

**AZ ORSZÁGOS FÖLDRENGÉSVIZSGÁLÓ INTÉZET KIADVÁNYAI**

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**A:** SOROZAT  
SERIE

**AZ ORSZÁGOS FÖLDRENGÉSVIZSGÁLÓ INTÉZET  
MIKROSZEIZMIKUS JELENTÉSE**

**1960 — 1961**

**RAPPORT MICROSEISMIQUE**

**DE L'INSTITUT NATIONAL  
SEISMOLOGIQUE DE  
HONGRIE**

Szerkesztette: **D. Csomor**  
Rédigé par:

**BUDAPEST, 1967**

Budapest /BUD/

Instrument: Pendule Wiechert /masse: 1000 kg./

Longitude: 19° 03' 55'' E Gr.      Latitude: 47° 29' 29'' N

Altitude: 110 m.      Sous-sol: Alluvion

Constantes:

| Date<br>1961. | Comp. | V   | To   | E:1 | $\frac{r}{2}$<br>To |
|---------------|-------|-----|------|-----|---------------------|
| Avril         | N     | 168 | 10,0 | 4,1 | 0,00690             |
|               | E     | 155 | 9,7  | 5,0 | 0,00404             |
| Août          | N     | 191 | 9,4  | 4,0 | 0,00951             |
|               | E     | 155 | 9,8  | 4,4 | 0,00916             |

Kaloosa /KAL/

Instrument: Pendule Wiechert horizontal /masse: 200 kg./

Longitude: 18° 58' 35'' E Gr.      Latitude: 46° 31' 43'' N

Altitude: 98 m.      Sous-sol: Sédiment friable  
alluvial

Constantes:

| Date<br>1961. | Comp. | V  | To  | E:1 | $\frac{r}{2}$<br>To |
|---------------|-------|----|-----|-----|---------------------|
| Avril         | N     | 87 | 2,8 | 3,0 | 0,0612              |
|               | E     | 76 | 3,1 | 3,4 | 0,0541              |
| Août          | N     | 82 | 2,9 | 3,4 | 0,0665              |
|               | E     | 96 | 3,1 | 2,9 | 0,0622              |

Kecskemét /KEC/

Instrument: Pendule Krumbach /masse: 100 kg./

Longitude: 19° 41' 54'' E Gr.      Latitude: 46° 54' 44'' N

Altitude: 122 m.      Sous-sol: Alluvion

Constantes:

| Date<br>1961. | Comp. | V   | To  | E:1 | $\frac{r}{2}$<br>To |
|---------------|-------|-----|-----|-----|---------------------|
| Avril         | N     | 98  | 3,1 | 4,9 | 0,0354              |
|               | E     | 100 | 3,2 | 5,0 | 0,0224              |
| Août          | N     | 100 | 3,1 | 4,1 | 0,0187              |
|               | E     | 97  | 3,2 | 4,7 | 0,0166              |

Szeged /SZE/

Instrument: Une paire de pendule Mainka /masse: 210 kg./

Longitude: 20° 08' 29'' E Gr.      Latitude: 46° 14' 54'' N

Altitude: 82 m.      Sous-sol: Alluvion

Constantes:

| Date<br>1961. | Comp. | V   | To  | E:1 | $\frac{r}{2}$<br>To |
|---------------|-------|-----|-----|-----|---------------------|
| Avril         | N     | 133 | 4,2 | 3,5 | 0,0319              |
|               | E     | 137 | 4,1 | 3,8 | 0,0303              |
| Août          | N     | 137 | 4,1 | 3,9 | 0,0441              |
|               | E     | 132 | 4,1 | 3,9 | 0,0225              |

1961

| No. | Date               | Sta-<br>tion | Phase                          | Heure de<br>Greenwich |    |      | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré<br>$\Delta^\circ$ | Remarques                                  |
|-----|--------------------|--------------|--------------------------------|-----------------------|----|------|--------------------|----------------|----------------|-------------------------|--------------------------------------------|
|     |                    |              |                                | h                     | m  | s    |                    | A <sub>N</sub> | A <sub>E</sub> |                         |                                            |
| 1.  | Jan-<br>vier<br>2. | BUD          | PKP<br>PP<br>PKS<br>PPP        | 10                    | 31 | 04   |                    |                |                | 135,4                   | 12,4 S; 166,4 E<br>H= 10 11 56,9<br>h= 161 |
|     |                    | SIZE         | e<br>PKS<br>PPP                | 10                    | 31 | 10   |                    |                |                | 135,8                   |                                            |
| 2.  | 5.                 | BUD          | e<br>S<br>FS<br>PFS<br>L<br>M  | 14                    | 20 | 06   |                    |                |                | 80,1                    | 51,6 N 176,3 W<br>H= 14 06 25,9<br>h= 37   |
|     |                    | SIZE         | PP<br>PPP<br>eL                | 14                    | 21 | 03   | 22                 | 29             | 37             | 81,1                    |                                            |
| 3.  | 5.                 | BUD          | e                              | 16                    | 13 | 30   |                    |                |                |                         |                                            |
| 4.  | 5.                 | BUD          | PKP                            | 18                    | 17 | 28   |                    |                |                | 144,4                   | 21,2 S; 169,3 E<br>H= 17 57 56,6<br>h= 123 |
|     |                    | KEC          | PKP<br>ePKS<br>PPP             | 18                    | 17 | 28   |                    |                |                | 144,1                   |                                            |
|     |                    | SIZE         | 1PKP/F<br>PP<br>eSKS/F         | 18                    | 17 | 12,7 |                    |                |                | 144,5                   |                                            |
| 5.  | 5.                 | BUD          | PKP<br>PP<br>SS<br>L<br>M<br>M | 18                    | 34 | 11   |                    |                |                | 144,2                   | 21 S; 169 E<br>H= 18 14 45<br>h= 124       |
|     |                    | SIZE         | PKP/F<br>ePP                   | 18                    | 33 | 48   | 23                 | 19             | 23             | 144,3                   |                                            |
| 6.  | 7.                 | BUD          | S<br>SS<br>SSS                 | 15                    | 57 | 15   |                    |                |                | 9,9                     | 37,7 N; 21,1 E<br>H= 15 52 54<br>h= 22     |
|     |                    | KEC          | ePg                            | 15                    | 56 | 44   |                    |                |                | 9,2                     |                                            |
|     |                    | SIZE         | S <sup>x</sup>                 | 15                    | 57 | 19   |                    |                |                | 8,8                     |                                            |

1961

| No. | Date                    | Sta-<br>tion | Phase | Heure de<br>Greenwich |    |    | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré | Remarques                                 |
|-----|-------------------------|--------------|-------|-----------------------|----|----|--------------------|----------------|----------------|-------|-------------------------------------------|
|     |                         |              |       | h                     | m  | s  |                    | A <sub>N</sub> | A <sub>E</sub> | Δ°    |                                           |
| 7.  | Jan-<br>vier<br><br>10. | BUD          | P     | 14                    | 34 | 09 |                    |                |                | 75,9  | 49,9 N; 156,2 E<br>H= 14 22 18,2<br>h= 29 |
|     |                         |              | ePP   |                       | 36 | 45 |                    |                |                |       |                                           |
|     |                         |              | PPP   |                       | 38 | 35 |                    |                |                |       |                                           |
|     |                         |              | S     |                       | 43 | 45 |                    |                |                |       |                                           |
|     |                         |              | SKS   |                       | 44 | 08 |                    |                |                |       |                                           |
|     |                         |              | PFS   |                       |    | 48 |                    |                |                |       |                                           |
|     |                         |              | eSSS  |                       | 52 | 57 |                    |                |                |       |                                           |
|     |                         |              | L     | 15                    | 01 | 30 |                    |                |                |       |                                           |
|     |                         |              | M     |                       | 11 |    | 20                 | 60             |                |       |                                           |
|     |                         |              | M     |                       | 11 | 30 | 19                 |                | 64             |       |                                           |
|     |                         |              | SZE   | P                     | 14 | 34 | 10                 |                |                | 76,4  |                                           |
|     |                         |              |       | ePP                   |    | 36 | 31                 |                |                |       |                                           |
|     |                         |              |       | S                     |    | 43 | 16                 |                |                |       |                                           |
|     |                         |              |       | HS                    |    |    | 57                 |                |                |       |                                           |
| 8.  | 16.                     | BUD          | eL    | 15                    | 01 | 31 |                    |                |                | 81,8  | 36 N; 141,1 E<br>H= 07 20 18,6<br>h= 131  |
|     |                         |              | P     | 07                    | 32 | 33 |                    |                |                |       |                                           |
|     |                         |              | PP    |                       | 35 | 28 |                    |                |                |       |                                           |
|     |                         |              | S     |                       | 42 | 47 |                    |                |                |       |                                           |
|     |                         |              | SeS   |                       | 43 | 06 |                    |                |                |       |                                           |
|     |                         |              | PS    |                       |    | 22 |                    |                |                |       |                                           |
|     |                         |              | PFS   |                       | 44 | 06 |                    |                |                |       |                                           |
|     |                         |              | SS    |                       | 47 | 58 |                    |                |                |       |                                           |
|     |                         |              | eL    |                       | 59 |    |                    |                |                |       |                                           |
|     |                         |              | M     | 08                    | 06 | 17 | 17                 | 105            | 89             |       |                                           |
|     |                         | KEC          | P     | 07                    | 32 | 35 |                    |                | 81,9           |       |                                           |
|     |                         |              | PP    |                       | 35 | 28 |                    |                |                |       |                                           |
|     |                         |              | PPP   |                       | 37 | 25 |                    |                |                |       |                                           |
|     |                         |              | S     |                       | 42 | 29 |                    |                |                |       |                                           |
|     |                         | SZE          | eL    | 08                    | 04 |    |                    |                | 82             |       |                                           |
|     |                         |              | P     | 07                    | 32 | 00 |                    |                |                |       |                                           |
|     |                         |              | sP    |                       | 33 | 16 |                    |                |                |       |                                           |
|     |                         |              | PPP   |                       | 37 | 24 |                    |                |                |       |                                           |
|     |                         |              | S     |                       | 42 | 37 |                    |                |                |       |                                           |
|     |                         |              | sS    |                       | 43 | 24 |                    |                |                |       |                                           |
|     |                         |              | SPP   |                       | 44 | 56 |                    |                |                |       |                                           |
|     |                         |              | m     |                       | 45 | 14 | 6                  | 2,2            |                |       |                                           |
|     |                         |              | SS    |                       | 48 | 58 |                    |                |                |       |                                           |
|     |                         |              | eL    | 08                    | 02 | 22 |                    |                |                |       |                                           |
|     |                         |              | M     |                       | 12 | 26 | 16                 | 114            |                | 248   |                                           |

1961

| No. | Date                | Sta-<br>tion | Phase                                                                                   | Heure de<br>Greenwich |          |                                                                                                    | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré | Remarques                                  |
|-----|---------------------|--------------|-----------------------------------------------------------------------------------------|-----------------------|----------|----------------------------------------------------------------------------------------------------|--------------------|----------------|----------------|-------|--------------------------------------------|
|     |                     |              |                                                                                         | h                     | m        | s                                                                                                  |                    | A <sub>N</sub> | A <sub>E</sub> | Δ°    |                                            |
| 9.  | Jan-<br>vier<br>16. | BUD          | P<br>eS<br>eL<br>M                                                                      | 11<br>12              | 32<br>05 | 12<br>42                                                                                           |                    |                |                | 81,6  | 35,7 N; 140,6 E<br>H= 11 19 46,5<br>h= 157 |
| 10. | 16.                 | BUD          | P<br>PP<br>S<br>SKS<br>SoS<br>SS<br>eL<br>M                                             | 12                    | 24       | 51<br>27<br>58<br>34<br>58<br>35<br>06<br>35<br>24<br>40<br>43<br>51                               | 15                 | 15             | 24             | 81,9  | 36,2 N; 141,7 E<br>H= 12 12 34,4<br>h= 105 |
|     |                     | SZE          | eP<br>PPP<br>S<br>SS<br>eL<br>M<br>M                                                    | 13<br>12              | 05<br>24 | 00<br>06<br>02<br>02<br>09<br>08<br>05<br>05<br>07                                                 | 15                 | 95             | 166            | 82,7  |                                            |
| 11. | 16.                 | BUD          | e<br>eL                                                                                 | 14                    | 20       | 06<br>48<br>30                                                                                     | 16<br>15           | 91             | 97             |       |                                            |
| 12. | 16.                 | SZE          | e                                                                                       | 14                    | 45       | 07                                                                                                 |                    |                |                |       |                                            |
|     |                     | BUD          | P<br>PP<br>S<br>SKS<br>SoS<br>FS<br>SS<br>eL<br>M<br>M<br>P<br>PPP<br>S<br>eL<br>M<br>M | 15<br>16              | 53<br>03 | 32<br>38<br>44<br>49<br>04<br>04<br>23<br>42<br>23<br>30<br>30<br>04<br>59<br>56<br>20<br>26<br>06 |                    |                |                | 81,2  | 36,4 N; 140,6 E<br>H= 15 41 23,3<br>h= 147 |
|     |                     | SZE          |                                                                                         | 15<br>16              | 53<br>02 | 04<br>56<br>56<br>20<br>26<br>06                                                                   | 17<br>17           | 26             | 21             | 81,1  |                                            |
|     |                     |              |                                                                                         |                       |          |                                                                                                    | 16<br>14           | 34             | 8              |       |                                            |

1961

| No. | Date                               | Sta-<br>tion | Phase            | Heure de<br>Greenwich |    |    | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré | Remarques                                                                              |
|-----|------------------------------------|--------------|------------------|-----------------------|----|----|--------------------|----------------|----------------|-------|----------------------------------------------------------------------------------------|
|     |                                    |              |                  | h                     | m  | s  |                    | A <sub>N</sub> | A <sub>E</sub> | Δ°    |                                                                                        |
| 13. | Jan-<br>vier<br><br>22.            | BUD          | PKP              | 03                    | 43 | 39 |                    |                |                | 135   | 11,9 S; 166,2 E<br>H= 03 24 04,5<br>h= 25                                              |
|     |                                    |              | PP               |                       | 45 | 59 |                    |                |                |       |                                                                                        |
|     |                                    |              | PKS              |                       | 47 | 21 |                    |                |                |       |                                                                                        |
|     |                                    |              | SKS              |                       | 50 | 44 |                    |                |                |       |                                                                                        |
|     |                                    |              | PS               |                       | 56 | 42 |                    |                |                |       |                                                                                        |
|     |                                    |              | SS               | 04                    | 04 | 04 |                    |                |                |       |                                                                                        |
|     |                                    |              | eSSS             |                       | 10 | 30 |                    |                |                |       |                                                                                        |
|     |                                    |              | eL               |                       | 19 |    |                    |                |                |       |                                                                                        |
|     |                                    |              | M                |                       | 49 | 30 | 17                 |                | 14             |       |                                                                                        |
|     |                                    |              | M                |                       | 53 |    | 17                 | 15             |                |       |                                                                                        |
|     |                                    | SZE          | PKP/F            | 03                    | 43 | 02 |                    |                |                | 135,6 |                                                                                        |
|     |                                    |              | PKS/A            |                       | 46 | 57 |                    |                |                |       |                                                                                        |
|     |                                    |              | PPP              |                       | 48 | 20 |                    |                |                |       |                                                                                        |
|     |                                    |              | SKS/F            |                       | 50 | 02 |                    |                |                |       |                                                                                        |
|     |                                    |              | PcPPKP/F         |                       | 51 | 08 |                    |                |                |       |                                                                                        |
|     |                                    |              | PKPPKP           | 04                    | 01 | 03 |                    |                |                |       |                                                                                        |
|     |                                    |              | SS               |                       | 03 | 10 |                    |                |                |       |                                                                                        |
|     |                                    |              | eL               |                       | 09 | 08 |                    |                |                |       |                                                                                        |
|     |                                    |              | eL               | 01                    | 35 | 00 |                    |                |                |       |                                                                                        |
| 14. | Fé-<br>vrier<br><br>1.<br>2.<br>3. | BUD          | e                | 22                    | 04 | 18 |                    |                |                |       | 28,2 S; 177,5 W<br>H= 21 01 06,4<br>h= 41<br>43,7 N; 147,6 E<br>H= 21 53 43,5<br>h= 45 |
|     |                                    |              | PKP              | 21                    | 21 | 01 |                    |                |                | 156,8 |                                                                                        |
|     |                                    |              | PKP <sub>2</sub> |                       |    | 27 |                    |                |                |       |                                                                                        |
|     |                                    |              | PP               |                       | 25 | 12 |                    |                |                |       |                                                                                        |
|     |                                    |              | P                | 22                    | 05 | 47 |                    |                |                | 78,2  |                                                                                        |
|     |                                    |              | ePP              |                       | 08 | 21 |                    |                |                |       |                                                                                        |
|     |                                    |              | ePPP             |                       | 10 | 16 |                    |                |                |       |                                                                                        |
|     |                                    |              | S                |                       | 15 | 39 |                    |                |                |       |                                                                                        |
|     |                                    |              | SoS              |                       |    | 46 |                    |                |                |       |                                                                                        |
|     |                                    |              | HS               |                       | 16 | 10 |                    |                |                |       |                                                                                        |
|     |                                    |              | PFS              |                       |    | 31 |                    |                |                |       |                                                                                        |
|     |                                    |              | SS               |                       | 20 | 43 |                    |                |                |       |                                                                                        |
|     |                                    |              | SSS              |                       | 24 | 24 |                    |                |                |       |                                                                                        |
|     |                                    |              | eL               |                       | 29 | 13 |                    |                |                |       |                                                                                        |
|     |                                    |              | M                |                       | 43 | 51 | 15                 | 123            |                |       |                                                                                        |
|     |                                    |              | M                |                       | 44 | 01 | 15                 |                | 114            |       |                                                                                        |
|     |                                    |              |                  |                       |    |    |                    |                |                |       |                                                                                        |
|     |                                    |              |                  |                       |    |    |                    |                |                |       |                                                                                        |
|     |                                    |              |                  |                       |    |    |                    |                |                |       |                                                                                        |
|     |                                    |              |                  |                       |    |    |                    |                |                |       |                                                                                        |
|     |                                    |              |                  |                       |    |    |                    |                |                |       |                                                                                        |
|     |                                    |              |                  |                       |    |    |                    |                |                |       |                                                                                        |

1961

| No. | Date                | Sta-<br>tion | Phase | Heure de<br>Greenwich |    |    | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré | Remarques       |
|-----|---------------------|--------------|-------|-----------------------|----|----|--------------------|----------------|----------------|-------|-----------------|
|     |                     |              |       | h                     | m  | s  |                    | A <sub>N</sub> | A <sub>E</sub> | Δ°    |                 |
| 3.  | Fé-<br>vrier<br>12. | KEC          | P     | 22                    | 05 | 47 |                    |                |                | 78,4  |                 |
|     |                     |              | PoP   |                       |    | 55 |                    |                |                |       |                 |
|     |                     |              | S     |                       | 15 | 41 |                    |                |                |       |                 |
|     |                     |              | PS    |                       | 16 | 15 |                    |                |                |       |                 |
|     |                     | SZE          | P     | 22                    | 05 | 30 |                    |                |                | 78,8  |                 |
|     |                     |              | sP    |                       | 06 | 02 |                    |                |                |       |                 |
|     |                     |              | eS    |                       | 14 | 28 |                    |                |                |       |                 |
|     |                     |              | eSS   |                       | 19 | 44 |                    |                |                |       |                 |
|     |                     |              | eL    |                       | 37 | 12 |                    |                |                |       |                 |
|     |                     |              | M     |                       | 41 | 12 | 16                 |                | 223            |       |                 |
|     |                     |              | M     |                       | 44 | 16 | 16                 | 250            |                |       |                 |
| 4.  | 12.                 | BUD          | P     | 23                    | 38 | 38 |                    |                |                | 78    | 44 N; 147,7 E   |
|     |                     |              | S     |                       | 48 | 30 |                    |                |                |       | H= 23 26 34,5   |
|     |                     |              | SKS   |                       |    | 43 |                    |                |                |       | h= 23           |
|     |                     |              | SoS   |                       |    | 50 |                    |                |                |       |                 |
|     |                     |              | eL    | 00                    | 03 |    |                    |                |                |       |                 |
|     |                     |              | M     |                       | 16 | 50 | 15                 | 16             | 19             |       |                 |
| 5.  | 13.                 | SZE          | e     | 00                    | 16 | 40 |                    |                |                |       |                 |
| 6.  | 13.                 | SZE          | e     | 04                    | 11 | 24 |                    |                |                |       |                 |
| 7.  | 13.                 | SZE          | eL    | 11                    | 35 | 28 |                    |                |                |       |                 |
| 8.  | 13.                 | BUD          | P     | 16                    | 39 | 25 |                    |                |                | 78,9  | 43,7 N; 149,6 E |
|     |                     |              | PoP   |                       |    | 33 |                    |                |                |       | H= 16 27 20,9   |
|     |                     |              | S     |                       | 49 | 23 |                    |                |                |       | h= 25           |
|     |                     |              | eL    | 17                    | 14 |    |                    |                |                |       |                 |
| 9.  | 14.                 | BUD          | P     | 03                    | 34 | 09 |                    |                |                | 78,5  | 43,8 N; 147,9 E |
|     |                     |              | PoP   |                       |    | 21 |                    |                |                |       | H= 03 22 00,7   |
|     |                     |              | S     |                       | 44 | 01 |                    |                |                |       | h= 20           |
|     |                     |              | eL    | 04                    | 09 |    |                    |                |                |       |                 |
|     |                     | SZE          | e     | 03                    | 46 | 25 |                    |                |                | 78,7  |                 |
|     |                     |              | eL    |                       | 48 | 01 |                    |                |                |       |                 |
|     |                     |              | M     |                       |    | 25 | 4                  |                | 7              |       |                 |
|     |                     |              | M     |                       | 49 | 37 | 4                  | 9              |                |       |                 |
| 10. | 15.                 | BUD          | P     | 10                    | 57 | 18 |                    |                |                | 78,1  | 43,7 N; 147,4 E |
|     |                     |              | S     | 11                    | 07 | 09 |                    |                |                |       | H= 10 45 15,9   |
|     |                     |              | SoS   |                       |    | 30 |                    |                |                |       | h= 69           |
|     |                     |              | eL    |                       | 28 |    |                    |                |                |       |                 |
|     |                     |              | M     |                       | 34 | 49 | 15                 |                | 18             |       |                 |
|     |                     |              | M     |                       | 35 | 30 | 15                 | 18             |                |       |                 |
| 11. | 15.                 | BUD          | e     | 21                    | 46 | 05 |                    |                |                |       |                 |

1961

| No. | Date                | Sta-<br>tion | Phase                                                            | Heure de<br>Greenwich |                                                  |                                                    | Pé-<br>rio-<br>des     | Ampli-<br>tude      |                 | Degré<br>$\Delta^\circ$ | Remarques                                 |
|-----|---------------------|--------------|------------------------------------------------------------------|-----------------------|--------------------------------------------------|----------------------------------------------------|------------------------|---------------------|-----------------|-------------------------|-------------------------------------------|
|     |                     |              |                                                                  | h                     | m                                                | s                                                  |                        | A <sub>N</sub>      | A <sub>E</sub>  |                         |                                           |
| 12. | Fé-<br>vrier<br>16. | BUD          | e<br>S <sup>x</sup><br>Sg<br>L                                   | 03                    | 47<br>48                                         | 23<br>16<br>29                                     |                        |                     |                 | 6,4                     | 41,1 N; 19,4 E<br>H= 03 44 58,8<br>h= 143 |
| 13. | 22.                 | SZE          | e                                                                | 03                    | 21                                               | 13                                                 |                        |                     |                 |                         |                                           |
| 14. | 23.                 | BUD          | P<br>PP<br>eS<br>eL                                              | 04                    | 28<br>31<br>37                                   | 33<br>58<br>47                                     |                        |                     |                 | 80,6                    | 38,2 N; 142,7 E<br>H= 04 16 25<br>h= 119  |
| 15. | 23.                 | BUD          | M<br>S<br>eL<br>M<br>M                                           | 05<br>21              | 00<br>50<br>52<br>54<br>55                       | 30<br>30<br>30<br>06<br>30                         | 15<br><br><br>12<br>10 | 24<br><br><br><br>5 | 26<br><br><br>9 | 11,9                    | 37,3 N; 27,5 E<br>H= 21 45 51,5<br>h= 25  |
|     |                     | SZE          | e<br>eL<br>M                                                     | 21                    | 51<br>52<br>53                                   | 09<br>49<br>05                                     | 10                     | 8                   |                 | 10,4                    |                                           |
| 16. | 26.                 | BUD          | eP<br>PP<br>PPP<br>S<br>ScS<br>PRS<br>SS<br>eSSS<br>eL<br>M<br>M | 18                    | 23<br>25<br>28<br>33<br><br>34<br>38<br>42<br>49 | 01<br>57<br>02<br>09<br>22<br>02<br>11<br>46<br>49 |                        |                     |                 | 80,4                    | 31,4 N; 131,2 E<br>H= 18 10 48,7<br>h= 54 |
|     |                     | KEC          | P<br>PcP<br>S<br>SKS<br>eL<br>M<br>M                             | 18                    | 23<br><br>33<br><br>48                           | 12<br>21<br>10<br>18<br>30                         | 15<br>16               | 307                 | 189             | 80,4                    |                                           |
|     |                     | SZE          | P<br>sP<br>sS<br>eL<br>M                                         | 18                    | 23<br><br>33<br>55                               | 01<br>25<br>13<br>08<br>45                         | 16<br><br><br>18       | 200                 | 162<br>33       | 80,2                    |                                           |

1961

| No. | Date         | Sta-<br>tion | Phase            | Heure de<br>Greenwich |    |    | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré | Remarques       |
|-----|--------------|--------------|------------------|-----------------------|----|----|--------------------|----------------|----------------|-------|-----------------|
|     |              |              |                  | h                     | m  | s  |                    | A <sub>N</sub> | A <sub>E</sub> | Δ°    |                 |
|     | Fé-<br>vrier |              |                  |                       |    |    |                    |                |                |       |                 |
| 16. | 26.          | SZE          | M                |                       | 02 | 05 | 18                 | 24             |                |       |                 |
| 17. | 28.          | BUD          | e                | 21                    | 47 | 07 |                    |                |                |       |                 |
|     |              | SZE          | e                | 21                    | 44 | 29 |                    |                |                |       |                 |
|     | Mars         |              |                  |                       |    |    |                    |                |                |       |                 |
| 1.  | 7.           | BUD          | PKP              | 10                    | 30 | 34 |                    |                |                | 157,5 | 28,2 S; 175,7 W |
|     |              |              | PKP <sub>2</sub> |                       | 31 | 06 |                    |                |                |       | H= 10 10 38,9   |
|     |              |              | PP               |                       | 34 | 33 |                    |                |                |       | h= 43           |
|     |              |              | SKS              |                       | 37 | 28 |                    |                |                |       |                 |
|     |              |              | PPP              |                       | 38 | 28 |                    |                |                |       |                 |
|     |              |              | SKKS             |                       | 41 | 25 |                    |                |                |       |                 |
|     |              |              | PHS              |                       | 47 | 58 |                    |                |                |       |                 |
|     |              |              | SS               |                       | 54 | 47 |                    |                |                |       |                 |
|     |              |              | SSS              | 11                    | 01 | 06 |                    |                |                |       |                 |
|     |              |              | eL               |                       | 10 |    |                    |                |                |       |                 |
|     |              |              | M                | 12                    | 02 | 28 | 19                 |                | 32             |       |                 |
|     |              |              | M                |                       | 11 |    | 17                 | 14             |                |       |                 |
|     |              | KEC          | ePKP             | 10                    | 31 | 10 |                    |                |                | 157,7 |                 |
|     |              | SZE          | pPKP/F           | 10                    | 30 | 30 |                    |                |                | 158   |                 |
|     |              |              | pPKP/A           |                       | 31 | 18 |                    |                |                |       |                 |
|     |              |              | ePP              |                       | 34 | 22 |                    |                |                |       |                 |
|     |              |              | SKS/F            |                       | 36 | 50 |                    |                |                |       |                 |
|     |              |              | PPP              |                       | 43 | 56 |                    |                |                |       |                 |
| 2.  | 11.          | BUD          | P                | 01                    | 43 | 26 |                    |                |                | 76,2  | 48,7 N; 154,6 E |
|     |              |              | eL               | 03                    | 12 |    |                    |                |                |       | H= 01 31 34,4   |
|     |              |              |                  |                       |    |    |                    |                |                |       | h= 26           |
| 3.  | 13.          | BUD          | e                | 19                    | 25 | 03 |                    |                |                | 14,2  | 34,4 N; 26,5 E  |
|     |              |              | M                |                       | 27 | 33 | 10                 | 4              |                |       | H= 19 17 16,1   |
|     |              |              |                  |                       |    |    |                    |                |                |       | h= 25           |
|     |              | SZE          | e                | 19                    | 24 | 28 |                    |                |                | 12,6  |                 |
| 4.  | 18.          | BUD          | PKP <sub>2</sub> | 15                    | 15 | 35 |                    |                |                | 156,5 | 49,9 S; 163,3 E |
|     |              |              | PKS              |                       | 18 | 33 |                    |                |                |       | H= 14 54 59,3   |
|     |              |              | eSKKS            |                       | 25 | 04 |                    |                |                |       | h= 38           |
|     |              |              | eL               | 16                    | 12 |    |                    |                |                |       |                 |
|     |              | SZE          | PKP              | 15                    | 15 | 22 |                    |                |                | 155,6 |                 |
| 5.  | 20.          | BUD          | PKP              | 16                    | 12 | 43 |                    |                |                | 148,7 | 18,4 S; 175,2 W |
|     |              |              | PKS              |                       | 16 | 15 |                    |                |                |       | H= 15 53 09,9   |
|     |              |              | ePPP             |                       | 19 | 11 |                    |                |                |       | h= 175          |

1961

| No. | Date  | Sta-<br>tion | Phase  | Heure de<br>Greenwich |    |    | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré<br>$\Delta^\circ$ | Remarques      |
|-----|-------|--------------|--------|-----------------------|----|----|--------------------|----------------|----------------|-------------------------|----------------|
|     |       |              |        | h                     | m  | s  |                    | A <sub>N</sub> | A <sub>E</sub> |                         |                |
|     | Mars  |              |        |                       |    |    |                    |                |                |                         |                |
| 5.  | 20.   | BUD          | PcSPKP |                       | 24 | 24 |                    |                |                |                         |                |
|     |       | KEC          | PKP    | 16                    | 12 | 43 |                    |                |                | 149                     |                |
|     |       | SZE          | PKP/F  | 16                    | 12 | 19 |                    |                |                | 149,4                   |                |
|     |       |              | sPKP/A |                       | 13 | 47 |                    |                |                |                         |                |
| 6.  | 23.   | BUD          | e      | 01                    | 05 | 20 |                    |                |                |                         |                |
|     |       | SZE          | e      | 01                    | 05 | 12 |                    |                |                |                         |                |
| 7.  | 28.   | BUD          | PcP    | 09                    | 49 | 36 |                    |                |                | 99,6                    | 0,2 N; 123,6 E |
|     |       |              | PP     |                       | 53 | 47 |                    |                |                |                         | H= 09 35 55,4  |
|     |       |              | PPP    |                       | 56 | 03 |                    |                |                |                         | h= 83          |
|     |       |              | SKS    |                       | 59 | 51 |                    |                |                |                         |                |
|     |       |              | S      | 10                    | 01 | 01 |                    |                |                |                         |                |
|     |       |              | SS     |                       | 06 | 47 |                    |                |                |                         |                |
|     |       |              | eL     |                       | 17 | 00 |                    |                |                |                         |                |
|     |       |              | M      |                       | 37 | 20 | 22                 | 42             |                |                         |                |
|     |       |              | M      |                       | 44 | 23 | 19                 |                | 30             |                         |                |
|     | Avril |              |        |                       |    |    |                    |                |                |                         |                |
| 1.  | 1.    | BUD          | P      | 15                    | 26 | 22 |                    |                |                | 42,2                    | 39,6 N; 77,7 E |
|     |       |              | PP     |                       | 28 | 00 |                    |                |                |                         | H= 15 18 22,8  |
|     |       |              | ePPP   |                       |    | 59 |                    |                |                |                         | h= 21          |
|     |       |              | S      |                       | 32 | 40 |                    |                |                |                         |                |
|     |       |              | eSS    |                       | 35 | 58 |                    |                |                |                         |                |
|     |       |              | ScS    |                       | 36 | 17 |                    |                |                |                         |                |
|     |       |              | SSS    |                       |    | 42 |                    |                |                |                         |                |
|     |       |              | M      |                       | 48 | 30 | 14                 | 35             |                |                         |                |
|     |       |              | M      |                       | 48 | 47 | 12                 |                | 39             |                         |                |
|     |       | KEC          | P      | 15                    | 26 | 19 |                    |                |                | 41,9                    |                |
|     |       |              | PP     |                       | 28 | 01 |                    |                |                |                         |                |
|     |       |              | SSS    |                       | 36 | 29 |                    |                |                |                         |                |
|     |       |              | eL     |                       | 37 | 19 |                    |                |                |                         |                |
|     |       | SZE          | P      | 15                    | 26 | 17 |                    |                |                | 41,7                    |                |
|     |       |              | PPP    |                       | 28 | 25 |                    |                |                |                         |                |
|     |       |              | PcS    |                       | 31 | 53 |                    |                |                |                         |                |
|     |       |              | PKKS   |                       | 45 | 09 |                    |                |                |                         |                |
|     |       |              | M      |                       | 58 | 37 | 16                 | 245            |                |                         |                |
| 2.  | 4.    | BUD          | e      | 09                    | 56 | 47 |                    |                |                | 42                      | 40,1 N; 77,8 E |
|     |       |              | SSS    | 10                    | 04 | 14 |                    |                |                |                         | H= 09 46 36,6  |
|     |       | SZE          | eP     | 09                    | 54 | 13 |                    |                |                | 41,5                    | h= 16          |

1961

| No. | Date  | Sta-<br>tion | Phase | Heure de<br>Greenwich |    |    | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré | Remarques       |
|-----|-------|--------------|-------|-----------------------|----|----|--------------------|----------------|----------------|-------|-----------------|
|     |       |              |       | h                     | m  | s  |                    | A <sub>N</sub> | A <sub>E</sub> | Δ°    |                 |
|     | Avril |              |       |                       |    |    |                    |                |                |       |                 |
| 2.  | 4.    | SZE          | PP    |                       | 55 | 19 |                    |                |                |       |                 |
|     |       |              | PPP   |                       | 56 | 21 |                    |                |                |       |                 |
| 3.  | 9.    | BUD          | P     | 15                    | 47 | 25 |                    |                |                | 80,7  | 24,1 N; 122,2 E |
|     |       |              | PP    |                       | 49 | 46 |                    |                |                |       | H= 15 35 05,4   |
|     |       |              | S     |                       | 57 | 31 |                    |                |                |       | h= 13           |
|     |       |              | eL    | 16                    | 16 |    |                    |                |                |       |                 |
|     |       |              | M     |                       | 27 | 30 | 16                 |                | 21             |       |                 |
|     |       |              | M     |                       | 28 | 22 | 16                 | 9              |                |       |                 |
|     |       | SZE          | ePcP  | 15                    | 47 | 21 |                    |                |                | 80,3  |                 |
|     |       |              | eS    |                       | 57 | 27 |                    |                |                |       |                 |
| 4.  | 13.   | BUD          | P     | 16                    | 42 | 36 |                    |                |                | 42    | 40,1 N; 77,8 E  |
|     |       |              | PP    |                       | 44 | 13 |                    |                |                |       | H= 16 34 39,1   |
|     |       |              | PcS   |                       | 48 | 16 |                    |                |                |       | h= 19           |
|     |       |              | eS    |                       |    | 37 |                    |                |                |       |                 |
|     |       |              | PPS   |                       | 49 | 08 |                    |                |                |       |                 |
|     |       |              | SS    |                       | 51 | 54 |                    |                |                |       |                 |
|     |       |              | eScS  |                       | 52 | 16 |                    |                |                |       |                 |
|     |       |              | eL    |                       | 56 |    |                    |                |                |       |                 |
|     |       |              | M     | 17                    | 00 | 35 | 16                 | 53             |                |       |                 |
|     |       |              | M     |                       | 02 | 02 | 16                 |                | 89             |       |                 |
|     |       | SZE          | P     | 16                    | 42 | 36 |                    |                |                | 41,5  |                 |
|     |       |              | PcP   |                       | 44 | 08 |                    |                |                |       |                 |
|     |       |              | ScS   |                       | 52 | 08 |                    |                |                |       |                 |
|     |       |              | eL    |                       | 58 | 47 |                    |                |                |       |                 |
| 5.  | 23.   | BUD          | P     | 05                    | 26 | 55 |                    |                |                | 83,6  | 26,2 N; 129,8 E |
|     |       |              | S     |                       | 37 | 14 |                    |                |                |       | H= 05 14 31,1   |
|     |       |              |       |                       |    |    |                    |                |                |       | h= 110          |
| 6.  | 23.   | BUD          | eP    | 09                    | 13 | 44 |                    |                |                | 78,4  | 44,6 N; 150,2 E |
|     |       |              | PcP   |                       |    | 56 |                    |                |                |       | H= 09 01 41,8   |
|     |       |              | PP    |                       | 18 | 56 |                    |                |                |       | h= 44           |
|     |       |              | S     |                       | 23 | 38 |                    |                |                |       |                 |
|     |       |              | SKS   |                       |    | 52 |                    |                |                |       |                 |
|     |       |              | H3    |                       | 24 | 17 |                    |                |                |       |                 |
|     |       |              | ePPS  |                       | 25 | 06 |                    |                |                |       |                 |
|     |       |              | eSS   |                       | 28 | 15 |                    |                |                |       |                 |
|     |       |              | eSSS  |                       | 31 | 09 |                    |                |                |       |                 |
|     |       |              | eL    |                       | 32 | 30 |                    |                |                |       |                 |
|     |       |              | M     |                       | 49 | 45 | 16                 |                | 22             |       |                 |
|     |       |              | M     |                       | 49 | 56 | 16                 | 42             |                |       |                 |

1961

| No. | Date  | Sta-<br>tion | Phase | Heure de<br>Greenwich |    |    | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré<br>$\Delta^\circ$ | Remarques              |
|-----|-------|--------------|-------|-----------------------|----|----|--------------------|----------------|----------------|-------------------------|------------------------|
|     |       |              |       | h                     | m  | s  |                    | A <sub>N</sub> | A <sub>E</sub> |                         |                        |
|     | Avril |              |       |                       |    |    |                    |                |                |                         |                        |
| 6.  | 23.   | SZE          | SPP   | 09                    | 13 | 54 |                    |                |                | 79                      |                        |
| 7.  | 25.   | BUD          | P     | 01                    | 29 | 41 |                    |                |                | 78,4                    | 44,5 N; 150 E          |
|     |       |              | S     |                       | 39 | 40 |                    |                |                |                         | H= 01 17 42,7<br>h= 78 |
| 8.  | 26.   | BUD          | P     | 07                    | 51 | 01 |                    |                |                | 78,3                    | 44,6 N; 149,9 E        |
|     |       |              | eS    | 08                    | 00 | 25 |                    |                |                |                         | H= 07 38 54,1<br>h= 20 |
|     |       |              | eL    |                       | 19 | 30 |                    |                |                |                         |                        |
|     |       |              | M     |                       | 29 | 25 | 15                 |                | 11             |                         |                        |
|     |       |              | M     |                       | 29 | 45 | 16                 | 11             |                |                         |                        |
| 9.  | 29.   | BUD          | P     | 09                    | 34 | 56 |                    |                |                | 28,8                    | 71,3 N; 7,4 W          |
|     |       |              | PP    |                       | 35 | 45 |                    |                |                |                         | H= 09 29 09,5<br>h= 14 |
|     |       |              | PPP   |                       | 36 | 17 |                    |                |                |                         |                        |
|     |       |              | S     |                       | 39 | 34 |                    |                |                |                         |                        |
|     |       |              | eL    |                       | 44 | 30 |                    |                |                |                         |                        |
|     |       |              | M     |                       | 46 |    | 14                 |                | 29             |                         |                        |
|     |       |              | M     |                       | 48 | 04 | 12                 | 12             |                |                         |                        |
|     |       | SZE          | eP    | 09                    | 34 | 29 |                    |                |                | 28,2                    |                        |
|     |       |              | PP    |                       | 35 | 34 |                    |                |                |                         |                        |
|     |       |              | PPP   |                       | 36 | 22 |                    |                |                |                         |                        |
|     |       |              | eL    |                       | 44 | 53 |                    |                |                |                         |                        |
|     |       |              | M     |                       | 50 | 53 | 12                 | 6,2            |                |                         |                        |
|     | Mai   |              |       |                       |    |    |                    |                |                |                         |                        |
| 1.  | 2.    | BUD          | PKP   | 23                    | 05 | 00 |                    |                |                | 156,9                   | 27,8 S; 176,5 W        |
|     |       |              | PKS   |                       | 08 | 55 |                    |                |                |                         | H= 22 44 44,3<br>h= 47 |
|     |       |              | SKS   |                       | 12 | 17 |                    |                |                |                         |                        |
|     |       |              | SKKS  |                       | 17 | 43 |                    |                |                |                         |                        |
|     |       |              | eL    |                       | 44 |    |                    |                |                |                         |                        |
|     |       |              | M     | 00                    | 15 |    | 19                 |                | 7              |                         |                        |
| 2.  | 16.   | BUD          | P     | 21                    | 57 | 53 |                    |                |                | 81,9                    | 30 N; 132 E            |
|     |       |              | ePP   | 22                    | 01 | 33 |                    |                |                |                         | H= 21 45 29<br>h= 25   |
|     |       |              | S     |                       | 08 | 04 |                    |                |                |                         |                        |
|     |       |              | SoS   |                       |    | 20 |                    |                |                |                         |                        |
|     |       |              | PS    |                       | 09 | 04 |                    |                |                |                         |                        |
|     |       |              | eL    |                       | 29 |    |                    |                |                |                         |                        |
| 3.  | 23.   | BUD          | eP    | 02                    | 48 | 21 |                    |                |                | 13,1                    | 36,4 N; 28,3 E         |
|     |       |              | PPP   |                       |    | 48 |                    |                |                |                         | H= 02 45 16<br>h=49    |

1961

| No. | Date        | Sta-<br>tion | Phase                                      | Heure de<br>Greenwich |                                              |                                            | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré | Remarques                                |
|-----|-------------|--------------|--------------------------------------------|-----------------------|----------------------------------------------|--------------------------------------------|--------------------|----------------|----------------|-------|------------------------------------------|
|     |             |              |                                            | h                     | m                                            | s                                          |                    | A <sub>N</sub> | A <sub>E</sub> | Δ°    |                                          |
|     | <b>Mai</b>  |              |                                            |                       |                                              |                                            |                    |                |                |       |                                          |
| 3.  | 23.         | BUD          | eS<br>eSSS<br>M<br>M                       |                       | 50<br>51<br>53<br>54                         | 30<br>57<br>25<br>21                       |                    |                | 188            |       |                                          |
|     |             | KEC          | P<br>PPP<br>S                              | 02                    | 48                                           | 21<br>41<br>31                             | 12<br>11           | 94             |                | 12,4  |                                          |
|     |             | SIZE         | P<br>PPP<br>S                              | 02                    | 48<br>49<br>50                               | 17<br>12<br>52                             |                    |                |                | 11,6  |                                          |
| 4.  | 25.         | SIZE         | eL                                         | 13                    | 18                                           | 02                                         |                    |                |                |       |                                          |
|     | <b>Juin</b> |              |                                            |                       |                                              |                                            |                    |                |                |       |                                          |
| 1.  | 1.          | BUD          | P<br>PP<br>S<br>PPS<br>SSS<br>eL<br>M<br>M | 23                    | 37<br>38<br>42<br>43<br>46<br>52<br>57<br>58 | 04<br>18<br>56<br>21<br>09<br><br>40<br>40 |                    |                | 18             | 40,6  | 10,6 N; 39,3 E<br>H= 23 29 21,1<br>h= 51 |
| 2.  | 2.          | BUD          | PKS<br>PPP<br>PPS<br>eL<br>M<br>M          | 04<br><br>05          | 58<br>59<br>07<br>15<br>21<br>26             | 59<br>20<br>48<br><br>09<br>12             | 13<br>14           | 10             |                | 118,6 | 5,5 S; 146,4 E<br>H= 04 36 52,3<br>h= 32 |
| 3.  | 2.          | SIZE         | e                                          | 13                    | 45                                           | 06                                         | 13                 | 11             | 4              |       |                                          |
| 4.  | 4.          | BUD          | P<br>PPP<br>ePPS<br>eSes<br>SS             | 07                    | 41<br>43<br>48<br>50                         | 46<br>39<br>39<br>09<br>47                 |                    |                |                | 48,1  | 33,8 N; 81,8 E<br>H= 07 33 05,4<br>h= 30 |
|     |             | SIZE         | P<br>PPP                                   | 07                    | 41<br>43                                     | 43<br>40                                   |                    |                |                | 48,6  |                                          |
| 5.  | 11.         | BUD          | P<br>P                                     | 05                    | 17<br>18                                     | 06<br>32                                   |                    |                |                | 33,2  | 28,9 N; 54,6 E<br>H= 05 10<br>h= 38      |

1961

| No. | Date        | Sta-<br>tion | Phase           | Heure de<br>Greenwich |    |    | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré | Remarques                                |
|-----|-------------|--------------|-----------------|-----------------------|----|----|--------------------|----------------|----------------|-------|------------------------------------------|
|     |             |              |                 | h                     | m  | s  |                    | A <sub>N</sub> | A <sub>E</sub> | Δ°    |                                          |
| 5.  | Juin<br>11. | BUD          | PcP             |                       | 19 | 28 |                    |                |                |       |                                          |
|     |             |              | S               |                       | 22 | 21 |                    |                |                |       |                                          |
|     |             |              | SS              |                       | 24 | 20 |                    |                |                |       |                                          |
|     |             |              | SSS             |                       |    | 56 |                    |                |                |       |                                          |
|     |             |              | eL              |                       | 29 |    |                    |                |                |       |                                          |
|     |             |              | M               |                       | 34 | 26 | 13                 | 47             |                |       |                                          |
|     |             |              | M               |                       |    | 37 | 13                 |                | 51             |       |                                          |
|     |             | SZE          | P               | 05                    | 17 | 07 |                    |                |                | 33,5  |                                          |
|     |             |              | PP              |                       |    | 10 |                    |                |                |       |                                          |
|     |             |              | PPP             |                       | 18 | 20 |                    |                |                |       |                                          |
|     |             |              | S               |                       | 20 | 23 |                    |                |                |       |                                          |
|     |             |              | SS              |                       | 21 | 44 |                    |                |                |       |                                          |
|     |             |              | SSS             |                       | 24 | 41 |                    |                |                |       |                                          |
|     |             |              | M               |                       | 31 | 53 | 9                  |                | 49             |       |                                          |
|     |             |              | eL              | 08                    | 26 | 30 |                    |                |                |       |                                          |
|     |             |              | e               | 16                    | 11 | 36 |                    |                |                | 11,9  | 37,9 N; 28,7 E<br>H= 16 04 02            |
|     |             |              | e               | 16                    | 10 | 06 |                    |                |                | 10,5  | h= 31                                    |
|     |             |              | Pn              | 00                    | 57 | 21 |                    |                |                | 5,1   | 42,4 N; 19,6 E<br>H= 00 56 04,7<br>h= 53 |
|     |             |              | Pg              |                       |    | 44 |                    |                |                |       |                                          |
|     |             |              | Sn              |                       | 58 | 20 |                    |                |                |       |                                          |
| 8.  | 22.         | BUD          | S <sup>x</sup>  |                       |    | 24 |                    |                |                |       |                                          |
|     |             |              | Sg              |                       |    | 50 |                    |                |                |       |                                          |
|     |             | KAL          | Pn              | 00                    | 56 | 14 |                    |                |                | 4,2   |                                          |
|     |             |              | eP <sup>x</sup> |                       | 57 | 26 |                    |                |                |       |                                          |
|     |             | SZE          | P <sup>x</sup>  | 00                    | 57 | 29 |                    |                |                | 3,9   |                                          |
|     |             |              | ePg             |                       |    | 52 |                    |                |                |       |                                          |
|     |             |              | eL              |                       | 58 | 18 |                    |                |                |       |                                          |
|     |             |              | M               |                       | 59 | 38 | 5                  |                | 23             |       |                                          |
|     |             |              |                 |                       |    |    |                    |                |                |       |                                          |
|     |             |              |                 |                       |    |    |                    |                |                |       |                                          |
| 1.  | 6.          | BUD          | PKP             | 22                    | 29 | 02 |                    |                |                | 143,1 | 20 S; 169 E<br>H= 22 09 31,4<br>h= 47    |
|     |             |              | PP              |                       | 32 | 02 |                    |                |                |       |                                          |
|     |             |              | eL              | 23                    | 15 |    |                    |                |                |       |                                          |
|     |             | KEC          | e               | 22                    | 28 | 40 |                    |                |                | 143,3 |                                          |
|     |             |              | PKP             |                       | 29 | 05 |                    |                |                |       |                                          |
|     |             | SZE          | PKP             | 22                    | 29 | 06 |                    |                |                | 143,4 |                                          |
|     |             |              |                 |                       |    |    |                    |                |                |       |                                          |

1961

| No. | Date         | Sta-<br>tion | Phase          | Heure de<br>Greenwich |    |    | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré<br>$\Delta^\circ$ | Remarques       |
|-----|--------------|--------------|----------------|-----------------------|----|----|--------------------|----------------|----------------|-------------------------|-----------------|
|     |              |              |                | h                     | m  | s  |                    | A <sub>N</sub> | A <sub>E</sub> |                         |                 |
|     | Juil-<br>let |              |                |                       |    |    |                    |                |                |                         |                 |
| 1.  | 6.           | SZE          | pPKP           |                       |    | 35 |                    |                |                |                         |                 |
|     |              |              | PP             |                       | 31 | 36 |                    |                |                |                         |                 |
|     |              |              | PPP            |                       | 35 | 49 |                    |                |                |                         |                 |
| 2.  | 10.          | SZE          | e              | 08                    | 48 | 59 |                    |                |                |                         |                 |
| 3.  | 11.          | SZE          | e              | 02                    | 52 | 15 |                    |                |                |                         |                 |
| 4.  | 13.          | SZE          | e              | 15                    | 20 | 26 |                    |                |                |                         |                 |
| 5.  | 17.          | BUD          | e              | 17                    | 04 | 53 |                    |                |                |                         |                 |
| 6.  | 18.          | BUD          | P              | 14                    | 16 | 01 |                    |                |                | 82,5                    | 29,4 N; 131,6 E |
|     |              |              | ePPP           |                       | 20 | 09 |                    |                |                |                         | H= 14 03 36,5   |
|     |              |              | S              |                       | 26 | 18 |                    |                |                |                         | h= 21           |
|     |              |              | ScS            |                       |    | 29 |                    |                |                |                         |                 |
|     |              |              | PS             |                       | 27 | 14 |                    |                |                |                         |                 |
|     |              |              | eL             |                       | 43 |    |                    |                |                |                         |                 |
|     |              |              | M              |                       | 53 | 06 | 15                 | 77             |                |                         |                 |
|     |              |              | M              |                       | 53 | 12 | 16                 |                | 67             |                         |                 |
|     |              | SZE          | P              | 14                    | 16 | 03 |                    |                |                | 81,9                    |                 |
|     |              |              | PoP            |                       |    | 09 |                    |                |                |                         |                 |
|     |              |              | PP             |                       | 19 | 03 |                    |                |                |                         |                 |
|     |              |              | PPP            |                       | 20 | 46 |                    |                |                |                         |                 |
|     |              |              | ScS            |                       | 26 | 23 |                    |                |                |                         |                 |
|     |              |              | eL             |                       | 45 | 01 |                    |                |                |                         |                 |
|     |              |              | M              |                       | 53 | 41 | 11                 | 53             |                |                         |                 |
|     |              |              | M              |                       | 56 | 55 | 17                 |                | 188            |                         |                 |
| 7.  | 18.          | BUD          | P              | 14                    | 46 | 30 |                    |                |                | 81,6                    | 29,9 N; 131,2 E |
|     |              |              |                |                       |    |    |                    |                |                |                         | H= 14 34 07,3   |
|     |              |              |                |                       |    |    |                    |                |                |                         | h= 72           |
| 8.  | 18.          | BUD          | P              | 15                    | 00 | 13 |                    |                |                |                         |                 |
| 9.  | 19.          | BUD          | Pn             | 23                    | 03 | 42 |                    |                |                | 9,9                     | 37,7 N; 20,2 E  |
|     |              |              | P <sup>x</sup> |                       | 04 | 11 |                    |                |                |                         | H= 23 00 56,7   |
|     |              |              | Pg             |                       |    | 31 |                    |                |                |                         | h= 37           |
|     |              |              | eSn            |                       | 05 | 27 |                    |                |                |                         |                 |
|     |              |              | S <sup>x</sup> |                       | 06 | 17 |                    |                |                |                         |                 |
| 10. | 23.          | BUD          | ePKP           | 22                    | 10 | 31 |                    |                |                | 141,4                   | 18,3 S; 168,3 E |
|     |              |              | PP             |                       | 13 | 18 |                    |                |                |                         | H= 21 51 07,5   |
|     |              |              | eSKS           |                       | 17 | 13 |                    |                |                |                         | h= 44           |
|     |              |              | SSF            |                       | 32 | 18 |                    |                |                |                         |                 |
|     |              |              | eL             |                       | 53 |    |                    |                |                |                         |                 |
|     |              |              | M              | 23                    | 09 | 51 | 23                 | 82             |                |                         |                 |
|     |              |              | M              |                       | 13 | 30 | 23                 |                | 94             |                         |                 |
|     |              | SZE          | PKP            | 22                    | 10 | 29 |                    |                |                | 141,6                   |                 |
|     |              |              | pPKP           |                       |    | 38 |                    |                |                |                         |                 |

1961

| No. | Date           | Sta-<br>tion | Phase                                       | Heure de<br>Greenwich |          |                                              | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré<br>$\Delta^\circ$ | Remarques                                 |
|-----|----------------|--------------|---------------------------------------------|-----------------------|----------|----------------------------------------------|--------------------|----------------|----------------|-------------------------|-------------------------------------------|
|     |                |              |                                             | h                     | m        | s                                            |                    | A <sub>N</sub> | A <sub>E</sub> |                         |                                           |
| 10. | Juillet<br>23. | SZE          | PPP<br>eL                                   |                       | 17<br>57 | 06<br>01                                     |                    |                |                |                         |                                           |
| 1.  | Août<br>1.     | BUD          | PP<br>PKS<br>ScSPKP<br>eL                   | 06                    | 01       | 28<br>18<br>26                               |                    |                |                | 130,2                   | 9,8 S; 160,5 E<br>H= 05 39 53,2<br>h= 50  |
| 2.  | 8.             | SZE<br>BUD   | PP<br>P<br>PP<br>S<br>eL                    | 06<br>12              | 01<br>30 | 28<br>43<br>20<br>55                         |                    |                |                | 130,2<br>81,3           | 50,9 N; 170,7 W<br>H= 12 18 18,9<br>h= 24 |
| 3.  | 11.            | BUD          | P<br>sS<br>PS<br>eSS<br>SSS<br>eL<br>M<br>M | 16                    | 03       | 32<br>55<br>19<br>22<br>25<br>28<br>41<br>28 |                    |                |                | 77,8                    | 42,9 N; 145,1 E<br>H= 15 51 35,4<br>h= 71 |
|     |                | KAL          | P<br>sP                                     | 16                    | 03       | 38<br>52                                     | 16                 | 122            |                |                         |                                           |
|     |                | KEC          | P<br>eS<br>SKS<br>PS<br>eL                  | 16                    | 03       | 31<br>46<br>23<br>45<br>30                   | 16                 |                | 162            |                         |                                           |
|     |                | SZE          | P<br>PP<br>ScS<br>eL                        | 16                    | 03       | 32<br>38<br>04<br>02                         |                    |                |                | 77,7                    |                                           |
| 4.  | 17.            | BUD          | P<br>pP<br>ePP<br>S<br>ScS                  | 21                    | 28       | 08<br>44<br>26<br>40<br>09                   |                    |                |                | 76,6                    | 46,3 N; 149,3 E<br>H= 21 16 30<br>h= 186  |

1961

| No. | Date        | Sta-<br>tion | Phase                                                                       | Heure de<br>Greenwich |                                              |                                              | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré | Remarques                                |
|-----|-------------|--------------|-----------------------------------------------------------------------------|-----------------------|----------------------------------------------|----------------------------------------------|--------------------|----------------|----------------|-------|------------------------------------------|
|     |             |              |                                                                             | h                     | m                                            | s                                            |                    | A <sub>N</sub> | A <sub>E</sub> | Δ°    |                                          |
| 4.  | Aout<br>17. | BUD          | sS<br>SSS<br>M<br>M                                                         |                       | 39<br>46<br>54<br>57                         | 04<br>21<br>09                               | 9<br>9             | 2              | 8              |       |                                          |
|     |             | SZE          | SPP                                                                         | 21                    | 28                                           | 15                                           |                    |                |                | 77,3  |                                          |
| 5.  | 19.         | BUD          | eSS<br>P<br>pP<br>PP<br>SKS<br>PS<br>sS<br>P <sub>2</sub><br>PPS<br>eL<br>M | 05                    | 22<br>24<br>26<br>31<br>35<br>37<br>45<br>56 | 18<br>33<br>09<br>56<br>18<br>17<br>42<br>49 |                    |                |                | 97,9  | 10,7 S; 71 W<br>H= 05 09 49,5<br>h= 649  |
|     |             | SZE          | e<br>PS<br>eL                                                               | 05<br>06              | 33<br>15                                     | 06<br>55                                     | 16                 | 239            | 153            | 98,9  |                                          |
| 6.  | 25.         | BUD          | e                                                                           | 12                    | 25                                           | 03                                           |                    |                |                |       |                                          |
| 7.  | 27.         | BUD          | e<br>eL                                                                     | 16<br>17              | 34<br>08                                     | 10<br>30                                     |                    |                |                |       |                                          |
| 8.  | 27.         | BUD          | P<br>PPP<br>S<br>SS                                                         | 22                    | 12<br>14                                     | 10<br>21<br>40                               |                    |                |                | 12,1  | 35,9 N; 23,7 E<br>H= 22 08 44,8<br>h= 69 |
| 9.  | 31.         | SZE          | e                                                                           | 22                    | 15                                           | 03                                           |                    |                |                | 10,7  |                                          |
|     |             | BUD          | P<br>PP<br>PPP<br>SKS<br>S                                                  | 02                    | 09<br>10<br>13<br>19<br>20                   | 44<br>52<br>07<br>21<br>07                   |                    |                |                | 97,5  | 10,4 S; 70,7 W<br>H= 01 57 08<br>h= 629  |
|     |             | KAL          | P<br>PP<br>SP<br>SKS<br>sP                                                  | 02                    | 09<br>10<br>11<br>19<br>21                   | 40<br>54<br>46<br>20<br>51                   |                    |                |                | 97,3  |                                          |
|     |             | SZE          | P<br>PP<br>SKS                                                              | 02                    | 09<br>10<br>19                               | 45<br>56<br>36                               |                    |                |                | 98,1  |                                          |

1961

| No. | Date                 | Sta-<br>tion | Phase                                                            | Heure de<br>Greenwich |    |    | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré<br>$\Delta^\circ$ | Remarques                                 |
|-----|----------------------|--------------|------------------------------------------------------------------|-----------------------|----|----|--------------------|----------------|----------------|-------------------------|-------------------------------------------|
|     |                      |              |                                                                  | h                     | m  | s  |                    | A <sub>N</sub> | A <sub>E</sub> |                         |                                           |
| 1.  | Septem-<br>bre<br>1. | BUD          | pPKP<br>PPP<br>S<br>PS<br>PPS                                    | 00                    | 28 | 23 |                    |                |                | 113,3                   | 59,3 S; 27,3 W<br>H= 00 09 34,6<br>h= 131 |
|     |                      | SIZE         | sPKP/D<br>PP<br>sSKS/D<br>PS<br>SS<br>SSP                        | 00                    | 28 | 47 |                    |                |                | 112,5                   |                                           |
| 2.  | 2.                   | SIZE         | Sg                                                               | 14                    | 20 | 17 |                    |                |                | 7,6                     | 39,1 N; 23,9 E<br>H= 14 16 05<br>h=33     |
| 3.  | 4.                   | SIZE         | e                                                                | 01                    | 21 | 17 |                    |                |                |                         |                                           |
| 4.  | 5.                   | BUD          | P<br>S                                                           | 11                    | 46 | 07 |                    |                |                | 72,4                    | 59,8 N; 150,6 W<br>H= 11 34 37,3<br>h= 44 |
|     |                      | SIZE         | e                                                                | 11                    | 46 | 25 |                    |                |                | 73,6                    |                                           |
| 5.  | 6.                   | SIZE         | e                                                                | 17                    | 23 | 09 |                    |                |                | 135,6                   | 22,5 S; 170 E<br>H= 17 09 15<br>h= 33     |
| 6.  | 8.                   | BUD          | PKP<br>PP<br>SKS<br>sS<br>eL<br>M<br>M                           | 11                    | 45 | 10 |                    |                |                | 110,1                   | 56,1 S; 27,3 W<br>H= 11 26 32,8<br>h= 125 |
|     |                      |              |                                                                  | 12                    | 10 |    | 16                 |                | 15             |                         |                                           |
|     |                      |              |                                                                  |                       | 29 | 30 | 17                 | 43             |                |                         |                                           |
|     |                      | SIZE         | pPKP<br>sPKP<br>PP<br>PPP<br>SKS/E<br>sSKS/c<br>SP<br>PPS<br>SPP | 11                    | 45 | 02 |                    |                |                | 109,8                   |                                           |
|     |                      |              |                                                                  |                       |    | 31 |                    |                |                |                         |                                           |
|     |                      |              |                                                                  |                       | 45 | 59 |                    |                |                |                         |                                           |
|     |                      |              |                                                                  |                       | 47 | 57 |                    |                |                |                         |                                           |
|     |                      |              |                                                                  |                       | 51 | 27 |                    |                |                |                         |                                           |
|     |                      |              |                                                                  |                       | 52 | 11 |                    |                |                |                         |                                           |
|     |                      |              |                                                                  |                       | 55 | 42 |                    |                |                |                         |                                           |
|     |                      |              |                                                                  |                       |    | 48 |                    |                |                |                         |                                           |
|     |                      |              |                                                                  |                       | 56 | 02 |                    |                |                |                         |                                           |
| 7.  | 15.                  | BUD          | eP<br>PPP                                                        | 01                    | 50 | 01 |                    |                |                | 16,6                    | 35,1 N; 33,9 E<br>H= 01 46 08,4<br>h=25   |
|     |                      |              |                                                                  |                       |    | 37 |                    |                |                |                         |                                           |

1961

| 1961 |                           |              |       |                       |     |     |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|------|---------------------------|--------------|-------|-----------------------|-----|-----|--------------------|----------------|----------------|-------|-----------|------------------------------------------|-------------------------------------------|------|------------------------------------------|------|------------------------------------------|
| No.  | Date                      | Sta-<br>tion | Phase | Heure de<br>Greenwich |     |     | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré | Remarques |                                          |                                           |      |                                          |      |                                          |
|      |                           |              |       | h                     | m   | s   |                    | A <sub>N</sub> | A <sub>E</sub> | Δ°    |           |                                          |                                           |      |                                          |      |                                          |
| 7.   | Septem-<br>bre<br><br>15. | BUD          | S     |                       | 52  | 54  | 12                 | 21             | 24             | 16    |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | SS    |                       | 53  | 13  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | eL    |                       | 55  | 09  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | M     |                       | 58  |     |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           | KAL          | P     | 01                    | 49  | 58  |                    |                |                |       |           | 5                                        | 15                                        |      |                                          |      |                                          |
|      |                           |              | PPP   |                       | 50  | 15  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | SS    |                       | 53  | 32  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | eL    |                       | 55  | 07  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           | SZE          | P     | 01                    | 49  | 41  |                    |                |                |       |           |                                          |                                           | 23,1 | 40,8 N; 50,1 E<br>H= 11 01 00,8<br>h= 31 |      |                                          |
|      |                           |              | S     |                       | 52  | 41  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | SS    |                       | 53  | 24  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | eL    |                       | 55  | 07  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | M     |                       | 59  | 30  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | e     | 05                    | 15  | 04  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
| 8.   | 17.                       | SZE          | e     | 05                    | 15  | 04  | 5                  | 15             |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | 9.    | 18.                   | BUD | P   |                    |                | 11             | 06    | 09        |                                          |                                           |      |                                          | 23,1 | 40,8 N; 50,1 E<br>H= 11 01 00,8<br>h= 31 |
|      |                           |              |       |                       |     | PP  |                    |                |                |       | 26        |                                          |                                           |      |                                          |      |                                          |
|      |                           |              |       |                       |     | S   |                    |                |                | 10    | 16        |                                          |                                           |      |                                          |      |                                          |
| 1.   | Octo-<br>bre<br><br>2.    | BUD          |       |                       |     | e   |                    |                | 07             | 24    | 27        | 159,9                                    | 33,8 S; 179,5 E<br>H= 07 02 40,4<br>h= 57 |      |                                          |      |                                          |
|      |                           |              | PKS   |                       | 26  | 06  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | PP    |                       | 27  | 17  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | L     |                       | 28  | 17  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           | KEC          | e     | 07                    | 24  | 58  |                    |                | 159,3          |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | PKS   |                       | 26  | 29  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | PP    |                       | 27  | 40  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           | SZE          | e     | 07                    | 24  | 48  |                    |                |                |       | 159       |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | PKS   |                       | 26  | 08  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
|      |                           |              | PP    |                       | 27  | 05  |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
| L    |                           |              |       | 31                    |     |     |                    |                |                |       |           |                                          |                                           |      |                                          |      |                                          |
| 2.   | 18.                       |              | BUD   | eL                    | 19  | 45  | 00                 | 26             |                |       |           | 33,7 N; 48,5 E<br>H= 10 46 40,2<br>h= 34 |                                           |      |                                          |      |                                          |
|      |                           |              |       | 3.                    | 26. | BUD | eL                 |                |                |       |           |                                          | 01                                        |      | 36                                       | 00   |                                          |
| 4.   | 28.                       | BUD          | P     |                       |     |     | 10                 |                |                |       |           |                                          | 52                                        |      | 17                                       |      |                                          |
|      |                           |              | 5.    | 29.                   | SZE | e   | 08                 |                | 55             | 09    |           |                                          |                                           |      |                                          |      |                                          |

1961

| No. | Date          | Sta-<br>tion | Phase         | Heure de<br>Greenwich |          |                | Pé-<br>rio-<br>des | Ampli-<br>tude |                | Degré | Remarques                                |
|-----|---------------|--------------|---------------|-----------------------|----------|----------------|--------------------|----------------|----------------|-------|------------------------------------------|
|     |               |              |               | h                     | m        | s              |                    | A <sub>N</sub> | A <sub>E</sub> | Δ°    |                                          |
|     | Novem-<br>bre |              |               |                       |          |                |                    |                |                |       |                                          |
| 1.  | 14.           | SZE          | e             | 07                    | 29       | 02             |                    |                |                |       |                                          |
| 2.  | 27.           | SZE          | e             | 09                    | 01       | 05             |                    |                |                |       |                                          |
| 3.  | 28.           | SZE          | PP<br>PPP     | 04                    | 16<br>17 | 44<br>08       |                    |                |                | 73,8  | 14,8 N; 61,7 W<br>H= 04 09 20<br>h= 130  |
|     | Décem-<br>bre |              |               |                       |          |                |                    |                |                |       |                                          |
| 1.  | 6.            | SZE          | SS            | 16                    | 52       | 13             |                    |                |                | 79,9  | 49,3 N; 155,4 E<br>H= 16 39 06<br>h= 60  |
| 2.  | 11.           | SZE          | e             | 04                    | 37       | 46             |                    |                |                |       |                                          |
| 3.  | 12.           | SZE          | e<br>SKS<br>S | 21                    | 38<br>40 | 01<br>39<br>57 |                    |                |                | 87,8  | 13,9 N; 120,6 E<br>H= 21 18 05<br>h= 120 |
| 4.  | 20.           | SZE          | e             | 13                    | 48       | 58             |                    |                |                |       |                                          |
| 5.  | 28.           | SZE          | e             | 23                    | 51       | 13             |                    |                |                |       |                                          |

Feldolgozták: M. D. Csomor

Par Mme. I. Posgay

Mme. M. Szilber