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Seismological Laboratory

PRELIMINARY  
SEISMOLOGICAL BULLETIN  
1962



Helsinki

UNIVERSITY OF HELSINKI  
SEISMOLOGICAL LABORATORY

PRELIMINARY  
SEISMOLOGICAL BULLETIN

1962

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Finland

Stations:

|            |      |            |            |
|------------|------|------------|------------|
| Helsinki   | (He) | 60°10'32"N | 24°57'25"E |
| Nurmijärvi | (Nu) | 60°30'32"N | 24°39'18"E |
| Sodankylä  | (So) | 67°22'16"N | 26°37'45"E |
| Kajaani    | (Ka) | 64.1° N    | 27.7° E    |
| Kevo       | (Ke) | 69°45.3' N | 27°00.6' E |

Unless otherwise stated, the locations are according to the USCGS preliminary determinations.

Direction of earth's movement: U = up; D = down

Kevo: Time apparatur out of operation in January.

January

1 Nu iP 02 51 51 D  
So iP 02 51 06 D  
iPcP 54  
Ka iP 02 51 26  
iPcP 52 07  
Rat Islands  
52.3 N, 177.9 E

1 Nu iP 05 28 38  
So iP 05 28 06  
i 23  
iPcP 43  
Ka iP 05 28 18  
i 36  
Honshu, Japan  
39.2 N, 141.6 E

1 So eP 10 27 08  
Ka eP 10 27 29  
Rat Islands  
51.9 N, 177.7 E

1 He iPKP 12 35 22  
Nu iPKP 12 35 22  
Kermadec Islands  
27.1 S, 175.4 W

January

1 He i 18 10 58  
Nu i 18 10 53  
So i 18 11 20  
Ka i 18 11 15

1 He eP 23 51 07  
Nu iP 23 51 06  
So iP 23 50 20  
iPcP 51 10  
Ka iP 23 50 40  
iPcP 51 23  
Rat Islands  
52.4 N, 177.7 E

2 Nu iPKP 12 06 45  
Ka ePKP 12 06 37  
Loyalty Islands  
21.8 S, 169.8 E

2 He iP 12 27 28  
eS 30 51  
Nu iP 12 27 23  
iS 30 43  
So iP 12 25 53  
eS 28 07  
Ka iP 12 26 36  
iS 29 26

Svalbard region  
80.0 N, 24.3 E

January

2 So iP 13 46 36  
eS 48 47  
Ka eP 13 47 22  
iS 50 05

2 So iP 15 35 46  
eS 38 01  
Ka eP 15 36 30  
eS 39 16

2 So iP 16 40 35

2 So iP 19 15 14  
Ka iP 19 15 21  
Mariana Islands  
19.3 N, 145.3 E

2 He iP 23 27 59  
Nu iP 23 27 58 U  
So iP 23 27 43  
Ka iP 23 27 48  
i 31 32

3 Nu eP 00 17 50

January

3 He iPKP 07 09 03  
iSKP 12 37  
Nu iPKP 07 09 01  
iSKP 12 36  
Ka iPKP 07 08 55  
iSKP 12 17  
Loyalty Islands  
21.7 S, 170.0 E

3 Nu iP 08 06 19

3 Nu iP 08 39 31

3 Nu iP 09 17 20  
Ka eP 09 16 47

3 Nu iP 11 44 12  
Ka iP 11 44 06

3 Nu iP 11 59 07  
Ka iP 11 59 00

3 He eP 18 03 47  
Nu eP 18 03 45  
Ka eP 18 03 22  
Rat Islands  
52.2 N, 177.5 E

3 He eP 21 01 42  
Nu iP 21 01 42  
So iP 21 01 04  
Ka eP 21 01 23

4 He iPKP 00 09 45  
Nu iPKP 00 09 43  
Ka iPKP 00 09 36  
Loyalty Islands  
21.5 S, 169.9 E

4 He eP 01 24 54  
Nu iP 01 24 54 D  
So iP 01 24 58  
Sumatra  
0.1 S, 100.1 E

4 He iP 04 27 04  
Nu iP 04 27 03 D  
So iP 04 26 34  
Ka iP 04 26 44  
Honshu, Japan  
35.1 N, 138.9 E

January

4 He iP 04 46 53  
ipP 47 08  
Nu iP 04 46 52 D  
ipP 47 08  
iPP 49 29  
iS 56 01  
So iP 04 46 25  
eS 55 14  
Ka iP 04 46 34  
Near Shikoku, Japan  
33.9 N, 135.2 E

4 So eP 08 42 22

4 Nu eP 12 11 26

4 So iP 20 13 28  
Ka iP 20 13 20  
Sumatra  
1.6 S, 99.6 E

4 He eP 21 36 20  
Nu eP 21 36 21  
So iP 21 36 03  
Ka iP 21 36 05  
Formosa  
24.6 N, 121.9 E

5 He iP 04 34 11  
ipP 42  
iPP 35 42  
iPPP 36 01  
Nu iP 04 34 12 D  
iS 39 57  
So iP 04 34 29 U  
Ka iP 04 34 12  
i 35 36

Hindu Kush  
36.4 N, 71.2 E

5 Nu ePKP 08 27 11  
Ka iPKP 08 27 16  
Tonga Islands  
15.5 S, 172.5 W

5 Nu iP 14 14 13  
So iP 14 14 18 U  
Sumatra  
1.6 S, 100.0 E

5 So iP 16 00 23  
Ka eP 16 00 15  
Sumatra  
1.5 S, 100.1 E

January

7 He iP 01 24 55  
Nu iP 01 24 52 U  
So iP 01 24 06 U  
Ka iP 01 24 29  
i 25 27

Kodiak Island  
55.2 N, 154.1 W

7 He iP 10 07 18  
Nu iP 10 07 21 D  
iPP 34  
iS 10 36  
iLg1 12 33  
So iP 10 08 34  
eLg2 16 30  
Ka iP 10 08 05

Yugoslavia  
43.4 N, 17.4 E

7 So iP 10 26 43  
Ka iP 10 26 13

7 Nu iP 10 30 36

7 Nu eP 18 11 30  
So eP 18 12 43  
Ka iP 18 12 18  
BCIS:  
Yugoslavia

7 Nu eP 19 28 49  
So iP 19 29 56  
Ka iP 19 29 26  
BCIS:  
Yugoslavia

8 He iP 01 12 13  
Nu iP 01 12 11 U  
ePP 15 03  
So iP 01 12 07  
iS 21 50  
Ka iP 01 12 15  
Dominican Republic  
18.5 N, 70.5 W

8 He iP 01 16 16  
Nu iP 01 16 13  
So iP 01 16 08  
Ka iP 01 16 16

8 Nu iP 02 17 18  
So iP 02 17 06  
Ka iP 02 17 14  
Dominican Republic  
18.5 N, 70.6 W

January

8 He ePKP 06 02 14  
Nu iP 06 02 15  
So iPKP 06 02 08  
Ka iP 06 02 13  
Tonga Islands  
24.2 S, 177.7 W

8 He iP 22 32 09  
i 33 25  
Nu iP 22 32 09 U  
So iP 22 32 25 U  
ipP 33 10  
Ka iP 22 32 09  
Hindu Kush  
36.5 N, 70.9 E

9 So iP 11 51 01  
eS 53 10  
Ka eP 11 51 45  
eS 54 35

9 He iP 12 51 32  
Nu iP 12 51 31  
So iP 12 50 56 U  
Hokkaido, Japan  
42.9 N, 144.8 E

9 He iP 22 23 30  
Nu iP 22 23 28 D  
So iP 22 22 50 D  
Ka iP 22 23 04  
Sea of Okhotsk  
48.3 N, 147.5 E

10 So eP 01 26 15  
Ryukyu Islands  
27.0 N, 128.7 E

10 Nu iP 02 30 47 D  
So eP 02 30 00  
Ka iP 02 30 23  
Fox Islands  
52.9 N, 169.1 W

10 He eP 12 41 44  
Nu eP 12 41 48  
So iP 12 42 50  
Ka eP 12 42 46

10 Nu iP 20 50 17

11 Nu iP 03 04 55  
So iP 03 04 11  
Ka iP 03 04 30  
Rat Islands  
51.6 N, 176.9 E

January

11 He iP 03 10 35  
Nu iP 03 10 36 D  
So iP 03 10 43  
Ka iP 03 10 31  
Nepal  
28.1 N, 84.8 E

11 He iP 05 09 08  
Nu iP 05 09 11 D  
iLg1 14 41  
So iP 05 10 23  
Ka iP 05 09 54  
Yugoslavia  
43.5 N, 17.7 E

11 Nu iP 05 34 38

11 So eP 05 38 39  
Ka iP 05 38 00

11 So iP 05 47 45  
Ka iP 05 47 15  
BCIS:  
Yugoslavia

11 Nu eP 05 54 16  
So iP 05 55 25  
Ka iP 05 54 55  
BCIS:  
Yugoslavia

11 So iP 06 52 06  
Ka eP 06 51 29  
BCIS:  
Yugoslavia

11 He eP 07 00 00  
Nu iP 06 59 56  
So iP 06 59 14  
Ka iP 06 59 34  
Andreanof Islands  
51.9 N, 179.3 W

11 Nu eP 10 06 58  
So iP 10 08 04  
Ka iP 10 07 34  
BCIS:  
Yugoslavia

11 Nu eP 12 36 49  
eS 40 11  
So eP 12 35 24  
iS 37 33  
Ka iP 12 36 07  
eS 38 56

January

12 Nu iP 00 12 05  
So eP 00 13 28  
Ka iP 00 12 52  
BCIS:  
Yugoslavia

12 Nu eP 09 03 05  
So iP 09 02 41  
Ka iP 09 02 50  
Mariana Islands  
20.2 N, 145.9 E

12 So iP 11 00 29

12 Nu iP 13 48 50 U  
So iP 13 48 14 U  
Ka iP 13 48 27  
Hokkaido, Japan  
42.5 N, 143.0 E

12 Nu iP 20 52 44  
eS 56 01  
So iP 20 53 55  
Ka iP 20 53 25  
BCIS:  
Yugoslavia

13 So iP 01 00 47  
Ka eP 01 00 12

13 Nu eP 04 52 10  
So iP 04 53 24  
Ka iP 04 52 52  
BCIS:  
Yugoslavia

13 Nu iP 04 59 18  
So eP 04 58 37  
Ka iP 04 58 55  
Rat Islands  
52.3 N, 177.4 E

13 Nu iP 05 43 10  
So iP 05 42 59  
Ka iP 05 42 59  
Philippine Islands  
12.9 N, 120.8 E

13 Nu iPKP 11 25 07  
So iPKP 11 24 54  
Ka iPKP 11 24 59  
North Island  
37.5 S, 178.7 E

13 So iP 12 34 46  
Ka iP 12 35 30

January

13 Nu iP 13 05 34 U  
So iP 13 06 51  
Ka iP 13 06 16  
BCIS:  
Yugoslavia

13 So iP 14 00 47

14 Nu iP 07 35 35 D  
So iP 07 34 58  
Hokkaido, Japan  
43.1 N, 145.1 E

14 He iP 13 44 14  
Nu iP 13 44 12  
So iP 13 43 37  
Ka iP 13 43 48  
i 44 43  
Hokkaido, Japan  
44.9 N, 140.8 E

14 So iP 16 48 33  
Ka iP 16 48 04

14 He iP 19 54 39  
Nu iP 19 54 37 U

15 Nu eP 08 34 13  
Ka iP 08 34 04  
i 40  
Venezuela  
13.0 N, 60.5 W

15 Nu iPKP 22 35 45  
Kermadec Islands  
32.0 S, 178.4 W

15 Nu eP 23 10 54  
So iP 23 10 24  
Ka iP 23 10 36

16 He iPKP 11 55 21  
Nu iPKP 11 55 18  
So iPKP 11 55 02  
Ka iPKP 11 55 06  
Kermadec Islands  
30.5 S, 177.9 W

16 So iP 16 58 38  
Ka iP 16 58 21  
Hindu Kush  
36.5 N, 70.3 E

January

16 He iP 18 28 37  
Nu eP 18 28 35  
So eP 18 28 56  
Ka iP 18 28 51  
Mid-Atlantic Ocean  
7.8 N, 36.0 W

17 So iP 15 42 20  
Ka eP 15 42 22  
Molucca Passage  
4.3 N, 128.3 E

17 So eP 15 56 19  
Ka iP 15 56 14  
Molucca Passage  
3.9 N, 126.6 E

18 Nu iP 20 34 31

19 Nu eP 03 43 17  
So eP 03 43 47  
i 49 52  
Ka iP 03 43 24  
i 44 23  
i 48 58

19 Nu eP 06 11 35  
So iP 06 10 53  
Ka iP 06 11 11  
Kamchatka  
51.5 N, 161.1 E

19 He iP 19 42 54  
Nu eP 19 42 58  
So iP 19 44 03  
Ka iP 19 43 36  
Greece  
38.5 N, 22.1 E

19 He iP 20 55 53  
Nu iP 20 55 53 D  
So iP 20 55 44 D  
i 57  
Ka iP 20 55 44  
Philippine Islands  
10.8 N, 122.4 E

19 He iP 22 23 21  
Nu eP 22 23 21  
Greece  
38.2 N, 22.1 E

January

20 Nu eP 03 38 06  
So iP 03 38 47  
Ka iP 03 38 20  
Iran  
32.7 N, 49.5 E

21 He iP 02 55 40  
Nu iP 02 55 42 U  
iS 58 55  
So iP 02 56 55  
Ka iP 02 56 27  
iS 03 00 27  
Yugoslavia  
43.2 N, 16.6 E

21 Nu eLg 06 10 30  
 $\Delta$ : 825 km  
So eP 06 07 56  
eS 08 55  
iLg 09 20  
 $\Delta$ : 565 km  
Ka iP 06 08 03  
iS 09 14  
iLg 51  
 $\Delta$ : 685 km  
According to the  
Finnish seismograph  
station net:  
69.2 N, 13.8 E  
Norway  
H: 06 06 35

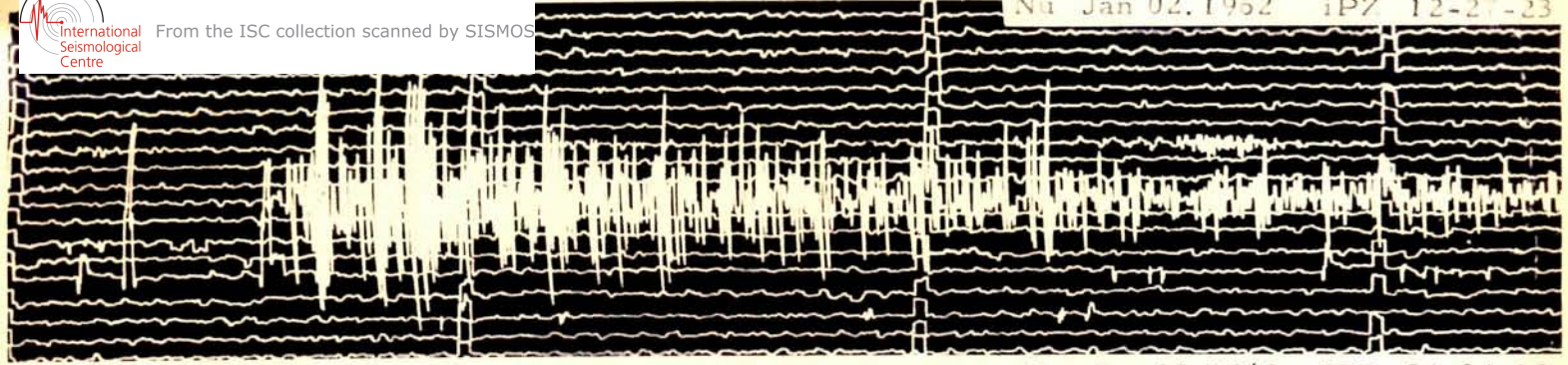
21 He iSKP 13 12 52  
Nu ePKP 13 10 09  
iSKP 12 50  
So iSKP 13 12 27  
Ka ePKP 13 10 02  
iSKP 12 38  
Fiji Islands  
17.7 S, 178.8 W

21 He iP 18 04 10  
i 12  
Nu iP 18 04 10 D  
i 12  
So iP 18 03 34  
Ka iP 18 03 49  
Hokkaido, Japan  
43.0 N, 144.5 E

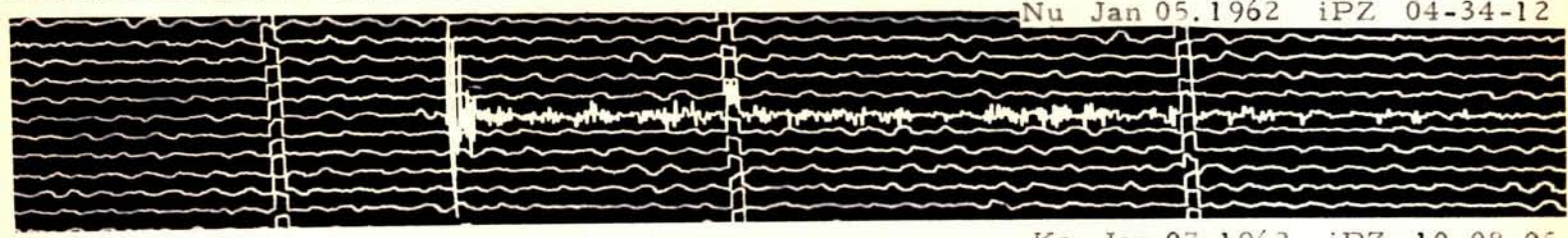
21 So eP 19 48 37  
BCIS:  
Yugoslavia

| January |                    |      |            | January |                  |       |            | January         |                    |      |            |
|---------|--------------------|------|------------|---------|------------------|-------|------------|-----------------|--------------------|------|------------|
| 22      | He                 | iP   | 07 34 20   | 25      | Nu               | eP    | 13 07 22   | 27              | Nu                 | eP   | 05 47 37   |
|         | Nu                 | iP   | 07 34 19 D | 25      | Nu               | eP    | 14 21 08   | 27              | He                 | eP   | 23 20 11   |
|         | So                 | eP   | 07 33 52   | 26      | He               | iP    | 05 33 46   |                 | Nu                 | iP   | 23 20 09   |
|         | Ka                 | iP   | 07 33 57   |         | Nu               | iP    | 05 33 45   |                 | So                 | iP   | 23 19 40   |
|         | Lake Baikal region |      |            |         |                  | i     | 34 19      |                 | Ka                 | iP   | 23 19 58   |
|         | 52.4 N, 100.0 E    |      |            |         |                  | ipP   | 35 05      |                 | Gulf of California |      |            |
| 22      | So                 | iP   | 10 11 45   |         |                  | iPP   | 36 32      |                 | 31.0 N, 114.3 W    |      |            |
|         | Ka                 | iP   | 10 11 47   |         | So               | iP    | 05 33 19 U | 28              | Nu                 | iPKP | 05 59 25   |
|         | Philippine Islands |      |            |         |                  | iPcP  | 42         |                 |                    | iPKS | 06 02 55   |
|         | 11.4 N, 125.4 E    |      |            |         |                  | ePP   | 35 44      |                 | So                 | iPKP | 05 59 14   |
| 22      | So                 | eP   | 15 12 53   |         |                  | eS    | 41 48      |                 | Ka                 | ePKP | 05 59 14   |
| 23      | So                 | eP   | 04 32 36   |         | Ka               | iP    | 05 33 26   |                 | Tonga Islands      |      |            |
| 23      | He                 | iP   | 16 10 13   |         |                  | ipP   | 34 40      |                 | 17.2 S, 172.0 W    |      |            |
|         | Nu                 | iP   | 16 10 12   |         |                  | ePP   | 35 54      | 28              | So                 | iP   | 16 54 17   |
|         | So                 | iP   | 16 09 26   |         | South of Honshu  |       |            |                 | Ka                 | iP   | 16 54 15   |
|         | Ka                 | iP   | 16 09 48   |         | 32.2 N, 138.1 E  |       |            |                 | Northern Celebes   |      |            |
|         | Fox Islands        |      |            | 26      | Nu               | iPKP  | 06 28 38   |                 | 0.0, 123.9 E       |      |            |
|         | 52.5 N, 169.5 W    |      |            |         |                  | iSKP  | 32 06      | 29              | So                 | iP   | 19 48 04   |
| 23      | Nu                 | iP   | 17 35 43   |         | So               | iSKP  | 06 31 48   | 30              | Nu                 | iPKP | 15 19 48   |
|         | So                 | iP   | 17 36 54   |         | Ka               | ePKP  | 06 28 31   |                 | Samoa Islands      |      |            |
|         |                    | eLg2 | 45 12      |         |                  | iSKP  | 31 56      |                 | 16.2 S, 176.0 W    |      |            |
|         | Ka                 | iP   | 17 36 26   |         | Tonga Islands    |       |            | 30              | He                 | iP   | 15 35 12   |
|         | Italy              |      |            |         | 23.4 S, 176.1 W  |       |            |                 | i                  |      | 51         |
|         | 44.6 N, 12.3 E     |      |            | 26      | He               | iP    | 08 23 01   |                 | Nu                 | iP   | 15 35 11 U |
| 24      | He                 | iPKP | 05 05 20   |         | Nu               | iP    | 08 23 04 U |                 | i                  |      | 48         |
|         | Nu                 | iPKP | 05 05 21 D |         |                  | iPcP  | 26 37      |                 | So                 | iP   | 15 34 47   |
|         | So                 | iPKP | 05 05 09 D |         |                  | iS    | 27 34      |                 | Ka                 | iP   | 15 34 53   |
|         | Ka                 | iPKP | 05 05 13   |         |                  | i     | 42         |                 | i                  |      | 30         |
|         | New Hebrides       |      |            |         |                  | iSS   | 28 36      |                 | Mariana Islands    |      |            |
|         | 15.6 S, 167.6 E    |      |            |         |                  | iPcS  | 30 16      |                 | 20.7 N, 144.5 E    |      |            |
| 24      | He                 | iP   | 15 51 08   |         | So               | iP    | 08 24 06   | 30              | So                 | eP   | 17 21 11   |
|         | Nu                 | iP   | 15 51 09 D |         |                  | iPcP  | 26 53      |                 | Ka                 | eP   | 17 21 31   |
|         | So                 | iP   | 15 50 51 D |         |                  | iSoP  | 30 33      |                 | Laptev Sea         |      |            |
|         |                    | iPcP | 51 13      |         | i                | 31 47 |            | 79.4 N, 123.5 E |                    |      |            |
|         | Ka                 | iP   | 15 50 53   |         | Ka               | iP    | 08 23 31   | 31              | He                 | iP   | 00 12 54   |
|         | Formosa            |      |            |         | West of Crete    |       |            |                 | Nu                 | iP   | 00 12 53 U |
|         | 24.4 N, 122.0 E    |      |            |         | 35.1 N, 22.7 E   |       |            |                 |                    | iPP  | 14 14      |
| 25      | Nu                 | eP   | 00 40 09   | 26      | He               | iPKP  | 12 08 04   |                 | So                 | iP   | 00 13 11   |
|         |                    | i    | 19         |         | Nu               | iPKP  | 12 08 03 D |                 | Ka                 | iP   | 00 12 49   |
|         | So                 | eP   | 00 39 07   |         | So               | iPKP  | 12 07 46 D |                 |                    | iPP  | 14 09      |
|         | Ka                 | iP   | 00 39 24   |         | Ka               | iPKP  | 12 07 54   |                 | Tadzhik S.S.R.     |      |            |
| 25      | Nu                 | ePKP | 02 09 12   |         | Kermadec Islands |       |            |                 | 38.5 N, 70.3 E     |      |            |
|         | Ka                 | ePKP | 02 09 04   | 26      | Nu               | eP    | 12 15 35   |                 |                    |      |            |
|         | Solomon Islands    |      |            | 26      | He               | iP    | 14 15 44   |                 |                    |      |            |
|         | 10.7 S, 161.8 E    |      |            |         | Nu               | iP    | 14 15 43   |                 |                    |      |            |
| 25      | Nu                 | iSKP | 12 36 09   | 26      | Nu               | iP    | 21 54 06   |                 | March 12, 1962     |      |            |
|         | S of Fiji Islands  |      |            |         | So               | iP    | 21 53 27   |                 | M. T. Porkka       |      |            |
|         | 23.2 S, 179.9 E    |      |            |         | Ka               | iP    | 21 53 42   |                 | Aili Huovila       |      |            |

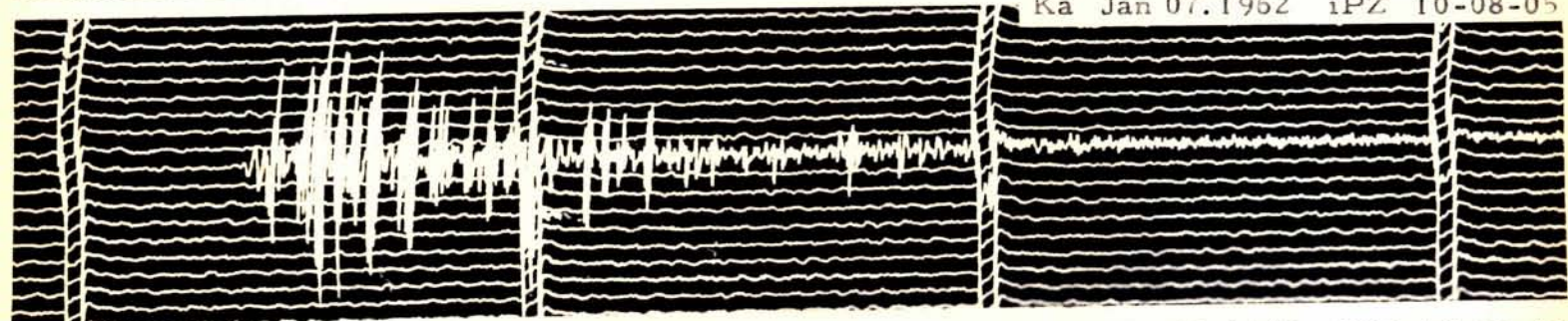
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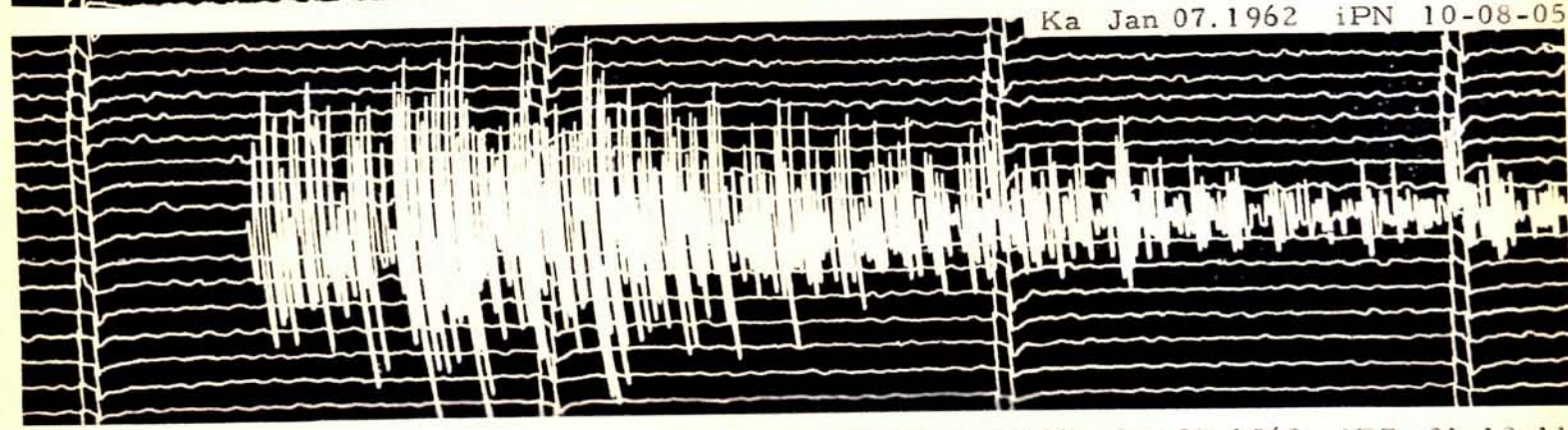
Nu Jan 05.1962 iPZ 04-34-12



Ka Jan 07.1962 iPZ 10-08-05



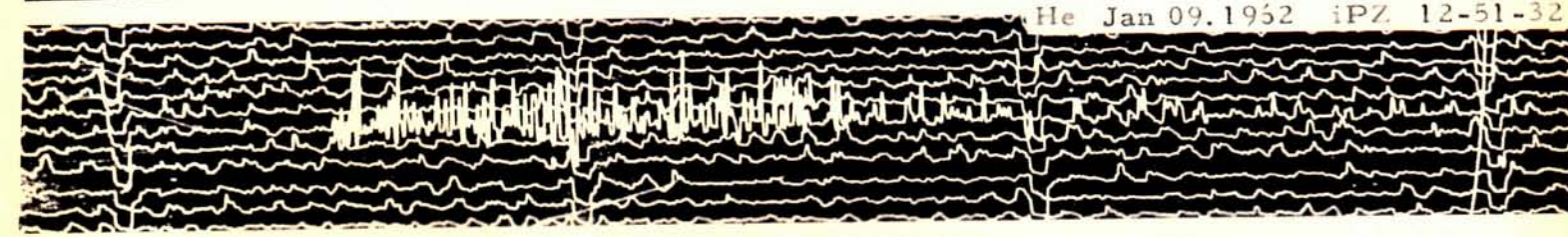
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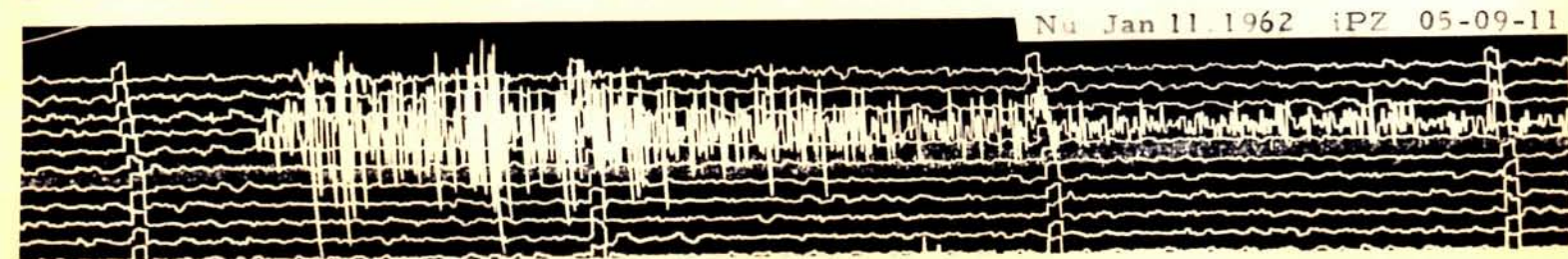
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He Jan 09.1962 iPZ 12-51-32



Nu Jan 11.1962 iPZ 05-09-11



Ka Jan 05.1962 iPZ 04-  
Nu Jan 07.1962 iPN 10

Nu Jan 07.1962 iPE 10

Ka Jan 07.1962 iPZ 10-08-05

Ka Jan 08.1962 iPZ 01-12-15

Ka Jan 11.1962 iPZ 12-36-07

Ka Jan 16 1962 iPKPZ 11-55-06

Nu Jan 26.1962 iPZ 08-23-04



## February

1 He iP 00 36 06  
 Nu iP 00 36 05  
  
 1 He iPKP 00 59 37  
 Nu iPKP 00 59 38  
 So iPKP 00 59 21  
 Ka iPKP 00 59 25  
 Kermadec Islands  
 31.7 S, 177.3 W  
  
 1 So eP 19 08 46  
 eS 11 02  
 Ka eP 19 09 31  
 eS 12 14  
  
 1 He iP 20 40 27  
 Nu iP 20 40 24  
  
 2 Nu iP 04 06 23  
  
 2 Nu iP 08 06 22  
 So iP 08 06 17 U  
 Ka iP 08 06 14  
 Kazakh S.S.R.  
 49.9 N, 78.2 E  
  
 2 Nu iP 17 31 01  
 So iP 17 30 21  
 Kurile Islands  
 43.7 N, 148.5 E  
  
 3 Nu ePP 00 56 05  
 So eP 00 51 36  
 ePP 55 46  
 North of New Guinea  
 1.2 S, 137.8 E  
  
 3 Nu iP 12 48 05  
  
 4 He iP 00 27 17  
 Nu iP 00 27 14  
  
 4 Nu iPKP 01 22 07  
 Kermadec Islands  
 29.1 S, 177.2 W  
  
 4 So iP 03 08 00  
 Celebes  
 4.6 S, 119.0 E  
  
 4 Nu iP 10 48 28  
 So iP 10 49 32  
 Ka eP 10 49 06

## February

4 He iP 21 40 47  
 i 41 02  
 Nu iP 21 40 48  
 i 41 03  
 So iP 21 41 18 U  
 i 33  
 i 43 55  
 South Atlantic Ocean  
 0.5 S, 20.2 W  
  
 5 So iP 04 24 38  
  
 5 Nu eP 19 39 35  
  
 5 He iP 23 06 52 U  
 iPcP 07 11  
 iP 27  
 i 54  
 Nu iP 23 06 51 U  
 iPcP 07 10  
 i 22  
 i 52  
 So iP 23 06 21 U  
 iPcP 56  
 iPP 08 43  
 Central Honshu  
 35.9 N, 138.8 E  
  
 6 Nu iP 04 51 18  
 So iP 04 50 30  
 Kodiak Island  
 56.8 N, 156.0 W  
  
 6 Nu eP 07 59 04  
 So eP 07 58 44  
  
 7 Nu iP 00 58 44  
  
 7 Nu eP 03 31 27  
 So eP 03 31 17  
  
 8 He iP 19 52 44  
 Nu iP 19 52 44 D  
 So iP 19 52 48 U  
 Sumatra  
 0.7 N, 98.6 E  
  
 9 So iP 01 12 30  
 Central Honshu  
 34.5 N, 140.9 E  
  
 9 Nu ePKP 12 21 07  
 iSKP 23 51  
 So iSKP 12 23 32  
 Kermadec Islands  
 24.2 S, 179.5 E

## February

9 Nu eP 13 13 09  
  
 9 He iP 14 39 25  
 Nu iP 14 39 25  
 So iP 14 39 08  
  
 9 Nu iP 21 25 42  
  
 9 So iP 22 04 20  
 Celebes  
 0.6 N, 123.9 E  
  
 10 So iP 19 43 21  
 Leeward Islands  
 17.9 N, 62.2 W  
  
 11 Nu iP 02 53 38  
 i 54 05  
 iS 03 02 43  
 So iP 02 53 14  
 South of Honshu  
 29.6 N, 139.0 E  
  
 11 Nu iP 10 12 16 U  
 i 29  
 So iP 10 11 31  
 Fox Islands  
 52.0 N, 168.0 W  
  
 11 Nu eP 19 14 22  
  
 12 So eP 17 36 24  
 Southern Honshu  
 34.4 N, 135.6 E  
  
 12 Nu iP 21 13 34  
  
 12 Nu iP 23 36 44  
 So eP 23 36 20  
 Bonin Islands  
 26.4 N, 140.9 E  
  
 13 Nu iP 00 52 43  
 N Atlantic Ocean  
 54.1 N, 35.1 W  
  
 13 Nu eP 02 33 00  
 So iP 02 32 05  
 Kurile Islands  
 49.0 N, 156.2 E  
  
 13 Nu iP 20 44 21 D  
 So iP 20 43 45  
 Hokkaido, Japan  
 42.7 N, 145.3 E

| February |                     |      |            | February |                   |      |            | February |                   |                |            |            |
|----------|---------------------|------|------------|----------|-------------------|------|------------|----------|-------------------|----------------|------------|------------|
| 14       | Nu                  | iP   | 00 24 05 D | 16       | Nu                | iP   | 13 50 46   | 20       | Nu                | iP             | 09 27 28   |            |
|          |                     |      |            |          | So                | eP   | 13 51 52   |          | So                | iP             | 09 27 35   |            |
| 14       | He                  | iPKP | 06 55 02   |          | Ka                | eP   | 13 51 24   |          | Ka                | iP             | 09 27 26   |            |
|          |                     | iPP  | 57 07      |          |                   |      |            |          | Nicobar Islands   |                |            |            |
|          | Nu                  | iPKP | 06 55 00   | 16       | Nu                | iP   | 16 05 05   |          | 6.8 N, 92.5 E     |                |            |            |
|          |                     | i    | 18         |          | So                | iP   | 16 04 23   |          |                   |                |            |            |
|          |                     | iPP  | 57 07      |          | Kurile Islands    |      |            | 20       | He                | iPKP           | 10 25 40   |            |
|          |                     | ePKS | 58 37      |          | 49.4 N, 156.0 E   |      |            |          |                   | iSKP           | 28 24      |            |
|          |                     | eSKS | 07 02 02   |          |                   |      |            |          | Nu                | iPKP           | 10 25 39   |            |
|          | So                  | iPKP | 06 55 04   | 16       | Nu                | eP   | 22 13 44   |          |                   | i              | 26 27      |            |
|          |                     | iPP  | 57 20      |          | So                | eP   | 22 12 54   |          |                   | i              | 27 35      |            |
|          |                     | iPKS | 58 43      |          |                   | iS   | 13 57      |          |                   | iSKP           | 28 23      |            |
|          | Near coast of Chile |      |            |          | Ka                | iP   | 22 13 24   |          | So                | iPKP           | 10 25 31   |            |
|          | 38.1 S, 73.1 W      |      |            |          |                   | eS   | 14 45      |          |                   | iSKP           | 28 05      |            |
| 14       | Nu                  | ePKP | 07 27 18   | 17       | So                | iP   | 22 11 41   |          | Ka                | iPKP           | 10 25 29   |            |
|          | Near coast of Chile |      |            |          | Kurile Islands    |      |            |          |                   | iSKP           | 28 13      |            |
|          | 38.2 S, 73.7 W      |      |            |          | 49.2 N, 156.0 E   |      |            |          | S of Fiji Islands |                |            |            |
| 14       | Nu                  | iPKP | 08 30 57   | 17       | Nu                | iP   | 22 39 15 D |          | 20                | He             | iSKP       | 10 28 39   |
|          | Near coast of Chile |      |            |          | So                | iP   | 22 38 30 D |          |                   | Nu             | iPKP       | 10 25 47   |
|          | 38.1 S, 73.7 W      |      |            |          | Ka                | iP   | 22 38 54 D |          |                   |                | iSKP       | 28 36      |
| 14       | Nu                  | ePKP | 08 47 58   |          | Fox Islands       |      |            |          | So                | iPKP           | 10 25 46   |            |
|          | Near coast of Chile |      |            |          | 52.7 N, 169.7 W   |      |            |          |                   | iSKP           | 28 11      |            |
|          | 38.2 S, 73.1 W      |      |            | 18       | So                | iP   | 01 38 24   |          | Ka                | iPKP           | 10 25 38   |            |
| 14       | He                  | iP   | 11 56 24   |          | Kurile Islands    |      |            |          |                   | iSKP           | 28 34      |            |
|          | Nu                  | iP   | 11 56 24   |          | 49.2 N, 156.6 E   |      |            |          | 20                | He             | iP         | 16 16 29   |
|          | So                  | iP   | 11 56 14   |          |                   |      |            |          |                   | i              | 45         |            |
|          | Philippine Islands  |      |            | 18       | So                | eP   | 07 06 51   |          | Nu                | iP             | 16 16 26 U |            |
|          | 5.7 N, 126.0 E      |      |            |          |                   |      |            |          | So                | iP             | 16 15 50 U |            |
| 15       | Nu                  | eP   | 12 15 12   | 18       | Nu                | iP   | 10 53 20 U |          | Ka                | iP             | 16 16 04 U |            |
| 15       | Nu                  | eP   | 12 55 17   |          | So                | iP   | 10 52 45   |          | Ke                | iP             | 16 15 39   |            |
| 15       | Nu                  | iSKP | 15 51 10   |          | Ka                | iP   | 10 52 59 U |          | Hokkaido, Japan   |                |            |            |
|          | So                  | iSKP | 15 50 52   |          | Hokkaido, Japan   |      |            |          | 43.0 N, 144.9 E   |                |            |            |
|          | Ka                  | iSKP | 15 51 03   |          | 41.5 N, 142.4 E   |      |            |          | 20                | So             | iP         | 19 18 39   |
|          | S of Fiji Islands   |      |            | 18       | He                | iP   | 17 38 02   |          |                   | Kurile Islands |            |            |
|          | 23.7 S, 179.7 W     |      |            |          |                   | i    | 16         |          | 46.8 N, 152.8 E   |                |            |            |
| 15       | Nu                  | eP   | 15 55 17   |          | Nu                | iP   | 17 38 00   |          | 20                | He             | iP         | 22 12 38 D |
| 15       | So                  | iP   | 17 27 42   |          |                   | i    | 14         |          |                   | ePP            | 15 03      |            |
| 15       | Nu                  | iP   | 17 36 07   |          | So                | iP   | 17 37 57 D |          | Nu                | iP             | 22 12 38 D |            |
|          | So                  | iP   | 17 35 31   |          |                   | i    | 38 11      |          | So                | iP             | 22 12 35   |            |
| 15       | Nu                  | ePKP | 21 15 33   |          | Ka                | iP   | 17 38 04   |          |                   | iS             | 20 39      |            |
|          | S of Tonga Islands  |      |            |          |                   | i    | 18         |          | Ka                | iP             | 22 12 30   |            |
|          | 23.9 S, 176.5 W     |      |            |          | Northern Colombia |      |            |          |                   | eS             | 20 31      |            |
| 15       | Nu                  | iP   | 23 51 43 U |          | 8.1 N, 74.6 W     |      |            |          | Ke                | iP             | 22 12 38   |            |
|          | So                  | iP   | 23 51 16 U | 19       | Nu                | eP   | 11 21 18   |          | Northern Burma    |                |            |            |
|          | Ka                  | iP   | 23 51 28   |          | So                | iP   | 11 21 20   |          | 26.1 N, 96.8 E    |                |            |            |
|          | South of Honshu     |      |            |          | Ka                | iP   | 11 21 13   |          | 21                | Nu             | ePKP       | 00 25 27   |
|          | 31.9 N, 137.9 E     |      |            |          |                   |      |            |          | So                | ePKP           | 00 25 19   |            |
|          |                     |      |            | 19       | Nu                | ePKP | 11 24 08   |          | Ka                | ePKP           | 00 25 14   |            |
|          |                     |      |            |          | Ka                | ePKP | 11 23 55   |          |                   | i              | 25         |            |
|          |                     |      |            |          | Tonga Islands     |      |            |          | Tonga Islands     |                |            |            |
|          |                     |      |            |          | 20.2 S, 175.1 W   |      |            |          | 24.8 S, 177.1 W   |                |            |            |

February

21 Nu iP 17 34 40  
So iP 17 34 27  
Chiapas, Mexico  
16.3 N, 93.0 W

21 Nu iP 22 56 19

22 He ePKP 10 09 48  
Nu iP 10 09 44  
Ka iP 10 09 31  
Kermadec Islands  
32.7 S, 179.7 W

22 Nu iP 12 05 15

22 Nu iP 16 49 29  
So eP 16 49 04  
Ka eP 16 49 10  
Ryukyu Islands  
29.4 N, 131.1 E

22 Nu eP 20 09 06  
So iP 20 07 42  
Ka eP 20 08 23

23 Nu eP 14 26 50

23 He iP 19 41 46  
Nu iP 19 41 45 D  
So iP 19 41 29  
Ka iP 19 41 34  
Philippine Islands  
11.1 N, 125.8 E

23 He eP 20 13 00  
Nu iP 20 13 00 D  
So iP 20 12 49 D  
Ka iP 20 12 48 D  
Philippine Islands  
10.9 N, 125.8 E

24 Nu iP 06 18 26  
So eP 06 18 27  
Ka iP 06 18 25  
Sumatra  
0.6 S, 99.4 E

24 Nu eP 14 01 20  
So eP 14 01 07  
Ka eP 14 01 09  
Sulu Sea  
9.5 N, 120.9 E

24 Nu eP 18 14 13  
Ka iP 18 14 15  
Afghanistan-Pakistan  
34.3 N, 70.1 E

February

25 So iP 06 34 30  
Philippine Islands  
11.7 N, 120.9 E

25 He iP 13 12 25  
Nu iP 13 12 25  
Ka iP 13 12 13

25 Nu eP 14 16 07  
i 18  
Ka eP 14 15 55

26 He i 01 24 18  
Nu iP 01 23 52  
i 24 14  
So iP 01 23 22  
i 41  
Ka iP 01 23 30  
i 48  
South of Hokkaido  
42.0 N, 141.8 E

26 He iP 02 50 23  
Nu iP 02 50 22  
i 37  
Ka iP 02 50 11  
Kermadec Islands  
33.0 S, 178.4 W

26 He iP 16 06 13  
Nu iP 16 06 13  
So iP 16 05 37  
Ka iP 16 05 50  
Kurile Islands  
44.7 N, 146.6 E

27 He iP 05 48 01  
isP 33  
iPP 49 28  
Nu iP 05 48 03 U  
ipP 22  
isP 34  
ePP 49 30  
So iP 05 48 19  
Ka iP 05 48 03  
Hindu Kush  
36.6 N, 71.4 E

27 He iP 06 02 04  
Nu eP 06 02 01  
So iP 06 01 14  
Ka iP 06 01 39  
Ke iP 06 00 54  
Central Alaska  
63.0 N, 150.0 W

February

27 He iP 06 45 01  
Nu iP 06 45 01 U  
So iP 06 44 55  
Ka iP 06 44 51  
Ke iP 06 44 53  
Szechwan, China  
27.7 N, 101.9 E

27 He ePKP 12 59 42  
Nu iP 12 59 43  
So iP 12 59 47  
Ka iP 12 59 48  
Near coast of Chile  
37.4 S, 73.2 W

27 He iP 21 37 29  
Nu iP 21 37 32  
i 38 05  
iS 40 10  
iSS 24  
iLg1 41 26  
So iP 21 38 52  
Ka iP 21 38 19  
Romania  
46.1 N, 26.3 E

28 He iP 07 31 20 U  
Nu iP 07 31 19 U  
So iP 07 30 51  
i 57  
Ka iP 07 31 01  
South of Honshu  
31.4 N, 139.2 E

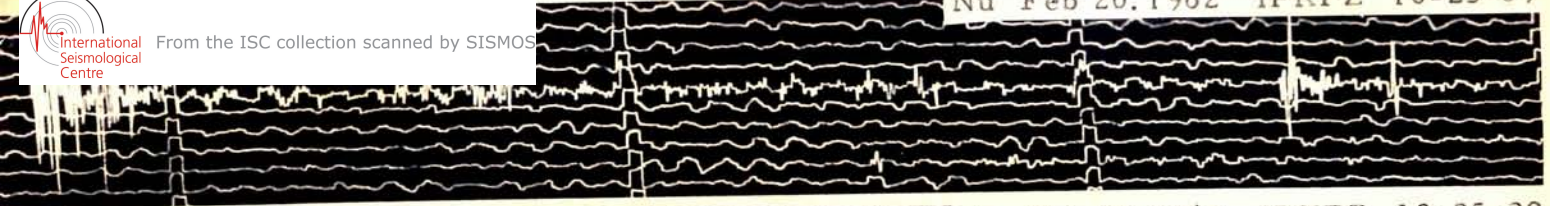
28 Nu iP 09 09 58  
Ka eP 09 08 50

28 So eP 20 46 00  
Dominican Republic  
19.4 N, 69.3 W

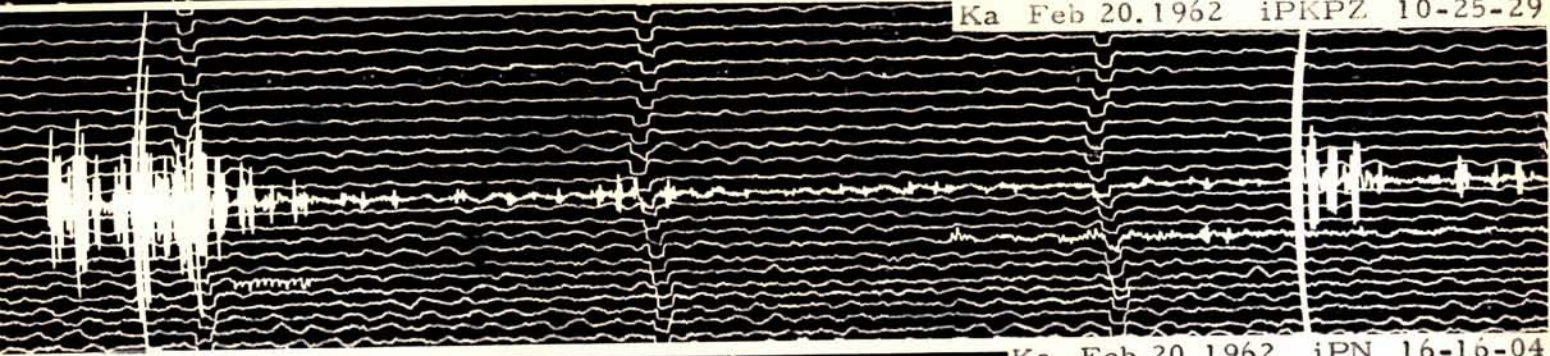
May 2, 1962

M. T. Porkka  
Aili Huovila

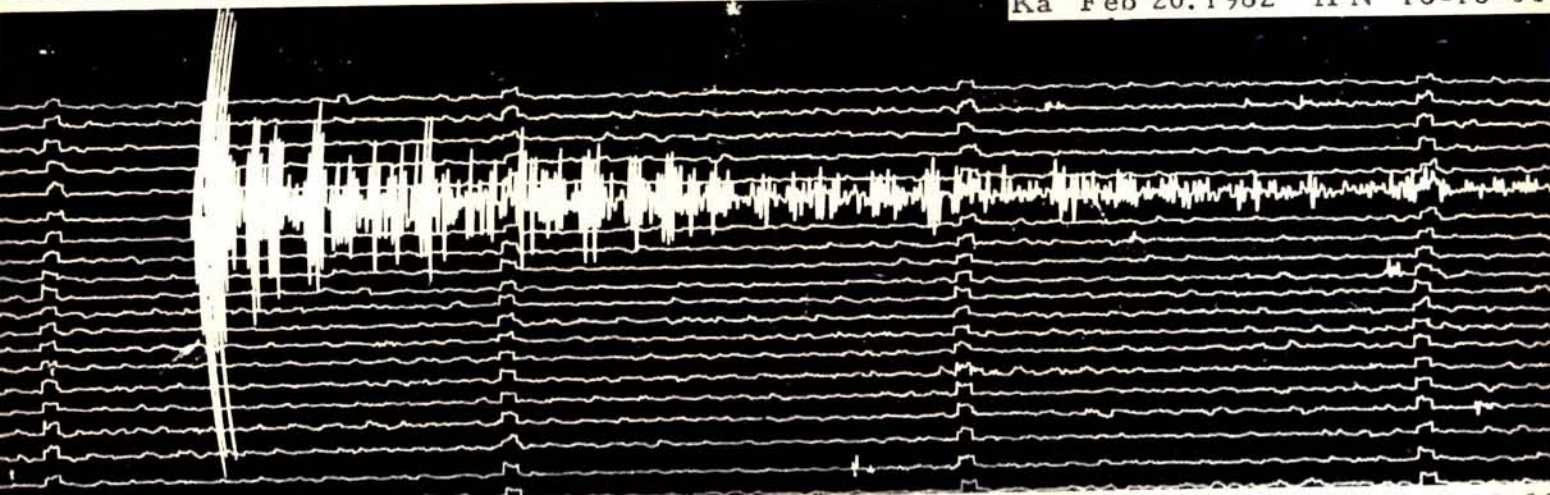
Nu Feb 20.1962 iPKPZ 10-25-39



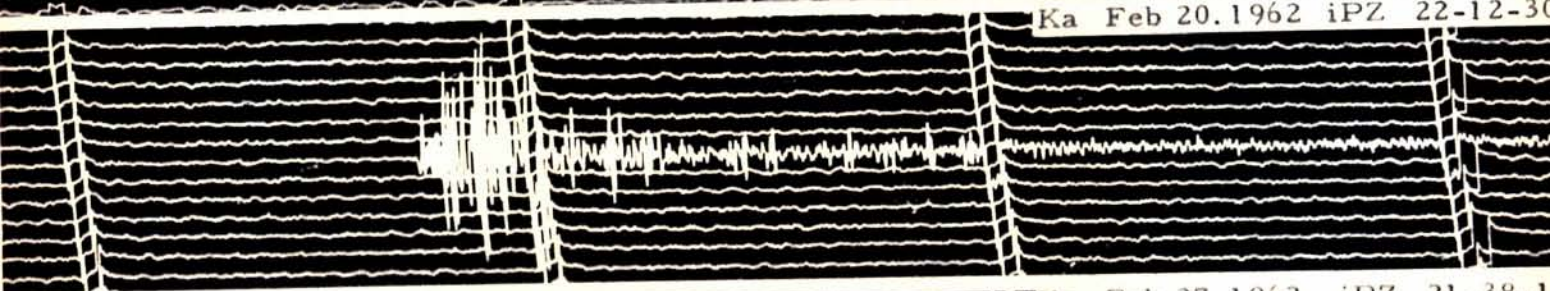
Ka Feb 20.1962 iPKPZ 10-25-29



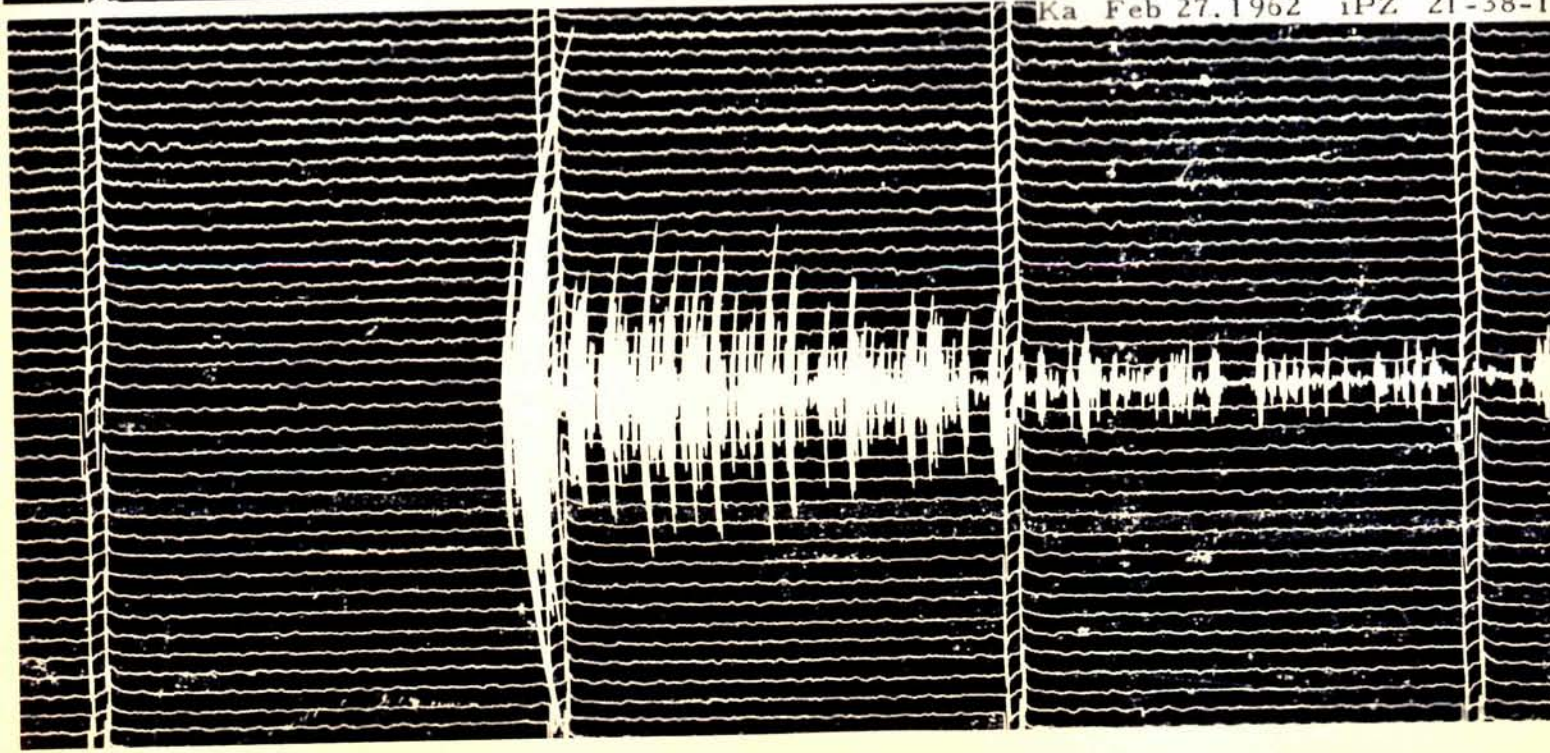
Ka Feb 20.1962 iPN 16-16-04



Ka Feb 20.1962 iPZ 22-12-30



Ka Feb 27.1962 iPZ 21-38-19



## March

1 He iP 05 03 24  
 Nu iP 05 03 23 D  
 So iP 05 03 05 D  
 Ka iP 05 03 10  
 Ryukyu Islands  
 25.7 N, 124.8 E

1 Nu eP 07 31 03  
 Andreanof Islands  
 51.1 N, 179.1 W

1 He iP 09 54 27  
 Nu iP 09 54 27  
 Ka eP 09 55 05

1 He iP 18 46 00  
 Nu iP 18 46 01 U  
 So iP 18 45 25 D  
 Ka iP 18 45 40  
 Ke iP 18 45 14  
 Hokkaido, Japan  
 43.0 N, 146.2 E

1 Nu eP 18 53 46

2 He iP 00 00 15  
 Nu ePKP 00 00 13  
 Ka iP 00 00 12  
 Samoa Islands  
 14.0 S, 172.5 E

2 He iP 00 41 04  
 Nu iP 00 41 02  
 Philippine Islands  
 6.1 N, 125.9 E

2 Nu eP 02 25 59  
 Andreanof Islands  
 51.7 N, 173.5 W

2 Nu eP 09 08 11  
 ePcP 39  
 Andreanof Islands  
 51.4 N, 178.1 W

2 He eP 13 16 02  
 Nu iP 13 16 05  
 iPP 19 41  
 eSKS 26 34  
 i 27 22  
 ePKKP 33 29  
 So iP 13 15 53  
 ePP 19 24  
 Ka eP 13 15 57  
 Philippine Islands  
 5.4 N, 126.5 E

## March

2 He iP 17 03 10  
 Nu iP 17 03 07 U  
 So iP 17 02 26  
 Ka iP 17 02 45

3 So iP 01 04 19  
 Sikang, China  
 28.2 N, 100.8 E

3 So eP 10 14 29  
 Molucca Passage  
 0.1 N, 126.5 E

3 Nu iP 10 50 22 D  
 Kamchatka  
 55.2 N, 162.5 E

3 He iP 12 27 43  
 Nu iP 12 27 42  
 i 44  
 i 56  
 iS 38 32  
 iPKKP 45 19  
 So. iP 12 27 31  
 iS 38 11  
 ePKKP 44 56  
 Ka iP 12 27 34  
 iS 38 14  
 Philippine Islands  
 7.4 N, 126.5 E

4 So iP 03 12 58

4 He eP 11 49 34  
 Nu iP 11 49 30  
 So iP 11 48 37  
 Ka eP 11 49 02  
 Ke eP 11 48 18  
 Chukotsky Peninsula  
 67.6 N, 171.4 W

4 He eP 13 01 30  
 iPcP 45  
 Nu iP 13 01 29  
 iPcP 43  
 So iP 13 01 08  
 Ka eP 13 01 15  
 Ryukyu Islands  
 27.1 N, 129.5 E

4 Nu eP 22 53 22

5 Nu iP 01 07 05

## March

5 He iP 03 55 19 U  
 Nu iP 03 55 18 U  
 So iP 03 55 21  
 Ka iP 03 55 17 U  
 S coast of Sumatra  
 4.0 S, 103.3 E

5 Nu eP 07 56 17  
 California  
 34.6 N, 121.6 W

5 He iP 15 12 29  
 Nu iP 15 12 29  
 So eP 15 12 17  
 Ka iP 15 12 20  
 Philippine Islands  
 11.3 N, 126.3 E

5 He iP 16 58 16  
 Nu eP 16 58 15  
 So iP 16 58 02  
 Ka iP 16 58 05  
 Philippine Islands  
 19.1 N, 121.1 E

5 Nu eP 21 09 42  
 Ka eP 21 09 35  
 California  
 40.3 N, 125.1 W

6 He iP 06 06 41  
 Nu iP 06 06 42  
 iPP 09 21  
 So iP 06 06 47  
 Ka iP 06 06 39  
 Andaman Islands  
 13.7 N, 93.7 E

6 So eP 15 20 20

7 Nu iP 01 48 02 U  
 Ka eP 01 48 06

7 Nu iP 02 12 23  
 So iP 02 12 09  
 Ka eP 02 12 26  
 Southwest of Iceland  
 62.2 N, 26.6 W

7 Nu iP 08 24 01  
 Kirghiz S.S.R.  
 40.2 N, 77.2 E



March

March

March

10 Nu eP 12 37 00  
So eP 12 36 43  
Ka eP 12 36 52  
W coast of Formosa  
24.6 N, 120.1 E

11 So iP 02 38 29  
Guatemala  
14.8 N, 91.2 W

11 He iP 08 16 03  
Nu iP 08 16 02  
ePKKP 32 47  
So iP 08 15 49  
Ka iP 08 15 53

11 He iP 15 34 19 U  
iPcP 49  
ipP 55  
Nu iP 15 34 16 U  
iPcP 46  
ipP 52  
i 35 41  
So iP 15 33 31  
ipP 34 07  
i 26  
ePP 35 42  
Ka iP 15 33 50  
Ke iP 15 33 16  
Rat Islands  
52.3 N, 178.0 E

11 He iP 16 28 27  
Nu iP 16 28 26  
So iP 16 28 05  
Ke iP 16 27 58  
Mariana Islands  
19.4 N, 144.9 E

11 He iP 19 31 54  
Nu iP 19 31 54  
iSKS 42 38  
i 48  
iS 58  
So iP 19 31 44  
iSKS 42 18  
iS 32  
Ka iP 19 31 46  
iSKS 42 18  
Ke eP 19 31 41  
Philippine Islands  
9.0 N, 126.7 E

11 He eP 20 11 28  
Nu iP 20 11 26  
So eP 20 11 12  
Ka eP 20 11 15  
Philippine Islands  
8.7 N, 126.3 E

11 Nu eP 21 35 47  
Philippine Islands  
8.7 N, 126.2 E

12 Nu eP 01 20 47  
So eP 01 20 39  
Celebes Sea  
4.6 N, 125.8 E

12 He eP 02 18 36  
Nu iP 02 18 38 D  
i 43  
So iP 02 18 57  
Hindu Kush  
34.1 N, 70.9 E

12 Nu eP 09 54 43  
So eP 09 54 25  
Costa Rica  
9.0 N, 83.0 W

12 He iP 11 53 23  
ePP 57 01  
Nu iP 11 53 21  
i 25  
iPP 57 04  
eSKS 12 03 58  
So iP 11 53 13  
i 17  
ePP 56 51  
eSKS 12 03 47  
eS 04 07  
Ka iP 11 53 22  
iPP 57 04  
iS 12 04 24  
Ke iP 11 53 14  
Panama-Costa Rica  
8.1 N, 83.0 W

12 So iP 13 26 46

13 Nu iP 00 30 18  
Ka iP 00 30 34

13 So eP 06 18 21  
Honshu, Japan  
37.3 N, 138.3 E

13 So iP 11 42 41  
Ka iP 11 42 43  
Molucca Passage  
2.9 N, 128.8 E

13 Nu iP 20 20 35

13 Nu eP 21 58 06  
So iP 21 57 54  
Ka iP 21 57 55

13 Nu iP 23 54 39  
So iP 23 54 19  
Ka eP 23 54 34

14 He iP 08 40 15  
i 26  
Nu iP 08 40 15  
i 26  
So iP 08 40 02  
Ka iP 08 40 04  
Philippine Islands  
8.8 N, 126.8 E

15 He eP 00 45 54  
Nu iP 00 45 52 D  
So iP 00 45 04 D  
Ka iP 00 45 27 D  
Ke eP 00 44 48

15 Nu eP 01 13 33  
So iP 01 12 46

15 He iP 02 02 03  
Nu iP 02 02 03 D  
iPcP 32  
So iP 02 01 22  
Ka eP 02 01 39  
Kurile Islands  
45.7 N, 151.3 E

15 He eP 04 47 30  
Nu iP 04 47 29  
So iP 04 46 43  
Ka eP 04 47 05

| March |                     |       |            | March |                      |       |            | March |                  |      |            |
|-------|---------------------|-------|------------|-------|----------------------|-------|------------|-------|------------------|------|------------|
| 15    | He                  | iSKP  | 13 28 03   | 16    | Nu                   | iP    | 22 30 33   | 17    | Nu               | iPKP | 21 48 18   |
|       | Nu                  | ePKP  | 13 25 18   |       | So                   | eP    | 22 30 17   |       | Ka               | iPKP | 21 48 10   |
|       |                     | i     | 24         |       | Ka                   | eP    | 22 30 24   |       | Loyalty Islands  |      |            |
|       |                     | ipPKP | 27 41      |       |                      |       |            |       | 22.3 S, 169.7 E  |      |            |
|       |                     | iSKP  | 28 02      | 17    | He                   | iP    | 04 38 30   | 18    | He               | iPKP | 01 00 04 U |
|       | Ka                  | iPKP  | 13 25 16   |       | Nu                   | iP    | 04 38 30 D |       | Nu               | iPKP | 01 00 04 U |
|       |                     | iSKP  | 27 51      |       |                      | i     | 42         |       | Ka               | iPKP | 00 59 53   |
|       | Fiji Islands        |       |            |       | Ka                   | iP    | 04 38 18   |       | North Island     |      |            |
|       | 20.6 S, 178.8 W     |       |            |       |                      | i     | 41         |       | 36.0 S, 176.9 W  |      |            |
| 15    | Nu                  | iP    | 15 08 49   | 17    | He                   | iP    | 07 53 35   | 18    | Nu               | iPKP | 01 46 17   |
|       | So                  | iP    | 15 09 30   |       | Nu                   | iP    | 07 53 36   |       | Kermadec Islands |      |            |
|       | Ka                  | iP    | 15 09 05   |       | So                   | iP    | 07 53 19   |       | 27.7 S, 177.3 W  |      |            |
| 15    | Nu                  | iP    | 21 26 08   | 17    | He                   | eP    | 11 36 32   | 18    | Nu               | ePKP | 03 25 29   |
|       | So                  | eP    | 21 26 06   |       | Nu                   | eP    | 11 36 29   |       | Ka               | ePKP | 03 25 27   |
|       | Ka                  | eP    | 21 26 05   |       | So                   | iP    | 11 36 26   |       | New Hebrides     |      |            |
|       | South coast of Java |       |            |       | Ka                   | iP    | 11 36 21   |       | 16.1 S, 167.2 E  |      |            |
|       | 7.1 S, 106.1 E      |       |            | 17    | He                   | iP    | 18 09 04 U | 18    | He               | iP   | 05 39 17   |
| 15    | Nu                  | ePKP  | 23 16 53   |       | Nu                   | iP    | 18 09 03 U |       | Nu               | iP   | 05 39 17 U |
|       | Solomon Islands     |       |            |       |                      | i     | 14         |       |                  | i    | 29         |
|       | 10.5 S, 162.6 E     |       |            |       | So                   | iP    | 18 08 18 U |       |                  | iPP  | 41 46      |
|       |                     |       |            |       |                      | i     | 29         |       | So               | iP   | 05 38 42   |
| 16    | Nu                  | iP    | 00 40 42   |       | Ka                   | iP    | 18 08 36   |       |                  | i    | 55         |
|       |                     |       |            |       | Kurile Islands       |       |            |       | Ka               | iP   | 05 38 56 U |
|       |                     |       |            |       | 51.4 N, 159.2 E      |       |            |       |                  | i    | 39 08      |
| 16    | Nu                  | eP    | 05 27 33   | 17    | He                   | iP    | 19 09 14   |       | Honshu, Japan    |      |            |
|       | So                  | eP    | 05 26 42   |       |                      | i     | 29         |       | 40.6 N, 142.4 E  |      |            |
| 16    | So                  | iP    | 07 26 53   |       | Nu                   | iP    | 19 09 15 D | 18    | He               | iP   | 15 35 01   |
| 16    | He                  | iP    | 09 53 40   |       | So                   | iP    | 19 09 03   |       |                  | eS   | 38 38      |
|       | Nu                  | iP    | 09 53 41 D |       | Ka                   | iP    | 19 09 04 D |       | Nu               | iP   | 15 35 05   |
|       | So                  | iP    | 09 53 19 D |       | Philippine Islands   |       |            |       |                  | iS   | 38 46      |
|       | Ka                  | iP    | 09 53 24 D |       | 9.8 N, 122.5 E       |       |            |       |                  | i    | 58         |
|       | Ke                  | iP    | 09 53 13   | 17    | He                   | iP    | 20 58 41   |       |                  | iSS  | 39 16      |
|       | Ryukyu Islands      |       |            |       |                      | i     | 47         |       |                  | iLg  | 41 42      |
|       | 26.8 N, 127.2 E     |       |            |       |                      | eP'P' | 21 26 56   |       | So               | iP   | 15 36 13 U |
| 16    | So                  | iP    | 12 27 24   |       | Nu                   | eP    | 20 58 38   |       |                  | iS   | 40 47      |
| 16    | Nu                  | ePKP  | 15 45 03   |       |                      | i     | 46         |       | Ke               | iP   | 15 36 35   |
|       | So                  | ePKP  | 15 44 46   |       |                      | ePP   | 21 01 22   |       |                  | iLg  | 46 34      |
|       | New Hebrides        |       |            |       |                      | iS    | 07 50      |       | Southern Albania |      |            |
|       | 21.7 S, 173.0 E     |       |            |       |                      | i     | 59         |       | 40.6 N, 19.6 E   |      |            |
|       |                     |       |            |       |                      | eP'P' | 26 47      | 18    | So               | iP   | 17 09 23   |
| 16    | He                  | ePKP  | 20 01 32   |       | So                   | iP    | 20 58 55   | 18    | He               | iP   | 20 30 03   |
|       |                     | i     | 45         |       |                      | ePP   | 21 01 46   |       | Nu               | iP   | 20 30 03 U |
|       | Nu                  | ePKP  | 20 01 34   |       | Ka                   | eP    | 20 58 52   |       |                  | i    | 25         |
|       |                     | i     | 45         |       |                      | i     | 59         |       |                  | i    | 33 48      |
|       |                     | i     | 03 18      |       |                      | ePP   | 21 01 38   |       | So               | iP   | 20 29 50   |
|       | Ka                  | ePKP  | 20 01 29   |       | Ke                   | iP    | 20 59 02   |       | Ka               | iP   | 20 29 50   |
|       | Santa Cruz Islands  |       |            |       | North Atlantic Ocean |       |            |       | Kwangtung, China |      |            |
|       | 10.8 S, 165.7 E     |       |            |       | 10.6 N, 43.7 W       |       |            |       | 23.7 N, 114.5 E  |      |            |



March

19 He iPKP 05 09 27  
 Nu iPKP 05 09 27  
 So ePKP 05 09 27  
 Ka ePKP 05 09 27  
 Ke iPKP 05 09 30  
 South of Tasmania  
 57.3 S, 147.2 E

19 He iP 06 07 40 U  
 Nu iP 06 07 39 U  
 iPP 11 33  
 ePKKP 24 42  
 So iP 06 07 32 U  
 iPKKP 24 45  
 Ka iP 06 07 30 U  
 i 11 18  
 Ke iP 06 07 30  
 Celebes Islands  
 0.3 N, 123.5 E

19 Nu iP 08 26 48

19 He iPKP 15 53 38  
 Nu iPKP 15 53 35  
 i 37  
 So iPKP 15 53 21  
 Ka iPKP 15 53 25  
 Kermadec Islands  
 31.8 S, 179.9 E

19 He iP 21 10 04 U  
 Nu iP 21 10 04 U  
 So iP 21 10 07  
 Ka iP 21 10 01  
 Sumatra  
 4.3 S, 103.1 E

19 Nu eP 23 11 17  
 So iP 23 11 54

20 Nu eP 03 48 26  
 So iP 03 47 49

20 He iP 11 37 43 D  
 Nu iP 11 37 45 D

20 Nu iP 15 50 48  
 So eP 15 50 21

March

20 Nu eP 16 42 44  
 So iP 16 41 59  
 Ka eP 16 42 25  
 Queen Charlotte  
 50.8 N, 129.7 W

20 He iP 19 05 18  
 Nu iP 19 05 17  
 So iP 19 04 56  
 Ka iP 19 04 59  
 Mariana Islands  
 22.8 N, 143.2 E

20 Nu eP 23 19 53  
 So iP 23 19 53  
 Ka iP 23 19 44  
 Tibet  
 32.0 N, 94.6 E

21 He eP 02 02 57  
 Nu iP 02 02 54 D  
 ipP 03 24  
 So iP 02 02 04  
 Ka iP 02 02 28  
 Southern Alaska  
 62.1 N, 152.7 W

21 Nu eP 08 05 34  
 So eP 08 05 16  
 Ka eP 08 05 24

21 Nu eP 10 38 00  
 So eP 10 38 23  
 Ka iP 10 37 52  
 i 40 31

21 Nu eP 11 58 13  
 So iP 11 57 57

21 He iP 17 45 23  
 Nu iP 17 45 22  
 So iP 17 45 06  
 Ka iP 17 45 13

21 Nu eP 21 14 46  
 So iP 21 14 05  
 Kurile Islands  
 48.6 N, 153.4 E

March

21 He iP 23 10 10  
 ipP 12 22  
 Nu iP 23 10 10  
 ipP 12 22  
 ePP 14 01  
 iSKS 19 45  
 iS 20 24  
 i 22 38  
 iPKKP 27 07  
 So iP 23 10 08  
 i 23  
 epP 12 23  
 isP 13 22  
 iPP 14 07  
 Ka iP 23 10 03  
 ipP 12 15  
 Ke iP 23 10 08  
 Java Sea  
 5.9 S, 113.0 E

22 He iP 00 32 04  
 ipP 34 12  
 ePKKP 49 02  
 Nu iP 00 32 03  
 ipP 34 11  
 isP 35 12  
 iPP 36 02  
 i 37 10  
 iSKS 41 41  
 iS 42 22  
 iPKKP 48 59  
 So iP 00 32 01  
 ipP 34 09  
 isP 35 07  
 ePP 59  
 iSKS 41 39  
 iPKKP 49 00  
 Ka iP 00 31 58  
 ipP 34 05  
 i 37 43  
 Ke iP 00 32 03  
 Java Sea  
 5.9 S, 112.9 E

22 He iP 00 49 55  
 Nu iP 00 49 55  
 ipP 52 04  
 iPKKP 01 06 52  
 So iP 00 49 53  
 Ka iP 00 49 49  
 Java Sea  
 6.0 S, 113.0 E

March

22 Nu iPKP 02 10 10  
Fiji Islands  
18.9 S, 173.1 W

22 Nu eP 06 40 16  
So iP 06 39 14  
Ka iP 06 39 52  
Ke eP 06 38 46  
Svalbard region  
84.8 N, 4.2 E

22 Nu iPKP 12 24 06  
Ka ePKP 12 24 01  
New Hebrides  
16.3 S, 167.5 E

22 Nu iP 13 56 57

22 He iP 15 27 17  
iPP 31 45  
Nu iP 15 27 16  
ePP 31 42  
eSKS 37 58  
i 39 30  
So iP 15 27 00  
eSKS 37 44  
Ka eP 15 27 04  
New Guinea  
3.2 S, 142.3 E

22 So iP 16 30 12  
Ka iP 16 30 14  
New Guinea  
2.1 S, 139.3 E

22 Nu ePKP 19 17 20  
So ePKP 19 17 26  
Catamarca, Argentina  
28.1 S, 67.5 W

23 Nu eP 04 34 42  
So iP 04 34 26  
Ka eP 04 34 26

23 Nu iP 14 04 06

23 Nu ePKP 15 27 10  
Ka iPKP 15 27 02  
Fiji Islands  
22.8 S, 179.4 E

23 Nu iP 20 47 19  
So eP 20 48 13  
Ka iP 20 47 35

March

23 So iP 20 53 44

24 So eP 00 46 53

24 He iP 07 05 11  
Nu eP 07 05 14  
So eP 07 06 21

24 He iP 13 13 50  
iPKP 17 54  
iPP 18 28  
iPKKP 28 57  
Nu iP 13 13 51  
iPKP 17 54  
iPP 18 25  
iPKKP 28 57  
So iP 13 13 34  
ipP 14 08  
iPP 18 02  
ePKKP 29 08  
Ka iP 13 13 37  
ePKP 17 53  
iPKKP 29 05  
Ke eP 13 13 30  
New Guinea  
5.7 S, 145.0 E

24 Nu iP 19 57 28

25 Nu iP 02 43 04  
So iP 02 43 40

25 He iP 08 23 39  
Nu iP 08 23 38 U  
So iP 08 22 52 U  
Ka iP 08 23 14 U  
Ke iP 08 22 37  
Fox Islands  
51.2 N, 169.8 W

25 So eP 13 48 38  
Ka eP 13 48 33  
Eastern India-Tibet  
28.2 N, 96.1 E

25 So iP 14 36 08  
Ka iP 14 36 04

25 He eP 20 59 07  
Nu eP 20 59 08  
So iP 20 59 03  
Ka iP 20 58 58  
Sikang, China  
27.8 N, 99.6 E

March

25 He iP 21 42 55 D  
Nu iP 21 42 57  
So iP 21 43 58 D  
Ka iP 21 43 32  
Ke iP 21 44 19  
Mediterranean Sea  
36.5 N, 16.7 E

25 So iP 21 57 50  
Ka eP 21 57 49  
Halmahera  
1.6 N, 127.2 E

26 He iP 09 27 01  
Nu eP 09 27 00  
iS 31 12  
So iP 09 28 09  
Ka iP 09 27 38  
Ionian Islands  
38.7 N, 20.6 E

26 He iP 12 16 03  
Nu iP 12 16 05 D  
So iP 12 16 37  
Ka iP 12 16 26  
Ke eP 12 16 46  
Mid-Atlantic Ocean  
0.5 S, 19.2 W

26 He iP 16 45 01 U  
Nu iP 16 45 03 U  
So eP 16 45 45

26 He iPKP 16 51 47  
Nu iPKP 16 51 47  
So iPKP 16 51 52  
Southern Chile  
40.6 S, 73.3 W

26 He eP 21 18 35  
Nu eP 21 18 40  
Ka eP 21 19 11  
Southern Turkey  
37.2 N, 36.5 E

26 So iP 21 20 14

27 So iP 05 36 00  
Ceram region  
3.9 S, 129.1 E

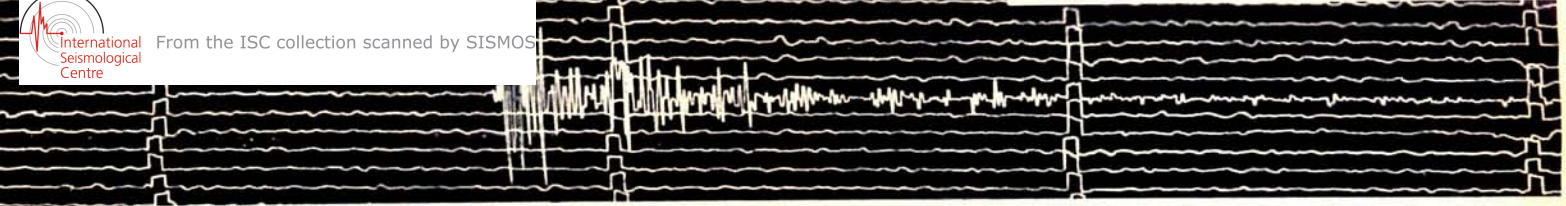
27 Nu eP 06 22 20  
So iP 06 22 25  
Ka eP 06 22 15  
Ke eP 06 22 32  
Sinkiang, China  
39.2 N, 77.3 E

| March |                  |      |            | March |                    |      |            | March |                  |      |            |
|-------|------------------|------|------------|-------|--------------------|------|------------|-------|------------------|------|------------|
| 27    | He               | iP   | 10 21 14   | 28    | He                 | iPKP | 14 32 28   | 30    | He               | eP   | 00 18 51   |
|       | Nu               | iP   | 10 21 11   |       | Nu                 | iPKP | 14 32 26   |       | Nu               | iP   | 00 18 50   |
|       | So               | iP   | 10 20 33   |       | Ka                 | iPKP | 14 32 16   |       | So               | iP   | 00 18 31   |
|       |                  | i    | 43         |       | Kermadec Islands   |      |            |       | Ka               | iP   | 00 18 37   |
|       | Ka               | iP   | 10 20 48   |       | 32.7 S, 178.0 W    |      |            |       | Mariana Islands  |      |            |
|       | Kurile Islands   |      |            | 28    | He                 | iP   | 18 54 18   |       | 12.9 N, 143.0 E  |      |            |
|       | 44.1 N, 147.3 E  |      |            |       | Nu                 | iP   | 18 54 17   | 30    | Nu               | eP   | 04 29 38   |
| 27    | So               | eP   | 21 32 15   |       | Ka                 | iP   | 18 54 06   | 30    | He               | eP   | 05 14 42   |
|       | Ka               | iP   | 21 32 26   |       |                    |      |            |       | Nu               | eP   | 05 14 40   |
|       | Guerrero, Mexico |      |            | 29    | Nu                 | eP   | 02 02 29   |       | So               | iP   | 05 13 56   |
|       | 16.9 N, 99.9 W   |      |            |       | So                 | eP   | 02 01 46   |       | Ka               | iP   | 05 14 16   |
|       |                  |      |            |       | i                  |      | 02 17      | 30    | Nu               | iP   | 12 17 30 U |
| 28    | He               | iP   | 00 59 04   |       | Kamchatka          |      |            | 30    | Nu               | iPKP | 14 42 32 U |
|       |                  | i    | 40         |       | 51.8 N, 157.2 E    |      |            |       |                  | i    | 44         |
|       |                  | iPP  | 01 00 34   | 29    | He                 | eP   | 03 17 13   |       |                  | iSKP | 45 39      |
|       | Nu               | iP   | 00 59 04   |       | Nu                 | iP   | 03 17 11   |       | Ka               | ePKP | 14 42 26   |
|       |                  | i    | 41         |       | So                 | iP   | 03 16 25 D |       |                  | iSKP | 45 31      |
|       |                  | ePP  | 01 00 34   |       | Ka                 | iP   | 03 16 49   |       | Kermadec Islands |      |            |
|       |                  | iS   | 04 46      |       | Lituya Bay, Alaska |      |            |       | 28.7 S, 179.0 W  |      |            |
|       |                  | i    | 07 42      |       | 58.6 N, 137.4 W    |      |            | 31    | Nu               | eP   | 05 04 32   |
|       | So               | iP   | 00 59 19   | 29    | He                 | eP   | 09 36 37   | 31    | He               | iP   | 08 07 37   |
|       |                  | e    | 48         |       | Nu                 | iP   | 09 36 35   |       | Nu               | iP   | 08 07 36 U |
|       |                  | iPcP | 01 01 40   |       | Ka                 | iP   | 09 36 24   | 31    | He               | eP   | 23 39 33   |
|       | Ka               | iP   | 00 59 04   |       |                    |      |            |       | Nu               | eP   | 23 39 37   |
|       | Ke               | iP   | 00 59 28   | 29    | He                 | iP   | 15 18 10   |       | So               | iP   | 23 40 56   |
|       |                  | i    | 01 00 56   |       | Nu                 | iP   | 15 18 10   |       | Ka               | eP   | 23 40 21   |
|       | Hindu Kush       |      |            | 29    | He                 | eP   | 19 35 41   | 31    | He               | iP   | 23 42 57   |
|       | 36.6 N, 71.6 E   |      |            |       | Nu                 | iP   | 19 35 41 U |       | Nu               | iP   | 23 42 56   |
| 28    | He               | iP   | 04 17 28   |       | So                 | iP   | 19 34 18   |       | Ka               | iP   | 23 43 14   |
|       | Nu               | iP   | 04 17 29   |       | Ka                 | eP   | 19 35 04   |       | Western Iran     |      |            |
|       |                  | ePP  | 20 26      |       | Svalbard region    |      |            |       | 34.0 N, 48.0 E   |      |            |
|       | So               | iP   | 04 17 35 U |       | 79.2 N, 2.7 E      |      |            | 31    | He               | eP   | 23 42 57   |
|       | Ka               | iP   | 04 17 27   | 29    | So                 | eP   | 20 22 22   |       | Nu               | iP   | 23 42 56   |
|       | Ke               | iP   | 04 17 39   |       | Ka                 | eP   | 20 22 21   |       | Ka               | iP   | 23 43 14   |
|       | Sumatra          |      |            |       | Halmahera          |      |            |       | Western Iran     |      |            |
|       | 1.4 N, 97.5 E    |      |            |       | 0.5 S, 127.4 E     |      |            |       | 34.0 N, 48.0 E   |      |            |
| 28    | He               | iPKP | 06 36 00   | 29    | So                 | iP   | 21 26 38   |       |                  |      |            |
|       |                  | iSKP | 39 00      |       | Ka                 | eP   | 21 26 47   |       |                  |      |            |
|       | Nu               | iPKP | 06 35 59 U |       | Philippine Islands |      |            |       |                  |      |            |
|       |                  | iSKP | 38 59      |       | 20.7 N, 120.6 E    |      |            |       |                  |      |            |
|       | Kermadec Islands |      |            | 29    | He                 | eP   | 22 48 15   |       |                  |      |            |
|       | 28.7 S, 179.9 W  |      |            |       | Nu                 | eP   | 22 48 13   |       |                  |      |            |
| 28    | He               | eP   | 13 33 24   |       | So                 | eP   | 22 47 52   |       |                  |      |            |
|       | Nu               | eP   | 13 33 26   |       | Ka                 | eP   | 22 48 03   |       |                  |      |            |
|       | So               | iP   | 13 33 21   | 29    | Nu                 | iPKP | 22 57 38   |       |                  |      |            |
|       | Ka               | eP   | 13 33 14   |       | Loyalty Islands    |      |            |       |                  |      |            |
|       |                  | i    | 19         |       | 20.1 S, 169.0 E    |      |            |       |                  |      |            |
|       | Ke               | iP   | 13 33 28   |       |                    |      |            |       |                  |      |            |
|       | Kazakh S.S.R.    |      |            |       |                    |      |            |       |                  |      |            |
|       | 45.7 N, 83.1 E   |      |            |       |                    |      |            |       |                  |      |            |

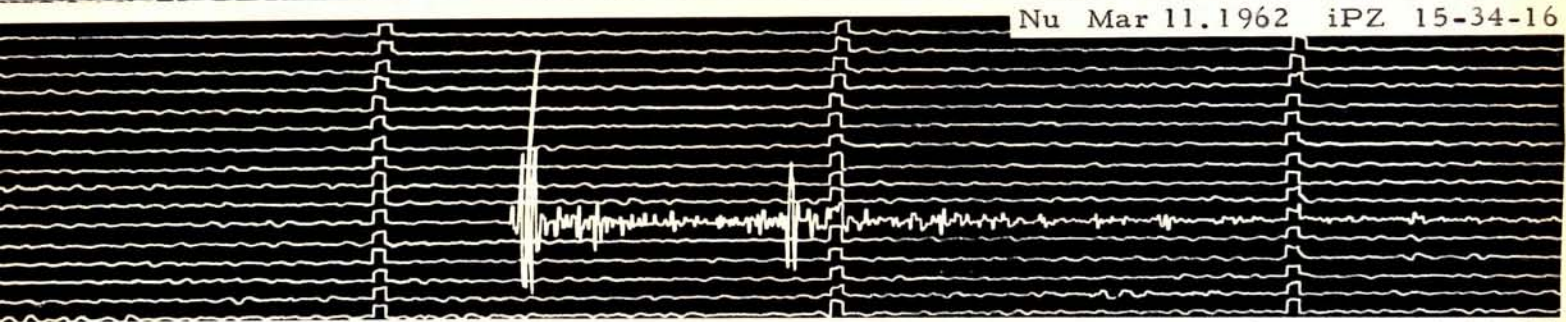
May 11, 1962

M.T. Porkka  
Aili Huovila

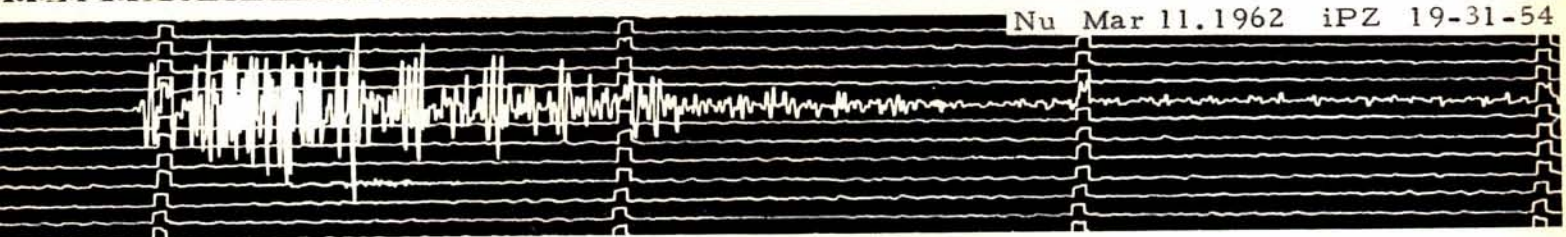
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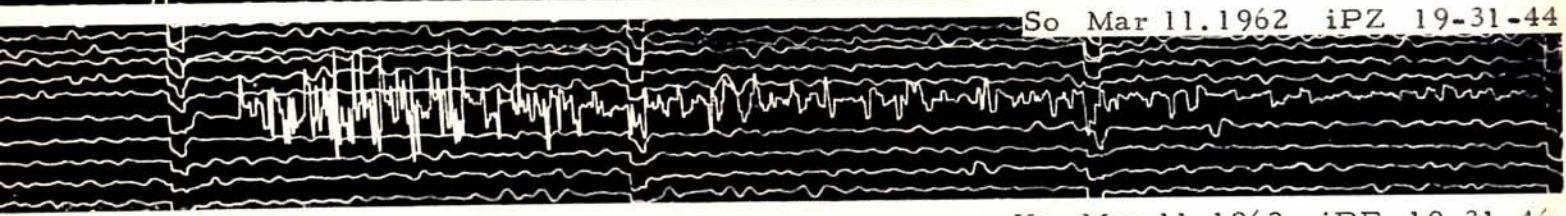
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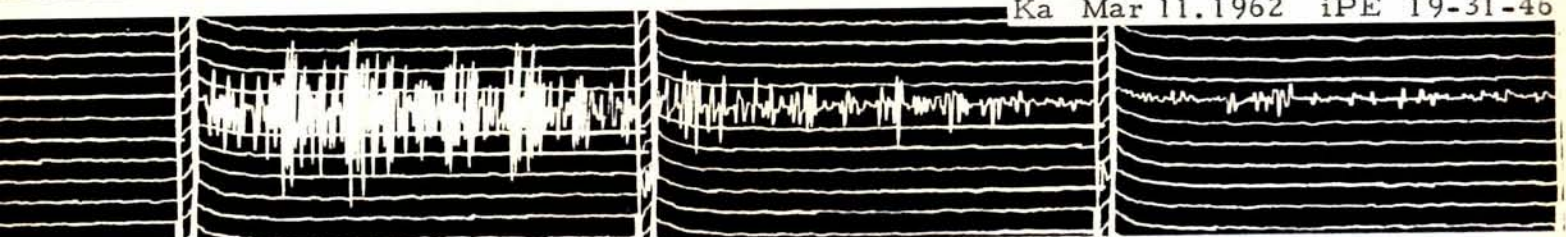
Nu Mar 11.1962 iPZ 19-31-54



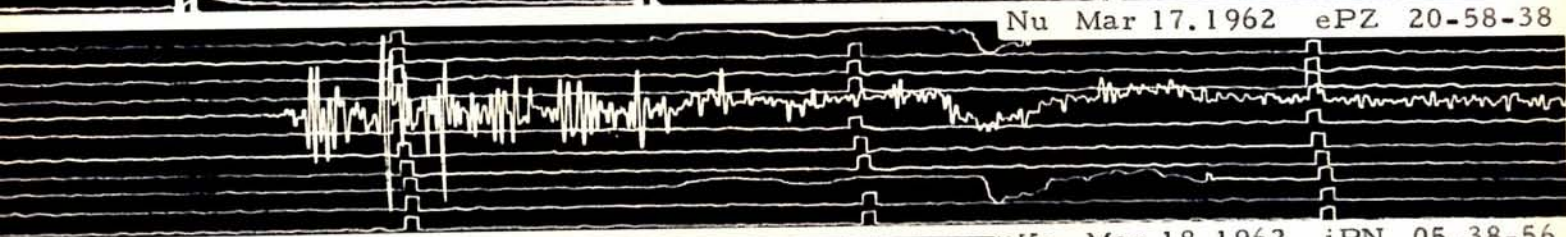
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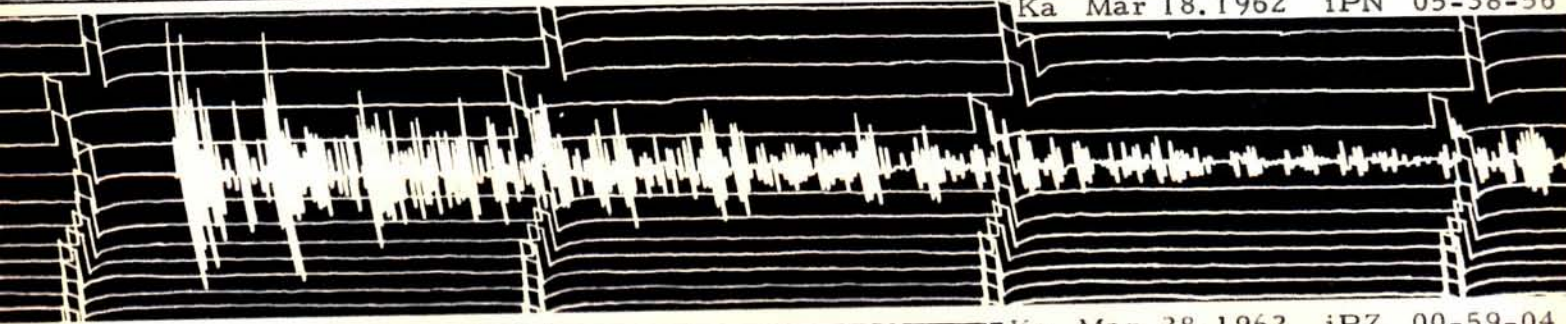
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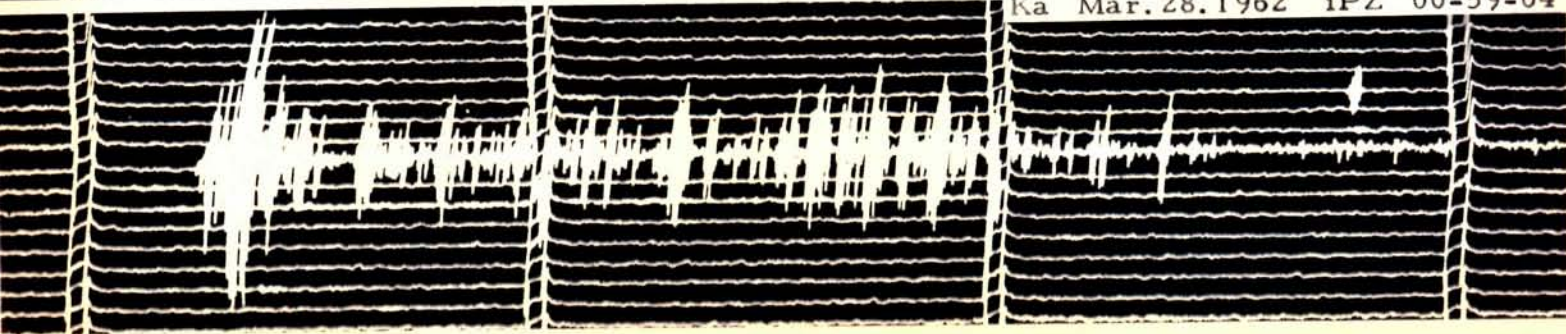
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Ka Mar 18.1962 iPN 05-38-56



Ka Mar.28.1962 iPZ 00-59-04



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Nu Mar 03.1962 iPZ 12

He Mar 07.1962 iPZ 11

He Mar 11.1962 iPZ 19-31-54

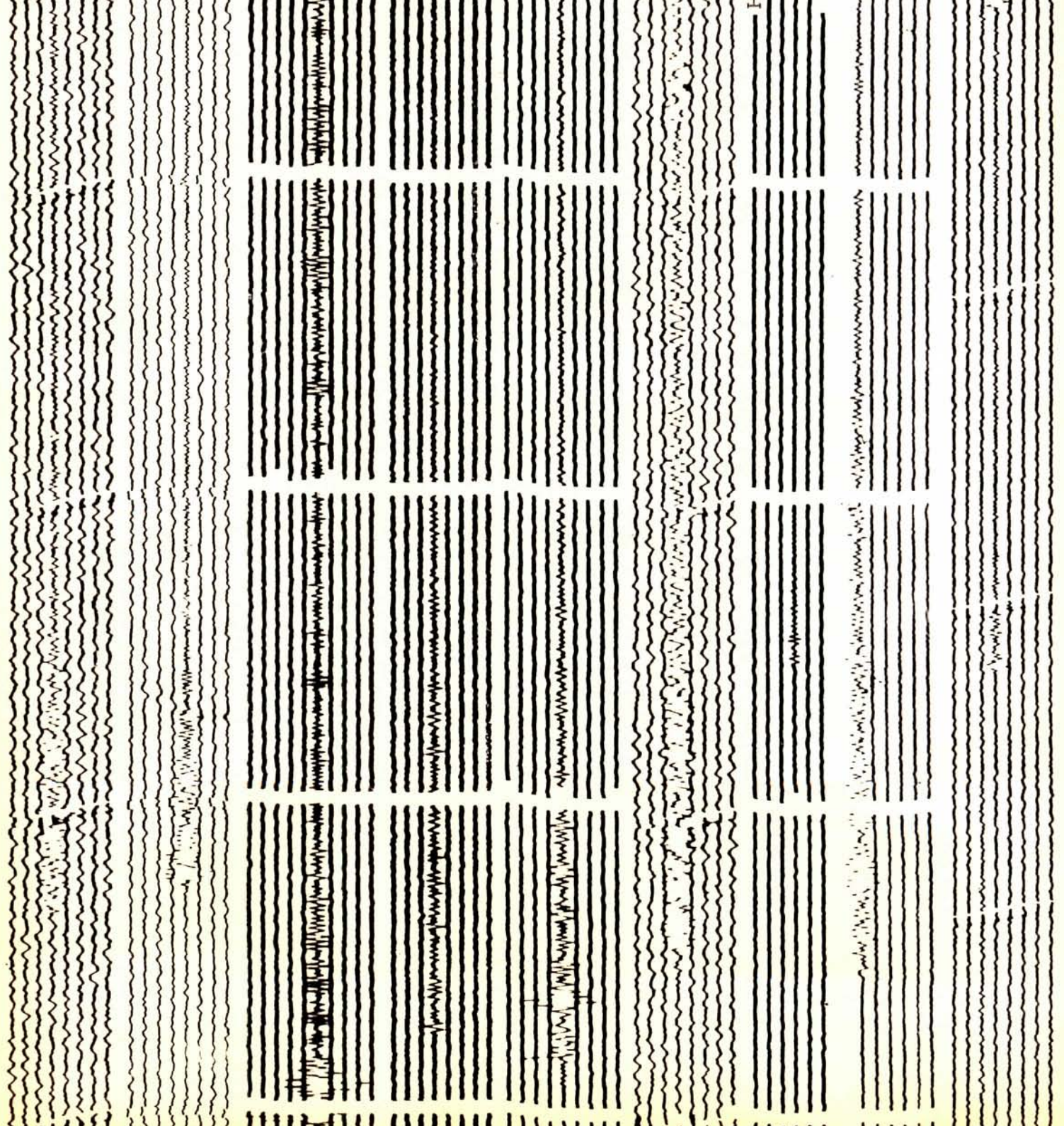
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Ka Mar 17.1962 ePZ 20-58-52

He Mar 18.1962 iPKPZ 01-00-00

He Mar 18.1962 iPZ 15-35-00

Ka Mar 22.1962 iPZ 00-32-01



## April

1 He eP 00 52 02  
    i      06  
    i      53 11  
 Nu iP 00 52 05  
    i      53 06  
 So eP 00 52 36  
    i      54 02  
 Ka iP 00 52 14  
    i      53 27  
 Ke eP 00 52 54  
 East Iran  
 33.6 N, 59.0 E

1 He eP 01 44 01  
    e      47 39  
 Nu iP 01 44 03  
    i      47 45  
 So iP 01 45 07  
 Ka iP 01 44 37  
    eS     49 21  
 Turkey  
 40.6 N, 36.0 E

1 He iP 05 12 45 U  
 Nu iP 05 12 44 U  
    i      54  
 So iP 05 12 08  
 Ka iP 05 12 21  
 Ke iP 05 11 59  
 Hokkaido, Japan  
 41.9 N, 143.4 E

1 Nu eP 09 32 58  
 So iP 09 31 56 U  
    i      32 07  
 Ka iP 09 32 25  
 Ke iP 09 31 36  
 North Polar region  
 81.5 N, 119.5 E

1 Nu iP 12 10 53  
 So iP 12 10 06  
 Ka iP 12 10 28  
 Ke eP 12 09 50  
 Fox Islands  
 53.4 N, 164.5 W

1 He iP 12 21 30  
 Nu eP 12 21 27  
 So iP 12 20 36  
 Ka iP 12 21 02  
 Ke eP 12 20 19  
 Alaska  
 63.1 N, 152.3 W

## April

1 He eP 12 25 21  
 Nu iP 12 25 20  
    iPP     29 49  
    ePKKP    40 42  
 So iP 12 25 03  
    iPP     29 22  
 Ka iP 12 25 06  
    ePKKP    41 13  
 New Guinea  
 4.2 S, 143.6 E

1 Nu iPKP 15 56 09  
 New Hebrides  
 17.9 S, 167.2 E

2 He iP 00 27 18  
 Nu iP 00 27 18  
    ipP     28 06  
 So iP 00 26 55  
    ipP     27 39  
    isP     28 05  
 Ka iP 00 27 02  
    ipP     46  
 Ke iP 00 26 48  
    ipP     27 33  
 Mariana Islands  
 18.6 N, 145.5 E

2 Nu iP 18 19 16  
 Ka iP 18 18 34

3 Nu ePKP 16 43 49  
    i      44 05  
 So i     16 43 58  
 Ka ePKP 16 43 43  
    i      44 01  
 Santa Cruz Islands  
 10.6 S, 164.9 E

3 Nu ePKP 18 56 54  
 Loyalty Islands  
 20.8 S, 169.4 E

4 So iP 01 40 28

4 So iP 01 56 25

4 Nu iP 02 18 27

4 So eP 03 42 38

4 He eP 05 46 42  
 Nu eP 05 46 48  
 So eP 05 47 46  
 Crete  
 34.1 N, 25.2 E

## April

4 Nu eP 14 15 41  
 So eP 14 15 31  
 Ka iP 14 15 40  
 Panama-Costa Rica  
 8.0 N, 83.0 W

4 He iP 20 00 38  
 Nu iP 20 00 41  
 So iP 20 01 42  
 Ka eP 20 01 13  
 Crete  
 35.0 N, 25.6 E

4 He iP 20 56 35 D  
 Nu iP 20 56 37 D  
    eS     21 01 12  
 So iP 20 57 38  
 Ka iP 20 57 08 D  
 Crete  
 34.7 N, 25.5 E

4 He iP 21 05 05  
 Nu iP 21 05 08  
    i      31  
    eS     09 42  
    i      10 01  
 So iP 21 06 09  
 Ka iP 21 05 39  
 Crete  
 34.6 N, 25.5 E

5 He eP 03 50 56  
 Nu iP 03 50 53 D  
    i      51 47  
 So iP 03 50 07 D  
    i      51 02  
 Ka iP 03 50 29 D  
    i      51 23  
 Unimak Island  
 53.7 N, 163.6 W

5 He eP 05 50 48  
 Nu iP 05 50 51  
 Ka eP 05 51 13

5 Nu eP 18 23 16  
 So eP 18 23 20  
 Sumatra  
 5.2 S, 102.1 E

5 Nu iPKP 20 05 04  
 Ka iPKP 20 04 57  
 New Hebrides  
 16.2 S, 167.5 E

April

6 Nu iSKP 04 47 02  
Fiji Islands  
17.7 S, 178.8 W

6 Nu iP 07 13 17

6 Nu ePKP 17 09 32  
Easter Island  
26.7 S, 113.2 W

6 Nu eP 18 52 32  
Ka eP 18 53 09

7 Nu iP 04 00 31

7 Nu eP 06 34 57  
ePP 38 51  
So iP 06 34 40  
Ka iP 06 34 45  
i 53  
iPP 38 31  
Ke iP 06 34 34  
i 52  
Caroline Islands  
10.0 N, 144.4 E

7 He eP 15 51 22  
Nu iP 15 51 21

7 Nu eP 21 40 00  
Ka iP 21 40 40  
Albania  
40.9 N, 20.3 E

7 He eP 22 21 55  
Nu iP 22 21 55  
So iP 22 22 11  
Ka iP 22 21 54  
ipP 22 17  
Ke eP 22 22 21  
Hindu Kush  
36.6 N, 71.4 E

7 Nu iP 23 13 44

7 He iP 23 15 48  
iPcP 16 04  
Nu iP 23 15 46  
iPcP 16 03  
i 12  
So iP 23 15 49  
iPcP 16 06  
Ka iP 23 15 52  
Ke iP 23 15 49  
iPcP 16 06  
Windward Islands  
15.0 N, 60.5 W

April

8 Nu ePKP 01 12 17  
New Hebrides  
16.1 S, 167.3 E

8 He iP 05 22 16  
Nu iP 05 22 15

8 Nu iP 22 20 11  
So eP 22 19 24  
Ka iP 22 19 45  
Unimak Island  
54.8 N, 165.0 W

9 Nu eP 00 45 04

9 Nu eP 04 26 49  
So iP 04 26 27  
Ka iP 04 26 34  
Mariana Islands  
18.6 N, 145.5 E

9 So iP 07 40 32  
Ka eP 07 41 13

9 So iP 22 45 44  
Ka iP 22 45 45  
Philippine Islands  
12.8 N, 124.9 E

10 He eP 04 17 42  
Nu iP 04 17 45  
So iP 04 18 05

10 He iPcP 04 54 58  
Nu ePKP 04 54 58  
ipPKP 55 32  
So iPcP 04 55 02  
ipPKP 35  
Ka ePKP 04 55 02  
Chile-Argentina  
28.6 S, 68.8 W

10 He iP 10 42 23  
Nu iP 10 42 23  
So iP 10 41 41  
Ka iP 10 41 59  
Kamchatka  
51.1 N, 157.7 E

10 He iPcP 13 30 11  
Nu iPcP 13 30 11  
Kermadec Islands  
30.1 S, 177.7 W

April

10 So iP 14 30 13  
Ka eP 14 30 06

10 He iP 21 42 11 U  
eS 46 19  
Nu iP 21 42 13 U  
iS 46 21  
So iP 21 43 18 U  
i 50 34  
iLg2 53 34  
Ka iP 21 42 49 U  
iS 47 26  
iLg1 51 42  
Ke iP 21 43 39  
Ionian Sea  
37.9 N, 20.1 E

10 Nu iP 22 01 02

10 Nu eP 22 02 29

10 He iP 22 15 48  
Nu iP 22 15 52  
So iP 22 16 57  
Ka iP 22 16 28  
Ionian Sea  
38.1 N, 20.4 E

10 Nu eP 23 03 40

10 He iP 23 41 01  
Nu iP 23 41 03  
So eP 23 42 08  
Ka eP 23 41 39  
Ionian Sea  
37.8 N, 20.7 E

10 Nu eP 23 48 08

11 He eP 00 04 32  
Nu iP 00 04 31  
So iP 00 04 03  
Ka iP 00 04 12  
Sea of Japan  
37.4 N, 135.4 E

11 Nu eP 00 15 34

11 Nu eP 00 27 37

11 Nu eP 01 32 45

11 Nu eP 01 34 55

| April |                 |    |            | April |                    |    |            | April |                 |      |            |
|-------|-----------------|----|------------|-------|--------------------|----|------------|-------|-----------------|------|------------|
| 11    | He              | eP | 01 40 49   | 11    | He                 | eP | 11 10 31   | 12    | Nu              | eP   | 03 34 20   |
|       | Nu              | eP | 01 40 49   |       | Nu                 | iP | 11 10 30   |       | He              | iP   | 05 27 12 U |
|       | Ka              | iP | 01 41 24   |       | So                 | iP | 11 10 18   |       | Nu              | iP   | 05 27 12 U |
|       | Ionian Sea      |    |            |       | Ka                 | iP | 11 10 20   |       | i               |      | 30         |
|       | 37.8 N, 20.4 E  |    |            |       | Philippine Islands |    |            |       | ePP             |      | 29 46      |
| 11    | Nu              | iP | 02 02 54   | 11    | Nu                 | iP | 20 50 25   |       | So              | iP   | 05 26 40 U |
|       | Ka              | eP | 02 03 37   |       | Ka                 | iP | 20 50 26   |       | Ka              | iP   | 05 26 51 U |
| 11    | He              | eP | 03 00 11   |       | Hindu Kush         |    |            |       | ePP             |      | 29 10      |
|       | Nu              | eP | 03 00 12   |       | 35.9 N, 71.1 E     |    |            |       | Ke              | iP   | 05 26 30   |
|       | Ka              | eP | 03 00 47   | 11    | Nu                 | eP | 22 50 16   |       | Honshu, Japan   |      |            |
| 11    | Nu              | eP | 03 15 54   | 12    | He                 | eP | 00 06 47   |       | 38.2 N, 142.5 E |      |            |
|       | Ka              | eP | 03 16 31   |       | Nu                 | iP | 00 06 47   | 12    | Nu              | iPKP | 06 12 23   |
| 11    | Nu              | eP | 05 33 49   |       | Ka                 | eP | 00 07 23   |       | Ka              | iPKP | 06 12 28   |
|       | Ka              | iP | 05 33 39   |       | Ionian Sea         |    |            |       | New Hebrides    |      |            |
| 11    | Nu              | iP | 09 30 50   |       | 37.7 N, 20.0 E     |    |            |       | 14.3 S, 166.8 E |      |            |
|       | So              | iP | 09 30 29   | 12    | He                 | eP | 00 48 29   | 12    | Nu              | iP   | 07 11 48   |
|       | Ka              | iP | 09 30 35   |       | Nu                 | iP | 00 48 29   |       | So              | iP   | 07 11 16   |
|       | Ke              | eP | 09 30 28   |       | Ka                 | eP | 00 49 06   |       | Ka              | eP   | 07 11 27   |
|       | Ryukyu Islands  |    |            | 12    | He                 | iP | 01 03 50 U |       | i               |      | 38         |
|       | 26.9 N, 127.1 E |    |            |       | iS                 |    | 12 58      |       | Honshu, Japan   |      |            |
| 11    | He              | iP | 09 40 47   |       | Nu                 | iP | 01 03 48 U | 12    | So              | eP   | 09 58 13   |
|       | Nu              | iP | 09 40 48 D |       | iPP                |    | 06 20      |       | Ka              | eP   | 09 58 24   |
|       | ipP             |    | 41 10      |       | iPPP               |    | 08 24      | 12    | So              | iP   | 16 31 58   |
|       | So              | iP | 09 41 03   |       | eS                 |    | 12 57      | 12    | He              | iP   | 22 35 52   |
|       | ipP             |    | 25         |       | i                  |    | 13 08      |       | Nu              | iP   | 22 35 52   |
|       | Ka              | iP | 09 40 47   |       | iScS               |    | 14 10      | 12    | Nu              | iP   | 23 27 47   |
|       | ipP             |    | 41 11      |       | So                 | iP | 01 03 15 U |       | So              | iP   | 23 27 24   |
|       | Hindu Kush      |    |            |       | ePP                |    | 05 39      | 12    | He              | iP   | 18 43 01   |
|       | 36.5 N, 71.6 E  |    |            |       | eS                 |    | 11 58      |       | Nu              | iP   | 18 43 01 U |
| 11    | Nu              | eP | 09 46 53   |       | iPS                |    | 12 12      |       | i               |      | 05         |
|       |                 |    |            |       | i                  |    | 29         |       | iPP             |      | 44 27      |
| 11    | He              | iP | 10 52 31   |       | iScS               |    | 13 14      |       | iS              |      | 48 41      |
|       | iS              |    | 56 38      |       | i                  |    | 32         |       | So              | iP   | 18 42 50   |
|       | Nu              | iP | 10 52 33 D |       | Ka                 | iP | 01 03 27 U |       | iPP             |      | 44 10      |
|       | iS              |    | 56 44      |       | iS                 |    | 12 14      |       | iS              |      | 48 41      |
|       | So              | iP | 10 53 37 D |       | eP'P'              |    | 32 33      |       | So              | iP   | 18 42 50   |
|       | Ka              | iP | 10 53 08   |       | Ke                 | iP | 01 03 06   |       | iPP             |      | 44 10      |
|       | iS              |    | 57 50      |       | ePP                |    | 05 34      |       | Ka              | iP   | 18 42 44   |
|       | iLg1            |    | 11 02 34   |       | i                  |    | 07 59      |       | ePP             |      | 44 06      |
|       | Ke              | eP | 10 53 59   |       | Honshu, Japan      |    |            |       | i               |      | 50 38      |
|       | i               |    | 54 35      |       | 38.2 N, 142.3 E    |    |            |       | Ke              | eP   | 18 42 51   |
|       | Ionian Sea      |    |            | 12    | Nu                 | eP | 01 17 08   |       | Kazakh-China    |      |            |
|       | 38.2 N, 20.0 E  |    |            |       | So                 | eP | 01 16 38   |       | 49.1 N, 87.2 E  |      |            |
|       |                 |    |            |       | i                  |    | 47         | 13    | Nu              | iP   | 22 13 28   |
|       |                 |    |            |       | Ka                 | eP | 01 16 49   |       |                 |      |            |
|       |                 |    |            |       | i                  |    | 59         |       |                 |      |            |



April

13 He iP 23 05 45  
Nu iP 23 05 43  
So eP 23 05 11  
Ka iP 23 05 22  
Honshu, Japan  
37.8 N, 142.8 E

14 He iP 01 24 18  
Nu iP 01 24 15 U  
So iP 01 23 26 U  
Kenai Peninsula  
59.6 N, 152.1 W

14 He iP 17 01 12  
Nu iP 17 01 10 D  
So iP 17 00 36  
Ka iP 17 00 49  
i 58  
Honshu, Japan  
38.2 N, 142.5 E

14 He iP 18 54 02  
Nu iP 18 54 05 D  
i 14  
So iP 18 53 33  
Ka iP 18 53 44 D  
i 54  
Honshu, Japan  
37.7 N, 142.8 E

15 He iP 07 43 20  
i 38  
Nu iP 07 43 20 D  
i 37  
So iP 07 42 49  
i 43 05  
Ka iP 07 42 59  
i 43 16  
ePP 45 21  
Honshu, Japan  
36.2 N, 140.6 E

15 He eP 09 48 22  
Nu eP 09 48 24  
Ka eP 09 48 59

15 He iP 11 47 34  
Nu eP 11 47 34  
So iP 11 47 22  
Ka iP 11 47 23  
i 50  
Philippine Islands  
13.7 N, 120.6 E

April

15 He iP 18 19 31  
Nu iP 18 19 32  
So iP 18 20 07  
Ka iP 18 19 56  
Ascension Island  
2.7 S, 11.6 W

15 He iP 18 56 23  
Nu iP 18 56 23  
So iP 18 56 59  
i 58 36  
Ka iP 18 56 49  
i 58 21  
Ke eP 18 57 10  
Ascension Island  
2.9 S, 11.9 W

15 He iPKP 22 49 54  
Nu iPKP 22 49 54  
So iPKP 22 50 06  
i 28  
Ka iPKP 22 50 02  
Sandwich Islands  
56.6 S, 26.2 W

16 He iP 00 20 13  
eS 24 20  
Nu iP 00 20 15  
eS 24 25  
So iP 00 21 20  
Ka iP 00 20 52  
Ionian Sea  
38.2 N, 20.4 E

16 So iP 06 01 01  
Ka iP 06 01 10

16 He iP 07 09 05  
Nu iP 07 09 04  
So iP 07 08 27

16 He iP 07 24 10 U  
Nu iP 07 24 13 U  
So eP 07 25 14  
Ka eP 07 24 44  
Aegean Sea  
35.6 N, 25.8 E

April

16 He iP 13 31 45 U  
Nu iP 13 31 44 U  
i 32 18  
iS 41 14  
i 21  
i 41  
So iP 13 31 17  
i 46  
i 32 13  
iS 40 23  
Ka iP 13 31 26 U  
i 55  
i 32 10  
iPP 34 06  
iS 40 40  
i 57  
Ke iP 13 31 09  
South of Honshu  
30.6 N, 140.6 E

16 Nu eP 22 01 49  
So iP 22 00 42  
Ka iP 22 01 17

17 He iP 07 00 29  
Nu iP 07 00 28  
So iP 07 00 00  
Ka iP 07 00 09  
South of Honshu  
31.3 N, 142.6 E

17 Nu eP 07 13 41  
So eP 07 13 49

17 Nu eP 08 01 14  
Kamchatka  
54.8 N, 160.7 E

17 He iP 10 08 04  
i 27  
Nu iP 10 08 06  
i 15  
eS 11 40  
i 14 47  
So iP 10 09 15  
i 29  
Ka iP 10 08 49  
i 09 01  
iLg 16 00  
Adriatic Sea  
42.3 N, 17.3 E



| April |                  |      |          |   | April |                 |       |          |   | April |                 |       |          |   |
|-------|------------------|------|----------|---|-------|-----------------|-------|----------|---|-------|-----------------|-------|----------|---|
| 20    | He               | iP   | 05 59 42 | U | 22    | He              | iPKP  | 04 48 34 |   | 23    | He              | iP    | 04 05 44 | U |
|       |                  | iPcP | 55       |   |       |                 | iSKP  | 51 44    |   |       | Nu              | iP    | 04 05 43 | U |
|       | Nu               | iP   | 05 59 41 | U |       | Nu              | iPKP  | 04 48 35 |   |       | So              | iP    | 04 05 14 |   |
|       |                  | iPcP | 54       |   |       |                 | ipPKP | 49 10    |   |       | Ka              | iP    | 04 05 23 | U |
|       |                  | iPP  | 06 02 23 |   |       |                 | iSKP  | 51 45    |   |       |                 | i     | 39       |   |
|       |                  | iS   | 09 19    |   |       |                 | iPKS  | 58       |   |       | Honshu, Japan   |       |          |   |
|       | So               | iP   | 05 59 34 | U |       | So              | iPKP  | 04 48 40 |   |       | 36.0 N, 139.2 E |       |          |   |
|       | Ka               | iP   | 05 59 42 |   |       |                 | iSKP  | 51 54    |   | 23    | Nu              | iP    | 04 28 49 |   |
|       |                  | iS   | 06 09 21 |   |       | Ka              | ePKP  | 04 48 34 |   |       | So              | iP    | 04 28 41 |   |
|       |                  | i    | 10 13    |   |       |                 | i     | 39       |   |       | Ka              | eP    | 04 28 38 |   |
|       | Ke               | iP   | 05 59 31 |   |       |                 | iSKP  | 51 52    |   | 23    | He              | iP    | 06 08 52 | U |
|       | N coast of Haiti |      |          |   |       |                 | iPKS  | 52 08    |   |       |                 | eS    | 17 38    |   |
|       | 20.6 N, 72.2 W   |      |          |   |       | Chile-Argentina |       |          |   |       |                 | eP'P' | 37 37    |   |
|       |                  |      |          |   |       | 44.2 S, 72.6 W  |       |          |   |       | Nu              | iP    | 06 08 51 | U |
| 20    | He               | iP   | 06 00 10 |   | 22    | He              | iP    | 04 58 13 | U |       |                 | ePP   | 11 20    |   |
|       | Nu               | iP   | 06 00 07 |   |       |                 | i     | 55       |   |       |                 | iS    | 17 30    |   |
|       |                  | iPcP | 20       |   |       | Nu              | iP    | 04 58 12 | U |       |                 | iScS  | 18 43    |   |
|       |                  | iPP  | 02 50    |   |       |                 | i     | 52       |   |       |                 | eP'P' | 37 31    |   |
|       |                  | iS   | 09 41    |   |       | So              | iP    | 04 57 58 | U |       | So              | iP    | 06 08 17 | U |
|       | Ka               | iP   | 06 00 03 |   |       |                 | i     | 58 40    |   |       |                 | iS    | 16 25    |   |
|       |                  | iS   | 09 45    |   |       | Ka              | iP    | 04 58 07 |   |       |                 | i     | 17 05    |   |
| 21    | He               | iP   | 00 01 59 |   |       |                 | i     | 43       |   |       |                 | iScS  | 18 03    |   |
|       | Nu               | iP   | 00 02 03 |   |       | Ke              | iP    | 04 57 54 |   |       |                 | e     | 37 26    |   |
| 21    | He               | iP   | 01 15 02 |   |       | Chiapas, Mexico |       |          |   |       |                 | iP'P' | 50       |   |
|       | Nu               | iP   | 01 15 04 |   |       | 15.5 N, 93.1 W  |       |          |   |       |                 | i     | 38 17    |   |
|       | So               | iP   | 01 14 41 |   | 22    | Nu              | iP    | 19 01 35 |   |       | Ka              | iP    | 06 08 29 |   |
|       | Ka               | iP   | 01 15 05 |   |       | So              | iP    | 19 01 02 | D |       |                 | iS    | 16 51    |   |
| 21    | He               | iP   | 02 27 30 |   |       | Ka              | iP    | 19 01 14 |   |       |                 | iP'P' | 37 41    |   |
|       | Nu               | eP   | 02 27 29 |   |       |                 |       |          |   |       |                 | e     | 38 08    |   |
| 21    | He               | eP   | 06 55 27 |   | 22    | He              | iP    | 19 26 24 | U |       | Ke              | iP    | 06 08 05 |   |
|       | Nu               | iP   | 06 55 29 |   |       | Nu              | iP    | 19 26 23 | U |       | Hokkaido, Japan |       |          |   |
|       |                  |      |          |   |       |                 | ipP   | 27 08    |   |       | 42.9 N, 143.4 E |       |          |   |
|       |                  |      |          |   |       | So              | iP    | 19 25 59 | U | 23    | He              | iP    | 10 01 43 |   |
|       |                  |      |          |   |       |                 | iPcP  | 26 27    |   |       | Nu              | iP    | 10 01 42 |   |
| 21    | He               | ePKP | 08 04 40 |   |       | Ka              | iP    | 19 26 05 | U |       | So              | iP    | 10 00 58 |   |
|       |                  | iSKP | 07 33    |   |       |                 | iPcP  | 32       |   |       | Ka              | iP    | 10 01 17 |   |
|       | Nu               | ePKP | 08 04 40 |   |       |                 | ipP   | 50       |   |       | Kamchatka       |       |          |   |
|       |                  | iSKP | 07 32    |   |       | Ke              | iP    | 19 25 51 |   |       | 51.6 N, 159.6 E |       |          |   |
|       | So               | iSKP | 08 07 14 |   |       | Kyushu, Japan   |       |          |   | 23    | He              | iP    | 15 25 34 |   |
|       | Ka               | ePKP | 08 04 39 |   |       | 32.3 N, 130.3 E |       |          |   |       | Nu              | iP    | 15 25 36 |   |
|       |                  | iSKP | 07 21    |   | 22    | He              | iP    | 22 01 27 |   | 23    | He              | iP    | 16 14 57 |   |
|       | Fiji Islands     |      |          |   |       |                 | e(S)  | 04 04    |   |       | Nu              | iP    | 16 14 56 |   |
|       | 23.7 S, 180.0    |      |          |   |       | Nu              | iP    | 22 01 31 |   |       | So              | iP    | 16 14 12 | U |
| 22    | He               | iPKP | 02 28 55 |   |       |                 | i(S)  | 04 06    |   |       | Ka              | iP    | 16 14 30 |   |
|       | Nu               | iPKP | 02 28 55 |   |       | So              | eP    | 22 02 53 |   |       | Kamchatka       |       |          |   |
|       | Ka               | iPKP | 02 28 46 |   |       |                 | e(S)  | 07 06    |   |       | 51.6 N, 159.6 E |       |          |   |
|       | Ke               | iPKP | 02 28 40 |   |       | Ka              | iP    | 22 02 15 |   |       |                 |       |          |   |
|       | New Hebrides     |      |          |   |       |                 | e(S)  | 05 36    |   |       |                 |       |          |   |
|       | 18.9 S, 169.5 E  |      |          |   |       |                 |       |          |   |       |                 |       |          |   |

| April |                     |      |            | April |                 |      |            | April |                 |                 |          |          |
|-------|---------------------|------|------------|-------|-----------------|------|------------|-------|-----------------|-----------------|----------|----------|
| 23    | So                  | iP   | 16 51 57   | 25    | He              | eP   | 06 27 23   | 26    | He              | ePKP            | 07 44 29 |          |
|       | Ka                  | iP   | 16 52 15   |       | Nu              | iP   | 06 27 28   |       |                 | iSKP            | 47 21    |          |
|       |                     |      |            |       |                 | eS   | 31 35      |       | Nu              | ePKP            | 07 44 29 |          |
| 23    | So                  | iP   | 19 43 23   |       | So              | iP   | 06 28 41   |       |                 | i               | 40       |          |
|       |                     |      |            |       | Ka              | iP   | 06 28 05   |       |                 | iSKP            | 47 20    |          |
|       |                     |      |            |       |                 | eS   | 32 52      |       |                 | iPKS            | 48 11    |          |
| 23    | Nu                  | iP   | 19 58 06   |       | Ionian Sea      |      |            |       | So              | iPKP            | 07 44 28 |          |
|       | So                  | iP   | 19 57 53   |       | 38.1 N, 20.6 E  |      |            |       |                 | iSKP            | 46 59    |          |
|       | Ka                  | iP   | 19 57 52   | 25    | So              | iP   | 15 41 42   |       |                 | iPKS            | 47 47    |          |
| 24    | He                  | iP   | 04 41 49   | 25    | He              | iP   | 15 58 32 U |       | Ka              | ePKP            | 07 44 29 |          |
|       | Nu                  | iP   | 04 41 50   |       | Nu              | iP   | 15 58 32 U |       |                 | i               | 33       |          |
|       | So                  | eP   | 04 41 38   |       |                 | ePP  | 16 01 10   |       |                 | i               | 46 53    |          |
|       | Ka                  | iP   | 04 41 45   |       |                 | iS   | 07 35      |       |                 | iSKP            | 47 08    |          |
| 24    | Nu                  | eP   | 14 14 21   |       | So              | iP   | 15 57 59 U |       |                 | iPKS            | 55       |          |
| 24    | He                  | iP   | 14 27 04 D |       |                 | i    | 58 09      |       |                 | i               | 50 49    |          |
|       | Nu                  | iP   | 14 27 07 D |       |                 | ePP  | 16 00 22   |       | Ke              | iPKP            | 07 44 25 |          |
|       |                     | i    | 50         |       |                 | eS   | 06 30      |       | Fiji Islands    |                 |          |          |
|       |                     | iPP  | 28 15      |       | Ka              | iP   | 15 58 10 U |       | 17.8 S, 179.1 W |                 |          |          |
|       | So                  | iP   | 14 27 22   |       |                 | iS   | 16 06 57   |       | 26              | He              | iP       | 15 21 20 |
|       | Ka                  | iP   | 14 27 06   |       |                 | iPS  | 07 11      |       |                 | Nu              | iP       | 15 21 18 |
|       | Ke                  | iP   | 14 27 32   |       | Ke              | eP   | 15 57 49   |       |                 | So              | iP       | 15 20 34 |
|       | Hindu Kush          |      |            |       | Honshu, Japan   |      |            |       |                 | Ka              | iP       | 15 20 53 |
|       | 37.4 N, 71.1 E      |      |            |       | 38.4 N, 142.5 E |      |            |       |                 | Kamchatka       |          |          |
| 25    | He                  | iP   | 03 39 09   | 25    | He              | iP   | 20 00 57   |       |                 | 51.7 N, 159.3 E |          |          |
|       | Nu                  | iP   | 03 39 08   |       |                 | i    | 01 09      |       | 26              | He              | iP       | 16 00 33 |
|       | So                  | iP   | 03 38 23   |       | Nu              | iP   | 20 00 57   |       |                 | Nu              | iP       | 16 00 32 |
|       | Ka                  | iP   | 03 38 42   |       |                 | i    | 01 08      |       |                 | Southern Iran   |          |          |
|       | Kamchatka           |      |            |       | So              | iP   | 20 00 25   |       |                 | 28.5 N, 57.2 E  |          |          |
|       | 54.0 N, 160.3 E     |      |            |       |                 | i    | 34         |       | 26              | Nu              | eP       | 18 19 07 |
|       |                     |      |            |       |                 | i    | 46         |       |                 | Ka              | eP       | 18 19 35 |
| 25    | Nu                  | iP   | 04 24 38   |       | Honshu, Japan   |      |            |       | 26              |                 |          |          |
|       | So                  | iP   | 04 23 53   |       | 38.4 N, 142.7 E |      |            |       |                 |                 |          |          |
| 25    | He                  | iP   | 04 49 13   | 26    | He              | iP   | 03 18 29   |       | 27              | Nu              | eP       | 01 48 45 |
|       | Nu                  | iP   | 04 49 14   |       |                 | i    | 38         |       |                 |                 |          |          |
|       |                     | eLg1 | 55 06      |       | Nu              | iP   | 03 18 30   |       |                 |                 |          |          |
|       | So                  | eP   | 04 50 14   |       |                 | i    | 37         |       |                 |                 |          |          |
|       |                     | iLg1 | 58 17      |       |                 | iLg1 | 30 09      |       | 27              | He              | i        | 06 48 52 |
|       | Ka                  | iP   | 04 49 53   |       | So              | iP   | 03 18 30   |       |                 |                 | iSKP     | 51 34    |
|       |                     | i    | 59         |       |                 | i    | 37         |       |                 | Nu              | ePKP     | 06 48 47 |
|       |                     | iLg1 | 57 09      |       | Ka              | iP   | 03 18 21   |       |                 |                 | i        | 52       |
|       | Southeastern France |      |            |       |                 | iPP  | 19 32      |       |                 |                 | iSKP     | 51 32    |
|       | 45.3 N, 5.2 E       |      |            |       |                 | iPcP | 20 57      |       |                 | So              | iSKP     | 06 51 15 |
|       |                     |      |            |       |                 | i    | 27 52      |       |                 | Ka              | ePKP     | 06 48 43 |
|       |                     |      |            |       |                 | iLg1 | 29 28      |       |                 |                 | i        | 50 59    |
|       |                     |      |            |       | Ke              | eP   | 03 18 41   |       |                 |                 | iSKP     | 51 23    |
|       |                     |      |            |       | Kazakh S.S.R.   |      |            |       |                 | Fiji Islands    |          |          |
|       |                     |      |            |       | 44.4 N, 78.4 E  |      |            |       |                 | 23.1 S, 179.2 E |          |          |

April

27 He iPKP 07 06 41  
Nu iPKP 07 06 40  
iPKS 10 07  
So iPKP 07 06 45  
Ka iPKP 07 06 44  
iPKS 10 16  
Southern Chile  
44.4 S, 74.8 W

27 Nu eP 12 11 45

27 Nu iPKP 16 48 01  
Kermadec Islands  
33.2 S, 179.3 W

28 Nu iP 09 11 42  
So iP 09 11 05  
Ka eP 09 11 19  
Hokkaido, Japan  
43.9 N, 146.3 E

28 He iP 11 24 11  
Nu iP 11 24 13  
iS 28 38  
So iP 11 25 14  
iPcP 28 21  
eS 30 21  
Ka iP 11 24 48  
i 29 28  
Ke eP 11 25 35  
Dodecanese Islands  
36.4 N, 26.6 E

28 He iP 12 49 01  
Nu iP 12 49 03  
iS 53 19  
So iP 12 50 05  
Ka iP 12 49 35  
Ke eP 12 50 27  
Dodecanese Islands  
36.3 N, 26.7 E

April

30 He iP 02 37 25 U  
iPcP 54  
ePP 39 54  
Nu iP 02 37 24 U  
iPP 39 44  
iS 46 23  
So iP 02 36 52 U  
ipP 37 14  
isP 25  
iPcP 30  
iPP 39 16  
eS 45 22  
Ka iP 02 37 04 U  
iS 45 44  
Ke iP 02 36 42  
Honshu, Japan  
38.8 N, 140.9 E

30 So eP 04 01 42  
Ka eP 04 02 17

30 He iP 09 57 09  
Nu iP 09 57 09 D  
So iP 09 56 47 D  
Ka iP 09 56 54  
Ke iP 09 56 40  
Mariana Islands  
17.0 N, 147.3 E

30 He iPKP 16 36 11  
Nu ePKP 16 36 08  
ePKS 39 41  
So ePKP 16 35 56  
Ka ePKP 16 36 04  
iPKS 39 27  
Tonga Islands  
17.9 S, 176.1 W

30 He iPKP 18 50 18  
Nu iPKP 18 50 16  
ePKS 53 47  
Ka ePKP 18 50 10  
iPKS 53 32  
Fiji Islands  
18.0 S, 176.4 W

April

30 He iP 20 52 40  
Nu eP 20 52 40  
So iP 20 52 29  
Ka iP 20 52 31  
Banda Sea  
6.4 N, 124.0 E

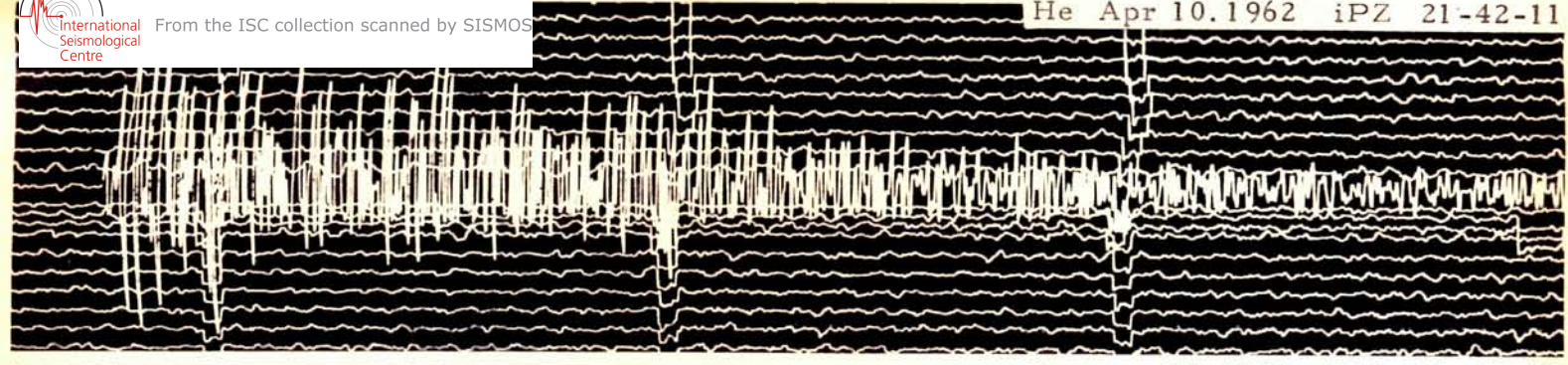
30 He iP 22 52 34  
Nu iP 22 52 33  
So iP 22 52 00  
Ka iP 22 52 12  
Honshu, Japan  
39.0 N, 140.4 E

30 He iP 23 53 54  
Nu iP 23 53 49 D  
iS 56 24  
So iP 23 52 38  
iS 54 19  
Ka iP 23 53 20  
eS 55 24  
Ke iP 23 52 21  
iS 53 47  
Svalbard region  
72.0 N, 7.2 E

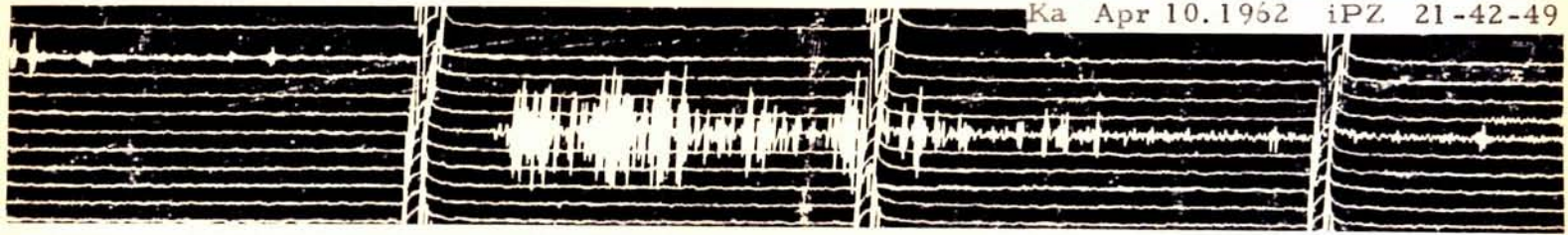
June 14, 1962

Esko Penttilä  
Aili Huovila

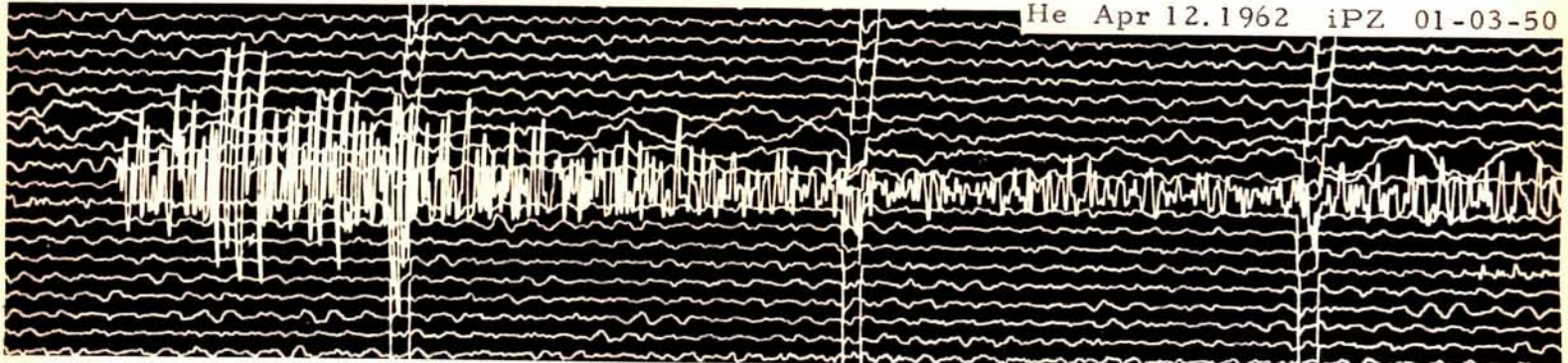
He Apr 10.1962 iPZ 21-42-11



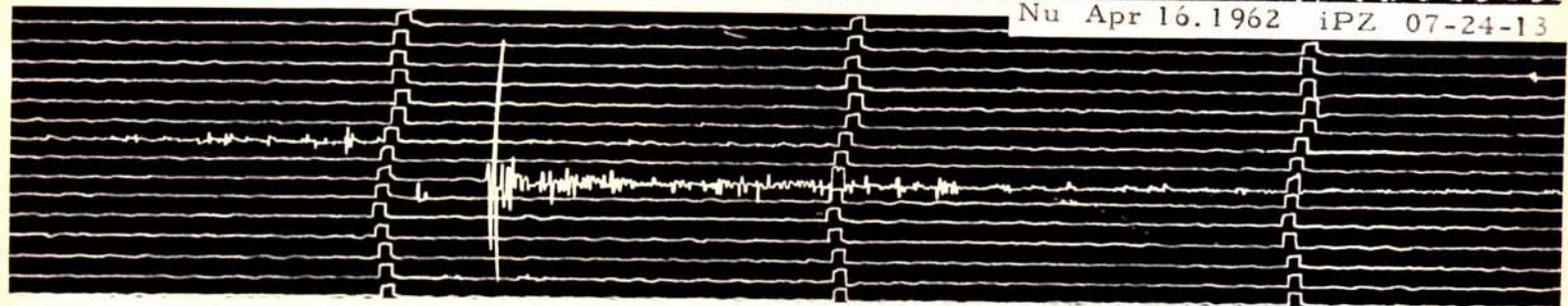
Ka Apr 10.1962 iPZ 21-42-49



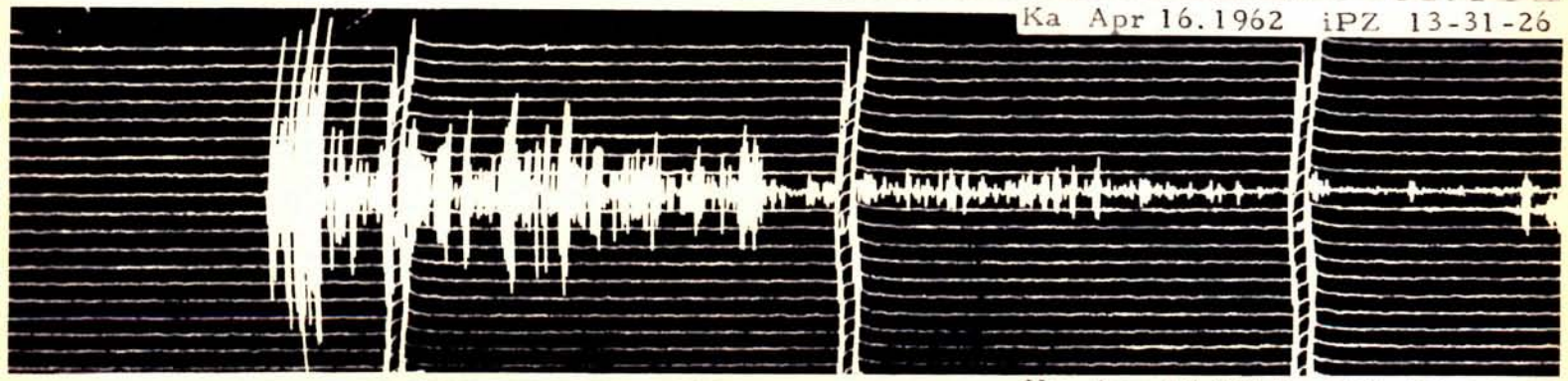
He Apr 12.1962 iPZ 01-03-50



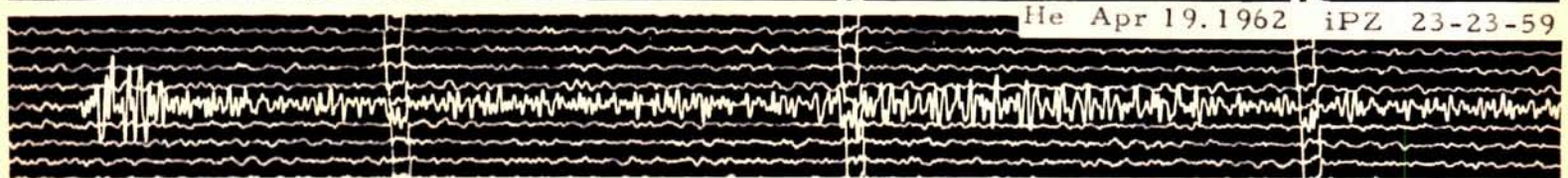
Nu Apr 16.1962 iPZ 07-24-13



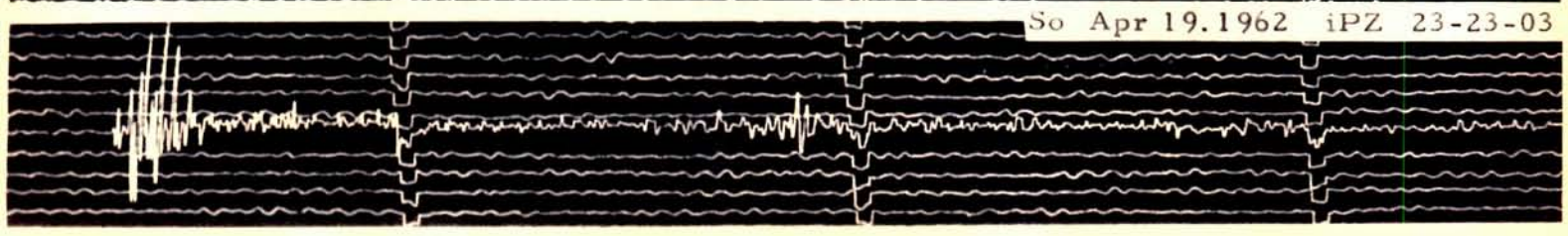
Ka Apr 16.1962 iPZ 13-31-26



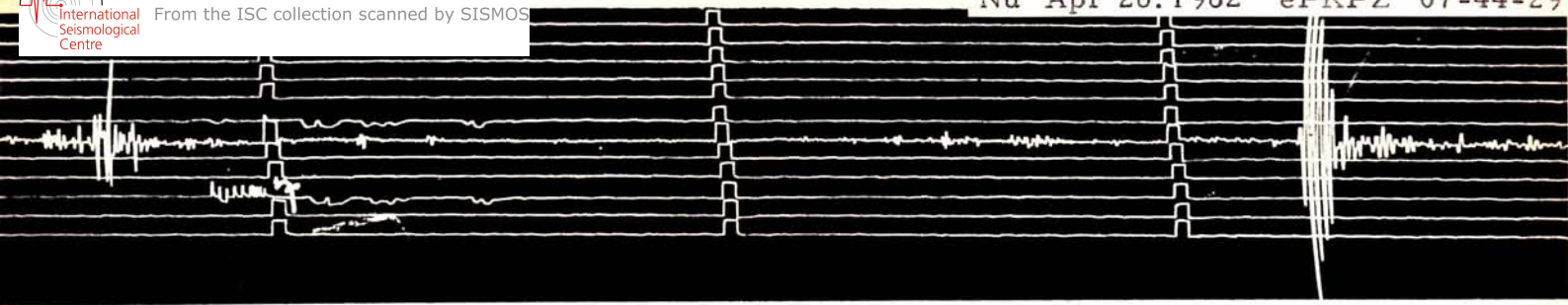
He Apr 19.1962 iPZ 23-23-59



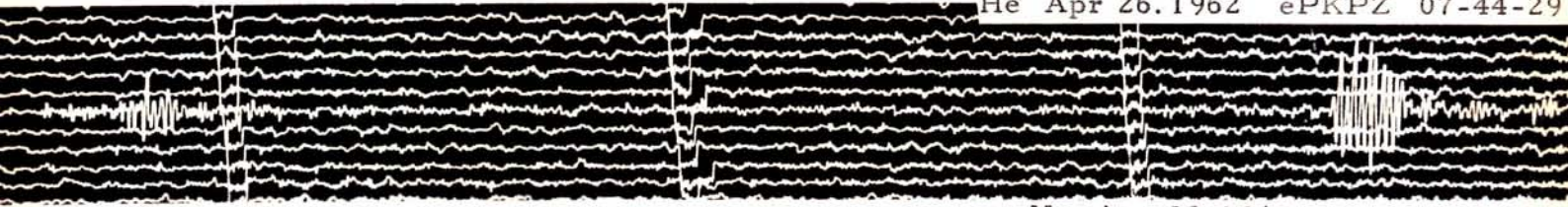
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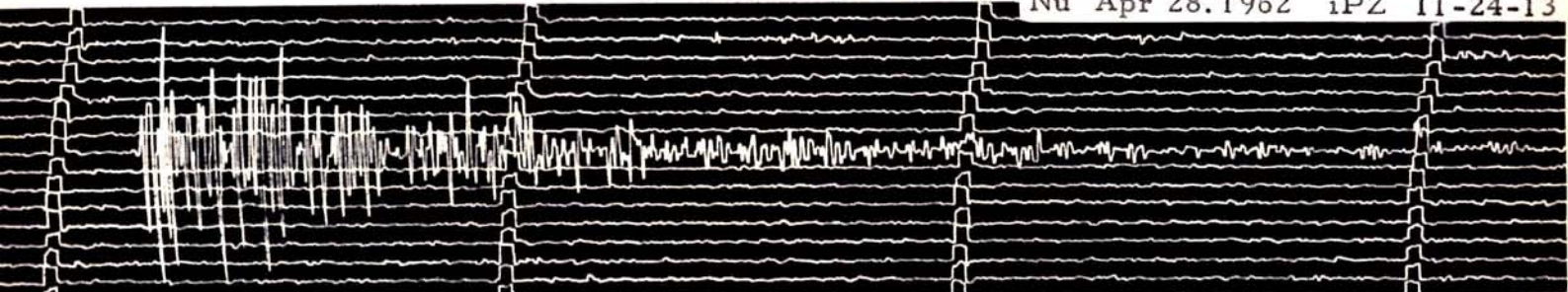
Nu Apr 26.1962 ePKPZ 07-44-29



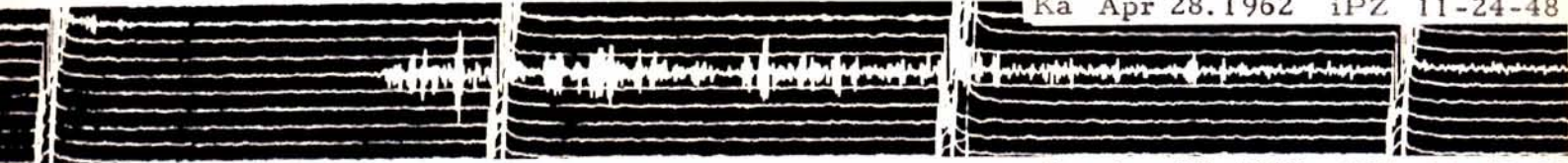
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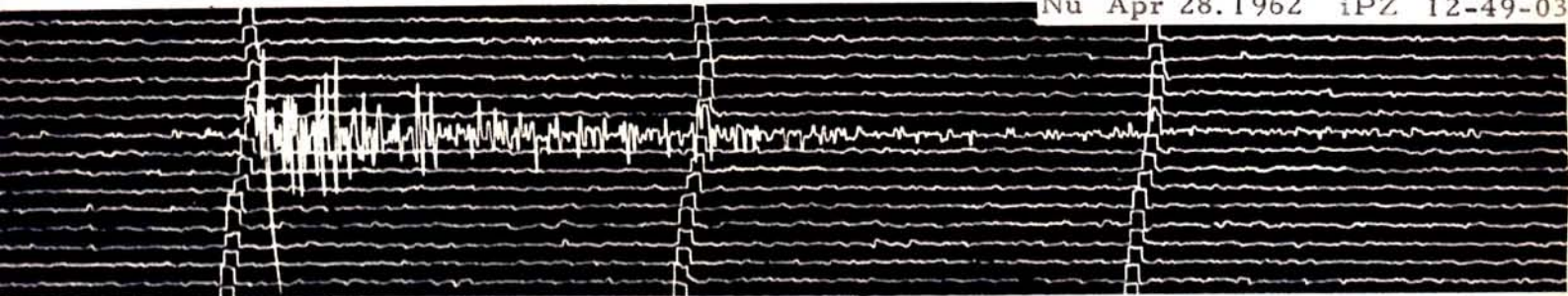
Nu Apr 28.1962 iPZ 11-24-13



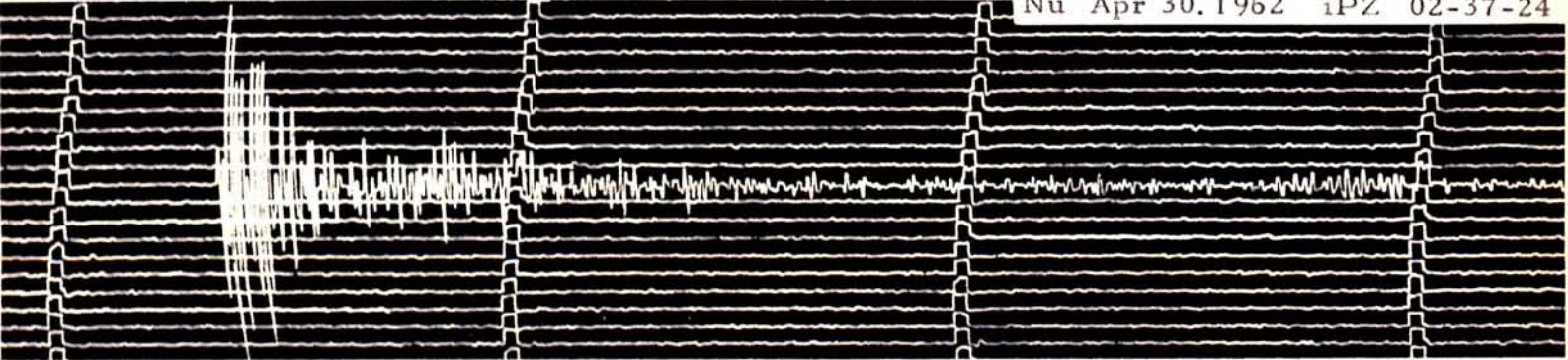
Ka Apr 28.1962 iPZ 11-24-48



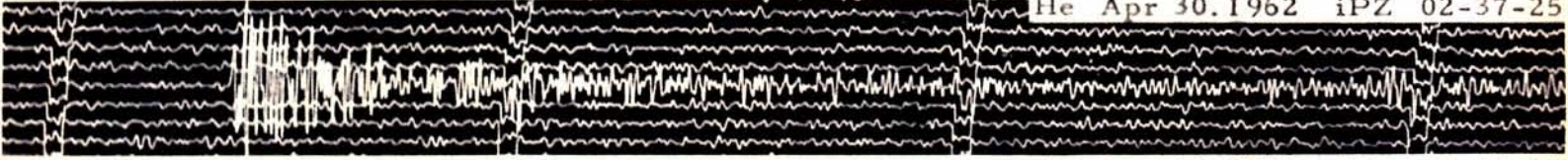
Nu Apr 28.1962 iPZ 12-49-03



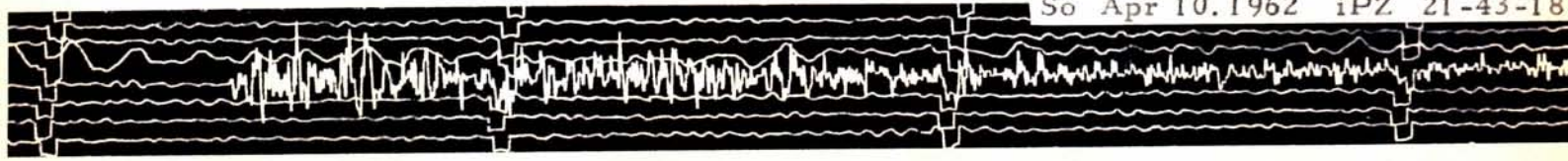
Nu Apr 30.1962 iPZ 02-37-24



He Apr 30.1962 iPZ 02-37-25



So Apr 10.1962 iPZ 21-43-18



He Apr 04.1962 iPZ 21

He Apr 10.1962 iPZ 21

He Apr 11.1962 iPZ 10

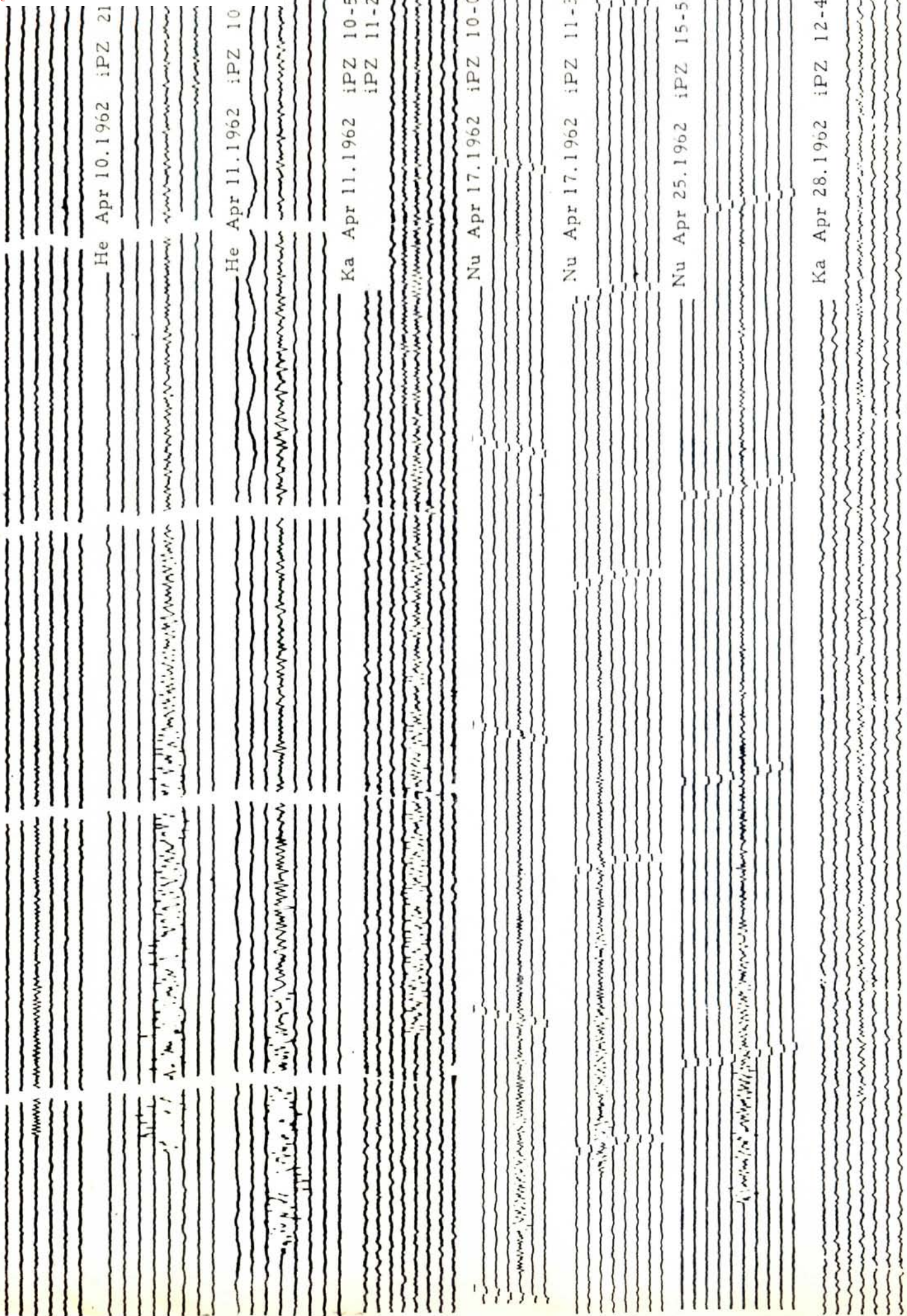
Ka Apr 11.1962 iPZ 10-53-08  
iPZ 11-20-20

Nu Apr 17.1962 iPZ 10-08-06

Nu Apr 17.1962 iPZ 11-38-54

Nu Apr 25.1962 iPZ 15-58-32

Ka Apr 28.1962 iPZ 12-49-35





| May |                  |      |            | May |                    |      |            | May |                   |                   |            |          |
|-----|------------------|------|------------|-----|--------------------|------|------------|-----|-------------------|-------------------|------------|----------|
| 1   | He               | iP   | 00 03 54   | 2   | So                 | iP   | 09 25 43   | 4   | He                | iP                | 05 59 15   |          |
|     | Nu               | iP   | 00 03 50 D |     | Ka                 | iP   | 09 25 35   |     | Nu                | iP                | 05 59 14 U |          |
|     |                  | eS   | 06 25      |     |                    |      |            |     | So                | iP                | 05 58 39 U |          |
|     | So               | iP   | 00 02 40   | 2   | Nu                 | eP   | 11 17 17   |     | Ka                | iP                | 05 58 51 U |          |
|     |                  | eS   | 04 19      |     | So                 | iP   | 11 17 04 U |     | Hokkaido, Japan   |                   |            |          |
|     | Ka               | eP   | 00 03 20   |     | Ka                 | iP   | 11 17 05 U |     | 42.8 N, 143.7 E   |                   |            |          |
|     |                  | iS   | 05 27      |     | Philippine Islands |      |            |     |                   |                   |            |          |
|     | Ke               | eP   | 00 02 22   |     | 14.5 N, 120.2 E    |      |            |     |                   |                   |            |          |
|     |                  | eS   | 03 46      | 2   | So                 | eP   | 23 20 47   | 4   | So                | eP                | 08 57 59   |          |
| 1   | Nu               | eP   | 02 58 19   |     | Ka                 | iP   | 23 21 28   | 4   | Nu                | iP                | 15 07 08   |          |
|     | So               | iP   | 02 57 58   |     | i                  |      | 39         |     |                   |                   |            |          |
|     | Mariana Islands  |      |            |     | Arctic Ocean       |      |            |     |                   |                   |            |          |
|     | 17.5 N, 146.7 E  |      |            |     | 74.9 N, 9.0 E      |      |            |     | 4                 | So                | eP         | 23 51 43 |
| 1   | So               | iP   | 03 04 43 U | 3   | He                 | iP   | 02 48 45 U |     | Ka                | iP                | 23 51 53   |          |
|     |                  |      |            |     | iPcP               |      | 49 19      |     | Honshu, Japan     |                   |            |          |
| 1   | He               | iP   | 10 07 25 D |     | Nu                 | iP   | 02 48 44 U |     | 38.9 N, 140.7 E   |                   |            |          |
|     | Nu               | iP   | 10 07 27 D |     | i                  |      | 58         |     |                   |                   |            |          |
|     | So               | iP   | 10 08 19 D |     | iPcP               |      | 49 17      | 5   | He                | iP                | 11 23 08   |          |
|     | Ka               | iP   | 10 07 58 D |     | So                 | iP   | 02 48 08 U |     | Nu                | iP                | 11 23 07   |          |
|     | Ke               | iP   | 10 08 37   |     | Ka                 | iP   | 02 48 21 U |     | i                 |                   | 13         |          |
|     | Southern Algeria |      |            |     | Ke                 | iP   | 02 47 56 U |     | iPcP              |                   | 27         |          |
|     | 23.8 N, 5.4 E    |      |            |     | Hokkaido, Japan    |      |            |     | So                | iP                | 11 22 38   |          |
| 1   | He               | eP   | 11 58 48   | 3   | He                 | iPKP | 03 53 58 U |     | Ka                | iP                | 11 22 47   |          |
|     | Nu               | eP   | 11 58 51   |     | i                  |      | 54 07      |     | Honshu, Japan     |                   |            |          |
|     | So               | eP   | 11 59 39   |     | Nu                 | iPKP | 03 53 58 U |     | 34.2 N, 139.2 E   |                   |            |          |
|     | Ka               | eP   | 11 59 26   |     | i                  |      | 54 05      | 5   | He                | iP                | 16 18 05   |          |
| 2   | He               | iP   | 02 54 03   |     | So                 | iPKP | 03 54 08   |     | Nu                | iP                | 16 18 05   |          |
|     | Nu               | iP   | 02 53 59 D |     | i                  |      | 56 40      |     |                   |                   |            |          |
|     | i                |      | 54 42      |     | Ka                 | iPKP | 03 54 05   | 5   | He                | iPKP <sub>1</sub> | 23 25 41 U |          |
|     | So               | iP   | 02 53 12   |     | i                  |      | 56 37      |     | iPKP <sub>2</sub> |                   | 53         |          |
|     | Ka               | iP   | 02 53 35   |     | iPKS               |      | 57 31      |     | Nu                | iPKP <sub>1</sub> | 23 25 40 U |          |
|     | Ke               | iP   | 02 52 56   |     | Sandwich Islands   |      |            |     | iPKP <sub>2</sub> |                   | 51         |          |
|     | Kodiak Island    |      |            | 3   | 60.0 S, 32.9 W     |      |            |     | i                 |                   | 26 18      |          |
|     | 55.9 N, 156.1 W  |      |            |     | He                 | eP   | 22 58 53   |     | So                | iPKP              | 23 25 22   |          |
| 2   | Nu               | iP   | 02 55 39   |     | Nu                 | iP   | 22 58 50   |     | Ka                | iPKP              | 23 25 28   |          |
|     | So               | iP   | 02 54 52   |     | So                 | iP   | 22 58 00   |     | Kermadec Islands  |                   |            |          |
| 2   | So               | iPKP | 09 14 47 U |     | Ka                 | eP   | 22 58 27   |     | 31.6 S, 176.7 W   |                   |            |          |
|     | Ka               | ePKP | 09 14 52   |     | Alaska             |      |            |     | 6                 | He                | eP         | 06 47 07 |
|     | Argentina        |      |            | 3   | He                 | iP   | 23 32 42   |     | Nu                | eP                | 06 47 08   |          |
|     | 23.6 S, 65.9 W   |      |            |     | Nu                 | eP   | 23 32 40   |     | Ka                | iP                | 06 47 44   |          |
|     |                  |      |            |     | i                  |      | 54         |     |                   |                   |            |          |
|     |                  |      |            |     | So                 | eP   | 23 33 25   | 6   | Nu                | iPKP              | 12 27 04   |          |
|     |                  |      |            |     | Ka                 | eP   | 23 33 08   |     | Ka                | ePKP              | 12 26 59   |          |
|     |                  |      |            |     | BCIS:              |      |            |     | Fiji Islands      |                   |            |          |
|     |                  |      |            |     | Spain              |      |            |     | 20.8 S, 178.7 W   |                   |            |          |
|     |                  |      |            |     | 43.6 N, 5.3 W      |      |            |     |                   |                   |            |          |

| May   | May   | May   |
|---|---|---|
| 6 He iPKP 19 19 16<br>Nu iPKP 19 19 16<br>ePP 21 23<br>iPKS 22 43<br>eSKKP 32 28<br>So ePKP 19 19 10<br>i 27<br>ePP 21 47<br>iPKS 22 59<br>e 24 56<br>Ka iPKP 19 19 24<br>iPP 21 47<br>iPKS 22 52<br>Ke ePKP 19 19 29<br>Sandwich Islands<br>60.0 S, 32.8 W | 7 He iP 15 16 44 U<br>Nu iP 15 16 44 U<br><br>7 He iP 17 50 29<br>ePP 52 57<br>ePPP 54 32<br>Nu iP 17 50 27<br>i 51 21<br>ePP 52 50<br>iPPP 54 28<br>eS 58 55<br>eP'P' 18 19 13<br>So iP 17 49 50 U<br>i 50 40<br>iPP 52 04<br>iPPP 53 30<br>eS 57 56<br>iScS 59 42<br>eP'P' 18 19 28<br>Ka iP 17 50 04<br>iPP 52 19<br>iPPP 53 48<br>i 58 00<br>i 26<br>eP'P' 18 19 22<br>Ke eP 17 49 38<br>i 50 34<br>Kurile Islands<br>45.3 N, 146.7 E | 8 He iP 19 46 07<br>Nu iP 19 46 08<br>So iP 19 46 24<br>Ka iP 19 46 08<br>West Pakistan<br>33.6 N, 72.3 E<br><br>8 He eP 20 02 12<br>Nu iP 20 02 11<br><br>8 He iP 23 59 13<br>Nu iP 23 59 15<br>eS 24 03 47<br>So iP 24 00 17<br>Ka iP 23 59 52<br>i 24 00 44<br>eS 04 34<br>Sea of Crete<br>35.9 N, 24.4 E<br><br>9 He iP 11 29 46 D<br>Nu iP 11 29 43 D<br>So iP 11 29 04 D<br>ePcP 45<br>Ka iP 11 29 19 D<br>Kurile Islands<br>46.1 N, 152.9 E<br><br>9 He iP 11 34 28<br>Nu iP 11 34 27<br>So iP 11 33 46<br><br>9 He iP 12 19 29<br>Nu iP 12 19 31<br>So iP 12 19 50<br>ePcP 22 02<br>Ka iP 12 19 32<br>Hindu Kush<br>36.6 N, 68.3 E<br><br>9 He eP 12 27 41<br>Nu eP 12 27 40<br><br>9 He iP 18 31 31<br>Nu iP 18 31 29<br>So eP 18 31 05<br>Ka iP 18 31 11<br>Ryukyu Islands<br>30.2 N, 130.3 E |
| 6 He eP 19 39 02<br>Nu iP 19 39 02<br>So iP 19 39 11  |   |   |
| 6 Nu eP 21 45 32<br>So eP 21 46 41<br>Ka iP 21 46 08  |   |   |
| 6 Nu iP 22 06 14  |   |   |
| 6 He iPKP 22 12 55<br>Nu iPKP 22 12 54 U<br>So ePKP 22 12 58<br>Ka ePKP 22 13 01<br>Sandwich Islands<br>60.2 S, 33.1 W  |   |   |
| 6 He iPKP 22 53 50<br>Nu ePKP 22 53 50<br>So ePKP 22 54 01<br>Sandwich Islands<br>60.4 S, 33.6 W  | 7 He iPKP 19 22 34<br>Nu ePKP 19 22 33<br>So iPKP 19 22 44<br>Ka iPKP 19 22 41<br>Sandwich Islands<br>59.5 S, 25.6 W  |   |
| 6 He iP 23 41 21<br>Nu eP 23 41 23<br>Ka eP 23 42 00  | 7 So eP 19 26 05<br>Ka iP 19 25 58  |   |
| 7 So eP 08 20 09<br>Ka iP 08 20 16<br>Mariana Islands<br>19.3 N, 145.4 E  | 8 Nu eP 03 52 56<br>Ka eP 03 53 32  |   |
| 7 He iPKP <sub>1</sub> 13 26 41<br>iPKP <sub>2</sub> 52<br>Nu iPKP <sub>1</sub> 13 26 41<br>iPKP <sub>2</sub> 51<br>Ka iPKP <sub>1</sub> 13 26 29<br>iPKP <sub>2</sub> 40<br>Kermadec Islands<br>32.0 S, 176.5 W  | 8 He iP 16 35 45<br>iPcP 36 15<br>Nu iP 16 35 43 U<br>iPcP 36 13<br>So iP 16 35 07<br>Honshu, Japan<br>43.8 N, 144.4 E  |   |

| May |                 |               | May |                    |               | May |                      |               |             |
|-----|-----------------|---------------|-----|--------------------|---------------|-----|----------------------|---------------|-------------|
| 9   | He              | eP 19 48 53   | 10  | So                 | iP 07 00 53   | 11  | So                   | eP 16 24 26   |             |
|     | Nu              | eP 19 48 52   |     | Ka                 | iP 07 01 24   |     | Mexico               |               |             |
| 10  | He              | iP 00 13 28   | 10  | Nu                 | iP 07 17 58   |     | 16.5 N, 98.6 W       |               |             |
|     |                 | eP'P' 43 16   |     | So                 | iP 07 17 47   | 11  | Nu                   | eP 20 14 13   |             |
|     | Nu              | iP 00 13 24 D |     | Ka                 | iP 07 17 50   |     | So                   | iP 20 14 14   |             |
|     |                 | iS 21 16      |     | Ke                 | eP 07 17 43   |     | South Atlantic Ocean |               |             |
|     |                 | eP'P' 42 59   | 10  | He                 | iP 08 54 28   |     | 27.5 S, 13.7 W       |               |             |
|     | So              | iP 00 12 35 D |     | Nu                 | eP 08 54 27   | 12  | Nu                   | iP 15 28 01   |             |
|     |                 | i 39          |     | So                 | iP 08 53 43   |     | So                   | iP 15 28 40   |             |
|     |                 | iPcP 13 52    |     | Ka                 | iP 08 53 59   |     | Ka                   | eP 15 28 30   |             |
|     |                 | iS 19 45      |     | Ke                 | iP 08 53 28   |     |                      |               |             |
|     | Ka              | iP 00 13 00 D |     | Kamchatka          |               |     |                      |               |             |
|     |                 | iS 20 30      |     | 53.0 N, 159.8 E    |               |     |                      |               |             |
|     |                 | iP'P' 43 17   | 10  | So                 | iP 15 20 17   | 12  | Nu                   | iP 18 57 39   |             |
|     | Ke              | iP 00 12 17 D |     | Ka                 | iP 15 20 26   |     | South Atlantic Ocean |               |             |
|     |                 | iPcP 13 43    |     |                    |               |     | 26.5 S, 13.6 W       |               |             |
|     | Alaska          |               | 10  | He                 | eP 18 35 14   | 12  | He                   | iP 19 12 01   |             |
|     | 62.0 N, 150.1 W |               |     | Nu                 | eP 18 35 14   |     | Nu                   | iP 19 11 58   |             |
| 10  | He              | ePKP 00 47 03 |     | So                 | iP 18 36 24   |     | So                   | iP 19 11 25   |             |
|     |                 | i 09          |     | Ka                 | iP 18 35 55   |     | Ka                   | iP 19 11 42   |             |
|     |                 | i 15          |     | i 36 05            |               |     |                      |               |             |
|     | Nu              | ePKP 00 47 01 |     | Yugoslavia-Albania |               |     |                      |               |             |
|     |                 | i 09          |     | 42.1 N, 19.2 E     |               |     |                      |               |             |
|     |                 | i 14          | 11  | He                 | eP 01 09 41   | 12  | He                   | iPKP 22 21 57 |             |
|     | So              | ePKP 00 46 55 |     | Nu                 | eP 01 09 42   |     | Nu                   | ePKP 22 21 55 |             |
|     |                 | i 58          |     | So                 | eP 01 10 51   |     | Fiji Islands         |               |             |
|     |                 | iSKP 50 33    |     | Ka                 | eP 01 10 22   |     | 18.0 S, 178.0 W      |               |             |
|     | Ka              | iPKP 00 46 56 |     | Italy              |               |     |                      |               |             |
|     |                 | i 47 00       |     | 44.4 N, 11.1 E     |               |     |                      |               |             |
|     | Ke              | iPKP 00 46 54 | 11  | He                 | iPKP 13 54 54 | 13  | Nu                   | iP 09 25 06   |             |
|     | South Island    |               |     | Nu                 | iPKP 13 54 53 |     | So                   | iP 09 25 05   |             |
|     | 41.8 S, 171.6 E |               |     | Kermadec Islands   |               |     |                      | Ka            | iP 09 25 08 |
| 10  | He              | eP 04 50 58   |     | 28.5 S, 177.6 W    |               |     |                      |               |             |
|     | Nu              | iP 04 50 57   | 11  | He                 | eP 14 24 55   | 13  | So                   | eP 12 15 35   |             |
|     | So              | iP 04 50 44   |     |                    | ePP 28 31     |     |                      |               |             |
|     | Ka              | iP 04 50 48   |     | Nu                 | iP 14 24 54   | 13  | He                   | iP 18 59 56   |             |
|     | Ke              | iP 04 50 40   |     |                    | iPP 28 29     |     | Nu                   | iP 18 59 54   |             |
| 10  | He              | iP 05 23 09   |     |                    | iSKS 35 30    |     | So                   | iP 18 59 21   |             |
|     |                 | eP'P' 51 35   |     |                    | i 36 13       |     | Ka                   | iP 18 59 31   |             |
|     | Nu              | iP 05 23 06 U |     | So                 | iP 14 24 35   |     | Northern Honshu      |               |             |
|     |                 | iS 31 55      |     |                    | iPP 28 03     |     | 39.0 N, 140.8 E      |               |             |
|     |                 | iScS 32 58    |     |                    | eSKS 35 08    |     |                      |               |             |
|     |                 | eP'P' 51 31   |     |                    | eS 27         |     |                      |               |             |
|     | So              | iP 05 22 21   |     |                    | iPS 36 35     | 14  | He                   | iP 04 10 52   |             |
|     |                 | i 23 08       |     | Ka                 | iP 14 24 47   |     | Nu                   | eP 04 10 51   |             |
|     | Ka              | iP 05 22 41 U |     |                    | iPP 28 21     |     |                      |               |             |
|     |                 | iS 31 07      |     |                    | iS 35 51      | 14  | Nu                   | eP 10 47 28   |             |
|     |                 | iP'P' 51 37   |     | Ke                 | eP 14 24 29   |     | So                   | eP 10 47 05   |             |
|     | Ke              | iP 05 22 05   |     |                    | i 52          |     | Soembawa             |               |             |
|     | Fox Islands     |               |     | Mexico             |               |     | 9.0 S, 118.7 E       |               |             |
|     | 52.4 N, 170.9 W |               |     | 17.0 N, 99.7 W     |               |     |                      |               |             |



| May |                                      |      |            | May |                                     |      |            | May |                                     |    |            |          |  |  |  |
|-----|--------------------------------------|------|------------|-----|-------------------------------------|------|------------|-----|-------------------------------------|----|------------|----------|--|--|--|
| 19  | He                                   | eP   | 20 53 33   | 21  | He                                  | iP   | 02 06 43   | 21  | Nu                                  | iP | 13 37 43   |          |  |  |  |
|     | Nu                                   | eP   | 20 53 31   |     | Nu                                  | eP   | 02 06 44   |     | So                                  | eP | 13 37 36   |          |  |  |  |
|     | So                                   | iP   | 20 54 36   |     | So                                  | iP   | 02 06 22   |     | Ka                                  | iP | 13 37 31   |          |  |  |  |
|     | Ka                                   | eP   | 20 54 04   |     | Ka                                  | iP   | 02 06 28   |     |                                     |    |            |          |  |  |  |
|     | Greece<br>38.2 N, 22.4 E             |      |            |     | Mariana Islands<br>19.4 N, 145.6 E  |      |            |     | Chinghai Province<br>37.3 N, 95.9 E |    |            |          |  |  |  |
| 19  | He                                   | iP   | 20 57 14   |     |                                     |      |            | 21  | Nu                                  | iP | 14 28 27   |          |  |  |  |
|     | Nu                                   | iP   | 20 57 14   |     |                                     |      |            |     | Ka                                  | eP | 14 28 15   |          |  |  |  |
|     | So                                   | iP   | 20 57 25   | 21  | He                                  | iP   | 12 11 42 U | 21  | He                                  | iP | 15 50 36   |          |  |  |  |
|     | Ka                                   | iP   | 20 57 11   |     | Nu                                  | iP   | 12 11 43 U |     | Nu                                  | iP | 15 50 35 U |          |  |  |  |
|     | Sinkiang Province<br>39.5 N, 73.9 E  |      |            |     |                                     | ePP  | 13 42      |     |                                     | i  | 40         |          |  |  |  |
|     |                                      |      |            |     |                                     | i    | 15 54      |     | So                                  | iP | 15 50 28   |          |  |  |  |
|     |                                      |      |            |     |                                     | iS   | 18 48      |     |                                     | i  | 33         |          |  |  |  |
|     |                                      |      |            |     |                                     | i    | 20 20      |     | Chinghai Province<br>37.1 N, 95.9 E |    |            |          |  |  |  |
| 19  | So                                   | iP   | 20 58 31   |     |                                     | iScS | 21 20      |     |                                     |    |            |          |  |  |  |
|     | Solomon Islands<br>6.3 S, 155.0 E    |      |            |     |                                     | i    | 22 44      | 21  | Nu                                  | iP | 17 07 43   |          |  |  |  |
|     |                                      |      |            |     | So                                  | iP   | 12 11 35 U |     | Ka                                  | eP | 17 07 31   |          |  |  |  |
| 19  | He                                   | iP   | 21 38 19   |     |                                     | iPP  | 13 30      |     |                                     |    |            |          |  |  |  |
|     | Nu                                   | iP   | 21 38 21   |     |                                     | iS   | 18 36      |     | 21                                  | Nu | iP         | 18 24 22 |  |  |  |
|     | So                                   | iP   | 21 38 21   |     |                                     | i    | 21 30      |     | So                                  | iP | 18 24 24   |          |  |  |  |
|     | Ka                                   | eP   | 21 38 13   |     | Ka                                  | iP   | 12 11 31 U |     | Ka                                  | iP | 18 23 10   |          |  |  |  |
|     |                                      |      |            |     | Chinghai Province<br>37.3 N, 96.0 E |      |            |     | Chinghai Province<br>36.9 N, 96.4 E |    |            |          |  |  |  |
| 20  | He                                   | iP   | 00 46 06   | 21  | He                                  | iP   | 12 31 56   | 21  | He                                  | eP | 19 37 57   |          |  |  |  |
|     | Nu                                   | iP   | 00 46 07   |     | Nu                                  | iP   | 12 31 54   |     | Nu                                  | iP | 19 37 58 D |          |  |  |  |
|     | So                                   | iP   | 00 47 09   |     | So                                  | iP   | 12 31 19   |     | So                                  | iP | 19 37 49   |          |  |  |  |
|     | Crete<br>34.8 N, 22.3 E              |      |            |     | Ka                                  | iP   | 12 31 32   |     | Ka                                  | eP | 19 37 44   |          |  |  |  |
|     |                                      |      |            |     | Chinghai Province<br>37.0 N, 95.9 E |      |            |     | Chinghai Province<br>37.4 N, 95.5 E |    |            |          |  |  |  |
| 20  | He                                   | iP   | 15 12 48   | 21  | He                                  | iP   | 12 45 10 U | 21  | He                                  | iP | 19 54 51   |          |  |  |  |
|     | Nu                                   | iP   | 15 12 46   |     | Nu                                  | iP   | 12 45 10 U |     | Nu                                  | iP | 19 54 51   |          |  |  |  |
|     | So                                   | iP   | 15 12 44   |     | So                                  | iP   | 12 45 02 U |     | So                                  | iP | 19 54 44   |          |  |  |  |
|     |                                      | i    | 54         |     | Ka                                  | iP   | 12 44 59 U |     | Ka                                  | iP | 19 54 39   |          |  |  |  |
|     | Ka                                   | iP   | 15 12 51   |     | Chinghai Province<br>37.0 N, 95.9 E |      |            |     | Chinghai Province<br>36.7 N, 95.8 E |    |            |          |  |  |  |
|     | Puerto Rico<br>20.5 N, 66.0 W        |      |            |     |                                     |      |            |     |                                     |    |            |          |  |  |  |
| 20  | So                                   | iP   | 16 07 56   | 21  | Nu                                  | iP   | 13 08 40   | 21  | Nu                                  | iP | 20 20 13   |          |  |  |  |
|     |                                      |      |            |     | So                                  | eP   | 13 08 30   |     | So                                  | iP | 20 20 04   |          |  |  |  |
|     |                                      |      |            |     | Ka                                  | iP   | 13 08 26   |     | Ka                                  | iP | 20 20 00   |          |  |  |  |
|     |                                      |      |            |     | Chinghai Province<br>37.1 N, 95.7 E |      |            |     | Chinghai Province<br>37.1 N, 95.7 E |    |            |          |  |  |  |
| 20  | He                                   | iP   | 17 02 32   | 21  | He                                  | iP   | 13 24 32 U | 21  | Nu                                  | eP | 20 54 58   |          |  |  |  |
|     | Nu                                   | iP   | 17 02 33 D |     | Nu                                  | iP   | 13 24 32 U |     | So                                  | eP | 20 54 51   |          |  |  |  |
|     | So                                   | iP   | 17 02 23 D |     |                                     | ePP  | 26 23      |     | Ka                                  | eP | 20 54 46   |          |  |  |  |
|     | Ka                                   | iP   | 17 02 22   |     | So                                  | iP   | 13 24 23   |     |                                     |    |            |          |  |  |  |
|     | Philippine Islands<br>6.2 N, 125.8 E |      |            |     |                                     | iPcP | 25 50      | 21  | He                                  | iP | 21 17 09   |          |  |  |  |
|     |                                      |      |            |     |                                     | iPP  | 26 19      |     | Nu                                  | iP | 21 17 10   |          |  |  |  |
| 20  | He                                   | iPKP | 18 50 17   |     | Ka                                  | iP   | 13 24 19 U |     | So                                  | iP | 21 17 01   |          |  |  |  |
|     | Nu                                   | iPKP | 18 50 16 D |     |                                     | iPP  | 26 12      |     | Ka                                  | iP | 21 16 58   |          |  |  |  |
|     | Kermadec Islands<br>30.0 S, 177.5 W  |      |            |     | Chinghai Province<br>37.0 N, 95.7 E |      |            |     | Chinghai Province<br>37.1 N, 95.7 E |    |            |          |  |  |  |



May

25 Nu ePKP 17 40 17  
iSKP 43 08  
So eSKP 17 42 49  
Fiji Islands  
24.1 S, 179.1 E

26 He ePKP 02 31 12  
i 21  
iSKP 34 02  
Nu ePKP 02 31 09  
i 20  
iSKP 33 59  
ePKS 34 53  
So iSKP 02 33 38  
Fiji Islands  
19.7 S, 178.0 W

26 So ePKP 13 10 15  
Southern Chile  
43.2 S, 75.6 W

26 He iP 19 55 51 U  
i 56 17  
Nu iP 19 55 52 U  
i 56 17  
iS 20 05 13  
So iP 19 55 59 U  
i 56 22  
iS 20 05 28  
Ka iP 19 55 49  
iS 20 05 11  
Nicobar Islands  
6.7 N, 94.6 E

28 He iP 01 30 41  
Nu iP 01 30 40 U  
So iP 01 30 05  
Hokkaido, Japan  
42.7 N, 144.5 E

28 He eP 03 00 13  
Nu eP 03 00 14  
So eP 03 00 01  
Ka eP 03 00 03  
Philippine Islands  
16.4 N, 120.4 E

May

28 He eP 10 21 30  
Nu eP 10 21 30  
So eP 10 21 01  
Ka iP 10 21 11  
South of Honshu  
31.1 N, 140.9 E

29 He iPKP 00 07 40  
Nu iPKP 00 07 38 U  
Ka iPKP 00 07 42  
Argentina  
31.3 S, 68.3 W

29 He eP 21 11 09  
iPcP 37  
Nu eP 21 11 06  
iPcP 35  
So eP 21 10 25  
Andreanof Islands  
51.8 N, 177.1 W

29 He iP 23 49 15  
Nu iP 23 49 15  
iS 53 20  
So iP 23 50 20  
Ionian Sea  
38.1 N, 20.9 E

30 He iP 05 16 50  
Nu iP 05 16 49 U  
So iP 05 16 36 U  
30 Nu iP 10 12 12  
So iP 10 12 22  
North Atlantic Ocean  
30.3 N, 42.4 W

31 He iP 02 05 23  
Nu iP 02 05 24  
So iP 02 05 50 D  
i 06 06  
iPcP 07 14  
Ka iP 02 05 30  
Pakistan  
24.5 N, 65.8 E

31 He iPKP 03 37 38  
Nu iPKP 03 37 37 U  
Kermadec Islands  
30.1 S, 177.1 W

May

31 He iP 05 24 09  
Nu iP 05 24 07  
Ka iP 05 23 58  
Philippine Islands  
7.7 N, 124.0 E

31 He iP 06 40 28  
i 42 06  
Nu iP 06 40 27 U  
i(sP) 42 01  
iS 50 24  
isS 52 29  
So iP 06 40 04 U  
ipP 41 09  
iS 49 41  
isS 51 36  
iPKKP 58 51  
Ka iP 06 40 11  
iS 49 53  
Volcano Islands  
22.1 N, 142.6 E

31 He iPKP 08 57 05  
Nu iPKP 08 57 05 U  
So ePKP 08 56 46  
Ka ePKP 08 56 55  
Kermadec Islands  
30.8 S, 177.3 W

31 Nu iP 10 28 51

September 5, 1962

M. T. Porkka  
Aili Huovila

Nu May 06.1962 iPKPZ 19-19-16

Nu May 10.1962 iPZ 00-13-24

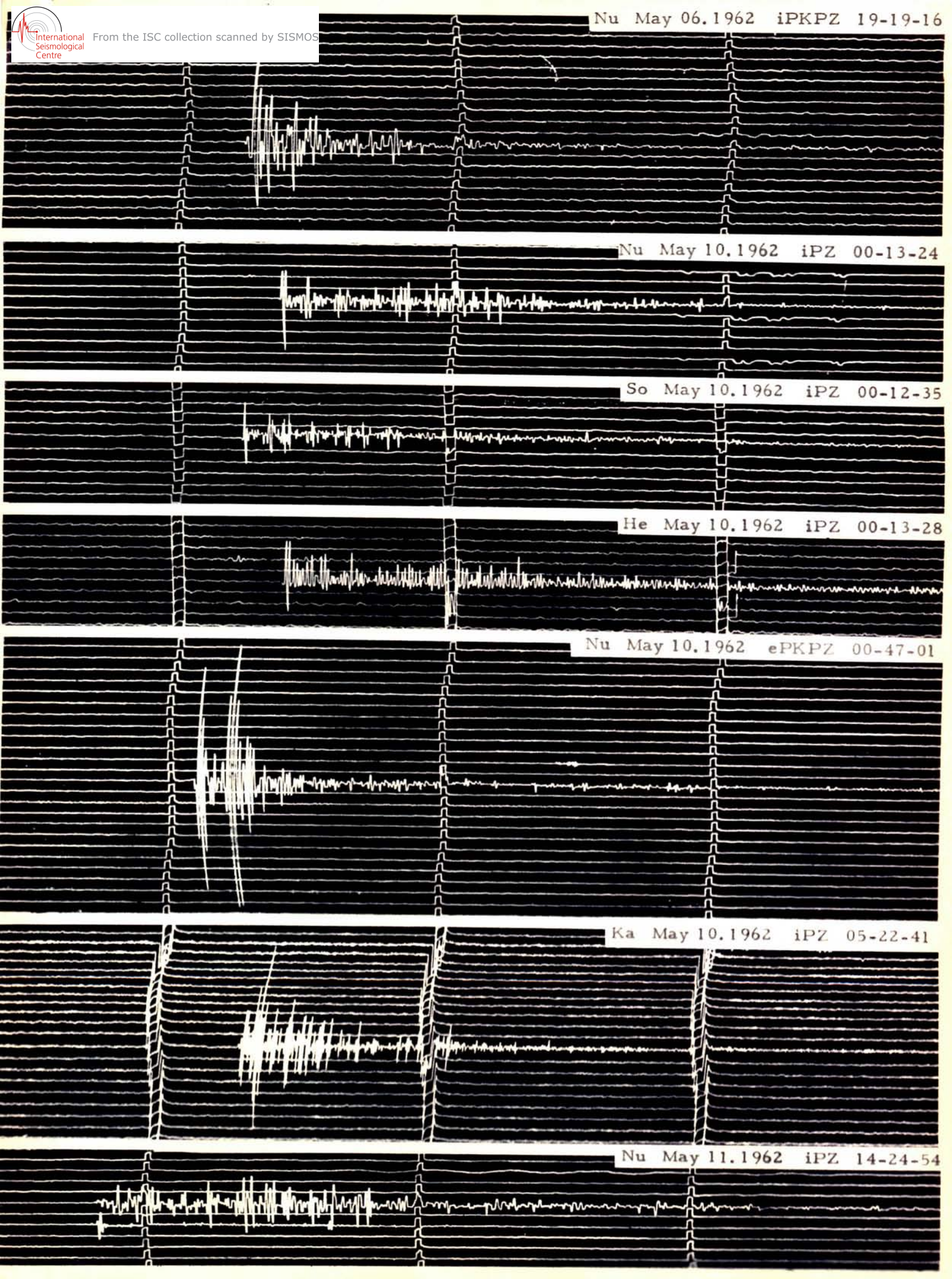
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He May 10.1962 iPZ 00-13-28

Nu May 10.1962 ePKPZ 00-47-01

Ka May 10.1962 iPZ 05-22-41

Nu May 11.1962 iPZ 14-24-54





Nu May 05, 1962 iPKPZ 23-

Nu May 07, 1962 iPZ 17

Ka May 07, 1962 iPZ 17.

Ka May 10, 1962 iPZ 05-22-41

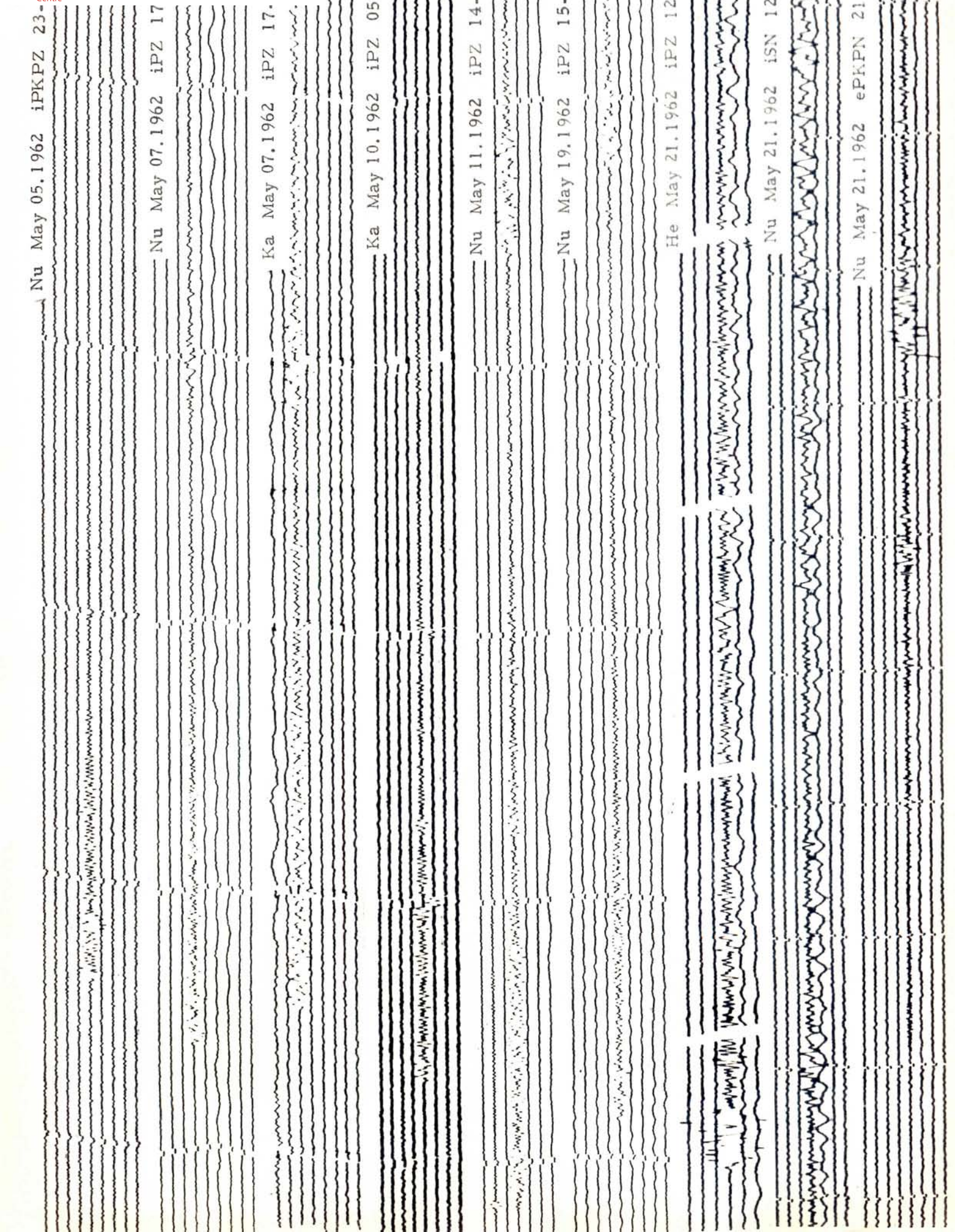
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Nu May 19, 1962 iPZ 15-11-14

He May 21, 1962 iPZ 12-11-4

Nu May 21, 1962 iSN 12-18-4

Nu May 21, 1962 ePKPN 21-34-0



July

1 He iPKP 01 50 56  
Nu iPKP 01 50 56 D  
So iPKP 01 50 46  
Ka iPKP 01 50 49  
New Hebrides  
14.1 S, 167.2 E

1 Nu eP 03 47 35  
So eP 03 47 21  
Ka iP 03 47 27  
i 49  
Sikang Province  
30.1 N, 102.8 E

1 Nu ePKP 05 27 03  
Tonga Islands  
23.8 S, 176.9 W

1 He iP 11 51 48 U  
iS 56 09  
Nu iP 11 51 51 U  
iS 56 16  
So eP 11 52 40  
Ka iP 11 52 06 U  
e 56 30  
iS 46  
Azerbaijan, S.S.R.  
40.8 N, 49.9 E

1 Nu iP 21 30 53 D  
i 42 21  
iLg1 43 03  
So iP 21 31 01 D  
iLg1 43 38  
Ka iP 21 30 48  
i 31 44  
iPP 32 11  
iLg1 42 50  
Sinkiang Province  
40.0 N, 75.4 E

2 Nu iPKP 08 51 26 D  
i 54  
Ka iPKP 08 51 20  
i 51  
Santa Cruz Islands  
10.3 S, 165.9 E

2 So eP 15 55 22  
Ka iP 15 55 23  
Celebes region  
0.2 S, 123.1 E

July

3 Nu iP 03 23 53 D  
So iP 03 24 09  
Ka iP 03 23 54 D  
Hindu Kush  
36.7 N, 70.9 E

3 Nu iP 06 38 33  
So eP 06 39 09  
Ka iP 06 38 47  
i 39 19  
ePP 40 26  
Iran  
28.0 N, 56.2 E

3 So iP 18 11 48

3 So iP 21 28 38  
Ka eP 21 28 32  
Mid-Atlantic Ocean  
4.3 N, 31.6 W

4 He eS 18 58 46  
Nu iP 18 57 25  
eS 58 39  
So iP 18 56 22  
Ka iP 18 56 35  
eS 57 04  
Ke eP 18 56 42  
eS 57 21

4 He iPKP 23 37 12 D  
Nu iPKP 23 37 11 D  
i 22  
Kermadec Islands  
28.5 S, 177.5 W

5 He iP 17 52 41  
Nu eP 17 52 38  
So iP 17 52 10  
Ka iP 17 52 19  
South of Japan  
30.9 N, 141.4 E

6 Nu iP 01 27 00  
So iP 01 26 33  
Ka iP 01 26 41  
iPP 29 16  
South of Honshu  
32.6 N, 139.7 E

July

6 He iP 02 21 35  
ePPP 24 34  
Nu iP 02 21 37 D  
ePP 23 37  
iPPP 24 35  
iS 29 13  
So iP 02 22 12 D  
i 47  
e 24 00  
ePPP 25 36  
Ka iP 02 21 50 D  
iPP 23 52  
iPPP 25 08  
iS 29 38  
iPS 50  
Ke eP 02 22 23  
Arabian Sea  
13.3 N, 58.0 E

6 He iP 09 21 14  
i 19  
eS 25 21  
Nu iP 09 21 16 U  
iPcP 24 56  
iS 25 26  
So iP 09 22 20  
Ka iP 09 21 52 U  
eS 26 32  
Ke eP 09 22 41  
Ionian Sea  
38.0 N, 20.2 E

6 He eP 09 33 59  
Nu iP 09 33 59  
Ka iP 09 34 39

6 He eP 09 41 44  
Nu iP 09 41 45  
So eP 09 42 48  
Ka iP 09 42 21

6 Nu eP 13 30 43  
Ka eP 13 31 23

6 He iP 14 24 31  
Nu iP 14 24 35  
So iP 14 25 40  
Ka iP 14 25 11

July

6 Nu eP 15 22 43  
So iP 15 22 17  
Ka iP 15 22 23 D  
i 23 07  
Ke eP 15 22 10  
N Ryukyu Islands  
30.5 N, 130.8 E

6 Nu iP 15 57 39

6 He eP 15 59 27  
Nu iP 15 59 29  
So eP 16 00 34  
Ionian Sea  
37.2 N, 19.4 E

6 Nu eP 16 10 25

6 He iP 17 04 57  
Nu eP 17 04 57  
So eP 17 06 05  
Ka iP 17 05 33

6 He iP 18 51 00  
Nu iP 18 50 58  
So iP 18 50 08  
Ka iP 18 50 33  
Kenai Peninsula  
60.3 N, 152.1 W

6 He iP 23 12 26 U  
ipP 13 10  
isP 37  
iPP 56  
Nu iP 23 12 28 U  
ipP 13 12  
iPP 56  
iS 17 59  
i 20 05  
iSS 21 18  
So iP 23 12 44  
Ka iP 23 12 28 U  
Ke iP 23 12 54  
Hindu Kush  
36.6 N, 70.4 E

7 He eP 03 09 07  
Nu iP 03 09 09  
So eP 03 09 14  
Tibet  
30.7 N, 84.4 E

July

7 He iP 06 23 35  
Nu iP 06 23 34  
eS 32 30  
iScS 33 28  
eP'P' 52 08  
So iP 06 22 49  
iPcP 23 36  
iScP 27 35  
iP'P' 52 21  
Ka iP 06 23 09 D  
iPcP 49  
Rat Islands  
51.3 N, 178.6 E

7 Nu eP 07 25 20  
So eP 07 24 36  
Ka eP 07 24 56  
Rat Islands  
51.3 N, 178.8 E

7 Nu iP 12 18 15

7 Nu iP 12 26 09  
Ka eP 12 26 43

7 He iP 12 52 11  
Nu iP 12 52 13  
i 38  
eS 56 26  
So eP 12 53 16  
Ka iP 12 52 48  
Ionian Sea  
36.8 N, 18.5 E

7 He iP 21 31 19  
Nu iP 21 31 17  
So iP 21 30 34  
Ka eP 21 30 52  
Kamchatka  
51.9 N, 158.6 E

7 He eP 23 14 59  
Nu eP 23 15 00

8 He iP 03 32 51  
eP'P' 04 01 17  
Nu iP 03 32 48  
eP'P' 04 01 16  
So iP 03 32 04  
iPcP 50  
eP'P' 04 01 27  
Ka iP 03 32 25  
eS 41 05  
eP'P' 04 01 20  
Rat Islands  
51.5 N, 178.5 E

July

8 Nu ePKP 04 22 48  
So ePKP 04 23 01  
Ka ePKP 04 22 58  
Sandwich Islands  
55.5 S, 30.1 W

8 He eP 07 42 02  
Nu eP 07 42 01  
So eP 07 42 17  
Ka iP 07 42 15  
Mid-Atlantic Ocean  
8.1 N, 38.0 W

8 Nu ePKP 12 20 51  
iSKP 23 33  
Fiji Islands  
22.0 S, 179.8 W

8 Ka iP 17 33 02  
Celebes  
0.3 S, 121.8 E

8 Nu eP 20 16 56

8 He iP 23 14 20  
Nu iP 23 14 19 U  
Kermadec Islands  
28.1 S, 176.5 W

8 He eP 23 32 04  
Nu eP 23 32 03  
So eP 23 31 19  
Ka eP 23 31 38  
Kamchatka  
54.0 N, 160.5 E

9 He iP 00 02 58  
Nu iP 00 02 59 D  
So iP 00 03 00  
Ka iP 00 02 52

9 Nu eP 04 45 12  
Ka eP 04 45 12

9 He iP 04 51 18  
Nu iP 04 51 16

9 Nu eP 07 11 42

9 He iP 14 03 43  
Nu iP 14 03 41  
So iP 14 03 02  
Ka iP 14 03 17  
Kurile Islands  
44.0 N, 147.8 E



July

15 He iP 06 58 10  
 ipP 36  
 isP 47  
 ePP 07 00 31  
 Nu iP 06 58 08  
 eS 07 06 54  
 So iP 06 57 35 D  
 i 49  
 ipP 58 00  
 isP 11  
 iPP 59 53  
 eS 07 05 53  
 Ka iP 06 57 47  
 iS 07 06 13  
 Ke iP 06 57 26  
 Honshu, Japan  
 39.8 N, 140.9 E

15 So eP 09 46 27  
 Mariana Islands  
 14.7 N, 146.3 E

15 He iP 15 23 38  
 i 51  
 Nu iP 15 23 37 U  
 i 46  
 So iP 15 23 03 U  
 i 15  
 Ka iP 15 23 15 U  
 e(PP) 25 46  
 Ke eP 15 22 52  
 Honshu, Japan  
 40.2 N, 142.4 E

15 He eP 22 01 22  
 So eP 22 02 00  
 Gulf of Aden  
 13.4 N, 53.1 E

16 He iPKP 02 24 28  
 Nu ePKP 02 24 29  
 So iPKP 02 24 31 U  
 Ka ePKP 02 24 27  
 Ke ePKP 02 24 29  
 South of Tasmania  
 52.1 S, 138.9 E

16 Nu eP 06 29 02  
 So iP 06 28 34  
 Bonin Islands  
 28.2 N, 142.5 E

16 So iP 06 59 26  
 Ka eP 06 59 25

16 He iP 07 08 35  
 Nu iP 07 08 39  
 So iP 07 09 44

July

16 He iPKP 09 44 37  
 Nu iPKP 09 44 36  
 ipPKP 45 26  
 So ePKP 09 44 18  
 Santa Cruz Islands  
 13.0 S, 167.2 E

16 He iP 13 04 31  
 ePcP 05 23  
 Nu iP 13 04 29 U  
 So iP 13 03 38 U  
 Ke eP 13 03 21  
 Alaska  
 62.3 N, 153.1 W

16 Nu iPKP 16 36 07  
 Easter Island  
 34.8 S, 108.6 W

16 Nu iP 21 13 11  
 So iP 21 13 28  
 Ka iP 21 13 11

17 He iP 03 06 08  
 Nu iP 03 06 11  
 So iP 03 07 17  
 Ka iP 03 06 47

17 He iPKP 05 51 17  
 Nu iPKP 05 51 17  
 iPKS 54 41  
 So iPKP 05 51 22  
 ePKS 54 54  
 Ka ePKP 05 51 23  
 Near coast of Chile  
 43.0 S, 74.9 W

17 Nu iPKP 05 51 27  
 iPKS 54 51

17 Nu eP 09 53 49  
 Mexico-Guatemala  
 14.8 N, 92.9 W

17 He iP 17 31 08  
 i 22  
 Nu iP 17 31 07 U  
 eP'P' 59 54  
 So iP 17 30 31 U  
 Ka iP 17 30 45 U  
 Ke iP 17 30 21  
 Hokkaido, Japan  
 43.1 N, 144.5 E

18 He iP 00 17 04  
 Nu iP 00 17 06

July

18 He iP 00 25 35  
 i 46  
 Nu iP 00 25 35  
 i 47  
 So iP 00 25 25  
 i 37  
 Philippine Islands  
 11.2 N, 121.9 E

18 Nu iP 01 39 31

18 So iP 07 13 57

18 He iP 10 23 21  
 Nu iP 10 23 21  
 So iP 10 22 59 D  
 Mariana Islands  
 15.3 N, 148.1 E

18 So iP 23 54 58

19 He iP 22 16 32  
 Nu iP 22 16 31 D  
 So iP 22 15 58 D  
 Ka iP 22 16 10 D  
 Honshu, Japan  
 39.8 N, 140.7 E

20 Nu eP 04 47 34  
 Fox Islands  
 51.5 N, 173.6 W

20 Nu ePKP 16 46 37  
 Tonga Islands  
 21.0 S, 174.8 W

21 Nu eP 03 13 15  
 iPP 14 18  
 So eP 03 13 50  
 Ka eP 03 13 28  
 Northern Iran  
 36.6 N, 54.6 E

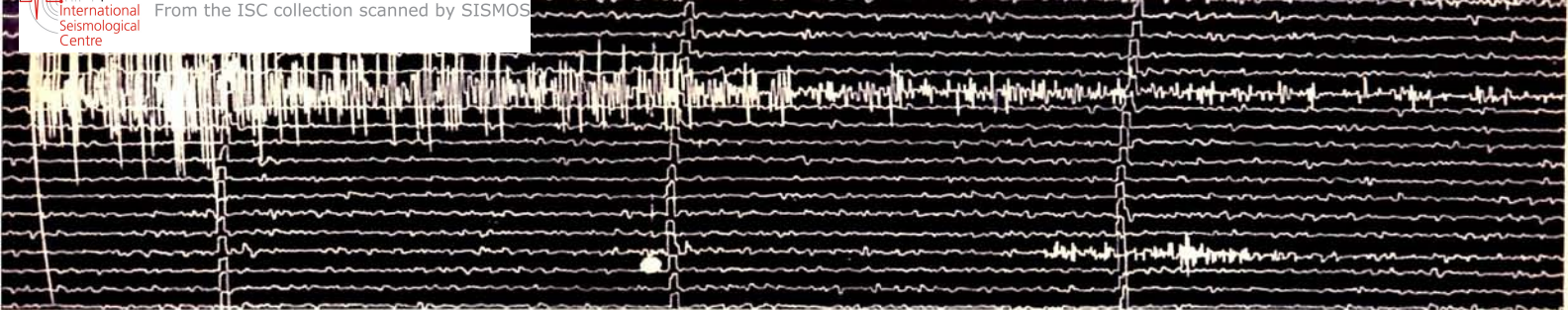
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 Nu iP 17 35 53 U  
 Ka iP 17 35 53  
 Hindu Kush  
 37.0 N, 71.9 E

22 Nu eP 00 26 44  
 So iP 00 25 33  
 Ka eP 00 26 11  
 Franz Josef Land  
 86.9 N, 50.8 E

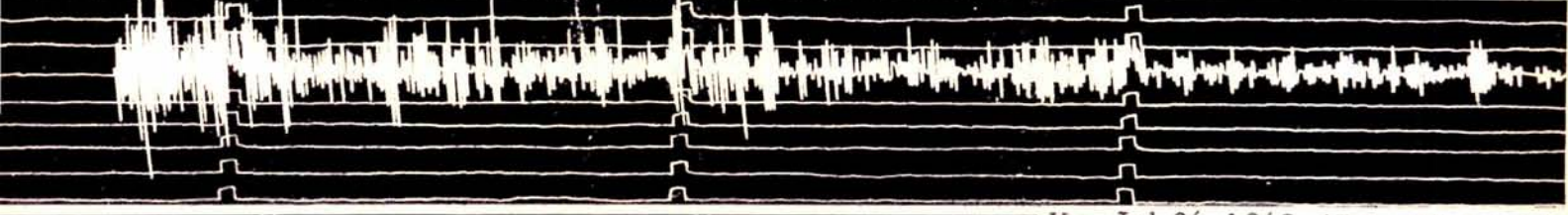


| July |                    |      |            | July |                  |       |            | July |                    |     |            |
|------|--------------------|------|------------|------|------------------|-------|------------|------|--------------------|-----|------------|
| 28   | He                 | iP   | 20 57 14   | 30   | He               | iP    | 17 31 02   | 31   | He                 | eP  | 01 30 37   |
|      | Nu                 | iP   | 20 57 11   |      | Nu               | eP    | 17 31 01   |      | Nu                 | eP  | 01 30 37   |
|      | So                 | iP   | 20 56 35   |      |                  | i     | 34 09      |      |                    | eS  | 35 02      |
|      | Ka                 | iP   | 20 56 49   |      |                  | ePKP  | 58         |      | So                 | iP  | 01 31 42   |
|      | Kurile Islands     |      |            |      |                  | iPP   | 35 24      |      |                    | ePP | 32 47      |
|      | 44.6 N, 148.6 E    |      |            |      |                  | eSKS  | 41 22      |      | Ka                 | eP  | 01 31 30   |
|      |                    |      |            |      |                  | i     | 42 22      |      | Greece             |     |            |
| 28   | He                 | eP   | 22 05 27   |      |                  | iPS   | 44 43      |      | 36.5 N, 22.7 E     |     |            |
|      | Nu                 | iP   | 22 05 25 U |      |                  | ePKKP | 46 52      |      |                    |     |            |
|      | So                 | iP   | 22 04 51   |      | So               | iP    | 17 30 44   | 31   | So                 | eP  | 02 33 05   |
|      | Ka                 | iP   | 22 05 02   |      |                  | i     | 33 52      |      | New Guinea         |     |            |
|      | Hokkaido, Japan    |      |            |      |                  | i     | 34 24      |      | 3.2 S, 144.1 E     |     |            |
|      | 42.5 N, 142.8 E    |      |            |      |                  | iPP   | 59         |      |                    |     |            |
|      |                    |      |            |      | Ka               | iP    | 17 30 48   | 31   | He                 | eP  | 05 20 27   |
| 28   | So                 | iP   | 23 58 55   |      |                  | i     | 34 46      |      | Nu                 | iP  | 05 20 28 D |
|      | Ka                 | iP   | 23 58 57   |      |                  | iPP   | 35 09      |      | So                 | iP  | 05 20 02 D |
|      |                    |      |            |      |                  | ePKKP | 46 47      |      | Ka                 | iP  | 05 20 09   |
| 29   | He                 | eP   | 03 48 41   |      | New Guinea       |       |            |      | Shikoku, Japan     |     |            |
|      | Nu                 | iP   | 03 48 40   |      | 3.3 S, 143.9 E   |       |            |      | 32.5 N, 132.1 E    |     |            |
|      |                    | i    | 57         |      |                  |       |            |      |                    |     |            |
|      | So                 | iP   | 03 48 21 U | 30   | So               | iP    | 19 10 21   |      |                    |     |            |
|      | Ka                 | iP   | 03 48 24 U |      | Ka               | iP    | 19 10 27   |      |                    |     |            |
|      | Ryukyu Islands     |      |            |      | Central Colombia |       |            |      |                    |     |            |
|      | 25.5 N, 125.4 E    |      |            |      | 6.6 N, 73.0 W    |       |            |      |                    |     |            |
| 29   | So                 | eP   | 07 35 01   |      |                  |       |            | 31   | Nu                 | iP  | 05 24 56 U |
| 29   | So                 | iP   | 09 08 38   | 30   | He               | iP    | 19 47 51   |      |                    | iS  | 34 39      |
|      | Ka                 | iP   | 09 08 38   |      | Nu               | iP    | 19 47 49 U |      | So                 | iP  | 05 24 42 U |
|      | Kwangtung Province |      |            |      | So               | iP    | 19 47 03   |      | Ka                 | iP  | 05 24 43 U |
|      | 23.6 N, 114.3 E    |      |            |      | Ka               | iP    | 19 47 25   |      | Philippine Islands |     |            |
|      |                    |      |            |      |                  |       |            |      | 18.8 N, 120.8 E    |     |            |
| 29   | Nu                 | ePKP | 18 39 39   | 30   | He               | iP    | 20 31 50   | 31   | Nu                 | iP  | 07 33 39   |
|      | So                 | iPKP | 18 39 26   |      | Nu               | eP    | 20 31 48   |      | So                 | iP  | 07 33 05   |
|      | Ka                 | ePKP | 18 39 29   |      |                  | ePP   | 35 28      |      | Ka                 | iP  | 07 33 18 U |
|      | South Island       |      |            |      |                  | iSKS  | 42 10      |      | Honshu, Japan      |     |            |
|      | 41.4 S, 173.2 E    |      |            |      |                  | iS    | 35         |      | 40.1 N, 143.0 E    |     |            |
|      |                    |      |            |      |                  | i     | 43 38      | 31   | Ka                 | iP  | 13 03 44   |
| 30   | Nu                 | eP   | 02 15 50   |      |                  | e     | 49 51      |      |                    |     |            |
| 30   | Nu                 | iP   | 09 19 50   |      | So               | iP    | 20 31 46   |      |                    |     |            |
|      | So                 | iP   | 09 20 05   |      |                  | i     | 48         |      |                    |     |            |
|      |                    |      |            |      |                  | i     | 53         |      |                    |     |            |
| 30   | He                 | iP   | 11 02 00   |      |                  | i     | 32 33      |      |                    |     |            |
|      | Nu                 | iP   | 11 01 59 U |      |                  | eSKS  | 42 08      |      |                    |     |            |
|      |                    | i    | 02 18      |      |                  | iS    | 30         |      |                    |     |            |
|      | So                 | iP   | 11 01 26 U |      |                  | iPS   | 43 10      |      |                    |     |            |
|      |                    | i    | 45         |      | Ka               | iP    | 20 31 51   |      |                    |     |            |
|      | Ka                 | iP   | 11 01 38 U |      |                  | i     | 54         |      |                    |     |            |
|      |                    | i    | 56         |      |                  | i     | 32 09      |      |                    |     |            |
|      | Honshu, Japan      |      |            |      | Ke               | iP    | 20 31 45   |      | November 22, 1962  |     |            |
|      | 39.7 N, 141.8 E    |      |            |      | Western Colombia |       |            |      | M. T. Porkka       |     |            |
|      |                    |      |            |      | 5.0 N, 76.3 W    |       |            |      | Aili Huovila       |     |            |

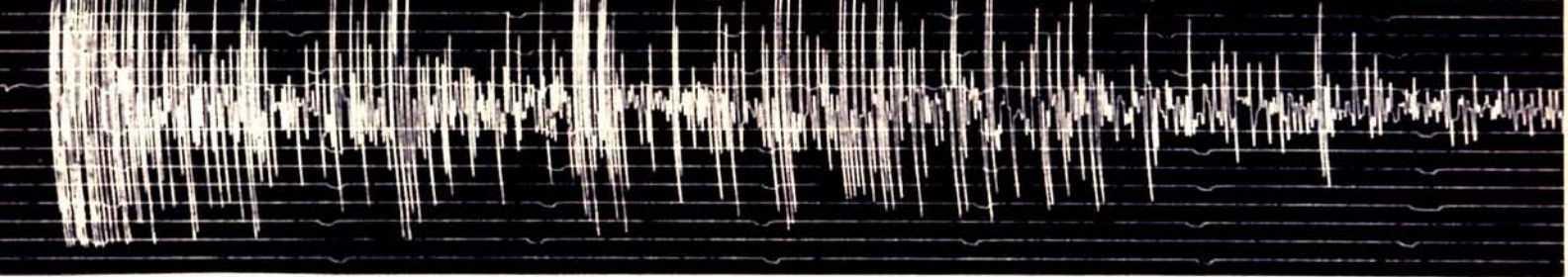
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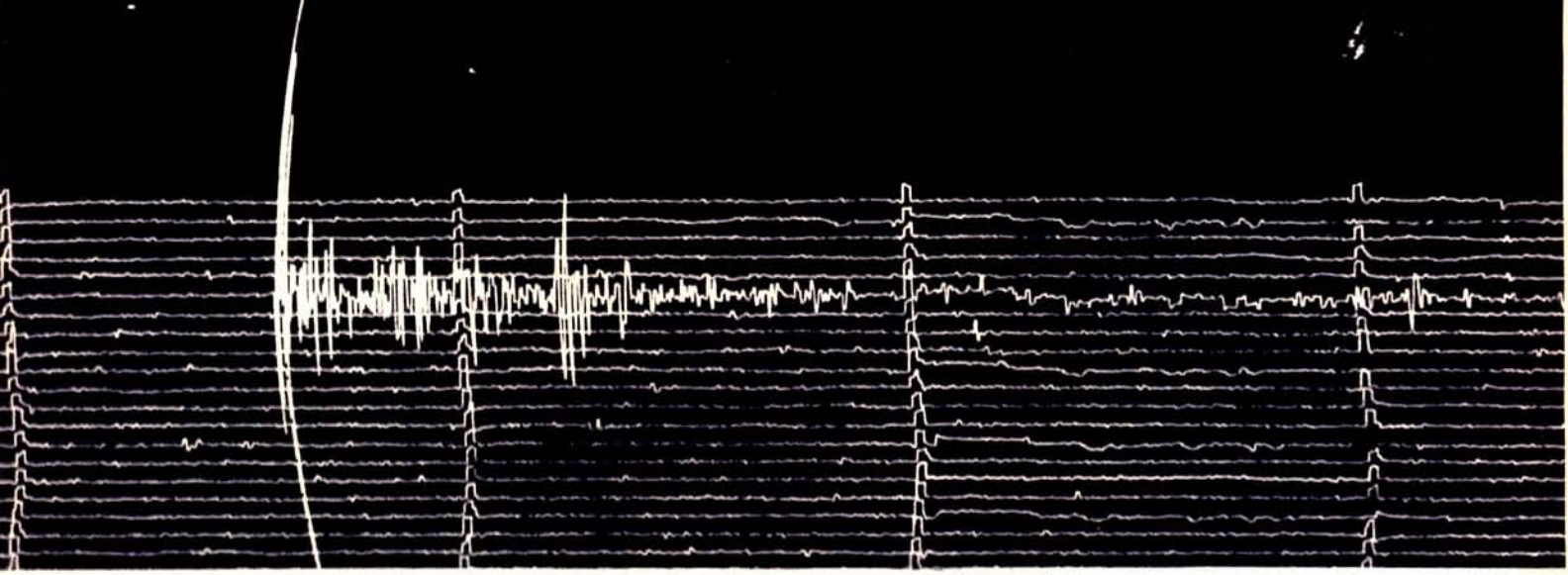
Ka Jul 01.1962 iPN 11-52-06



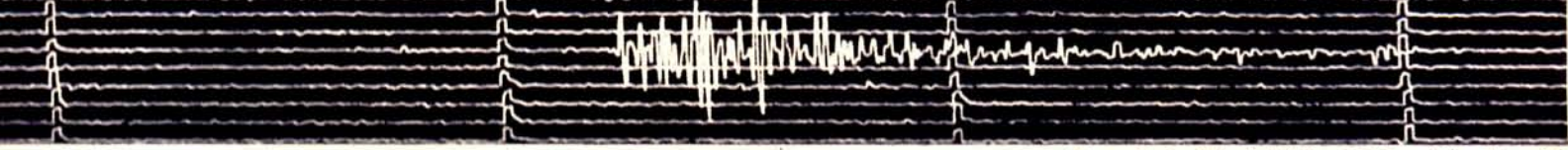
Ke Jul 06.1962 iPZ 23-12-54



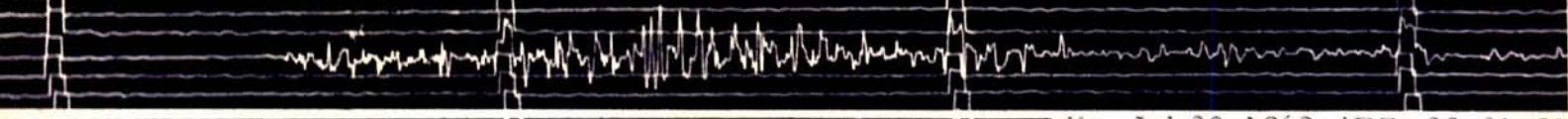
Nu Jul 15.1962 iPZ 06-58-08



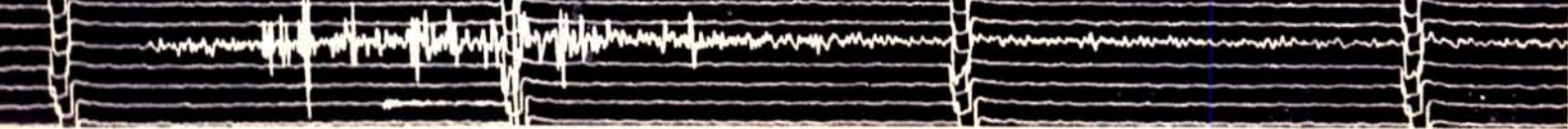
Nu Jul 25.1962 iPZ 04-50-04



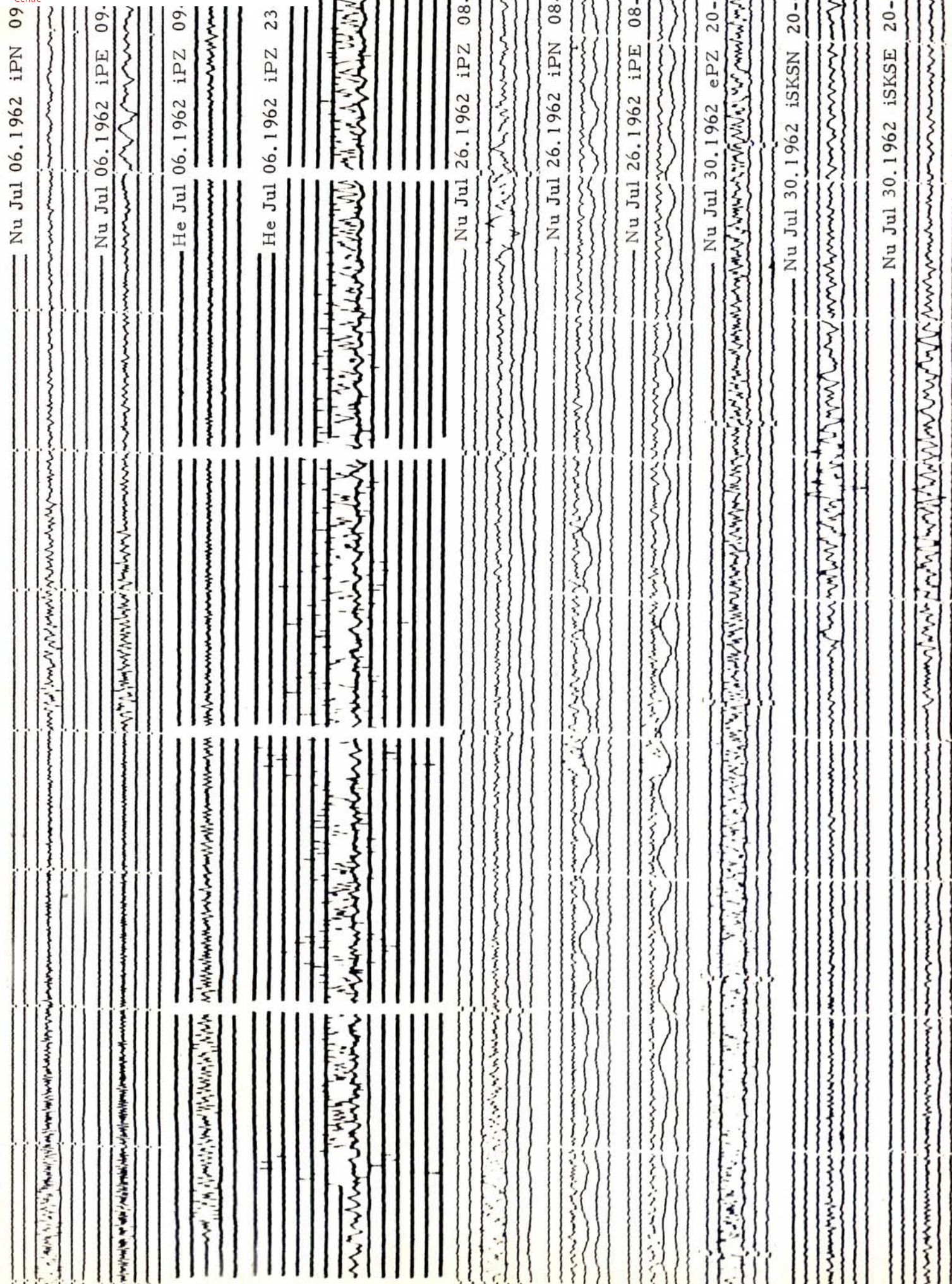
So Jul 30.1962 iPZ 20-31-46



Ka Jul 30.1962 iPZ 20-31-51







June

1 He eP 02 10 16  
Nu eP 02 10 14  
So eP 02 09 22  
Kodiak Island  
57.6 N, 150.8 W

1 Nu iP 09 51 57

2 Nu iP 06 38 13

2 Nu eP 12 37 08  
So eP 12 36 26  
Vancouver Island  
49.9 N, 129.8 W

2 Nu eP 12 46 46  
So eP 12 46 01  
Ka eP 12 46 30  
Vancouver Island  
49.8 N, 129.8 W

2 He eP 17 26 31  
Nu eP 17 26 30  
iPcP 53  
So iP 17 26 10  
Ka iP 17 26 12  
Kyushu, Japan  
29.8 N, 130.6 E

3 So iP 15 12 48  
Ka eP 15 12 50  
North Atlantic Ocean  
22.4 N, 45.2 W

3 Nu iP 19 21 26

5 Nu eP 10 58 23  
Sinkiang Province  
38.9 N, 75.5 E

6 Nu iP 06 05 34

6 He eP 18 02 05  
Nu iP 18 02 03  
So iP 18 01 28  
Ka iP 18 01 47 D  
California  
39.1 N, 123.1 W

June

6 He eP 18 06 59  
Nu iP 18 06 59  
Ka iP 18 06 46

6 Nu eP 19 48 58  
Kurile Islands  
44.7 N, 149.0 E

6 He iP 20 13 47  
Nu iP 20 13 47 D  
So iP 20 13 22  
Ka iP 20 13 29  
Bonin Islands  
28.1 N, 139.8 E

6 Nu eP 21 00 31  
So eP 20 59 04  
Ka eP 20 59 48

7 Nu eP 00 35 12  
Gulf of California  
30.0 N, 113.4 W

7 Nu iP 05 46 28  
iPcP 59  
So iP 05 45 42  
iPcP 46 31  
Ka iP 05 46 02  
iPcP 43  
Rat Islands  
51.9 N, 175.9 E

7 He iP 08 04 02  
Nu iP 08 04 04  
So eP 08 05 03  
Ka eP 08 04 23  
e(S) 08 36

8 He iSKP 01 52 47  
Nu ePKP 01 50 09  
iSKP 52 46  
So iSKP 01 52 23  
Ka ePKP 01 50 02  
iSKP 52 33  
Fiji Islands  
18.1 S, 178.4 W

8 Nu iP 09 21 22

June

8 He iP 09 22 42  
Nu iP 09 22 40  
i 48  
So iP 09 22 17  
i 26  
Ka iP 09 22 22  
i 30  
Ryukyu Islands  
29.1 N, 129.5 E

8 Nu iP 16 15 27  
i 56  
So iP 16 14 55  
Ka iP 16 15 05  
Honshu, Japan  
37.9 N, 141.2 E

8 He iP 19 29 59 D  
Nu iP 19 29 59 D  
So iP 19 29 46  
Ka iP 19 29 47  
i 56  
Timor Sea  
11.3 N, 126.0 E

8 So ePKP 21 08 26  
Sandwich Islands  
55.7 S, 26.2 W

9 So eP 07 52 51  
Ka iP 07 52 51  
i 53 01  
Philippine Islands  
9.0 N, 126.6 E

9 He iP 10 47 33  
Nu iP 10 47 33

9 Nu iP 17 54 49

9 He eP 20 10 26  
Nu iP 20 10 26 U  
So iP 20 10 13 U  
Ka iP 20 10 22 U  
Coast of Guatemala  
13.6 N, 91.2 W

10 He eP 14 05 00  
Nu iP 14 05 01  
Bonin Islands  
30.5 N, 138.6 E



| June |                   |       |            | June |                     |    |            | June |                    |      |            |
|------|-------------------|-------|------------|------|---------------------|----|------------|------|--------------------|------|------------|
| 17   | He                | iP    | 22 38 54   | 19   | So                  | iP | 20 28 32   | 22   | He                 | iP   | 12 00 35   |
|      | Nu                | iP    | 22 38 51 U |      | Ka                  | eP | 20 29 08   |      | Nu                 | iP   | 12 00 34 D |
|      |                   | iPcP  | 39 20      |      |                     |    |            |      |                    | iPcP | 48         |
|      | So                | iP    | 22 38 06   | 20   | So                  | iP | 00 27 32   |      | So                 | eP   | 12 00 05   |
|      | Andreanof Islands |       |            |      |                     |    |            |      | Ka                 | iP   | 12 00 16 D |
|      | 51.7 N, 177.0 E   |       |            |      |                     |    |            |      |                    | iPP  | 02 43      |
|      |                   |       |            | 20   | Nu                  | eP | 04 44 33   |      | Honshu, Japan      |      |            |
| 18   | He                | iP    | 06 30 54   |      | Hokkaido, Japan     |    |            |      | 32.2 N, 142.4 E    |      |            |
|      |                   | ipP   | 31 34      |      | 46.4 N, 143.3 E     |    |            |      |                    |      |            |
|      | Nu                | iP    | 06 30 52 U |      |                     |    |            | 23   | Nu                 | iP   | 04 34 47   |
|      |                   | ipP   | 31 32      |      |                     |    |            |      | Ka                 | iP   | 04 34 28   |
|      | So                | iP    | 06 30 02   | 20   | So                  | eP | 06 29 38   |      | Honshu, Japan      |      |            |
|      |                   | ipP   | 44         |      | Ka                  | iP | 06 29 37   |      | 37.1 N, 141.3 E    |      |            |
|      | Ka                | iP    | 06 30 26   |      | Banda Sea           |    |            |      |                    |      |            |
|      | Alaska            |       |            |      |                     |    |            | 23   | He                 | iP   | 05 11 47   |
|      | 60.5 N, 153.8 W   |       |            |      |                     |    |            |      | Nu                 | iP   | 05 11 49   |
|      |                   |       |            | 20   | So                  | iP | 19 36 48   |      | Ka                 | iP   | 05 12 07   |
| 18   | He                | iPKP  | 24 01 02   |      | Northern California |    |            |      |                    | iPP  | 13 29      |
|      |                   | iPP   | 45         |      | 45.6 N, 128.9 W     |    |            |      | Persian Gulf       |      |            |
|      | Nu                | iPKP  | 24 01 02   |      |                     |    |            |      | 29.7 N, 49.1 E     |      |            |
|      |                   | iPP   | 45         |      |                     |    |            |      |                    |      |            |
|      | e                 |       | 07 31      | 20   | He                  | iP | 20 44 05   | 23   | He                 | iP   | 09 56 17   |
|      | So                | iP    | 23 56 44   |      | Nu                  | iP | 20 44 03   |      | Nu                 | iP   | 09 56 14   |
|      |                   | iPKP  | 24 00 53   |      | So                  | iP | 20 43 27   |      |                    | ePP  | 59 03      |
|      |                   | ePP   | 01 16      |      |                     |    |            |      | i                  |      | 10 00 53   |
|      | Ka                | iP    | 23 56 50   |      |                     |    |            |      | eS                 |      | 05 48      |
|      |                   | iPKP  | 24 00 56   | 21   | He                  | iP | 03 35 21   |      | So                 | iP   | 09 55 55   |
|      |                   | iPP   | 01 24      |      | Nu                  | iP | 03 35 21   |      |                    | ePP  | 58 32      |
|      |                   | ePKKP | 12 01      |      | So                  | iP | 03 35 12   |      |                    | ePPP | 10 00 22   |
|      | New Britain       |       |            |      | Ka                  | iP | 03 35 12 D |      |                    | iS   | 05 14      |
|      | 4.8 S, 151.8 E    |       |            |      | Celebes Sea         |    |            |      |                    | iScS | 06 00      |
|      |                   |       |            |      |                     |    |            |      | Ka                 | iP   | 09 56 00   |
|      |                   |       |            |      |                     |    |            |      |                    | iS   | 10 05 23   |
| 19   | He                | iP    | 06 37 14   |      |                     |    |            |      |                    | iScS | 06 03      |
|      | Nu                | iP    | 06 37 13   |      |                     |    |            |      | Ke                 | eP   | 09 55 49   |
|      | So                | iP    | 06 37 01   | 21   | So                  | eP | 04 56 53   |      | Ryukyu Islands     |      |            |
|      | i                 |       | 54         |      | South of Panama     |    |            |      | 25.7 N, 128.5 E    |      |            |
|      |                   |       |            |      |                     |    |            |      |                    |      |            |
|      |                   |       |            |      |                     |    |            | 23   | He                 | iP   | 10 10 16   |
| 19   | Nu                | iP    | 08 20 46   |      |                     |    |            |      | i                  |      | 25         |
|      | Ka                | eP    | 08 20 46   | 22   | He                  | iP | 00 04 15   |      | i                  |      | 48         |
|      |                   |       |            |      | Nu                  | iP | 00 04 16 D |      | Nu                 | iP   | 10 10 14 U |
|      |                   |       |            |      |                     |    |            |      | i                  |      | 23         |
| 19   | He                | i     | 16 57 57   |      |                     |    |            |      | i                  |      | 47         |
|      |                   | eSKP  | 17 00 50   |      |                     |    |            |      | iS                 |      | 19 54      |
|      | Nu                | ePKP  | 16 57 47   | 22   | Nu                  | eP | 07 51 34   |      | So                 | iP   | 10 10 01 U |
|      |                   | i     | 56         |      |                     | iS | 54 59      |      | i                  |      | 09         |
|      |                   | iSKP  | 17 00 49   |      | So                  | eP | 07 50 02   |      | Ka                 | iP   | 10 10 03 U |
|      | So                | ePKP  | 16 57 45   |      |                     | iS | 52 14      |      |                    | iS   | 19 33      |
|      |                   | eSKP  | 17 00 31   |      | Ka                  | eP | 07 50 47   |      | Ke                 | iP   | 10 09 58   |
|      | Ka                | iPKP  | 16 57 49   |      |                     | iS | 53 31      |      | i                  |      | 10 08      |
|      | Fiji Islands      |       |            |      | Ke                  | eP | 07 49 31   |      | Philippine Islands |      |            |
|      | 20.9 S, 177.8 W   |       |            |      |                     | iS | 51 20      |      | 19.1 N, 121.4 E    |      |            |

| June |                     |       |            | June |                  |      |            | June |                    |      |            |
|------|---------------------|-------|------------|------|------------------|------|------------|------|--------------------|------|------------|
| 23   | He                  | iP    | 22 50 56   | 25   | Nu               | iP   | 13 02 54   | 27   | Nu                 | iP   | 08 41 13   |
|      | Nu                  | iP    | 22 50 55   |      | So               | iP   | 13 02 43   |      | So                 | iP   | 08 40 30   |
| 24   | He                  | iP    | 01 31 33   |      | Ka               | iP   | 13 02 46   |      | Kamchatka          |      |            |
|      | Nu                  | iP    | 01 31 33 D |      | Molucca Passage  |      |            |      | 50.2 N, 158.7 E    |      |            |
|      |                     | i     | 32 07      |      | 3.7 N, 126.6 E   |      |            | 27   | So                 | iPKP | 13 52 26   |
|      | So                  | iP    | 01 31 28 D | 25   | Nu               | eP   | 19 11 17   |      | Off coast of Chile |      |            |
|      |                     | i     | 32 03      |      | Ka               | eP   | 19 11 15   |      | 39.1 S, 74.9 W     |      |            |
|      |                     | iPP   | 33 42      |      | Nicaragua        |      |            | 27   | Nu                 | eP   | 18 11 58   |
|      | Ka                  | iP    | 01 31 25 D |      | 14.5 N, 82.4 W   |      |            |      | So                 | iP   | 18 11 26   |
|      |                     | iPP   | 33 38      | 25   | He               | iP   | 23 02 07   | 27   | He                 | eP   | 23 38 18   |
|      | Yunnan Province     |       |            |      | Nu               | iP   | 23 02 02   |      | Nu                 | eP   | 23 38 18   |
|      | 25.6 N, 101.1 E     |       |            |      | So               | iP   | 23 00 36   |      | So                 | iP   | 23 38 00   |
| 24   | He                  | iP    | 15 17 14   |      |                  | eS   | 02 28      |      | Formosa            |      |            |
|      | Nu                  | iP    | 15 17 16 D |      | Ka               | iP   | 23 01 23   |      | 23.7 N, 123.0 E    |      |            |
|      | So                  | iP    | 15 17 57   |      | Ke               | eP   | 23 00 10   | 28   | He                 | i    | 04 25 19   |
|      | Ka                  | iP    | 15 17 35 D |      |                  | iS   | 01 38      |      | Nu                 | eP   | 04 25 07   |
|      | Gulf of Aden        |       |            |      | Svalbard region  |      |            |      |                    | i    | 19         |
|      | 12.5 N, 48.6 E      |       |            |      | 75.0 N, 4.2 E    |      |            |      | So                 | eP   | 04 24 41   |
| 25   | He                  | i     | 01 49 55   | 26   | He               | iP   | 03 02 50   |      |                    | i    | 54         |
|      |                     | iSKP  | 52 30      |      | Nu               | iP   | 03 02 49 D |      | Ka                 | eP   | 04 24 49   |
|      | Nu                  | iPKP  | 01 49 45   |      | So               | iP   | 03 02 28   |      |                    | i    | 25 01      |
|      |                     | i     | 55         |      | Ka               | iP   | 03 02 34   |      | Kyushu, Japan      |      |            |
|      |                     | iSKP  | 52 30      |      | Ryukyu Islands   |      |            |      | 31.9 N, 130.8 E    |      |            |
|      | So                  | ePKP  | 01 49 40   |      | 27.9 N, 129.2 E  |      |            | 28   | Nu                 | eP   | 04 41 04   |
|      |                     | iSKP  | 52 08      | 26   | He               | iP   | 14 58 26   |      |                    | ePP  | 45 11      |
|      | Ka                  | iPKP  | 01 49 48   |      | Nu               | iP   | 14 58 27   |      | So                 | iP   | 04 40 33   |
|      |                     | iSKP  | 52 19      |      | So               | iP   | 14 59 43   |      |                    | iPP  | 44 20      |
|      | Fiji Islands        |       |            |      | Ka               | iP   | 14 59 10   |      | Hawaii Island      |      |            |
|      | 20.8 S, 179.2 W     |       |            |      | Bulgaria         |      |            |      | 20.0 N, 155.6 W    |      |            |
| 25   | So                  | iPKP  | 06 45 51   | 26   | He               | iP   | 14 58 26   | 28   | He                 | iP   | 06 55 33   |
|      | Near coast of Chile |       |            |      | Nu               | iP   | 14 58 27   |      | Nu                 | iP   | 06 55 35   |
|      | 37.3 S, 73.5 W      |       |            |      | So               | iP   | 14 59 43   |      |                    | i    | 41         |
| 25   | He                  | iP    | 11 21 54   |      | So               | iP   | 14 59 10   |      |                    | eS   | 59 17      |
|      | Nu                  | iP    | 11 21 52   |      | Bulgaria         |      |            |      | So                 | iP   | 06 56 44   |
|      |                     | i     | 58         |      | 42.7 N, 23.8 E   |      |            |      | Ka                 | iP   | 06 56 13   |
|      |                     | iS    | 31 32      | 27   | He               | eP   | 00 23 40   |      | Greece-Albania     |      |            |
|      |                     | i     | 54         |      | Nu               | iP   | 00 23 44   |      | 40.9 N, 20.8 E     |      |            |
|      | So                  | iP    | 11 21 35   |      |                  | i    | 29 56      | 28   | Nu                 | iP   | 11 30 55   |
|      |                     | i     | 39         |      | So               | iP   | 00 24 39   |      | So                 | iP   | 11 30 56 D |
|      |                     | ePP   | 24 14      |      |                  | i    | 29 41      |      | Ka                 | iP   | 11 30 52   |
|      |                     | e     | 31 42      |      | Ka               | eP   | 00 24 08   |      | Near coast of Java |      |            |
|      | Ka                  | iP    | 11 21 39   | 27   | He               | iPKP | 08 37 25 U |      | 7.7 S, 107.9 E     |      |            |
|      |                     | i     | 30 55      |      | Nu               | iPKP | 08 37 24 U | 28   | So                 | iP   | 17 51 34   |
|      |                     | i     | 31 23      |      | Kermadec Islands |      |            |      |                    |      |            |
|      |                     | eP'P' | 49 34      |      | 30.0 S, 177.7 W  |      |            |      |                    |      |            |
|      | Ke                  | eP    | 11 21 34   |      |                  |      |            |      |                    |      |            |
|      | Formosa             |       |            |      |                  |      |            |      |                    |      |            |
|      | 24.3 N, 122.6 E     |       |            |      |                  |      |            |      |                    |      |            |

June

28 He iP 18 01 41  
Nu iP 18 01 40 U  
iPcP 02 10  
So iP 18 01 04  
Hokkaido, Japan  
43.8 N, 144.5 E

28 He iP 19 03 44  
Nu eP 19 03 43  
So iP 19 03 35  
e 06 41  
ePKKP 20 44  
Ka iP 19 03 35  
Northern Celebes  
0.2 S, 124.3 E

28 He iPKP 21 06 23  
Nu iPKP 21 06 23 D  
ePKS 09 53  
So iPKP 21 06 09  
Ka ePKP 21 06 15  
Tonga Islands  
17.6 S, 175.2 W

28 So iP 23 29 02

28 So iP 01 00 13

29 So iP 01 59 08

29 Nu iPKP 03 49 14  
So iPKP 03 49 24  
Sandwich Islands  
56.2 S, 26.9 W

June

29 He iP 12 07 45  
Nu eP 12 07 44  
29 He iP 15 59 21  
Nu iP 15 59 20  
So eP 15 58 47  
Northern Honshu  
38.2 N, 143.1 E

29 He iP 16 37 54  
Nu iP 16 37 51  
So iP 16 37 02  
iPcP 38 19  
Ka eP 16 37 26  
Alaska  
62.3 N, 152.4 W

29 He iP 16 40 34  
Nu iP 16 40 32  
So iP 16 39 42

29 He iP 22 42 08 U  
Nu iP 22 42 11 U  
iS 47 23  
So iP 22 42 55  
i 44 12  
Ka iP 22 42 28  
iS 47 56

Iran  
32.1 N, 48.4 E

30 He iP 01 21 13  
Nu iP 01 21 11 U  
So iP 01 20 42 U  
i 58  
Ka iP 01 20 51  
Honshu, Japan  
34.0 N, 141.5 E

June

30 He eP 09 53 20  
Nu iP 09 53 21  
So iP 09 53 58  
Iran  
27.6 N, 57.7 E

30 He iP 19 42 06  
Nu iP 19 42 06  
So iP 19 41 45  
i 54  
i 42 07  
Ka iP 19 41 45  
i 51  
Philippine Islands  
16.5 N, 122.0 E

October 16, 1962

M. T. Porkka  
Aili Huovila

Nu Jun 14.1962 iPZ 08-02-12

Ka Jun 14.1962 iPN 08-01-47

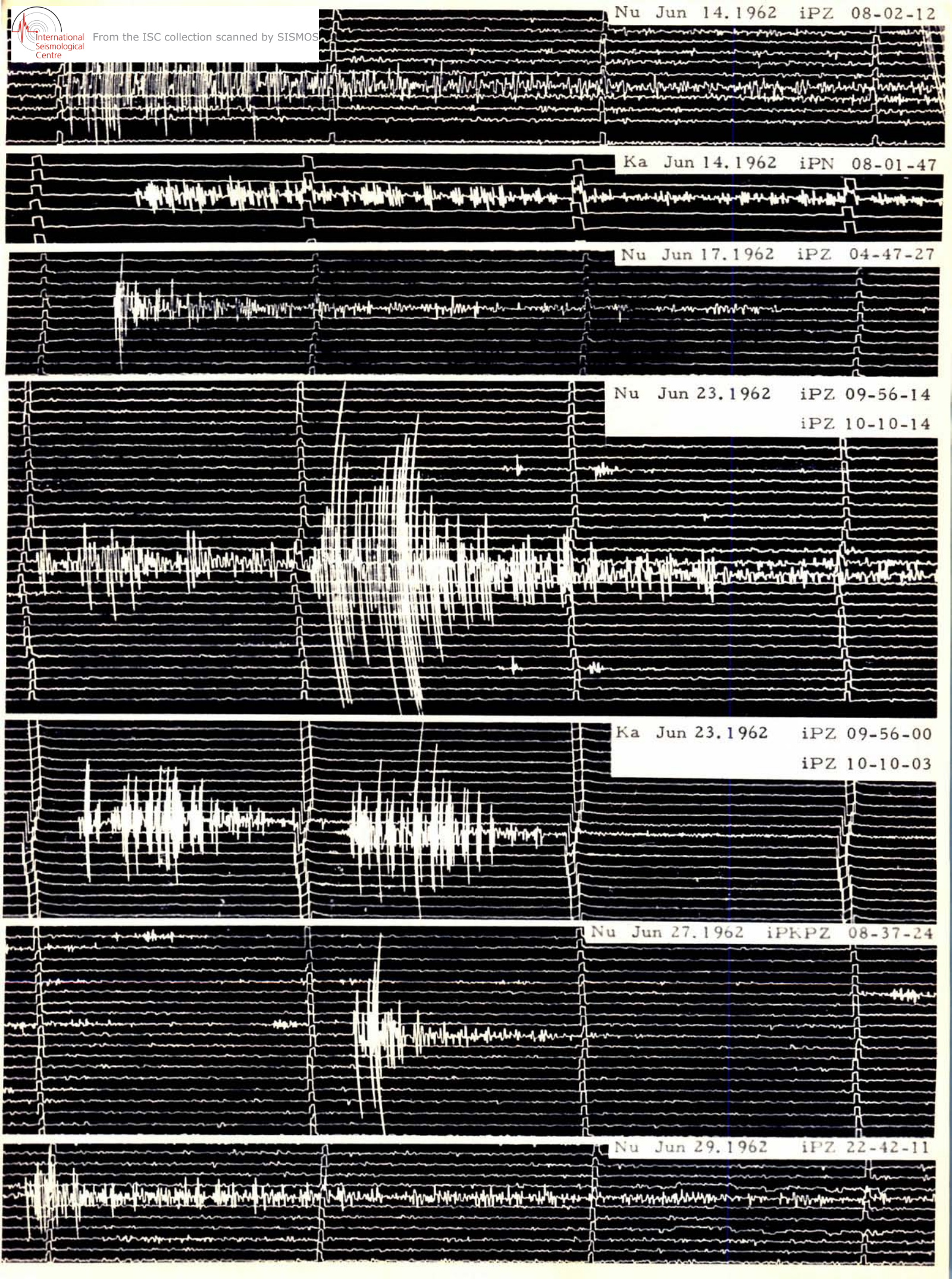
Nu Jun 17.1962 iPZ 04-47-27

Nu Jun 23.1962 iPZ 09-56-14  
iPZ 10-10-14

Ka Jun 23.1962 iPZ 09-56-00  
iPZ 10-10-03

Nu Jun 27.1962 iPKPZ 08-37-24

Nu Jun 29.1962 iPZ 22-42-11



## August

1 He iP 02 53 10  
 Nu iP 02 53 12 D  
 Ka iP 02 53 11

1 He iPKP 04 08 41  
 Nu ePKP 04 08 41  
 Ka ePKP 04 08 38  
 Kermadec Islands  
 27.0 S, 176.4 W

1 Nu eP 04 51 04  
 ePKP 55 00  
 iPP 40  
 iSKS 05 01 57  
 iS 03 15  
 iPS 05 02  
 iSS 10 50  
 So eP 04 50 55  
 i 51 01  
 ePKP 54 18  
 iPP 55 22  
 Ka iP 04 50 59  
 i 51 07  
 ePKP 54 29  
 iPP 55 20  
 iPKKP 05 07 40  
 New Guinea  
 3.2 S, 143.7 E

1 He iPn 08 58 48  
 iSn 59 12  
 Nu iPn 08 58 43  
 iSn 59 05  
 Off coast of Finland  
 60°32'46" N,  
 21°09'41" E  
 H: 08 58 12  
 Underwater explosion  
 of 900 kg TNT

1 He iPn 11 16 50  
 iSn 17 14  
 Nu iPn 11 16 47  
 iSn 17 09  
 Off coast of Finland  
 60°32'48" N,  
 21°09'41" E  
 H: 11 16 14  
 Underwater explosion  
 of 300 kg TNT

1 Nu iP 12 58 26

1 He ePKP 13 07 21  
 Nu iPKP 13 07 18  
 Kermadec Islands  
 27.1 S, 176.3 W

## August

1 He iPn 13 57 41  
 iSg 14 00 12  
 Nu iPn 13 57 39  
 iSn 59 17  
 i 32  
 iSb 47  
 iSg 14 00 07  
 So ePn 13 58 13  
 iSn 14 00 11  
 iSg 01 29  
 Ka iPn 13 58 03  
 iSn 59 57  
 iSg 14 01 02

1 He iSg 14 02 12  
 Nu iSg 14 02 07  
 So iSg 14 03 30  
 Ka iSg 14 03 03

1 He iPn 14 58 50  
 iSn 59 14  
 Nu iPn 14 58 47  
 iSn 59 09  
 Off coast of Finland  
 60°32'48" N,  
 21°09'40" E  
 H: 14 58 14  
 Underwater explosion  
 of 600 kg TNT

1 He iP 15 56 34  
 Nu iP 15 56 34 U  
 iPcP 57 56  
 iPP 58 29  
 So iP 15 56 22 U  
 ePP 58 14  
 Ka iP 15 56 19 U  
 i 24  
 Ke iP 15 56 23  
 Kansu Province  
 39.1 N, 98.6 E

2 He iPn 02 59 16  
 iSn 40  
 Nu iPn 02 59 13  
 iSn 35  
 Off coast of Finland  
 60°32'45" N,  
 21°09'41" E  
 H: 02 58 41  
 Underwater explosion  
 of 300 kg TNT

## August

2 He eP 04 54 15  
 Nu iP 04 54 12  
 So eP 04 53 52  
 South of Cuba  
 19.3 N, 81.0 W

2 He iPn 07 05 46  
 iSn 06 10  
 Nu iPn 07 05 43  
 iSn 06 04  
 Off coast of Finland  
 60°32'46" N,  
 21°09'40" E  
 H: 07 05 10  
 Underwater explosion  
 of 150 kg TNT

2 He iPn 09 15 47  
 iSn 16 12  
 Nu iPn 09 15 43  
 iSn 16 06  
 Off coast of Finland  
 60°32'44" N,  
 21°09'36" E  
 H: 09 15 11  
 Underwater explosion  
 of 1200 kg TNT

2 So eP 11 41 12  
 iS 43 22  
 Ka eP 11 41 53  
 Ke eP 11 40 44  
 eS 42 31

2 He iP 14 07 11  
 Nu iP 14 07 14 D  
 So eP 14 07 52  
 e 13 21  
 Ka iP 14 07 27  
 e 12 26

2 He eP 15 40 04  
 Nu iP 15 40 05  
 ePP 41 43  
 So iP 15 40 21 D  
 Ka iP 15 40 07  
 Ke eP 15 40 21  
 West Pakistan  
 33.4 N, 73.5 E

3 Nu eP 07 42 18  
 Ka eP 07 42 06



August

3 He iPKP 09 14 39  
 ePP 15 19  
 ePKKP 25 34  
 i 45  
 Nu e 09 11 17  
 iPKP 14 38  
 iPP 15 18  
 iSKS 21 06  
 iSKKS 22 07  
 eS 41  
 ePKKP 25 36  
 i 45  
 iSKKP 29 35  
 eP'P' 34 03  
 So iPKP 09 14 42  
 i 55  
 iPP 15 37  
 i 16 05  
 iSKS 21 13  
 iSKKS 22 17  
 iPKKP 25 29  
 i 36  
 i 26 21  
 iSKKP 29 21  
 Ka iPKP 09 14 41  
 ePP 15 24  
 iPKKP 25 29  
 i 36  
 Chile-Argentine  
 23.2 S, 67.5 W

3 Nu iPKP 10 23 31  
 Ka ePKP 10 23 24  
 Solomon Islands  
 10.1 S, 161.2 E

3 He iP 11 10 57  
 i 11 03  
 Nu iP 11 10 59  
 i 11 05  
 eLi 18 41  
 iLg1 23 35  
 So iP 11 11 08  
 i 12 11  
 iPcP 13 31  
 iLi 21 25  
 iLg1 23 27  
 Ka iP 11 10 55  
 i 12 01  
 Kirghiz, S.S.R.  
 40.9 N, 73.3 E

August

3 He iP 18 09 42  
 Nu iP 18 09 44  
 So iP 18 09 59  
 Ka iP 18 09 43  
 Hindu Kush  
 36.6 N, 71.1 E

3 So eP 22 57 22  
 Ka eP 22 57 15

4 He eP 03 02 49  
 Nu iP 03 02 47  
 So iP 03 02 34  
 Ka eP 03 02 42  
 Guatemala  
 14.1 N, 93.0 W

5 He iP 09 12 48  
 eS 15 55  
 Nu iP 09 12 45  
 iS 15 49  
 So iP 09 11 26  
 iS 13 26  
 Ka iP 09 11 56  
 i 14 21  
 Ke iP 09 11 03  
 iS 12 47  
 Novaya Zemlya  
 74.2 N, 52.5 E

5 He ePKP 15 27 32  
 Nu iPKP 15 27 30  
 So ePKP 15 27 19  
 Ka ePKP 15 27 22  
 New Hebrides  
 13.7 S, 166.6 E

6 He iP 00 16 29  
 Nu iP 00 16 28

6 He iP 01 44 31  
 ePcP 45 48  
 Nu iP 01 44 29  
 iPcP 45 48  
 iPP 46 23  
 iS 51 45  
 iScS 54 20  
 iSS 55 20  
 So iP 01 44 40  
 iPcP 45 53  
 eS 52 07  
 Ka iP 01 44 43  
 Ke iP 01 44 42  
 North Atlantic Ocean  
 32.0 N, 40.8 W

August

6 He eP 02 24 33  
 Nu eP 02 24 34  
 So iP 02 24 30

6 He iPKP 09 00 11  
 i 38  
 Nu iPKP 09 00 10  
 So iPKP 09 00 22  
 eSKP 03 39  
 iPKS 48  
 Ka iPKP 09 00 18  
 iSKP 03 32  
 Ke ePKP 09 00 27  
 Sandwich Islands  
 58.4 S, 25.5 W

6 So eP 09 33 54  
 Northern Honshu  
 39.7 N, 140.6 E

6 He iPKP 21 11 23  
 Nu iPKP 21 11 22  
 iPP 14 34  
 iSKKS 21 22  
 So ePKP 21 11 05  
 i 17  
 iPP 13 56  
 iSKP 14 43  
 Ka iPKP 21 11 11  
 i 21  
 Ke iPKP 21 11 06  
 e 13 30  
 e 14 08  
 Kermadec Islands  
 26.9 S, 177.1 W

7 He iP 01 02 28  
 Nu iP 01 02 26 U

7 He eP 03 13 07  
 Nu eP 03 13 09  
 So iP 03 13 01  
 Ka eP 03 12 51  
 Andaman Islands  
 12.2 N, 92.5 E

7 He eP 05 21 04  
 Nu eP 05 21 04  
 So iP 05 22 05  
 Ka eP 05 21 36  
 Near coast of Turkey  
 36.1 N, 30.4 E

| August |                      |      |          | August |                 |                 |          | August   |                     |                |                   |          |          |   |  |  |
|--------|----------------------|------|----------|--------|-----------------|-----------------|----------|----------|---------------------|----------------|-------------------|----------|----------|---|--|--|
| 7      | So                   | iP   | 08 57 40 | 10     | So              | iP              | 23 50 08 | 12       | He                  | iP             | 11 20 11          |          |          |   |  |  |
|        | Ka                   | eP   | 08 57 41 |        |                 |                 |          |          | Nu                  | iP             | 11 20 12          | D        |          |   |  |  |
|        | Molucca Passage      |      |          | 11     | He              | ePKP            | 02 05 39 |          | So                  | iP             | 11 20 05          | D        |          |   |  |  |
|        | 4.8 N, 127.8 E       |      |          |        |                 | i               | 52       |          | Ka                  | iP             | 11 20 01          |          |          |   |  |  |
|        |                      |      |          |        |                 | iSKP            | 08 27    |          |                     |                |                   |          |          |   |  |  |
| 8      | He                   | eP   | 11 05 49 |        | Nu              | iPKP            | 02 05 40 |          |                     |                |                   |          |          |   |  |  |
|        | Nu                   | iP   | 11 05 48 | D      |                 | i               | 51       | 12       | Nu                  | iP             | 11 35 17          |          |          |   |  |  |
|        | So                   | iP   | 11 05 02 | D      |                 | ipPKP           | 08 16    |          | So                  | iP             | 11 35 09          | D        |          |   |  |  |
|        | Ka                   | iP   | 11 05 23 |        |                 | iSKP            | 27       |          | Ka                  | iP             | 11 35 05          |          |          |   |  |  |
|        | Ke                   | iP   | 11 04 44 |        |                 | iPKS            | 09 24    |          |                     |                |                   |          |          |   |  |  |
|        | Fox Islands          |      |          |        |                 | iSKS            | 11 40    |          |                     |                |                   |          |          |   |  |  |
|        | 52.1 N, 170.5 W      |      |          |        |                 | iSPKS           | 12 42    | 13       | Nu                  | iSKS           | 07 00 04          |          |          |   |  |  |
|        |                      |      |          |        | So              | iPKP            | 02 05 36 |          | So                  | eP             | 06 49 14          |          |          |   |  |  |
| 8      | So                   | iP   | 17 28 14 | U      |                 | ipPKP           | 07 59    |          | Ecuador             |                |                   |          |          |   |  |  |
|        | Ka                   | iP   | 17 28 22 | U      |                 | iSKP            | 08 05    |          | 2.1 N, 83.5 W       |                |                   |          |          |   |  |  |
|        | Mariana Islands      |      |          |        |                 | iPKS            | 09 02    |          |                     |                |                   |          |          |   |  |  |
|        | 18.8 N, 144.8 E      |      |          |        |                 | eSKKP           | 18 06    |          |                     |                |                   |          |          |   |  |  |
|        |                      |      |          |        | Ka              | iPKS            | 02 09 12 | 13       | Nu                  | eS             | 20 26 06          |          |          |   |  |  |
| 8      | Nu                   | iP   | 18 06 46 | D      |                 | iSKS            | 11 34    |          | So                  | iP             | 20 19 21          |          |          |   |  |  |
|        | So                   | iP   | 18 06 13 | U      |                 | Fiji Islands    |          |          | Buryatskaya, S.S.R. |                |                   |          |          |   |  |  |
|        | Ka                   | iP   | 18 06 29 | D      |                 | 20.0 S, 178.8 W |          |          | 51.8 N, 110.2 E     |                |                   |          |          |   |  |  |
|        |                      | i    | 36       |        |                 |                 |          |          |                     |                |                   |          |          |   |  |  |
|        | Ke                   | eP   | 18 06 00 |        | 11              | He              | iP       | 08 26 57 |                     |                |                   |          |          |   |  |  |
|        | Honshu, Japan        |      |          |        |                 | Nu              | iP       | 08 26 56 | D                   | 14             | He                | ePKP     | 01 31 05 |   |  |  |
|        | 37.0 N, 141.5 E      |      |          |        |                 |                 | ipP      | 27 36    |                     |                | Nu                | iPKP     | 01 31 07 |   |  |  |
|        |                      |      |          |        |                 |                 | ePP      | 29 42    |                     |                |                   | eSKKS    | 41 36    |   |  |  |
| 9      | He                   | eP   | 04 34 29 |        |                 |                 | ePPP     | 31 24    |                     |                | So                | ePKP     | 01 30 42 |   |  |  |
|        | Nu                   | eP   | 04 34 28 |        |                 |                 | iS       | 36 08    |                     |                | Ke                | ePKP     | 01 30 44 |   |  |  |
|        | So                   | iP   | 04 34 23 |        |                 |                 | iPS      | 36       |                     |                | Macquarie Islands |          |          |   |  |  |
|        | Ka                   | iP   | 04 34 30 |        |                 |                 | iScS     | 37 04    |                     |                | 49.9 S, 163.0 E   |          |          |   |  |  |
|        |                      | ipP  | 35 13    |        | So              | iP              | 08 26 38 | D        |                     |                |                   |          |          |   |  |  |
|        | Ke                   | iP   | 04 34 21 |        |                 | iS              | 35 36    |          |                     |                |                   |          |          |   |  |  |
|        | Columbia             |      |          |        |                 | i               | 46       |          | 14                  | Nu             | eP                | 07 35 08 |          |   |  |  |
|        | 6.7 N, 73.1 W        |      |          |        |                 | iScS            | 36 25    |          |                     | So             | iP                | 07 35 43 |          |   |  |  |
|        |                      |      |          |        |                 | iP'P'           | 54 40    |          |                     |                | i                 | 36 09    |          |   |  |  |
| 9      | Nu                   | iP   | 10 54 58 |        | Ka              | iP              | 08 26 41 |          |                     | Ka             | eP                | 07 35 28 |          |   |  |  |
|        | So                   | iP   | 10 54 34 |        |                 | i               | 27 21    |          |                     | Ke             | eP                | 07 35 58 |          |   |  |  |
|        | Ka                   | eP   | 10 54 41 |        |                 | iS              | 35 39    |          |                     | Iran           |                   |          |          |   |  |  |
|        | Ke                   | eP   | 10 54 28 |        |                 | iScS            | 36 27    |          |                     | 28.0 N, 55.6 E |                   |          |          |   |  |  |
|        | Ryukyu Islands       |      |          |        | Ke              | iP              | 08 26 33 |          |                     |                |                   |          |          |   |  |  |
|        | 30.1 N, 129.0 E      |      |          |        | Formosa         |                 |          |          |                     |                |                   |          |          |   |  |  |
|        |                      |      |          |        | 25.2 N, 123.3 E |                 |          |          |                     | 15             | He                | iP       | 02 56 55 |   |  |  |
| 10     | He                   | eP   | 21 10 22 |        |                 |                 |          |          |                     |                | i                 | 57 11    |          |   |  |  |
|        |                      | iPcP | 13 12    |        |                 |                 |          |          |                     |                | Nu                | iP       | 02 56 55 | D |  |  |
|        | Nu                   | iP   | 21 10 18 |        | 11              | He              | iP       | 18 25 14 |                     |                | So                | iP       | 02 56 27 | D |  |  |
|        |                      | iPP  | 11 12    |        |                 | Nu              | iP       | 18 25 13 | U                   |                | Ke                | iP       | 02 56 18 |   |  |  |
|        |                      | iPcP | 13 12    |        |                 | i               | 36       |          |                     |                | South of Honshu   |          |          |   |  |  |
|        |                      | eS   | 15 25    |        |                 | So              | iP       | 18 25 01 | U                   |                | 31.4 N, 139.2 E   |          |          |   |  |  |
|        | So                   | iP   | 21 10 27 |        |                 | i               | 26       |          |                     |                |                   |          |          |   |  |  |
|        |                      | iPcP | 13 06    |        |                 | Ka              | iP       | 18 25 03 |                     |                |                   |          |          |   |  |  |
|        | Ka                   | iP   | 21 10 28 |        |                 |                 |          |          |                     |                |                   |          |          |   |  |  |
|        |                      | i    | 11 58    |        |                 |                 |          |          |                     | 15             | He                | iP       | 08 29 44 |   |  |  |
|        | Ke                   | eP   | 21 10 29 |        | 12              | Nu              | eP       | 04 54 39 |                     |                | Nu                | iP       | 08 29 42 |   |  |  |
|        |                      | i    | 11 19    |        |                 | So              | iP       | 04 55 37 |                     |                | So                | iP       | 08 28 56 |   |  |  |
|        | North Atlantic Ocean |      |          |        |                 | Turkey          |          |          |                     |                | Ka                | eP       | 08 29 22 |   |  |  |
|        | 49.4 N, 27.9 W       |      |          |        |                 | 37.5 N, 30.7 E  |          |          |                     |                | Kamchatka         |          |          |   |  |  |
|        |                      |      |          |        |                 |                 |          |          |                     |                | 54.6 N, 161.5 E   |          |          |   |  |  |

| August |                    |      |            | August |                    |      |            | August |                  |      |            |
|--------|--------------------|------|------------|--------|--------------------|------|------------|--------|------------------|------|------------|
| 15     | He                 | eP   | 10 16 54   | 18     | Nu                 | iSKP | 04 22 36   | 19     | So               | iPKP | 23 31 31   |
|        | Nu                 | iP   | 10 16 54 D |        | So                 | iSKP | 04 22 17   |        | Ka               | ePKP | 23 31 32   |
|        | So                 | iP   | 10 16 22 D |        | Ka                 | iSKP | 04 22 26   |        | Northern Chile   |      |            |
|        | Ka                 | eP   | 10 16 40   |        | Fiji Islands       |      |            |        | 26.6 S, 69.0 W   |      |            |
|        | Ke                 | eP   | 10 16 10   |        | 21.9 S, 179.3 W    |      |            | 20     | Nu               | iP   | 09 06 15   |
|        | Manchuria, China   |      |            | 18     | He                 | iP   | 04 34 06   |        | iS               |      | 09 19      |
|        | 45.2 N, 132.6 E    |      |            |        | Nu                 | iP   | 04 34 09   |        | So               | iP   | 09 04 49   |
| 15     | So                 | eP   | 11 30 50   |        | eS                 |      | 38 36      |        | iS               |      | 06 47      |
|        | Andreanof Islands  |      |            |        | So                 | iP   | 04 35 08   |        | Ka               | eP   | 09 05 22   |
|        | 51.8 N, 177.0 W    |      |            |        | Ka                 | eP   | 04 34 37   |        | eS               |      | 07 46      |
| 15     | Nu                 | iP   | 13 17 43   |        | Turkey             |      |            |        | Ke               | eP   | 09 04 28   |
|        | iS                 |      | 25 05      |        | 37.0 N, 32.5 E     |      |            |        | iS               |      | 06 09      |
|        | So                 | eP   | 13 18 20   | 18     | Nu                 | eP   | 09 23 52   |        | Novaya Zemlya    |      |            |
|        | Socotra Island     |      |            |        | So                 | eP   | 09 23 42   |        | 74.4 N, 51.2 E   |      |            |
|        | 14.5 N, 55.3 E     |      |            |        | Ka                 | eP   | 09 23 40   | 20     | He               | iPKP | 23 37 39   |
| 17     | He                 | eP   | 03 20 30   |        | Philippine Islands |      |            |        | Nu               | iPKP | 23 37 38   |
|        | Nu                 | iP   | 03 20 28   |        | 10.7 N, 121.6 E    |      |            |        | i                |      | 42         |
|        | So                 | iP   | 03 20 26   | 18     | He                 | iP   | 16 53 44   |        | So               | ePKP | 23 37 31   |
|        | Venezuela          |      |            |        | Nu                 | iP   | 16 53 41   |        | Ke               | ePKP | 23 37 26   |
|        | 7.9 N, 71.4 W      |      |            |        | So                 | iP   | 16 52 51   |        | New Hebrides     |      |            |
| 17     | He                 | iPKP | 03 42 19   |        | i                  |      | 55 00      |        | 14.7 S, 166.6 E  |      |            |
|        | Nu                 | iPKP | 03 42 18 D |        | Ka                 | iP   | 16 53 16   | 21     | So               | eP   | 04 39 36   |
|        | So                 | iPKP | 03 42 21   |        | Ke                 | eP   | 16 52 32   |        | Formosa          |      |            |
|        | San Juan Province  |      |            |        | Central Alaska     |      |            |        | 23.9 N, 121.7 E  |      |            |
|        | 31.6 S, 67.7 W     |      |            |        | 62.3 N, 152.5 W    |      |            | 21     | Nu               | iP   | 07 28 29 D |
| 17     | He                 | ePKP | 04 15 13   | 18     | He                 | iP   | 17 56 05 D | 21     | Nu               | iP   | 07 44 22 U |
|        | Nu                 | iPKP | 04 15 12   |        | Nu                 | iP   | 17 56 03 D | 21     | So               | iP   | 15 27 10   |
|        | Santa Cruz Islands |      |            |        | So                 | iP   | 17 55 13 D | 21     | He               | iPKP | 16 29 39   |
|        | 12.2 S, 167.1 E    |      |            |        | iPcP               |      | 56 30      |        | Nu               | iPKP | 16 29 38   |
| 17     | Nu                 | iP   | 04 57 37   |        | Ka                 | iP   | 17 55 38 D |        | i                |      | 49         |
|        | So                 | iP   | 04 56 50   |        | iPcP               |      | 56 43      |        | Kermadec Islands |      |            |
| 17     | He                 | iP   | 05 17 02 D |        | Ke                 | eP   | 17 54 55   |        | 28.2 S, 176.7 W  |      |            |
|        | Nu                 | iP   | 05 17 02 D | 19     | He                 | iP   | 18 33 43   | 21     | He               | iP   | 17 40 02   |
|        | iS                 |      | 27 25      |        | Nu                 | iP   | 18 33 43 D |        | Nu               | iP   | 17 40 00   |
|        | So                 | iP   | 05 16 50 D |        | i                  |      | 34 19      |        | So               | iP   | 17 39 11   |
|        | ePP                |      | 20 00      |        | iS                 |      | 39 19      |        | Ka               | eP   | 17 39 34   |
|        | Ka                 | iP   | 05 16 51   |        | So                 | iP   | 18 33 41 D |        | Central Alaska   |      |            |
|        | iS                 |      | 27 13      |        | i                  |      | 42 10      |        | 62.4 N, 152.6 W  |      |            |
|        | Ke                 | iP   | 05 16 48   |        | iLg1               |      | 45 38      | 21     | He               | iP   | 18 13 36   |
|        | Philippine Islands |      |            |        | Ka                 | iP   | 18 33 37 D |        | i                |      | 39         |
|        | 10.6 N, 121.6 E    |      |            |        | Ke                 | iP   | 18 33 43   |        | Nu               | iP   | 18 13 39   |
| 18     | He                 | iP   | 00 30 19   |        | Sinkiang Province  |      |            |        | iS               |      | 17 14      |
|        | Nu                 | iP   | 00 30 18   |        | 44.6 N, 81.7 E     |      |            |        | So               | iP   | 18 14 45 D |
|        | So                 | eP   | 00 30 07   | 19     | So                 | iP   | 21 31 47   |        | Ka               | iP   | 18 14 18   |
|        | Ka                 | eP   | 00 30 06   |        | Ka                 | eP   | 21 31 47   |        | iS               |      | 18 25      |
|        |                    |      |            |        | Celebes Sea        |      |            |        | Ke               | eP   | 18 15 07   |
|        |                    |      |            |        | 4.5 N, 123.2 E     |      |            |        | Italy            |      |            |
|        |                    |      |            |        |                    |      |            |        | 41.5 N, 15.4 E   |      |            |

| August |                  |      |            | August |                    |      |            | August |                    |      |            |
|--------|------------------|------|------------|--------|--------------------|------|------------|--------|--------------------|------|------------|
| 21     | He               | iP   | 18 24 02   | 22     | He                 | eP   | 09 04 07   | 23     | Nu                 | ePKP | 21 11 45   |
|        |                  | i    | 05         |        | Nu                 | iP   | 09 04 04   |        | So                 | iPKP | 21 11 57   |
|        | Nu               | iP   | 18 24 05 D |        |                    | eS   | 06 06      |        | Ka                 | iPKP | 21 11 53   |
|        |                  | iS   | 27 41      |        | So                 | iP   | 09 02 42   |        | Sandwich Islands   |      |            |
|        | So               | iP   | 18 25 11   |        |                    | iS   | 04 40      |        | 56.1 S, 26.6 W     |      |            |
|        |                  | iS   | 29 48      |        | Ka                 | eS   | 09 05 41   | 24     | Nu                 | eP   | 01 37 08   |
|        | Ka               | iP   | 18 24 45   |        | Ke                 | iP   | 09 02 21   |        | So                 | eP   | 01 37 21   |
|        |                  | iS   | 29 03      |        |                    | iS   | 04 02      |        | Ka                 | iP   | 01 37 05   |
|        | Ke               | eP   | 18 25 03   |        | Novaya Zemlya      |      |            |        |                    |      |            |
|        | Italy            |      |            | 22     | He                 | iPKP | 12 25 26   | 24     | He                 | iP   | 01 55 57   |
|        | 41.4 N, 15.5 E   |      |            |        | Nu                 | iPKP | 12 25 25   |        | Nu                 | iP   | 01 55 56   |
| 21     | He               | eP   | 18 49 30   |        | Ka                 | ePKP | 12 25 31   |        | Ka                 | iP   | 01 55 30   |
|        |                  | i    | 33         |        | Kermadec Islands   |      |            |        | Kamchatka          |      |            |
|        | Nu               | eP   | 18 49 30   |        | 28.6 S, 176.7 W    |      |            |        | 52.3 N, 160.6 E    |      |            |
|        | So               | iP   | 18 50 37   | 22     | Nu                 | eP   | 21 20 50   | 24     | Nu                 | iPKP | 04 17 40   |
|        | Ka               | eP   | 18 50 11   |        | Ka                 | iP   | 21 20 40   |        | Santa Cruz Islands |      |            |
|        | Italy            |      |            |        |                    | i    | 59         |        | 11.2 S, 165.0 E    |      |            |
|        | 41.2 N, 15.2 E   |      |            |        | Philippine Islands |      |            | 24     | He                 | ePKP | 07 05 32   |
| 21     | He               | iPKP | 21 25 30   |        | 8.3 N, 123.8 E     |      |            |        |                    | i    | 39         |
|        | Nu               | iPKP | 21 25 29   | 23     | So                 | eP   | 02 24 45   |        |                    | iSKP | 08 20      |
|        | Ka               | ePKP | 21 25 26   |        | Ka                 | iP   | 02 24 13   |        | Nu                 | ePKP | 07 05 29   |
|        | Kermadec Islands |      |            |        |                    |      |            |        |                    | i    | 36         |
|        | 28.7 S, 176.8 W  |      |            | 23     | Nu                 | eP   | 12 46 20   |        |                    | iPP  | 07 52      |
| 21     | He               | i    | 21 29 15   |        | Near Islands       |      |            |        |                    | iSKP | 08 20      |
|        | Nu               | iPKP | 21 29 08   |        | 51.7 N, 173.8 E    |      |            |        |                    | i    | 31         |
|        |                  | iPP  | 32 01      | 23     | He                 | iP   | 12 56 13   |        | So                 | iPKP | 07 05 23   |
|        |                  | iPKS | 45         |        | Nu                 | iP   | 12 56 11   |        |                    | iSKP | 08 01      |
|        | So               | ePKP | 21 29 10   |        | So                 | iP   | 12 55 21 D |        | Ka                 | ePKP | 07 05 11   |
|        |                  | iPP  | 31 41      |        | Ka                 | iP   | 12 55 46   |        |                    | i    | 29         |
|        | Ka               | iPKP | 21 29 13   |        |                    | iPcP | 56 51      |        |                    | iSKP | 08 10      |
|        |                  | iPKS | 33 07      |        | Central Alaska     |      |            |        |                    | ePKS | 09 00      |
|        |                  |      |            |        | 62.2 N, 152.8 W    |      |            |        | Fiji Islands       |      |            |
| 21     | He               | iPKP | 22 24 14   | 23     | He                 | eP   | 15 41 19   |        | 24.5 S, 178.8 E    |      |            |
|        | Nu               | iPKP | 22 24 13   |        | Nu                 | iP   | 15 41 22   | 24     | Nu                 | iPKP | 09 23 40   |
|        | Kermadec Islands |      |            |        |                    | iS   | 50 30      |        |                    | iPKS | 27 06      |
|        | 28.8 S, 176.5 W  |      |            |        | So                 | iP   | 15 41 03 D |        | So                 | ePKP | 09 23 28   |
| 22     | He               | iP   | 04 44 38   |        | Ke                 | eP   | 15 40 59   |        | Ka                 | iPKP | 09 23 30   |
|        | Nu               | iP   | 04 44 38   |        | Formosa            |      |            |        | Samoa Islands      |      |            |
|        |                  | iS   | 54 40      |        | 22.9 N, 120.8 E    |      |            |        | 15.0 S, 173.3 W    |      |            |
|        | So               | iP   | 04 44 13   | 23     | He                 | eP   | 19 40 56   | 24     | So                 | eP   | 18 13 00   |
|        | Ka               | iP   | 04 44 22   |        | Nu                 | iP   | 19 40 54   |        | Ka                 | eP   | 18 13 02   |
|        | Ke               | eP   | 04 44 05   |        |                    | i    | 41 03      | 24     | He                 | iP   | 21 57 32   |
|        | Volcano Islands  |      |            |        | So                 | iP   | 19 40 18 U |        | Nu                 | iP   | 21 57 31 U |
|        | 26.1 N, 142.5 E  |      |            |        | Ka                 | eP   | 19 40 39   |        |                    |      |            |
|        |                  |      |            |        |                    | i    | 48         | 24     | Nu                 | eP   | 23 00 58   |
| 22     | He               | iPKP | 05 48 57   |        | Ke                 | eP   | 19 40 14   |        | So                 | eP   | 23 00 28   |
|        | Nu               | iPKP | 05 48 56 D |        | California         |      |            |        | Ka                 | eP   | 23 00 37   |
|        | Kermadec Islands |      |            |        | 41.8 N, 124.1 W    |      |            |        |                    |      |            |
|        | 28.7 S, 176.7 W  |      |            |        |                    |      |            |        |                    |      |            |

| August |                  |       |            | August |                 |       |            | August |                    |      |            |
|--------|------------------|-------|------------|--------|-----------------|-------|------------|--------|--------------------|------|------------|
| 25     | He               | eP    | 00 39 45   | 26     | Nu              | eP    | 01 45 04   | 27     | So                 | eP   | 09 03 24   |
|        | Nu               | iP    | 00 39 44 U |        | Ka              | eP    | 01 44 45   |        |                    | iS   | 05 21      |
|        | So               | iP    | 00 39 07   |        | Ryukyu Islands  |       |            |        | Ka                 | eS   | 09 06 21   |
|        | Kurile Islands   |       |            |        | 27.9 N, 129.3 E |       |            |        | Ke                 | eP   | 09 03 03   |
|        | 44.4 N, 148.7 E  |       |            |        |                 |       |            |        |                    | eS   | 04 43      |
|        |                  |       |            |        | Novaya Zemlya   |       |            |        | 74.7 N, 50.3 E     |      |            |
| 25     | Nu               | iP    | 02 21 46 D | 26     | He              | eP    | 07 00 18   | 27     | Nu                 | iP   | 14 33 18 U |
|        | So               | iP    | 02 20 58 D |        |                 | i     | 07 00 22   |        | So                 | eP   | 14 33 56   |
|        |                  | i     | 02 22 21   |        | Nu              | iP    | 07 00 16   |        | Ka                 | eP   | 14 33 32   |
|        | Ke               | iP    | 02 20 40   |        |                 | iS    | 07 09 36   |        |                    | i    | 14 35 09   |
|        | Alaska Peninsula |       |            |        | So              | iP    | 06 59 47   |        |                    |      |            |
|        | 55.5 N, 155.9 W  |       |            |        |                 | ePP   | 07 02 17   | 27     | He                 | iP   | 16 31 10   |
| 25     | Nu               | iP    | 07 23 40   |        | Ka              | iP    | 06 59 56   |        | Nu                 | iP   | 16 31 09 U |
|        | So               | iP    | 07 24 42   |        |                 | i     | 06 59 59   |        |                    | i    | 16 31 19   |
|        | Ka               | eP    | 07 24 00   |        | Ke              | eP    | 06 59 42   |        |                    | ePP  | 16 33 33   |
|        |                  |       |            |        | Honshu, Japan   |       |            |        | So                 | iP   | 16 30 37 U |
| 25     | He               | i     | 08 50 08   |        | 34.0 N, 139.2 E |       |            |        |                    | iPcP | 16 31 12   |
|        |                  | iSKP  | 08 52 49   |        |                 |       |            |        |                    | ePP  | 16 32 46   |
|        | Nu               | iPKP  | 08 49 50   |        |                 |       |            |        |                    | i    | 16 32 54   |
|        |                  | i     | 08 50 09   | 26     | So              | iP    | 16 37 32 D |        | Ka                 | iP   | 16 30 47 U |
|        |                  | iSKP  | 08 52 49   |        |                 | Ka    | 16 37 11   |        |                    | i    | 16 30 56   |
|        |                  | iPKS  | 08 53 41   |        | Algeria         |       |            |        |                    | iPP  | 16 33 08   |
|        | So               | ePKP  | 08 49 42   |        | 36.5 N, 1.6 E   |       |            |        | Ke                 | iP   | 16 30 26   |
|        |                  | i     | 08 54 54   |        |                 |       |            |        | Honshu, Japan      |      |            |
|        |                  | iSKP  | 08 52 28   |        |                 |       |            |        | 38.3 N, 142.4 E    |      |            |
|        |                  | iPKS  | 08 53 20   | 26     | Nu              | iP    | 22 46 30   | 27     | He                 | eP   | 19 19 42   |
|        |                  | eSKS  | 08 56 10   |        | So              | iP    | 22 46 02   |        | Nu                 | iP   | 19 19 44   |
|        |                  | eSKKP | 09 02 39   |        | Ka              | iP    | 22 46 10   |        |                    | i    | 19 20 23   |
|        | Ka               | ePKP  | 08 49 49   |        | Honshu, Japan   |       |            |        | So                 | iP   | 19 20 00   |
|        |                  | i     | 08 50 01   |        | 34.3 N, 139.3 E |       |            |        | Ka                 | iP   | 19 19 43   |
|        |                  | iSKP  | 08 52 32   | 26     | So              | iP    | 23 44 29   |        |                    | iPP  | 19 21 13   |
|        |                  | iPKS  | 08 53 31   |        |                 | iPKKP | 24 00 31   |        | Hindu Kush         |      |            |
|        | Ke               | iPKP  | 08 49 50   |        | Ka              | iP    | 23 44 33   |        | 36.6 N, 70.2 E     |      |            |
|        |                  | eSKP  | 08 52 23   |        | New Guinea      |       |            | 27     | Nu                 | iPKP | 22 32 03   |
|        | Fiji Islands     |       |            |        | 3.7 S, 140.1 E  |       |            |        | Ka                 | iPKP | 22 31 56   |
|        | 20.5 S, 178.5 W  |       |            |        |                 |       |            |        | Santa Cruz Islands |      |            |
| 25     | Nu               | iP    | 09 04 34   |        |                 |       |            |        | 12.3 S, 167.1 E    |      |            |
|        |                  | eS    | 09 07 39   | 27     | He              | iP    | 02 29 17   |        |                    |      |            |
|        |                  |       |            |        |                 | ipP   | 02 30 22   | 28     | So                 | eP   | 00 24 15   |
| 25     | So               | eP    | 15 57 06   |        |                 | iPP   | 02 31 40   |        | Honshu, Japan      |      |            |
|        | Honshu, Japan    |       |            |        | Nu              | iP    | 02 29 15   |        | 35.0 N, 140.2 E    |      |            |
|        | 35.1 N, 138.7 E  |       |            |        |                 | ipP   | 02 30 19   |        |                    |      |            |
|        |                  |       |            |        |                 | iPP   | 02 31 42   | 28     | So                 | eP   | 00 29 12   |
| 25     | So               | eP    | 19 17 26   |        | So              | iP    | 02 28 44 D |        | Honshu, Japan      |      |            |
|        | Ka               | eP    | 19 17 36   |        |                 | iPP   | 02 30 58   |        | 34.2 N, 139.7 E    |      |            |
|        |                  |       |            |        | Ka              | iP    | 02 28 53 D |        |                    |      |            |
| 25     | So               | iP    | 20 05 29 U |        |                 | ipP   | 02 29 56   | 28     | Nu                 | eP   | 00 40 49   |
|        | Ka               | eP    | 20 05 14   |        |                 | iPP   | 02 31 11   |        | So                 | iP   | 00 40 19   |
|        | Ke               | eP    | 20 05 46   |        | Ke              | iP    | 02 28 34   |        | Ka                 | iP   | 00 40 28   |
|        | Algeria          |       |            |        | Sea of Japan    |       |            |        | Honshu, Japan      |      |            |
|        | 36.7 N, 1.6 E    |       |            |        | 40.2 N, 137.8 E |       |            |        | 34.2 N, 139.7 E    |      |            |

| August |                      |    |            | August |                   |      |            | August   |                  |    |            |          |
|--------|----------------------|----|------------|--------|-------------------|------|------------|----------|------------------|----|------------|----------|
| 28     | So                   | eP | 06 33 06   | 29     | He                | iP   | 20 31 46   | 31       | He               | iP | 16 36 23   |          |
|        |                      |    |            |        | Nu                | iP   | 20 31 44   |          | Nu               | iP | 16 36 21 U |          |
| 28     | Nu                   | iP | 08 24 35 U |        |                   | i    | 32 26      |          | iPcP             |    | 37 05      |          |
|        | So                   | iP | 08 24 03   |        | Ka                | iP   | 20 31 19   |          | So               | iP | 16 35 36 D |          |
|        | Ka                   | iP | 08 24 13   |        |                   | i    | 32 05      |          | Ka               | iP | 16 35 55   |          |
|        | Ke                   | eP | 08 23 57   |        | Honshu, Japan     |      |            |          |                  | i  | 36 08      |          |
|        | Honshu, Japan        |    |            |        | 34.0 N, 139.3 E   |      |            |          | Ke               | eP | 16 35 21   |          |
|        | 34.2 N, 139.3 E      |    |            |        |                   |      |            |          | Kamchatka        |    |            |          |
|        |                      |    |            |        |                   |      |            |          | 52.5 N, 160.6 E  |    |            |          |
| 28     | He                   | iP | 11 04 47   | 29     | He                | eP   | 22 48 15   |          |                  |    |            |          |
|        |                      | i  | 12 00      |        | Nu                | iP   | 22 48 14   |          |                  |    |            |          |
|        | Nu                   | iP | 11 04 49   |        |                   | iS   | 57 32      | 31       | He               | iP | 17 13 36   |          |
|        |                      | iS | 08 40      |        | Ka                | iP   | 22 47 53   |          | Nu               | iP | 17 13 33   |          |
|        | So                   | iP | 11 05 54 U |        |                   | i    | 48 15      |          | ePPP             |    | 17 50      |          |
|        |                      | eS | 10 40      |        | Ke                | iP   | 22 47 40   |          | iS               |    | 22 24      |          |
|        | Ka                   | iP | 11 05 25 U |        | Honshu, Japan     |      |            |          | iP'P'            |    | 42 03      |          |
|        | Ke                   | iP | 11 06 15   |        | 34.1 N, 139.1 E   |      |            |          | So               | iP | 17 12 47   |          |
|        | Greece               |    |            |        |                   |      |            |          | eP'P'            |    | 42 09      |          |
|        | 38.0 N, 23.1 E       |    |            | 30     | He                | eP   | 07 49 49   |          | Ka               | iP | 17 13 08   |          |
|        |                      |    |            |        | Nu                | iP   | 07 49 49   |          |                  | i  | 14 23      |          |
| 28     | Nu                   | iP | 11 38 24   |        |                   | eS   | 52 24      |          | iP'P'            |    | 42 09      |          |
|        | So                   | iP | 11 37 54   |        | So                | iP   | 07 51 12   |          | Ke               | iP | 17 12 33   |          |
|        | Ka                   | eP | 11 38 07   |        | Ka                | iP   | 07 50 38   |          | ePP              |    | 14 32      |          |
|        |                      |    |            |        |                   | i    | 55         |          | i                |    | 20 24      |          |
|        |                      |    |            |        |                   | iS   | 53 48      |          | iS               |    | 21 00      |          |
| 28     | So                   | eP | 22 57 43   |        | Romania           |      |            |          | iSS              |    | 24 40      |          |
|        | Ka                   | eP | 22 57 25   |        | 45.5 N, 26.7 E    |      |            |          | Rat Islands      |    |            |          |
|        | NW of Chagos Islands |    |            |        |                   |      |            |          | 51.3 N, 179.7 W  |    |            |          |
|        | 2.2 S, 67.8 E        |    |            | 30     | He                | iP   | 13 46 56   |          |                  |    |            |          |
|        |                      |    |            |        | Nu                | iP   | 13 46 50 D | 31       | He               | iP | 18 07 00   |          |
| 29     | Nu                   | iP | 02 24 26   |        |                   | iS   | 56 12      |          | Nu               | iP | 18 06 58 D |          |
|        | So                   | iP | 02 23 58   |        | Ka                | iP   | 13 46 36   |          | So               | iP | 18 06 13 D |          |
|        | Ka                   | iP | 02 24 09   |        | Utah-Idaho border |      |            |          | Ka               | iP | 18 06 33   |          |
|        | Honshu, Japan        |    |            |        | 41.8 N, 111.8 W   |      |            |          | Ke               | iP | 18 05 57   |          |
|        | 34.9 N, 140.0 E      |    |            |        |                   |      |            |          | Rat Islands      |    |            |          |
|        |                      |    |            |        |                   |      |            |          | 51.2 N, 179.9 W  |    |            |          |
| 29     | Nu                   | eP | 09 23 15   |        | 30                | Nu   | eP         | 13 57 30 |                  |    |            |          |
|        |                      | eS | 32 28      |        |                   | Ka   | eP         | 13 57 11 |                  |    |            |          |
|        | So                   | eP | 09 23 41   |        | 30                | He   | ePKP       | 17 37 17 | 31               | Nu | eP         | 21 34 03 |
|        | Ka                   | iP | 09 23 22   |        |                   | Nu   | iPKP       | 17 37 17 |                  | So | eP         | 21 33 18 |
|        |                      | i  | 28         |        |                   | ePP  | 40 00      |          | Ka               | iP | 21 33 37   |          |
|        | NW of Chagos Islands |    |            |        |                   | iPKS | 49         |          | Rat Islands      |    |            |          |
|        | 1.9 S, 67.9 E        |    |            |        |                   | e    | 54 40      |          | 51.4 N, 179.8 W  |    |            |          |
|        |                      |    |            |        |                   | iSS  | 58 18      |          |                  |    |            |          |
| 29     | Nu                   | eP | 11 39 02   |        | Ka                | ePKP | 17 37 07   |          |                  |    |            |          |
|        | Northern India       |    |            |        |                   | i    | 18         |          |                  |    |            |          |
|        | 30.9 N, 78.4 E       |    |            |        | Tonga Islands     |      |            |          |                  |    |            |          |
|        |                      |    |            |        | 21.2 S, 174.4 W   |      |            |          |                  |    |            |          |
| 29     | Nu                   | eP | 15 25 48   | 31     | Nu                | iP   | 06 43 25 D |          | January 15, 1963 |    |            |          |
|        | Honshu, Japan        |    |            |        | So                | iP   | 06 42 58   |          | M. T. Porkka     |    |            |          |
|        | 34.5 N, 139.8 E      |    |            |        | Ka                | eP   | 06 43 05   |          | Aili Huovila     |    |            |          |



September

1 Nu eP 00 47 17  
eS 54 32  
Ka eP 00 47 36

1 He iP 03 56 58  
Nu iP 03 56 56 U  
iPPP 04 01 14  
iS 05 46  
So iP 03 56 11 U  
eP'P' 04 10 41  
Ka iP 03 56 30 U  
Ke iP 03 55 55 U  
ePP 58 13  
iS 04 03 48  
iPS 04 16  
eSS 07 52  
Rat Islands  
51.3 N, 179.7 W

1 He eP 04 09 14  
Nu iP 04 09 12  
So iP 04 08 28  
Ka eP 04 08 46  
Ke eP 04 08 14  
Rat Islands  
51.1 N, 180.0

1 Nu iP 04 50 11  
i 16  
So eP 04 49 42  
i 47  
Ka iP 04 49 50  
Ke iP 04 49 38

1 He iP 04 52 33 U  
Nu iP 04 52 30 U  
So iP 04 51 45 U  
Ka iP 04 52 06 U  
Ke iP 04 51 29 U  
i 52 13  
iPcP 25  
Rat Islands  
51.3 N, 179.9 W

1 He iP 05 10 26  
Nu iP 05 10 23  
So iP 05 09 38 D  
Ka iP 05 09 59 D  
Ke eP 05 09 23

September

1 He iPKP 05 10 53  
ipPKP 11 58  
iSKP 13 49  
Nu iP 05 10 52 U  
ipPKP 11 54  
iSKP 13 49  
iPKS 14 12  
iSKS 17 35  
iSKKS 19 27  
So iP 05 10 40  
iPKKP 20 35  
i 23 42  
iSKKP 24 32  
Ka iP 05 10 45 U  
ipPKP 11 47  
iPKKP 20 28  
Ke iP 05 10 37 U  
ipPKP 11 42  
New Hebrides  
15.9 S, 168.2 E

1 Nu iP 07 52 57  
So iP 07 52 13  
Ka eP 07 52 33  
Rat Islands  
51.4 N, 180.0

1 He iP 08 01 59 U  
Nu iP 08 01 56 U  
So iP 08 01 11 U  
eP'P' 30 35  
Ka iP 08 01 32 U  
eP'P' 30 36  
Ke iP 08 00 56 U  
iPcP 01 51  
e(PP) 02 36  
eS 08 52  
iPS 09 20  
iSS 13 00  
Rat Islands  
51.3 N, 179.9 W

1 Nu iP 08 57 56  
So iP 08 57 12  
Ka iP 08 57 31  
Rat Islands  
51.4 N, 179.8 W

1 He eP 11 55 12  
Nu iP 11 55 08  
eS 56 47  
So eP 11 54 36  
eS 55 52  
Ka eP 11 54 55  
eS 56 26  
Ke eP 11 54 43  
iS 56 04

September

1 He iP 15 09 10  
i 17  
iPP 10 51  
Nu iP 15 09 13 U  
i 19  
iPP 10 56  
iS 15 47  
So iP 15 09 39 D  
i 46  
iPcP 11 14  
iPP 32  
eS 16 27  
Ka iP 15 09 20  
iPP 11 06  
Ke iP 15 09 51  
West Pakistan  
25.8 N, 65.3 E

1 He iP 19 26 43 U  
Nu iP 19 26 45 U  
So iP 19 27 27 U  
Ka iP 19 27 01 U  
Ke iP 19 27 44 U  
Northwest Iran  
35.6 N, 50.0 E

1 He iP 20 33 40  
i 34 18  
Nu iP 20 33 43 D  
So iP 20 34 25  
iPP 35 41  
Ka iP 20 33 59  
iPP 35 19  
Ke iP 20 34 42  
iPP 36 06  
Northwest Iran  
35.3 N, 49.6 E

1 Nu iP 23 47 54  
So iP 23 46 34  
iS 49 04  
Ka eP 23 47 14  
Ke eP 23 46 10  
Svalbard region  
79.0 N, 2.7 E

2 Nu iP 01 27 36  
So iP 01 26 14  
eS 28 39

2 He iP 03 13 21  
Nu iP 03 13 19 U  
So iP 03 12 35  
Ka iP 03 12 55 U  
Rat Islands  
51.3 N, 179.8 W



September

2 So eP 06 48 07  
2 He eP 07 18 03  
Nu iP 07 18 07  
So iP 07 18 47  
i 19 47  
Ka iP 07 18 20  
i 19 29

Northwest Iran  
35.6 N, 49.2 E

2 He eP 08 34 48  
Nu eP 08 34 45  
i 49  
So iP 08 34 20  
Ka iP 08 34 29  
iPP 37 13

Honshu, Japan  
34.2 N, 139.5 E

2 Nu eP 13 27 31  
So iP 13 28 11  
Ka iP 13 27 45

2 Nu eP 15 35 45  
So iP 15 35 42  
Soemba Islands  
10.2 S, 120.3 E

2 Nu iP 19 56 18  
So eP 19 55 24  
Ka iP 19 55 55  
Ke iP 19 55 10

Jan Mayen  
71.2 N, 12.7 W

2 Nu iPKP 20 36 34  
So ePKP 20 36 20  
Ka ePKP 20 36 26  
i 34  
Ke iPKP 20 36 17  
North Islands  
38.5 S, 179.8 W

2 Nu iP 21 08 53 U  
i 58  
So iP 21 08 24  
Ka iP 21 08 34  
i 39

Honshu, Japan  
33.9 N, 138.7 E

September

2 Nu eP 22 59 25  
So eP 22 59 08  
Ka eP 22 59 13

3 So iP 00 09 45  
Ka iP 00 09 44  
Banda Sea  
7.0 S, 124.8 E

3 He eP 02 14 31  
Nu iP 02 14 33 D  
So iP 02 15 16  
Ka iP 02 14 51 D

3 Nu iP 04 49 35 U  
Ka iP 04 49 41

3 Nu iP 11 40 16

3 He eP 17 02 01  
Nu iP 17 01 56  
i 02 01

So eP 17 01 27  
i 32

Ka eP 17 01 37  
i 42

Ke eP 17 01 23  
Honshu, Japan  
34.5 N, 139.4 E

3 Nu iP 20 47 56  
i 48 01  
So eP 20 47 27  
Ka eP 20 47 37

Honshu, Japan  
34.0 N, 139.0 E

3 So iPKP 22 25 07  
Sandwich Islands  
56.6 S, 27.2 W

4 He eP 02 03 24  
Nu iP 02 03 23  
So eP 02 03 08  
Ka iP 02 03 12

4 So eP 11 42 28

4 Nu iP 13 36 16 U  
iPP 37 18  
So iP 13 36 59  
iPP 38 07  
Ka iP 13 36 33 U

cont.

September

Ke iP 13 37 16 U  
i 38 21  
i 30  
iPP 39  
eS 42 58  
iSS 45 24

Northwest Iran  
35.6 N, 49.7 E

4 So iP 15 30 03  
Mexico-Guatemala  
15.0 N, 91.7 W

4 So eP 15 30 47  
Ka eP 15 30 58  
Ke iP 15 30 42

4 Nu iP 17 29 10  
So iP 17 28 34  
Ka iP 17 28 54  
Ke iP 17 28 22

California  
41.0 N, 124.0 W

4 Nu iPKP 19 47 28 U  
Ka ePKP 19 47 21  
New Hebrides  
15.5 S, 167.7 E

4 So eP 21 56 19  
Ke iP 21 56 19  
North Atlantic Ocean  
24.0 N, 46.4 W

4 He iP 23 04 28  
Nu iP 23 04 31 D  
iS 08 49  
So iP 23 05 19 D  
Ka iP 23 04 51 D  
Ke iP 23 05 38  
iS 10 44

Turkey-Armenia S.S.R.  
39.9 N, 44.2 E

5 So eP 08 45 18  
Ka eP 08 45 38  
Kamchatka

52.7 N, 159.1 E

5 So eP 16 15 25  
Utah  
40.7 N, 112.0 W

September

6 Nu iP 07 21 11  
So iP 07 21 16

6 So ePKP 11 08 22  
Tonga Islands  
21.2 S, 174.5 W

6 Ka eP 11 24 27  
Ceram Sea  
4.0 S, 126.4 E

6 Nu iPKP 15 21 37  
Solomon Islands  
8.4 S, 158.8 E

6 So iP 17 49 29  
Honshu, Japan  
34.5 N, 139.7 E

6 Nu iPKP 18 25 54  
i 26 38  
Ka ePKP 18 25 47  
Kermadec Islands  
31.8 S, 178.8 W

7 So iP 12 14 24  
Ka iP 12 14 30  
Honshu, Japan  
34.0 N, 139.3 E

7 He i 23 56 36  
Nu iPKP 23 56 32  
i 35  
So iPKP 23 56 16  
Ka iPKP 23 56 23  
Ke ePKP 23 56 18  
Kermadec Islands  
26.3 S, 178.0 W

8 Nu iPKP 00 10 43  
Solomon Islands  
8.4 S, 159.0 E

8 He iP 10 22 01  
eS 25 02  
Nu eP 10 21 59  
eS 25 01  
So iP 10 20 38  
iS 22 38  
Ka iP 10 21 10  
eS 23 34  
Ke iP 10 20 16  
i 21 50  
iS 57  
Novaya Zemlya  
73.7 N, 53.8 E

September

8 Nu iP 13 15 03  
So iP 13 15 05  
Ke iP 13 15 05  
Leeward Islands  
16.9 N, 60.9 W

9 He iP 01 47 06 U  
Nu iP 01 47 06 U  
So iP 01 46 56 D  
Ka iP 01 46 57  
Ke iP 01 46 54  
Philippine Islands  
10.3 N, 121.4 E

9 Nu iP 10 03 33

9 He eP 19 22 24  
Nu iP 19 22 22 D  
So iP 19 21 31  
Ke eP 19 21 17  
Alaska  
62.4 N, 152.4 W

10 He iP 09 41 52  
Nu iP 09 41 54  
iS 46 18  
So iP 09 42 55  
eS 48 07  
Ka iP 09 42 26  
Ke iP 09 43 15  
i 48 36  
iS 50  
Dodecanese Islands  
35.0 N, 27.1 E

10 He iPKP 16 02 03  
iSKP 04 50  
Nu iPKP 16 02 02  
i 11  
iSKP 04 47  
iPKS 05 46  
iSKKS 09 52  
So iPKP 16 01 44  
i 48  
i 59  
iSKP 04 26  
iPKS 05 27  
Ka ePKP 16 01 51  
Ke ePKP 16 01 45  
i 56  
iSKP 04 20  
iPKS 05 20  
iSKS 08 20  
iSKKS 09 44  
Fiji Islands  
21.1 S, 179.2 W

September

10 So iP 16 37 48

10 So iP 22 56 30  
Sikang Province  
30.5 N, 94.6 E

11 He iP 00 22 48  
Nu iP 00 22 50  
eS 27 10  
So iP 00 23 37  
Ka iP 00 23 09  
Eastern Turkey  
39.9 N, 43.9 E

11 Nu iP 01 38 27  
Ka eP 01 38 19

11 So iP 07 46 11

11 He eP 11 21 11  
Nu eP 11 21 11  
iPP 22 03  
eS 26 12  
So iP 11 21 58  
i 22 47  
i 24 03

11 He iP 18 03 18  
i 22  
Nu iP 18 03 16 D  
So iP 18 02 51  
Ke iP 18 02 45  
Bonin Islands  
26.9 N, 142.7 E

11 So iP 22 07 31  
Formosa  
23.8 N, 121.3 E

12 Nu iP 05 01 44  
So iP 05 02 23  
Ascension Islands  
7.0 S, 12.4 W

September

12 He iP 21 04 04  
 Nu iP 21 04 06  
 iPP 05 24  
 eS 09 36  
 i 41  
 iSS 12 00  
 So iP 21 04 24 D  
 i 05 39  
 Ka iP 21 04 08  
 iSS 11 56  
 Ke iP 21 04 34  
 i 05 52  
 iPP 06 08  
 iS 10 36  
 iSS 13 16  
 Hindu Kush  
 36.5 N, 69.2 E

13 He iP 00 10 20  
 Nu iP 00 10 20  
 So eP 00 10 48  
 i 54  
 Ke iP 00 11 05  
 Ascension Island  
 7.3 S, 13.3 W

13 Nu iP 08 18 29  
 So eP 08 17 51  
 Kurile Islands  
 47.7 N, 157.0 E

13 Nu eP 12 53 03  
 So eP 12 53 21  
 Ka iP 12 53 05  
 i 08

13 He iP 14 46 55 U  
 Nu iP 14 46 53 U  
 So eP 14 46 56  
 Ka eP 14 47 00  
 North of Trinidad  
 11.6 N, 61.3 W

14 He eP 00 38 03  
 Nu iP 00 38 06  
 iS 41 54  
 So iP 00 39 18  
 i 44 31  
 Western Turkey  
 39.6 N, 28.6 E

September

14 Nu ePKP 17 41 54  
 Ka ePKP 17 41 41  
 i 52  
 Fiji Islands  
 26.6 S, 178.5 W

14 Nu iSKP 18 39 30  
 So iSKP 18 39 08  
 Ka iSKP 18 39 18  
 Fiji Islands  
 19.9 S, 177.6 W

15 Nu eP 08 06 04  
 eS 09 02  
 So iP 08 04 49  
 eS 06 47  
 i 51  
 Ka eP 08 05 21  
 eS 07 44  
 Ke eP 08 04 26  
 eS 06 07  
 Novaya Zemlya  
 74.4 N, 51.5 E

15 He iP 23 01 24  
 i 40  
 Nu iP 23 01 23  
 i 39  
 iS 10 02  
 iScS 11 18  
 So iP 23 00 41  
 i 57  
 iPP 02 43  
 Ka iP 23 00 59  
 eP'P' 30 19  
 Kurile Islands  
 48.5 N, 156.8 E

16 Nu iP 03 18 23  
 So iP 03 18 03  
 Jalisco, Mexico  
 19.3 N, 103.1 W

16 So eP 05 47 50  
 Kern County  
 35.8 N, 118.1 W

September

16 Nu eP 11 03 05  
 eS 06 05  
 So iP 11 01 47  
 eS 03 46  
 Ke iP 11 01 25  
 eS 03 07  
 Novaya Zemlya  
 74.2 N, 51.6 E

16 Nu iP 14 54 06  
 BCIS:  
 Italy  
 43.6 N, 11.3 E

16 Nu eP 19 17 15  
 So iP 19 17 15  
 Ka eP 19 17 08  
 Burma  
 16.7 N, 94.2 E

16 Nu eP 22 56 58  
 So iP 22 56 31 U  
 Ka iP 22 56 33  
 i 44  
 Formosa  
 22.8 N, 123.5 E

17 So iP 01 18 43  
 Alaska  
 64.3 N, 149.3 W

17 Nu iP 15 56 04  
 So eP 15 55 10  
 Ke eP 15 54 53  
 Alaska  
 66.1 N, 153.9 W

17 Nu iP 16 42 47  
 So iP 16 42 30  
 Ka eP 16 42 32  
 Ke eP 16 42 27  
 Formosa  
 23.5 N, 121.7 E

17 He ePKP 18 13 50  
 i 14 01  
 Nu iP 18 13 49  
 i 14 00  
 iP 16 25  
 iSKP 36  
 iPKS 17 35

September

So iPKP 18 13 31  
i 48  
ipPKP 16 09  
iSKP 17  
iPKS 17 14  
Ka iPKP 18 13 41  
i 53  
ipPKP 16 19  
iSKP 25  
iPKS 17 22  
Ke iPKP 18 13 44  
i 15 12  
iSKP 16 09  
i 18  
iPKS 17 07  
Fiji Islands  
21.0 S, 179.1 W

17 He eP 19 49 10  
Nu iP 19 49 14  
So iP 19 50 23  
Ka iP 19 49 54  
Southern Yugoslavia  
41.3 N, 20.8 E

18 He i 00 42 19  
Nu iP 00 42 13  
i 15  
iPP 45 51  
iSKS 52 44  
iS 53 08  
So iP 00 42 04  
iPP 45 42  
ePPP 47 44  
iS 52 59  
Ka iP 00 42 12  
iPP 45 56  
Ke iP 00 42 02  
i 06  
iPP 45 28  
eS 52 53  
South of Panama  
7.5 N, 82.3 W

18 Nu eP 05 26 43  
So eP 05 26 38  
Ka eP 05 26 49  
South of Panama  
7.3 N, 82.4 W

18 Nu iP 05 30 10  
So eP 05 30 30  
Ka iP 05 30 12  
Ke eP 05 30 38

September

18 Nu iP 06 23 43  
i 50  
i 27 06  
iS 34 52  
So eP 06 23 30  
i 34  
i 54  
Ka iP 06 23 32  
i 35  
i 56  
Molucca Passage  
2.3 N, 126.9 E

18 Nu eP 08 33 07  
So iP 08 31 47  
eS 33 46  
Ka iS 08 34 44  
Ke eP 08 31 26  
iS 33 08  
Novaya Zemlya  
73.2 N, 54.7 E

18 Nu eP 10 33 48  
So iP 10 32 23

18 Nu eP 12 29 35  
So iP 12 29 33  
i 58  
Ka eP 12 29 53  
Northern Burma  
26.4 N, 96.6 E

18 Nu iPKP 20 30 55  
iSKP 34 15  
So ePKP 20 30 45  
Ka iPKP 20 30 48  
eSKP 34 04  
Ke ePKP 20 30 40  
New Hebrides  
21.0 S, 169.9 E

18 He iP 23 29 29  
Nu iP 23 29 29 U

19 He eP 00 16 39  
Nu iP 00 16 39  
So iP 00 16 08  
Ka iP 00 16 17  
Ke iP 00 15 59  
Sea of Japan  
42.0 N, 132.9 E

September

19 Nu iP 01 33 25  
i 40  
So iP 01 32 39  
i 54  
Ka iP 01 33 00  
i 16  
Ke iP 01 32 23  
i 38  
Andreanof Islands  
52.3 N, 173.4 W

19 He iP 05 17 11  
Nu iP 05 17 10  
So iP 05 16 33 D  
Ka iP 05 16 46 D  
Ke iP 05 16 20  
Sakhalin Islands  
48.1 N, 145.1 E

19 Nu iP 07 35 29  
So iP 07 36 13  
iPP 37 46  
Ka iP 07 35 47  
ePP 37 05  
Ke iP 07 36 29  
iPP 38 08  
eSS 45 34  
Western Iran  
29.9 N, 50.4 E

19 He eP 08 01 39  
Nu iP 08 01 39  
So iP 08 01 21 D  
Ka iP 08 01 25  
Ke iP 08 01 15  
Mariana Islands  
11.5 N, 141.0 E

19 Nu eP 11 05 00  
So iP 11 03 36  
iS 05 34  
Ka iP 11 04 09  
iS 06 33  
Ke iP 11 03 14  
i 25  
iS 04 55  
Novaya Zemlya  
73.8 N, 53.8 E

19 Nu iP 16 26 00  
So iP 16 24 49  
Ka iP 16 25 29  
Ke iP 16 24 30  
i 25 55

| September |                    |      |            | September |                      |      |            | September |                     |      |            |          |
|-----------|--------------------|------|------------|-----------|----------------------|------|------------|-----------|---------------------|------|------------|----------|
| 20        | So                 | eP   | 03 14 35   | 22        | He                   | iP   | 08 13 34 U | 23        | He                  | iP   | 16 00 45   |          |
|           |                    |      |            |           |                      | i    | 46         |           | Nu                  | iP   | 16 00 43   |          |
| 20        | Nu                 | iP   | 17 05 16 D |           |                      | iPP  | 15 06      |           | So                  | iP   | 15 59 55   |          |
|           |                    |      |            |           | Nu                   | iP   | 08 13 36 U |           | Ka                  | iP   | 16 00 18   |          |
|           |                    |      |            |           |                      | i    | 47         |           | Ke                  | eP   | 15 59 52   |          |
| 20        | Nu                 | eP   | 18 10 14   |           |                      | ePP  | 15 06      |           | Kenai Peninsula     |      |            |          |
|           |                    |      |            |           |                      | iPcP | 42         |           | 60.1 N, 151.2 W     |      |            |          |
|           |                    |      |            |           | So                   | iP   | 08 13 55   |           |                     |      |            |          |
| 21        | Nu                 | iP   | 01 09 19   |           |                      | i    | 14 06      | 23        | He                  | iP   | 16 01 00   |          |
|           |                    | i    | 31         |           | Ka                   | iP   | 08 13 36 U |           | Nu                  | iP   | 16 00 58   |          |
|           | Ka                 | iP   | 01 09 09   |           |                      | i    | 47         |           | So                  | iP   | 16 00 10   |          |
|           |                    | i    | 20         |           |                      | iPP  | 15 08      |           |                     | iPcP | 01 19      |          |
|           | Philippine Islands |      |            |           | Ke                   | iP   | 08 14 04   |           | Ka                  | iP   | 16 00 33   |          |
|           | 8.0 N, 126.4 E     |      |            |           |                      | i    | 21         |           |                     | iPcP | 01 30      |          |
|           |                    |      |            |           | Hindu Kush           |      |            |           |                     |      |            |          |
|           |                    |      |            |           | 36.4 N, 69.0 E       |      |            |           | 23                  | Nu   | iP         | 20 46 52 |
| 21        | Nu                 | eP   | 02 36 16   |           |                      |      |            |           |                     | i    | 47 11      |          |
|           | Ka                 | iP   | 02 35 51   |           |                      |      |            |           | So                  | eP   | 20 47 52   |          |
|           | Kamchatka          |      |            |           |                      |      |            |           | West coast of Crete |      |            |          |
|           | 53.7 N, 160.3 E    |      |            | 22        | Nu                   | iP   | 09 03 37   |           | 35.5 N, 23.3 E      |      |            |          |
|           |                    |      |            |           | So                   | iP   | 09 03 34   |           |                     |      |            |          |
| 21        | Nu                 | eP   | 08 05 08   |           | Ka                   | iP   | 09 03 27   | 24        | Nu                  | eP   | 03 33 42   |          |
|           |                    | eS   | 08 08      |           |                      |      |            |           |                     | i    | 50         |          |
|           | So                 | iP   | 08 03 49   | 22        | He                   | iP   | 15 27 54   |           |                     | iPP  | 35 04      |          |
|           |                    | eS   | 05 47      |           | Nu                   | iP   | 15 27 53   |           |                     | iLg1 | 45 44      |          |
|           | Ke                 | eS   | 08 05 08   |           | So                   | iP   | 15 27 40   |           | So                  | iP   | 03 33 48   |          |
|           | Novaya Zemlya      |      |            |           | Ka                   | iP   | 15 27 44   |           | Ka                  | eP   | 03 33 41   |          |
|           |                    |      |            |           |                      |      |            |           | Kazakh S.S.R.       |      |            |          |
|           |                    |      |            |           |                      |      |            |           | 44.3 N, 80.6 E      |      |            |          |
| 21        | Nu                 | iPKP | 22 58 21   | 22        | So                   | eP   | 15 41 28   | 24        | Nu                  | eP   | 05 41 05   |          |
|           | So                 | ePKP | 22 58 22   |           |                      |      |            |           |                     | i    | 14         |          |
|           | Drake Passage      |      |            |           |                      |      |            |           | So                  | iP   | 05 41 02   |          |
|           | 57.7 S, 64.1 W     |      |            | 23        | Nu                   | iP   | 12 00 47   |           | Ka                  | iP   | 05 41 02   |          |
|           |                    |      |            |           | So                   | iP   | 12 01 01   |           |                     | i    | 11         |          |
|           |                    |      |            |           | Ka                   | iP   | 12 00 59   |           | Philippine Islands  |      |            |          |
|           |                    |      |            |           | North Atlantic Ocean |      |            |           | 9.2 N, 126.6 E      |      |            |          |
|           |                    |      |            |           | 14.7 N, 45.1 W       |      |            |           |                     |      |            |          |
| 22        | He                 | iP   | 07 01 27   |           |                      |      |            | 24        | Nu                  | iP   | 09 34 22 U |          |
|           | Nu                 | iP   | 07 01 29 U |           |                      |      |            |           |                     | i    | 37         |          |
|           |                    | iPP  | 03 37      |           |                      |      |            |           | So                  | eP   | 09 33 52   |          |
|           |                    | ePPP | 05 10      | 23        | He                   | iP   | 12 13 29 U |           | Ka                  | iP   | 09 34 02   |          |
|           |                    | iS   | 09 33      |           |                      | i    | 34         |           | Central Honshu      |      |            |          |
|           |                    | iScS | 11 17      |           | So                   | iP   | 12 13 42   |           | 35.9 N, 139.6 E     |      |            |          |
|           | So                 | iP   | 07 01 26   |           | Ka                   | iP   | 12 13 41   |           |                     |      |            |          |
|           |                    | iPcP | 02 16      |           | Ke                   | iP   | 12 13 52   | 24        | He                  | iP   | 14 49 09   |          |
|           |                    | iPP  | 03 36      |           | North Atlantic Ocean |      |            |           |                     | i    | 19         |          |
|           |                    | iS   | 09 30      |           | 14.7 N, 45.1 W       |      |            |           | Nu                  | iP   | 14 49 09 U |          |
|           |                    | i    | 38         |           |                      |      |            |           |                     | i    | 19         |          |
|           | Ka                 | iP   | 07 01 21   |           |                      |      |            |           | So                  | iP   | 14 48 33 U |          |
|           |                    | iS   | 09 18      |           |                      |      |            |           | Ka                  | iP   | 14 48 45 U |          |
|           | Ke                 | iP   | 07 01 28   | 23        | Nu                   | eP   | 12 35 35   |           | Ke                  | iP   | 14 48 20   |          |
|           |                    | ePPP | 04 56      |           | So                   | iP   | 12 35 14   |           |                     | iS   | 56 24      |          |
|           |                    | iS   | 09 32      |           | Ka                   | iP   | 12 35 18   |           | Hokkaido, Japan     |      |            |          |
|           | Northern Burma     |      |            |           | Ryukyu Islands       |      |            |           | 42.8 N, 145.3 E     |      |            |          |
|           | 26.5 N, 97.0 E     |      |            |           | 25.9 N, 128.6 E      |      |            |           |                     |      |            |          |

| September |                    |      |            | September |                  |                    |            | September        |                 |                 |            |
|-----------|--------------------|------|------------|-----------|------------------|--------------------|------------|------------------|-----------------|-----------------|------------|
| 24        | He                 | iP   | 14 56 24 D | 26        | Nu               | iP                 | 03 04 09   | 27               | He              | iP              | 13 19 45   |
|           |                    | i    | 31         |           | So               | iP                 | 03 03 30 U |                  |                 | i               | 57         |
|           | Nu                 | iP   | 14 56 23 D |           | Kurile Islands   |                    |            |                  | Nu              | iP              | 13 19 46   |
|           |                    | i    | 31         |           | 46.5 N, 153.0 E  |                    |            |                  |                 | i               | 58         |
|           |                    | iPcP | 53         | 26        | He               | iPKP               | 13 04 20   |                  | So              | iP              | 13 19 32 U |
|           | So                 | iP   | 14 55 48 D |           |                  | i                  | 56         |                  |                 | i               | 45         |
|           |                    | i    | 56         |           | Nu               | iPKP               | 13 04 19   |                  | Ka              | iP              | 13 19 33   |
|           | Ka                 | iP   | 14 55 59   |           | Kermadec Islands |                    |            |                  |                 | i               | 45         |
|           | Ke                 | iP   | 14 55 34   |           | 27.5 S, 176.4 W  |                    |            |                  | Ke              | iP              | 13 19 28   |
|           | Hokkaido, Japan    |      |            |           |                  | i                  | 40         |                  |                 | i               | 40         |
|           | 42.9 N, 145.3 E    |      |            |           |                  | Philippine Islands |            |                  |                 | 18.6 N, 121.8 E |            |
| 24        | Nu                 | iP   | 15 22 00   | 26        | Nu               | eP                 | 13 36 56   | 27               | He              | i               | 13 43 24   |
|           | Hindu Kush         |      |            |           | So               | iP                 | 13 36 35   |                  | Nu              | iPKP            | 13 43 16   |
|           | 36.4 N, 70.9 E     |      |            |           | Ka               | iP                 | 13 36 41   |                  |                 | i               | 24         |
| 24        | He                 | eP   | 23 31 31   |           | Ke               | eP                 | 13 36 28   |                  |                 | i               | 46 03      |
|           | Nu                 | eP   | 23 31 32   |           | Mariana Islands  |                    |            |                  |                 | iSKP            | 06         |
| 24        | He                 | eP   | 23 41 47   |           | 18.7 N, 145.4 E  |                    |            |                  |                 | iPKS            | 54         |
|           | Nu                 | iP   | 23 41 46 U | 27        | Nu               | eP                 | 01 14 22   |                  | Ka              | iPKP            | 13 43 17   |
| 25        | Nu                 | eP   | 02 48 22   |           |                  | i                  | 15 15      |                  |                 | iSKP            | 45 54      |
|           | Yamaguchi, Japan   |      |            |           | Ka               | eP                 | 01 14 13   |                  | Fiji Islands    |                 |            |
|           | 34.0 N, 131.7 E    |      |            |           |                  | Novaya Zemlya      |            |                  |                 | 17.6 S, 178.9 W |            |
| 25        | He                 | iP   | 04 59 39   | 27        | Nu               | eP                 | 08 07 14   | 28               | Nu              | iP              | 05 44 51 U |
|           |                    | i    | 53         |           | eS               | 10 14              |            |                  | So              | iP              | 05 44 05   |
|           | Nu                 | iP   | 04 59 41 U |           | So               | iP                 | 08 05 56   |                  | Ka              | iP              | 05 44 27   |
|           |                    | i    | 55         |           | eS               | 07 54              |            | Alaska Peninsula |                 |                 |            |
|           | Ka                 | iP   | 05 00 01   |           | Ka               | iP                 | 08 06 27   |                  | 55.0 N, 160.7 W |                 |            |
|           |                    | i    | 15         |           | iS               | 08 50              | 28         | Nu               | eP              | 06 25 54        |            |
|           | Central Tanganyika |      |            |           | Ke               | iP                 | 08 05 33   |                  | So              | iP              | 06 25 58   |
|           | 7.4 S, 34.9 E      |      |            |           | eS               | 07 14              |            | Ka               | iP              | 06 25 52        |            |
| 25        | Nu                 | iP   | 13 06 36   |           | Novaya Zemlya    |                    |            | 28               | Nu              | eP              | 11 26 10   |
|           |                    | eS   | 09 36      |           | 74.3 N, 52.4 E   |                    |            |                  | So              | iP              | 11 26 03   |
|           | So                 | iP   | 13 05 15   | 27        | He               | iP                 | 09 29 07   | 28               | Nu              | eP              | 17 23 13   |
|           |                    | eS   | 07 12      |           | Nu               | iP                 | 09 29 06 U |                  |                 | i               | 24         |
|           | Ka                 | eP   | 13 05 43   |           | So               | eP                 | 09 28 31   |                  |                 | i               | 57         |
|           |                    | eS   | 08 02      |           | Ka               | iP                 | 09 28 43 U |                  |                 | iS              | 24 08      |
|           | Ke                 | eP   | 13 04 55   |           | Ke               | iP                 | 09 28 20   |                  | So              | iP              | 17 22 58   |
|           |                    | eS   | 06 37      |           | Hokkaido, Japan  |                    |            |                  |                 | i               | 23 07      |
|           | Novaya Zemlya      |      |            |           | 42.3 N, 142.3 E  |                    |            |                  |                 | eS              | 36         |
|           | 73.7 N, 55.0 E     |      |            | 27        | He               | iP                 | 13 08 57   |                  |                 | e               | 53         |
| 25        | Nu                 | eP   | 19 59 52   |           | Nu               | iP                 | 13 08 58 U |                  | Ka              | iP              | 17 22 49   |
|           | So                 | eP   | 19 58 29   |           |                  | i                  | 19 13      |                  |                 | e               | 58         |
|           | Ka                 | eP   | 19 59 08   |           | Ka               | iP                 | 13 08 55   |                  |                 | iS              | 23 19      |
|           | Ke                 | eP   | 19 58 03   |           | Southern Sumatra |                    |            |                  | Ke              | eP              | 17 23 25   |
|           |                    |      |            |           | 4.6 S, 104.4 E   |                    |            |                  |                 | e               | 34         |
|           |                    |      |            |           |                  |                    |            |                  |                 | eS              | 24 26      |

September

28 He iP 19 09 01  
Nu iP 19 09 00  
ipP 26  
eSKS 19 18  
So iP 19 08 56  
ipP 09 22  
Ka iP 19 09 03  
i 48  
Ke iP 19 08 55  
i 09 18  
eSKS 19 12  
Western Colombia  
5.2 N, 76.2 W

29 He eP 06 25 56  
Nu iP 06 25 58  
So iP 06 27 07  
Ka iP 06 26 37  
Greece-Albania  
40.1 N, 21.0 E

29 He eP 07 01 18  
Nu iP 07 01 20  
iPP 02 55  
So iP 07 01 55  
iPP 03 42  
Ka iP 07 01 33  
Southern Iran  
28.2 N, 57.4 E

29 Nu eP 08 27 48  
So eP 08 29 06  
Ka eP 08 28 28

29 He eP 15 31 27  
iPKP 35 18  
iPKKP 46 10  
Nu eP 15 31 29  
isP 34 47  
iPKP 35 18  
iPP 36 13  
iPPP 38 54  
iSKS 41 08  
isSKS 45 08  
iPKKP 46 10  
ipPKKP 48 19  
i 34  
iSS 51 13

cont.

September

So eP 15 31 40  
iPKP 35 22  
iPP 36 29  
ePKKP 46 01  
i 09  
Ka eP 15 31 41  
iPKP 35 22  
iPP 36 31  
iPKKP 46 11  
epPKKP 48 18  
Ke iPKP 15 35 24  
i 36 13  
iPP 22  
iPPP 39 24  
iSKS 41 24  
isSKS 45 20  
iPKKP 46 00  
i 22  
i 49 06  
i 52 12

Santiago Del Estero  
27.0 S, 63.6 W

29 Nu eP 19 29 39  
So eP 19 30 17  
i 31 15  
Ka eP 19 29 53  
e 36 02  
Ke eP 19 30 36

29 Nu ePKP 21 01 14  
New Hebrides  
14.2 S, 168.2 E

29 Nu iP 23 52 03  
So eP 23 51 49

30 Nu iP 06 12 06  
Ka iP 06 12 04  
Tadzhik S.S.R.  
38.4 N, 73.1 E

30 He eP 06 57 03  
Nu iP 06 57 03  
So iP 06 56 43  
Ka iP 06 56 50  
Ke iP 06 56 37  
Mariana Islands  
13.5 N, 146.2 E

September

30 Nu iPKP 11 06 44  
So eP 11 02 28  
Ka iP 11 02 34  
New Britain  
5.2 S, 152.7 E

30 Nu iP 14 36 55  
So eP 14 36 34  
Ka eP 14 36 39

30 He iP 22 09 13  
Nu iP 22 09 14 D  
So iP 22 09 00 D  
Ka iP 22 09 02  
Ke iP 22 08 57  
Philippine Islands  
18.6 N, 120.9 E

January 29, 1963

M. T. Porkka  
Aili Huovila







## October

1 He eSKP 04 17 49  
 Nu ePKP 04 14 55  
 i 15 09  
 iSKP 17 48  
 iPKS 18 37  
 So ePKP 04 14 46  
 iSKP 17 26  
 Ka ePKP 04 14 56  
 iSKP 17 38  
 Fiji Islands  
 17.5 S, 178.9 W

1 Nu iP 08 02 31 U  
 So iP 08 02 38 D  
 Ka iP 08 02 30  
 Ke iP 08 02 42  
 Nicobar Islands  
 6.5 N, 95.1 E

1 He iP 10 03 56 D  
 iPcP 04 30  
 Nu iP 10 03 54 D  
 iPcP 04 29  
 ipP 34  
 i 05 07  
 iPcS 08 31  
 iScS 13 33  
 So iP 10 03 14  
 ipP 53  
 iPcP 04 05  
 Ka iP 10 03 31  
 ipP 04 08  
 iPcP 15  
 Ke iP 10 03 03  
 ipP 40  
 iPcP 58  
 Kurile Islands  
 47.3 N, 151.5 E

1 Nu eP 10 48 48  
 Ka eP 10 48 50

1 He iP 12 21 17 U  
 Nu iP 12 21 20 U  
 i 52  
 i 22 42  
 iPP 52  
 iPcP 23 32  
 iS 27 07  
 eSS 29 38  
 So iP 12 21 58 U  
 i 23 26  
 iPP 43  
 Ka iP 12 21 35  
 cont.

## October

Ke iP 12 22 13  
 iPP 24 06  
 iS 28 48  
 iSS 32 08  
 Southern Iran  
 27.9 N, 54.9 E

1 He iP 13 00 06 U  
 Nu iP 13 00 24 U  
 i 38  
 So iP 12 59 42  
 i 56  
 Ke iP 12 59 28  
 Kamchatka  
 49.0 N, 157.5 E

1 Nu eP 16 52 26  
 So eP 16 52 20

1 Nu iPcP 21 01 44  
 i 54  
 i 02 08  
 So e 21 01 50  
 Ke iPcP 21 01 28  
 Fiji Islands  
 19.6 S, 174.5 W

2 Nu eP 19 43 08  
 Ka eP 19 42 58  
 Philippine Islands  
 10.4 N, 126.9 E

2 So iP 22 46 37

2 Nu iP 23 27 06  
 So eP 23 27 20

3 Nu eP 01 24 11  
 So eP 01 24 23  
 Ke eP 01 24 30  
 Azores region  
 40.6 N, 29.7 W

3 Nu iP 01 26 44  
 iS 32 46  
 So iP 01 26 59  
 Ke iP 01 27 06  
 eS 33 20  
 Azores region  
 40.7 N, 29.7 W

3 Nu iPcP 17 33 06  
 Ka iPcP 17 32 59  
 Loyalty Islands  
 21.0 S, 168.4 E

## October

3 He iP 20 25 24 U  
 Nu iP 20 25 22 U  
 So iP 20 24 52 U  
 Ka iP 20 25 03  
 Ke iP 20 24 43

4 So eP 04 49 42  
 Azores region  
 40.4 N, 29.5 W

4 He eP 07 29 08  
 Nu eP 07 29 12  
 i 23  
 eS 32 40  
 So iP 07 30 14  
 i 49  
 Ka eP 07 29 43  
 i 54  
 i 30 26  
 Black Sea  
 42.2 N, 36.1 E

4 Nu eP 13 30 50  
 So eP 13 31 08  
 Azores region  
 40.9 N, 29.7 W

4 He eP 19 51 04  
 Nu iP 19 51 06  
 iPcP 55 05  
 iS 09  
 iScP 58 34  
 iLg2 59 20  
 i 20 00 04  
 So iP 19 52 10  
 Ka eP 19 51 42  
 i 48  
 Ke iP 19 52 31  
 Greece  
 38.3 N, 22.7 E

5 Nu iP 01 21 50

5 Nu eP 04 22 01  
 So eP 04 22 19  
 Azores region  
 40.2 N, 29.5 W

5 So iP 10 34 59  
 Honshu, Japan  
 39.0 N, 140.2 E

5 Nu iP 17 11 56  
 So iP 17 11 25

October

5 Nu iP 17 56 05  
So eP 17 55 33  
Honshu, Japan  
37.9 N, 143.2 E

5 Nu iP 20 09 05  
iPP 10 11  
iPcP 11 45  
So iP 20 09 37  
ePP 10 56  
iPcP 11 57  
Ka iPP 20 10 24  
Ke iP 20 09 50  
ePP 11 19  
BCIS:  
Iran  
35.1 N, 58.6 E

5 Nu eP 22 24 54  
So eP 22 25 11

5 Nu eP 23 46 08

6 Nu iP 03 24 25  
eS 30 26  
So iP 03 24 43  
Ke eP 03 24 49  
Azores region  
40.8 N, 29.5 W

6 Nu iP 04 02 20 U  
So iP 04 02 36  
Azores region  
40.5 N, 29.5 W

6 Nu iPKP 04 42 29  
i 32  
i 45 52  
iSKP 46 04  
iSS 05 02 08  
So iPKP 04 42 21  
Ka ePKP 04 42 22  
i 29  
Ke iPKP 04 42 15  
New Hebrides  
17.4 S, 167.7 E

6 Nu ePKP 04 54 08  
New Hebrides  
17.4 S, 167.8 E

October

6 Nu iP 05 50 00 U  
So iP 05 49 40 U  
Ka iP 05 49 44 U  
Ke iP 05 49 33  
Ryukyu Islands  
26.2 N, 126.9 E

6 Nu ePKP 07 36 11  
New Hebrides  
17.4 S, 167.8 E

6 Nu ePKP 08 15 25  
New Hebrides  
17.4 S, 167.9 E

6 Nu iPKP 08 22 40  
iPKS 26 02  
So iPKP 08 22 31  
Ka ePKP 08 22 32  
Ke iPKP 08 22 28  
New Hebrides  
17.2 S, 168.0 E

6 Nu ePKP 08 50 56  
New Hebrides  
17.3 S, 167.8 E

6 He iPKP 11 19 31  
Nu iPKP 11 19 30 U  
iPKP 20 20  
e 22 33  
iSKP 49  
So iPKP 11 19 19  
iPKKP 29 28  
Ka iPKP 11 19 24  
Ke iPKP 11 19 16  
New Hebrides  
13.3 S, 167.3 E

6 Nu ePKP 12 18 52  
New Hebrides  
17.4 S, 167.8 E

6 Nu iP 17 46 07  
So iP 17 45 30  
Ka eP 17 45 43  
i 46  
Kurile Islands  
44.4 N, 148.2 E

October

6 He iPKP 18 20 14  
Nu iPKP 18 20 13  
iPKS 23 35  
So iPKP 18 20 02  
Ke iPKP 18 19 55  
New Hebrides  
17.6 S, 168.0 E

6 Nu eP 23 42 43  
So iP 23 42 30  
Ka eP 23 42 31

6 He ePKP 23 50 31  
Nu iPKP 23 50 32  
i 53 54  
iPKS 54 06  
So ePKP 23 50 24  
Ke iPKP 23 50 15  
New Hebrides  
17.5 S, 167.6 E

7 Nu ePKP 16 19 16  
Sandwich Islands  
57.8 S, 25.5 W

7 Nu ePKP 17 06 29  
New Hebrides  
17.7 S, 167.5 E

8 Nu eP 05 21 40  
So eP 05 21 56  
Azores region  
40.5 N, 29.5 W

8 He eP 14 30 49  
Nu eP 14 30 49  
iLg1 36 42  
So eP 14 32 04  
Ka eP 14 31 32  
BCIS:  
Bulgaria  
42.4 N, 24.6 E

8 He iP 15 15 21  
Nu iP 15 15 26  
eLg1 21 38  
i 23 00  
So iP 15 16 38  
Ka eP 15 16 12  
Bulgaria  
42.2 N, 24.1 E

October

8 Nu iP 15 46 22  
So iP 15 46 09  
Ka eP 15 46 11

8 He iP 22 07 46  
Nu iP 22 07 47  
iPPP 12 13  
iS 17 14  
i 22 24  
So iP 22 07 30  
Ka iP 22 07 32  
Ke iP 22 07 27  
ePP 10 06  
iPPP 11 44  
eS 16 32

Formosa  
24.3 N, 121.7 E

8 He iP 22 35 32  
Nu iP 22 35 32  
So iP 22 35 15  
Ka iP 22 35 18

Formosa  
24.1 N, 121.8 E

9 He iP 16 06 10 U  
ipP 07 02  
iPP 43  
Nu iP 16 06 12 U  
i 14  
ipP 07 04  
iPP 46  
iPcP 08 24  
So iP 16 06 30 U  
Ka iP 16 06 13  
Ke iP 16 06 39  
i 09 23

Hindu Kush  
36.4 N, 71.3 E

9 Nu ePP 20 33 30  
iSKS 39 40  
iPS 42 51  
iSS 48 55  
Ke ePP 20 32 50  
iSKS 39 19  
iPS 41 54  
iSS 47 39

Bismarck Sea  
3.2 S, 148.2 E

10 Nu eP 02 28 32  
Ka eP 02 28 49

October

10 Nu ePKP 09 39 00  
Fiji Islands  
22.2 S, 179.6 W

10 Nu iP 11 56 05  
Peru-Ecuador  
3.2 S, 77.7 W

10 Nu iP 13 46 34 U  
Ka iP 13 46 29  
South coast of Java  
8.9 S, 110.4 E

10 Nu iP 20 50 56  
So eP 20 51 28  
Iran  
27.9 N, 54.8 E

10 Nu ePKP 21 12 40  
Mendoza Province  
34.9 S, 70.1 W

10 Nu iPKP 22 11 49  
i 57  
iPKS 15 17  
Samoa Islands  
15.1 S, 173.3 W

11 So iP 16 13 43  
Formosa  
24.3 N, 121.6 E

12 Nu iPKP 02 04 36  
Ka iPKP 02 04 24  
Kermadec Islands  
33.1 S, 178.2 W

12 Nu iP 09 19 47 D  
So iP 09 19 25  
Ka eP 09 19 29  
Ryukyu Islands  
27.4 N, 129.1 E

12 Nu iPKP 19 23 16 U  
ipPKP 53  
Kermadec Islands  
28.9 S, 177.1 W

12 So eP 22 45 06

13 He eP 01 11 19  
Nu iP 01 11 18

October

13 He iP 10 29 39  
Nu iP 10 29 42  
iPP 30 35  
iS 34 39  
i 35 52

So iP 10 30 24  
iPP 31 29  
eS 35 54  
Ka iP 10 29 59  
Ke iP 10 30 40  
iPP 32 04  
i 09  
iS 36 24  
i(SS) 38 52

Northwestern Iran  
35.5 N, 49.8 E

13 Nu iPKP 19 06 40  
Santa Cruz Islands  
12.6 S, 166.6 E

14 He iPKP 00 49 39  
Nu iPKP 00 49 38  
Ka iPKP 00 49 28  
Ke ePKP 00 49 23  
Kermadec Islands  
33.4 S, 179.3 W

14 Ka iP 02 11 26  
Kamchatka  
54.4 N, 159.8 E

14 Nu iP 15 20 12 U  
i 21  
Ka eP 15 19 55  
Kyushu, Japan  
31.8 N, 131.5 E

14 He eP 19 36 09  
Nu iP 19 36 05  
So iP 19 34 41  
Ka iP 19 35 26  
Ke iP 19 34 14  
Arctic Ocean  
75.5 N, 5.8 E

15 So iP 00 51 06  
Ka iP 00 51 51

| October |                  |      |            | October |                   |      |            | October |                    |       |            |          |
|---------|------------------|------|------------|---------|-------------------|------|------------|---------|--------------------|-------|------------|----------|
| 15      | Nu               | eP   | 03 00 03   | 16      | He                | eP   | 18 13 28   | 18      | He                 | iP    | 11 33 03   |          |
|         | So               | iP   | 02 58 35   |         | Nu                | iP   | 18 13 25   |         | Nu                 | iP    | 11 33 03   |          |
|         |                  | iS   | 03 00 25   |         |                   | iPcP | 55         |         | So                 | iP    | 11 32 25 U |          |
|         | Ka               | iP   | 02 59 22   |         |                   | ePPP | 17 36      |         | Ka                 | iP    | 11 32 40   |          |
|         |                  | iS   | 03 01 45   |         |                   | e    | 22 04      |         | Ke                 | iP    | 11 32 12   |          |
|         | Ke               | eP   | 02 58 11   |         | So                | iP   | 18 12 39   |         |                    | iPcP  | 33 07      |          |
|         |                  | eS   | 59 38      |         | Ke                | eP   | 18 12 22   |         | Kurile Islands     |       |            |          |
|         | Arctic Ocean     |      |            |         |                   | ePS  | 20 48      |         | 46.5 N, 149.5 E    |       |            |          |
|         | 74.7 N, 2.6 E    |      |            |         |                   | iSS  | 24 20      |         |                    |       |            |          |
|         |                  |      |            |         | Near Islands      |      |            |         | 18                 | He    | iP         | 11 50 45 |
| 15      | Nu               | iPKP | 14 19 31   |         | 51.6 N, 175.8 W   |      |            |         |                    | iS    | 51 06      |          |
|         |                  | i    | 36         |         |                   |      |            |         | Nu                 | iP    | 11 50 46   |          |
|         | Kermadec Islands |      |            | 17      | He                | iP   | 12 50 00   |         |                    | iS    | 51 07      |          |
|         | 33.1 S, 178.5 W  |      |            |         | Nu                | iP   | 12 50 00   |         | So                 | iP    | 11 52 19   |          |
| 15      | He               | ePKP | 17 49 52   |         | So                | iP   | 12 49 32 U |         |                    | iS    | 53 51      |          |
|         | Nu               | iPKP | 17 49 52 D |         | Ka                | iP   | 12 49 40 U |         | Ka                 | iP    | 11 51 42   |          |
|         |                  | i    | 50 04      |         | Ke                | iP   | 12 49 24   |         |                    | iS    | 52 45      |          |
|         | Kermadec Islands |      |            |         | South of Honshu   |      |            |         |                    |       |            |          |
|         | 28.8 S, 176.4 W  |      |            |         | 33.3 N, 137.7 E   |      |            |         | 18                 | So    | iP         | 20 02 52 |
| 15      | Nu               | eP   | 19 05 40   | 18      | He                | eP   | 02 09 45   |         | Ke                 | iP    | 20 02 46   |          |
| 15      | Nu               | eP   | 22 49 34   |         | Nu                | iP   | 02 09 45   |         | Chiapas, Mexico    |       |            |          |
|         | So               | eP   | 22 49 03   |         | So                | iP   | 02 09 42 U |         | 16.2 N, 93.5 W     |       |            |          |
|         |                  |      |            |         | Ka                | iP   | 02 09 36   |         | 19                 | He    | iPKP       | 04 31 38 |
| 15      | He               | iPKP | 23 56 29 D |         | China-India-Burma |      |            |         | Nu                 | iPKP  | 04 31 37   |          |
|         |                  | i    | 41         |         | 28.4 N, 97.3 E    |      |            |         |                    | ipPKP | 32 08      |          |
|         | Nu               | iPKP | 23 56 28 D | 18      | He                | iP   | 08 51 17   |         | So                 | iPKP  | 04 31 42   |          |
|         |                  | i    | 40         |         |                   | i    | 52 01      |         |                    | ipPKP | 32 13      |          |
|         | So               | iPKP | 23 56 19 U |         | Nu                | iP   | 08 51 17 D |         | San Juan Province  |       |            |          |
|         | Ka               | iPKP | 23 56 21   |         |                   | iPcP | 50         |         | 31.0 S, 69.4 W     |       |            |          |
|         | Ke               | iPKP | 23 56 14   |         |                   | i    | 52 01      |         | 19                 | So    | iP         | 10 57 17 |
|         | South Islands    |      |            |         | So                | iP   | 08 50 38   |         |                    | Ka    | eP         | 10 57 18 |
|         | 43.5 S, 169.8 E  |      |            |         |                   | i    | 51 20      |         | Philippine Islands |       |            |          |
| 16      | Nu               | ePKP | 03 08 43   |         | Ka                | eP   | 08 50 53   |         | 10.6 N, 125.2 E    |       |            |          |
|         | New Hebrides     |      |            |         | Ke                | iP   | 08 50 25   |         |                    |       |            |          |
|         | 17.1 S, 167.7 E  |      |            |         |                   | i    | 51 07      |         |                    |       |            |          |
|         |                  |      |            |         | Kurile Islands    |      |            |         | 19                 | Nu    | ePKP       | 17 33 28 |
| 16      | Nu               | eP   | 05 05 53   |         | 46.5 N, 149.6 E   |      |            |         | Kermadec Islands   |       |            |          |
|         | Tadzhik S.S.R.   |      |            | 18      | He                | eP   | 10 37 23   |         | 32.9 S, 179.9 E    |       |            |          |
|         | 39.4 N, 73.4 E   |      |            |         |                   | iS   | 38 33      |         |                    |       |            |          |
| 16      | Nu               | ePKP | 05 40 34   |         | Nu                | iP   | 10 37 21   |         | 19                 | So    | iP         | 23 56 01 |
|         | New Hebrides     |      |            |         |                   | iS   | 38 29      |         |                    | Ka    | eP         | 23 56 02 |
|         | 17.1 S, 167.6 E  |      |            |         |                   | i    | 39 05      |         | Banda Sea          |       |            |          |
|         |                  |      |            |         | So                | eP   | 10 38 02   |         | 5.7 S, 130.3 E     |       |            |          |
| 16      | Nu               | eP   | 12 05 50   |         |                   | iS   | 39 37      |         |                    |       |            |          |
|         | So               | iP   | 12 06 30   |         |                   | i    | 40 31      |         | 20                 | So    | iP         | 11 15 48 |
|         | Iran             |      |            |         | Ka                | iP   | 10 37 44   |         |                    | Ka    | eP         | 11 16 29 |
|         | 30.6 N, 57.3 E   |      |            |         |                   | iS   | 39 10      |         |                    | Ke    | eP         | 11 15 17 |
|         |                  |      |            |         | Ke                | eP   | 10 38 22   |         |                    |       |            |          |
|         |                  |      |            |         |                   | eS   | 40 14      |         |                    |       |            |          |

October

21 He iP 02 15 15  
i 36  
Nu iP 02 15 13 D  
i 33  
So iP 02 14 24 D  
Ka iP 02 14 49  
Ke iP 02 14 06  
i 28  
Vicinity Anchorage  
61.1 N, 149.7 W

21 So iP 05 48 23  
eS 50 35  
i 52 18  
Ka eP 05 49 07  
eS 51 55  
Ke eP 05 47 51  
iS 49 40

22 Nu iP 05 18 21

22 Nu eP 09 10 13  
So eP 09 08 54  
eS 10 52  
Ka eS 09 11 46  
Ke iP 09 08 32  
eS 10 12  
Novaya Zemlya  
73.4 N, 54.9 E

22 He eP 15 34 02  
Nu eP 15 34 01  
iPcP 38  
ePPP 38 14  
iS 42 28  
eSS 46 46  
i 50 04  
So iP 15 33 18  
Ke eP 15 33 06  
ePS 41 20  
e 45 44  
Kurile Islands  
49.8 N, 155.8 E

22 He iP 22 29 55  
Nu iP 22 29 55  
So iP 22 29 23  
Ka iP 22 29 33  
Honshu, Japan  
37.9 N, 141.7 E

23 He iP 00 58 11  
Nu iP 00 58 10 D  
So iP 00 57 31  
Kurile Islands  
46.2 N, 153.2 E

October

23 So eP 09 14 31  
Venezuela  
9.5 N, 70.0 W

23 So eP 10 09 51  
Mariana Islands  
18.4 N, 145.6 E

23 He iP 20 17 51  
Nu iP 20 17 53  
So iP 20 18 08  
Ka iP 20 17 52  
Ke eP 20 18 16  
Hindu Kush  
36.7 N, 71.1 E

25 He iP 09 47 31  
Nu iP 09 47 28  
i 45  
iS 58 33  
So iP 09 47 18  
iPKKP 10 04 37  
Molucca Passage  
3.0 N, 126.7 E

25 Nu ePKP 20 26 16  
So iPKP 20 26 34  
Macquarie Islands  
61.4 S, 154.9 E

26 Nu ePKP 07 39 34  
New Hebrides  
17.7 S, 167.5 E

26 He eP 11 31 49  
Nu iP 11 31 52  
i 56  
iS 36 41  
So iP 11 32 53 U  
iScP 39 19  
Ke eP 11 33 17  
Mediterranean Sea  
33.7 N, 27.9 E

26 So iPKP 16 17 40  
Sandwich Islands  
55.5 S, 26.5 W

28 He iP 12 18 20  
Nu iP 12 18 19  
So iP 12 18 06  
Ke eP 12 18 05  
Philippine Islands  
14.8 N, 119.7 E

28 So iP 13 12 41

October

28 Nu ePKP 14 20 44  
Kermadec Islands  
32.3 S, 178.8 W

28 So iP 15 13 22  
Northern Celebes  
0.1 N, 123.6 E

28 Nu iP 23 05 46  
eSKS 16 10  
So iP 23 05 33  
Ke iP 23 05 27  
i 47  
eS 15 54  
Chiapas, Mexico  
16.0 N, 93.6 W

29 Nu eP 00 32 49  
So iP 00 32 42 U  
Ke iP 00 32 38  
South of Panama  
7.1 N, 82.6 W

29 Nu eS 07 36 40  
e 43 46  
So eP 07 28 31  
Ke e 07 42 48

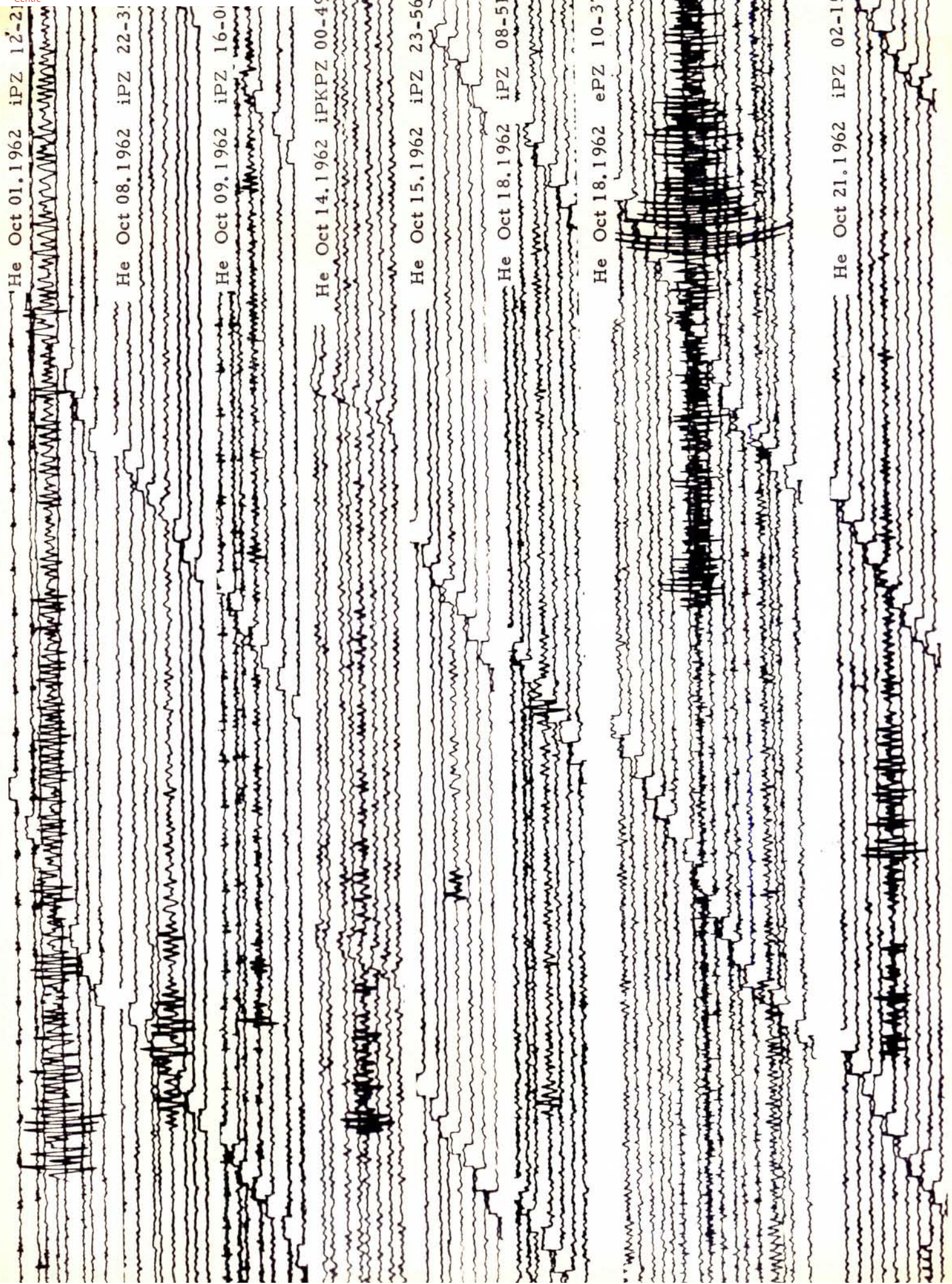
30 Nu ePP 02 06 06  
ePS 15 42  
eSS 21 44  
So ePP 02 06 49  
Ke ePP 02 07 04  
Bouvet Islands  
54.2 S, 9.1 E

30 Nu eP 16 23 08  
So iP 16 23 09  
Ke iP 16 23 11  
Eastern India  
26.6 N, 93.3 E

31 Nu iPS 11 58 10  
So iP 11 45 38  
Ke iP 11 45 34  
iSKS 56 06  
iS 34  
eSS 12 02 40  
South of Panama  
5.6 N, 82.6 W

March 4, 1963

M. T. Porkka  
Aili Huovila



Nu Oct 01.1962 iPZ 12-



Nu Oct 01.1962 iPN 12-



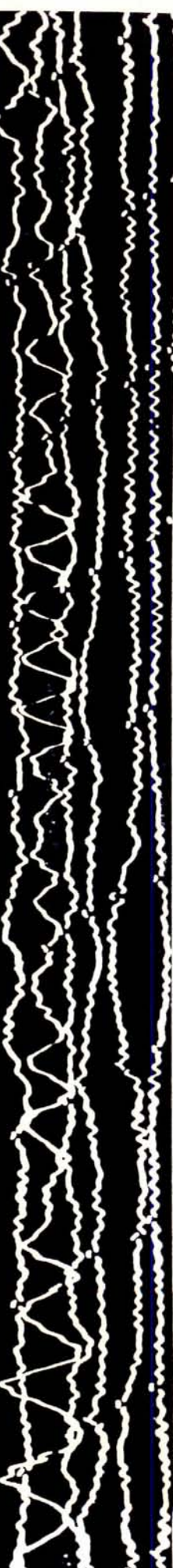
Nu Oct 01.1962 iPE 12-



Ke Oct 09.1962 ePSZ 20-41-54



Ke Oct 09.1962 ePSN 20-41-54



Ke Oct 09.1962 iSKSE 20-39-19



November

1 He eP 13 53 42  
Nu iP 13 53 40  
iPcP 55 53  
So eP 13 53 55  
Ke eP 13 54 03  
Hindu Kush  
37.2 N, 70.0 E

1 Nu eP 15 33 51  
So iP 15 34 07  
Ka iP 15 33 52  
Ke eP 15 34 16  
Hindu Kush  
37.4 N, 70.0 E

1 He iP 15 46 51  
Nu iP 15 46 50  
eSKS 57 24  
iPS 59 36  
iSS 16 04 56  
So iP 15 46 37  
Ka iP 15 46 41  
Ke eP 15 46 34  
eSKS 57 16  
ePS 58 56  
iSS 16 04 08  
New Guinea  
1.9 N, 133.0 E

1 He eP 18 05 49  
Nu iP 18 05 50  
i 57  
ePP 09 49  
ePS 18 34  
iSS 24 06  
So iP 18 05 37  
i 44  
Ka iP 18 05 40  
Ke eP 18 05 34  
eSKS 16 12  
iPS 17 54  
iSS 23 04  
New Guinea  
1.9 N, 132.8 E

1 He iP 23 31 30 U  
Nu iP 23 31 29 U  
So iP 23 30 51  
Ke iP 23 30 41  
Kurile Islands  
43.9 N, 145.2 E

November

2 Nu iP 13 30 17  
Hindu Kush  
36.5 N, 71.4 E

2 He eP 15 00 23  
Nu iP 15 00 24  
So iP 15 00 21  
Ke eP 15 00 22  
South of Sumbawa  
10.0 S, 117.8 E

2 He iP 15 11 31  
i 44  
Nu iP 15 11 31  
i 42  
iPP 13 55  
So iP 15 11 00  
ePP 13 23  
Ke iP 15 10 50  
eS 19 20  
East coast of Honshu  
36.7 N, 141.1 E

2 So eP 19 16 51  
Fox Islands  
52.5 N, 170.7 W

3 He eP 03 45 15  
Nu iP 03 45 16

3 So iP 07 52 23

3 He iP 14 25 45  
Nu iP 14 25 41  
So iP 14 24 33  
eS 26 17  
Ke eP 14 24 17  
Arctic Ocean  
72.1 N, 2.5 E

3 He iP 15 10 27  
Nu iP 15 10 28  
So iP 15 10 19  
Tsinghai Province  
37.1 N, 95.5 E

3 Nu iP 15 40 42  
So iP 15 39 32  
eS 41 17  
Ke eP 15 39 16

November

3 He ePKP 18 25 01  
Nu ePKP 18 25 03  
So iPKP 18 24 46  
Ka ePKP 18 24 51  
Ke iPKP 18 24 41  
North Island  
37.6 S, 179.5 E

3 He iP 19 17 09  
Nu iP 19 17 11 D  
So iP 19 17 14 D  
Ka eP 19 17 08  
Ke eP 19 17 15  
Southern Sumatra  
4.5 S, 103.4 E

4 So iP 02 44 41

4 He eP 11 04 18  
Nu iP 11 04 20  
So iP 11 04 26  
Sinkiang Province  
40.3 N, 77.7 E

4 So iP 13 50 53  
Ke eP 13 51 04

4 He iPKP 23 12 43  
Nu iPKP 23 12 43  
iPP 14 58  
iPKS 16 07  
i 10  
i 22 20  
iPS 25 20  
eSS 32 42  
So ePKP 23 12 44  
i 48  
ePKS 16 20  
Ka ePKP 23 12 48  
iPKS 16 17  
Ke iPKP 23 12 50  
iPKS 16 20  
iPS 25 26  
eSS 33 34  
Southern Chile  
43.2 S, 75.6 W

5 He eP 00 32 30  
Nu eP 00 32 30  
So iP 00 32 17  
e 50  
Ka iP 00 32 23  
Ke iP 00 32 11



November

5 So iP 07 30 10  
Ka eP 07 30 10

5 He iP 11 48 39  
Nu iP 11 48 35  
iS 50 20  
So iP 11 48 05  
iS 49 30  
Ka iP 11 48 23  
iS 49 59  
Ke iP 11 48 10  
iS 49 38  
Off coast of Norway  
66.4 N, 6.8 E

6 He iP 00 17 06  
Nu iP 00 17 09  
iPP 18 42  
iPcP 19 16  
eS 23 03  
iSS 25 50  
So iP 00 17 46  
ePP 19 34  
Ka iP 00 17 23  
i 18 11  
ePP 19 08  
Ke iP 00 18 01  
e 20 00  
eS 24 38  
i 25 30  
eSS 27 57  
Southern Iran  
28.0 N, 55.6 E

6 He iP 03 48 02  
Nu iP 03 48 00 D  
So iP 03 47 22 D  
Ka iP 03 47 43  
Ke iP 03 47 08  
Washington-Oregon  
45.8 N, 122.5 W

6 He eP 21 01 13  
Nu eP 21 01 13  
So iP 21 01 02  
Ka eP 21 01 03  
Philippine Islands  
10.5 N, 121.9 E

7 Nu eP 13 05 05  
eS 10 54  
eSS 13 42  
So iP 13 05 22 D  
Ke eP 13 05 28  
Azores  
40.5 N, 29.4 W

November

7 Nu eP 16 16 28  
ePP 20 43  
eS 27 34  
e 31 06  
iSS 34 40  
So eP 16 16 24  
Ka ePP 16 20 31  
Flores Sea  
7.8 S, 119.8 E

7 So iP 20 13 40  
Ka eP 20 13 42  
Philippine Islands  
20.4 N, 122.1 E

7 He eP 22 09 14  
Nu eP 22 09 14  
So iP 22 09 02  
Ka eP 22 09 04  
Philippine Islands  
15.5 N, 120.3 E

7 He eP 22 37 19  
Nu eP 22 37 17  
So iP 22 36 31  
Ke eP 22 36 15  
Rat Islands  
51.5 N, 176.1 E

8 Nu ePS 01 02 25  
eSS 08 30  
Galapagos Islands  
4.4 S, 105.5 W

8 Nu ePKP 15 32 15  
Santa Cruz Islands  
12.0 S, 166.8 E

8 He ePKP 17 37 26  
Nu iPKP 17 37 26  
Ka iPKP 17 37 16  
Kermadec Islands  
31.5 S, 180.0

8 He iP 18 58 32  
Nu iP 18 58 30  
So iP 18 57 53 D  
Ke iP 18 57 40  
Kurile Islands  
45.2 N, 147.2 E

8 Nu eP 21 26 36  
So iP 21 25 50  
iPcP 26 40  
Near Islands  
52.0 N, 174.9 E

November

9 He eP 01 17 12  
Nu eP 01 17 16  
eS 22 12  
So iP 01 18 01  
iScP 24 14  
Ka eP 01 17 34  
Ke iP 01 18 19  
ePP 19 51  
eSS 26 46  
Iraq-Iran border  
33.4 N, 47.2 E

9 He eP 02 18 05  
i 11  
Nu eP 02 18 09  
i 15  
iS 20 45  
So iP 02 19 29  
i 52  
iS 23 37  
Ke iP 02 19 52  
eS 24 24  
Central Romania  
45.8 N, 26.7 E

9 Nu eP 05 35 30  
So iP 05 34 29  
Ke eP 05 34 14

9 He iP 09 32 44  
Nu iP 09 32 43 U  
So iP 09 32 13 U  
Ka iP 09 32 23 U  
Ke iP 09 32 03  
Honshu, Japan  
35.8 N, 140.3 E

9 He iP 14 02 49  
Nu iP 14 02 48  
So iP 14 02 23 D  
Ka iP 14 02 31  
Ke iP 14 02 16  
Bonin Islands  
27.5 N, 140.1 E

9 He eP 16 34 46  
Nu eP 16 34 47  
Ka eP 16 34 34

9 So eP 18 16 26  
Azores  
40.3 N, 29.3 W

| November |                     |      |            | November |                    |                |          | November |                    |                |                    |          |            |          |
|----------|---------------------|------|------------|----------|--------------------|----------------|----------|----------|--------------------|----------------|--------------------|----------|------------|----------|
| 10       | Nu                  | eP   | 01 39 25   | 11       | He                 | iP             | 11 39 46 |          | So                 | iPKP           | 16 28 39 D         |          |            |          |
|          | So                  | iP   | 01 40 02 D |          | Nu                 | iP             | 11 39 46 |          |                    | i              | 57                 |          |            |          |
|          | Ka                  | eP   | 01 39 40   |          |                    | i              | 53       |          |                    | iPKKP          | 38 50              |          |            |          |
|          | Ke                  | iP   | 01 40 17   |          |                    | iPP            | 41 31    |          |                    | e              | 41 51              |          |            |          |
|          | South coast of Iran |      |            |          |                    | iPcP           | 40       |          |                    | iSKKP          | 42 22              |          |            |          |
|          | 27.9 N, 55.6 E      |      |            |          |                    | iPPP           | 42 08    |          | Ka                 | iPKP           | 16 28 44           |          |            |          |
| 10       | He                  | iP   | 01 44 02 U |          |                    | i              | 45 52    |          |                    | iPKKP          | 38 44              |          |            |          |
|          |                     | i    | 17         |          |                    | iS             | 46 12    |          | Ke                 | iPKP           | 16 28 36           |          |            |          |
|          | Nu                  | iP   | 01 44 01 U |          | So                 | iP             | 11 39 10 |          |                    | eSKS           | 35 26              |          |            |          |
|          |                     | iPP  | 46 06      |          |                    | i              | 18       |          |                    | ePS            | 39 26              |          |            |          |
|          |                     | ePPP | 48 16      |          |                    | eS             | 45 20    |          | Santa Cruz Islands |                |                    |          |            |          |
|          |                     | iS   | 52 45      |          | Ka                 | iP             | 11 39 21 |          | 12.9 S, 166.5 E    |                |                    |          |            |          |
|          |                     | ePS  | 53 12      |          |                    | i              | 29       |          |                    |                |                    |          |            |          |
|          |                     | eSS  | 56 50      |          |                    | iPP            | 40 55    |          | 11                 | He             | iPKP               | 22 33 28 |            |          |
|          |                     | i    | 02 00 30   |          | Ke                 | iP             | 11 39 00 |          |                    | Nu             | iPKP               | 22 33 28 |            |          |
|          | So                  | iP   | 01 43 23 U |          |                    | i              | 40 18    |          |                    |                | iPKS               | 36 50    |            |          |
|          |                     | iS   | 51 36      |          |                    | ePPP           | 26       |          |                    |                | eSS                | 53 20    |            |          |
|          | Ka                  | iP   | 01 43 39   |          |                    | iS             | 44 49    |          |                    |                | eSSS               | 58 04    |            |          |
|          |                     | eS   | 52 04      |          | Lake Baikal region |                |          |          |                    | So             | iPKP               | 22 33 32 |            |          |
|          | Ke                  | iP   | 01 43 11   |          | 55.8 N, 113.1 E    |                |          |          |                    |                | ePKS               | 37 03    |            |          |
|          |                     | iPcP | 44 02      |          | 11                 | Nu             | ePKP     | 12 16 02 |                    | Ka             | iPKP               | 22 33 32 |            |          |
|          |                     | i    | 56         |          |                    |                | i        | 08       |                    |                | iPKS               | 37 02    |            |          |
|          |                     | ePPP | 46 44      |          |                    |                | iSKP     | 19 13    |                    | Ke             | iPKP               | 22 33 34 |            |          |
|          |                     | iS   | 51 08      |          | Fiji Islands       |                |          |          |                    |                | iPP                | 36 05    |            |          |
|          |                     | eSS  | 54 48      |          | 19.3 S, 177.6 W    |                |          |          |                    |                | iPKS               | 37 04    |            |          |
|          | Kurile Islands      |      |            |          |                    |                |          |          |                    |                | iSS                | 54 06    |            |          |
|          | 43.8 N, 147.2 E     |      |            |          | 11                 | So             | eP       | 12 47 42 |                    | Southern Chile |                    |          |            |          |
| 10       | Nu                  | eP   | 06 12 55   |          |                    |                |          |          | 43.2 S, 76.0 W     |                |                    |          |            |          |
|          | Ka                  | eP   | 06 13 14   |          | 11                 | He             | iP       | 15 08 01 |                    |                |                    |          |            |          |
|          |                     |      |            |          |                    | Nu             | iP       | 15 08 00 |                    |                |                    |          |            |          |
| 10       | So                  | iP   | 11 15 12   |          | 11                 | He             | iP       | 15 23 42 |                    | 12             | He                 | iP       | 13 00 44   |          |
|          | Ka                  | eP   | 11 15 13   |          |                    |                |          |          |                    |                |                    | i        | 53         |          |
|          | Ke                  | eP   | 11 15 10   |          |                    | Nu             | iP       | 15 23 45 |                    |                | Nu                 | iP       | 13 00 44 U |          |
|          | Philippine Islands  |      |            |          |                    |                | e        | 25 46    |                    |                |                    | i        | 54         |          |
|          | 19.3 N, 121.1 E     |      |            |          |                    |                | iS       | 30 22    |                    |                | So                 | iP       | 13 00 23 U |          |
|          |                     |      |            |          |                    |                | eSS      | 33 54    |                    |                |                    | i        | 32         |          |
|          |                     |      |            |          |                    | So             | iP       | 15 24 32 |                    |                | Ka                 | iP       | 13 00 29   |          |
|          |                     |      |            |          |                    | Ka             | iP       | 15 24 08 |                    |                |                    | i        | 39         |          |
| 10       | He                  | iP   | 19 43 02   |          |                    | Ke             | iP       | 15 24 50 |                    |                | Ke                 | iP       | 13 00 18   |          |
|          | Nu                  | iP   | 19 43 01   |          |                    |                | iS       | 32 22    |                    |                |                    | eS       | 09 27      |          |
|          | So                  | iP   | 19 42 29 U |          |                    | Red Sea        |          |          |                    |                | Ryukyu Islands     |          |            |          |
|          |                     | i    | 39         |          |                    | 17.2 N, 40.7 E |          |          |                    |                | 26.0 N, 128.4 E    |          |            |          |
|          | Ka                  | iP   | 19 42 40   |          |                    |                |          |          |                    |                |                    |          |            |          |
|          | Honshu, Japan       |      |            |          | 11                 | He             | iPKP     | 16 28 51 |                    |                |                    |          |            |          |
|          | 38.3 N, 141.8 E     |      |            |          |                    |                | e        | 41 31    |                    |                | 12                 | Nu       | iP         | 19 43 25 |
|          |                     |      |            |          |                    |                |          |          |                    |                |                    |          | i          | 54       |
|          |                     |      |            |          |                    | Nu             | iPKP     | 16 28 51 |                    |                |                    | So       | iP         | 19 42 37 |
|          |                     |      |            |          |                    |                | i        | 29 04    |                    |                |                    |          | iPcP       | 43 24    |
|          |                     |      |            |          |                    |                | i        | 23       |                    |                |                    | Ka       | eP         | 19 43 01 |
|          |                     |      |            |          |                    |                | iSKS     | 35 50    |                    |                | Andreasnof Islands |          |            |          |
|          |                     |      |            |          |                    |                | i        | 41 31    |                    |                | 51.5 N, 178.4 W    |          |            |          |
| 10       | He                  | iPKP | 22 33 00 D |          |                    |                |          |          |                    |                |                    |          |            |          |
|          | Nu                  | iPKP | 22 33 00 D |          |                    |                |          |          |                    |                |                    |          |            |          |
|          | Kermadec Islands    |      |            |          |                    |                |          |          |                    |                |                    |          |            |          |
|          | 30.1 S, 179.1 W     |      |            |          |                    |                |          |          |                    |                |                    |          |            |          |

cont.

| November |                  |      |            | November |                 |      |            | November |                 |    |            |
|----------|------------------|------|------------|----------|-----------------|------|------------|----------|-----------------|----|------------|
| 13       | He               | iP   | 09 05 20   | 16       | Nu              | ePKP | 07 38 09   | 18       | He              | iP | 06 56 25   |
|          |                  | i    | 43         |          |                 | iPKS | 41 36      |          | Nu              | iP | 06 56 25   |
|          | Nu               | iP   | 09 05 19 U |          |                 | e    | 58 40      |          | So              | iP | 06 56 19   |
|          |                  | i    | 42         |          |                 | iSS  | 59 20      |          | Ke              | eP | 06 56 15   |
|          | So               | iP   | 09 04 45 U |          |                 | e    | 08 03 52   |          | Molucca Sea     |    |            |
|          |                  | i    | 05 05      |          |                 | iSSS | 04 34      |          | 0.2 S, 125.1 E  |    |            |
|          | Ka               | iP   | 09 04 58   |          | So              | ePKP | 07 38 08   | 19       | So              | eP | 04 26 43   |
|          | Ke               | iP   | 09 04 33   |          | Ka              | ePKP | 07 38 09   |          | Ryukyu Islands  |    |            |
|          | Hokkaido, Japan  |      |            |          | Ke              | iPKS | 07 41 24   |          | 24.3 N, 122.6 E |    |            |
|          | 42.0 N, 141.9 E  |      |            |          |                 | eSS  | 58 20      |          |                 |    |            |
|          |                  |      |            |          |                 | eSSS | 08 03 36   |          |                 |    |            |
| 13       | Nu               | eP   | 10 08 57   |          | Easter Islands  |      |            | 19       | So              | eP | 07 36 02   |
|          | Ka               | eP   | 10 08 33   |          | 32.3 S, 111.1 W |      |            |          |                 |    |            |
|          | Fox Islands      |      |            | 16       | So              | eP   | 10 04 27   | 19       | So              | iP | 14 43 03   |
|          | 52.9 N, 166.7 W  |      |            |          | Mariana Islands |      |            |          | Ka              | eP | 14 43 08   |
| 14       | He               | iP   | 07 59 17   |          | 19.0 N, 145.3 E |      |            |          | Colombia        |    |            |
|          | Nu               | iP   | 07 59 17 D |          |                 |      |            |          | 6.7 N, 73.0 W   |    |            |
|          |                  | iS   | 08 08 48   | 16       | He              | iP   | 21 20 58   | 19       | Nu              | iP | 21 55 34   |
|          | So               | iP   | 07 58 47 D |          | Nu              | iP   | 21 20 58   |          | So              | iP | 21 54 48   |
|          | Ka               | iP   | 07 58 58   |          |                 | iPP  | 23 26      |          | Ke              | iP | 21 54 30   |
|          | Ke               | eP   | 07 58 37   |          |                 | eS   | 29 52      |          | Unimak Island   |    |            |
|          | Central Honshu   |      |            |          |                 | eSS  | 34 16      |          | 53.8 N, 163.6 W |    |            |
|          | 35.7 N, 140.8 E  |      |            |          | So              | iP   | 21 21 04 U |          |                 |    |            |
|          |                  |      |            |          | Ka              | iP   | 21 20 57 U |          |                 |    |            |
|          |                  |      |            |          | i               |      | 21 04      | 20       | Nu              | iP | 07 04 01   |
| 14       | So               | iP   | 22 12 19   |          | Ke              | iP   | 21 21 08   |          | eSS             |    | 16 00      |
|          | Ka               | eP   | 22 12 14   |          | Andaman Islands |      |            |          | So              | iP | 07 03 15   |
|          | Northern Celebes |      |            |          | 13.5 N, 93.2 E  |      |            |          | Ka              | eP | 07 03 34   |
|          | 0.3 S, 123.0 E   |      |            |          |                 |      |            |          | Ke              | eP | 07 03 02   |
| 15       | Nu               | eP   | 13 59 47   | 16       | So              | iP   | 22 56 42 D |          | Kamchatka       |    |            |
|          | So               | iP   | 13 59 17   |          | Ka              | iP   | 22 56 34   |          | 55.6 N, 158.8 E |    |            |
|          | Ka               | iP   | 13 59 28   |          | Andaman Islands |      |            |          |                 |    |            |
|          | Central Honshu   |      |            |          | 14.0 N, 92.8 E  |      |            |          |                 |    |            |
|          | 36.0 N, 140.3 E  |      |            |          |                 |      |            | 20       | Nu              | iP | 07 42 35   |
| 15       | Nu               | eP   | 15 33 43   | 17       | Nu              | eP   | 04 58 00   |          | ePS             |    | 51 12      |
|          |                  |      |            |          | So              | eP   | 04 56 31   |          | eSS             |    | 54 38      |
|          |                  |      |            |          | eS              |      | 58 09      |          | So              | iP | 07 41 50   |
|          | So               | ePKP | 16 10 59   |          | Ka              | eP   | 04 57 15   |          | Ka              | eP | 07 42 07   |
|          | Central Chile    |      |            |          | Ke              | eP   | 04 56 04   |          | Ke              | eP | 07 41 30   |
|          | 38.3 S, 73.2 W   |      |            |          | eS              |      | 57 17      |          | Kamchatka       |    |            |
| 15       | So               | ePKP | 16 28 21   | 17       | So              | iP   | 11 20 03   |          | 56.2 N, 159.3 E |    |            |
|          | Central Chile    |      |            |          | i               |      | 07         |          |                 |    |            |
|          | 38.4 S, 73.6 W   |      |            |          | Oaxaca, Mexico  |      |            | 20       | So              | iP | 13 13 01   |
| 15       | Nu               | eSKS | 23 49 54   |          | 16.3 N, 98.2 W  |      |            |          | Celebes region  |    |            |
|          |                  | ePS  | 52 50      | 17       | So              | iP   | 14 33 24 U |          | 1.8 N, 126.4 E  |    |            |
|          |                  | eSS  | 58 26      |          | Ka              | iP   | 14 33 23   |          |                 |    |            |
|          |                  | e    | 24 01 24   |          | Celebes Sea     |      |            | 20       | Nu              | iP | 16 12 57   |
|          | Ke               | eSKS | 23 49 52   |          | 2.8 N, 121.7 E  |      |            |          | So              | iP | 16 12 21 U |
|          |                  | ePS  | 52 56      |          |                 |      |            |          | Ka              | eP | 16 12 34   |
|          |                  | eSS  | 58 16      | 17       | So              | iP   | 22 37 07   |          | Ke              | eP | 16 12 10   |
|          | Northern Peru    |      |            |          | Central Alaska  |      |            |          | Hokkaido, Japan |    |            |
|          | 8.7 S, 79.8 W    |      |            |          | 63.3 N, 150.0 W |      |            |          | 42.6 N, 143.4 E |    |            |

November

20 Nu eP 20 53 07  
So eP 20 53 23  
Ka eP 20 53 22  
Southern Iran  
27.9 N, 54.9 E

21 Nu iP 15 15 50  
So iP 15 15 28  
Ka eP 15 15 32  
Ke eP 15 15 23  
Ryukyu Islands  
26.0 N, 128.2 E

21 Nu ePKP 19 58 41  
iSKP 20 01 18  
So iSKP 20 00 58  
Ka ePKP 19 58 32  
iSKP 20 01 06  
Ke ePKP 19 58 24  
iSKP 20 00 50  
Fiji Islands  
21.1 S, 179.2 W

22 He eP 03 20 28  
Nu iP 03 20 27  
So eP 03 19 51  
Ke eP 03 19 41  
Hokkaido, Japan  
42.8 N, 143.0 E

22 So eP 07 35 45

22 So eP 14 30 16  
Kurile Islands  
44.8 N, 149.9 E

22 He iP KP 20 52 33  
Nu iP KP 20 52 32  
i 42  
So ePKP 20 52 14  
Kermadec Islands  
30.2 S, 178.6 W

23 He ePKP 23 23 53  
i 24 01  
Nu ePKP 23 23 52  
i 24 05  
iSKP 26 40  
So ePKP 23 23 51  
iSKP 26 21  
Ka ePKP 23 23 55  
iSKP 26 29

cont.

November

Ke ePKP 23 23 47  
iSKP 26 13  
Fiji Islands  
21.5 S, 179.3 W

24 Nu ePKP 10 52 33  
iSKP 55 30  
So iSKP 10 55 11  
Ka ePKP 10 52 32  
iSKP 55 19  
Fiji Islands  
24.8 S, 180.0 E

24 He eP 11 02 43  
Nu eP 11 02 42

24 He iP 14 31 47  
Nu iP 14 31 44  
Ka eP 14 31 16  
Kamchatka  
54.8 N, 161.6 E

24 Nu eP 16 02 42  
So eP 16 01 58  
Kurile Islands  
49.5 N, 155.8 E

24 So eP 16 31 09  
Ka eP 16 31 07  
Ke eP 16 31 20  
Mid-Atlantic Ocean  
9.8 N, 40.7 W

25 So iP 17 47 14  
Ka eP 17 47 24  
Ke eP 17 47 09  
Chiapas, Mexico  
16.3 N, 94.2 W

25 He eP 23 01 42  
Nu iP 23 01 39  
So iP 23 00 13  
eS 01 45  
Ka iP 23 00 57  
eS 02 59  
Ke iP 22 59 46  
eS 23 00 58  
Svalbard  
74.8 N, 14.6 E

November

26 He eP 01 48 08  
iP 36  
Nu eP 01 48 10  
iP 39  
isP 52  
iPP 49 46  
So eP 01 48 27  
ePP 49 56  
Ka eP 01 48 11  
Hindu Kush  
36.2 N, 70.0 E

26 Ka eP 04 24 15

26 He eP 05 36 51  
Nu eP 05 36 52  
eSS 45 24  
So iP 05 36 58  
i 37 02  
e 56  
Ka iP 05 36 46  
ePP 38 08  
Ke iP 05 37 04  
Sinkiang Province  
39.8 N, 77.2 E

26 Nu iP 13 39 22  
i 34  
So iP 13 38 47  
Ka eP 13 38 59  
Ke eP 13 38 35  
Hokkaido, Japan  
42.2 N, 144.4 E

26 Nu eP 14 12 48

26 He ePKP 16 18 09  
Nu ePKP 16 18 09  
i 18  
Ka ePKP 16 18 07  
Tonga Islands  
23.8 S, 175.8 W

27 He iP 07 04 08  
iP 52  
Nu iP 07 04 09  
iPcP 25  
iP 52  
e 06 30  
So iP 07 03 51  
iPcP 04 13  
iP 35  
isP 05 00

cont.

November

Ka iP 07 03 54  
ipP 04 38  
Ke eP 07 03 46  
Ryukyu Islands  
25.1 N, 122.9 E

27 Nu iP 12 19 19  
So eP 12 19 06  
i 18  
Ka eP 12 19 08  
Philippine Islands  
14.9 N, 119.9 E

27 He iP 17 03 39 U  
Nu eP 17 03 38  
So iP 17 03 19 U  
Ka eP 17 03 24  
Mariana Islands  
12.2 N, 143.8 E

28 He iP 02 49 00  
Nu iP 02 49 00  
So iP 02 48 40 D  
Ka iP 02 48 47  
Ke eP 02 48 35  
Mariana Islands  
12.1 N, 143.7 E

28 Nu eP 05 15 22  
Ka eP 05 15 41  
South Atlantic Ocean  
22.4 S, 10.5 W

28 So eP 06 04 57  
Volcano Islands  
24.3 N, 141.3 E

28 Nu eP 09 29 37

28 He iP 15 37 11  
iPcP 32  
Nu eP 15 37 12  
So iP 15 37 19 D  
Ka eP 15 37 10  
Ke iP 15 37 23  
i 52  
Andaman Islands  
9.9 N, 93.4 E

November

28 Nu iP 21 17 31  
So eP 21 16 57

29 So eP 00 00 46

29 Nu eP 02 29 31  
So eP 02 30 07  
Ka eP 02 29 50  
Arabian Sea  
14.0 N, 55.1 E

29 He iPKP 04 17 54  
Nu iPKP 04 17 53  
i 18 48  
Kermadec Islands  
29.4 S, 177.9 W

29 Nu eP 07 50 21  
Ka eP 07 50 12

29 Nu ePKP 09 23 10  
So ePKP 09 22 43  
Ka ePKP 09 23 07  
Tonga Islands  
22.3 S, 175.9 W

29 Nu ePKP 19 25 44  
iPKS 29 09  
eSSS 50 16  
Ka ePKP 19 25 39  
New Hebrides  
17.3 S, 168.5 E

29 So eP 22 59 12  
Hindu Kush  
38.4 N, 70.4 E

30 Nu eP 16 11 59  
So iP 16 11 59 U  
Ke eP 16 12 03  
Burma  
24.2 N, 94.5 E

November

30 So eP 17 06 27  
Ka eP 17 06 24  
Ke eP 17 06 33  
Molucca Passage  
3.2 N, 127.1 E

30 Nu eP 22 04 24  
i 49  
ePP 07 52  
iSKS 14 51  
iPS 16 30  
So iP 22 04 03  
i 21  
iPP 07 24  
Ke eP 22 04 09  
e(PP) 07 16  
eSKS 14 16  
iS 30  
Guerrero, Mexico  
17.4 N, 99.6 W

March 19, 1963

M. T. Porkka  
Aili Huovila



Nu Nov 10.1962 iSE 01-5



01-52

Ke Nov 10.1962 iSN 01-5



01-50

Ke Nov 10.1962 iSE 01-



01-50

Ke Nov 11.1962 iSN 11-44-49



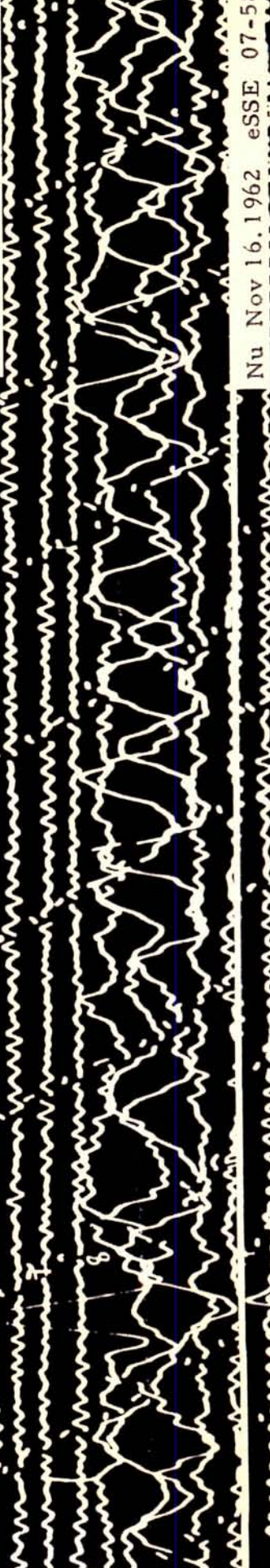
11-44

Ke Nov 11.1962 iSE 11-44-49



11-44

Nu Nov 16.1962 eSSN 07-58-40



07-58

Nu Nov 16.1962 eSSE 07-58-40



07-58

December

1 He eP 02 01 07  
 Nu eP 02 01 09  
 iPcP 30  
 eS 10 14  
 eSS 14 32  
 So iP 02 00 23.3  
 e 02 25  
 Ka eP 02 00 44  
 Ke eP 02 00 07  
 iPcP 01 02  
 eS 08 10  
 eSS 12 08  
 Fox Islands  
 52.4 N, 170.1 W

1 He iPcP 04 36 33.1 U  
 Nu iPcP 04 36 31.9  
 So iPcP 04 36 14.3  
 Ka ePKP 04 36 21  
 Ke ePKP 04 36 13  
 Kermadec Islands  
 29.7 S, 177.7 W

1 Nu eP 09 29 10  
 So eP 09 28 08  
 Ka eP 09 28 41

2 Ka eP 22 27 49  
 Iran  
 35.8 N, 50.1 E

2 Ka eP 23 42 45  
 Iran  
 35.5 N, 50.1 E

4 Nu iP 06 26 40.2  
 So iP 06 26 09.2  
 Ka eP 06 26 20  
 Honshu, Japan  
 36.9 N, 141.0 E

4 Nu eP 08 26 52  
 Yellow Sea  
 36.1 N, 123.5 E

4 Nu eP 18 56 25  
 Kurile Islands  
 44.6 N, 147.9 E

5 Nu eP 00 28 57  
 So eP 00 28 42  
 Ka eP 00 28 50

5 So eP 08 08 46

December

5 Nu eP 12 00 16

6 So iP 02 24 41.1  
 i 56  
 Ka eP 02 24 51  
 e 25 02  
 South of Honshu  
 30.7 N, 142.0 E

6 He eP 04 14 34  
 i 43  
 iPcP 15 10  
 Nu iP 04 14 32.3  
 iPcP 15 08  
 So iP 04 13 50.5  
 Ka iP 04 14 09.5  
 iPcP 56  
 Ke eP 04 13 37  
 Kurile Islands  
 49.0 N, 154.3 E

6 Nu eP 09 02 02  
 So iP 09 01 19.6 U  
 Sea of Okhotsk  
 53.5 N, 153.5 E

6 Nu eP 17 26 13  
 Kamchatka  
 55.0 N, 161.7 E

6 So eP 19 17 41

7 He iP 09 45 22.5  
 i 27  
 i 44  
 Nu iP 09 45 22.4  
 i 29  
 i 43  
 i 53  
 eLq 10 04 30  
 So iP 09 45 06.9 D  
 i 17  
 i 29  
 i 37  
 Ka iP 09 45 06.9  
 i 28  
 Central China  
 38.0 N, 106.3 E

7 He ePKP 13 14 32  
 Nu iPcP 13 14 31.2 D  
 So ePKP 13 14 15  
 Kermadec Islands  
 30.7 S, 179.3 W

December

7 He iP 14 14 42.4  
 i 51  
 eS 23 50  
 Nu iP 14 14 41.3 U  
 i 15 09  
 i 50  
 esP 16 56  
 iPP 17 38  
 ipPP 18 50  
 ePPP 19 30  
 i 20 43  
 iS 23 47  
 iScS 24 12  
 isS 26 32  
 iSS 28 46  
 isSS 31 18  
 iSSS 32 12  
 So iP 14 14 15.6  
 iS 23 00  
 iScS 36  
 i 24 38  
 Ka iP 14 14 23.2  
 i 15 22  
 i 16 56  
 ePP 17 26  
 i 18 01  
 iS 23 13  
 iSP 44  
 esSP 26 38  
 Ke iP 14 14 08.4 U  
 iPPP 18 36  
 iS 22 44  
 iSP 23 28  
 isS 25 22  
 eSS 27 18  
 isSS 29 44  
 iSSS 31 08  
 i 32 50  
 Bonin Islands  
 29.2 N, 139.2 E

8 So iP 00 06 47.6  
 Ka eP 00 06 48  
 Philippine Islands  
 13.9 N, 120.6 E

8 So eP 01 52 41  
 Central Alaska  
 62.6 N, 151.6 W



December

8 He eP 09 09 10  
 Nu eP 09 09 09  
 iPP 10 10  
 eSS 15 42  
 So eP 09 09 42  
 i 10 34  
 Ka eP 09 09 22  
 Ke eP 09 09 59  
 Northern Iran  
 36.5 N, 55.0 E

8 He eP 11 43 51  
 Nu eP 11 43 53  
 i 44 12  
 i 45

8 He ePKP 18 37 44  
 i 38 00  
 Nu iPKP 18 37 43.1  
 i 57  
 i 38 06  
 ePP 40 20  
 iPKS 41 12  
 i 23  
 ePS 50 26  
 So ePKP 18 37 29  
 i 53  
 Ka ePKP 18 37 37  
 i 38 00  
 ePKS 41 08  
 Ke ePKP 18 37 25  
 i 49  
 Tonga Islands  
 15.2 S, 173.7 W

8 He iPKP 21 44 47.9  
 epPP 47 29  
 ePKKP 55 50  
 i 56 03  
 Nu eP 21 40 54  
 iPKP 44 47  
 i 45 06  
 ePP 35  
 ipPP 47 33  
 i 59  
 isPP 48 29  
 iSKS 50 33  
 i 39  
 i 51 34  
 ePKKP 55 53

cont.

December

So eP 21 41 11  
 iPKP 44 52  
 iPP 45 46  
 ipPKP 47 12  
 iSKS 50 45  
 e 51 37  
 ePKKP 55 42  
 i 51  
 ipPKKP 57 54  
 Ka eP 21 41 07  
 iPKP 44 54  
 iPP 45 54  
 i 47 21  
 epPP 46  
 iSKS 50 44  
 i 51 56  
 ePKKP 55 39  
 i 52  
 ipPKKP 58 02  
 Ke iPKP 21 44 54  
 iPP 45 50  
 iSKS 50 46  
 e 51 54  
 i 54 38  
 ePKKP 55 35  
 i 48  
 Argentina  
 25.8 S, 63.4 W

8 He eP 23 06 01  
 i 16  
 Nu iP 23 05 59.3 D  
 i 06 13  
 eS 14 55  
 So eP 23 05 14  
 i 28  
 eP'P' 34 31  
 Ka eP 23 05 36  
 i 49  
 ePP 07 49  
 eP'P' 34 18  
 Ke iP 23 04 57.0  
 Andeanof Islands  
 50.5 N, 176.8 W

8 So eP 23 24 35  
 eS 26 54  
 Ka eP 23 24 48

9 So eP 03 26 47  
 Ka eP 03 26 49

December

9 So eP 07 22 20

9 So iP 10 27 48.8 D  
 Kurile Islands  
 43.5 N, 147.3 E

9 So iSKP 14 38 08.9  
 Ka ePKP 14 34 59  
 eSKP 38 18  
 Tonga Islands  
 22.4 S, 177.0 W

9 Nu eP 15 00 00  
 So iP 14 59 47.5 D  
 Ka eP 14 59 49  
 Ke iP 14 59 43.5

9 So eP 21 27 22  
 Ka eP 21 27 31  
 Northern Honshu  
 39.9 N, 140.5 E

10 So eP 05 09 55  
 Ka eP 05 09 43  
 Indian Ocean  
 28.3 S, 62.7 E

10 He ePKP 17 15 26  
 Nu ePKP 17 15 27  
 Ka ePKP 17 15 23  
 Kermadec Islands  
 27.2 S, 176.8 W

10 So iP 23 17 42.0  
 Ka eP 23 17 38  
 Central Java  
 8.0 S, 108.6 E

11 So iSKP 14 15 02  
 Fiji Islands  
 19.7 S, 178.4 W

11 Nu eP 16 25 51  
 So eP 16 25 18  
 Ka eP 16 25 31  
 Honshu, Japan  
 39.1 N, 144.3 E

11 So eP 23 46 10  
 Ka eP 23 46 23  
 Molucca Passage  
 3.5 N, 126.9 E

| December |                  |              | December |                    |              | December |                  |              |
|----------|------------------|--------------|----------|--------------------|--------------|----------|------------------|--------------|
| 12       | He eP            | 00 13 37     | 13       | He eP              | 04 31 02     | 15       | He eP            | 03 50 43     |
|          | Nu eP            | 00 13 36     |          | Nu iP              | 04 31 00.4   |          | eS               | 52 16        |
|          | So iP            | 00 13 10.9 D |          | So iP              | 04 30 10.3 D |          | Nu iP            | 03 50 36.8   |
|          | Ka iP            | 00 13 18.4   |          | Ka iP              | 04 30 34.5   |          | i                | 51 49        |
|          | Ke iP            | 00 13 01.5   |          | Ke eP              | 04 29 51     |          | iS               | 52 08.0      |
|          | Southern Honshu  |              |          | Alaska             |              |          | So iP            | 03 49 51.6   |
|          | 33.0 N, 136.0 E  |              |          | 63.3 N, 149.7 W    |              |          | eS               | 50 45        |
| 12       | Nu e             | 10 27 33     | 13       | So eP              | 07 01 20     |          | Ka iP            | 03 50 14.0   |
|          | ePP              | 58           |          |                    |              |          | i                | 22           |
|          | e                | 35 44        | 13       | He eP              | 15 07 19     |          | iS               | 51 24        |
|          | eSP              | 37 20        |          | Nu iP              | 15 07 16.7 U |          | i                | 52 03        |
|          | iSS              | 43 42        |          | So iP              | 15 06 27.3 U |          | Ke iP            | 03 49 58.7   |
|          | iSSS             | 47 38        |          | Ka iP              | 15 06 51.6   |          | eS               | 50 57        |
|          | So eP            | 10 23 24     |          | Ke eP              | 15 06 09     |          | Norway           |              |
|          | e                | 27 04        |          | Kenai Peninsula    |              |          | 67.2 N, 13.7 E   |              |
|          | i                | 41           |          | 61.4 N, 147.2 W    |              | 16       | Nu eP            | 06 41 23     |
|          | iPP              | 58           | 13       | He eP              | 15 07 31     |          | ePP              | 42 45        |
|          | Ka eP            | 10 23 30     |          | Nu eP              | 15 07 28     |          | Hindu Kush       |              |
|          | Ke ePP           | 10 27 26     |          | i                  | 41           |          | 36.2 N, 71.3 E   |              |
|          | iSP              | 36 28        |          | i                  | 50           | 16       | So eP            | 13 33 06     |
|          | New Britain      |              |          | So eP              | 15 06 39     | 16       | Nu eP            | 22 16 19     |
|          | 4.8 S, 153.8 E   |              |          | iPcP               | 07 53        | 17       | He eP            | 11 12 42     |
| 12       | So eP            | 10 57 18     |          | Ka eP              | 15 07 02     |          | Nu iP            | 11 12 43.0 D |
| 12       | So eP            | 11 39 56     |          |                    |              |          | i                | 15 27        |
|          | Northern Honshu  |              | 13       | Nu eP              | 22 50 55     |          | iPP              | 16 22        |
|          | 39.6 N, 140.5 E  |              |          | eS                 | 55 26        |          | eSKS             | 22 33        |
|          |                  |              |          | So eP              | 22 51 55     |          | eS               | 23 04        |
|          |                  |              |          | Dodecanese Islands |              |          | So iP            | 11 12 34.1 D |
|          |                  |              |          | 35.2 N, 28.3 E     |              |          | i                | 13 26        |
| 12       | So ePKP          | 14 15 36     | 13       | So eP              | 23 32 01     |          | iPP              | 16 19        |
|          | Sandwich Islands |              |          | Ka eP              | 23 32 00     |          | ePKKP            | 30 01        |
|          | 60.3 S, 25.9 W   |              |          | Batan Islands      |              |          | Ka iP            | 11 12 32.8   |
| 12       | He iP            | 23 08 24.1   |          | 20.4 N, 122.0 E    |              |          | ipP              | 14 14        |
|          | i                | 39           |          |                    |              |          | iPP              | 16 07        |
|          | Nu eP            | 23 08 24     |          |                    |              |          | eSKS             | 22 22        |
|          | i                | 41           | 14       | Nu eP              | 13 17 30     |          | Ke eP            | 11 12 32     |
|          | So iP            | 23 08 31.6 D |          | Northern Honshu    |              |          | ePP              | 16 14        |
|          | i                | 48           |          | 41.8 N, 141.1 E    |              |          | isS              | 25 28        |
|          | Ka iP            | 23 08 22.7   |          |                    |              |          | Celebes Sea      |              |
|          | i                | 40           |          |                    |              |          | 2.1 N, 122.9 E   |              |
|          | Ke eP            | 23 08 34     | 14       | He eP              | 17 00 02     | 17       | Nu eP            | 12 20 08     |
|          | i                | 09 15        |          | Nu iP              | 16 59 59.2   | 17       | He eP            | 17 35 02     |
|          | Sumatra          |              |          | ePP                | 17 01 27     |          | Nu iP            | 17 35 01.3 U |
|          | 4.6 N, 96.5 E    |              |          | So iP              | 16 59 43.0   |          | i                | 04           |
| 13       | He eP            | 00 36 29     |          | Ka eP              | 16 59 41     |          | i                | 19           |
|          | i                | 37           |          | Outer Mongolia     |              |          | So eP            | 17 34 46     |
|          | Nu eP            | 00 36 30     |          | 50.3 N, 90.6 E     |              |          | iPP              | 36 50        |
|          | So eP            | 00 36 38     | 14       | Nu eP              | 18 12 07     |          | Ka eP            | 17 34 46     |
|          | Ka eP            | 00 36 28     |          | Kurile Islands     |              |          | Ke eP            | 17 34 42     |
|          | Nicobar Islands  |              |          | 43.8 N, 148.3 E    |              |          | Ningsia Province |              |
|          | 7.2 N, 93.1 E    |              |          |                    |              |          | 38.0 N, 106.1 E  |              |

| December |                    |              | December        |                     |              | December |                 |                 |            |
|----------|--------------------|--------------|-----------------|---------------------|--------------|----------|-----------------|-----------------|------------|
| 18       | He iP              | 02 12 56.2   | So iSKP         | 09 08 17            | 21           | He iP    | 08 53 40.2      |                 |            |
|          | Nu iP              | 02 12 58.2 D | Ka ePKP         | 09 05 44            |              | Nu iP    | 08 53 37.9      |                 |            |
|          | i                  | 13 37        | iSKP            | 08 24               |              | i        | 55 11           |                 |            |
|          | iPP                | 14 18        | Fiji Islands    |                     |              | eS       | 09 02 30        |                 |            |
|          | So iP              | 02 13 11.3   | 23.4 S, 179.3 E |                     |              | So iP    | 08 52 52.7      |                 |            |
|          | Ka eP              | 02 12 56     |                 |                     |              | i        | 53 03           |                 |            |
|          | Ke eP              | 02 13 19     | 21              | He iP               | 00 57 43.5   |          | Ka iP           | 08 53 14.1      |            |
|          | Kirghiz S.S.R.     |              |                 | Nu iP               | 00 57 44.5   |          | i               | 17              |            |
|          | 39.8 N, 71.4 E     |              |                 | i                   | 59 23        |          | Ke eP           | 08 52 35        |            |
|          |                    |              |                 | i                   | 01 00 43     |          | Fox Islands     |                 |            |
| 18       | He iP              | 03 06 45.6 U |                 | iPP                 | 01 45        |          | 52.4 N, 168.5 W |                 |            |
|          | Nu iP              | 03 06 45.5 U |                 | So eP               | 00 57 42     |          |                 |                 |            |
|          | So iP              | 03 06 22.3 D |                 | ePP                 | 01 01 38     | 21       | Nu eP           | 08 56 58        |            |
|          | ipP                | 07 29        |                 | Ka iP               | 00 57 39.6   |          |                 |                 |            |
|          | Ka iP              | 03 06 29.2 U |                 | Ke eP               | 00 57 43     | 21       | Nu iP           | 08 59 37.3      |            |
|          | ipP                | 07 37        |                 | iSKS                | 01 08 16     |          | So iP           | 08 58 52.4      |            |
|          | Ke eP              | 03 06 15     |                 | iPS                 | 10 20        |          | Ka eP           | 08 59 13        |            |
|          | Mariana Islands    |              |                 | South coast of Java |              |          | Ke eP           | 08 58 35        |            |
|          | 21.6 N, 143.1 E    |              |                 | 9.0 S, 112.4 E      |              |          |                 |                 |            |
| 18       | He eP              | 04 00 49     | 21              | He iP               | 06 38 40.5 D | 21       | He iP           | 09 00 58.0      |            |
|          | Nu eP              | 04 00 52     |                 | Nu iP               | 06 38 39.0 D |          | Nu iP           | 09 00 55.8      |            |
|          | So iP              | 04 00 53.7   |                 | eS                  | 47 31        |          | So iP           | 09 00 10.4 D    |            |
|          | India-Burma border |              |                 | So iP               | 06 37 52.9   |          | Ka iP           | 09 00 31.9      |            |
|          | 23.8 N, 93.9 E     |              |                 | Ka iP               | 06 38 14.0   |          | Ke eP           | 08 59 53        |            |
| 18       | Nu eP              | 07 26 30     |                 | Ke eP               | 06 37 35     |          | Fox Islands     |                 |            |
|          | So eP              | 07 27 32     |                 | eSS                 | 49 40        |          | 52.8 N, 168.1 W |                 |            |
|          |                    |              |                 | Fox Islands         |              | 21       | He iP           | 09 11 34.5      |            |
|          |                    |              |                 | 52.5 N, 168.7 W     |              |          | i               | 47              |            |
| 18       | He iPKP            | 10 53 09.4 U | 21              | He iP               | 06 42 32.8   |          | Nu iP           | 09 11 31.4 U    |            |
|          | Nu iPKP            | 10 53 07.3 U |                 | Nu iP               | 06 42 31.2   |          | i               | 43              |            |
|          | i                  | 17           |                 | So eP               | 06 41 45     |          | eS              | 20 24           |            |
|          | ipPKP              | 54 02        |                 | Ka eP               | 06 42 08     |          | So eP           | 09 10 45        |            |
|          | i                  | 32           |                 | Ke eP               | 06 41 28     |          | i               | 57              |            |
|          | So ePKP            | 10 52 52     |                 | Fox Islands         |              |          | iPcP            | 11 32           |            |
|          | Ka ePKP            | 10 52 56     |                 | 52.6 N, 168.6 W     |              |          | Ka eP           | 09 11 07        |            |
|          | Kermadec Islands   |              |                 |                     |              |          | Ke eP           | 09 10 28        |            |
|          | 28.3 S, 178.2 W    |              |                 |                     |              |          | Fox Islands     |                 |            |
| 18       | So eP              | 12 31 16     | 21              | Nu eP               | 07 17 52     |          | 52.4 N, 168.5 W |                 |            |
|          |                    |              |                 | So iP               | 07 17 07.6   |          |                 |                 |            |
| 18       | So eP              | 22 56 54     |                 | Fox Islands         |              |          |                 |                 |            |
|          |                    |              |                 | 52.8 N, 168.8 W     |              | 21       | Nu eP           | 09 17 50        |            |
| 19       | He ePKP            | 11 21 18     |                 |                     |              |          | So eP           | 09 17 05        |            |
|          | Nu iPKP            | 11 21 18.3 D | 21              | Nu iP               | 08 26 49.8   |          |                 |                 |            |
|          | Kermadec Islands   |              |                 | So eP               | 08 26 04     |          |                 |                 |            |
|          | 31.2 S, 178.1 W    |              | 21              | Nu eP               | 08 44 49     |          | 21              | He eP           | 09 20 51   |
|          |                    |              |                 | So eP               | 08 44 04     |          |                 | Nu iP           | 09 20 48.8 |
| 20       | He iSKP            | 09 08 36     |                 |                     |              |          |                 | eS              | 29 46      |
|          | Nu ePKP            | 09 05 45     | 21              | Nu eP               | 08 47 41     |          |                 | So eP           | 09 20 03   |
|          | iSKP               | 08 35        |                 | So eP               | 08 46 55     |          |                 | Ka eP           | 09 20 25   |
|          |                    |              |                 | Fox Islands         |              |          |                 | Ke eP           | 09 19 47   |
|          |                    |              |                 | 52.8 N, 168.6 W     |              |          |                 | Fox Islands     |            |
|          |                    |              |                 |                     |              |          |                 | 52.5 N, 168.5 W |            |

cont.

| December |                 |              | December       |                     |              | December   |                    |            |          |
|----------|-----------------|--------------|----------------|---------------------|--------------|------------|--------------------|------------|----------|
| 21       | He eP           | 09 20 54     | So eP          | 17 57 06            | So iP        | 15 30 34.6 |                    |            |          |
|          | Nu eP           | 09 20 53     | i              | 17                  | i            | 31 35      |                    |            |          |
|          | So eP           | 09 20 07     | Ka eP          | 17 56 43            | eS           | 39 19      |                    |            |          |
|          | iPcP            | 50           | Ke eP          | 17 57 20            | iScS         | 40 23      |                    |            |          |
|          | Ka eP           | 09 20 28     | Gulf of Aden   |                     |              | eP'P'      | 16 00 03           |            |          |
|          | Ke eP           | 09 19 50     | 14.2 N, 51.7 E |                     |              | Ka iP      | 15 30 55.5         |            |          |
|          |                 |              |                |                     | eP'P'        | 59 58      |                    |            |          |
| 21       | He eP           | 09 22 55     | 21             | He eP               | 18 32 51     | Ke eP      | 15 30 17           |            |          |
|          | Nu iP           | 09 22 53.0   |                | Nu eP               | 18 32 51     | i          | 31 26              |            |          |
|          |                 |              |                | So iP               | 18 32 38.0   | ePP        | 32 28              |            |          |
| 21       | He eP           | 09 24 53     |                | Ka iP               | 18 32 38.9   | eS         | 38 23              |            |          |
|          | Nu iP           | 09 24 51.9   |                | Central Luzon       |              |            | Fox Islands        |            |          |
|          | So eP           | 09 24 06     |                | 15.3 N, 121.7 E     |              |            | 52.5 N, 168.8 W    |            |          |
| 21       | He eP           | 09 43 59     | 21             | Nu eP               | 20 38 03     | 22         | Nu eP              | 15 39 28   |          |
|          | Nu iP           | 09 43 57.8   |                | Fox Islands         |              |            | So iP              | 15 38 43.0 |          |
|          | i               | 44 17        |                | 52.4 N, 168.5 W     |              |            |                    |            |          |
|          | iPcP            | 27           | 22             | He ePKP             | 01 11 32     | 22         | So eP              | 18 46 11   |          |
|          | i               | 45 41        |                | Nu ePKP             | 01 11 33     |            |                    |            |          |
|          | iS              | 52 39        |                | iSKP                | 15 08        | 23         | He eP              | 00 48 18   |          |
|          | So iP           | 09 43 22.8   |                | So ePKP             | 01 11 29     |            | Nu eP              | 00 48 24   |          |
|          | Ka iP           | 09 43 36.0 U |                | Ka ePKP             | 01 11 32     |            | So iP              | 00 49 31.9 |          |
|          | iS              | 51 57        |                | iSKP                | 14 57        |            | Ka eP              | 00 49 03   |          |
|          | Ke eP           | 09 43 12     |                | Loyalty Islands     |              |            | Albania-Yugoslavia |            |          |
|          | Hokkaido, Japan |              |                | 22.0 S, 170.1 E     |              |            | 41.3 N, 20.4 E     |            |          |
|          | 42.4 N, 142.3 E |              |                |                     |              |            |                    |            |          |
| 21       | So eP           | 10 11 55     | 22             | Nu ePKP             | 01 48 10     | 23         | Nu iP              | 06 35 03.5 |          |
| 21       | Nu eP           | 12 47 18     |                | Loyalty Islands     |              |            | iPP                | 36 31      |          |
|          |                 |              |                | 21.9 S, 170.1 E     |              |            | So iP              | 06 35 16.5 |          |
| 21       | Nu eP           | 14 51 33     | 22             | He eP               | 02 13 16     |            | Ka iP              | 06 35 01.6 |          |
|          | So eP           | 14 50 48     |                | Nu iP               | 02 13 16.9 U |            | Hindu Kush         |            |          |
|          | Fox Islands     |              |                | So iP               | 02 13 15.4   |            | 37.9 N, 73.1 E     |            |          |
|          | 52.6 N, 168.3 W |              |                | Ka iP               | 02 13 12.2   | 23         | Nu eP              | 08 31 16   |          |
|          |                 |              |                | Ke eP               | 02 13 16     |            | So eP              | 08 31 05   |          |
| 21       | Nu eP           | 15 21 14     |                | South coast of Java |              |            | Ka eP              | 08 31 05   |          |
|          | Fox Islands     |              |                | 9.2 S, 112.4 E      |              |            | Fukien Province    |            |          |
|          | 52.5 N, 168.7 W |              |                |                     |              |            | 26.7 N, 116.4 E    |            |          |
| 21       | He eP           | 15 39 07     | 22             | Nu eP               | 06 19 49     | 23         | So iP              | 10 33 49.0 |          |
|          | Nu iP           | 15 39 05.0   |                |                     |              |            | Ka eP              | 10 33 50   |          |
|          | So iP           | 15 38 20.0   | 22             | Nu eP               | 15 26 59     |            | Philippine Islands |            |          |
|          | Ka eP           | 15 38 40     |                | So iP               | 15 26 13.3   |            | 15.3 N, 121.7 E    |            |          |
|          | Ke eP           | 15 38 02     |                |                     |              |            |                    |            |          |
|          | Fox Islands     |              | 22             | He iP               | 15 31 21.7   | 23         | Nu iP              | 10 59 02.5 |          |
|          | 52.7 N, 168.8 W |              |                | Nu iP               | 15 31 19.3   |            | So iP              | 10 58 17.5 |          |
|          |                 |              |                | i                   | 32 31        |            | Ka eP              | 10 58 38   |          |
| 21       | He eP           | 17 56 30     |                | iS                  | 40 15        |            | Fox Islands        |            |          |
|          | Nu iP           | 17 56 26.9   |                | iScS                | 41 19        |            | 52.5 N, 168.9 W    |            |          |
|          | i               | 39           |                |                     |              |            |                    |            |          |
|          |                 |              | cont.          |                     |              | cont.      | 23                 | So eP      | 11 19 55 |

| December |                     |              | December |                       |              | December             |              |              |
|----------|---------------------|--------------|----------|-----------------------|--------------|----------------------|--------------|--------------|
| 23       | Nu iP               | 15 15 26.9 D | 25       | He eP                 | 13 40 05     | So eP                | 23 34 07     |              |
|          | So iP               | 15 14 41.6 D |          | Nu eP                 | 13 40 06     | i                    | 11           |              |
|          | Fox Islands         |              |          | So eP                 | 13 38 45     | iPP                  | 36 07        |              |
|          | 52.5 N, 168.3 W     |              |          | eS                    | 40 46        | Ka eP                | 23 33 47     |              |
| 23       | Nu ePKP             | 15 54 34     |          | Ka eP                 | 13 39 30     | ePP                  | 35 36        |              |
|          | So ePKP             | 15 54 23     |          | Ke eP                 | 13 38 25     | Ke iP                | 23 34 18.1 U |              |
|          | North Island        |              |          | eS                    | 40 06        | i                    | 26           |              |
|          | 38.1 S, 179.4 W     |              | 25       | So iP                 | 18 38 25.0 D | Arabian Sea          |              |              |
|          |                     |              |          | Ke iP                 | 18 38 28.8   | 23.9 N, 65.4 E       |              |              |
| 23       | Nu eP               | 19 03 29     | 26       | Nu iP                 | 05 39 26.0   | 26                   | He iP        | 23 56 36.9 U |
|          | Fox Islands         |              |          | So eP                 | 05 38 43     | i                    | 49           |              |
|          | 52.5 N, 169.0 W     |              |          | Ka eP                 | 05 39 01     | Nu iP                | 23 56 35.0 U |              |
| 24       | He ePKP             | 00 42 50     |          | Fox Islands           |              | i                    | 58 27        |              |
|          | Nu ePKP             | 00 42 51     |          | 52.5 N, 168.4 W       |              | So iP                | 23 55 48.5 U |              |
|          | So ePKP             | 00 43 02     | 26       | So iP                 | 06 24 23.3 U | Ka iP                | 23 56 09.2 U |              |
|          | Ka ePKP             | 00 42 58     |          | Ka eP                 | 06 24 28     | Ke iP                | 23 55 32.4 U |              |
|          | Sandwich Islands    |              |          | Windward Islands      |              | Komandorskie Islands |              |              |
|          | 59.1 S, 26.0 W      |              |          | 12.8 N, 60.9 W        |              | 54.0 N, 168.8 E      |              |              |
| 24       | Nu eP               | 03 53 35     | 26       | Nu eP                 | 09 04 24     | 27                   | He iP        | 18 29 37.2 U |
|          | Northern Honshu     |              |          | So iP                 | 09 05 02.1   | i                    | 32 07        |              |
|          | 39.1 N, 139.0 E     |              |          | Ka eP                 | 09 04 51     | Nu iP                | 18 29 36.4 U |              |
| 24       | He eP               | 10 48 26     |          | Ke eP                 | 09 05 15     | So iP                | 18 29 02.6 U |              |
|          | Nu eP               | 10 48 24     |          | Off coast of Portugal |              | ePP                  | 31 20        |              |
|          | So eP               | 10 47 00     |          | 39.3 N, 10.6 W        |              | Ka iP                | 18 29 14.8 U |              |
|          | eS                  | 48 57        |          |                       |              | i                    | 33           |              |
|          | Ke eP               | 10 46 37     | 26       | He iP                 | 22 35 40.0   | Ke eP                | 18 28 52     |              |
|          | eS                  | 48 16        |          | Nu iP                 | 22 35 36.0 U | Southern Honshu      |              |              |
|          |                     |              |          | iPP                   | 37 51        | 39.9 N, 142.0 E      |              |              |
|          |                     |              |          | iPPP                  | 39 22        | 28                   | Nu eP        | 14 57 50     |
| 24       | He eP               | 11 15 56     |          | iS                    | 44 00        | So eP                | 14 57 06     |              |
|          | eS                  | 19 05        |          | So eP                 | 22 34 51     | Ke eP                | 14 56 49     |              |
|          | i                   | 24           |          | ePP                   | 36 42        | Fox Islands          |              |              |
|          | Nu eP               | 11 15 53     |          | iS                    | 42 33        | 53.7 N, 163.7 W      |              |              |
|          | eS                  | 18 56        |          | iPS                   | 45           |                      |              |              |
|          | i                   | 19 20        |          | Ka iP                 | 22 35 09.8   |                      |              |              |
|          | So iP               | 11 14 34.6   |          | eS                    | 43 10        | 28                   | Nu eP        | 20 00 56     |
|          | iS                  | 16 42        |          | Ke iP                 | 22 34 34.5 U | So eP                | 20 00 19     |              |
|          | Ka eP               | 11 15 05     |          | ePP                   | 36 40        | Ka eP                | 20 00 33     |              |
|          | eS                  | 17 39        |          | iS                    | 42 04.0      | Hokkaido, Japan      |              |              |
|          | Ke iP               | 11 14 12.1   |          | Komandorskie Islands  |              | 42.9 N, 145.4 E      |              |              |
|          | iS                  | 16 01.5      |          | 53.9 N, 168.7 E       |              |                      |              |              |
|          | Novaya Zemlya       |              | 26       | He eP                 | 23 33 36.3   | 28                   | He eP        | 21 51 32     |
|          | 73.6 N, 57.5 E      |              |          | i                     | 45           | Nu iP                | 21 51 33.0 D |              |
| 25       | So ePKP             | 12 29 07     |          | Nu eP                 | 23 33 40     | So iP                | 21 52 02.9 D |              |
|          | South Pacific Ocean |              |          | i                     | 47           | Ka eP                | 21 51 52     |              |
|          | 36.2 S, 100.2 W     |              |          | iPP                   | 35 33        | South Atlantic Ocean |              |              |
|          |                     |              |          |                       |              | 17.1 S, 14.1 W       |              |              |

cont.

| December            | December            | December              |
|---------------------|---------------------|-----------------------|
| 29 He eP 04 25 24   | So ePKP 15 07 05    | 31 He eP 08 10 42     |
| Nu eP 04 25 25      | Ka ePKP 15 07 07    | Nu iP 08 10 40.2 D    |
| So iP 04 25 14.4    | Ke ePKP 15 07 04    | So iP 08 09 55.6      |
| i 36                | iPP 09 54           | i 10 06               |
| iPP 28 58           | eSS 28 26           | Ka iP 08 10 14.5      |
| Ka eP 04 25 15      | Kermadec Islands    | i 25                  |
| Ke eP 04 25 12      | 31.2 S, 177.9 W     | Ke iP 08 09 39.5      |
| Halmahera           |                     | Kamchatka             |
| 2.4 N, 127.1 E      | 29 Nu ePKP 15 40 22 | 52.5 N, 160.8 E       |
|                     | e 41 56             |                       |
| 29 So eP 06 50 01   | Kermadec Islands    | 31 He eP 11 13 20     |
| eS 51 58            | 31.4 S, 177.6 W     | Nu eP 11 13 21        |
| e 52 17             |                     | So eP 11 13 24        |
|                     | 29 He ePKP 18 33 40 | Ka eP 11 13 18        |
| 29 Nu eP 08 12 45   | Nu ePKP 18 33 40    | Ke eP 11 13 30        |
| ePP 14 26           | Kermadec Islands    | Sumatra               |
| iS 19 42            | 31.6 S, 177.8 W     | 0.1 S, 99.3 E         |
| e 22 52             |                     |                       |
| iSS 23 06           | 29 He ePKP 18 39 20 | 31 Nu ePKP 19 59 27   |
| So eP 08 13 16      | Nu iPKP 18 39 20.8  | Loyalty Islands       |
| i 25                | Ka ePKP 18 39 09    | 22.7 S, 171.4 E       |
| iPP 15 23           | Kermadec Islands    |                       |
| Ka eP 08 12 56      | 31.5 S, 177.6 W     | 31 Nu eP 21 00 40     |
| ePP 14 50           |                     | So iP 21 00 02.2 D    |
| Ke eP 08 13 26      | 29 He ePKP 18 43 00 | Ka eP 21 00 25        |
| Afghanistan         | Nu iPKP 18 42 59.8  | Pierce County         |
| 23.9 N, 65.2 E      |                     | 47.1 N, 122.0 W       |
|                     | 29 Nu eP 20 00 15   |                       |
| 29 Nu eP 10 55 28   |                     | 31 Nu iPKP 22 04 10.5 |
| iPP 11 00 02        | 30 So eP 07 19 00   | Kermadec Islands      |
| eSKS 06 22          | Ka eP 07 19 03      | 28.3 S, 178.4 W       |
| eS 07 54            | Philippine Islands  |                       |
| ePS 09 30           | 15.4 N, 119.7 E     |                       |
| Ke eP 10 55 38      |                     |                       |
| ePKP 59 40          | 30 He ePKP 13 42 42 |                       |
| iPP 11 00 10        | Nu iPKP 13 42 41.8  |                       |
| eSKS 06 12          | Kermadec Islands    |                       |
| eS 08 10            | 28.2 S, 175.8 W     |                       |
| iPS 09 42           |                     |                       |
| eSS 16 28           |                     |                       |
| Northern Chile      | 30 He eP 22 19 19   |                       |
| 20.0 S, 69.9 W      | Nu eP 22 19 18      |                       |
|                     | So iP 22 18 42.9    |                       |
| 29 He ePKP 15 07 20 | Ka eP 22 18 56      |                       |
| Nu ePKP 15 07 20    | Hokkaido, Japan     |                       |
| eSKKS 17 36         | 42.6 N, 144.3 E     |                       |
| eSS 29 38           |                     |                       |

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April 5, 1963

M. T. Porkka  
Aili Huovila

He Dec 08.1962 iPKPZ 21-44.

He Dec 21.1962 iPZ 00-57

He Dec 21.1962 iPZ 08-53

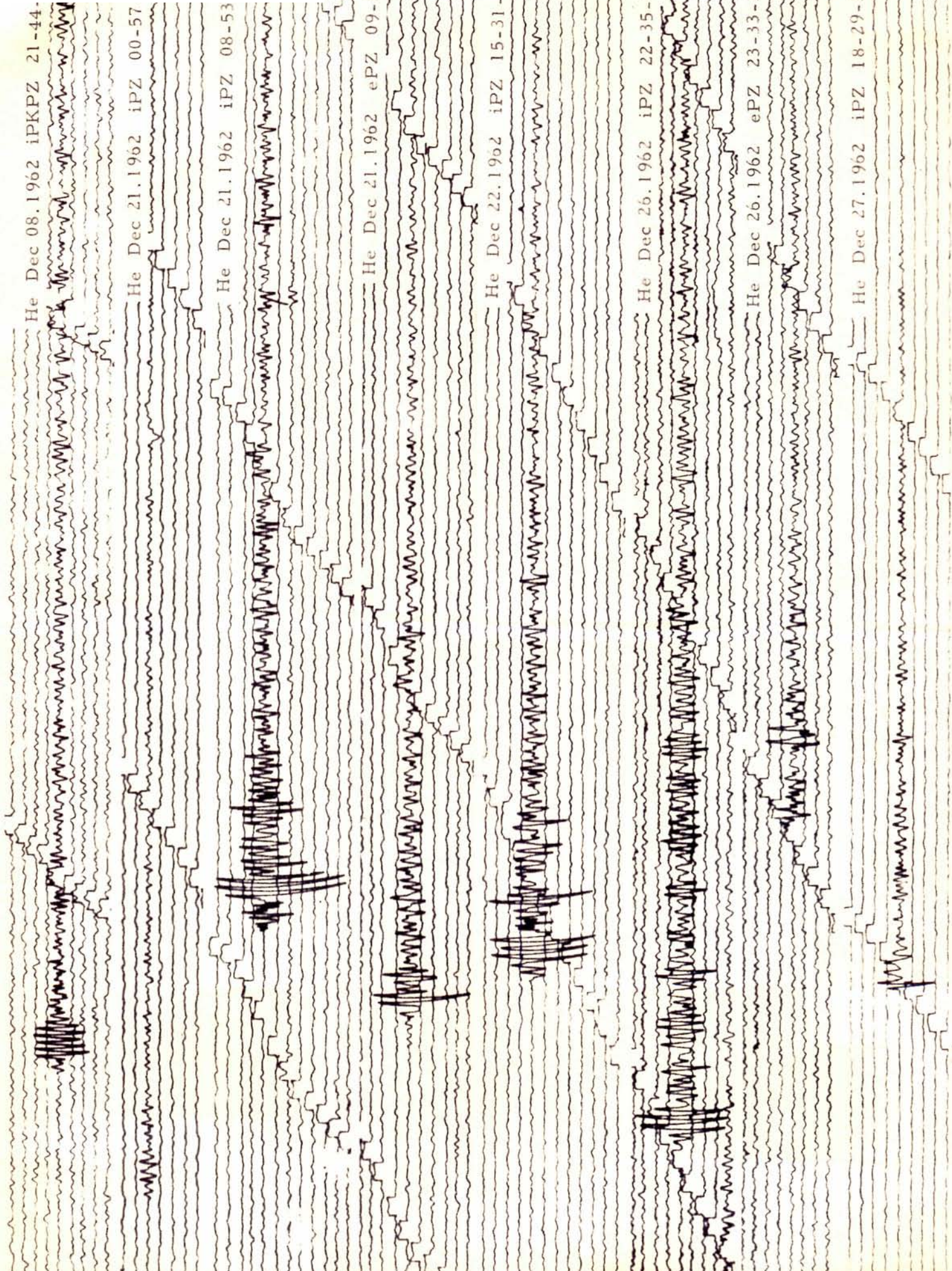
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He Dec 22.1962 iPZ 15-31-21.7

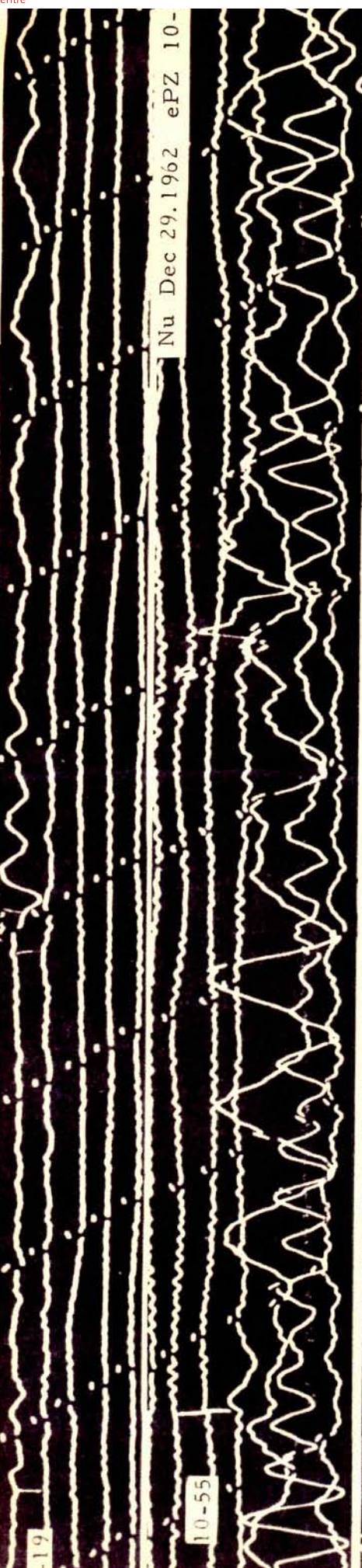
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He Dec 26.1962 ePZ 23-33-36.3

He Dec 27.1962 iPZ 18-29-37.2



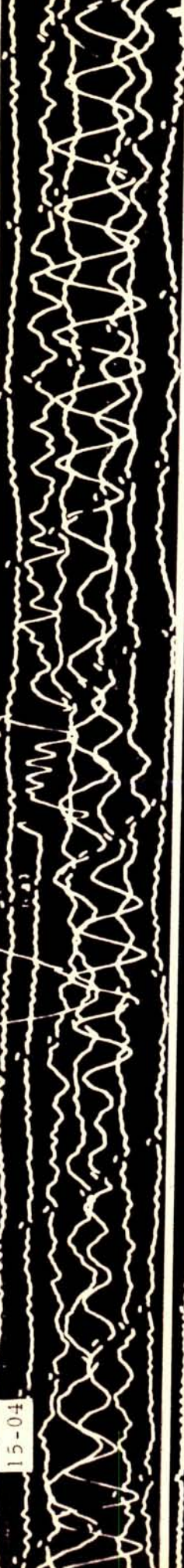
Nu Dec 29.1962 iSN 08-



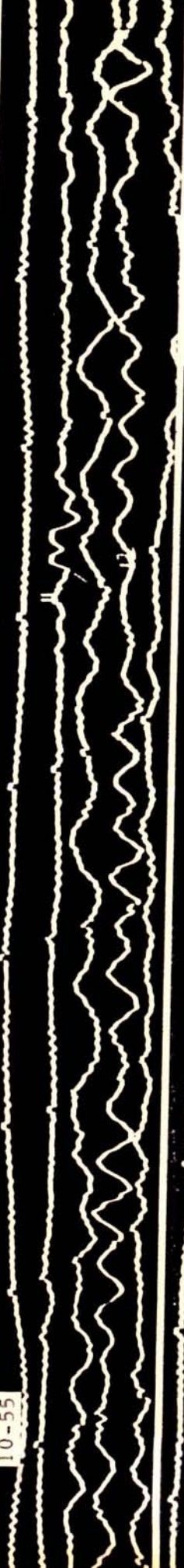
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Nu Dec 29.1962 ePKPZ 15-07-20



Ke Dec 29.1962 ePZ 10-55-28



Ke Dec 29.1962 iPSZ 11-09-42



Ke Dec 29.1962 iPSE 11-09-42



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