

NEDERLANDSCH METEOROLOGISCH INSTITUUT.

N^o. 108.

SEISMISCHE REGISTRERINGEN
IN DE BILT.

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27.

1939.

1941.

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TE VERKRIJGEN BIJ | EN VENTE CHEZ  
DE RIJKSUITGEVERIJ TE 'S GRAVENHAGE.  
Prijs *f* 1.00. | Prix *fl* 1.00.

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## EINLEITUNG

Die geographischen Koordinaten der Station sind: Breite  $52^{\circ}6'N.$ , Länge  $5^{\circ}11'E.$  von Greenwich. Die Höhe des Terrains über dem Meeresniveau beträgt 3 m. Der Untergrund besteht aus Sand (diluvialen Ablagerungen).

Die Temperatur im Instrumentenraum war am 1 Januar  $6^{\circ}.2$ , das Minimum war  $6^{\circ}.2$  am 1 Januar, das Maximum  $16^{\circ}.8$  vom 6—7 und vom 10 zum 13 September, während am 31 Dezember die Temperatur  $7^{\circ}.0$  betrug.

### DIE SEISMOGRAPHEN.

Die folgenden Instrumente waren regelmäßig in Betrieb:  
ein Paar Horizontalseismographen und ein Vertikalseismograph mit magnetischer Dämpfung und galvanometrischer Registrierung nach GALITZIN.

ein astatischer Horizontalseismograph nach WIECHERT,  $M = 200$  kg,  
ein Paar Horizontalpendel von BOSCH,  $M = 25$  kg.

DIE SEISMOGRAPHEN GALITZIN. Unten sind angegeben: die Galvanometerperiode  $T_1$ , die reduzierte Pendellänge  $l$ , die Entfernung des Galvanometerspiegels vom Registrierpapier  $A_1$ , und weiter die Grenzen der Werte der Eigenperiode des Pendels ohne Dämpfung  $T$ , des Dämpfungskonstante  $\mu$  und des Übertragungsfaktors  $k$  während 1939, nach den Bestimmungen in 1939, Ende 1938 und Anfang 1940<sup>1)</sup>.

|                            | Komp. N.S.    | Komp. E.W.    | Komp. Z. |
|----------------------------|---------------|---------------|----------|
| Galvanometerperiode $T_1$  | 24,43s        | 24,96s        | 12,0s    |
| Reduzierte Pendellänge $l$ | 123,13mm      | 122,58mm      | 405,9mm  |
| Entfernung $A_1$           | 1380 „        | 1380 „        | 1380 „   |
| Pendelperiode $T$          | 24,99s; 23,62 | 25,28s; 24,53 | 12s      |
| Dämpfungskonstante $\mu$   | 0,14; —0,14   | 0,07; —0,04   | 0,0      |
| Übertragungsfaktor $k$     | 10,98; 10,45  | 11,08; 10,26  | 174      |

<sup>1)</sup> Die Galitzin'sche Notation für die Dämpfungskonstante  $\mu^2$  ist abgeändert worden in die Somville'sche  $\mu$ .

## VORWORT.

Die vorliegende sieben und zwanzigste Nummer der Seismischen Registrierungen ist in der Hauptsache in derselben Weise abgefaßt wie die vorangehende.

Die Bearbeitung wurde vom Wissenschaftlichen Assistenten, Dr. S. W. VISSER, gemacht und in der Einleitung erläutert.

*Der Hauptdirektor  
des Niederl. Meteor. Instituts*

Dr. H. G. CANNEGIETER.

DE BILT, November 1941.

DIE SEISMOGRAPHEN WIECHERT UND BOSCH. Die Grenzen der Werte der Eigenperiode des Pendels ohne Dämpfung T, des Dämpfungsverhältnisses  $\varepsilon$  und der Indikatorvergrößerung V während 1939 waren, nach den Bestimmungen in 1939, Ende 1938 und Anfang 1940:

|                       | T                                  | $\varepsilon$ | V         |
|-----------------------|------------------------------------|---------------|-----------|
| WIECHERT (N.S. Komp.) | 4,8 <sup>s</sup> ;4,9 <sup>s</sup> | 4             | 155;160   |
| „ (E.W. „ )           | 4,8 ;4,9                           | 4             | 166;171   |
| BOSCH (N.S. Komp.)    | 18,0 ;18,2                         | 4             | 19,8;20,4 |
| „ (E.W. „ )           | 17,8 ;18,2                         | 4             | 20,2;20,7 |

BEARBEITUNG DER SEISMISCHEN REGISTRIERUNGEN;  
BESTIMMUNG DER HERDE.

Die Bearbeitung der seismischen Registrierungen und die Bestimmung der Herde geschah in nahezu derselben Weise wie in den vorangehenden Jahren.

Zur Zusammenstellung der Tabellen haben die Diagramme der Seismographen GALITZIN gedient; falls der Lichtpunkt über den Papierrand trat und der Umkehrpunkt nicht auf einer der nächsten Registriertrommeln fiel und die Umkehrpunkte der Wellen daher berechnet werden mußten, wurden die Werte der Amplituden mit \* bezeichnet. Wenn die Registrierungen der Seismographen BOSCH und WIECHERT mitbenutzt wurden, ist dies in der Rubrik Bemerkungen mitgeteilt worden; die diesen Seismographen entnommenen Maxima M wurden mit \* bezeichnet. Es sind in den Tabellen keine Korrekturen an die auf den Diagrammen gemessenen Zeiten der Maxima angebracht.

Die folgenden Zeichen für die Phasen werden hauptsächlich angewandt:

- P = undae primae = Anfang der ersten Vorläufer.  
 PP = einmal an der Erdoberfläche reflektierte erste Vorläufer.  
 P' = Erste Vorläufer, die den Erdkern passiert haben.  
 S = undae secundae = Anfang der zweiten Vorläufer.  
 SS = einmal an der Erdoberfläche reflektierte zweite Vorläufer.  
 S' = Zweite Vorläufer, die den Erdkern passiert haben.  
 m = undae maximae = Maxima von Wellen in der Vorphase.

- L = undae longae = Anfang der langen Wellen (Oberflächenwellen).  
 M = Maxima der Bodenbewegung in der Hauptphase.  
 L' = Oberflächenwellen, die die Station über den Gegenpunkt erreichen.  
 M' = Maxima dieser Wellen.  
 M'' = Maxima von Oberflächenwellen, die über Station, Gegenpunkt und Herd die Station zum zweiten Mal erreichen.  
 F = finis = Ende der sichtbaren Bewegung.  
 i = impetus = scharfes Auftreten einer Phase.  
 e = emersio = allmähliches Auftreten einer Phase.  
 A = Amplitudo der wahren Bodenbewegung in  $\mu$  (= 0.001 mm), gerechnet von der Ruhelinie aus.  
 A<sub>N</sub> = Nord-Süd-Komponente von A (+ nach N, — nach S).  
 A<sub>E</sub> = Ost-West-Komponente von A (+ nach E, — nach W).  
 A<sub>Z</sub> = Vertikal-Komponente von A (+ nach dem Zenith, — nach unten).

Der Index N, E oder Z wird zur Angabe der Komponente auch den übrigen Zeichen beigelegt; der Index H wird beigelegt, falls die betreffende Phase sich auf die beiden Horizontalkomponenten bezieht.

- $\Delta$  = Epizentralentfernung.  
 h = Herdtiefe.

Die Zeit ist in Mittlerer Greenwicher Zeit, von Mitternacht bis Mitternacht gezählt von 0 bis 24 h, angegeben worden. Die Periode gibt die Dauer einer Doppelschwingung in Sekunden an. Wenn eine Grösse fraglich war, wurde dieselbe in Klammern gesetzt oder mit einem ? versehen.

Die Epizentralentfernung  $\Delta$  wurde aus (S—P) berechnet und in Graden angegeben mit Hilfe der Laufzeitkurven von Brunner's „Focal Depth-Time-Distance-Chart“.

Die unter Bemerkungen angegebenen Herde sind den dem Institute in De Bilt zugegangenen Berichten seismischer Stationen und anderen Publikationen entnommen.

Die Erdbebenwarten, deren Berichte für das ganze Jahr oder für einen Teil des Jahres zur Verfügung standen, waren:

Algier, Ambon, Apia, Baku, Basel, Batavia, Budapest, Bukarest, Cape Girardeau, Christchurch, Chur, Collmberg, Denver, Florenz, Florissant,

Fordham (New York), Fort-de-France, Göttingen, Hamburg, Helgoland, Helwan, Hong Kong, Hukuoka, Irkutsk, Jena, Kapstadt, Kew, Ksara, La Plata, Little Rock, Malabar, Manila, Medan, Mizusawa, Melbourne, Moncalieri, Moskau, Neuchâtel, Oak Ridge, Ottawa, Papeete, Parc St. Maur, Pasadena, Pennsylvania, Piatigorsk, Pittsburg, Prag, Pulkovo, Reykjavik, Rio de Janeiro, Rom, Saint Louis, Straßburg, Stuttgart, Sverdlovsk, Sydney Riverview, Tachkent, Taihoku, Tananarive, Toledo, Triest, Uccle, Upsala, Vladivostok, Wellington, Weston, Zi-Ka-Wei, Zinsen und Zürich.

Die folgenden Abkürzungen wurden benutzt:

- IGGU = Internationale Geodetische Geophysische Union, Straßburg.  
 JSA = Jesuit Seismological Association, Saint Louis.  
 URSS = Institut Séismologique de l'Académie des Sciences de l'URSS, Leningrad.  
 USCGS = United States Coast and Geodetic Survey, Washington.

#### DIE MIKROSEISMISCHE BEWEGUNG.

Die Tabelle S. VII, die den *Charakter* der mikroseismischen Bewegung angibt, ist in derselben Weise zusammengestellt wie für die früheren Jahre (vgl. 1915, S 101, 1916, S 101). Es bedeutet:

- o sehr schwach und schwach  
 1 mäßig  
 2 stark  
 3 sehr stark.

Die Daten sind den Registrierungen des Seismographen WIECHERT entnommen; die Amplituden des Diagrammes (von der Ruhelinie aus gemessen) und die annähernden Amplituden der Bodenbewegung, die den Klassen 0, 1, 2 und 3 entsprechen, sind unten zusammengefaßt.

| Klasse. | Ampl. Diagramm.     | Ampl. Bodenbewegung    |
|---------|---------------------|------------------------|
| 0       | 0— $\frac{1}{4}$ mm | 0— $\frac{1}{4}$ $\mu$ |
| 1       | $\frac{1}{4}$ —1 „  | $\frac{1}{4}$ —5 „     |
| 2       | 1—2 „               | 5—10 „                 |
| 3       | >2 „                | >10 „                  |

### Charakter der mikroseismischen Bewegung.

(nach „WIECHERT“).

| Datum<br>1939 | Jan.  | Febr. | März  | April | Mai   | Juni | Juli  | Aug. | Sept. | Okt.  | Nov.  | Dez.  |
|---------------|-------|-------|-------|-------|-------|------|-------|------|-------|-------|-------|-------|
| 1             | 1 2   | 1     | 2 1   | 1     | 1     | 0 1  | 0 1   | 1    | 0 1   | 1     | 1     | 1 2   |
| 2             | 2     | 1     | 1 2 1 | 1     | 1     | 1 0  | 1 2 1 | 1    | 1 0   | 1     | 1     | 2     |
| 3             | 2     | 1     | 1     | 1     | 1 0   | 0    | 1     | 1 0  | 0     | 1     | 1     | 2 3   |
| 4             | 2     | 1     | 1     | 1     | 1 2 1 | 0    | 1 0   | 0 1  | 0 1   | 1 2   | 1 2   | 3 2   |
| 5             | 2 1   | 1     | 1     | 1 2 1 | 1 2 1 | 0    | 0 1   | 1 0  | 1     | 2     | 2     | 2 1   |
| 6             | 1     | 1     | 1     | 1     | 0     | 0    | 1     | 0    | 1     | 2     | 2 1   | 1     |
| 7             | 1 2   | 1     | 1 2   | 1     | 0     | 0 1  | 1     | 0 1  | 1 0   | 2 1   | 1     | 1 0   |
| 8             | 2     | 1     | 2 3   | 1 0   | 0     | 1    | 1     | 1 0  | 0     | 1     | 1     | 0 1   |
| 9             | 2     | 1     | 3 1   | 0 1   | 0     | 1    | 1     | 0 1  | 0     | 1 2   | 1     | 1 2 1 |
| 10            | 2 1   | 1     | 1     | 1     | 0     | 1 0  | 1     | 1 0  | 0 1   | 2 1   | 1     | 1 2 1 |
| 11            | 1 2 1 | 1 2 1 | 1     | 1     | 0 1   | 0    | 1     | 0    | 1 2   | 1     | 1 0   | 1     |
| 12            | 1     | 1 2   | 1     | 1     | 1     | 0 1  | 1 0   | 0    | 2     | 1 2   | 0 1   | 1     |
| 13            | 1     | 2 1   | 1     | 1     | 1     | 1    | 0 1 0 | 0    | 2 1   | 2 1   | 1 2   | 1 0   |
| 14            | 1     | 1     | 1     | 1     | 1 0   | 1    | 0 1 0 | 0    | 1     | 1 3 2 | 2 3   | 0 1   |
| 15            | 1 2   | 1     | 1 2 1 | 1     | 0     | 1 0  | 0 1   | 0    | 1 0   | 2 1   | 3 2   | 1     |
| 16            | 2     | 1     | 1     | 1 2 1 | 0 1   | 0    | 1 0 1 | 0    | 0     | 1 2 1 | 2 3   | 1     |
| 17            | 2     | 1     | 1 2 1 | 1 2   | 1     | 0    | 1     | 0    | 0 1   | 1 0   | 3 1   | 1 0   |
| 18            | 2 1   | 1 2 1 | 1 0   | 2 1   | 1 0   | 0    | 1     | 0    | 1     | 0 1   | 1     | 0 1 0 |
| 19            | 1     | 1     | 0 1   | 1     | 0 1   | 0 1  | 1 0   | 0    | 1     | 1 3   | 1 3 1 | 0     |
| 20            | 1 2   | 1     | 1 2   | 1 0   | 1 0   | 1    | 0 1   | 0    | 1     | 3 1   | 1     | 0 1   |
| 21            | 2 1   | 1     | 2 1   | 0 1   | 0     | 1    | 1 0   | 0    | 1     | 1 0   | 1     | 1     |
| 22            | 1 2   | 1     | 1 2   | 1 2   | 0     | 1    | 0     | 0 1  | 1     | 0     | 1     | 1     |
| 23            | 2     | 1 2 1 | 2 1   | 2 1   | 0     | 1    | 0 1   | 1 0  | 1 2   | 0 1   | 1     | 1     |
| 24            | 2 1   | 1     | 1     | 1 2 1 | 0     | 1    | 1 0 1 | 0    | 2     | 1     | 1 2 1 | 1     |
| 25            | 1 2   | 1     | 1     | 1     | 0 1   | 1    | 1     | 0    | 2 1   | 1     | 1 3   | 1     |
| 26            | 2 1   | 1     | 1 2 1 | 1 0   | 1 0   | 1 0  | 1 0   | 0    | 1     | 1     | 3     | 1     |
| 27            | 1     | 1     | 1     | 0 1   | 0     | 0 1  | 0     | 0    | 1     | 1 2   | 3 2   | 1     |
| 28            | 1     | 1 2   | 1     | 1     | 0 1   | 1    | 0     | 0    | 1     | 2 3 2 | 2     | 1     |
| 29            | 1     |       | 1 0   | 1     | 1     | 1    | 0     | 0    | 1     | 2 1   | 2     | 1     |
| 30            | 1     |       | 0 1   | 1     | 1 0   | 1 0  | 0     | 0    | 1 0 1 | 1     | 2 1   | 1 2   |
| 31            | 1     |       | 1     |       | 0     |      | 0 1   | 0    |       | 1     |       | 2 1   |

| Datum<br>1939 | Phase | Zeit |      |    | Periode | Richtung | Bemerkungen                                                                               |    |
|---------------|-------|------|------|----|---------|----------|-------------------------------------------------------------------------------------------|----|
|               |       | h    | m    | s  | s       |          |                                                                                           |    |
| Jan. (1) 2    | LN    | 4    | 46   | 52 | 24      |          |                                                                                           |    |
|               | LE    | 4    | 46   | 52 | 24      |          |                                                                                           |    |
|               | MH    | 4    | 47   | 45 |         |          |                                                                                           |    |
|               | F     | 4    | 52   |    |         |          |                                                                                           |    |
| " (2) 3       | LH    | 17   | 55,5 |    | 26      |          |                                                                                           |    |
|               | MN    | 17   | 57   |    |         |          |                                                                                           |    |
|               | F     | 18   | 2    |    |         |          |                                                                                           |    |
| " (3) 8       | eL    | 9    | 55   |    | 30      |          |                                                                                           |    |
|               | MN    | 9    | 57   | 0  |         |          |                                                                                           |    |
|               | F     | 9    | 59   |    |         |          |                                                                                           |    |
| " (4) 13      | eL    | 23   | 6,5  |    | 48      |          |                                                                                           |    |
|               | M     | 23   | 10,6 |    |         |          |                                                                                           |    |
|               | F     | 23   | 15   |    |         |          |                                                                                           |    |
| " (5) 20      | iSe   | 1    | 33   | 12 | 14      | 21       | (5) Geführt in Grande Syrte (Libyen).<br>IGGU: 31.9°N, 16.8°E; 1h24m19s.                  |    |
|               | iSn   | 1    | 33   | 15 | 14      |          |                                                                                           |    |
|               | ME    | 1    | 34   | 52 | 33      |          |                                                                                           |    |
|               | Lz    | 1    | 40   |    | 18      |          |                                                                                           |    |
|               | F     | 1    | 44   |    |         |          |                                                                                           |    |
| " (6) 20      | iSn   | 14   | 31   | 32 | 22      | 2        | (6) Nachbeben von (5).<br>IGGU: 14h22m28s. URSS: 31.5°N, 17.5°E.                          |    |
|               | ie    | 14   | 31   | 42 |         |          |                                                                                           |    |
|               | LE    | 14   | 34   |    |         |          |                                                                                           |    |
|               | ME    | 14   | 37   | 4  |         |          |                                                                                           |    |
|               | ME    | 14   | 39   | 3  |         |          |                                                                                           |    |
|               | MN    | 14   | 39   | 25 |         |          |                                                                                           |    |
|               | F     | 14   | 50   |    |         |          |                                                                                           |    |
| " (7) 20      | eL    | 21   | 25,9 |    | 18      |          | (7) JSA: 13°N, 89.5°W; 20h40m28s; USCGS: 13°N,<br>91.5°W; 20h40.2m; URSS: 11.0°N, 90.5°W. |    |
|               | M     | 21   | 30   | 59 | 17      |          |                                                                                           |    |
|               | F     | 21   | 33   |    |         |          |                                                                                           |    |
| " (8) 22      | eL    | 5    | 20   | 6  | 12      |          | (8) URSS: 57.0°N, 130.0°E.                                                                |    |
|               | M     | 5    | 24   | 32 |         |          |                                                                                           |    |
|               | F     | 5    | 28   |    |         |          |                                                                                           |    |
| " (9) 22      | L     | 14   | 47   | 37 | 20      |          | (9) Wellington: 5°S, 157°E; 13h31m.                                                       |    |
|               | F     | 14   | 55   |    |         |          |                                                                                           |    |
| " (10) 23     | iSh   | 2    | 31   | 50 | 18      |          | (10) Nachbeben von (5).<br>IGGU: 2h22m53s. URSS: 31.5°N, 16.5°E.                          |    |
|               | LN    | 2    | 35   | 42 |         |          |                                                                                           |    |
|               | Lz    | 2    | 37   | 34 |         |          |                                                                                           |    |
|               | ME    | 2    | 37   | 40 |         |          |                                                                                           | 14 |
|               | Mz    | 2    | 39   | 34 |         |          |                                                                                           | 18 |
|               | MN    | 2    | 39   | 46 |         |          |                                                                                           | 13 |
|               | F     | 2    | 46   |    |         |          |                                                                                           |    |
| " (11) 24     | LN    | 4    | 53   |    | 51      |          |                                                                                           |    |
|               | F     | 4    | 55   |    |         |          |                                                                                           |    |

| Datum<br>1939   | Phase | Zeit |    |    | Periode<br>s | Richtung<br>μ                                                                               | Bemerkungen                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------|-------|------|----|----|--------------|---------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |       | h    | m  | s  |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
| Jan. 25<br>(12) | iPz   | 3    | 46 | 50 |              |                                                                                             | (12) Zerstörendes Erdbeben in Chillán (Chili).<br>La Plata: 36.7°S, 72.5°W; Tacubaya: 36°30'S,<br>72°10'W; 3 <sup>h</sup> 31 <sup>m</sup> 24 <sup>s</sup> ; IGGU: 36.6°S, 72.2°W; 3 <sup>h</sup> 32 <sup>m</sup><br>15 <sup>s</sup> ; USCGS: 37°S, 73°W; 3 <sup>h</sup> 32 <sup>m</sup> 16 <sup>s</sup> ; JSA: 36.4°S,<br>72.1°W; 3 <sup>h</sup> 32 <sup>m</sup> 20 <sup>s</sup> ; URSS: 36.5°S, 74.0°W. |
|                 | PPz   | 3    | 51 | 7  |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | ie    | 3    | 51 | 28 |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | ie    | 3    | 53 | 59 |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | iS'H  | 3    | 57 | 23 |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | iH    | 4    | 0  | 48 |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | iN    | 4    | 6  | 32 |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | ie    | 4    | 6  | 45 |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | LE    | 4    | 11 | 46 | 36           | 22                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | ie    | 4    | 15 | 39 |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | LE    | 4    | 18 | 4  | 39           | 31                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | ME    | 4    | 25 | 26 | 43           | 60                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | MN    | 4    | 25 | 48 | 37           | 50                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | ME    | 4    | 29 | 51 | 43           | 149                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                          |
| MN              | 4     | 32   | 4  | 26 | 42           |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
| ME              | 4     | 32   | 59 | 27 | 83           |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
| F               | 7     | 2    |    |    |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
| " 27<br>(13)    | eL    | 11   | 30 |    |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | F     | 11   | 34 |    |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
| " 27<br>(14)    | L     | 14   | 55 | 22 | 21           | (14) Gefühlt in San Salvador (VI).<br>San Salvador: 12.9°N, 91.7°W; JSA: 13.4°N,<br>91.3°W. |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | M     | 15   | 2  | 34 | 17,5         |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | F     | 15   | 20 |    |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
| " 27<br>(15)    | L     | 20   | 18 | 8  | 22           | Gefühlt auf die Liparischen Inseln (VI).                                                    |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | Lz    | 20   | 19 | 51 | 14           |                                                                                             | 3                                                                                                                                                                                                                                                                                                                                                                                                        |
|                 | F     | 20   | 40 |    |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
| " 29<br>(16)    | L     | 19   | 38 | 33 | 18           | (16) Nachbeben von (14). Gefühlt (VI).<br>San Salvador: 13.5°N, 90.3°W.                     |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | M     | 19   | 40 | 55 | 19           |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | F     | 20   | 55 |    |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
| " 30<br>(17)    | ePz   | 2    | 34 | 24 |              |                                                                                             | (17) Gefühlt auf die Salomon-inseln, in New Bri-<br>tain und New Guinea.<br>Wellington: 7°S, 155°E; 2 <sup>h</sup> 18 <sup>m</sup> 7 <sup>s</sup> ; IGGU: 6°S,<br>156°E; 2 <sup>h</sup> 18 <sup>m</sup> 26 <sup>s</sup> ; USCGS: 7°S, 155°E; 2 <sup>h</sup> 18 <sup>m</sup> 26 <sup>s</sup> ;<br>URSS: 7.0°S, 156.0°E.                                                                                   |
|                 | iz    | 2    | 37 | 38 |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | iPPz  | 2    | 39 | 46 |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | iH    | 2    | 39 | 47 |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | i     | 2    | 48 | 58 |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | iN    | 2    | 57 | 8  |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | iH    | 3    | 4  | 10 |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | LE    | 3    | 16 | 31 | 47           |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | ME    | 3    | 23 | 36 | 28           | 80                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | MN    | 3    | 23 | 36 | 27           | 67                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | Mz    | 3    | 29 | 28 | 26           | 81                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | MN    | 3    | 32 |    | 26           | 55                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | ME    | 3    | 32 |    | 22           | 65                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                          |
|                 | C     | 6    | 23 | 42 | 35           |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |
| F               | 6     | 58   |    |    |              |                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                          |

| Datum<br>1939   | Phase | Zeit |    |    | Periode<br>s | Richtung<br>μ | Bemerkungen                                                                                                                                                                                                                                           |
|-----------------|-------|------|----|----|--------------|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |       | h    | m  | s  |              |               |                                                                                                                                                                                                                                                       |
| Jan. 31<br>(18) | iPPz  | 0    | 10 | 54 |              |               | (18) URSS: Bismarck-Archipel 5.0°S, 148.0°E; h =<br>170 km.                                                                                                                                                                                           |
|                 | iz    | 0    | 11 | 35 |              |               |                                                                                                                                                                                                                                                       |
|                 | iz    | 0    | 23 | 17 |              |               |                                                                                                                                                                                                                                                       |
|                 | L     | 0    | 30 |    | 32           |               |                                                                                                                                                                                                                                                       |
|                 | L     | 0    | 49 | 2  | 33           |               |                                                                                                                                                                                                                                                       |
|                 | M     | 0    | 53 | 14 | 28           |               |                                                                                                                                                                                                                                                       |
| F               | 1     | 26   |    |    |              |               |                                                                                                                                                                                                                                                       |
| Feb. 2<br>(19)  | eL    | 8    | 3  | 59 |              |               |                                                                                                                                                                                                                                                       |
|                 | F     | 8    | 6  |    |              |               |                                                                                                                                                                                                                                                       |
| " 3<br>(20)     | eL    | 0    | 1  |    |              |               | (20) Nachbeben von (5).<br>IGGU: 31.9°N, 16.8°E; 23 <sup>h</sup> 50 <sup>m</sup> 42 <sup>s</sup> (am 2. Feb.).                                                                                                                                        |
|                 | M     | 0    | 5  |    |              |               |                                                                                                                                                                                                                                                       |
|                 | F     | 0    | 8  |    |              |               |                                                                                                                                                                                                                                                       |
| " 3<br>(21)     | iP'z  | 5    | 45 | 37 |              |               | (21) Wellington: 11°S, 157°E; 5 <sup>h</sup> 26 <sup>m</sup> . IGGU: 10°S,<br>159°E; 5 <sup>h</sup> 26 <sup>m</sup> 37 <sup>s</sup> ; h 50 km; JSA: 10.5°S, 159.4°E;<br>5 <sup>h</sup> 26 <sup>m</sup> 18 <sup>s</sup> ; USCGS: 10°S, 159°E; h 80 km. |
|                 | iz    | 5    | 47 | 42 |              |               |                                                                                                                                                                                                                                                       |
|                 | iPPz  | 5    | 48 | 0  |              |               |                                                                                                                                                                                                                                                       |
|                 | iz    | 5    | 49 | 1  |              |               |                                                                                                                                                                                                                                                       |
|                 | iN    | 5    | 49 | 7  |              |               |                                                                                                                                                                                                                                                       |
|                 | Lz    | 6    | 36 |    | 30           | 19            |                                                                                                                                                                                                                                                       |
|                 | Mz    | 6    | 39 | 58 | 24           | 39            |                                                                                                                                                                                                                                                       |
|                 | Mz    | 6    | 44 | 34 | 11           | 50            |                                                                                                                                                                                                                                                       |
|                 | F     | 8    | 6  |    |              |               |                                                                                                                                                                                                                                                       |
|                 |       |      |    |    |              |               |                                                                                                                                                                                                                                                       |
| " 3<br>(22)     | eP'z  | 20   | 33 | 3  |              |               | (22) URSS: 26.0°S, 169.5°W.                                                                                                                                                                                                                           |
|                 | eL    | 21   | 39 |    |              |               |                                                                                                                                                                                                                                                       |
|                 | L     | 21   | 41 |    | 21,5         |               |                                                                                                                                                                                                                                                       |
| F               | 22    | 10   |    |    |              |               |                                                                                                                                                                                                                                                       |
| " 4<br>(23)     | eL    | 6    | 18 |    | 35           |               | (23) Wellington: 9°S, 156°E; 5 <sup>h</sup> 19 <sup>m</sup> . URSS: 19.5°S,<br>151.0°E.                                                                                                                                                               |
|                 | M     | 6    | 29 |    | 21,5         |               |                                                                                                                                                                                                                                                       |
|                 | F     | 6    | 57 |    |              |               |                                                                                                                                                                                                                                                       |
| " 5<br>(24)     | iz    | 22   | 5  | 34 |              |               | (24) Gefühlt in Dalmatien (Fiume (V).)                                                                                                                                                                                                                |
|                 | F     | 22   | 8  |    |              |               |                                                                                                                                                                                                                                                       |
| " 6<br>(25)     | eSE   | 7    | 28 | 19 |              |               | (25) Nachbeben von (24). Gefühlt in Fiume (IV).                                                                                                                                                                                                       |
|                 | iSN   | 7    | 28 | 39 |              |               |                                                                                                                                                                                                                                                       |
|                 | iSz   | 7    | 28 | 32 |              |               |                                                                                                                                                                                                                                                       |
|                 | iz    | 7    | 31 | 21 |              |               |                                                                                                                                                                                                                                                       |
|                 | F     | 7    | 34 |    |              |               |                                                                                                                                                                                                                                                       |
| " 6<br>(26)     | eL    | 10   | 50 | 30 |              |               | (26) Nachbeben von (24). Gefühlt in Fiume (III).                                                                                                                                                                                                      |
|                 | F     | 10   | 55 |    |              |               |                                                                                                                                                                                                                                                       |
| " 7<br>(27)     | eLE   | 4    | 58 |    |              |               | (27) URSS: 35.0°N, 150.5E.                                                                                                                                                                                                                            |
|                 | F     | 5    | 15 |    |              |               |                                                                                                                                                                                                                                                       |
| " 8<br>(28)     | eLN   | 7    | 16 |    | 27           |               |                                                                                                                                                                                                                                                       |
|                 | Mz    | 7    | 23 |    | 18           |               |                                                                                                                                                                                                                                                       |
|                 | F     | 7    | 25 |    |              | 9             |                                                                                                                                                                                                                                                       |





| Datum<br>1939   | Phase | Zeit |    |    | Periode | Richtung | Bemerkungen                                                                                                                                                                                                                                      |
|-----------------|-------|------|----|----|---------|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                 |       | h    | m  | s  |         |          |                                                                                                                                                                                                                                                  |
| März 22<br>(54) | L     | 4    | 48 | 34 | 26      |          | (54) Wellington: 7°S, 150°E; 3 <sup>h</sup> 45 <sup>m</sup> . URSS: 5.0°S, 149.0°E.                                                                                                                                                              |
|                 | MN    | 4    | 56 |    |         |          |                                                                                                                                                                                                                                                  |
|                 | MN    | 5    | 1  |    |         |          |                                                                                                                                                                                                                                                  |
|                 | F     | 5    | 5  |    |         |          |                                                                                                                                                                                                                                                  |
| " 22<br>(55)    | iz    | 8    | 34 | 39 | 26      | +        | (55) Wellington: 18°S, 173°E; 7 <sup>h</sup> 21 <sup>m</sup> . URSS: 19.0°S, 169°W.                                                                                                                                                              |
|                 | iE    | 8    | 54 | 15 |         |          |                                                                                                                                                                                                                                                  |
|                 | F     | 9    | 2  |    |         |          |                                                                                                                                                                                                                                                  |
| " 23<br>(56)    | eL    | 17   | 43 |    | 26      |          | (56) Wellington: 32°S, 178°W; 16 <sup>h</sup> 21 <sup>m</sup> . URSS: 24.5°S, 171.5°W.                                                                                                                                                           |
|                 | F     | 17   | 54 |    |         |          |                                                                                                                                                                                                                                                  |
| " 25<br>(57)    | eL    | 6    | 40 |    | 26      |          | (57) Manila: gefühlt in Dapa, Tandag und Surigao. Epizentrum im Philippinen-tief. URSS: 10.0°N, 129.5°E.                                                                                                                                         |
|                 | F     | 6    | 55 |    |         |          |                                                                                                                                                                                                                                                  |
| " 29<br>(58)    | eL    | 3    | 27 |    | 26      |          | (58) Manila: gefühlt in Dapa, Tandag und Surigao. Epizentrum im Philippinen-tief. URSS: 10.0°N, 129.5°E.                                                                                                                                         |
|                 | F     | 3    | 38 |    |         |          |                                                                                                                                                                                                                                                  |
| " 31<br>(59)    | eL    | 8    | 6  |    | 26      |          | (59) URSS: 41.0°N, 144.0°E.                                                                                                                                                                                                                      |
|                 | F     | 8    | 12 |    |         |          |                                                                                                                                                                                                                                                  |
| April 1<br>(60) | eL    | 3    | 20 |    | 26      |          | (60) Manila: gefühlt in Dapa, Tandag und Surigao. Epizentrum im Philippinen-tief. URSS: 10.0°N, 129.5°E.                                                                                                                                         |
|                 | F     | 3    | 36 |    |         |          |                                                                                                                                                                                                                                                  |
| " 4<br>(61)     | eL    | 11   | 22 |    | 26      |          | (61) Manila: gefühlt in Dapa, Tandag und Surigao. Epizentrum im Philippinen-tief. URSS: 10.0°N, 129.5°E.                                                                                                                                         |
|                 | L     | 11   | 29 |    |         |          |                                                                                                                                                                                                                                                  |
|                 | M     | 11   | 40 |    |         |          |                                                                                                                                                                                                                                                  |
|                 | F     | 11   | 54 |    |         |          |                                                                                                                                                                                                                                                  |
| " 5<br>(62)     | iP'z  | 17   | 2  | 17 | 28      | 4        | (62) Wellington: 20°S, 169°E; 16 <sup>h</sup> 42.6 <sup>m</sup> . IGGU: 19.3°S, 168.5°E; 16 <sup>h</sup> 42 <sup>m</sup> 48 <sup>s</sup> . URSS: 16.5°S, 178.0°E. JSA: Gebiet von 27°S, 167°E; 16 <sup>h</sup> 42 <sup>m</sup> 15 <sup>s</sup> . |
|                 | eP'H  | 17   | 2  | 19 |         |          |                                                                                                                                                                                                                                                  |
|                 | iPPN  | 17   | 5  | 58 |         |          |                                                                                                                                                                                                                                                  |
|                 | LN    | 17   | 53 | 18 |         |          |                                                                                                                                                                                                                                                  |
|                 | M     | 17   | 59 | 36 |         |          |                                                                                                                                                                                                                                                  |
|                 | MN    | 18   | 2  |    |         |          |                                                                                                                                                                                                                                                  |
|                 | MN    | 18   | 5  |    |         |          |                                                                                                                                                                                                                                                  |
|                 | Mz    | 18   | 6  |    |         |          |                                                                                                                                                                                                                                                  |
|                 | F     | 19   | 30 |    |         |          |                                                                                                                                                                                                                                                  |
| " 6<br>(63)     | e     | 0    | 15 |    | 28      |          | (63) Manila: gefühlt in Dapa, Tandag und Surigao. Epizentrum im Philippinen-tief. URSS: 10.0°N, 129.5°E.                                                                                                                                         |
|                 | F     | 0    | 20 |    |         |          |                                                                                                                                                                                                                                                  |
| " 6<br>(64)     | e     | 4    | 33 |    | 28      |          | (64) URSS: 34.5°N, 52.0°E (Iran).                                                                                                                                                                                                                |
|                 | F     | 4    | 36 |    |         |          |                                                                                                                                                                                                                                                  |
| " 6<br>(65)     | e     | 18   | 5  |    | 28      |          | (65) Manila: gefühlt in Dapa, Tandag und Surigao. Epizentrum im Philippinen-tief. URSS: 10.0°N, 129.5°E.                                                                                                                                         |
|                 | F     | 18   | 11 |    |         |          |                                                                                                                                                                                                                                                  |
| " 6<br>(66)     | e     | 21   | 56 |    | 28      |          | (66) Manila: gefühlt in Dapa, Tandag und Surigao. Epizentrum im Philippinen-tief. URSS: 10.0°N, 129.5°E.                                                                                                                                         |
|                 | F     | 21   | 58 |    |         |          |                                                                                                                                                                                                                                                  |
| " 10<br>(67)    | e     | 14   | 10 |    | 28      |          | (67) Manila: gefühlt in Dapa, Tandag und Surigao. Epizentrum im Philippinen-tief. URSS: 10.0°N, 129.5°E.                                                                                                                                         |
|                 | F     | 14   | 24 |    |         |          |                                                                                                                                                                                                                                                  |

| Datum<br>1939    | Phase  | Zeit |      |    | Periode | Richtung | Bemerkungen                                                                                                                                                                                                                                                                                                    |
|------------------|--------|------|------|----|---------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  |        | h    | m    | s  |         |          |                                                                                                                                                                                                                                                                                                                |
| April 12<br>(68) | e      | 14   | 29   |    | 25      |          | (68) URSS: 30°N, 145°E.                                                                                                                                                                                                                                                                                        |
|                  | F      | 14   | 40   |    |         |          |                                                                                                                                                                                                                                                                                                                |
| " 15<br>(69)     | eN     | 9    | 58   |    | 25      |          | (69) URSS: 30°N, 145°E.                                                                                                                                                                                                                                                                                        |
|                  | F      | 10   | 5    |    |         |          |                                                                                                                                                                                                                                                                                                                |
| " 15<br>(70)     | ePP    | 21   | 24   |    | 25      |          | (70) Wellington: 6.0°S, 148°E; 20 <sup>h</sup> 3.8 <sup>m</sup> .                                                                                                                                                                                                                                              |
|                  | L      | 21   | 35   |    |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | F      | 21   | 44   |    |         |          |                                                                                                                                                                                                                                                                                                                |
| " 18<br>(71)     | Pz     | 6    | 36   | 37 | 29      | 17       | (71) F während Papierwechsel. Zerstörendes Beben in Copiapound Caldera, Chili. IGGU: 27°S, 70°W; 6 <sup>h</sup> 22 <sup>m</sup> 42 <sup>s</sup> . USCGRS: 27°S, 71°W; 6 <sup>h</sup> 22.7 <sup>m</sup> . JSA: 25.8°S, 75.2°W; 6 <sup>h</sup> 22 <sup>m</sup> 56 <sup>s</sup> ; h 100 km. URSS: 28.5°S, 73.0°W. |
|                  | iz     | 6    | 36   | 42 |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | iPPz   | 6    | 40   | 53 |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | iP'E   | 6    | 41   | 8  |         |          |                                                                                                                                                                                                                                                                                                                |
| " 18<br>(71)     | iz     | 6    | 43   | 19 | 24      | 14       | (71) F während Papierwechsel. Zerstörendes Beben in Copiapound Caldera, Chili. IGGU: 27°S, 70°W; 6 <sup>h</sup> 22 <sup>m</sup> 42 <sup>s</sup> . USCGRS: 27°S, 71°W; 6 <sup>h</sup> 22.7 <sup>m</sup> . JSA: 25.8°S, 75.2°W; 6 <sup>h</sup> 22 <sup>m</sup> 56 <sup>s</sup> ; h 100 km. URSS: 28.5°S, 73.0°W. |
|                  | i      | 6    | 50   | 17 |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | LE     | 7    | 14   | 40 |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | ME     | 7    | 18   | 0  |         |          |                                                                                                                                                                                                                                                                                                                |
| " 18<br>(71)     | F      | 8    | (50) |    | 24      | 14       | (71) F während Papierwechsel. Zerstörendes Beben in Copiapound Caldera, Chili. IGGU: 27°S, 70°W; 6 <sup>h</sup> 22 <sup>m</sup> 42 <sup>s</sup> . USCGRS: 27°S, 71°W; 6 <sup>h</sup> 22.7 <sup>m</sup> . JSA: 25.8°S, 75.2°W; 6 <sup>h</sup> 22 <sup>m</sup> 56 <sup>s</sup> ; h 100 km. URSS: 28.5°S, 73.0°W. |
|                  | F      | 8    | (50) |    |         |          |                                                                                                                                                                                                                                                                                                                |
| " 20<br>(72)     | iP'z   | 22   | 27   | 54 | 29      | 17       | (72) Neu Seeland. Gefühlt in Queenstown und Invercargill. Christchurch: P 22 <sup>h</sup> 7 <sup>m</sup> 57 <sup>s</sup> .                                                                                                                                                                                     |
|                  | iPPz   | 23   | 31   | 41 |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | eL     | 23   | 38   |    |         |          |                                                                                                                                                                                                                                                                                                                |
| " 20<br>(72)     | F      | 23   | 58   |    | 29      | 17       | (72) Neu Seeland. Gefühlt in Queenstown und Invercargill. Christchurch: P 22 <sup>h</sup> 7 <sup>m</sup> 57 <sup>s</sup> .                                                                                                                                                                                     |
|                  | F      | 23   | 58   |    |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | F      | 23   | 58   |    |         |          |                                                                                                                                                                                                                                                                                                                |
| " 21<br>(73)     | iPz    | 4    | 39   | 45 | 29      | 17       | (73) $\Delta$ 73.8°. Tiefer Herd (500 km). IGGU: 47°N, 141°E; h 500-550 km; JSA: 48.6°N, 138.0°E; 4 <sup>h</sup> 20 <sup>m</sup> 11 <sup>s</sup> . USCGRS: 50°N, 140°E; 4 <sup>h</sup> 29.2 <sup>m</sup> ; h 500 km; URSS: 47.5°N, 143.0°E; h 530 km.                                                          |
|                  | PH     | 4    | 39   | 46 |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | iPPz   | 4    | 41   | 37 |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | iPP    | 4    | 42   | 34 |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | iS     | 4    | 48   | 32 |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | (iS')? | 4    | 49   | 4  |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | F      | 5    | 46   |    |         |          |                                                                                                                                                                                                                                                                                                                |
| " 23<br>(74)     | Pz     | 16   | 32   | 36 | 29      | 17       | (74) $\Delta$ 55.1°. IGGU: 2°N, 18°W; 16 <sup>h</sup> 23 <sup>m</sup> 12 <sup>s</sup> . USCGRS: 1°S, 17°W; 16 <sup>h</sup> 23.1 <sup>m</sup> . JSA: 0.1°N, 18.0°W; 16 <sup>h</sup> 23 <sup>m</sup> 9 <sup>s</sup> . URSS: 10°S, 18.0°W.                                                                        |
|                  | iS     | 16   | 40   | 25 |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | LE     | 16   | 46   | 52 |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | LE     | 16   | 50   | 0  |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | ME     | 16   | 53   |    |         |          |                                                                                                                                                                                                                                                                                                                |
| " 23<br>(74)     | F      | 17   | 40   |    | 26,5    | 2        | (74) $\Delta$ 55.1°. IGGU: 2°N, 18°W; 16 <sup>h</sup> 23 <sup>m</sup> 12 <sup>s</sup> . USCGRS: 1°S, 17°W; 16 <sup>h</sup> 23.1 <sup>m</sup> . JSA: 0.1°N, 18.0°W; 16 <sup>h</sup> 23 <sup>m</sup> 9 <sup>s</sup> . URSS: 10°S, 18.0°W.                                                                        |
|                  | F      | 17   | 40   |    |         |          |                                                                                                                                                                                                                                                                                                                |
| " 26<br>(75)     | e      | 12   | 1    |    | 24      |          | (75) Manila: gefühlt in Basco, Laoag und Vigan. Epiz. 19°35'N, 121°15'E.                                                                                                                                                                                                                                       |
|                  | L      | 12   | 5    |    |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | F      | 12   | 29   |    |         |          |                                                                                                                                                                                                                                                                                                                |
| " 28<br>(76)     | Pz     | 0    | 38   | 16 | 24      |          | (76) $\Delta$ 23.2°. IGGU: 43°N, 27°W; nördl. der Azoren. URSS: 40°N, 26°W.                                                                                                                                                                                                                                    |
|                  | ePE    | 0    | 38   | 16 |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | eS     | 0    | 42   | 28 |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | L      | 0    | 45   |    |         |          |                                                                                                                                                                                                                                                                                                                |
|                  | F      | 1    | 7    |    |         |          |                                                                                                                                                                                                                                                                                                                |

| Datum<br>1939     | Phase                                             | Zeit                                                                                        | Periode              | Richtung            | Bemerkungen                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------|---------------------------------------------------|---------------------------------------------------------------------------------------------|----------------------|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   |                                                   | h m s                                                                                       | s                    | $\mu$               |                                                                                                                                                                                                                                                                                                                                                                                                        |
| April 30<br>(77)  | ePz<br>iP'z<br>iPPH<br>L<br>MN<br>LE<br>F         | 3 12 17<br>3 14 48<br>3 17 54<br>4 6 24<br>4 8<br>4 18<br>8 (30)                            | 24<br>18             | 41<br>23            | (77) F in Papierwechsel.<br>Gefühlt auf die Salomon-inseln. Seismische Wogen.<br>Wellington: 10°S, 158°E; 2 <sup>h</sup> 55.5 <sup>m</sup> . IGGU: 7.5°S,<br>159.6°E; 2 <sup>h</sup> 55 <sup>m</sup> 35 <sup>s</sup> ; h 150 km? USCGS: 11°S, 158°E;<br>2 <sup>h</sup> 55.4 <sup>m</sup> . URSS: 14.0°S, 162.0°E.<br>JSA: Gegend von 10.8°S, 158.5°E, 2 <sup>h</sup> 55 <sup>m</sup> 24 <sup>s</sup> . |
| " 30<br>(78)      | L<br>L<br>F                                       | 15 10<br>15 19<br>15 31                                                                     | 31<br>20             |                     | (78) Gefühlt in Karamea und Asbestos (NW. Wel-<br>son; R.F. 3).<br>Wellington: 40.9°S, 172.3°E.                                                                                                                                                                                                                                                                                                        |
| Mai 1<br>(79, 80) | P1z<br>P2z<br>S1<br>S2<br>LN<br>MN<br>F           | 6 10 42<br>6 12 22<br>6 20 48<br>6 20 25<br>6 37<br>6 41<br>8 (27)                          | 40<br>25             | 5<br>21             | (79, 80). Zwei Beben. $\Delta_1$ 79.7°; $\Delta_2$ 79.1°.<br>Stark gefühlt in Japan; Gegend von Akita.<br>(79) JSA: 39.4°N, 139°E; 5 <sup>h</sup> 58 <sup>m</sup> 30 <sup>s</sup> . URSS: 39.0°N,<br>140.0°E.<br>(80) JSA: 39.4°N, 139°E; 6 <sup>h</sup> 0 <sup>m</sup> 13 <sup>s</sup> ; URSS: 39°N,<br>139.5°E.                                                                                      |
| " 1<br>(81)       | e<br>i<br>F                                       | 12 34<br>12 37 18<br>12 57                                                                  |                      |                     | IGGU: Nachbeben von (79)? URSS: 37.5°N,<br>138.0°E.                                                                                                                                                                                                                                                                                                                                                    |
| " 1<br>(82)       | iP<br>eL<br>ME<br>ME<br>F                         | 16 28 5<br>16 38<br>16 49 16<br>16 52 30<br>17 58                                           | 33<br>22             | 2<br>4              | IGGU: Nachbeben von (79). URSS: 39.0°N,<br>140.0°E.                                                                                                                                                                                                                                                                                                                                                    |
| " 2<br>(83)       | iPz<br>iz<br>iS<br>i<br>LE<br>LE<br>MN<br>ME<br>F | 13 27 22<br>13 28 19<br>13 37 44<br>13 40 51<br>13 50<br>13 53<br>13 58 30<br>14 2<br>16 28 | 29<br>41<br>30<br>22 | 4<br>12<br>13<br>14 | (83) $\Delta$ 82.8°.<br>Gefühlt in San Diego (Cal.) und Tucson.<br>JSA: 29.4°N, 113.5°W; 13 <sup>h</sup> 14 <sup>m</sup> 49 <sup>s</sup> . USCGS: 29.5°N,<br>113.8°W; 13 <sup>h</sup> 14.8 <sup>m</sup> .                                                                                                                                                                                              |
| " 6<br>(84)       | ePz<br>iPPz<br>S<br>i<br>LE<br>ME<br>F            | 6 12 48<br>6 15 37<br>6 23 17<br>6 24 31<br>6 29<br>6 50<br>7 24                            | 34<br>19             | 2                   | (84) $\Delta$ 84.3°.<br>USCGS: 5.0°N; 6 <sup>h</sup> 0.2 <sup>m</sup> . JSA: 7.5°N, 84.5°W;<br>6 <sup>h</sup> 0 <sup>m</sup> 33 <sup>s</sup> ; h 50 km.                                                                                                                                                                                                                                                |
| " 6<br>(85)       | L<br>M<br>F                                       | 17 49<br>17 54<br>18 18                                                                     | 29<br>20             |                     | (85) Manila: gefühlt in Calapan (Mindoro) und<br>S. Luzon.<br>Ep. 13°30'N, 121°15'E; 17 <sup>h</sup> 0 <sup>m</sup> 7 <sup>s</sup> ; h 75 km.                                                                                                                                                                                                                                                          |
| " 6<br>(86)       | e<br>F                                            | 21 16<br>21 27                                                                              |                      |                     | (86) Wellington: 10 <sup>1</sup> / <sub>4</sub> °S, 160 <sup>1</sup> / <sub>4</sub> E; 20 <sup>h</sup> 4 <sup>m</sup> .                                                                                                                                                                                                                                                                                |

| Datum<br>1939 | Phase                                 | Zeit                                                              | Periode    | Richtung | Bemerkungen                                                                                                                                                                                                                                                           |
|---------------|---------------------------------------|-------------------------------------------------------------------|------------|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               |                                       | h m s                                                             | s          | $\mu$    |                                                                                                                                                                                                                                                                       |
| Mai 8<br>(87) | iPz<br>iS<br>M<br>F                   | 1 52 21<br>1 56 45<br>2 32?<br>4 35                               | 8          | 152      | (87) $\Delta$ 26.4°.<br>Gefühlt in den Azoren.<br>IGGU: 37.0°N, 23.9°W; 1 <sup>h</sup> 46 <sup>m</sup> 52 <sup>s</sup> . USCGS 37°N,<br>24°W; 1 <sup>h</sup> 46.8 <sup>m</sup> . JSA 36.4°N, 24.3°W; 1 <sup>h</sup> 46 <sup>m</sup> 58 <sup>s</sup> ; h<br>90-100 km. |
| " 8<br>(88)   | Pz<br>eSE<br>eL<br>F                  | 16 20 51<br>16 25 20<br>16 28<br>16 56                            |            |          | (88) $\Delta$ 25.2°.<br>IGGU: Nachbeben von (87).                                                                                                                                                                                                                     |
| " 9<br>(89)   | Pz<br>eS<br>eL<br>M<br>F              | 7 39 44<br>7 48 41<br>8 4<br>8 10 12                              | 32<br>20   |          | (89) $\Delta$ 76.5°. F in Papierwechsel.<br>JSA: 51.0°N, 152.5°W; 7 <sup>h</sup> 28 <sup>m</sup> 43 <sup>s</sup> . URSS: 55.0°N,<br>155.0°W.                                                                                                                          |
| " 9<br>(90)   | ePz<br>eL<br>F                        | 16 32 50<br>16 41<br>16 46                                        |            |          | (90) IGGU: Nachbeben von (87).                                                                                                                                                                                                                                        |
| " 10<br>(91)  | iPz<br>iz<br>ie<br>in<br>L<br>ME<br>F | 7 56 10<br>8 1 14<br>8 5 56<br>8 6 57<br>8 11 35<br>8 34<br>10 35 | 29<br>18.5 | 2        | (91) USCGS: 51°N, 179°W; 7 <sup>h</sup> 44.4 <sup>m</sup> . JSA: Gegend<br>von 51.0°N, 177.2°W; 7 <sup>h</sup> 44 <sup>m</sup> 25 <sup>s</sup> . URSS: 50.0°N, 180°.                                                                                                  |
| " 11<br>(92)  | eL<br>F                               | 18 46<br>18 56                                                    |            |          | (92) IGGU: Nevada.<br>Pasadena: P 18 <sup>h</sup> 5 <sup>m</sup> 51 <sup>s</sup> ; S 18 <sup>h</sup> 6 <sup>m</sup> 56 <sup>s</sup> .                                                                                                                                 |
| " 12<br>(93)  | e<br>L<br>F                           | 2 54<br>3 4<br>3 17                                               | 22         |          | (93) URSS: 3.0°S, 115°W.                                                                                                                                                                                                                                              |
| " 14<br>(94)  | P'z<br>iz<br>iPPz<br>eLE<br>Lz<br>F   | 18 32 22<br>18 33 17<br>18 37 1<br>19 31<br>19 35 40<br>20 9      | 29         |          | (94) Wellington: 37 <sup>1</sup> / <sub>2</sub> °S, 180°; 18 <sup>h</sup> 12.5 <sup>m</sup> .                                                                                                                                                                         |
| " 14<br>(95)  | ez<br>e<br>F                          | 23 41 36<br>23 45 54<br>24 6                                      |            |          |                                                                                                                                                                                                                                                                       |
| " 15<br>(96)  | eL<br>L<br>F                          | 22 5<br>22 8<br>22 17                                             |            |          |                                                                                                                                                                                                                                                                       |

| Datum<br>1939  | Phase | Zeit |    |    | Periode<br>s | Richtung<br>μ | Bemerkungen                                                                                                                                                    |
|----------------|-------|------|----|----|--------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                |       | h    | m  | s  |              |               |                                                                                                                                                                |
| Mai 16<br>(97) | iSSz  | 7    | 49 | 45 | 20<br>16     | 2<br>15       | (97) Anfang im Papierwechsel.<br>Gefühlt auf Formosa.                                                                                                          |
|                | L     | 8    | 1  |    |              |               |                                                                                                                                                                |
|                | MN    | 8    | 8  |    |              |               |                                                                                                                                                                |
|                | Mz    | 8    | 15 | 10 |              |               |                                                                                                                                                                |
|                | F     | 8    | 57 |    |              |               |                                                                                                                                                                |
| " 17<br>(98)   | iz    | 0    | 38 | 4  |              |               |                                                                                                                                                                |
|                | e     | 0    | 51 |    |              |               |                                                                                                                                                                |
|                | F     | 1    | 56 |    |              |               |                                                                                                                                                                |
| " 17<br>(99)   | eLN   | 15   | 12 | 10 | 36           | 22,5          |                                                                                                                                                                |
|                | M     | 15   | 22 |    |              |               |                                                                                                                                                                |
|                | F     | 15   | 37 |    |              |               |                                                                                                                                                                |
| " 17<br>(100)  | ePz   | 18   | 44 | 7  | 33<br>19     | 34            | (100) IGGU: 24°N, 143°E; 18 <sup>h</sup> 30.4 <sup>m</sup> ; JSA: Gegend<br>von 29.0°N, 143.5°E; 18 <sup>h</sup> 31.0 <sup>m</sup> ; URSS: 24.5°N,<br>146.0°E. |
|                | iPPz  | 18   | 48 | 0  |              |               |                                                                                                                                                                |
|                | iS'   | 18   | 54 | 39 |              |               |                                                                                                                                                                |
|                | L     | 19   | 19 | 15 |              |               |                                                                                                                                                                |
|                | M     | 19   | 25 |    |              |               |                                                                                                                                                                |
|                | F     | 21   | 11 |    |              |               |                                                                                                                                                                |
| " 19<br>(101)  | ePPz  | 18   | 51 | 54 |              |               | (101) JSA: 170°S, 70.0°W; 18 <sup>h</sup> 35 <sup>m</sup> 47 <sup>s</sup> ; h 100 km.                                                                          |
|                | e     | 19   | 12 |    |              |               |                                                                                                                                                                |
|                | M     | 19   | 27 |    |              |               |                                                                                                                                                                |
|                | F     | 19   | 47 |    |              |               |                                                                                                                                                                |
| " 20<br>(102)  | iS    | 9    | 42 | 24 |              |               | (102) Gefühlt in Albanien.<br>IGGU: 41°9'N, 19°19'E; 9 <sup>h</sup> 35 <sup>m</sup> 26 <sup>s</sup> .                                                          |
|                | i     | 9    | 43 | 15 |              |               |                                                                                                                                                                |
|                | F     | 10   | 7  |    |              |               |                                                                                                                                                                |
| " 21<br>(103)  | e     | 13   | 55 |    |              |               |                                                                                                                                                                |
|                | F     | 14   | 4  |    |              |               |                                                                                                                                                                |
| " 21<br>(104)  | e     | 14   | 49 |    |              |               |                                                                                                                                                                |
|                | F     | 14   | 54 |    |              |               |                                                                                                                                                                |
| " 21<br>(105)  | eN    | 20   | 55 |    |              |               | (105) Wellington 22½°S 180°; h 600 km.                                                                                                                         |
|                | F     | 21   | 14 |    |              |               |                                                                                                                                                                |
| " 22<br>(106)  | e     | 2    | 11 |    | 29<br>25     |               | (106) Batavia: gefühlt in Nord Neu Guinea. URSS:<br>2.0°S, 140.5°E.                                                                                            |
|                | L     | 2    | 33 |    |              |               |                                                                                                                                                                |
|                | M     | 2    | 40 |    |              |               |                                                                                                                                                                |
|                | F     | 3    | 10 |    |              |               |                                                                                                                                                                |
| " 23<br>(107)  | iPz   | 4    | 29 | 3  |              | +             | Δ 59.8°.<br>IGGU: 10°N, 60°E; 4 <sup>h</sup> 19.0 <sup>m</sup> . URSS 9.0°N, 61.0°E.                                                                           |
|                | iS    | 4    | 37 | 21 |              |               |                                                                                                                                                                |
|                | eL    | 4    | 51 |    |              |               |                                                                                                                                                                |
|                | L     | 5    | 4  |    |              |               |                                                                                                                                                                |
|                | F     | 5    | 24 |    |              |               |                                                                                                                                                                |
| " 24<br>(108)  | e     | 0    | 30 |    |              |               |                                                                                                                                                                |
|                | F     | 0    | 35 |    |              |               |                                                                                                                                                                |

| Datum<br>1939   | Phase | Zeit |    |    | Periode<br>s | Richtung<br>μ | Bemerkungen                                                                                                                       |
|-----------------|-------|------|----|----|--------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------|
|                 |       | h    | m  | s  |              |               |                                                                                                                                   |
| Mai 24<br>(109) | ez    | 11   | 47 | 58 |              |               |                                                                                                                                   |
|                 | eL    | 11   | 55 | 50 |              |               |                                                                                                                                   |
|                 | F     | 12   | 6  |    |              |               |                                                                                                                                   |
| " 25<br>(110)   | L     | 7    | 5  | 29 |              |               | (110) Manila: gefühlt in SE Luzon. Epiz. 14°30'N,<br>123°10'E.                                                                    |
|                 | L     | 7    | 9  | 23 |              |               |                                                                                                                                   |
|                 | F     | 7    | 23 |    |              |               |                                                                                                                                   |
| " 26<br>(111)   | iz    | 9    | 39 | 47 | 26           | 3             | (111) IGGU: 55°N, 110°E; URSS: 55.0°N,<br>110.0°E.(?).                                                                            |
|                 | eL    | 10   | 3  |    |              |               |                                                                                                                                   |
|                 | MN    | 10   | 16 |    |              |               |                                                                                                                                   |
|                 | F     | 10   | 40 |    |              |               |                                                                                                                                   |
| " 26<br>(112)   | ePPz  | 18   | 10 | 29 | 29<br>38     | 2             | (112) Batavia: gefühlt in Genjem (N. Guinea).<br>URSS: 4.0°S, 140.5°E.                                                            |
|                 | L     | 18   | 27 |    |              |               |                                                                                                                                   |
|                 | LE    | 18   | 46 |    |              |               |                                                                                                                                   |
|                 | F     | 20   | 26 |    |              |               |                                                                                                                                   |
| " 27<br>(113)   | ePz   | 3    | 56 | 59 | 26           | 1             | (113) Δ 72.0°; h 70 km.<br>IGGU: Birma 25°N, 95°E. URSS: 25.0°N, 94.0°E;<br>h 65 km.                                              |
|                 | ipPz  | 3    | 57 | 12 |              |               |                                                                                                                                   |
|                 | eS    | 4    | 6  | 4  |              |               |                                                                                                                                   |
|                 | esS   | 4    | 6  | 36 |              |               |                                                                                                                                   |
|                 | LN    | 4    | 14 | 19 |              |               |                                                                                                                                   |
|                 | F     | 5    | 11 |    |              |               |                                                                                                                                   |
| " 30<br>(114)   | eLN   | 1    | 20 |    |              |               |                                                                                                                                   |
|                 | F     | 1    | 24 |    |              |               |                                                                                                                                   |
| " 30<br>(115)   | iS    | 10   | 22 | 14 |              |               | (115) URSS: gefühlt in Garme (VIII) und Tash-<br>kent (III) 39.5°N, 70.5°E.                                                       |
|                 | iz    | 10   | 22 | 19 |              |               |                                                                                                                                   |
|                 | e     | 10   | 25 | 11 |              |               |                                                                                                                                   |
|                 | eL    | 10   | 33 |    |              |               |                                                                                                                                   |
|                 | F     | 11   | 4  |    |              |               |                                                                                                                                   |
| " 31<br>(116)   | ePe   | 0    | 28 | 17 |              | -             | (116) Δ 17.6°.<br>Gefühlt in Kalavryta (Griechenland).<br>Athen: 37.8°N, 22.1°E. Nature 143, p 976: 38°1'N,<br>22°8'E.            |
|                 | ePz   | 0    | 28 | 19 |              |               |                                                                                                                                   |
|                 | iPPz  | 0    | 28 | 28 |              |               |                                                                                                                                   |
|                 | eSh   | 0    | 31 | 39 |              |               |                                                                                                                                   |
|                 | eN    | 0    | 34 | 10 |              |               |                                                                                                                                   |
|                 | iz    | 0    | 36 | 36 |              |               |                                                                                                                                   |
|                 | F     | 0    | 47 |    |              |               |                                                                                                                                   |
| " 31<br>(117)   | eN    | 1    | 19 | 44 |              |               | (117) IGGU: Nachbeben von (116)?                                                                                                  |
|                 | F     | 1    | 24 |    |              |               |                                                                                                                                   |
| Juni 1<br>(118) | e     | 1    | 18 | 45 |              |               |                                                                                                                                   |
|                 | F     | 1    | 24 |    |              |               |                                                                                                                                   |
| " 2<br>(119)    | ePH   | 3    | 47 | 15 |              | +             | (119) Batavia: gefühlt in Manado, Sangir und Ta-<br>laud I, Halmaheira. Manila: gefühlt in Ost-Mindanao.<br>URSS: 6.5°N, 128.5°E. |
|                 | iPz   | 3    | 47 | 19 |              |               |                                                                                                                                   |
|                 | eP'z  | 3    | 51 | 21 |              |               |                                                                                                                                   |
|                 | iS'   | 3    | 57 | 51 |              |               |                                                                                                                                   |

| Datum<br>1939   | Phase | Zeit     | Periode | Richtung | Bemerkungen                                                                                                   |
|-----------------|-------|----------|---------|----------|---------------------------------------------------------------------------------------------------------------|
|                 |       | h m s    | s       | μ        |                                                                                                               |
|                 | eL    | 4 15     | 26      |          |                                                                                                               |
|                 | ME    | 4 28 14  | 27      | 3        |                                                                                                               |
|                 | F     | 5 32     |         |          |                                                                                                               |
| Juni 2<br>(120) | iz    | 14 15 38 |         | —        |                                                                                                               |
|                 | e     | 14 19 15 |         |          |                                                                                                               |
|                 | F     | 14 29    |         |          |                                                                                                               |
| " 4<br>(121)    | eP'z  | 0 43 24  |         |          | (121) Batavia: gefühlt in den Kleinen Soenda-Inseln.<br>URSS: 9.5°S, 126.5°E; h 100 km.                       |
|                 | eSz   | 0 52 56  |         |          |                                                                                                               |
|                 | eL    | 1 27     |         |          |                                                                                                               |
|                 | F     | 1 48     |         |          |                                                                                                               |
| " 4<br>(122)    | eZ    | 12 17 15 |         |          |                                                                                                               |
|                 | eL    | 13 22    |         |          |                                                                                                               |
|                 | F     | 13 57    |         |          |                                                                                                               |
| " 4<br>(123)    | eL    | 16 18    |         |          |                                                                                                               |
|                 | F     | 16 40    |         |          |                                                                                                               |
| " 5<br>(124)    | ePz   | 23 10    | 3       |          | (124) IGGU: Atlantischer Ozean, W von Azoren.<br>39°N, 37°W; 23 <sup>h</sup> 3.5 <sup>m</sup> .               |
|                 | eL    | 23 18    |         |          |                                                                                                               |
| " 7<br>(125)    | eL    | 1 57     |         |          |                                                                                                               |
|                 | F     | 2 31     |         |          |                                                                                                               |
| " 8<br>(126)    | eL    | 2 22     |         |          |                                                                                                               |
|                 | F     | 2 44     |         |          |                                                                                                               |
| " 8<br>(127)    | L     | 16 32    |         |          |                                                                                                               |
|                 | F     | 16 55    |         |          |                                                                                                               |
| " 8<br>(128)    | iPz   | 21 6 19  |         | +        | (128) h 100 km.                                                                                               |
|                 | iPN   | 21 6 22  |         | +        | Wellington: gefühlt in Apia (Samoa I.) h 100-130                                                              |
|                 | ipPz  | 21 6 44  |         | +        | km. Ep. 16°S, 174°W; 20 <sup>h</sup> 46.9 <sup>m</sup> . USCGS: 15°S,                                         |
|                 | iE    | 21 28 20 |         | +        | 173°W; 20 <sup>h</sup> 47.1 <sup>m</sup> h 100 km. JSA: 14.5°S, 174.3°W;                                      |
|                 | L     | 21 48    |         |          | h 100 km. URSS: 15°S, 172°W; h 120 km.                                                                        |
|                 | F     | 23 3     |         |          |                                                                                                               |
| " 9<br>(129)    | eL    | 20 5     |         |          | (129) URSS: 2.5°S, 139.0° E. N. Guinea.                                                                       |
|                 | F     | 20 37    |         |          | (130) URSS: 33.0°N, 58.0°E. Iran.                                                                             |
| " 10<br>(130)   | eL    | 9 1      |         |          | (131) Δ 61.4°.                                                                                                |
|                 | F     | 9 12     |         |          | Gefühlt in Porto Rito. Seebelen gefühlt auf die                                                               |
| " 12<br>(131)   | iPz   | 4 15 35  |         | +        | Dämpfer „Veendam“ (20°24'N, 65°59'W), „Alabama“                                                               |
|                 | S     | 4 24 3   |         |          | (20°50'N, 65°15'W) und „Framlington Court“                                                                    |
|                 | L     | 4 34 34  | 30      |          | (22°30'N, 66°20'W) um 4 <sup>h</sup> 5 <sup>m</sup> . Der Dampfer „Veen-                                      |
|                 | L     | 4 36     | 24      |          | dam“ wurde plötzlich 14° (343°-357°) aus seinem                                                               |
|                 | ME    | 4 39     | 19.5    | 3        | Kurs geworfen. Es ist zur Zeit nicht möglich mehr                                                             |
|                 | F     | 5 29     |         |          | Einzelheiten zu geben.<br>JSA: 20.1°N, 67.0°W; 4 <sup>h</sup> 5 <sup>m</sup> 14 <sup>s</sup> . USCGS: 21.8°N, |
|                 |       |          |         |          | 66.0°W; 4 <sup>h</sup> 5.2 <sup>m</sup> . URSS: 20.0°N, 67.0°W.                                               |

| Datum<br>1939    | Phase | Zeit     | Periode | Richtung | Bemerkungen                                                                                                            |
|------------------|-------|----------|---------|----------|------------------------------------------------------------------------------------------------------------------------|
|                  |       | h m s    | s       |          |                                                                                                                        |
| Juni 13<br>(132) | eL    | 21 24    |         |          | (132) Batavia: gefühlt in Manado und Laboea.                                                                           |
|                  | eL    | 21 34    | 36      |          | Epiz. 0.7°N, 126.2°E; 20 <sup>h</sup> 39 <sup>m</sup> 5 <sup>s</sup> . h 200 km.                                       |
|                  | F     | 21 54    |         |          |                                                                                                                        |
| " 16<br>(133)    | eL    | 6 8      |         |          |                                                                                                                        |
|                  | F     | 6 15     |         |          |                                                                                                                        |
| " 17<br>(134)    | eL    | 13 24    |         |          |                                                                                                                        |
|                  | F     | 13 34    |         |          |                                                                                                                        |
| " 18<br>(135)    | eL    | 4 39     |         |          |                                                                                                                        |
|                  | F     | 4 50     |         |          |                                                                                                                        |
| " 18<br>(136)    | iz    | 12 49 56 |         | +        | (136) URSS: 41.0°N, 81.0°E, Mongolien.                                                                                 |
|                  | eL    | 12 51    |         |          |                                                                                                                        |
|                  | F     | 12 57    |         |          |                                                                                                                        |
| " 18<br>(137)    | eZ    | 16 58 24 |         |          | (137) IGGU: gefühlt in Costa Rica (VII).                                                                               |
|                  | iz    | 16 58 34 |         |          |                                                                                                                        |
|                  | eLN   | 17 20    |         |          |                                                                                                                        |
|                  | L     | 17 25 39 |         |          |                                                                                                                        |
|                  | M     | 17 30    | 20.5    |          |                                                                                                                        |
|                  | F     | 17 41    |         |          |                                                                                                                        |
| " 19<br>(138)    | eL    | 22 33    | 36      |          | (138) URSS: 25°N, 97.5°E, (Birma). Florissant:                                                                         |
|                  | M     | 22 38    | 21      |          | 33°4'N, 92°38'W; 21 <sup>h</sup> 42 <sup>m</sup> 29 <sup>s</sup> .                                                     |
|                  | F     | 23 7     |         |          |                                                                                                                        |
| " 20<br>(139)    | eL    | 6 39     |         |          |                                                                                                                        |
|                  | F     | 6 42     |         |          |                                                                                                                        |
| " 22<br>(140)    | iPz   | 19 28 0  |         | —        | (140) Δ 44.8°.                                                                                                         |
|                  | PN    | 19 28 2  |         |          | Zerstörendes Beben im Gegend der Goldküste und                                                                         |
|                  | iPPz  | 19 29 50 |         | +        | Togo (Accra).                                                                                                          |
|                  | S     | 19 34 44 |         |          | IGGU: 5.8°N, 0.0; 19 <sup>h</sup> 19 <sup>m</sup> 35 <sup>s</sup> . USCGS: 5°N, 1°W;                                   |
|                  | i     | 19 38 16 |         |          | 19 <sup>h</sup> 19 <sup>m</sup> 33 <sup>s</sup> . JSA: 6.3°N, 1.1°W; 19 <sup>h</sup> 29 <sup>m</sup> 32 <sup>s</sup> . |
|                  | L     | 19 40 40 | 40      |          |                                                                                                                        |
|                  | ME    | 19 45 20 | 16      | 16       |                                                                                                                        |
|                  | MN    | 19 45 20 | 16      | 5        |                                                                                                                        |
|                  | Mz    | 12 45 20 | 17      | 34       |                                                                                                                        |
|                  | F     | 20 48    |         |          |                                                                                                                        |
| " 24<br>(141)    | eL    | 0 38     |         |          | (141) Pasadena: Gegend von Apia.                                                                                       |
|                  | F     | 0 54     |         |          |                                                                                                                        |
| " 24<br>(142)    | eL    | 5 8 40   |         |          | (142) La Plata: Süd-Atlantik?                                                                                          |
|                  | F     | 5 22     |         |          |                                                                                                                        |
| " 24<br>(143)    | eL    | 13 47    |         |          | (143) Pasadena: 37.5°N, 121°W.                                                                                         |
|                  | F     | 13 52    |         |          |                                                                                                                        |
| " 27<br>(144)    | ePz   | 23 28 18 |         | —        | (144) Manila: gefühlt in Mindanao, Leyte und                                                                           |
|                  | iPz   | 23 18 21 |         |          | Samar; Epiz. 7°30'N, 127°E. USCGS: 8°N, 128°E,                                                                         |
|                  | iPP   | 23 22 35 |         |          | 23 <sup>h</sup> 4.4 <sup>m</sup> . JSA: 7.8°N, 126.3°E; 23 <sup>h</sup> 4 <sup>m</sup> 27 <sup>s</sup> . URSS:         |
|                  |       |          |         |          | 8.5°N, 128.5°E.                                                                                                        |

| Datum<br>1939    | Phase                       | Zeit |                            |                            | Periode |          | Richtung | Bemerkungen                                                                                                                                                                                                                                                                                                                  |
|------------------|-----------------------------|------|----------------------------|----------------------------|---------|----------|----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  |                             | h    | m                          | s                          | s       | $\mu$    |          |                                                                                                                                                                                                                                                                                                                              |
|                  | iS'                         | 23   | 29                         | 4                          |         |          |          |                                                                                                                                                                                                                                                                                                                              |
|                  | iz                          | 23   | 31                         | 28                         |         |          |          |                                                                                                                                                                                                                                                                                                                              |
|                  | LE                          | 23   | 38                         |                            | 36      |          |          |                                                                                                                                                                                                                                                                                                                              |
|                  | ME                          | 23   | 58                         | 10                         | 30      |          |          |                                                                                                                                                                                                                                                                                                                              |
|                  | F                           | 1    | 31                         |                            |         |          |          |                                                                                                                                                                                                                                                                                                                              |
| Juni 28<br>(145) | L<br>F                      | 12   | 29<br>41                   |                            |         |          |          | (145) La Plata: gefühlt in Estado Sta Catalina, Brasilien; O: 11 <sup>h</sup> 32.4 <sup>m</sup> .                                                                                                                                                                                                                            |
| " 29<br>(146)    | eL<br>F                     | 21   | 35<br>46                   |                            |         |          |          | (146) URSS: 45°N, 95°E.                                                                                                                                                                                                                                                                                                      |
| Juli 2<br>(147)  | e<br>F                      | 9    | 27<br>31                   |                            |         |          |          |                                                                                                                                                                                                                                                                                                                              |
| " 2<br>(148)     | eL<br>eL<br>F               | 20   | 27<br>36<br>43             |                            |         |          |          |                                                                                                                                                                                                                                                                                                                              |
| " 2<br>(149)     | L<br>F                      | 23   | 53<br>56                   | 22                         |         |          |          |                                                                                                                                                                                                                                                                                                                              |
| " 4<br>(150)     | iz<br>ez<br>iSH<br>L<br>F   | 18   | 40<br>43<br>23<br>4<br>19  | 20<br>57<br>15<br>44<br>56 |         | 35       |          | (150) USCGS: 23°S, 67°W; 18 <sup>h</sup> 26 <sup>m</sup> 3 <sup>s</sup> ; h 300-400 km. UGGI: 22.5°S, 67.5°W. JSA: 19.9°S, 67.3°W; 18 <sup>h</sup> 26 <sup>m</sup> 24 <sup>s</sup> ; h 300 km.                                                                                                                               |
| " 5<br>(151)     | eP<br>ipPE<br>i<br>LE<br>F  | 22   | 59<br>2<br>9<br>30<br>45   | 54<br>16<br>20<br>40<br>45 |         | 29       | 2        | (151) h 600 km. Wellington: 23°S, 178°E; 22 <sup>h</sup> 41.0 <sup>m</sup> ; h 600 km. IGGU: 25°S, 179°W; h 650 km. USCGS: 24°S, 179°W; 22 <sup>h</sup> 40 <sup>m</sup> 9 <sup>s</sup> ; h 500 km. JSA: 24.0°S, 180.0; 22 <sup>h</sup> 40 <sup>m</sup> 54 <sup>s</sup> ; h mindestens 500 km. URSS: 26.0°S, 176.0°E; 630 km. |
| " 6<br>(152)     | e<br>F                      | 4    | 19<br>25                   |                            |         |          |          | (152) URSS: 42.5°N, 85.0°E.                                                                                                                                                                                                                                                                                                  |
| " 8<br>(153)     | ez<br>L<br>F                | 3    | 18<br>24<br>33             | 0                          |         | 20       |          |                                                                                                                                                                                                                                                                                                                              |
| " 12<br>(154)    | iPz<br>iP<br>eS<br>eLE<br>F | 20   | 20<br>20<br>30<br>46<br>21 | 28<br>39<br>19             |         |          |          | (154) $\Delta$ 80.7°<br>URSS: 41.5°N, 145.0°E.                                                                                                                                                                                                                                                                               |
| " 12<br>(155)    | iz<br>eP?<br>eL<br>MN<br>F  | 23   | 8<br>13<br>53<br>0<br>1    | 55<br>16                   |         | 46<br>28 | 2        | (155) Wellington: gefühlt in S. Hawkes Bay und Cook Strait (N. Guinea). Epiz. 4°S, 140°E; 22 <sup>h</sup> 58.4 <sup>m</sup> . URSS: 4.0°S, 141.0°E. Harvard: 4°S, 140°E; 22 <sup>h</sup> 58 <sup>m</sup> 21 <sup>s</sup> .                                                                                                   |

| Datum<br>1939    | Phase                                   | Zeit |                                         |                    | Periode |       | Richtung | Bemerkungen                                                                                                                                                               |
|------------------|-----------------------------------------|------|-----------------------------------------|--------------------|---------|-------|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  |                                         | h    | m                                       | s                  | s       | $\mu$ |          |                                                                                                                                                                           |
| Juli 13<br>(156) | eL<br>F                                 | 17   | 54<br>18                                | 27                 |         |       |          | (156) URSS: 26.5°N, 144.0°E.                                                                                                                                              |
| " 14<br>(157)    | iPz<br>SE<br>L<br>F                     | 8    | 43<br>52<br>9<br>9                      | 12<br>45           |         | 29    |          | (157) $\Delta$ 73.2°<br>URSS: 51.0°N, 166.5°E.                                                                                                                            |
| " 16<br>(158)    | ez<br>ez<br>L<br>F                      | 12   | 34<br>37<br>57<br>46                    | 19<br>39           |         | 38    |          | (158) URSS: 18.0°S, 72.5°E.                                                                                                                                               |
| " 16<br>(159)    | eL<br>F                                 | 19   | 28<br>32                                |                    |         |       |          |                                                                                                                                                                           |
| " 18<br>(160)    | iPz<br>S<br>L<br>M<br>M<br>Mz<br>L<br>F | 3    | 38<br>47<br>56<br>4<br>4<br>4<br>6<br>6 | 8<br>33<br>48      |         | 16    | 54       | (160) $\Delta$ 71.5°<br>USCGS: 49.0°N, 130.5°W; 3 <sup>h</sup> 26.5 <sup>m</sup> . JSA: 49.2°N, 128.1°W; 3 <sup>h</sup> 26 <sup>m</sup> 46 <sup>s</sup> .                 |
| " 18<br>(161)    | ez<br>eL<br>F                           | 11   | 36<br>12<br>12                          | 31                 |         | 23    |          | (161) URSS: 6.5°N, 92.5°E.                                                                                                                                                |
| " 20<br>(162)    | eL<br>F                                 | 0    | 47<br>3                                 |                    |         |       |          | (162) JSA: 22.6°S, 177°W; 2 <sup>h</sup> 23 <sup>m</sup> 0 <sup>s</sup> .                                                                                                 |
| " 20<br>(163)    | iPz<br>eP'N<br>iPP<br>F                 | 2    | 41<br>41<br>45<br>58                    | 41<br>43<br>16     |         |       |          | (163) JSA: Gegend von 22.6°S, 177°W; 2 <sup>h</sup> 23 <sup>m</sup> ; h 650-700 km. USCGS: 21°S, 179°W; 2 <sup>h</sup> 23 <sup>m</sup> . URSS: 26.0°S, 176.0°E. h 640 km. |
| " 21<br>(164)    | ePz<br>F                                | 13   | 5<br>10                                 | 4                  |         |       |          | (164) Rheinland.                                                                                                                                                          |
| " 23<br>(165)    | eL<br>F                                 | 16   | 2<br>13                                 |                    |         |       |          | (165) URSS: 37°N, 26.5°E.                                                                                                                                                 |
| " 24<br>(166)    | eL<br>F                                 | 22   | 17<br>25                                |                    |         |       |          | (166) URSS: 37°N, 26.5°E.                                                                                                                                                 |
| " 25<br>(167)    | Pz<br>eS<br>i<br>i<br>F                 | 3    | 45<br>49<br>52<br>54<br>4               | 5<br>2<br>15<br>30 |         |       |          | (167) $\Delta$ 21.5°<br>URSS: 39.5°N, 31.0°E.                                                                                                                             |

| Datum<br>1939    | Phase                          | Zeit |    |    | Periode<br>s | Richtung<br>$\mu$                                                                 | Bemerkungen |
|------------------|--------------------------------|------|----|----|--------------|-----------------------------------------------------------------------------------|-------------|
|                  |                                | h    | m  | s  |              |                                                                                   |             |
| Juli 26<br>(168) | e<br>F                         | 5    | 27 |    |              |                                                                                   |             |
| " 27<br>(169)    | e<br>F                         | 6    | 2  |    |              | (169) URSS: 30°N, 143°E.                                                          |             |
| " 28<br>(170)    | eL<br>eL<br>F                  | 0    | 7  |    |              |                                                                                   |             |
| " 28<br>(171)    | eL<br>F                        | 6    | 5  |    |              | (171) URSS: 37°N, 142.5°E.                                                        |             |
| " 28<br>(172)    | ePz<br>S<br>F                  | 10   | 17 | 43 |              | (172) $\Delta$ 22.6°.<br>URSS: 35°N, 23.5°E, Kreta.                               |             |
| " 28<br>(173)    | eS<br>F                        | 16   | 15 | 15 |              | (173) URSS: 35.5°N, 23.5°E, Kreta.                                                |             |
| " 31<br>(174)    | e<br>e<br>F                    | 13   | 44 | 46 |              | (174) URSS: 39.0°N, 30.5°E.                                                       |             |
| " 31<br>(175)    | eL<br>M<br>F                   | 19   | 28 |    | 15           |                                                                                   |             |
| Aug. 1<br>(176)  | iz<br>eL<br>F                  | 16   | 7  | 24 |              | (176) URSS: 49.2°N, 156.2°E; h 170 km.                                            |             |
| " 2<br>(177)     | ez<br>e<br>iN<br>LE<br>F       | 0    | 59 | 41 |              |                                                                                   |             |
| " 3<br>(178)     | iz<br>eL<br>F                  | 2    | 48 | 16 | 27           | 4                                                                                 |             |
| " 3<br>(179)     | iPz<br>iPe<br>S<br>L<br>i<br>F | 12   | 37 | 35 |              | (179) $\Delta$ 21.1°.<br>Zürich: Gegend von Klein-Asien.<br>URSS: 41.0°N, 27.0°E. |             |
| " 3<br>(180)     | e<br>F                         | 20   | 32 |    |              |                                                                                   |             |

| Datum<br>1939   | Phase                       | Zeit |    |    | Periode<br>s | Richtung<br>$\mu$                                                                                                                                                       | Bemerkungen                                                                                                  |
|-----------------|-----------------------------|------|----|----|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
|                 |                             | h    | m  | s  |              |                                                                                                                                                                         |                                                                                                              |
| Aug. 4<br>(181) | e<br>F                      | 10   | 26 |    |              |                                                                                                                                                                         |                                                                                                              |
| " 5<br>(182)    | eL<br>F                     | 1    | 3  |    |              | (182) Manila: gefühlt in NE-Mindanao.                                                                                                                                   |                                                                                                              |
| " 5<br>(183)    | e<br>F                      | 21   | 19 | 52 |              |                                                                                                                                                                         |                                                                                                              |
| " 6<br>(184)    | e<br>F                      | 5    | 25 |    |              |                                                                                                                                                                         |                                                                                                              |
| " 8<br>(185)    | eL<br>L<br>F                | 0    | 42 |    |              | (185) URSS: 3.5°N, 76.5°E.                                                                                                                                              |                                                                                                              |
| " 9<br>(186)    | e<br>F                      | 3    | 8  | 19 |              |                                                                                                                                                                         |                                                                                                              |
| " 9<br>(187)    | ePz<br>eSz<br>F             | 12   | 37 | 12 |              | (187) $\Delta$ 21.2°.<br>URSS: 41°N, 25°E.                                                                                                                              |                                                                                                              |
| " 9<br>(188)    | Pz<br>S<br>iz<br>F          | 23   | 48 | 29 |              | (188) $\Delta$ 21.8°.<br>URSS: 39.0°N, 30.0°E.                                                                                                                          |                                                                                                              |
| " 12<br>(189)   | iPz<br>iPP<br>eL<br>F       | 2    | 26 | 36 |              | (189) Wellington: 17°S, 167°E; 2h7.4m; h 150 km.<br>USCGS: 13°S, 169°E; 2h7.6m; h 150 km. JSA: 14.2°S, 168.9°E; 2h7m35s, h 150-175 km. URSS: 16.5°S, 168.0°E; h 180 km. |                                                                                                              |
| " 12<br>(190)   | iPz<br>iSe<br>eL<br>ME<br>F | 10   | 1  | 57 | 28           | +                                                                                                                                                                       | (190) $\Delta$ 77.8°.<br>USCGS: 45°N, 153°E; 9h49.8m. JSA: 44.3°N, 152.5°E; 9h49m55s. URSS: 45.5°N, 152.5°E. |
| " 13<br>(191)   | ez<br>F                     | 4    | 37 | 3  | 26           | 3                                                                                                                                                                       | (191) Manila: Philippinentief; gefühlt in Guiuan (Samar).                                                    |
| " 16<br>(192)   | eLe<br>L<br>F               | 17   | 39 |    | 18           |                                                                                                                                                                         | (192) USCGS: 13°N, 91°W; 17h7.0m JSA: 10.0°N, 93.0°W; 17h6m31s.                                              |
| " 17<br>(193)   | eL<br>F                     | 16   | 30 |    |              |                                                                                                                                                                         |                                                                                                              |
| " 18<br>(194)   | eL<br>F                     | 5    | 17 |    |              |                                                                                                                                                                         |                                                                                                              |

| Datum<br>1939    | Phase                                 | Zeit                                                            | Periode | Richtung | Bemerkungen                                                                                                                |
|------------------|---------------------------------------|-----------------------------------------------------------------|---------|----------|----------------------------------------------------------------------------------------------------------------------------|
|                  |                                       | h m s                                                           | s       | μ        |                                                                                                                            |
| Aug. 18<br>(195) | iP'z<br>iP'N<br>iPP<br>iS'<br>LE<br>F | 22 35 36<br>22 35 39<br>22 38 55<br>22 41 18<br>23 32 0<br>0 56 |         | +        | (195) Wellington: 19°S, 168°E; 22h15.9m.<br>USCGS: 18°S, 168°E; 22h16.0m; J.S.A: 18.0°S,<br>167.9°E; 22h16m0s.             |
| " 19<br>(196)    | iP'z<br>cPP<br>eL<br>F                | 1 7 4<br>1 10 24<br>2 0<br>3 0                                  |         | +        | (196) Wellington: 19°S, 169°E.<br>URSS: 18.0°S, 172.0°E.                                                                   |
| " 21<br>(197)    | eL<br>F                               | 10 3<br>10 26                                                   |         | +        |                                                                                                                            |
| " 21<br>(198)    | Pz<br>SE<br>eL<br>F                   | 15 30 57<br>15 40 42<br>15 56<br>16 49                          |         | +        | (198) Δ 75.5°.<br>URSS: 50.0°N, 176.0°E.                                                                                   |
| " 21<br>(199)    | eL<br>F                               | 19 48<br>20 4                                                   |         | +        |                                                                                                                            |
| " 22<br>(200)    | Pz<br>iz<br>eSE<br>eL<br>F            | 0 18 46<br>0 18 57<br>0 29 25<br>0 46<br>1 17                   |         | +        | (200) Δ 86.4°.<br>URSS: 36.0°N, 141.0°E.                                                                                   |
| " 22<br>(201)    | e<br>e<br>F                           | 12 55 37<br>12 57 30<br>13 4                                    |         | +        | (201) Zürich: vermutlich Herdgebiet Adria.                                                                                 |
| " 23<br>(202)    | Pz<br>i<br>eL<br>F                    | 4 55 51<br>4 56 52<br>5 45<br>7 2                               |         | +        |                                                                                                                            |
| " 23<br>(203)    | eL<br>F                               | 22 14<br>22 43                                                  |         | +        | (203) Manila: gefühlt in E. Mindanao. Epiz. 8°N,<br>127°E.                                                                 |
| " 25<br>(204)    | Pz<br>iz<br>L<br>F                    | 4 7 14<br>4 9 8<br>4 52<br>5 53                                 |         | +        | URSS: 9.5°N, 130.0°E.<br>(204) Riverview: gefühlt in Neu Guinea (Rabaul<br>R.F.6; Kokopo R.F.6).<br>URSS: 13.0°S, 151.5°E. |
| " 26<br>(205)    | eL<br>F                               | 4 12<br>4 25                                                    |         | +        | (205) URSS: 21.5°N, 121.0°E, Formosa.                                                                                      |
| " 27<br>(206)    | iPz<br>iz<br>F                        | 11 37 4<br>11 38 9<br>11 45                                     |         | +        |                                                                                                                            |

| Datum<br>1939    | Phase                                | Zeit                                                             | Periode | Richtung                | Bemerkungen                                                                                |
|------------------|--------------------------------------|------------------------------------------------------------------|---------|-------------------------|--------------------------------------------------------------------------------------------|
|                  |                                      | h m s                                                            | s       | μ                       |                                                                                            |
| Aug. 28<br>(207) | e<br>F                               | 21 54<br>22 21                                                   |         |                         | (207) URSS: 36.5°N, 57.2°E, NE. Iran.                                                      |
| " 30<br>(208)    | eN<br>eL<br>F                        | 0 38 54<br>0 48<br>1 6                                           |         |                         |                                                                                            |
| Sep. 2<br>(209)  | iP'z<br>iPPz<br>eL<br>ME<br>F        | 9 18 11<br>9 20 55<br>10 5<br>10 14<br>11 8                      |         | +                       | (209) Wellington: 13°S, 167°E; 8h58.7m.                                                    |
| " 3<br>(210)     | eE<br>eL<br>L<br>M<br>F              | 8 7 30<br>8 30<br>8 33 6<br>8 41<br>9 3                          |         | 24<br>24<br>23<br>16    |                                                                                            |
| " 5<br>(211)     | PE<br>i<br>F                         | 6 5 15<br>6 8 30<br>6 13                                         |         |                         |                                                                                            |
| " 6<br>(212)     | eL<br>F                              | 9 38<br>9 47                                                     |         |                         |                                                                                            |
| " 6<br>(213)     | eZ<br>iz,E<br>eLN<br>F               | 11 50 18<br>11 58 28<br>12 0<br>12 5                             |         | 37                      |                                                                                            |
| " 8<br>(214)     | iPz<br>ipPz<br>ipPN<br>iS<br>LE<br>F | 12 16 35<br>12 16 42<br>12 16 42<br>12 26 29<br>13 7 29<br>16 20 |         | —<br>—<br>—<br>37<br>34 | (214) Δ 77.2°.<br>USCGS: 51°N, 175°E; 12h4m45s. JSA: 53.7°N,<br>175.8°E; 12h5m7s; h 50 km. |
| " 11<br>(215)    | L<br>L<br>F                          | 8 34 29<br>8 44<br>9 6                                           |         | 23<br>20                |                                                                                            |
| " 12<br>(216)    | eL<br>F                              | 13 22<br>14 3                                                    |         | 28                      | (216) Gefühlt auf die Kermadec-Inseln.<br>Wellington: 30°S, 176°W; 12h6.5m; h 300 km.      |
| " 14<br>(217)    | eL<br>M<br>F                         | 9 42<br>9 50<br>10 28                                            |         | 40<br>24                |                                                                                            |
| " 15<br>(218)    | eZ<br>L<br>F                         | 12 7 32<br>13 15<br>13 35                                        |         | —<br>20                 |                                                                                            |

| Datum<br>1939    | Phase                             | Zeit |    |    | Periode<br>s | Richtung<br>$\mu$ | Bemerkungen                                                                                                                           |
|------------------|-----------------------------------|------|----|----|--------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------|
|                  |                                   | h    | m  | s  |              |                   |                                                                                                                                       |
| Sep. 15<br>(219) | eL<br>F                           | 22   | 41 |    |              |                   |                                                                                                                                       |
| " 15<br>(220)    | iPz<br>iPE<br>iS<br>iz<br>Mz<br>F | 23   | 21 | 13 |              | +                 | (220) $\Delta$ 21.2°.                                                                                                                 |
| " 16<br>(221)    | e<br>F                            | 1    | 56 |    |              |                   |                                                                                                                                       |
| " 16<br>(222)    | e<br>F                            | 5    | 44 |    |              |                   |                                                                                                                                       |
| " 16<br>(223)    | iz<br>eL<br>F                     | 7    | 45 | 11 |              | 39                | (223) Manila: tiefer als normal. Niederl. Ost-Indien.                                                                                 |
| " 17<br>(224)    | eL<br>F                           | 8    | 32 |    |              |                   |                                                                                                                                       |
| " 18<br>(225)    | ih<br>ih<br>F                     | 0    | 18 | 29 |              |                   | (225) Zürich: Gegend von Semmering; starke Beschädigungen in Fuchsberg (Österreich).                                                  |
| " 19<br>(226)    | ePz<br>eS<br>L<br>F               | 3    | 31 | 27 |              |                   | (226) $\Delta$ 46.6°.                                                                                                                 |
| " 20<br>(227)    | PN<br>PE<br>iS<br>LE<br>F         | 0    | 23 | 40 |              | +                 | (227) $\Delta$ 17.7°.<br>Herdegebiet Jonisches Meer. Zürich: 38°N, 18°E.                                                              |
| " 20<br>(228)    | eL<br>F                           | 9    | 0  |    |              |                   |                                                                                                                                       |
| " 21<br>(229)    | iPz<br>L<br>F                     | 11   | 23 | 49 |              | +                 |                                                                                                                                       |
| " 21<br>(230)    | P<br>eSN<br>eL<br>F               | 11   | 48 | 6  |              |                   | (230) $\Delta$ 25.7°.                                                                                                                 |
| " 21<br>(231)    | e<br>F                            | 22   | 13 |    |              |                   | (231) USCGS: 30°N, 114°W; 21 <sup>h</sup> 27.4 <sup>m</sup> . JSA: 30.0°N, 114.0°W; 21 <sup>h</sup> 27 <sup>m</sup> 31 <sup>s</sup> . |

| Datum<br>1939    | Phase                                              | Zeit |    |    | Periode<br>s | Richtung<br>$\mu$ | Bemerkungen                                                                                                                                                                                        |
|------------------|----------------------------------------------------|------|----|----|--------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  |                                                    | h    | m  | s  |              |                   |                                                                                                                                                                                                    |
| Sep. 22<br>(232) | iPz<br>iPE<br>iPN<br>iS<br>L<br>MN<br>ME<br>F      | 0    | 41 | 8  |              |                   | (232) $\Delta$ 20.4°.<br>Gefühlt in Smyrna, Türkei (VIII); Schwere Beschädigungen in Dikili.                                                                                                       |
| " 25<br>(233)    | e<br>F                                             | 16   | 39 |    |              |                   |                                                                                                                                                                                                    |
| Oct. 7<br>(234)  | eZ<br>eL<br>F                                      | 21   | 2  | 59 |              | 31                |                                                                                                                                                                                                    |
| " 9<br>(235)     | L<br>M<br>F                                        | 3    | 30 |    |              | 29                | (235) Wellington: 20°S, 170°E; 2 <sup>h</sup> 17 <sup>m</sup> .                                                                                                                                    |
| " 10<br>(236)    | iPz<br>iz<br>ePPz<br>S<br>L<br>MN<br>ME<br>Mz<br>F | 18   | 44 | 21 |              | +                 | (236) $\Delta$ 80.8°.<br>USCGS: 41°N, 143°E; 18 <sup>h</sup> 32 <sup>m</sup> 3 <sup>s</sup> . JSA: 41.2°N, 143.4°E; 18 <sup>h</sup> 32 <sup>m</sup> 12 <sup>s</sup> .                              |
| " 11<br>(237)    | eL<br>F                                            | 2    | 16 |    |              |                   |                                                                                                                                                                                                    |
| " 15<br>(238)    | e<br>i<br>F                                        | 4    | 54 | 44 |              |                   |                                                                                                                                                                                                    |
| " 15<br>(239)    | e<br>e<br>i<br>F                                   | 14   | 9  | 35 |              |                   | (239) Carrara (Italien) und Kanton Tessin (Schweiz). (II-III).                                                                                                                                     |
| " 17<br>(240)    | eP'z<br>ipP'z<br>izPPz<br>L<br>F                   | 6    | 41 | 19 |              | +                 | (240) Wellington: 15½°S, 167½°E; 125 km.<br>USCGS: 16°S, 168°E; 6 <sup>h</sup> 22.0 <sup>m</sup> ; h 100 km. JSA: 16.8°S, 167.7°E; 6 <sup>h</sup> 22 <sup>m</sup> 8 <sup>s</sup> ; h 110 km.       |
| " 19<br>(241)    | L<br>F                                             | 12   | 18 | 33 |              | 22                | (241) Gefühlt in Neu-England, New York, Ost-Canada; westlich bis Ohio. USCGS: 48°N, 70°W; 11 <sup>h</sup> 54 <sup>m</sup> . JSA: 47.6°N, 70.0°W; 11 <sup>h</sup> 53 <sup>m</sup> 58 <sup>s</sup> . |



| Datum<br>1939    | Phase                          | Zeit |    |    | Periode<br>s | Richtung<br>$\mu$ | Bemerkungen                                                                  |
|------------------|--------------------------------|------|----|----|--------------|-------------------|------------------------------------------------------------------------------|
|                  |                                | h    | m  | s  |              |                   |                                                                              |
| Oct. 19<br>(242) | eL<br>F                        | 21   | 43 | 49 | 21           |                   | (242) Zürich: Klein-Asien.                                                   |
| " 20<br>(243)    | e<br>F                         | 20   | 49 |    |              |                   | (243) Gefühlt in Balboa Heights (Panama) IV.<br>JSA: 9.0°N, 83.0°W; 20h6m1s. |
| " 26<br>(244)    | e<br>eL<br>F                   | 1    | 14 | 54 | 26           |                   |                                                                              |
| " 26<br>(245)    | eL<br>F                        | 22   | 57 |    |              |                   |                                                                              |
| " 30<br>(246)    | iz<br>iz<br>F                  | 13   | 31 | 58 |              |                   |                                                                              |
| " 30<br>(247)    | e<br>F                         | 23   | 34 | 30 |              |                   |                                                                              |
| " 31<br>(248)    | e<br>F                         | 21   | 14 |    |              |                   |                                                                              |
| Nov. 1<br>(249)  | eL<br>F                        | 7    | 24 |    | 28           |                   |                                                                              |
| " 2<br>(250)     | e<br>F                         | 11   | 44 |    |              |                   |                                                                              |
| " 4<br>(251)     | iPz<br>iz<br>eS<br>L<br>M<br>F | 10   | 22 | 23 |              | +                 | (251) $\Delta$ 36.7°.<br>Zürich: Mesopotamien, 47°E, 32°N.                   |
| " 5<br>(252)     | e<br>F                         | 2    | 25 | 53 |              |                   |                                                                              |
| " 7<br>(253)     | eL<br>F                        | 4    | 40 |    |              |                   |                                                                              |
| " 8<br>(254)     | L<br>M<br>F                    | 17   | 43 |    | 28           |                   |                                                                              |
| " 10<br>(255)    | e<br>F                         | 18   | 27 |    |              |                   |                                                                              |
| " 10<br>(256)    | L<br>F                         | 21   | 27 |    | 32           |                   | (256) Wellington: 10°S, 147½°E; 20h20.9m.                                    |

| Datum<br>1939    | Phase                                              | Zeit |    |    | Periode<br>s | Richtung<br>$\mu$ | Bemerkungen                                                                      |
|------------------|----------------------------------------------------|------|----|----|--------------|-------------------|----------------------------------------------------------------------------------|
|                  |                                                    | h    | m  | s  |              |                   |                                                                                  |
| Nov. 18<br>(257) | eN<br>eZ<br>L<br>L<br>L<br>M<br>L<br>F             | 1    | 54 | 23 |              | (+)               |                                                                                  |
| " 21<br>(258)    | Pz<br>S<br>L<br>M<br>F                             | 8    | 54 | 36 |              |                   | (258) Gefühlt in Armenien; Beschädigungen.                                       |
| " 21<br>(259)    | iPz<br>iPE<br>ipPz<br>iz<br>iSE<br>isSE<br>iN<br>F | 11   | 10 | 6  |              | +                 | (259) $\Delta$ 47.7° h ungefähr 200 km.<br>USCGS: 35°N, 71°E; 11h1,2m; h 200 km. |
| " 21<br>(260)    | e<br>F                                             | 22   | 27 |    |              |                   |                                                                                  |
| " 25<br>(261)    | e<br>L<br>F                                        | 0    | 31 |    | 23           |                   |                                                                                  |
| Dez. 5<br>(262)  | iPz<br>PE<br>SE<br>iE<br>iE<br>L<br>Mz<br>ME<br>F  | 8    | 42 | 35 |              | +                 | (262) USCGS: 14.5°N, 92.5°W; 8h30.2m. JSA:<br>13.5°N, 90.9°W; 8h30m10s; h 75 km. |
| " 7<br>(263)     | ePz<br>eL<br>F                                     | 11   | 28 | 15 |              | +                 |                                                                                  |
| " 7<br>(264)     | eL<br>F                                            | 13   | 0  |    |              |                   |                                                                                  |
| " 9<br>(265)     | e<br>F                                             | 3    | 26 |    |              |                   |                                                                                  |
| " 10<br>(266)    | e<br>F                                             | 20   | 28 |    |              |                   |                                                                                  |

| Datum<br>1939    | Phase | Zeit |    |    | Periode<br>s | Richtung<br>$\mu$ | Bemerkungen                                                                                                                                                                                                                                              |
|------------------|-------|------|----|----|--------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  |       | h    | m  | s  |              |                   |                                                                                                                                                                                                                                                          |
| Dez. 16<br>(267) | iPz   | 10   | 58 | 33 |              | +                 | (267) h 70 km.<br>USCGS: 41.9°N, 147.3°E; 10 <sup>h</sup> 46.5 <sup>m</sup> ; Pasadena:<br>44°N, 146°E; h 70 km; JSA: 45.7°N, 145.3°E;<br>10 <sup>h</sup> 46 <sup>m</sup> 35 <sup>s</sup> ; h 80 km.                                                     |
|                  | PE    | 10   | 58 | 33 |              | —                 |                                                                                                                                                                                                                                                          |
|                  | PN    | 10   | 58 | 33 |              | —                 |                                                                                                                                                                                                                                                          |
|                  | ipPz  | 10   | 58 | 49 |              | —                 |                                                                                                                                                                                                                                                          |
|                  | i     | 11   | 8  | 26 |              |                   |                                                                                                                                                                                                                                                          |
|                  | LE    | 11   | 22 |    | 50           |                   |                                                                                                                                                                                                                                                          |
|                  | LE    | 11   | 27 |    | 38           | 7                 |                                                                                                                                                                                                                                                          |
|                  | ME    | 11   | 32 |    | 23           | 5                 |                                                                                                                                                                                                                                                          |
| " 18<br>(268)    | e     | 11   | 22 |    |              |                   | (268) Riverview: gefühlt in Kerema, Gulf Div.<br>Papua, R.F. 5.<br>Wellington: Herdtiefe möglich 400 km.                                                                                                                                                 |
|                  | F     | 11   | 38 |    |              |                   |                                                                                                                                                                                                                                                          |
| " 18<br>(269)    | i     | 15   | 0  | 47 |              |                   | (269) Nahbeben?                                                                                                                                                                                                                                          |
|                  | F     | 15   | 1  |    |              |                   |                                                                                                                                                                                                                                                          |
| " 19<br>(270)    | e     | 19   | 15 |    |              |                   |                                                                                                                                                                                                                                                          |
|                  | F     | 19   | 18 |    |              |                   |                                                                                                                                                                                                                                                          |
| " 21<br>(271)    | e     | 2    | 17 |    |              |                   |                                                                                                                                                                                                                                                          |
|                  | F     | 2    | 25 |    |              |                   |                                                                                                                                                                                                                                                          |
| " 21<br>(272)    | iPz   | 21   | 7  | 10 |              | +                 | (272, 273) Zwei Beben. (272) JSA: 9.9°N, 84.7°W;<br>20 <sup>h</sup> 54 <sup>m</sup> 47 <sup>s</sup> . USCGS: 10.0°N, 85.0°W; 20 <sup>h</sup> 54 <sup>m</sup> 48 <sup>s</sup> .                                                                           |
|                  | iPE   | 21   | 7  | 12 |              | +                 |                                                                                                                                                                                                                                                          |
|                  | ePN   | 21   | 7  | 10 |              | (+)               |                                                                                                                                                                                                                                                          |
|                  | PP    | 21   | 10 | 21 |              | +                 |                                                                                                                                                                                                                                                          |
|                  | SN    | 21   | 17 | 26 |              |                   |                                                                                                                                                                                                                                                          |
| (273)            | P     | 21   | 15 | 14 |              |                   | (273) Zerstörendes Beben in Manado; gefühlt in<br>Ternate, Sulu I. und S. Mindanao. Manila: 0.5°N,<br>124°E. JSA: 0°S, 122°E; 21 <sup>h</sup> 0.5 <sup>m</sup> . USCGS: 2°S,<br>122°E; 21 <sup>h</sup> 0.5 <sup>m</sup> . Seismogram schwierig zu lesen. |
|                  | P'H   | 21   | 18 | 34 |              |                   |                                                                                                                                                                                                                                                          |
|                  | MN    | 21   | 59 |    | 20           | 49                |                                                                                                                                                                                                                                                          |
|                  | F     | 25   | 3  |    |              |                   |                                                                                                                                                                                                                                                          |
| " 22<br>(274)    | Pz    | 4    | 56 | 23 |              | +                 | (274) $\Delta$ 81.2°.<br>USCGS: 9.6°N, 85.0°W; 4 <sup>h</sup> 44 <sup>m</sup> 0 <sup>s</sup> . JSA: 9.8°N,<br>84.2°W; 4 <sup>h</sup> 44 <sup>m</sup> 2 <sup>s</sup> .                                                                                    |
|                  | S     | 5    | 6  | 36 |              |                   |                                                                                                                                                                                                                                                          |
|                  | LN    | 5    | 21 |    | 25           | 5                 |                                                                                                                                                                                                                                                          |
|                  | F     | 8    | 15 |    |              |                   |                                                                                                                                                                                                                                                          |
| " 23<br>(275)    | L     | 17   | 48 |    |              |                   |                                                                                                                                                                                                                                                          |
|                  | F     | 18   | 10 |    |              |                   |                                                                                                                                                                                                                                                          |
| " 25<br>(276)    | e     | 6    | 45 |    |              |                   |                                                                                                                                                                                                                                                          |
|                  | F     | 6    | 50 |    |              |                   |                                                                                                                                                                                                                                                          |
| " 25<br>(277)    | Pz    | 12   | 57 | 52 |              | +                 |                                                                                                                                                                                                                                                          |
|                  | S     | 13   | 2  | 6  |              |                   |                                                                                                                                                                                                                                                          |
|                  | F     | 13   | 29 |    |              |                   |                                                                                                                                                                                                                                                          |

| Datum<br>1939    | Phase | Zeit |    |    | Periode<br>s | Richtung<br>$\mu$ | Bemerkungen                                                                                                                                                                                               |
|------------------|-------|------|----|----|--------------|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                  |       | h    | m  | s  |              |                   |                                                                                                                                                                                                           |
| Dez. 25<br>(278) | eL    | 17   | 25 |    |              |                   |                                                                                                                                                                                                           |
|                  | F     | 17   | 56 |    |              |                   |                                                                                                                                                                                                           |
| " 26<br>(279)    | L     | 12   | 33 | 39 | 37           |                   | (279) USCGS: 13.5°N, 88.4°W; 11 <sup>h</sup> 55 <sup>m</sup> 12 <sup>s</sup> .                                                                                                                            |
|                  | F     | 12   | 55 |    |              |                   |                                                                                                                                                                                                           |
| " 27<br>(280)    | iPz   | 0    | 2  | 58 |              | —                 | (280) $\Delta$ 25.3°.<br>Grosse Erdbeben-katastrophe in Anatolien.<br>UGGI: 39°N, 39°E; 23 <sup>h</sup> 57 <sup>m</sup> 23 <sup>s</sup> .<br>ii nach Wiechert-seismograph; S nach Bosch-seis-<br>mograph. |
|                  | ii    | 0    | 3  | 35 |              | —                 |                                                                                                                                                                                                           |
|                  | iPEW  | 0    | 2  | 58 |              | +                 |                                                                                                                                                                                                           |
|                  | S     | 0    | 7  | 44 |              |                   |                                                                                                                                                                                                           |
|                  | ME    | 0    | 32 |    | 23           | 162               |                                                                                                                                                                                                           |
|                  | F     | 4    | 24 |    |              |                   |                                                                                                                                                                                                           |
| " 27<br>(281)    | iz    | 22   | 44 | 38 |              | —                 | (281) Zürich: Nachstoss in Anatolien (280).                                                                                                                                                               |
|                  | F     | 22   | 52 |    |              |                   |                                                                                                                                                                                                           |
| " 28<br>(282)    | e     | 1    | 16 |    |              |                   |                                                                                                                                                                                                           |
|                  | F     | 1    | 23 |    |              |                   |                                                                                                                                                                                                           |
| " 28<br>(283)    | Pz    | 3    | 30 | 46 |              | +                 | (283) $\Delta$ 25.4°.<br>Zürich: Nachstoss in Anatolien (280).                                                                                                                                            |
|                  | S     | 3    | 35 | 16 |              |                   |                                                                                                                                                                                                           |
|                  | i     | 3    | 36 | 5  |              |                   |                                                                                                                                                                                                           |
|                  | F     | 4    | 0  |    |              |                   |                                                                                                                                                                                                           |
| " 29<br>(284)    | i     | 11   | 44 | 6  |              |                   |                                                                                                                                                                                                           |
|                  | F     | 11   | 57 |    |              |                   |                                                                                                                                                                                                           |