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1967

Helsinki

INSTITUTE OF SEISMOLOGY  
UNIVERSITY OF HELSINKI

PRELIMINARY  
SEISMOLOGICAL BULLETIN

1967

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University of Helsinki  
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Finland

Stations:

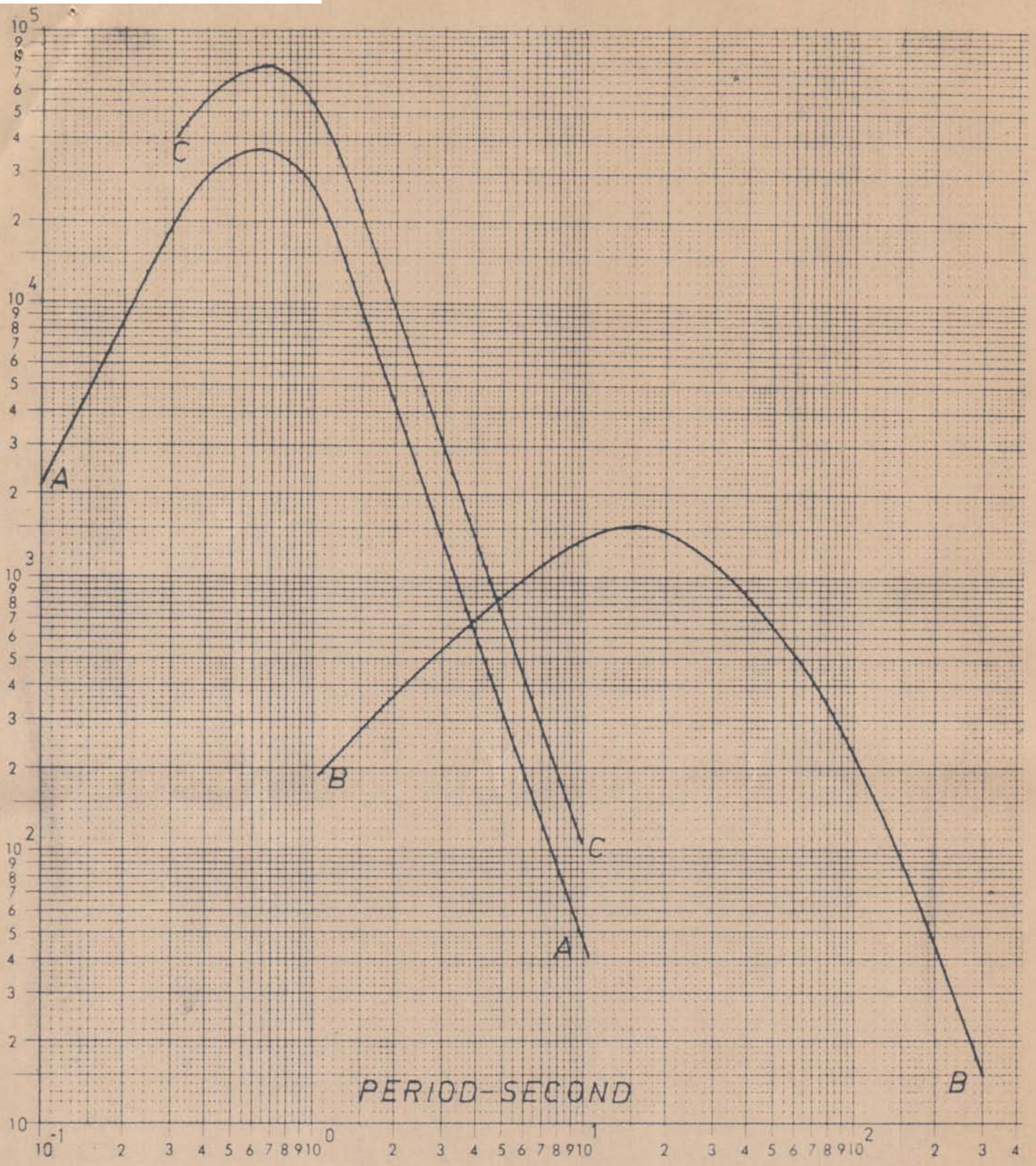
Nurmijärvi	(NUR)	60°30'32"N	24°39'05"E
Kajaani	(KJN)	64.1° N	27.7° E
Oulu	(OUL)	65°05'07"N	25°53'47"E
Sodankylä	(SOD)	67°22'16"N	26°37'45"E
Kevo	(KEV)	69°45'21"N	27°00'45"E

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

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

The maximal center-to-peak ground amplitudes (A) in millimicrons and the corresponding periods (T) in seconds are reported for the P phases. They are read from the short-period vertical seismograms at Nurmijärvi, Kajaani and Kevo.

Seismometer	Instrumental constants			Damp. ratio
	Period sec. Seism.	Galv.	Max. Magn.	
<b>NUR</b>				
Sprengnether Z	15	100	1 500	Critical
Sprengnether N	15	100	1 500	Critical
Sprengnether E	15	100	1 500	Critical
Benioff Z	1.0	0.75	37 000	17:1
Benioff N	1.0	0.75	37 000	17:1
Benioff E	1.0	0.75	37 000	17:1
<b>KJN</b>				
Benioff Portable Z	1.0	0.75	74 000	17:1
Benioff Portable N	1.0	0.75		17:1
Benioff Portable E	1.0	0.75		17:1
<b>OUL</b>				
Willmore Z	0.75	0.2	ca. 470 000	4:1
<b>SOD</b>				
Benioff Z	1.0	0.2		
<b>KEV</b>				
Sprengnether Z	15	100	1 500	Critical
Sprengnether N	15	100	1 500	Critical
Sprengnether E	15	100	1 500	Critical
Benioff Z	1.0	0.75	37 000	17:1
Benioff N	1.0	0.75	37 000	17:1
Benioff E	1.0	0.75	37 000	17:1



RESPONSE CURVES 1967

- Instruments of the standard stations:  
 A-A Short-period seismographs NUR and KEV  
 B-B Long -period seismographs NUR and KEV
- Other instruments:  
 C-C Benioff Z, N and E KJN

January

January

		T	A			T	A
1	NUR iPKP 00 40 03.5	1.2	57.0	SOD iPKP 07 24 48.9			
	KJN iPKP 00 39 56.8	1.2	43.0	KEV iPKP 07 24 44.7	1.0	74.0	
	KEV ePKP 00 39 51			ePP 26 20			
	H: 00 21 06.6			ePKS 27 54			
	12.1 S, 166.2 E, 33 km (R)			e 29 06			
	Santa Cruz Islands			eSKS 31 44			
				eSKKS 33 24			
1	KJN iP 03 10 38.6 U			ePS 36 22			
	i 59.1			eSS 43 12			
	SOD iP 03 10 47.3			H: 07 05 48.6			
	KEV eP 03 10 50			15.3 S, 173.6 W, 33 km (R)			
	H: 02 59 33.8			Tonga Islands			
	10.7 N, 92.8 E, 60 km						
	Andaman Islands			1	KJN eP 08 16 46		
1	NUR ePKP 03 32 12			1	NUR iPKP 09 14 13.0		
	KJN ePKP 03 32 03				KJN iPKP 09 14 06.7 U		
	H: 03 13 18.0				H: 08 55 17		
	11.9 S, 166.2 E, 33 km (R)				12.3 S, 166.0 E, 33 km (R)		
	Santa Cruz Islands				Santa Cruz Islands		
1	KJN eP 03 47 12			1	NUR iPKP 14 37 46.0	0.7	15.5
	SOD eP 03 47 23				KJN iPKP 14 37 39.4	0.6	7.5
	H: 03 35 42.9				OUL iPKP 14 37 38.1		
	7.6 N, 94.4 E, 38 km				SOD ePKP 14 37 35		
	Nicobar Islands				H: 14 18 51		
1	NUR iPKP 04 23 03.2	0.7	10.3		12.4 S, 165.8 E, 33 km (R)		
	KJN ePKP 04 22 56				Sanat Cruz Islands		
	H: 04 04 06.5			1	NUR eP 16 04 38		
	12.0 S, 166.0 E, 33 km (R)				SOD eP 16 04 01		
	Santa Cruz Islands				H: 15 53 52		
1	NUR iPKP 07 25 02.4	0.8	41.8		42.6 N, 147.5 E, 33 km (R)		
	i 15.0				Hokkaido, Japan		
	ePP 27 26			1	NUR ePKP 22 17 49		
	iSKP 28 29.4				eSS 36 28		
	ePKS 37				e 39 10		
	e 42				KJN ePKP 22 17 46		
	e 48				OUL iPKP 22 17 44.2		
	e 31 32				KEV ePP 22 18 40		
	eSKS 32 12				e(PS) 28 24		
	eSKKS 34 12				ePPS 30 24		
	ePSKS 37 18				H: 21 58 57.8		
	eSPP 39 24				11.1 S, 165.5 E, 33 km (R)		
	eSS 44 36				Santa Cruz Islands		
	eSSS 49 24			2	NUR ePKP 02 54 10		
	eLR 08 07.5				KJN ePKP 02 54 02		
KJN	iPKP 07 24 54.2				OUL ePKP 02 54 03		
	i 25 04.1				H: 02 35 15.3		
	i 42.9				11.4 S, 165.2 E, 33 km (R)		
	e 26 55				Santa Cruz Islands		
	iPKS 28 15.2						
	i 27.6						
	i 33.0						
	cont.						

January

T A

2 NUR eP 08 25 30  
eS 30 14  
KJN eP 08 26 04  
eS 31 16  
OUL eP 08 26 06  
SOD iP 08 26 29.5  
i 44.4  
e 29 34  
KEV e(P) 08 26 54  
eS 32 42  
H: 08 19 32.8  
32.2 N, 22.7 E, 20 km  
Near coast of Libya

2 NUR iP 09 59 06.1 D 0.8 37.4  
e 16  
KJN iP 09 59 27.9 D 0.8 40.0  
i 38.0  
OUL iP 09 59 33.0 D  
SOD iP 09 59 46.6 D  
i 56.5  
KEV iP 10 00 00.1 U 1.1 59.5  
H: 09 47 53.3  
10.2 S, 28.5 E, 33 km (R)  
Republic of the Congo

2 NUR iP 13 56 51.1 U 0.9 26.9  
i 59.0  
i 57 21.2  
i 58 33.0  
e 14 02 07  
eS 15  
KJN iP 13 57 08.0 U 0.8 26.9  
i 27.7  
ePP 58 29  
ePcP 59 35  
eS 14 02 42  
OUL iP 13 57 17.8 U  
SOD iP 13 57 33.5  
i 40.6  
ePP 59 04  
KEV iP 13 57 49.9  
i 58 18.0  
ePP 59 27  
H: 13 50 06.2  
30.6 N, 50.4 E, 40 km  
Iran

2 KJN iP 14 58 46.6 D 0.9 17.9  
OUL iP 14 58 49.0  
SOD iP 14 58 44.0  
H: 14 47 11.6  
20.1 N, 122.4 E, 33 km (R)  
Philippine Islands

January

T A

2 NUR iPKP 20 18 56.0 U 0.9 20.2  
ePS 30 36  
eSS 37 41  
KJN iPKP 20 18 52.2  
i 56.9  
e 19 07  
OUL iPKP 20 18 48.4  
i 19 13.0  
SOD ePKP 20 18 52  
e 19 22  
KEV ePP 20 20 25  
ePS 29 38  
eSS 36 11  
H: 19 59 58.7  
12.3 S, 166.4 E, 33 km (R)  
Santa Cruz Islands

2 NUR eP 21 40 38

2 NUR eP 22 20 03  
KJN e(P) 22 19 44  
OUL eP 22 19 28  
SOD eP 22 19 11  
H: 22 09 40  
58.3 N, 152.2 W, 4 km  
Kodiak Island

2 NUR eP 22 26 22  
KJN eP 22 26 20  
H: 22 17 53.4  
30.7 N, 79.3 E, 4 km  
Tibet-India border

3 NUR eP 05 38 20  
ipP 42.5 0.7 11.6  
KJN iP 05 37 55.0 0.5 7.4  
epP 38 17  
OUL iP 05 37 46.9 U  
ipP 38 10.0  
SOD iP 05 37 30.5 U  
ipP 53.7  
H: 05 28 29.3  
60.9 N, 151.5 W, 92 km  
Kenai Peninsula, Alaska

3 NUR ePKP 05 54 40  
ePP 56 08  
e 06 04 16  
ePS 06 10  
eSS 13 00  
KJN ePKP 05 54 33  
e 57 21  
OUL iPKP 05 54 32.7  
cont.

January

January

		T	A			T	A
KEV	ePP	05 55	42				
	eS	06 03	22				
	ePS	05 06					
	eSS	11 20					
H: 05 35 46.6							
10.9 S, 165.5 E, 33 km (R)							
Santa Cruz Islands							
3	NUR	ePKP	06 11 45	0.9	16.8		
	KJN	ePKP	06 11 39				
	OUL	iPKP	06 11 40.2				
H: 05 52 51.8							
11.2 S, 165.5 E, 33 km (R)							
Santa Cruz Islands							
3	NUR	ePKP	11 24 09				
		i	12.0				
	KJN	ePKP	11 24 04				
	OUL	ePKP	11 24 01				
H: 11 05 15.4							
11.2 S, 165.4 E, 33 km (R)							
Santa Cruz Islands							
3	NUR	ePKP	11 50 29				
	OUL	ePKP	11 50 21				
H: 11 31 34.4							
11.2 S, 165.4 E, 33 km (R)							
Santa Cruz Islands							
3	NUR	ePKP	12 51 03				
	OUL	ePKP	12 50 54				
H: 12 32 09.2							
10.9 S, 165.4 E, 33 km (R)							
Santa Cruz Islands							
3	NUR	ePKP	18 05 39				
	OUL	ePKP	18 05 31				
H: 17 46 44.9							
11.3 S, 165.8 E, 33 km (R)							
Santa Cruz Islands							
3	NUR	iPKP	21 42 19.0 D	1.0	32.0		
		i	34.7				
		ePP	44 14				
	KJN	iPKP	21 42 11.6	1.0	18.5		
	OUL	iPKP	21 42 11.7				
	SOD	ePKP	21 42 08				
H: 21 23 22							
12.4 S, 166.4 E, 33 km (R)							
Santa Cruz Islands							
4	NUR	iP	03 53 17.0 D	1.0	90.0		
		i	26.6				
		i	34.2				
cont.							
KJN	iP	03 53	03.9 D	1.0	158.1		
	i		08.4				
	i		13.4				
	i		20.7				
OUL	iP	03 53	06.5 D				
SOD	iP	03 53	02.5 D				
	i		12.6				
	e		49				
KEV	iP	03 52	59.0				
	i	53	08.0				
	i		31.0				
H: 03 41 36.4							
20.3 N, 120.0 E, 33 km (R)							
Philippine Islands							
4	NUR	eP	03 57 51				
	KJN	iP	03 57 38.2 U	1.0	21.8		
	OUL	eP	03 57 41				
4	NUR	eP	04 07 34				
4	NUR	ePn	04 46 08				
		eSn	47 33				
	KJN	ePn	04 45 32				
		iSn	46 24.1				
		i	47.7				
	OUL	e	04 45 18				
		iPg	22.1				
		e	50				
		eSn	54				
	SOD	ePn	04 44 57				
		eSn	45 26				
	KEV	ePn	04 45 08				
		eSn	43				
4	NUR	iP	06 01 46.1				
	KJN	eP	06 02 25				
	SOD	eP	06 02 33				
4	NUR	iP	06 03 50.0 U	1.3	133.2		
		i	04 03.1				
		e	37				
		eS	07 56				
	KJN	iP	06 04 27.3	1.0	49.1		
		i	52.6				
		i	05 59.0				
		e	06 44				
	OUL	iP	06 04 34.9				
		ePcP	07 57				
	SOD	iP	06 04 56.0				
		e	05 22				
	KEV	iP	06 05 16.2				
		e	40				
H: 05 58 54.1							
38.6 N, 22.1 E, 7 km							
Greece							



January

T A

SOD iP 10 15 16.1  
ePP 16 39  
KEV eP 10 15 24  
i 37.8  
ePP 17 17  
eS 21 28  
eSS 24 10

H: 10 07 58.3  
39.4 N, 72.9 E, 11 km  
Kirgiz SSR

5 NUR iPKP 10 54 41.1 D 0.6 17.5  
KJN iPKP 10 54 33.9 0.8 8.5  
OUL iPKP 10 54 33.1 D

H: 10 35 50.3  
11.3 S, 166.2 E, 62 km (R)  
Santa Cruz Islands

5 NUR eP 17 04 53  
KJN eP 17 05 29  
OUL eP 17 05 39

H: 17 00 07  
39.3 N, 21.7 E, 33 km (R)  
Greece

5 KJN eP 22 48 17 1.1 12.2  
SOD eP 22 48 14

6 NUR iP 00 06 31.2 U 1.1 76.2  
ePP 08 19  
eS 13 08  
eSS 16 30

KJN iP 00 06 11.8 U 1.2 147.9  
iPP 07 53.9

OUL iP 00 06 15.3 U  
iPcP 08 06.2

SOD iP 00 06 09.3 U  
ePP 07 46

KEV iP 00 06 04.8 D 1.0 84.3  
ePP 07 45  
eS 12 20

H: 23 58 21.4  
48.1 N, 102.9 E, 33 km (R)  
Mongolia

6 NUR iP 00 14 49.1 U 0.7 91.6  
iPP 17 17.5

KJN iP 00 14 26.9 U 0.6 78.8  
OUL iP 00 14 25.6 U

SOD iP 00 14 14.4  
cont.

January

T A

KEV eP 00 14 03 0.8 46.5  
i 04.6  
i 16.1  
e 15 08

H: 00 04 02.7  
41.8 N, 143.3 E, 35 km  
Hokkaido, Japan

6 KJN iP 00 21 49.9  
OUL eP 00 21 49  
SOD eP 00 21 50

6 KJN eP 02 08 32

6 NUR e(P) 10 16 47  
ePP 20 44  
eSKS 27 07

KJN eP 10 16 24  
ePP 20 14

OUL eP 10 16 26  
SOD eP 10 16 22

KEV ePP 10 20 10  
ePS 28 12

H: 10 03 05.8  
1.5 S, 126.6 E, 57 km  
Molucca Sea

6 NUR eSS 18 03 45  
KJN iP 17 46 18.0 0.6 6.2  
OUL eP 17 46 19  
SOD eP 17 46 10

H: 17 35 17  
30.6 N, 130.8 E, 33 km (R)  
Kyushu, Japan

6 NUR eP 19 38 55

7 NUR ePKP 00 46 19  
e 32

eSKP 49 40  
ePKS 54

e 50 15  
eSKSP 58 42

eSS 01 06 14  
e 56

eSSS 11 06  
KJN ePKP 00 46 33

ePKS 49 57  
OUL iPKP 00 46 35.0

SOD ePKP 00 46 33  
cont.



January

January

January						January						
				T	A					T	A	
KEV	ePKP	00 46 41				7	NUR	iPKP	16 59 59.7 D	0.9	20.2	
	eSKP	50 06					KJN	iPKP	16 59 52.8	1.0	20.7	
	eSKSP	59 08					OUL	iPKP	16 59 51.9 D			
	ePPS	01 01 05					SOD	ePKP	16 59 51			
	eSS	06 38					H:	16 41 03				
H:	00 27 25.2							11.9 S, 166.1 E, 33 km (R)				
	48.8 S, 112.7 E, 33 km (R)							Santa Cruz Islands				
	Southeast Indian Rise											
7	NUR	iP	01 38 58.2	0.7	14.2	7	NUR	eP	19 37 09			
	KJN	eP	01 38 53				OUL	eP	19 36 57			
	OUL	eP	01 38 47					i	37 27.8			
							SOD	eP	19 36 52			
							H:	19 24 15.3				
								17.4 N, 98.8 W, 68 km (R)				
								Guerrero, Mexico				
7	NUR	eP	03 29 23			7	NUR	eP	20 06 56			
7	KJN	eP	05 05 52			8	NUR	eP	01 51 10			
	H:	04 55 30					OUL	eP	01 51 18			
	51.7 N, 175.5 W, 72 km							e	33			
	Andreanof Islands						8	NUR	eP	01 55 45		
7	NUR	iPKP	11 51 57.5 U	1.0	18.0	8	NUR	iP	05 12 52.0	1.0	62.0	
	KJN	ePKP	11 51 50					i	13 12.5			
	OUL	iPKP	11 51 49.2					eS	21 00			
	H:	11 33 01						eSS	25 15			
	12.3 S, 166.1 E, 33 km (R)						KJN	iP	05 12 25.0	1.0	28.3	
	Santa Cruz Islands						OUL	iP	05 12 20.9			
7	NUR	iP	13 11 54.6 U	0.9	23.5			iPcP	13 22.8			
	e	13 18					SOD	eP	05 12 03			
	KJN	iP	13 11 34.8 U	1.2	46.4		KEV	eSS	05 23 10			
	ePP	13 08					H:	05 02 52.1				
	OUL	iP	13 11 38.2					56.0 N, 162.9 E, 33 km (R)				
	SOD	iP	13 11 32.6					Kamchatka				
	KEV	eP	13 11 27	1.0	37.2							
	H:	13 03 44.9										
	48.2 N, 102.8 E, 33 km (R)											
	Mongolia											
7	NUR	iP	13 47 58.6 U	0.9	62.2	8	NUR	iP	05 16 48.8 U	0.9	28.6	
	e	48 52					KJN	eP	05 16 21			
	KJN	iP	13 47 44.7 U	1.0	77.4		OUL	eP	05 16 20			
	OUL	iP	13 47 44.8				H:	05 06 48				
	SOD	iP	13 47 39.3					56.1 N, 162.9 E, 23 km				
	KEV	iP	13 47 33.0 U	0.8	45.1			Kamchatka				
	H:	13 34 48.3										
	11.8 N, 142.7 E, 36 km											
	South of Mariana Islands											
7	NUR	ePKP	16 12 49			8	NUR	iP	06 53 31.0 U	1.2	99.3	
	KJN	ePKP	16 12 42					ePcP	54 18			
	OUL	ePKP	16 12 41				KJN	iP	06 53 03.7 D	1.2	77.4	
	H:	15 53 51					OUL	iP	06 52 59.3 D			
	12.6 S, 167.5 E, 33 km (R)						SOD	eP	06 52 39			
	Santa Cruz Islands						H:	06 43 32.3				
								56.1 N, 162.8 E, 44 km				
								Kamchatka				

January							January						
					T	A					T	A	
8	NUR	iP	08 42	01.0 U			9	NUR	eP	16 52	54		
		iPcP		48.8					e	54 44			
	KJN	eP	08 41	33				KJN	eP	16 53	11		
	OUL	eP	08 41	29				OUL	eP	16 53	24		
	SOD	eP	08 41	12				SOD	eP	16 53	43		
	H:	08 31	59.7						e	54 13			
		56.2 N,	162.7 E,	24 km									
		Kamchatka					9	NUR	iP	18 21	27.9	1.0	14.0
8	NUR	eP	13 59	31					e(SKS)	32 08			
	OUL	eP	14 00	15				KJN	eP	18 21	29		
									e	55			
8	NUR	ePKP	15 46	13				OUL	iP	18 21	24.6		
	KJN	ePKP	15 46	06				SOD	eP	18 21	24		
	OUL	iPKP	15 46	05.9				KEV	eSKS	18 31	56		
	H:	15 27	16.9						eS	32 26			
		12.2 S,	166.5 E,	40 km				H:	18 08	23.9			
		Santa Cruz Islands							5.1 N,	77.6 W,	40 km		
									Colombia				
8	NUR	eP	18 16	53			9	NUR	ePKP	18 50	30		
	SOD	eP	18 17	02				OUL	iPKP	18 50	21.9		
								H:	18 31	34			
9	NUR	iP	02 02	36.3 U	0.7	23.2			11.9 S,	165.9 E,	33 km (R)		
		i		48.0					Santa Cruz Islands				
		e	04 01										
		ePP		11				9	NUR	ePKP	20 05	56	
		eS	08 30						OUL	ePKP	20 05	47	
		eSS	11 10						H:	19 47	06		
	KJN	iP	02 02	50.8 U					11.5 S,	165.4 E,	78 km		
		i	03 18.7						Santa Cruz Islands				
		ePP	04 23										
		e	41					9	NUR	eP	20 58	36	
		eS	08 52						KJN	eP	20 58	31	
	OUL	iP	02 03	00.3 U									
	SOD	iP	02 03	14.7				10	NUR	eP	00 52	36	
		iPP	04 59.2						OUL	eP	00 52	17	
	KEV	eP	02 03	30	0.7	43.9							
		i		32.0									
		i		46.8				10	NUR	eP	17 52	38	
		ePP	05 22						KJN	iP	17 52	10.8 D	
		eS	09 56						OUL	iP	17 52	05.6	
	H:	01 55	13.6						SOD	eP	17 51	51	
		27.7 N,	54.5 E,	17 km					KEV	e(P)	17 51	42	
		Southern Iran							H:	17 42	39		
									56.0 N,	162.8 E,	33 km (R)		
									Kamchatka				
9	KJN	eP	09 50	49			11	NUR	ePKP	03 16	57		
	OUL	eP	09 50	52					KJN	iPKP	03 16	47.7	
	SOD	eP	09 50	46					OUL	ePKP	03 16	49	
	H:	09 39	39						H:	02 58	01.2		
		24.1 N,	122.6 E,	50 km					11.4 S,	165.6 E,	33 km (R)		
		Taiwan							Santa Cruz Islands				

January				T	A	January				T	A
11	NUR	iP	06 07 11.7	1.1	30.9	12	KJN	eP	01 31 42		
		eSKS	17 45					H:	01 22 17		
		eSS	24 42						60.4 N, 158.7 W, 33 km (R)		
	KJN	iP	06 07 02.4 U	0.8	46.9				Southern Alaska		
		i	04.7			12	NUR	eP	01 32 54	0.6	10.0
		e	09 16				OUL	iP	01 32 22.5		
		ePP	10 45				SOD	eP	01 32 06		
	OUL	iP	06 07 05.6			12	NUR	eP	02 40 45		
	SOD	iP	06 07 03.7				SOD	eP	02 40 39		
		i	05.1			12	NUR	iP	18 21 38.0	0.6	8.5
							e	22 13			
		H:	05 54 00				KJN	eP	18 21 52	0.7	8.2
			0.1 S, 120.1 E, 23 km				OUL	iP	18 22 02.6		
			Northern Celebes				SOD	eP	18 22 17		
11	NUR	iP	11 26 50.2 U	1.8	207.4		e	23 16			
		i	27 21.0				KEV	eP	18 22 32	0.7	13.9
		i	32.3				H:	18 14 20			
		e	28 27					28.0 N, 54.5 E, 33 km (R)			
		eS	31 50					Southern Iran			
	KJN	iP	11 27 09.0	1.4	518.4	12	NUR	eP	22 32 08		
		iPP	28 05.0				KJN	eP	22 32 30		
		e	31 47				OUL	eP	22 32 37		
		eS	32 16				SOD	eP	22 32 53		
	OUL	iP	11 27 20.0 U				H:	22 22 12			
	SOD	iP	11 27 37.0 U					2.1 N, 31.3 E, 29 km			
		i	41.8					Uganda			
		ePP	28 44			13	NUR	iP	03 59 30.4	0.6	6.1
	KEV	iP	11 27 54.8 U	1.5	224.2		i	38.5			
		i	59.5				i	52.8			
		i	28 22.8				KJN	eP	03 59 31		
		iPP	29 10.2				OUL	eP	03 59 19		
		i	17.4			13	NUR	eP	04 37 02		
		eS	33 42				KJN	iP	04 36 42.8 D	0.9	12.5
		H:	11 20 45.7				OUL	eP	04 36 43		
			34.1 N, 45.7 E, 34 km				H:	04 26 15.5			
			Iran-Iraq border					32.2 N, 137.7 E, 392 km			
11	NUR	eP	11 43 37					South of Honshu, Japan			
	KJN	eP	11 43 37			13	NUR	iP	09 47 26.2 D		
	OUL	iP	11 43 44.1				KJN	eP	09 47 01		
	SOD	eP	11 43 47				OUL	iP	09 46 52.9 D		
							SOD	iP	09 46 36.4 D		
		Moscow:					H:	09 37 56.0			
		H:	11 31 02					63.2 N, 151.1 W, 126 km			
			3.5 S, 100.8 E					Central Alaska			
			Indonesia			13	NUR	eP	14 14 28		
11	NUR	ePS	16 33 46				KJN	iP	14 14 20.0		
		e(SS)	37 54								
	KJN	eP	16 21 24								
	OUL	eP	16 21 23								
		H:	16 08 06.1								
			5.3 N, 82.5 W, 22 km								
			South of Panama								
11	NUR	eP	19 41 51								

cont.

January				T	A	January				T	A		
	OUL	iP	14 14 27.3				KEV	eP	12 14 29	0.8	28.8		
		ipP	53.0					e	15 01				
		iPcP	15 12.8					iPcP	25.5				
	SOD	iP	14 14 28.0				H:	12 04 50.7					
		epP	53					52.1 N, 175.4 E, 41 km (R)					
	KEV	eP	14 14 31					Rat Islands					
		H:	14 04 30.8										
			23.8 N, 94.6 E, 91 km				14	NUR	iP	12 54 03.2 U	0.9	23.5	
			Burma-India border					KJN	iP	12 54 00.8	0.8	26.9	
13	NUR	ePS	14 18 24					OUL	iP	12 54 05.2 U			
		eSS	25 32					SOD	iP	12 54 06.8			
		e	30 20					KEV	eP	12 54 10			
	KEV	ePS	14 17 08					H:	12 41 17.4				
		eSS	23 32						4.1 S, 102.4 E, 33 km (R)				
		e(SSS)	27 18						Southern Sumatra				
		H:	13 48 11.7				14	NUR	iP	12 54 17.3 U	0.7	37.4	
			10.6 S, 161.4 E, 32 km					KJN	iP	12 54 14.5 D	0.7	21.2	
			Solomon Islands					OUL	iP	12 54 17.7			
								SOD	iP	12 54 20.8 U			
13	KJN	iP	17 28 40.1	0.7	15.1								
	OUL	iP	17 28 45.1 U				14	NUR	eP	13 37 08			
	SOD	iP	17 28 44.4					KJN	eP	13 36 56			
									e	37 14			
14	NUR	eP	02 21 07					OUL	eP	13 36 59			
		e	16						i	37 15.1			
	KJN	eP	02 20 55					SOD	eP	13 36 55			
		e	21 12					H:	13 24 53.2				
	OUL	eP	02 20 58						13.6 N, 120.6 E, 38 km				
		e	21 12						Mindoro, P.I.				
	SOD	eP	02 20 47				14	KJN	eP	13 46 21			
		H:	02 10 39						epP	56			
			41.8 N, 140.4 E, 126 km					OUL	eP	13 46 21			
			Hokkaido, Japan						ipP	56.4			
								H:	13 34 00.3				
14	NUR	iP	11 06 22.2 U	0.8	15.8				18.4 N, 146.0 E, 125 km (R)				
	OUL	eP	11 06 24						Mariana Islands				
		e	29										
		H:	10 59 25										
			39.1 N, 70.6 E, 25 km					14	NUR	ePKP	14 32 36		
			Tadzhik SSR						OUL	ePKP	14 32 32		
									H:	14 13 40.8			
										11.3 S, 165.7 E, 33 km (R)			
										Santa Cruz Islands			
14	NUR	iP	12 15 30.0 U	1.0	78.0								
		i	41.2										
		i	16 12.8										
	KJN	iP	12 15 04.0 U	1.0	56.7			14	NUR	eP	15 36 20	1.1	30.9
		i	15.3							i	35.0		
		iPcP	45.0							ePP	37 42		
	OUL	iP	12 14 59.4 U						KJN	iP	15 36 09.0 U	0.8	7.7
		iPcP	15 43.2							i	23.6		
	SOD	iP	12 14 44.4							ePP	37 34		
		ePcP	15 34						OUL	iP	15 36 16.8		
			cont.								cont.		





January

January

					T	A
	KJN	ePKP	15 07 42			
	OUL	ePKP	15 07 37			
	H: 14 48 49.3					
	11.3 S, 165.7 E, 33 km (R)					
	Santa Cruz Islands					
16	NUR	iPKP	16 21 17.2	0.8	20.2	
		i	29.3			
	KJN	ePKP	16 21 12			
		e	23			
	OUL	ePKP	16 21 10			
	H: 16 02 22.7					
	11.3 S, 165.6 E, 38 km					
	Santa Cruz Islands					
17	NUR	iP	00 43 38.0			
	KJN	eP	00 43 17			
	OUL	eP	00 43 12			
	SOD	eP	00 43 01			
	H: 00 32 49					
	43.1 N, 147.5 E, 33 km (R)					
	Kurile Islands					
17	NUR	iPKP	01 25 24.4 U	0.8	36.0	
		e	31			
		ePP	26 18			
		e	27 16			
		ipPKP	41.8			
	KJN	iPKP	01 25 28.6 U	0.8	37.7	
		ipPKP	27 46.0			
	OUL	iPKP	01 25 27.1 U			
	SOD	iPKP	01 25 29.0 U			
		e	27 22			
	H: 01 07 54.3					
	27.4 S, 63.3 W, 590 km (R)					
	Santiago del Estero, Argentina					
17	NUR	iPKP	01 36 12.9 D	1.0	34.0	
		ipPKP	40.1			
		ePP	38 28			
	KJN	iPKP	01 36 06.0	1.0	31.6	
		iPP	38 23.5			
	OUL	iPKP	01 36 05.1 D			
	SOD	ePKP	01 36 02			
	H: 01 17 19.4					
	14.7 S, 167.2 E, 90 km (R)					
	New Hebrides Islands					
17	NUR	ePKP	10 44 19			
	KJN	iPKP	10 44 25.5 D	0.9	25.9	
	OUL	iPKP	10 44 26.1			
	H: 10 25 22.7					
	58.2 S, 25.4 W, 33 km (R)					
	South Sandwich Islands					

					T	A
17	NUR	iPKP	11 10 23.0 U	0.8	28.8	
		i	28.4			
		i	39.0			
		i	54.0			
	KJN	ePKP	11 10 12			
	OUL	ePKP	11 10 08			
	SOD	ePKP	11 10 25			
		e	11 32			
	H: 10 50 47					
	30.6 S, 177.8 W, 33 km (R)					
	Kermadec Islands					
17	NUR	iP	12 10 34.3 U	0.6	121.3	
		i	11 46.3			
		e	12 43			
		ePP	13 00			
		e	26			
		e	56			
		ePPP	14 56			
		eS	19 38			
		e	55			
		eScS	20 20			
		eSS	24 08			
		eLQ	12 29.0			
		eLR	12 32.9			
	KJN	iP	12 10 13.0 U			
		eS	18 56			
		ePS	19 15			
	OUL	iP	12 10 12.1 U			
	SOD	iP	12 10 01.7 U			
		i	14.1			
	KEV	iP	12 09 51.7 U	1.6	602.7	
		i	10 03.9			
		i	16.3			
		i	37.0			
		e	11 43			
		ePP	12 06			
		ePPP	13 42			
		ePcS	14 26			
		eS	18 16			
		eScS	19 44			
		eSS	22 08			
		eLQ	12 27.0			
		eLR	12 29.1			
	H: 11 59 31.5					
	38.3 N, 142.1 E, 44 km (R)					
	Honshu, Japan					
17	NUR	iP	12 37 24.3	0.7	19.4	
	KJN	iP	12 37 03.1 U	0.7	42.5	
	OUL	iP	12 37 02.5			

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January

January

					T	A
	SOD	iP	12 36	52.3 U		
	H:		12 26	20.8		
			38.3 N,	142.1 E,		37 km
			Honshu, Japan			
18	NUR	iP	04 31	21.0	0.6	15.0
		ePcP		57		
	KJN	iP	04 30	56.7	0.7	11.0
	OUL	iP	04 30	52.6		
	SOD	eP	04 30	39		
	KEV	eP	04 30	31		
	H:		04 20	52.9		
			48.9 N,	154.9 E,		40 km (R)
			Kurile Islands			
18	NUR	iP	05 42	57.2 D	1.8	371.8
		i		43 01.6		
		i		11.1		
		iPcP	44	31.1		
		iPP		49.0		
		eS		49 43		
		eSS		52 54		
		eLQ	05	54.5		
	KJN	iP	05 42	31.8 U	1.4	256.5
		i		55.8		
		ePP		44 15		
		eS		48 56		
	OUL	eP	05 42	28		
		i		33.5		
	SOD	eP	05 42	17		
		i		21.3		
		e		56		
		iPP	44	12.0		
	KEV	eP	05 42	05		
		i		09.8		
		ePP	43	34		
		i		43.1		
		eS		48 05		
		eLR	05	53.5		
	H:		05 34	32.6		
			56.6 N,	120.8 E,		11 km
			Eastern Russia			
18	NUR	eP	06 32	10		
	H:		06 21	27.0		
			45.3 N,	150.7 E,		33 km (R)
			Kurile Islands			
18	NUR	iP	08 29	11.1 D	0.8	446.4
		i		27.0		
		i		54.5		
		e	30	45		
			cont.			

					T	A
	eS		38	01		
	eSS		42	40		
	eLR	08	50.5			
	KJN	iP	08 28	46.7 D	0.8	215.3
		i		51.0		
		i		29 40.5		
	OUL	iP	08 28	40.1 U		
		eP*P*		57 51		
	SOD	iP	08 28	26.1		
		i		35.3		
		e		29 33		
	KEV	iP	08 28	09.1 D	0.8	118.1
		i		29 16.2		
		eS		36 04		
		eScS		37 48		
		eLQ	08	42.5		
	H:		08 18	22.0		
			52.5 N,	168.3 W,		37 km
			Fox Islands			
18	NUR	iP	08 39	43.8 U	0.7	25.8
	KJN	iP	08 39	20.6 U	0.5	27.9
	OUL	iP	08 39	19.6 U		
	SOD	iP	08 39	08.9 U		
	KEV	eP	08 38	58		
	H:		08 29	03.4		
			42.0 N,	142.4 E,		65 km
			Hokkaido, Japan			
18	NUR	iP	10 51	47.2 D	0.8	15.8
		epP		52 09		
	KJN	iP	10 51	22.5 D	0.8	13.1
		ipP		44.0		
	OUL	iP	10 51	14.3 D		
		epP		35		
	SOD	iP	10 50	58.0 D		
		ipP		51 19.0		
	KEV	eP	10 50	42		
		ipP		51 00.6		
	H:		10 41	54.0		
			60.4 N,	152.5 W,		96 km (R)
			Southern Alaska			
18	NUR	eP	15 38	24		
	OUL	eP	15 37	56		
	SOD	eP	15 37	44		
	KEV	eP	15 37	38		
	H:		15 28	03		
			47.3 N,	152.1 E,		140 km (R)
			Kurile Islands			

January

T A

18 NUR eP 17 19 45  
 KJN iP 17 19 44.6  
 OUL iP 17 19 53.7 U  
 Moscow:  
 H: 17 12 45  
 36.8 N, 71.0 E, 200 km  
 Hindu Kush

18 NUR eP 21 57 36  
 ePP 59 22  
 KJN iP 21 57 16.0 D 1.4 121.5  
 e 58 06  
 ePP 59 02  
 OUL iP 21 57 19.7 U  
 iPP 59 10.3  
 SOD iP 21 57 14.0 D  
 ePP 58 52  
 KEV iP 21 57 09.0 D 1.2 91.2  
 i 21.0  
 H: 21 49 25.8  
 48.1 N, 102.9 E, 33 km (R)  
 Mongolia

19 OUL eP 02 21 48  
 SOD eP 02 21 32

19 NUR iP 12 57 11.8 1.0 92.0  
 ipPKP 49.0  
 i 59.0  
 KJN iP 12 57 04.9 D 1.0 60.0  
 i 10.0  
 ipPKP 41.3  
 OUL iP 12 57 03.7  
 epPKP 40  
 SOD ePKP 12 57 01  
 KEV iP 12 56 58.2 1.0 24.0  
 H: 12 38 31.3  
 11.8 S, 166.4 E, 156 km  
 Santa Cruz Islands

19 NUR iP 12 59 26.2  
 ePP 13 01 30  
 i 02 14.0  
 iPKS 49.0  
 ePPP 04 26  
 e 05 30  
 eSKS 07 04  
 eSKKS 08 30  
 e 10 28  
 ePS 12 00  
 ePPS 13 26  
 e 14 28  
 cont.

January

T A

e 15 30  
 eSS 19 22  
 eSSS 23 10  
 KJN iP 12 59 21.6 U 1.8 177.9  
 i 47.0  
 OUL iP 12 59 20.2  
 SOD ePKP 12 59 21  
 KEV ePKP 12 59 14  
 ePP 13 01 05  
 e 41  
 e 08 22  
 ePS 10 34  
 ePPS 12 04  
 e 13 32  
 eSS 17 35  
 e 19 09  
 eSSS 21 26  
 H: 12 40 12.6  
 14.8 S, 178.8 W, 18 km  
 Fiji Islands

19 NUR eP 14 48 47  
 H: 14 38 44.6  
 55.3 N, 163.2 E, 33 km (R)  
 Kamchatka

19 NUR iP 14 52 24.0 0.6 51.3  
 e 50  
 KJN iP 14 51 59.2 U 0.6 51.4  
 i 52 06.7  
 iPcP 38.0  
 OUL iP 14 51 52.7 U  
 iPcP 52 33.1  
 SOD iP 14 51 38.7  
 KEV iP 14 51 21.8 D 0.8 37.4  
 i 41.6  
 iPcP 52 15.6  
 H: 14 41 37  
 52.4 N, 169.6 W, 55 km  
 Fox Islands

19 NUR eP 16 56 56 0.8 23.0  
 KJN iP 16 56 43.2 U 0.8 31.5  
 OUL iP 16 56 34.9 U  
 e 57 08  
 SOD iP 16 56 25.0  
 KEV eP 16 56 12 0.9 26.9

19 NUR iP 19 09 32.7 1.0 18.0

19 NUR iP 19 56 07.0 1.1 30.9  
 KJN iP 19 56 05.2 0.8 16.1  
 cont.



January

T A

OUL iP 19 55 58.2  
H: 19 43 24.3  
17.0 N, 85.7 W, 33 km (R)  
Caribbean Sea

19 NUR eP 21 49 08

20 NUR iP 02 05 33.5  
iPP 07 18.0  
e 10 56  
ePcS 11 09  
eS 12 16

KJN iP 02 05 12.0  
i 13.3  
iPP 06 54.0  
eS 11 30

OUL iP 02 05 15.3 U  
iPP 07 05.2

SOD iP 02 05 11.0  
iPP 06 46.1  
i 50.2  
i 07 18.0

KEV iP 02 05 06.1 U 1.0 540.0  
ePP 06 40  
i 47.9  
e 07 48  
eS 11 04  
e 34  
eLQ 02 15.0  
eLR 02 17.8

H: 01 57 23.1  
48.0 N, 102.9 E, 33 km (R)  
Mongolia

20 KJN iP 03 35 05.0 1.1 32.4  
OUL iP 03 35 07.4  
SOD iP 03 35 02.6  
KEV iP 03 35 00.3  
H: 03 27 13.9  
48.0 N, 103.0 E, 33 km (R)  
Mongolia

20 NUR eP 03 36 56  
KJN iP 03 36 36.3  
e 37 25  
OUL iP 03 36 39.3  
ePP 38 30  
SOD iP 03 36 35.0 D  
KEV eP 03 36 23  
H: 03 28 45  
47.8 N, 102.8 E, 33 km (R)  
Mongolia

January

T A

20 KJN eP 05 24 23  
OUL eP 05 24 24  
SOD eP 05 24 35  
H: 05 16 39.8  
32.3 N, 69.8 E, 70 km  
West Pakistan

20 NUR iP 06 31 28.3 U 1.1 50.0  
KJN iP 06 31 08.2 U 1.3 78.1  
i 44.0  
iPP 32 48.1

OUL eP 06 31 11  
iPP 33 00.2

SOD iP 06 31 05.0  
KEV eP 06 31 02 0.9 28.6  
H: 06 23 16.3

47.9 N, 103.1 E, 33 km (R)  
Mongolia

20 NUR eP 17 19 37

20 NUR iP 17 52 00.7 D 0.9 15.1  
KJN iP 17 51 46.4 D 0.9 19.6  
OUL iP 17 51 37.1 U  
SOD iP 17 51 28.2

20 NUR eP 21 27 51  
KJN eP 21 27 30 0.9 8.9  
SOD eP 21 27 28  
H: 21 19 39

48.0 N, 103.2 E, 33 km (R)  
Mongolia

20 NUR iP 22 01 08.8 0.8 14.4

21 NUR iP 00 49 42.8 D  
i 57.4  
KJN iP 00 49 22.8 D 1.2 34.4  
OUL iP 00 49 25.4 D  
SOD eP 00 49 20  
KEV iP 00 49 15.8 D 1.0 32.0  
e 50 13

H: 00 41 32.2  
48.1 N, 102.9 E, 33 km (R)  
Mongolia

21 NUR ePKP 03 13 55  
i 14 03.0  
i 11.8  
eSKSP 28 20  
e 31 05  
eSS 37 14  
e 38 06

cont.



January				January							
		T	A		T	A					
22	NUR eP	23	19 52	23	NUR eP	21	55 42				
	KJN iP	23	19 37.7		KJN e(P)	21	55 20				
	SOD eP	23	19 35		OUL eP	21	55 18				
	H: 23 08		17.4		H: 21 45		33				
	21.8 N, 121.8 E,		63 km		55.3 N, 163.0 E,		33 km (R)				
	Taiwan				Kamchatka						
23	KJN iP	09	32 26.9 U	0.9	31.3	24	NUR iP	03	16 20.6 U	0.8	116.1
	OUL iP	09	32 29.4				i				30.8
	SOD iP	09	32 28.3				i				17 00.4
	H: 09 19		38.4				iPP				18 47.0
	0.7 N, 122.5 E,		166 km				eS				25 08
	Northern Celebes						ePS				36
							eSS				32 56
23	NUR iP	11	29 18.0 U				eLR	03	37.5		
	i		47.2			KJN iP	03	15 58.8 U	1.0	185.3	
	e		30 38			iPcP		16 35.6			
	KJN ePKP	11	29 09			OUL iP	03	15 57.3 U			
	OUL iP	11	29 07.3			SOD iP	03	15 46.9 U			
	H: 11 09		51.8			ePcP		16 29			
	27.7 S, 176.9 W,		60 km (R)			e		17 39			
	Kermadec Islands					KEV iP	03	15 36.4 U	0.8	46.1	
						i		45.8			
23	NUR eP	19	56 01			iPcP		16 22.5			
	KJN eP	19	56 39			e		22 19			
						eS		23 40			
23	NUR eP	20	38 42			e		26 04			
	eS		49 36			eSS		27 28			
	ePS		50 54			eLR	03	33			
	eSS		55 48			H: 03 05		39.0			
	e		21 02 46			41.4 N, 141.9 E,		69 km (R)			
	KJN eP	20	38 33			Hokkaido, Japan					
	OUL eP	20	38 32								
	SOD eP	20	38 20								
	KEV eP	20	38 15								
	i		21.8			24	NUR eP	03	33 08		
	e		43 18				KJN iP	03	32 23.3	1.0	22.9
	e		46 05				OUL iP	03	32 06.1		
	eSKS		48 40				SOD iP	03	31 40.4		
	ePS		49 50				eS		33 13		
	eSS		54 18				KEV eP	03	31 14		
	H: 20 25		38.3				eS		32 18		
	19.9 N, 109.3 W,		56 km				e		32		
	Revilla Gigedo Islands										
23	NUR eP	20	59 03			24	NUR iP	04	59 12.4		
	KJN eP	20	59 25	1.2	25.8		KJN eP	04	58 49		
	SOD eP	20	59 42				OUL iP	04	58 48.0		
	H: 20 47		56.7				SOD eP	04	58 35		
	1.6 S, 15.6 W,		33 km (R)				H: 04 48		57		
	North of Ascension Island						44.6 N, 142.2 E,		158 km		
							Hokkaido, Japan				

January				T	A	January				T	A	
24	NUR	iP	09 40 24.2			24	NUR	eP	20 35 04			
		i	37.2	1.2	120.2			eS	37 04			
		i	41 24.0					e	15			
		ePP	43 18				KJN	eP	20 34 19			
		ePPP	44 54					i	24.7			
		e	45 35					eS	35 53			
		eS	49 38				OUL	eP	20 34 07			
		e	53 10					i	14.2			
		eLQ	09 57.5					iS	35 22.9			
		eLR	10 01.0				SOD	e	20 33 28			
	KJN	iP	09 40 50.3					e	44			
		i	58.2	1.0	122.1			eS	34 32			
		i	42 05.6					e	35 13			
		iPP	43 32.6				KEV	eP	20 33 16			
	OUL	eP	09 40 44					eS	55			
		i	57.3					e	35 27			
	SOD	eP	09 40 59				25	NUR	iP	01 57 12.1 U		
		i	41 08.3					i	58 09.0			
		ePP	43 39					iPP	40.0			
	KEV	eP	09 41 09					e	48			
		i	17.8	1.0	140.0			ipPP	59 25.0			
		i	54.1					esPP	52			
		e	42 26					eS	02 02 40			
		i	38.1					ePcS	03 08			
		e	45 14					esS	04 18			
		ePPP	46 10				KJN	iP	01 57 11.7 U			
		eS	50 59					ePP	58 37			
		eScS	51 20					i	02 02 21.6			
		eSS	55 26					iS	42.1			
		eLQ	10 01.0				OUL	iP	01 57 20.5 U			
		eLR	10 03.1				SOD	iP	01 57 26.9 U			
	H: 09 29 12.3							ePP	59 03			
	0.6 S, 21.0 W, 33 km (R)						KEV	iP	01 57 36.2 U	0.8	460.8	
	Central Mid-Atlantic Ridge							i	58 49.5			
								iPP	59 31.0			
24	NUR	iP	14 55 15.0	0.8	21.6			eS	02 03 25			
		i	52.2					esS	05 06			
	KJN	iP	14 55 03.6 U	0.8	24.6			e	06 07			
		i	49.1					H: 01 50 19.4				
	OUL	iP	14 55 07.2 D					36.6 N, 71.6 E, 281 km				
	SOD	iP	14 55 05.4					Afghanistan-USSR border				
	KEV	iP	14 55 05.3 D	1.0	44.0		25	NUR	eP	04 33 33		
	H: 14 45 16.0						25	SOD	eP	13 46 58		
	30.1 N, 104.1 E, 33 km (R)											
	Szechwan, China						25	NUR	iP	21 21 06.9	0.9	11.8
24	KJN	eP	15 33 20					KJN	eP	21 20 40		
	H: 15 21 50							OUL	iP	21 20 36.1 U		
	0.8 S, 19.9 W, 33 km (R)							H: 21 10 25				
	Central Mid-Atlantic Ridge							51.8 N, 174.5 E, 33 km (R)				
								Near Islands				





January						January					
				T	A					T	A
28	NUR	eP	15 56 13	0.8	8.8	28	NUR	iP	17 37 23.0	0.9	48.2
	KJN	eP	15 55 50					i	35.0		
	H: 15 45 22						KJN	iP	17 36 58.9	0.8	28.5
	52.2 N, 169.6 W, 33 km (R)						OUL	iP	17 36 52.3		
	Fox Islands						SOD	eP	17 36 37		
28	NUR	eP	16 10 55				KEV	iP	17 36 20.8 D	1.1	51.3
	KJN	eP	16 10 33				H: 17 26 32.8				
	H: 16 00 09						52.3 N, 169.4 W, 33 km				
	52.9 N, 169.3 W, 33 km (R)						Fox Islands				
	Fox Islands					28	NUR	eP	17 40 20		
28	NUR	iP	16 42 12.0	1.0	172.2		KJN	eP	17 39 52		
		i	21.2			28	NUR	eP	17 43 27		
		i	51.0				KJN	eP	17 42 59		
		eS	51 06				OUL	eP	17 42 53		
	KJN	iP	16 41 46.1	1.0	91.6		SOD	eP	17 42 40		
	OUL	iP	16 41 40.7			28	NUR	iP	17 52 49.2 U	0.8	172.0
	SOD	iP	16 41 25.4					i	55.3		
	KEV	iP	16 41 09.0 U	1.1	69.9			i	53 24.2		
		i	42 14.8					eS	18 01 45		
	H: 16 31 21.1							eP'P'	21 17		
	52.3 N, 169.3 W, 32 km						KJN	iP	17 52 24.4 U	0.8	142.3
	Fox Islands							eP'P'	18 21 27		
28	NUR	iP	17 10 07.2 D	0.7	17.2		OUL	iP	17 52 18.1 U		
	KJN	iP	17 09 43.1	0.7	10.3			eP'P'	18 21 26		
	OUL	iP	17 09 36.4 D				SOD	iP	17 52 03.6		
	SOD	iP	17 09 21.0				KEV	iP	17 51 47.1	0.7	32.8
	H: 16 59 17.2						H: 17 42 01.5				
	52.4 N, 169.4 W, 33 km (R)						52.4 N, 169.4 W, 50 km (R)				
	Fox Islands						Fox Islands				
28	NUR	eP	17 23 50			28	NUR	eP	19 04 19		
	KJN	iP	17 23 25.9				KJN	eP	19 03 55		
	SOD	eP	17 23 03				SOD	eP	19 03 35		
	H: 17 13 01.5						H: 18 53 31				
	52.5 N, 169.4 W, 33 km (R)						52.4 N, 169.4 W, 54 km				
	Fox Islands						Fox Islands				
28	NUR	iP	17 30 23.0 U	1.0	73.8	28	NUR	eP	20 05 24		
		i	29.8				KJN	eP	20 04 59		
	KJN	iP	17 29 58.1 U	0.9	36.6		OUL	eP	20 04 53		
	OUL	iP	17 29 52.2 U			28	NUR	eP	20 21 08		
	SOD	iP	17 29 37.2 U				KJN	iP	20 20 44.0		
	KEV	iP	17 29 20.2	0.9	19.7		OUL	iP	20 20 37.5		
	H: 17 19 32.7						SOD	eP	20 20 22		
	52.3 N, 169.5 W, 41 km						H: 20 10 21				
	Fox Islands						52.6 N, 169.4 W, 33 km (R)				
							Fox Islands				

January							January						
					T	A						T	A
28	NUR	iP	20 59	22.3 D	0.9	29.2	29	NUR	eP	02 18	28		
	KJN	eP	20 58	58									
	OUL	iP	20 58	51.3 D			29	NUR	eP	03 17	28		
	SOD	iP	20 58	35.3				KJN	eP	03 17	44		
	H: 20 48 34.0							OUL	eP	03 17	54		
	52.5 N, 169.4 W, 47 km												
	Fox Islands						29	NUR	iP	04 01	30.8		
28	NUR	eP	21 13	44	0.8	13.2		i			33.0		
	KJN	iP	21 13	19.4				ePP		03 03			
	OUL	iP	21 13	12.8				KJN	iP	04 01	43.9		
	SOD	eP	21 12	58				i			46.9		
	H: 21 02 55							iPP		03 19	9.9		
	52.5 N, 169.5 W, 33 km (R)							OUL	iP	04 01	53.9		
	Fox Islands							i			56.7		
28	NUR	eP	22 30	00				ePP		03 33			
								i		04 52	7		
28	NUR	iP	22 37	54.1 U	0.7	23.8		SOD	eP	04 02	08		
	e		38 26					i			10.1		
	ePcP		39					ePP		03 48			
	KJN	iP	22 37	26.9 U	1.0	26.2		H: 03 53 58.8					
	iPcP		38 24	8				26.5 N, 55.3 E, 42 km					
	OUL	iP	22 37	23.4				Southern Iran					
	ePcP		38 23				29	NUR	eP	04 43	47	1.0	18.5
	SOD	iP	22 37	08.3				KJN	iP	04 43	23.0	0.7	7.5
	iPcP		38 14	4				OUL	eP	04 43	17		
	H: 22 28 01.2							SOD	eP	04 43	01		
	55.0 N, 160.2 E, 113 km (R)							H: 04 32 58					
	Kamchatka							52.5 N, 169.3 W, 33 km (R)					
								Fox Islands					
29	NUR	iP	00 07	24.4	0.7	11.9	29	NUR	eP	04 44	43		
	KJN	eP	00 06	59				KJN	eP	04 44	55		
	OUL	iP	00 06	53.8				OUL	iP	04 45	04.9		
	SOD	eP	00 06	38				SOD	eP	04 45	18		
	H: 23 56 34												
	52.5 N, 169.6 W, 33 km (R)												
	Fox Islands						29	NUR	eP	06 51	33		
								KJN	iP	06 51	48.0 U	0.8	13.1
								OUL	eP	06 51	56		
								i			58.1		
								SOD	eP	06 52	10		
29	NUR	iP	00 15	31.3									
	i			42.2									
	eS		18 13										
	KJN	iP	00 16	17.0	1.0	28.3	29	NUR	eP	07 05	27		
	e		17 04					KJN	eP	07 05	43	0.9	9.8
	eS		19 38					OUL	iP	07 05	52.5 U		
	OUL	iP	00 16	26.1									
	SOD	eP	00 16	53			29	NUR	eP	07 09	47	1.2	32.1
	KEV	eP	00 17	19				KJN	eP	07 09	26	1.4	67.5
	H: 00 12 13.6							ePP		11 18			
	47.9 N, 14.3 E, 25 km							OUL	eP	07 09	31		
	Austria							ePP		11 21			

cont.



I. II. NR: 07 20 43  
07 19 38  
50:1

II. III. NR 07 20 68  
07 20 43  
0:25

(K)N 07 20 57  
07 19 52  
1:05

(K)N 07 20 82  
07 20 57  
0:25

again 0:26

(K)N 07 21 05  
07 20 07  
1:04

KCV 07 21 36  
07 20 29  
1:07

SOD 07 21 30  
07 20 15  
1:05

SOD 07 21 46  
07 20 20  
1:26

07:13:10  
+  
07:13:10  
0:26

07:13:10  
+  
07:13:36  
0:26

January

T A

SOD eP 07 09 23  
KEV eP 07 09 18  
H: 07 01 34.7  
48.0 N, 103.1 E, 33 km (R)  
Mongolia

29 NUR eP 07 13 29  
i 32.7  
KJN eP 07 13 46 0.8 8.5  
OUL iP 07 13 54.6  
SOD eP 07 14 09  
KEV eP 07 14 25  
H: 07 06 00  
26.7 N, 55.3 E, 58 km  
Southern Iran

29 NUR eP 07 19 38  
KJN iP 07 19 51.9  
OUL eP 07 20 01  
i 02.1  
SOD eP 07 20 15  
KEV eP 07 20 29  
H: 07 12 05  
26.5 N, 55.3 E, 33 km (R)  
Southern Iran

29 NUR iP 07 20 43.0  
KJN iP 07 20 56.8 0.9 22.3  
OUL eP 07 21 05  
i 06.1  
SOD iP 07 21 20.4  
KEV eP 07 21 36

29 NUR iP 07 21 08.0  
ePP 22 44  
KJN iP 07 21 22.3 0.8 69.2  
ePP 23 02  
OUL iP 07 21 32.6 U  
iPP 23 12.1  
i 25 24.1  
SOD iP 07 21 46.4  
ePP 23 29  
KEV iP 07 22 02.0 0.8 45.1  
eSS 32 16

29 KJN eP 07 40 07  
OUL eP 07 39 53

29 NUR iP 08 04 10.0  
i 12.7  
i 26.2  
iPP 05 43.1  
eS 10 14  
cont.

January

T A

KJN iP 08 04 23.8  
i 26.8 0.8 61.5  
iPP 06 05.7  
eS 10 40  
OUL iP 08 04 33.5  
i 37.3  
SOD eP 08 04 48  
i 53.3  
ePP 06 35  
KEV iP 08 05 05.9 1.0 35.3  
ePP 06 46  
eS 11 46  
eSS 15 12  
H: 07 56 39.2  
26.5 N, 55.2 E, 38 km  
Southern Iran

29 NUR iP 09 34 30.0 0.6 17.9  
KJN iP 09 34 05.1 U 0.8 9.2  
SOD eP 09 33 44  
H: 09 23 40  
52.4 N, 169.6 W, 33 km (R)  
Fox Islands

29 NUR eP 13 28 02  
KJN iP 13 28 17.7 0.9 12.5  
OUL iP 13 28 28.2  
H: 13 20 31  
26.7 N, 55.4 E, 33 km  
Southern Iran

29 NUR eP 15 53 28  
KJN iP 15 53 13.2 U 0.7 8.2  
OUL iP 15 53 15.1  
SOD eP 15 53 10  
H: 15 41 55.8  
24.2 N, 123.6 E, 33 km (R)  
Ryukyu Islands

29 SOD eP 20 12 05

29 SOD eP 20 56 43

30 NUR eP 00 04 20  
KJN eP 00 03 56  
e 04 19

30 SOD eP 00 40 51

30 NUR eP 01 25 34  
i 36.9  
eS 29 44  
cont.

January

January

			T	A	
	KJN	iP	01 25	52.0	
		i		54.6	
	OUL	iP	01 26	02.8 U	
	SOD	eP	01 26	21	
		e		46	
	KEV	eP	01 26	42	
		e		27 07	
		eS		31 38	
	H: 01 20 31.7				
	41.0 N, 44.2 E, 33 km (R)				
	Western Caucasus				
30	NUR	eP	04 08	21	
		e		55	
	KJN	iP	04 08	08.0	0.6 6.9
		e		42	
	OUL	iP	04 08	15.8	
	SOD	eP	04 08	16	
	BCIS:				
	H: 04 02 00				
	50.0 N, 78.0 E				
	Eastern Kazakh				
30	NUR	eP	07 19	08	
		e		19	
	KJN	eP	07 19	11	
	OUL	eP	07 19	19	
	SOD	eP	07 19	10	
		e		21	
	H: 07 09 30				
	25.7 N, 90.4 E, 33 km (R)				
	India-East Pakistan border				
30	NUR	iP	10 50	54.6	
	KJN	iP	10 50	35.3	
	OUL	iP	10 50	35.1	
	SOD	iP	10 50	26.0	
	H: 10 39 59				
	34.4 N, 138.7 E, 206 km				
	Honshu, Japan				
30	NUR	iP	12 30	11.2	1.2 28.5
		i		32.2	
		i		31 00.4	
		eS		34 32	
	KJN	iP	12 30	31.5	
		i		35.8	0.9 58.0
		e		31 22	
	OUL	iP	12 30	47.0	
	cont.				

				T	A
	SOD	eP	12 30	57	
		e		31 33	
	H: 12 25 00.6				
	39.3 N, 41.3 E, 33 km (R)				
	Turkey				
30	KJN	eP	14 32	18	
	SOD	eP	14 32	16	
	H: 14 19 24				
	4.4 N, 126.1 E, 33 km (R)				
	Talaud Islands				
30	NUR	eP	18 43	32	
	H: 18 32 42.7				
	52.2 N, 169.6 W, 33 km (R)				
	Fox Islands				
30	NUR	iP	21 15	24.6 U	0.9 39.4
		i		30.0	
		ePP		17 38	
	KJN	iP	21 15	16.3 U	1.2 80.8
		i		27.5	
		iPcP		16 09.3	
		ePP		17 27	
		e		18 09	
	OUL	iP	21 15	21.8 U	
		iPcP		16 12.6	
	SOD	iP	21 15	23.0 U	
		i		29.0	
	KEV	iP	21 15	23.3 U	
		i		29.0	
		i		40.7	
	H: 21 05 30.4				
	26.2 N, 96.2 E, 44 km				
	Burma				
31	NUR	iP	03 43	47.1	0.9 23.0
		ePP		45 29	
	KJN	iP	03 43	27.2 U	1.1 40.5
		ePP		45 07	
	OUL	iP	03 43	31.3 U	
		ePP		45 22	
	SOD	iP	03 43	25.2	
		ePP		44 55	
	KEV	iP	03 43	20.0 U	0.9 31.9
	H: 03 35 36.3				
	47.9 N, 102.8 E, 33 km (R)				
	Mongolia				
31	NUR	eP	09 15	30	
	KJN	eP	09 15	29	1.1 16.2
	OUL	eP	09 15	32	

January

January

					T	A
31	KJN	iP	13 36 08.6			
	SOD	eP	13 36 09			
	H:		13 24 26.0			
			13.8 N, 120.8 E, 197 km			
			Mindoro, P.I.			
31	NUR	iP	17 54 40.5 U	0.7	42.8	
		i	52.0			
	KJN	iP	17 54 17.4 U	1.0	57.8	
		ePcP	55			
	OUL	iP	17 54 15.7 U			
	SOD	iP	17 54 05.1			
	KEV	iP	17 53 53.9	0.9	33.6	
		i	54 03.0			
		e	22			
	H:		17 43 56.2			
			42.8 N, 145.4 E, 44 km			
			Hokkaido, Japan			
31	NUR	iP	19 07 57.6			
		i	08 01.0			
		i	49.3			
		ePP	09 33			
		i	10 22.0			
		eSS	17 05			
	KJN	eP	19 08 11	1.0	55.6	
		i	15.0			
		i	09 03.6			
		iPP	50.9			
	OUL	iP	19 08 21.0			
		i	09 12.7			
		ePP	10 04			
	SOD	eP	19 08 35			
		i	38.4			
		e	09 26			
		ePP	10 18			
	KEV	iP	19 08 53.0 U	0.9	35.3	
		e	09 10			
		eSS	18 56			
	H:		19 00 22.7			
			26.5 N, 55.3 E, 16 km			
			Southern Iran			
31	NUR	iP	19 11 54.0			
		e	12 19			
	KJN	iP	19 12 10.0 D	0.8	16.9	
	OUL	iP	19 12 17.5			
	SOD	eP	19 12 34			

					T	A
31	NUR	eP	19 16 39			
	KJN	eP	19 16 53			
	OUL	iP	19 17 01.6			
	SOD	eP	19 17 17			
31	NUR	eP	20 14 11			
		i	13.2			
	KJN	iP	20 14 27.4	0.7	11.6	
		i	36.5			
	OUL	iP	20 14 34.4			
		i	37.0			
	SOD	eP	20 14 49			
	KEV	iP	20 15 05.5			
	H:		20 06 40			
			26.7 N, 55.5 E, 46 km			
			Southern Iran			
31	KJN	eP	21 00 35			
	H:		20 52 50			
			26.7 N, 55.4 E, 49 km			
			Southern Iran			
31	KJN	eP	21 09 29			
	OUL	iP	21 09 30.3			
	SOD	eP	21 09 26			
	H:		20 58 13.9			
			24.0 N, 121.6 E, 22 km			
			Taiwan			

June 1, 1967

Urmas Luosto  
Aili Huovila

February

February

				T	A					T	A		
1	NUR	iP	01 14 52.2	0.8	40.9	1	NUR	iPKP	18 03 47.0	1.0	27.4		
		i	54.8							H:	17 44 41		
		i	15 02.3								28.8 S, 179.9 W, 274 km		
		ePP	16 25								Kermadec Islands		
		e	17 04					1	NUR	eP	18 21 29		
		eS	20 50										
	KJN	iP	01 15 06.3					1	NUR	eP	19 48 31	0.8	11.3
		i	08.7							e	44		
		ePP	16 36						KJN	iP	19 48 05.0	0.9	10.7
		e	17 37						OUL	iP	19 48 01.9 D		
	OUL	iP	01 15 16.3				SOD	iP	19 47 47.0				
		ePP	16 56				KEV	eP	19 47 32				
	SOD	iP	01 15 29.7					H:	19 38 10				
		i	32.2						51.9 N, 159.9 E, 33 km (R)				
		e	16 50						Kamchatka				
		ePP	17 23			1	NUR	eP	20 55 47				
		e	39					e	56 18				
	KEV	eP	01 15 45			1	KJN	eP	21 00 26				
		i	47.3				OUL	eP	21 00 29				
		e	16 08			1	NUR	eP	21 56 56				
		eS	22 28					e	57 09				
		eSS	26 04			2	NUR	eP	01 26 06				
		H:	01 07 19.2				KJN	eP	01 25 56				
			26.7 N, 55.3 E, 19 km				SOD	eP	01 26 14				
			Southern Iran					H:	01 18 57				
1	NUR	eP	09 05 31						40.6 N, 75.3 E, 33 km (R)				
	OUL	iP	09 04 58.9						Kirgiz-Sinkiang border				
	SOD	eP	09 04 44			2	NUR	ePKP	06 02 10				
		H:	08 54 41.8				KJN	ePKP	06 02 12				
			52.5 N, 169.3 W, 33 km (R)				OUL	iPKP	06 02 03.4				
			Fox Islands					H:	05 43 03.8				
									15.9 S, 167.0 E, 14 km				
									New Hebrides Islands				
1	NUR	eP	09 28 37			2	NUR	iPKP	06 44 39.2 U	0.8	17.3		
		e	47					i	49.8				
	KJN	eP	09 28 09					ePP	46 24				
	OUL	iP	09 28 05.0					e	47 23				
		ipP	41.5					eSKS	51 40				
		H:	09 18 50.5					e	53 20				
			55.8 N, 160.7 E, 140 km (R)					e	54 23				
			Kamchatka					e	55 24				
								e	58 04				
								e	07 01 44				
								eSS	03 07				
								eSSS	07 46				
								e	11 36				
1	NUR	iP	15 32 47.3 D	0.8	21.2								
	KJN	iP	15 32 44.7 U	0.8	42.3								
		i	33 01.9										
	OUL	iP	15 32 48.9 U										
		i	33 05.6										
	SOD	iP	15 32 50.4 D										
	KEV	iP	15 32 53.4	0.9	23.5								
		H:	15 19 56.8										
			4.8 S, 103.2 E, 33 km										
			Southern Sumatra										

cont.

February

February

					T	A
KJN	iPKP	06 44	47.0 U	0.9	81.3	
	i		56.4			
	i	45	08.2			
	eSKP	48 17				
	e		39			
OUL	iPKP	06 44	47.3 U			
	e	48 02				
	iSKP		20.3			
SOD	iPKP	06 44	50.3			
	ePP	47 07				
	e	48 11				
	iSKP		28.5			
KEV	iPKP	06 44	55.0			
	iPP	47 21.2				
	eSKP	48 24				
	e	52 35				
	e	54 18				
	eSKSP	57 36				
	eSS	07 04 22				
	e	07 05				
H: 06 25 49.8						
57.9 S, 25.7 W, 81 km (R)						
South Sandwich Islands						
2	NUR	iP	07 45 06.0 U	1.0	70.0	
		i	13.1			
		i	30.4			
		ePP	46 27			
KJN	iP	07 45	01.8 U			
	e		23			
	ePP	46 16				
OUL	iP	07 45	10.2 U			
	iScP	51 12.7				
SOD	iP	07 45	14.3 U			
	i		23.3			
KEV	iP	07 45	21.0	0.8	27.4	
	i		52.4			
	e	46 26				
H: 07 37 54.9						
39.7 N, 75.5 E, 39 km						
Southern Sinkiang, China						
2	NUR	eP	08 57 44			
	KJN	eP	08 57 41			
	OUL	eP	08 57 47			
2	NUR	eP	14 59 56			
2	NUR	iP	16 35 03.6 U			
	i		11.9			
cont.						

					T	A
	i		55.2			
	ePP	37 21				
	eS	43 30				
	ePS	43				
	eScS	44 36				
	eSS	47 36				
	eSSS	50 58				
KJN	iP	16 34	41.8 D	1.0	58.9	
	i		46.7			
	ipP	35 25.3				
	ePP	36 56				
	eS	43 01				
OUL	iP	16 34	41.0 U			
	i		46.6			
	ipP	35 17.6				
	i		27.1			
	iPP	36 57.7				
SOD	iP	16 34	29.7 U			
	i		36.3			
	iPP	36 41.4				
	eS	42 21				
KEV	iP	16 34	19.2	1.0	30.0	
	i		25.2	0.7	27.1	
	epP	35 02				
	e	36 15				
	eS	42 08				
	esS	43 12				
	eScS	48				
	eSS	45 54				
	e	48 28				
H: 16 24 39.1						
41.6 N, 139.7 E, 176 km (R)						
Hokkaido, Japan						
2	NUR	ePKP	18 36 25			
	KJN	ePKP	18 36 24			
	OUL	ePKP	18 36 18			
H: 18 18 17.4						
4.3 S, 153.7 E, 247 km						
New Ireland						
2	NUR	eP	20 22 56			
	KJN	eP	20 23 09			
3	NUR	eP	08 28 10			
	KJN	iP	08 27 50.7 U	0.9	17.0	
	OUL	eP	08 27 51			
	SOD	eP	08 27 30			
H: 08 17 05.4						
36.5 N, 138.0 E, 26 km						
Honshu, Japan						

February

February

		T	A			T	A
3	NUR e(P) 09 18 47			3	NUR eP 13 01 29		
	H: 09 05 37				KJN iP 13 01 24.7 D 0.7 61.0		
	14.6 N, 93.4 W, 33 km (R)				e 11 20		
	Chiapas, Mexico				e 36		
3	NUR eP 12 43 06				OUL iP 13 01 28.2		
	KJN iP 12 43 01.5 D				SOD eP 13 01 27		
	OUL iP 12 43 05.0 D			3	NUR iP 21 37 21.8 0.8 11.8		
	H: 12 30 53.0				KJN eP 21 36 58		
	5.6 S, 110.5 E, 569 km				OUL iP 21 36 50.6 D		
	Java Sea				SOD eP 21 36 35		
3	NUR iP 13 00 24.2 U 0.9 33.6				KEV eP 21 36 15		
	i 26.3				H: 21 26 47.0		
	epP 02 23				55.5 N, 155.6 W, 33 km (R)		
	ePP 04 14				South of Alaska		
	e 06 52			4	NUR eP 09 07 14		
	e 09 10				e 40		
	eSKS 10 06			4	NUR eP 15 36 20		
	eS 40				e 35		
	eSP 11 56				eS 37 22		
	e 13 16				iSg 51.8		
	esPS 15 28				KJN iP 15 36 53.6		
	eSS 17 12				iS 38 20.4		
KJN	iP 13 00 18.5 U				iSg 39 07.4		
	i 20.4				OUL iP 15 36 50.9		
	i 32.5				eS 38 16		
	ipP 02 22.0				iSg 52.4		
	e 03 31				SOD eS 15 38 53		
	ePP 04 11				i 39 06.7		
	e 09 59				e 31		
	eSKS 10 19				iSg 56.3		
	e 26				KEV e 15 40 10		
	eS 30				eSg 41 00		
OUL	iP 13 00 22.1				H: 15 34 55.7		
	epP 02 26				59.6 N, 13.3 E, 33 km (R)		
SOD	iP 13 00 23.0 U				Sweden		
	i 29.2						
	epP 02 26			4	NUR iP 18 01 13.3 0.8 11.8		
KEV	iP 13 00 23.7 0.9 18.9				i 20.2		
	epP 02 20				KJN iP 18 00 57.4 0.8 10.8		
	e 06 44				OUL eP 18 00 56		
	eSKS 10 05				SOD iP 18 00 48.2		
	eS 34				KEV eP 18 00 41		
	eSP 12 02				H: 17 49 02.4		
	H: 12 48 09.2				25.5 N, 142.7 E, 33 km (R)		
	5.6 S, 110.5 E, 560 km				Volcano Islands		
	Java Sea						

February

February

				T	A					T	A	
5	NUR	iP	03 04 28.8			7	NUR	eP	08 41 52	0.8	15.4	
	KJN	eP	03 04 05				KJN	iP	08 41 37.6 D	0.8	20.0	
	OUL	iP	03 03 58.5					epP	42 17			
	SOD	eP	03 03 43				OUL	iP	08 41 37.6			
5	NUR	iP	19 07 06.8	1.0	14.4			epP	42 18			
		e	08 31				SOD	eP	08 41 30			
	KJN	eP	19 07 28	1.1	20.3			i	32.8			
		e	34				KEV	eP	08 41 25			
	SOD	eP	19 07 40					i	26.0			
		e	47					H:	08 28 57.9			
	KEV	e	19 09 24						13.9 N, 144.8 E, 138 km			
			H: 18 55 45.1						Mariana Islands			
			5.4 S, 11.4 W, 19 km			7	NUR	iP	15 03 36.2 U	1.0	83.9	
			Ascension Island					ipP	51.3			
6	NUR	ePKP	03 29 43					i	04 35.0			
	KJN	iPKP	03 29 46.2	0.6	8.9		KJN	iP	15 03 12.0 U			
	OUL	ePKP	03 29 43					ipP	27.4			
	SOD	ePKP	03 29 21					iPcP	59.6			
		e	43					e	04 15			
			H: 03 10 33.4				OUL	iP	15 03 04.7			
			22.8 S, 176.1 W, 90 km (R)					ipP	21.3			
			South of Fiji Islands					ePcP	54			
6	NUR	eP	03 36 31	0.7	24.3		SOD	iP	15 02 48.7 U			
		i	31.8					ipP	03 05.0			
		e	37 10					ePcP	46			
	KJN	iP	03 36 07.0 U	0.6	11.6		KEV	iP	15 02 31.1 U	0.7	27.1	
		e	54					ipP	47.2			
	OUL	eP	03 35 57					ePcP	03 35			
		i	58.9					H:	14 53 13.9			
	SOD	eP	03 35 40						56.7 N, 157.2 W, 67 km (R)			
		i	42.2						Alaska Peninsula			
		e	36 14			7	SOD	eP	16 30 28			
	KEV	eP	03 35 23			7	NUR	eP	19 50 19			
			H: 03 26 35.4					e	26			
			60.1 N, 152.8 W, 110 km					KJN	eP	19 50 00		
			Southern Alaska					OUL	eP	19 49 53		
6	NUR	eP	04 34 11					i	50 02.4			
			H: 04 23 24.4					SOD	e(P)	19 49 42		
			52.7 N, 169.3 W, 33 km (R)					H:	19 40 14.8			
			Fox Islands						55.2 N, 163.1 E, 33 km (R)			
									Kamchatka			
6	NUR	eP	04 39 57			8	NUR	eP	10 00 44			
	KJN	eP	04 39 46					iP	10 00 22.1 U			
	OUL	eP	04 39 49					SOD	eP	10 00 13		
	SOD	eP	04 39 54					H:	09 49 41.6			
6	NUR	iP	12 12 22.2	0.9	17.6				36.5 N, 137.8 E, 50 km			
									Honshu, Japan			



February

February

				T	A					T	A	
8	NUR	ePKP	15 54 49			9	NUR	iP	15 37 51.5 U	1.5	115.0	
		eSS	16 12 30					i	38 09.0			
		eSSS	17 42					e	40 13			
	KJN	iPKP	15 54 55.4	1.0	13.1			ePP	41 20			
		i	55 15.8					e	35			
	OUL	ePKP	15 54 48					e	46 07			
		e	57					e	47 36			
	H: 15 35 43							eSKS	48 20			
	58.3 S, 13.0 W, 33 km (R)							e	39			
	Southwestern Atlantic Ocean							eS	49 10			
								ePS	50 08			
8	NUR	iP	17 27 50.2					ePKKP	55 09			
		i	28 11.0					eLQ	16 01.0			
	KJN	eP	17 27 45				KJN	iP	15 37 55.3 U			
		i	28 25.5					i	38 06.4			
	OUL	eP	17 27 54					i	41 01.7			
	SOD	eP	17 27 50					iPP	34.4			
		e	28 07					i	43.4			
	KEV	eP	17 27 57					ePPP	43 35			
		e	28 20					e	46 20			
	H: 17 17 45.7							eSKS	48 25			
	23.2 N, 93.9 E, 33 km (R)							eS	45			
	Burma-India border							e	49 20			
								ePKKP	55 25			
8	NUR	iP	19 47 34.9 D	0.9	35.2		OUL	iP	15 37 50.0			
								i	38 00.5			
9	NUR	eP	03 48 49					ePP	41 27			
	SOD	eP	03 48 29					ePKKP	55 09			
							SOD	iP	15 37 50.3 D			
9	NUR	iP	14 13 01.7 D	0.8	367.5			i	38 02.0			
		i	15 16.2					ePP	41 26			
		eS	16 47					e	44			
		e	56				KEV	iP	15 37 49.0 D	1.4	236.6	
		ePcP	17 14					i	59.1			
	KJN	iP	14 13 40.4 U	0.8	72.3			e	39 31			
		i	41.4					e	45			
		eS	17 59					e	40 11			
		e	18 07					e	41 24			
		e	20 18					iPP	32.0			
	OUL	iP	14 13 46.7					i	42 33.8			
	SOD	iP	14 14 09.7 U					eSKS	48 18			
		i	58.3					eS	41			
		e	16 29					e	49 06			
	KEV	iP	14 14 31.0 U	0.9	37.0			H: 15 24 47.2				
		i	45.2					2.9 N, 74.9 W, 58 km (R)				
		iPP	15 27.2					Colombia				
		eS	19 26									
		e	20 16									
	H: 14 08 18.7						9	NUR	eP	18 27 26		
	40.0 N, 20.3 E, 3 km							KJN	eP	18 28 19		
	Greece-Albania border											
							9	NUR	eP	18 51 10		

February				T	A	February				T	A
9	NUR	eP	23 18 33			11	KJN	eP	00 43 37		
	KJN	iP	23 18 24.3	0.7	6.2		OUL	eP	00 43 33		
	OUL	iP	23 18 23.6				SOD	eP	00 43 36		
	SOD	eP	23 18 17				Moscow:				
							H: 00 32 16				
10	NUR	iP	05 54 24.1 D	1.0	16.0		11.0 N, 94.4 E				
		i	35.2				Andaman Islands				
	KJN	iP	05 54 23.4 D	0.6	10.3						
		i	44.4			11	NUR	iP	02 50 09.7 U	0.8	54.7
		ePP	55 54					e	39		
	OUL	iP	05 54 31.8				KJN	iP	02 49 44.1 U	0.8	51.5
	SOD	iP	05 54 37.8 D					i	47.8		
	KEV	iP	05 54 45.8 D	0.8	25.4			e	50 21		
	H: 05 46 27.9						OUL	iP	02 49 40.2 U		
	33.0 N, 75.5 E, 27 km						SOD	iP	02 49 25.8 U		
	Kashmir-India border						KEV	iP	02 49 11.0	0.9	55.8
								i	28.3		
10	NUR	iP	05 58 47.3 U	1.1	21.4		H: 02 39 47.1				
		i	59 01.0				51.7 N, 159.5 E, 21 km				
	KJN	iP	05 58 36.0 U	0.8	20.8		Kamchatka				
		i	44.9			11	NUR	eP	04 23 31		
		i	59 12.8				KJN	eP	04 23 06		
		ePP	06 00 11			11	NUR	eP	06 47 16		
	SOD	iP	05 58 43.0 U			11	NUR	eP	08 12 23		
	KEV	iP	05 58 45.8 D	0.7	31.5			i	27.7		
	H: 05 51 01.9							ePP	13 42		
	41.6 N, 86.2 E, 23 km						KJN	eP	08 12 21		
	Southern Sinkiang, China							i	27.0		
10	NUR	eP	06 53 15					ePP	13 38		
		i	21.8				OUL	iP	08 12 35.6		
	KJN	iP	06 52 38.0	1.0	19.6		SOD	eP	08 12 37		
		eS	55 48				KEV	eP	08 12 44		
	OUL	eP	06 52 26				H: 08 05 08				
		eS	55 23				36.7 N, 71.1 E, 58 km				
	SOD	eP	06 51 56				Afghanistan-USSR border				
		eS	54 25								
	KEV	eP	06 51 37								
		e	53 25								
10	NUR	eP	11 48 04								
10	SOD	eP	12 57 34			11	NUR	eP	09 35 33		
10	NUR	eP	19 03 36					i	40.2		
	KJN	eP	19 03 03					i	36 07.3		
	OUL	eP	19 02 48					ePP	37 16		
	SOD	eP	19 02 25					e	40 42		
10	NUR	iP	22 53 17.2 D	0.8	7.2			eSS	45 20		
	KJN	eP	22 53 56				KJN	eP	09 35 10	1.3	36.9
	KEV	eP	22 54 22					i	17.2		
		e	55 43				OUL	eP	09 35 10		
								i	19.7		
								ePP	36 54		
									cont.		

February

				T	A
	SOD	eP	09 35 05		
	KEV	eP	09 35 01		
		i	07.4		
		e	40 48		
	H: 09 27 29.6				
	52.0 N, 106.2 E, 5 km				
	Lake Baikal				
11	NUR	iP	14 43 40.9		
	KJN	eP	14 43 15		
	OUL	eP	14 43 14		
	SOD	eP	14 43 01		
	H: 14 33 06.3				
	48.2 N, 154.8 E, 26 km				
	Kurile Islands				
11	NUR	iP	15 24 53.4	1.0	16.0
	KJN	iP	15 25 10.0 D	0.8	20.0
		i	16.4		
	OUL	iP	15 25 20.1 U		
	SOD	iP	15 25 35.4 D		
	KEV	iP	15 25 52.1	0.9	23.0
	H: 15 18 06.3				
	30.5 N, 50.7 E, 42 km				
	Iran				
11	NUR	iP	15 36 00.2 D	0.9	20.2
		i	06.7		
		eS	39 48		
	KJN	iP	15 35 19.6 D	1.0	112.3
		i	31.7		
		e	36 23		
	OUL	iP	15 35 05.2 D		
		eS	37 58		
	SOD	iP	15 34 37.1		
		i	39.1		
		i	55.1		
		eS	37 05		
	KEV	iP	15 34 07.6	1.2	114.4
		i	08.8		
		i	21.1		
		i	37.7		
		e	35 33		
		eS	36 07		
	H: 15 31 27.1				
	79.6 N, 3.4 E, 33 km (R)				
	Greenland Sea				
11	NUR	eP	23 08 22		
	KJN	eP	23 08 30		
	SOD	eP	23 08 34		

February

				T	A
12	NUR	iP	16 14 01.3 D	0.6	42.5
		i	05.2		
		e	54		
		ePP	15 27		
	KJN	iP	16 14 01.4 D	0.7	21.9
		ipP	25.1		
		ePP	15 31		
	OUL	iP	16 14 10.8		
	SOD	iP	16 14 17.3 D		
	KEV	iP	16 14 26.2 D	0.7	15.8
	H: 16 06 48				
	35.8 N, 71.0 E, 100 km				
	Hindu Kush				
12	NUR	iP	16 43 52.0 D	0.8	14.4
	KJN	iP	16 43 27.0	0.8	8.5
	OUL	iP	16 43 21.3		
	SOD	eP	16 43 05		
	KEV	eP	16 42 45		
12	NUR	eP	16 52 52		
	KJN	iP	16 53 09.4 D	0.6	13.0
	OUL	iP	16 53 20.0 D		
	SOD	eP	16 53 35		
	H: 16 46 04				
	30.3 N, 50.3 E, 33 km (R)				
	Iran				
13	KJN	eP	06 13 15		
	H: 06 02 10.5				
	24.6 N, 121.3 E, 80 km				
	Taiwan				
13	NUR	iP	10 18 21.8 D	0.6	12.5
		i	47.0		
	KJN	iP	10 17 57.2 D	0.6	13.0
	OUL	iP	10 17 51.2 D		
	SOD	iP	10 17 35.4 D		
	KEV	eP	10 17 20		
	H: 10 07 34.5				
	52.5 N, 169.6 W, 51 km				
	Fox Islands				
13	NUR	iP	11 32 14.3 U	0.8	20.2
		e	33		
	KJN	iP	11 31 54.2 U	0.9	39.3
	OUL	iP	11 31 54.5		
	SOD	iP	11 31 44.7		
	H: 11 21 08.4				
	36.2 N, 139.7 E, 58 km				
	Honshu, Japan				

February

February

				T	A					T	A
13	NUR	iP	11 41 30.8	0.7	5.5	KJN	iP	01 47 05.2 D	1.0	36.0	
	KJN	iP	11 41 06.8			OUL	iP	01 47 12.9			
	OUL	iP	11 41 05.3			SOD	iP	01 47 12.3			
	SOD	iP	11 40 53.3			KEV	iP	01 47 17.0			
	H:		11 30 45			ePP		50 14			
			43.9 N, 148.4 E, 33 km (R)	e		52 04					
			Kurile Islands	eS		56 50					
						H:		01 36 04.7			
13	NUR	eP	15 29 13					13.7 N, 96.5 E, 27 km			
	KJN	eP	15 29 09					Andaman Islands			
13	NUR	iP	17 15 58.0 D	0.7	15.5	14	NUR	eP	01 50 32		
	KJN	eP	17 15 33				OUL	eP	01 50 32		
	OUL	eP	17 15 33				SOD	iP	01 50 33.3		
	SOD	eP	17 15 19			14	NUR	ePKP	05 20 32		
	H:		17 05 10.3				i		33.8		
			43.6 N, 147.4 E, 30 km				e		21 10		
			Kurile Islands				epPKP		22 44		
13	NUR	iP	20 54 40.8			KJN	ePKP	05 20 18			
	KJN	eP	20 54 14				i		25.4	0.8 73.1	
	OUL	iP	20 54 10.4			OUL	iPKP	05 20 25.8			
	SOD	eP	20 53 55			SOD	ePKP	05 20 21			
	H:		20 43 49			KEV	ePKP	05 20 17		1.0 54.0	
			51.1 N, 179.4 W, 33 km (R)				H:				
			Andreanof Islands					05 02 38.4			
								13.3 S, 171.3 E, 635 km			
13	NUR	iP	23 20 49.4 U	0.9	85.7			New Hebrides Islands			
		i									
		ePP	21 57			14	NUR	iP	14 47 08.3 D	0.7 19.4	
	KJN	iP	23 20 55.5 U	0.9	75.9		e		25		
		e	25 25				OUL	eP	14 47 48		
	OUL	iP	23 20 47.1 U			14	NUR	eP	17 35 06		
	SOD	iP	23 20 48.0			14	NUR	eP	17 44 34		
		i	56.5				OUL	eP	17 44 44		
	KEV	iP	23 20 47.2 U	1.6	168.3		Moscow:				
		i	57.5				H:		17 37 31		
		iPP	22 02.0					36.6 N, 69.5 E, 180 km			
		eS	25 54					Hindu Kush			
	H:		23 14 19.6								
			52.7 N, 34.1 W, 10 km								
			North Atlantic Ocean								
14	NUR	iP	01 47 10.2 D			14	NUR	ePKP	18 32 39		
		i	17.3				H:		18 13 14		
		i	49.6					19.4 S, 172.8 W, 33 km (R)			
		e	48 16					Tonga Islands			
		e	49 40								
		ePP	50								
		e	50 13			14	NUR	eP	22 13 35		
		ePPP	51 40				H:		22 02 44.5		
		eS	56 38					51.7 N, 178.2 E, 18 km			
		eP'P'	02 15 33					Rat Islands			
			cont.								

February

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15 NUR iP 01 53 34.0  
i 49.1  
e 55 09  
OUL iP 01 54 03.4 U  
SOD iP 01 54 19.1  
e 55 25  
H: 01 47 27.7  
34.5 N, 47.6 E, 38 km  
Western Iran

15 NUR eP 05 52 42  
H: 05 40 14  
17.1 S, 66.6 E, 33 km (R)  
Mascarene Islands

15 NUR iP 06 07 48.7 1.0 28.0  
i 08 04.0  
ePP 09 56  
e 10 47  
e 15 05  
eScS 17 35  
OUL eP 06 07 49  
i 08 02.6  
SOD iP 06 07 51.4  
e 08 01  
H: 05 57 24.6  
20.4 N, 94.1 E, 10 km  
Burma

15 NUR iP 07 35 48.7

15 NUR ePKP 15 25 54  
OUL iP 15 25 47.3  
H: 15 07 00  
11.9 S, 165.6 E, 24 km  
Santa Cruz Islands

15 NUR iP 16 23 57.8  
i 24 05.4  
ipP 26 09.1  
e 48  
esP 27 05  
ePP 28 09  
i 50.3  
epPP 29 47  
ePPP 30 27  
esPP 31 05  
eSKS 33 35  
e 34 15  
e 39  
eS 50  
eSP 36 04  
cont.

e 37 51  
esPS 39 52  
iPKKP 40 36.2  
eSS 41 48  
esSS 45 10  
e 46 44  
eP'P' 48 24  
eSKKKS 50 15  
KJN iP 16 24 04.4 U 1.4 275.4  
ipP 26 14.8  
esP 27 14  
iPP 28 15.4  
epPP 30 07  
esPP 31 25  
iSKS 33 47.3  
iS 34 55.4  
iPKKP 40 27.6  
e 42 20  
OUL iP 16 24 00.7  
ipP 26 11.0  
iPKKP 40 03.2  
i 42 20.2  
SOD iP 16 24 00.2  
ePP 28 16  
ePKKP 40 31  
KEV iP 16 24 01.2  
epP 26 11  
ePP 28 12  
epPP 30 10  
esPP 31 06  
iSKS 33 42.1  
eSKKS 34 16  
eSP 36 46  
ePS 37 28  
esPS 40 06  
eSS 42 03  
esSS 45 04  
H: 16 11 11.8  
9.0 S, 71.3 W, 597 km (R)  
Peru-Brazil border

15 NUR e 16 39 55  
e 40 01  
KJN e 16 39 57  
i 40 06.4  
OUL e 16 39 37  
SOD e 16 39 23

15 NUR ePKP 19 51 44  
KJN ePKP 19 51 43  
H: 19 32 21  
24.6 S, 177.6 W, 70 km  
South of Fiji Islands

February				T	A	February				T	A	
15	NUR	iP	23 49 22.0 D	0.7	8.8	KEV	ePKP	10 30 05				
	KJN	eP	23 49 28				ePP	32 30				
	OUL	eP	23 49 20				e	33 05				
	H: 23 42 56						iPKS	30.9				
	52.7 N, 33.9 W, 33 km (R)						ePPP	35 22				
	North Atlantic Ocean						eSKKS	39 20				
							eSKSP	42 34				
16	OUL	eP	09 02 10				ePPS	44 14				
	SOD	eP	09 01 37				e	46 06				
							eSS	49 42				
16	NUR	eP	12 01 33				H: 10 10 51.5					
	H: 11 55 19						23.7 S, 175.2 W, 19 km					
	35.8 N, 51.9 E, 17 km						Tonga Islands					
	Iran											
16	NUR	eP	12 05 39			17	NUR	eP	10 34 23			
							KJN	iP	10 34 03.6			
							OUL	iP	10 34 04.4			
17	NUR	iP	00 50 41.7	1.0	13.7		SOD	iP	10 33 55.2			
		e	51 22				KEV	eP	10 33 44			
		e	58									
		ePP	54 21			17	NUR	eP	18 09 21			
		eS	01 01 36									
	KJN	iP	00 50 31.8	0.9	11.6	17	NUR	eP	21 39 19			
	OUL	iP	00 50 34.3				OUL	iP	21 39 11.1			
	SOD	eP	00 50 31				SOD	eP	21 39 05			
	H: 00 37 42.5											
	4.4 N, 125.6 E, 66 km					17	KJN	eP	22 03 41			
	Talaud Islands						H: 21 52 13					
							0.3 S, 20.3 W, 33 km (R)					
							Central Mid-Atlantic Ridge					
17	NUR	ePKP	10 30 13									
		ePP	33 18				17	SOD	eP	22 41 53		
		e	36									
		iPKS	57.0				17	NUR	eP	22 48 59		
		i	34 18.1									
		i	35 35.0				18	NUR	eP	00 41 15		
		e	39 30					KJN	eP	00 41 25	1.3	32.6
		e	40 12					OUL	eP	00 41 32		
		eSKSP	43 18					H: 00 31 48				
		e	46 06					28.9 N, 43.4 W, 33 km (R)				
		eSS	51 54					North Atlantic Ridge				
		eSSS	56 26									
	KJN	ePKP	10 30 06			18	NUR	eP	02 54 01			
		i	13.7	1.4	156.6			iPKP	57 54.3	0.7	7.6	
		iPP	32 49.8					ePKKP	03 08 40			
		iPKS	33 46.6				KJN	iP	02 53 46.6 U	0.8	12.3	
	OUL	ePKP	10 30 03					ePKP	57 49			
		i	12.7					OUL	iP	02 53 47.9		
		ePP	32 53					ePKP	57 49			
	SOD	ePKP	10 30 07					ePKKP	03 08 41			
		ePP	32 31					cont.				

February

February

			T	A				T	A		
	SOD	eP	02 53 39			19	NUR	iPKP	18 13 06.0		
	H:		02 39 19.4				KJN	eSKP	18 16 21		
			5.9 S, 153.2 E, 41 km				OUL	iPKP	18 12 58.7		
			New Ireland				H:		17 53 50.6		
18	NUR	eP	04 00 06						21.7 S, 169.8 E, 33 km (R)		
									Loyalty Islands		
18	OUL	eP	06 57 08			19	NUR	iP	20 09 21.0	1.0	15.3
	SOD	eP	06 57 06				KJN	eP	20 09 30		
	H:		06 43 31.2				OUL	iP	20 08 51.0		
			6.4 S, 130.1 E, 159 km				SOD	eP	20 09 12		
			Banda Sea								
18	KJN	eP	09 46 19			19	NUR	iP	20 15 51.0 U	1.1	49.9
							e		16 14		
18	NUR	eP	10 01 24				KJN	iP	20 15 40.6 U	0.8	15.4
	OUL	eP	10 00 52				e		16 04		
	SOD	eP	10 00 35				ePP		17 02		
	H:		09 51 06				OUL	iP	20 15 48.2		
			57.5 N, 153.7 W, 51 km				SOD	iP	20 15 48.7		
			Kodiak Island				KEV	iP	20 15 52.1	0.7	15.1
							H:		20 08 20.9		
18	KJN	eP	10 34 19						42.0 N, 83.5 E, 33 km (R)		
	SOD	eP	10 34 03						Northern Sinkiang, China		
18	NUR	eP	20 43 53			19	NUR	iP	21 40 31.2	0.8	19.3
	OUL	eP	20 43 22				KJN	iP	21 40 06.2 U	0.7	8.9
18	NUR	eP	23 24 11				OUL	eP	21 40 00		
							SOD	eP	21 39 45		
19	NUR	eP	03 58 41				H:		21 29 42.4		
	KJN	eP	03 58 24						52.4 N, 169.5 W, 48 km		
									Fox Islands		
19	NUR	eP	06 43 16	0.7	7.4	19	NUR	iP	22 27 59.5		
	ePcP		53				i		28 10.5	1.4	168.6
	KJN	eP	06 42 51				ePP		32 01		
	OUL	iP	06 42 48.6				e		39 01		
	H:		06 32 52				eS		10		
			49.5 N, 154.1 E, 33 km (R)				ePS		40 27		
			Kurile Islands				ePKKP		44 41		
							e		45 07		
19	NUR	eP	12 40 15				KJN	iP	22 27 54.3 U	0.8	34.6
	KJN	eP	12 40 00				i		28 06.2		
	OUL	iP	12 40 01.8				i		22.7		
	SOD	iP	12 39 52.9				ePP		31 45		
	KEV	eP	12 39 46				eSKS		38 21		
	H:		12 28 10				e		35		
			19.1 N, 145.0 E, 380 km				eS		39 01		
			Mariana Islands				ePKKP		44 44		
							e		45 15		
19	NUR	eP	14 06 45				OUL	iP	22 27 58.4 U		
							ePKKP		44 42		
19	NUR	eP	16 03 11				e		45 06		

cont.







February							February						
					T	A						T	A
23	NUR	iP	14 37	10.0	0.8	26.5	24	KJN	eP	10 55	22		
		e		25				OUL	eP	10 55	26		
	KJN	iP	14 36	54.7 D	1.0	51.2		SOD	eP	10 55	24		
		i		37 09.0				H:		10 42	42.4		
	OUL	iP	14 36	57.6 D						7.2 S,	123.8 E,	575 km	
	SOD	iP	14 36	51.8						Banda Sea			
		e		37 20			24	NUR	eP	18 15	40		
	KEV	iP	14 36	47.9	0.9	33.6	24	NUR	eP	18 27	56		
	H:		14 25	43.9				KJN	eP	18 27	33		
			24.2 N,	122.5 E,	48 km			OUL	iP	18 27	24.8		
			Taiwan					SOD	eP	18 27	08		
								H:		18 18	10.5		
23	NUR	iP	19 01	57.1 U	0.8	25.0				60.3 N,	153.7 W,	165 km	
		e		02 13						Southern Alaska			
	KJN	iP	19 01	43.2 U	0.8	50.0	25	NUR	iP	00 28	43.1 D	0.7	17.2
		i		02 02.8				KJN	iP	00 28	20.5 D	0.6	34.3
	OUL	iP	19 01	35.1 U					i		23.6		
	SOD	iP	19 01	24.7 U				OUL	iP	00 28	20.1 D		
	KEV	iP	19 01	12.1	0.9	23.5		SOD	iP	00 28	08.7 D		
								KEV	iP	00 27	58.2	0.8	25.9
								H:		00 18	36		
23	NUR	iP	20 50	31.2 U	1.0	51.3				43.9 N,	139.1 E,	209 km	
	KJN	iP	20 50	14.4 U	0.8	43.8				Eastern Sea of Japan			
		i		22.1			25	KJN	eP	06 59	41		
	OUL	iP	20 50	16.7 U			25	KJN	eP	07 51	49		
	SOD	iP	20 50	09.8 U				OUL	eP	07 51	36		
	KEV	iP	20 50	04.1	0.9	31.9	25	NUR	eP	11 33	57		
		i		14.0					e		34 04		
		eS		59 16					e		35 57		
	H:		20 38	56.3					ePP		37 49		
			26.1 N,	128.5 E,	30 km			KJN	iP	11 33	52.2 U	1.2	80.8
			Ryukyu Islands						i		34 42.5		
23	NUR	eP	22 42	55					i		35 24.1		
	KJN	eP	22 43	42				OUL	iP	11 33	55.0 U		
	SOD	eP	22 44	09				SOD	iP	11 33	53.0		
	BCIS:								e		34 43		
	H:		22 38	50				KEV	iP	11 33	53.7 U		
			43.7 N,	15.9 E				H:		11 20	47.4		
			Yugoslavia							0.0 S,	123.9 E,	70 km	
23	NUR	eP	23 20	19						Northern Celebes			
24	NUR	iP	00 25	30.5			25	NUR	eP	11 51	56		
	KJN	iP	00 25	29.4 D	0.7	11.6			e		53 15		
	OUL	iP	00 25	38.9				KJN	iP	11 51	47.4 U	1.0	53.4
	SOD	eP	00 25	44					i		52 28.8		
	KEV	eP	00 25	52					i		54.2		
	Moscow:												cont.
	H:		00 17	36									
			33.3 N,	75.4 E									
			India										



February				T	A	February				T	A	
26	NUR	eP	23 07 46			KJN	iP	09 48 33.2	1.2	65.4		
	KJN	eP	23 07 53				i	44.4				
	OUL	iP	23 08 01.9				i	49 13.3				
27	KJN	eP	02 20 10			OUL	iP	09 48 32.6				
	OUL	eP	02 19 54				i	44.7				
	H: 02 06 42.5					SOD	iP	09 48 23.4				
	2.9 N, 74.8 W, 69 km						i	39.0				
	Colombia					KEV	iP	09 48 15.1				
27	NUR	eP	04 40 56				ePP	50 44				
27	NUR	eP	06 31 50	0.9	15.5		ePPP	52 18				
	KJN	eP	06 32 28				eS	57 10				
	OUL	eP	06 32 36				eScS	58 04				
27	NUR	eP	18 13 51				eSS	10 01 16				
	KJN	iP	18 13 10.5	1.0	24.0		e	05 00				
	OUL	iP	18 12 53.4				H: 09 37 18.0					
27	NUR	eP	21 04 16				32.7 N, 141.7 E, 23 km					
	i		20.0				South of Honshu, Japan					
	i		29.6			28	NUR	iP	14 26 51.6 D	0.5	15.8	
	i		38.3				KJN	iP	14 27 29.7	0.6	13.0	
	eS		07 00				e	41				
	e		04				OUL	iP	14 27 34.3			
KJN	eP		21 05 03				SOD	eP	14 27 56			
	i		12.8				H: 14 21 54					
	i		21.5				37.5 N, 21.3 E, 77 km					
	eS		08 24				Southern Greece					
	e		45			28	NUR	eP	15 26 08			
OUL	iP		21 05 14.1				KJN	eP	15 25 42			
	eS		08 55				OUL	iP	15 25 38.2			
SOD	iP		21 05 39.7				H: 15 15 56.0					
	i		53.2				53.1 N, 159.9 E, 33 km (R)					
	i		06 17.4				Kamchatka					
	eS		09 43			28	NUR	iP	18 38 05.0	0.8	20.2	
	e		10 00				KJN	eP	18 37 53			
KEV	eP		21 06 03				OUL	eP	18 37 54			
	i		12.0									
	i		18.6									
	e		55									
	e		07 47									
	BCIS:											
	H: 21 00 40											
	45.0 N, 27.1 E											
	Rumania											
28	NUR	iP	09 48 52.0	1.1	45.2							
	i		49 04.7									
	eS		58 20									
	eScS		56									
	eSS		10 03 05									
	cont.											

July 18, 1967

M. T. Porkka  
Aili Huovila

March

March

March				March			
	T	A		T	A		
1	NUR eP	01 50 03		2	NUR eP	08 02 17	
	KJN iP	01 49 52.4			OUL eP	08 02 39	
					H: 07 55 24.3		
1	KJN eP	05 16 40			32.1 N, 55.8 E, 33 km (R)		
	OUL eP	05 16 44			Iran		
	SOD eP	05 16 38		2	NUR iP	08 28 52.8 U	
	H: 05 04 18				KJN iP	08 28 32.5 U	0.6 35.6
	9.6 N, 122.2 E, 66 km				ipP	54.9	
	Negros, P.I.				OUL iP	08 28 32.7 U	
1	KJN iP	10 20 25.7 D	1.1 25.7		ipP	54.4	
	OUL iP	10 20 36.4 U			SOD iP	08 28 22.6 U	
	SOD eP	10 20 49			KEV iP	08 28 12.8 U	
	KEV eP	10 21 06			H: 08 17 44.5		
	H: 10 12 49.4				35.7 N, 139.9 E, 75 km		
	28.3 N, 57.1 E, 39 km				Honshu, Japan		
	Southern Iran			2	OUL iP	09 58 33.9	
1	KJN eP	14 37 32			SOD eP	09 58 38	
	OUL iP	14 37 38.6			H: 09 51 48		
	SOD eP	14 37 37			41.4 N, 71.4 E, 59 km		
	H: 14 24 26.5				Kirgiz SSR		
	1.5 N, 126.4 E, 49 km			2	KJN eP	11 56 16	
	Molucca Passage				OUL iP	11 56 22.4	
					SOD eP	11 56 25	
1	KJN eP	18 50 42			KEV iP	11 56 29.2	0.7 20.6
	OUL iP	18 50 41.8			H: 11 47 15		
	SOD iP	18 50 33.5			28.5 N, 86.4 E, 44 km		
	H: 18 39 59				Tibet		
	36.8 N, 137.9 E, 33 km (R)			2	NUR iP	20 57 59.2 D	0.8 38.9
	Honshu, Japan				i	58 10.0	
					KJN iP	20 57 33.4 D	
1	NUR iP	22 27 20.9	0.8 38.9		i	44.6	
	KJN iP	22 26 54.8 U	1.0 18.5		i	54.6	
	OUL iP	22 26 49.8 U			iPcP	58 28.2	
	i	55.6			OUL iP	20 57 28.2	
	SOD eP	22 26 35			i	38.2	
	H: 22 16 30.4				iPcP	58 26.8	
	51.4 N, 179.3 W, 33 km (R)				SOD iP	20 57 14.8 D	
	Andreanof Islands				i	25.8	
					ePcP	58 16	
2	NUR iP	03 00 49.3 U	0.9 20.2		KEV iP	20 56 58.6 D	0.7 29.7
	KJN iP	03 00 52.3 D	0.8 18.5		i	57 09.9	
	i	01 08.0			H: 20 47 37.6		
	OUL iP	03 00 46.9 D			52.4 N, 160.5 E, 18 km		
	SOD iP	03 00 46.1 D			Kamchatka		
	KEV iP	03 00 44.2	0.9 25.2	2	NUR iP	23 13 52.4 U	1.0 60.0
	H: 02 47 31.7				iPcP	14 34.1	
	0.3 S, 78.7 W, 121 km				e	15 16	
	Ecuador						

cont.

March

March

				T	A					T	A
	KJN	iP	23 13 25.6	1.0	54.5		SOD	iP	05 20 37.6		
		i	35.7					i	50.4		
		e	14 05					e	21 20		
	OUL	iP	23 13 20.2				KEV	iP	05 20 34.2 U	0.6	42.5
	SOD	eP	23 13 06					i	45.2		
		i	07.7					e	58		
	KEV	iP	23 12 52.1					epP	21 14		
	H: 23 03 39.7							eS	29 42		
	53.8 N, 160.5 E, 21 km							e	31 22		
	Kamchatka						H: 05 09 24.2				
3	NUR	eP	01 37 44				21.4 N, 121.8 E, 134 km				
	KJN	eP	01 38 24				Taiwan				
		i	38.6			4	NUR	iPKP	06 35 05.4		
	OUL	iP	01 38 26.1					i	17.0	1.2	91.2
	SOD	eP	01 38 50					e	55		
	H: 01 32 43							epPKP	36 20		
	37.7 N, 20.8 E, 33 km (R)							i	38 02.6		
	Ionian Sea							iSKP	29.3		
3	NUR	eP	06 00 28					iPKS	47.5		
	KJN	iP	06 00 37.1 U	1.0	25.1			esPKS	39 48		
		i	44.8				KJN	iPKP	06 35 09.0		
	KEV	eP	06 01 03					epPKP	36 11		
	H: 05 48 54.8							iSKP	38 17.0		
	5.3 S, 68.5 E, 35 km							iPKS	35.0		
	Chagos Archipelago							epPKS	39 13		
3	NUR	iP	12 31 42.7				OUL	iPKP	06 35 07.8		
3	NUR	eP	23 46 27					ipPKP	36 08.7		
4	NUR	iP	01 23 50.7	0.7	6.5			iSKP	38 14.9		
	KJN	iP	01 23 35.7 U	0.8	16.1			e	35		
	OUL	iP	01 23 38.4				SOD	ePKP	06 35 04		
	SOD	eP	01 23 34					eSKP	38 07		
	H: 01 12 31.6						KEV	iPKP	06 35 00.5 D	1.0	54.0
	24.8 N, 121.8 E, 68 km						H: 06 16 21.9				
	Taiwan						18.5 S, 175.4 W, 225 km (R)				
4	NUR	iP	05 20 52.8	1.0	38.0		Tonga Islands				
		i	55.9			4	NUR	iP	15 10 30.2	1.0	28.0
		i	21 22.7					e	39		
		eS	30 20				OUL	iP	15 09 59.5 D		
	KJN	iP	05 20 38.7 U				SOD	iP	15 09 45.0		
		i	21 04.7				KEV	eP	15 09 28		
		ipP	14.5				H: 14 59 39.2				
		e	46				52.1 N, 170.5 W, 42 km				
		eS	29 54				Fox Islands				
	OUL	iP	05 20 41.7 U			4	NUR	eP	15 24 08		
	cont.					4	NUR	iP	18 02 52.0 U	2.0	1245.9
								i	03 34.0		
								iS	06 42.1		
								eLR	18 08.0		
							cont.				

March				March			
		T	A		T	A	
KJN	eP	18 03	31				
	i		35.4				
OUL	iP	18 03	36.5				
	i		53.0				
	iS	08	31.2				
SOD	eP	18 03	59				
	i	04	08.1				
	i		18.3				
KEV	iP	18 04	20.2 U	1.6	271.5		
	i		23.0				
	i		37.4				
	e	05	06				
	iPP		22.7				
	ePcP	07	19				
	eS	09	22				
	eLR	18	12.5				
H: 17 58 06.4							
39.2 N, 24.6 E, 33 km (R)							
Aegean Sea							
4	NUR	iP	18 42 49.2				
	KJN	eP	18 43 28				
	OUL	eP	18 43 35				
	SOD	eP	18 43 56				
	KEV	eP	18 44 23				
H: 18 38 03							
39.0 N, 24.7 E, 35 km							
Aegean Sea							
4	OUL	iP	22 54 36.5				
	SOD	eP	22 54 41				
	KEV	eP	22 54 36				
H: 22 41 14.5							
7.8 N, 146.2 E, 20 km							
Caroline Islands							
5	NUR	eP	01 04 30				
BCIS:							
H: 00 59 38							
39.0 N, 24.8 E							
Aegean Sea							
5	NUR	eP	10 05 53				
	OUL	eP	10 05 27				
	SOD	eP	10 05 14				
H: 09 55 15							
46.8 N, 152.7 E, 33 km (R)							
Kurile Islands							
5	NUR	iP	17 26 16.0				
	e		31				
	iS	28	52.4				
cont.							
	KJN	eP	17 27 00				
	e		19				
	eS		30 19				
	e		35				
OUL	iP	17 27	11.5				
	i		31 00.7				
SOD	eP	17 27	36				
	e(S)		31 38				
H: 17 22 54							
45.8 N, 26.8 E, 130 km							
Rumania							
5	NUR	iP	18 57 49.3				
	eS		19 00 31				
KJN	iP	18 58	39.1	0.9	12.5		
	eS		19 01 59				
	e		02 45				
OUL	iP	18 58	50.7				
SOD	eP	18 59	15				
H: 18 54 18							
45.1 N, 25.3 E, 57 km							
Rumania							
5	NUR	iP	19 31 44.0 U	0.6	13.8		
	KJN	iP	19 31 35.5	0.5	9.6		
	OUL	iP	19 31 35.2 U				
	SOD	eP	19 31 29				
6	NUR	iP	00 12 21.7				
6	NUR	eP	02 55 02				
	KJN	iP	02 54 52.9 D	0.6	8.2		
	OUL	iP	02 54 56.5				
	SOD	eP	02 54 55				
H: 02 41 58.6							
3.9 N, 126.6 E, 83 km							
Talaud Islands							
6	NUR	iP	04 51 04.5 D	0.7	71.0		
	ipP		52 55.0				
	eS		59 55				
KJN	iP	04 50	45.3 D	0.6	54.1		
	i		47.4				
	epP		52 33				
	iPP		53 07.7				
	eS		59 22				
OUL	iP	04 50	47.0 D				
	i		51 02.8				
	i		40.0				
	ipP		52 39.3				
	isPP		53 31.5				
cont.							





March							March							
					T	A					T	A		
8	NUR	iPKP	22 32	47.8	0.6	35.0	9	KJN	eP	21 05	50			
		i		48.5				OUL	iP	21 05	48.5			
	KJN	iPKP	22 32	40.7 D	0.8	22.3		SOD	eP	21 05	48			
	OUL	iPKP	22 32	40.3 D				H: 20 59 43						
	SOD	iPKP	22 32	36.4				55.8 N, 34.3 W, 33 km (R)						
	KEV	iPKP	22 32	33.5	0.7	11.6		North Atlantic Ocean						
	H: 22 13 56.8													
	15.6 S, 167.6 E, 132 km							9	NUR	iP	21 06	49.4	0.8	14.4
	New Hebrides Islands								e		07 25			
								KJN	eP	21 06	31			
								e		07 08				
9	NUR	iPKP	07 17	34.2 D	0.8	20.2		OUL	iP	21 06	57.5			
		i		18 00.6										
		ePP		19 14										
		e		20 28				9	NUR	iP	21 17	50.8 D	0.9	25.2
		ePS		29 00					KJN	iP	21 17	32.5 D	0.6	11.0
		e		31 16					OUL	iP	21 17	33.2 U		
		eSS		36 17					SOD	iP	21 17	24.1 U		
		eSSS		40 22					H: 21 06 35.6					
	KJN	iPKP	07 17	26.7				30.3 N, 139.4 E, 248 km						
		i		55.7				South of Honshu, Japan						
	OUL	iPKP	07 17	24.1										
	SOD	ePKP	07 17	18				9	NUR	ePKP	21 44	24		
	KEV	ePKP	07 17	25					i		29.2			
		e		43					KJN	ePKP	21 44	18		
		ePPP		20 50					i		21.0			
		ePS		28 00					OUL	iPKP	21 44	19.9		
		eSS		33 40					H: 21 25 34.6					
		e		36 08				21.5 S, 176.3 W, 283 km						
		eSSS		38 56				Fiji Islands						
	H: 06 58 35.7													
	10.6 S, 166.3 E, 30 km							10	NUR	iP	00 42	15.0 U	0.6	52.5
	Santa Cruz Islands								KJN	iP	00 41	57.7 U	0.6	44.5
									OUL	iP	00 41	58.3 U		
9	NUR	iPKP	17 51	39.1 D	0.8	17.3			SOD	iP	00 41	50.0 U		
	KJN	iPKP	17 51	28.4					KEV	iP	00 41	42.2 U	0.7	45.2
	OUL	iPKP	17 51	30.2 D					H: 00 31 17.0					
	SOD	ePKP	17 51	24				28.7 N, 138.7 E, 490 km						
	H: 17 32 07							Bonin Islands						
	37.8 S, 176.8 E, 156 km													
	North Island, N.Z.							10	NUR	eP	00 51	09		
9	NUR	ePKP	18 21	34										
		eSSS		44 39				10	NUR	eP	14 27	10	0.9	18.5
	OUL	iPKP	18 21	27.9					KJN	iP	14 26	51.1	0.8	17.7
	KEV	ePS	18 32	12					OUL	iP	14 26	51.4		
		eSS		38 16					H: 14 16 26.8					
		eSSS		42 54				34.4 N, 137.6 E, 311 km						
	H: 18 02 45.7							Honshu, Japan						
	10.7 S, 166.3 E, 59 km													
	Santa Cruz Islands							10	NUR	eP	16 48	24		
									SOD	iP	16 48	41.5		

March							March							
					T	A						T	A	
10	NUR	eP	22 08 23				11	NUR	eP	14 57 45				
	KJN	iP	22 08 02.0						i	57.0				
	OUL	iP	22 08 00.4						eS	15 08 20				
	H: 21 57 39								KJN	iP	14 57 40.2	1.3	43.4	
	41.1 N, 142.1 E, 68 km									i	52.2			
	Hokkaido, Japan									i	58 12.4			
11	NUR	eP	04 22 14					OUL	eP	14 57 36				
11	NUR	iP	06 38 05.7 U	1.0	70.0			SOD	iP	14 57 28.1				
		i	30.6						i	40.5				
		ipP	50.2					KEV	iP	14 57 21.4	1.7	305.8		
		esP	39 13						i	34.0				
	KJN	iP	06 38 05.5 U	1.1	86.4				i	46.3				
		i	24.7						eS	15 07 42				
		ipP	50.2						eSS	13 04				
		isP	39 13.8					H: 14 44 59.2						
		ippP	38.7					19.1 N, 95.8 W, 33 km						
		isPP	40 41.0					Vera Cruz, Mexico						
	OUL	iP	06 38 15.0 U				11	NUR	iP	17 06 28.8 D	0.9	49.9		
		ipP	59.7						i	33.0				
		i	39 17.2					KJN	iP	17 06 20.7 D	1.1	44.6		
	SOD	iP	06 38 21.5 U						i	30.2				
		ippP	39 53.1						e	08 07				
	KEV	iP	06 38 30.6 D	0.9	52.1			OUL	iP	17 06 26.7 D				
		i	54.3					SOD	iP	17 06 27.0				
		epP	39 15					KEV	iP	17 06 29.3 D	1.0	22.1		
	H: 06 31 09.0									ePP	08 35			
	36.4 N, 70.7 E, 220 km								H: 16 56 48.7					
	Hindu Kush								28.4 N, 94.4 E, 7 km					
								India-China border						
11	NUR	iPKP	08 52 18.7	0.9	26.9		11	NUR	eP	18 54 28				
	KJN	ePKP	08 52 12					KJN	eP	18 54 26				
	OUL	iPKP	08 52 10.8					OUL	iP	18 54 34.0				
	KEV	ePS	09 02 48					H: 18 45 41						
	H: 08 33 27.4								29.2 N, 81.4 E, 8 km					
	10.7 S, 166.2 E, 49 km (R)								Nepal					
	Santa Cruz Islands								12	OUL	eP	01 33 43		
									SOD	eP	01 33 28			
								H: 01 23 49.5						
								51.1 N, 157.9 E, 21 km						
								Kamchatka						
11	NUR	iP	12 26 09.7	0.8	14.4		12	NUR	iP	03 02 36.8 U	0.5	33.8		
	KJN	eP	12 26 04					KJN	iP	03 02 14.2 U	1.0	81.8		
	OUL	eP	12 25 58						i	41.3				
11	NUR	eP	12 27 26					OUL	iP	03 02 13.4				
	KJN	eP	12 27 25						i	40.4				
	OUL	eP	12 27 13					SOD	iP	03 02 01.7				
	H: 12 22 47								KEV	iP	03 01 50.9	0.7	41.3	
	63.5 N, 18.4 W, 33 km (R)								H: 02 51 54.7					
	Iceland								42.6 N, 143.0 E, 33 km (R)					
								Hokkaido, Japan						

March						March					
				T	A						
						T			A		
12	NUR	eP	08 01 25			13	NUR	iP	17 40 18.4		
	OUL	iP	08 01 15.0				KJN	iP	17 40 07.8	1.1	33.8
								i	13.6		
12	KJN	eP	18 43 37				OUL	iP	17 40 14.6 D		
							SOD	eP	17 40 06		
13	NUR	eP	07 43 11				H: 17 27 11				
	KJN	eP	07 43 27				3.6 N, 126.5 E, 63 km				
	OUL	iP	07 43 53.3				Talaud Islands				
13	NUR	ePKP	07 55 45			13	NUR	eP	17 48 20		
		i	53.8				KJN	eP	17 48 56		
		iSKP	58 33.0				OUL	eP	17 49 03		
	KJN	ePKP	07 55 46				SOD	eP	17 49 25		
		eSKP	58 32				H: 17 43 24				
	OUL	iPKP	07 55 33.0				37.6 N, 22.6 E, 89 km				
		i	46.0				Southern Greece				
	SOD	ePKP	07 55 41			13	NUR	iP	19 14 11.7	1.0	24.0
		eSKP	58 13				KJN	iP	19 14 01.6	0.9	23.2
	H: 07 37 37.5							i	12.4		
	20.6 S, 178.4 W, 586 km						OUL	iP	19 14 04.8 D		
	Fiji Islands						SOD	iP	19 13 59.3		
							H: 19 01 01.4				
13	KJN	eP	11 54 43				3.6 N, 126.5 E, 35 km				
	OUL	iP	11 54 53.0 U				Talaud Islands				
	SOD	eP	11 55 08			13	NUR	iP	19 30 08.7 D	1.7	187.2
	H: 11 46 29							i	12.3		
	19.7 N, 39.1 E, 33 km (R)						ePP	31 54			
	Red Sea						eS	36 12			
13	NUR	iP	14 54 51.0 U	0.5	15.8		e	39 42			
		e	56 01				eLR	19 42.5			
	KJN	iP	14 54 26.8 D	0.5	12.5		KJN	iP	19 30 32.4 D	1.7	441.4
		e	55 41				ePcP	32 14			
	OUL	iP	14 54 20.9 U				ePP	25			
	SOD	iP	14 54 04.8				OUL	iP	19 30 42.0 D		
	KEV	iP	14 53 47.8 D	0.7	22.4		iPcP	32 18.2			
		i	54 12.8				iPP	35.0			
	H: 14 44 07.2						SOD	iP	19 30 59.2		
	53.7 N, 165.4 W, 33 km (R)						i	31 03.2			
	Fox Islands						ePcP	32 25			
13	NUR	iPKP	16 25 57.0	1.0	22.0		KEV	iP	19 31 16.4	1.5	149.4
	KJN	ePKP	16 26 00					i	20.4		
	OUL	iPKP	16 26 00.6				e	36 40			
	SOD	ePKP	16 26 01				eS	38 23			
	H: 16 06 54.3						H: 19 22 15.4				
	40.1 S, 74.5 W, 33 km (R)						19.7 N, 38.9 E, 7 km				
	Southern Chile						Red Sea				

March				March								
				T	A		T	A				
13	NUR	eP	21 49 03				KJN	iP	07 54 29.6 D	1.0	26.2	
		e	53 42					i	34.5			
	KJN	eP	21 48 21					e	50			
		i	41.4					eS	57 47			
		i	45.6					e	58 00			
	OUL	iP	21 48 09.6 U				OUL	iP	07 54 17.3 D			
		eS	51 32					iS	57 18.0			
	SOD	iP	21 47 37.7				SOD	iP	07 53 47.2			
		i	47.1					i	54 17.1			
		e	50 03					iS	56 26.7			
		eS	17					i	59 09.3			
	KEV	eP	21 47 08				KEV	iP	07 53 18.3			
		i	20.0	0.7	25.8			i	29.2	0.7	90.3	
		eS	49 26					i	45.2			
								e	55 08			
								eS	34			
	H: 21 44 04						H: 07 50 19.3					
	82.2 N, 39.7 E, 11 km						82.5 N, 36.2 E, 33 km (R)					
	Franz Josef Land						Franz Josef Land					
14	NUR	eP	02 41 28									
14	NUR	iP	07 07 41.4 U	1.2	330.6		14	NUR	eP	09 25 01		
		i	51.5									
		i	08 09.2				14	NUR	iP	14 42 09.6	0.8	11.5
		ePP	09 44					KJN	iP	14 42 09.2	0.8	7.7
		eS	15 26					OUL	iP	14 42 19.4 D		
		eScS	17 36					SOD	iP	14 42 25.8		
		eSS	19 10					KEV	eP	14 42 27		
	KJN	iP	07 07 32.7 U				H: 14 35 12					
		i	37.7				36.5 N, 70.6 E, 193 km					
		i	55.7				Hindu Kush					
		iPP	09 33.0									
		eS	15 12				14	NUR	ePKP	23 42 53		
		ePS	18						i	43 02.0		
	OUL	iP	07 07 39.5 U						iSKP	45 41.0		
	SOD	iP	07 07 39.8 U				KJN	ePKP	23 42 46			
		i	08 05.0						i	54.7		
		ePP	09 31						i	56.3		
	KEV	iP	07 07 42.7 U	1.3	201.2				eSKP	45 33		
		i	09 09.2						ePKS	46 26		
		ePP	43				OUL	iPKP	23 42 53.5			
		ePPP	11 12						iSKP	45 23.8		
		eS	15 30				SOD	ePKP	23 42 50			
		eScS	17 26						eSKP	45 19		
		eSS	19 06				H: 23 24 47.8					
	H: 06 58 04.6						23.0 S, 178.7 E, 650 km (R)					
	28.4 N, 94.3 E, 24 km						South of Fiji Islands					
	India-China border											
14	NUR	iP	07 55 13.3				15	NUR	ePKP	06 58 42		
		i	17.6					KJN	ePKP	06 58 35		
		i	25.8					OUL	iPKP	06 58 35.0 D		
		e	58 53				H: 06 39 59.8					
		eS	59 11				18.9 S, 169.3 E, 253 km					
							New Hebrides Islands					

cont.



March

March

				T	A					T	A		
18	NUR	eP	00 15 58			KJN	iP	01 24 29.8 U	1.1	74.3			
	KJN	eP	00 16 15	0.9	21.4		i	25 01.8					
		i	16.1				ePP	28 38					
		i	54.1				ePKKP	40 33					
	OUL	iP	00 16 26.8				e	41 10					
	SOD	eP	00 16 49			OUL	iP	01 24 33.0 U					
		e	58				i	25 05.8					
	KEV	eP	00 17 24				i	27 52.2					
	BCIS:						ePKKP	41 01					
	H: 00 10 56					SOD	eP	01 24 31					
	42.0 N, 46.3 E						ePP	28 33					
	Caucasus					KEV	i	01 25 16.3					
							ePKKP	40 52					
18	NUR	iP	01 12 54.3 D	0.9	21.8	H: 01 10 45.8							
		i	13 15.0			6.7 S, 129.9 E, 60 km							
	KJN	eP	01 12 31			Banda Sea							
		i	33.9										
18	NUR	ePKP	09 45 53			19	NUR	iP	03 05 50.8 U	0.8	21.6		
		iSKP	48 29.6				KJN	iP	03 05 33.4	1.0	17.4		
	KJN	iPKP	09 45 46.5				OUL	iP	03 05 35.7				
		iSKP	48 17.7				SOD	eP	03 05 29				
	OUL	iPKP	09 45 46.0				KEV	eP	03 05 21				
		iSKP	48 16.8				H: 02 54 22.4						
	SOD	ePKP	09 45 42				28.0 N, 130.5 E, 48 km						
		iSKP	48 09.3				Ryukyu Islands						
	H: 09 27 42.7					19	NUR	iP	04 12 18.7				
	20.7 S, 179.4 W, 650 km (R)						i	20.4					
	Fiji Islands						i	28.0					
18	NUR	iP	18 00 52.5	0.7	15.5		i	13 36.2					
		e	01 14				ePP	14 52					
	KJN	iP	18 00 31.7	0.8	20.0		ePPP	16 18					
		i	51.2				eS	21 08					
		i	01 05.9				eScS	22 14					
	OUL	iP	18 00 32.4				e	27					
		i	51.6			KJN	iP	04 11 56.4 D	1.4	94.5			
	SOD	iP	18 00 21.6				i	12 10.6					
	KEV	eP	18 00 12				iPcP	37.5					
		i	40.4				ePP	14 23					
	H: 17 49 50.8						ePPP	15 45					
	36.3 N, 139.8 E, 105 km						eScS	21 47					
	Honshu, Japan						e	22 05					
19	NUR	iP	01 24 38.7			OUL	iP	04 11 52.7					
		ePP	28 43				i	12 21.5					
		e	29 37				i	38.8					
		ePKKP	40 35				i	18 36.0					
		e	55			SOD	eP	04 11 39					
			cont.				i	41.3					
								cont.					

March

March

				T	A					T	A
	KEV	iP	04 11 29.0			19	NUR	iP	17 35 57.8	1.0	20.0
		i	32.9					i	36 08.7		
		i	37.5				KJN	iP	17 35 33.3 U		
		i	54.0					i	43.7		
		iPcP	12 24.0				OUL	iP	17 35 28.2 U		
		e	43					i	34.7		
		ePP	13 40				SOD	eP	17 35 13		
		e	14 12				KEV	eP	17 34 58		
		ePPP	15 16				H: 17 25 10.5				
		e	17 55				51.9 N, 180.0 E, 18 km				
		eS	19 28				Rat Islands				
		e	54			19	NUR	eP	22 01 28		
		eSS	23 34				H: 21 50 47				
	H: 04 01 36.7						45.8 N, 151.0 E, 33 km (R)				
	45.4 N, 151.3 E, 33 km (R)						Kurile Islands				
	Kurile Islands					20	NUR	iP	08 32 57.6 D		
19	NUR	iP	06 07 09.0	1.0	20.0		KJN	iP	08 32 33.6		
	KJN	iP	06 06 57.7 U	0.5	25.7		SOD	iP	08 32 08.8		
	OUL	iP	06 07 01.4				H: 08 23 00.4				
	SOD	iP	06 06 57.4				60.4 N, 149.5 W, 59 km				
	KEV	eP	06 06 55				Kenai Peninsula, Alaska				
	H: 05 55 03					20	NUR	eP	09 41 18		
	13.7 N, 120.6 E, 96 km						KJN	eP	09 40 54		
	Mindoro, P.I.						OUL	iP	09 40 52.7		
19	NUR	eP	07 37 32				SOD	eP	09 40 40		
	KJN	eP	07 37 36				H: 09 30 36.4				
19	NUR	eP	07 43 50				45.6 N, 151.5 E, 33 km (R)				
	KJN	eP	07 43 51				Kurile Islands				
19	NUR	eP	15 29 41			20	NUR	iP	10 58 47.2 D	1.0	20.0
	KJN	iP	15 29 30.4 D	0.8	10.0			iPcP	59 19.0		
		i	37.5				KJN	iP	10 58 21.6 D	1.0	14.2
	OUL	eP	15 29 33					iPcP	59 03.4		
	SOD	eP	15 29 29				OUL	iP	10 58 16.9		
	H: 15 17 11							iPcP	59 00.6		
	10.3 N, 125.9 E, 127 km						SOD	eP	10 58 02		
	Leyte, P.I.							ePcP	52		
							H: 10 48 07				
							51.8 N, 175.2 E, 50 km				
							Rat Islands				
19	NUR	eP	16 06 03			20	NUR	iP	13 42 14.3	1.0	164.0
		e	09					i	16.0		
	KJN	iP	16 05 50.6					i	22.1		
	OUL	iP	16 05 54.8					ePcP	44		
	SOD	eP	16 05 50				KJN	iP	13 41 51.4 D	1.1	129.6
	KEV	iP	16 05 51.4					i	42 04.6		
	H: 15 53 21							iPcP	31.5		
	10.4 N, 126.2 E, 33 km (R)						cont.				
	Philippine Islands										

March				March			
		T	A		T	A	
	OUL	iP	13 41 47.7		20	NUR	iP 14 03 38.1
		i	48.8			KJN	eP 14 03 22
	SOD	iP	13 41 34.8			SOD	eP 14 03 06
		i	37.8				
		ePcP	42 23		20	NUR	iP 14 55 00.2
	KEV	iP	13 41 24.5 D 0.8 76.1			KJN	iP 14 54 36.4
		i	29.4			OUL	eP 14 54 33
		iPcP	42 16.3			SOD	eP 14 54 21
		i	30.1			KEV	eP 14 54 08
	H:	13 31 34.0				H:	14 44 17.8
		45.6 N, 151.4 E, 51 km (R)					45.4 N, 151.5 E, 50 km (R)
		Kurile Islands					Kurile Islands
20	NUR	iP	13 49 33.3 D 0.6 13.8	20	NUR	iP	15 57 09.2 0.8 14.4
	KJN	eP	13 49 08			e	54
	OUL	eP	13 49 06		KJN	iP	15 56 45.4
	SOD	eP	13 48 54			ePcP	57 24
	KEV	eP	13 48 41		OUL	iP	15 56 41.9
	H:	13 38 53.7			SOD	eP	15 56 30
		45.7 N, 151.6 E, 50 km (R)				ePcP	57 17
		Kurile Islands				H:	15 46 29.4
							45.6 N, 151.2 E, 60 km (R)
							Kurile Islands
20	NUR	iP	13 51 34.1 U 0.7 59.3		20	NUR	eP 16 22 43
		i	48.8			OUL	eP 16 22 17
		ePcP	52 05			H:	16 12 01
		e	20				45.5 N, 151.1 E, 33 km (R)
	KJN	iP	13 51 09.6 U 0.9 45.5				Kurile Islands
		iPcP	49.3				
	OUL	iP	13 51 06.9		20	NUR	eP 16 26 58
	SOD	iP	13 50 53.8		20	NUR	iP 17 22 18.0 0.6 7.5
		i	51 03.6				i 27.8
		e	30			KJN	iP 17 21 55.1 D
	KEV	iP	13 50 42.9 U 0.8 38.1				e 22 39
		i	56.3			OUL	eP 17 21 50
		iPcP	51 32.1			SOD	eP 17 21 43
	H:	13 40 52.8				KEV	eP 17 21 29
		45.6 N, 151.5 E, 53 km (R)				H:	17 11 34.8
		Kurile Islands					45.5 N, 151.4 E, 33 km (R)
							Kurile Islands
20	NUR	iP	14 02 48.2 0.5 34.3		20	NUR	ePKP 19 26 34
		i	52.9				i 43.3 1.0 28.0
	KJN	iP	14 02 24.4 D 0.7 13.0				eSKP 30 11
		i	32.4			KJN	iPKP 19 26 36.4 U 0.8 19.2
		iPcP	03 05.7				iSKP 29 59.5
	OUL	iP	14 02 21.2			OUL	iPKP 19 26 34.2 D
	SOD	iP	14 02 08.8				eSKP 29 58
		i	14.8				cont.
	KEV	iP	14 01 56.9 D 0.6 22.0				
		i	02 05.4				
	H:	13 52 05.5					
		45.6 N, 151.5 E, 32 km					
		Kurile Islands					



March

				T	A	
	SOD	ePKP	19 26 31			
	KEV	ePKP	19 26 32			
	H: 19 07 25.2					
	22.1 S, 170.6 E, 28 km					
	Loyalty Islands					
20	NUR	iP	22 05 54.2 U	0.9	25.2	
	KJN	iP	22 05 33.8 U	1.0	26.2	
		i	54.4			
	OUL	iP	22 05 33.5 U			
		i	54.3			
	SOD	iP	22 05 23.7			
		i	26.2			
	KEV	eP	22 05 15			
	H: 21 54 48.0					
	36.3 N, 139.7 E, 57 km					
	Honshu, Japan					
20	NUR	eP	22 36 32			
		e	38 17			
	KJN	iP	22 36 50.6			
		i	52.9			
	OUL	iP	22 37 00.7			
	SOD	eP	22 37 19			
	H: 22 30 44					
	35.8 N, 44.2 E, 43 km					
	Iraq					
21	NUR	eP	18 24 18			
		ipP	57.4			
	KJN	iP	18 24 19.5 D	1.2	80.8	
		i	46.8			
		ipP	25 01.6			
	OUL	iP	18 24 14.2			
		i	41.4			
		i	25 18.3			
	SOD	iP	18 24 13.7			
		epP	55			
	KEV	iP	18 24 13.1	1.0	28.0	
	H: 18 11 42.2					
	6.8 N, 73.0 W, 151 km (R)					
	Northern Colombia					
22	NUR	ePKP	00 29 46			
	OUL	ePKP	00 29 33			
	H: 00 10 51.7					
	11.7 S, 165.5 E, 33 km (R)					
	Santa Cruz Islands					
22	NUR	eP	06 09 06			
	H: 05 58 26					
	51.6 N, 173.9 E, 33 km (R)					
	Near Islands					

March

				T	A	
22	NUR	iP	18 07 22.1	0.8	13.0	
	KJN	eP	18 07 14			
	OUL	eP	18 07 14			
	SOD	eP	18 06 52			
22	NUR	ePKP	21 36 30			
	KJN	ePKP	21 36 36			
	OUL	ePKP	21 36 37			
	SOD	ePKP	21 36 42			
	H: 21 17 34					
	56.1 S, 27.6 W, 23 km					
	South Sandwich Islands					
22	NUR	eP	22 45 47			
	SOD	eP	22 45 48			
23	NUR	iP	03 47 35.6			
23	NUR	iP	13 52 39.9	0.6	18.3	
	KJN	iP	13 52 15.5 D	0.8	8.5	
	OUL	iP	13 52 14.0 D			
	SOD	eP	13 52 01			
	H: 13 41 58					
	45.8 N, 151.9 E, 33 km (R)					
	Kurile Islands					
23	NUR	iP	15 13 15.4	0.7	17.6	
	KJN	iP	15 13 13.6	0.7	17.1	
	OUL	iP	15 13 18.0 U			
	SOD	iP	15 13 19.3 D			
	KEV	iP	15 13 22.2 D	0.8	21.6	
	H: 15 00 27.8					
	4.7 S, 101.8 E, 33 km (R)					
	Southern Sumatra					
24	NUR	eP	01 19 31			
	KJN	iP	01 19 16.5			
		i	24.6			
	OUL	eP	01 19 20			
	SOD	eP	01 19 13			
	H: 01 08 06.7					
	24.2 N, 121.5 E, 47 km					
	Taiwan					
24	NUR	eP	01 34 07			
	H: 01 23 25					
	45.3 N, 151.0 E, 33 km (R)					
	Kurile Islands					
24	NUR	iP	02 05 33.8	0.9	9.8	
	KJN	eP	02 05 58			
	OUL	eP	02 06 05			

cont.

March

March

				T	A					T	A			
	SOD	eP	02 06 24					KJN	iP	09 12 30.3	U	1.0	53.4	
			H: 01 57 49						ipP	14 40.3				
			20.2 N, 38.3 E, 33 km (R)						i	15 13.5				
			Red Sea						esP	42				
24	NUR	iP	02 09 26.0	0.7	8.8				ePP	16 20				
	KJN	iP	02 09 22.3	1.0	27.3				i	17 06.3				
	OUL	eP	02 09 30						ipPP	18 15.3				
			H: 01 56 24						esPP	19 17				
			6.0 S, 105.3 E, 22 km						e	20 16				
			Sunda Strait						eSKS	22 08				
24	NUR	eP	03 26 39						eS	45				
	KJN	iP	03 26 28.0	0.7	6.9				ePKKP	29 33				
	OUL	iP	03 26 41.6					OUL	iP	09 12 34.2	U			
	SOD	eP	03 26 34						ipP	14 43.8				
			H: 03 19 00						isPP	19 27.8				
			42.5 N, 86.5 E, 33 km (R)						iSP	24 08.0				
			Northern Sinkiang, China						iSPP	25 20.3				
24	NUR	iP	04 22 29.5	D	0.6	19.5			ipPKP	29 34.4				
	KJN	iP	04 22 07.7	D	0.7	26.0			SOD	iP	09 12 33.3			
	OUL	iP	04 22 06.7	D					ipP	14 35.3				
	SOD	iP	04 21 55.3						iPP	16 21.6				
			H: 04 11 29.6						KEV	iP	09 12 34.1			
			40.2 N, 144.6 E, 27 km						ipP	14 44.0				
			Honshu, Japan						esP	15 43				
24	NUR	eP	06 30 38						ePP	16 27				
	KJN	eP	06 30 28						epPP	18 26				
			H: 06 18 02						e	20 44				
			12.1 N, 125.9 E, 16 km						eSKS	22 10				
			Samar, P.I.						eS	48				
									eSP	24 15				
									eSPP	25 20				
									e	26 06				
									H: 09 00 19.5					
									6.0 S, 112.3 E, 600 km (R)					
									Java Sea					
24	NUR	iP	09 12 35.3											
		ipP	14 46.0	2.0	863.1			24	OUL	iP	11 19 16.7			
		iPP	16 30.7											
		i	39.0											
		epPP	18 30											
		esPP	19 28											
		iSKS	22 11.8					24	NUR	iP	11 58 29.0	0.6	14.6	
		eS	52							ePKKP	12 15 28			
		eSP	24 14						KJN	iP	11 58 23.8	0.7	13.7	
		eSPP	25 18							ipP	12 00 35.1			
		e	26 16							OUL	iP	11 58 27.9		
		esS	44							SOD	eP	11 58 28		
		esPS	28 00							KEV	e	11 58 47		
		eSS	29 28							H: 11 46 13.9				
		ePKKP	34							6.0 S, 112.3 E, 600 km (R)				
		esSS	32 34							Java Sea				
		eSSS	33 20											
			cont.					24	NUR	eP	13 13 14			

March

March

		T	A			T	A
24	NUR eP	17	42 18	25	NUR eP	07	46 30
	KJN eP	17	42 58		KJN iP	07	46 14.5
	OUL eP	17	43 03		OUL iP	07	46 17.3
	SOD eP	17	43 25		SOD iP	07	46 12.6
	H: 17 38 18				KEV eP	07	46 07
	46.6 N, 7.7 E, 33 km (R)				H: 07 35 16.5		
	Switzerland				24.9 N, 122.3 E, 122 km		
					Taiwan		
24	NUR eP	18	41 38	25	NUR eP	07	52 31
	KJN eP	18	41 08				
	OUL eP	18	41 13				
	SOD eP	18	41 04				
	H: 18 29 23						
	27.9 N, 142.7 E, 33 km (R)						
	Bonin Islands						
24	NUR ePKP	19	29 17	25	NUR eP	22	33 58
	KJN ePKP	19	29 07		e		34 03
	i		14.0		OUL iP	22	34 18.9 D
	OUL iP	19	29 06.0		SOD iP	22	34 30.4 D
	SOD ePKP	19	29 03		KEV iP	22	34 44.0
	KEV ePKP	19	28 57		i		54.8
	H: 19 09 19				H: 22 26 29		
	40.6 S, 176.5 E, 33 km (R)				28.8 N, 60.3 E, 41 km		
	North Island, N.Z.				Southern Iran		
24	NUR ePKP	23	17 48	25	NUR iP	22	58 40.8 D
	iSKP	20	30.0		i		55.5
	KJN iSKP	23	20 18.0		ePPP	23	02 46
	OUL ePKP	23	17 41		eS		07 30
	eSKP	20	16		eScS		08 40
	SOD eSKP	23	20 03		eSS		11 52
	i		09.7		e		15 08
	H: 22 59 47.3				KJN iP	22	58 17.9 U
	20.2 S, 179.0 W, 654 km				i		29.7
	Fiji Islands				OUL iP	22	58 15.1
					SOD iP	22	58 02.4
25	NUR iP	06	04 23.0 U		e		16
	e		54		KEV iP	22	57 50.5
	i		05 19.4		i		58 03.3
	KJN iP	06	04 10.0 U		e		34
	i		39.2		ePPP	23	01 32
	i		57.5		eS		05 42
	OUL iP	06	04 16.7		eScS		07 40
	i		35.3		eSS		10 00
	i		56.5		H: 22 47 58.4		
	SOD iP	06	04 17.1 U		45.5 N, 151.4 E, 41 km		
	e		55		Kurile Islands		
	KEV iP	06	04 20.0	26	NUR eP	03	16 35
	i		05 15.0		KJN e(P)	03	16 54
	BCIS:				OUL eP	03	16 48
	H: 05 58 00				SOD eP	03	16 59
	50.0 N, 78.0 E				H: 03 08 27		
	Kazakh SSR				27.2 N, 67.5 E, 21 km		
					West Pakistan		

March						March					
				T	A						
26	KJN eP	04 33 25				27	NUR iP	09 08 15.8 D	0.8	52.2	
	OUL iP	04 33 17.5					i	22.3	0.9	137.8	
	SOD eP	04 33 01					eS	16 24			
	H: 04 24 13.5						eSS	20 38			
	64.1 N, 147.2 W, 33 km						KJN iP	09 07 57.0 D	0.8	24.6	
	Central Alaska						i	08 04.3	0.9	93.8	
26	NUR iP	05 27 07.0	0.9	33.6			OUL iP	09 08 00.5			
							i	07.5			
26	KJN eP	08 01 28					SOD iP	09 07 53.0			
	OUL iP	08 01 23.6 D					i	08 00.1			
	SOD eP	08 01 08					KEV iP	09 07 47.7			
	H: 07 51 07						i	54.6	0.9	50.8	
	51.3 N, 174.4 E, 33 km (R)						ePP	08 06.1			
	Near Islands						e	09 56			
26	NUR iP	16 33 18.2	0.4	14.7			eS	10 34			
	KJN iP	16 33 01.3					eSS	15 28			
	OUL iP	16 33 01.9					H: 08 58 25.5				
	SOD iP	16 32 53.5					38.4 N, 116.5 E, 61 km (R)				
	H: 16 22 10						Northeastern China				
	27.7 N, 139.8 E, 450 km					27	NUR ePKP	10 20 50			
	Bonin Islands						eSS	40 10			
26	NUR eP	17 13 30					KJN ePKP	10 20 45			
	KJN iP	17 13 20.5	0.6	8.2			OUL iPKP	10 20 42.9			
	e	34					KEV ePKP	10 20 36			
	OUL iP	17 13 22.9					ePS	32 15			
	SOD eP	17 13 18					e	34 20			
	H: 17 00 33						eSS	38 36			
	5.5 N, 126.3 E, 87 km						eSSS	43 02			
	Mindanao, P.I.						H: 10 01 42.0				
26	NUR iPKP	21 29 44.7	1.0	19.6			16.5 S, 168.1 E, 11 km				
	KJN iPKP	21 29 36.0	0.9	15.2			New Hebrides Islands				
	i	46.0				27	NUR iP	11 50 44.4			
	OUL iPKP	21 29 35.0 U					KJN iP	11 50 23.9	0.6	10.3	
	SOD iPKP	21 29 28.2					OUL iP	11 50 24.0			
	H: 21 09 57						SOD eP	11 50 15			
	35.5 S, 179.6 W, 33 km (R)						H: 11 39 34.4				
	North Island, N.Z.						35.7 N, 139.1 E, 36 km				
27	NUR eP	08 19 52					Honshu, Japan				
	KJN iP	08 19 54.4 U	1.3	56.4			27	KJN eP	18 32 22		
	OUL iP	08 20 01.7					OUL eP	18 32 28			
	SOD iP	08 20 07.3					H: 18 19 32				
	i	13.0					5.8 N, 126.4 E, 33 km (R)				
	KEV eP	08 20 15					Mindanao, P.I.				
	Moscow:						27	NUR eP	20 01 28	1.2	28.5
	H: 08 09 44						KJN iP	20 01 53.3	1.5	86.6	
	15.1 N, 80.5 E						OUL iP	20 02 05.1			
	Bay of Bengal						SOD eP	20 02 22			
							H: 19 53 41				
							20.0 N, 38.6 E, 23 km				
							Red Sea				

March				T	A	March				T	A
28	NUR	eP	00 09 20			29	NUR	iPKP	02 08 15.7 U	0.7	31.7
	KJN	iP	00 09 57.1					i	24.0		
	OUL	iP	00 10 03.9				KJN	ePKP	02 08 05		
	SOD	eP	00 10 26				OUL	ePKP	02 08 04		
	H: 00 04 27							i	13.6		
	38.5 N, 25.3 E, 34 km						SOD	ePKP	02 08 02		
	Aegean Sea						Moscow:				
28	NUR	iP	05 21 22.9 U	1.0	62.0		H: 01 48 39				
	KJN	eP	05 21 11				30.7 S, 178.9 W				
							Kermadec Islands				
28	KJN	iP	07 14 47.8	0.7	7.5	29	NUR	eP	02 45 12		
28	NUR	eP	13 29 38			29	KJN	eP	05 50 38		
28	NUR	eP	15 53 01				OUL	iP	05 50 24.2		
		eS	55 47					e(S)	53 07		
	KJN	eP	15 53 39				SOD	eP	05 49 54		
		eS	57 09					eS	51 51		
	OUL	eP	15 53 44				KEV	eP	05 49 26		
	SOD	eP	15 54 04					eS	51 07		
	H: 15 49 23					29	NUR	eSS	11 06 52		
	50.5 N, 4.1 E, 18 km						KJN	eP	10 47 27		
	Belgium						OUL	eP	10 47 31		
28	NUR	eP	19 44 26				H: 10 33 38.4				
	KJN	iP	19 44 12.3 U	1.0	13.1		2.4 S, 138.5 E, 38 km				
		i	34.1				West New Guinea				
	OUL	iP	19 44 15.8 U			29	SOD	eP	17 04 46		
	SOD	eP	19 44 11				H: 16 51 51				
	KEV	eP	19 44 09				2.6 N, 128.9 E, 147 km				
	H: 19 32 25.4						Halmahera				
	17.1 N, 122.4 E, 51 km					29	NUR	ePKP	17 27 49		
	Luzon, P.I.							iSKP	30 07.5		
28	NUR	eP	21 23 37	0.7	21.1			i	15.5		
		i	47.0					e	31		
	KJN	eP	21 23 27				KJN	iSKP	17 29 54.2		
	OUL	eP	21 23 28				OUL	eSKP	17 29 56		
	KEV	eP	21 22 50				SOD	iSKP	17 29 46.4		
28	NUR	iP	21 39 38.0				H: 17 09 21.9				
	OUL	iP	21 39 27.9				20.1 S, 179.0 W, 610 km (R)				
	SOD	eP	21 38 06				Fiji Islands				
29	NUR	iP	01 20 08.2	0.7	21.1	30	NUR	iP	02 21 46.1	0.9	32.7
	KJN	iP	01 20 05.1 U	0.8	23.8			i	54.2		
	OUL	iP	01 20 10.2 U					e	22 16		
	SOD	iP	01 20 11.1					e	24 33		
	KEV	eP	01 20 12					ePP	25 43		
	H: 01 07 24.0							e	56		
	4.8 S, 103.2 E, 92 km							e	27 04		
	Southern Sumatra							e	29 58		

cont.

March		T	A	March		T	A
	eSKS	32 24		30	NUR eP	13 16 54	
	ePS	34 46			e	17 42	
	ePKKP	38 05			KJN eP	13 16 55	
	e	44			OUL eP	13 17 04	
	eSS	40 11			SOD eP	13 17 11	
KJN	iP	02 21 40.4	D 0.7	43.2	H: 13 09 51		
	i	51.7			36.2 N, 70.9 E, 172 km		
	ePP	25 30			Hindu Kush		
OUL	iP	02 21 44.6	U				
	i	53.4		30	NUR eP	17 05 00	
	ePP	25 30					
SOD	iP	02 21 43.8	U		30	NUR eSS	23 44 46
	i	55.2			KEV eSS	23 42 38	
	e	22 52			eSSS	46 44	
	ePP	25 36			H: 23 04 46		
	e	51			16.9 S, 176.9 W, 33 km (R)		
KEV	iP	02 21 44.7	0.8	31.7	Fiji Islands		
	ePP	25 52					
	e	26 07		31	NUR iP	02 23 10.2	U 1.0 90.0
	ePPP	28 06			i	23.8	
	e	31 02			e	32 46	
	eSKS	32 22			eSS	36 52	
	ePS	34 44			KJN iP	02 22 45.7	U 1.0 55.6
	ePPS	35 32			OUL iP	02 22 39.9	U
	e	37 54			SOD iP	02 22 24.5	U
	eSS	40 22			i	48.0	
H: 02 08 02.4					KEV iP	02 22 07.7	U 1.0 54.0
11.0 S, 115.5 E, 33 km (R)					e	30	
South of Bali Island					H: 02 12 17.8		
					52.1 N, 169.7 W, 28 km		
					Fox Islands		
30	KJN eP	03 33 00					
	OUL eP	03 32 47		31	NUR iP	03 26 05.0	0.9 10.1
	SOD eP	03 32 23			i	10.0	
	KEV eP	03 32 09			e	27 10	
H: 03 27 42					KJN eP	03 26 33	
85.7 N, 86.0 E, 33 km (R)					OUL iP	03 26 43.4	
North of Severnaya Zemlya					SOD eP	03 27 01	
					KEV eP	03 27 18	
					H: 03 18 24.2		
30	OUL eP	08 00 50			20.2 N, 38.6 E, 33 km (R)		
	SOD iP	08 00 19.4			Red Sea		
				31	NUR eP	04 28 01	
30	KJN iP	08 46 21.0	U 1.7	122.9	e	10	
	OUL iP	08 46 11.0			KJN eP	04 27 41	
	SOD eP	08 45 48			i	45.2	
	KEV e	08 45 29			OUL iP	04 27 33.6	
H: 08 41 14					i	36.7	
86.4 N, 71.6 E, 33 km (R)					ipP	51.9	
North of Severnaya Zemlya					cont.		

March

					T	A
	SOD	iP	04 27	17.2		
		i		20.3		
		ipP		35.3		
		i		43.6		
	KEV	eP	04 27	01		
	H:		04 18	31.1		
			63.1 N,	148.5 W,		83 km
			Central Alaska			
31	NUR	iP	07 07	03.0 U	0.8	15.8
	KJN	iP	07 06	51.2 D	0.7	27.4
	OUL	iP	07 06	54.3 U		
	SOD	iP	07 06	50.8		
	KEV	iP	07 06	47.5	0.7	9.0
	H:		06 54	38.8		
			12.8 N,	123.1 E,		33 km (R)
			Luzon, P.I.			
31	NUR	eP	09 26	11		
	KJN	iP	09 25	45.0 D		
	OUL	iP	09 25	40.1 U		
	SOD	iP	09 25	24.7		
	KEV	eP	09 25	09		
	H:		09 15	29.1		
			51.8 N,	176.2 E,		48 km
			Rat Islands			
31	OUL	ePKP	10 49	08		
	SOD	ePKP	10 49	07		
	H:		10 29	44		
			35.7 S;	102.7 W,		33 km (R)
			Southern Pacific Ocean			

March

					T	A
31	SOD	ePKP	10 53	21		
	H:		10 34	01		
			35.6 S,	103.0 W,		33 km (R)
			Southern Pacific Ocean			
31	NUR	iPKP	20 24	09.4	1.2	114.0
	KJN	iPKP	20 24	02.1 U	1.0	60.0
		ipPKP		36.2		
	OUL	iPKP	20 24	02.0 U		
	SOD	iPKP	20 23	58.1		
	KEV	iPKP	20 23	55.0 U	0.8	38.9
		e		24 06		
	H:		20 05	18.9		
			15.4 S,	167.5 E,		132 km
			New Hebrides Islands			
31	NUR	eP	22 12	55		

August 9, 1967  
Urmass Luosto  
Aili Huovila

21 DEC 1967

Helsinki, Finland  
Prel. Bull. 1967

KEVO (KEV) station has not been in operation between April 26 and June 1.

April

T A

1 NUR iP 06 04 59.6  
iPcP 05 32.0  
ePcS 09 24  
eS 13 48  
eScS 14 55  
eSS 17 40  
KJN iP 06 04 36.2 U 1.0 102.5  
i 51.2  
iPcP 05 18.2  
eScS 14 30  
e 42  
OUL iP 06 04 34.5 D  
iPcP 05 17.1  
SOD iP 06 04 21.0  
i 27.6  
KEV iP 06 04 09.4 D 0.6 42.5  
i 37.0  
iPcP 05 00.8  
eS 12 04  
eScS 13 56  
eSS 16 16  
H: 05 54 19.1  
45.8 N, 151.8 E, 40 km (R)  
Kurile Islands

1 NUR iP 06 07 47.0 U 0.6 65.0  
i 08 04.5  
ePcP 23  
eScS 17 42  
KJN iP 06 07 23.8 U 0.8 30.8  
i 39.6  
ePcP 08 08  
OUL iP 06 07 22.0 U  
SOD iP 06 07 08.7 U  
ePcP 55  
e 08 58  
KEV iP 06 06 56.2 D 0.9 52.1  
i 57.3  
i 07 09.4  
ePcP 50  
H: 05 57 09  
46.3 N, 152.0 E, 40 km (R)  
Kurile Islands

1 NUR iP 07 48 22.7 0.6 10.0  
KJN eP 07 47 59  
H: 07 37 42  
45.9 N, 151.8 E, 40 km (R)  
Kurile Islands

April

T A

1 NUR iP 07 59 09.3 D 0.6 25.0  
KJN iP 07 58 44.7 U 0.7 16.4  
OUL iP 07 58 43.6 D  
SOD iP 07 58 29.3  
ePcP 59 17  
KEV iP 07 58 17.6 D 0.5 15.8  
ePcP 59 09  
H: 07 48 28  
45.9 N, 152.0 E, 40 km (R)  
Kurile Islands

1 NUR iP 07 59 47.0  
i 08 00 01.0  
KJN iP 07 59 23.2  
OUL iP 07 59 22.3 U  
SOD iP 07 59 08.1  
KEV eP 07 58 56

1 NUR eS 11 08 06  
ePS 10 06  
e 14 04  
eSS 15 52  
eSSS 19 52  
KEV ePS 11 09 32  
eSS 14 52  
eSSS 18 54  
H: 10 41 00.2  
4.6 S, 105.8 W, 33 km  
Northern Easter Island

1 NUR iP 12 34 16.2 0.9 176.4  
i 21.4  
iPcP 47.9  
ePPP 38 16  
eS 42 59  
e 43 44  
eScS 44 06  
KJN iP 12 33 53.0 1.0 141.7  
iPcP 34 34.9  
OUL eP 12 33 50  
i 58.2  
SOD iP 12 33 36.7  
ePcP 34 24  
KEV iP 12 33 25.3 U 1.0 140.0  
i 32.8  
i 49.0  
ePcP 34 19  
cont.



April

April

		T	A			T	A
	ePP	35	38				
	ePPP	37	09				
	eS	41	20				
	eScS	43	14				
	eSS	45	22				
	H: 12 23 35.5						
	45.7 N, 151.8 E, 40 km (R)						
	Kurile Islands						
1	NUR eP	12	46	20	1.0	30.0	
	KJN iP	12	46	18.2	1.2	41.3	
	OUL eP	12	46	07			
	SOD eP	12	46	04			
	KEV eP	12	46	03	1.1	33.3	
	H: 12 41 40.6						
	63.7 N, 18.9 W, 2 km						
	Iceland						
1	NUR iP	14	11	16.8	0.7	83.9	
	i			17.8			
	KJN iP	14	10	53.4	0.7	20.6	
	OUL iP	14	10	51.0			
	SOD iP	14	10	38.2			
	KEV iP	14	10	26.0 D	0.7	32.3	
	H: 14 00 33.8						
	45.8 N, 151.7 E, 23 km						
	Kurile Islands						
1	NUR eP	16	23	41			
1	NUR iP	17	26	27.4 U	0.7	15.5	
	KJN iP	17	26	03.2 U	0.7	8.9	
	OUL iP	17	26	02.2 D			
	SOD iP	17	25	48.8			
	KEV eP	17	25	35			
	H: 17 15 45.7						
	45.9 N, 152.0 E, 33 km (R)						
	Kurile Islands						
1	NUR iP	17	29	24.9	0.5	7.9	
	KJN eP	17	29	01			
	OUL iP	17	28	59.5			
	SOD eP	17	28	46			
	e			51			
	KEV eP	17	28	33			
	H: 17 18 45						
	46.1 N, 151.9 E, 45 km (R)						
	Kurile Islands						
1	NUR iP	17	31	51.3 U	0.5	25.1	
	KJN iP	17	31	27.2 U	0.8	13.8	
	OUL iP	17	31	25.4			
	cont.						
	SOD iP	17	31	11.3			
	KEV eP	17	31	01			
	H: 17 21 09.3						
	45.6 N, 151.9 E, 40 km (R)						
	Kurile Islands						
1	NUR eP	23	31	20			
	KJN eP	23	30	54			
	iPcP			31		47.2	
	OUL iP	23	30	47.8			
	iPcP			31		43.1	
	SOD iP	23	30	30.4			
	iPcP			31		33.7	
	KEV eP	23	30	13			
	H: 23 21 12.2						
	58.4 N, 154.9 W, 96 km						
	Alaska Peninsula						
2	NUR ePKP	00	25	49			
	KJN ePKP	00	25	51			
	OUL iPcP	00	25	43.1			
	H: 00 06 42.7						
	16.7 S, 167.0 E, 33 km (R)						
	New Hebrides Islands						
2	KJN ePKP	02	13	28			
	H: 01 53 51						
	20.4 S, 173.8 W, 33 km (R)						
	Tonga Islands						
2	NUR iP	15	28	20.6	0.7	15.5	
	KJN iP	15	27	55.5	0.7	6.9	
	OUL iP	15	27	47.3			
	SOD eP	15	27	30			
	H: 15 19 09.8						
	66.6 N, 136.1 W, 33 km (R)						
	Northern Yukon, Canada						
2	NUR eP	15	44	44			
	KJN eP	15	45	06			
	i			20.3			
	OUL eP	15	45	13			
	SOD eP	15	45	46			
2	NUR ePKP	17	46	40			
	H: 17 27 11						
	25.0 S, 175.5 W, 33 km (R)						
	South of Tonga Islands						
2	NUR ePS	18	09	36			
	ePPS			10		40	
	eSS			15		56	
	eSSS			19		40	
	cont.						



April

April

		T		A				T		A	
KEV	ePP	17	59	17							
	eSKS	18	05	32							
	ePS		08	40							
	eSS		14	32							
H: 17 40 38.8											
6.3 S, 148.8 E, 37 km											
New Britain											
2	NUR	eP	18	13	37						
3	SOD	eP	03	02	30						
H: 02 53 46.4											
62.8 N, 150.9 W, 100 km											
Central Alaska											
3	NUR	iP	07	46	15.9	0.8	13.0				
	e			47	15						
	KJN	iP	07	46	40.2 U	1.6	104.0				
	OUL	eP	07	46	49						
	SOD	eP	07	47	07						
	KEV	eP	07	47	22						
H: 07 38 28.4											
19.9 N, 38.5 E, 33 km (R)											
Red Sea											
3	NUR	ePS	08	33	05						
	e			35	20						
	eSS			39	46						
	eSSS			43	20						
	KJN	ePKP	08	22	45						
	OUL	iP	08	18	43.8						
	KEV	eSKS	08	29	12						
	ePS			32	12						
	ePPS			33	14						
	eSS			38	20						
	eSSS			41	55						
H: 08 04 15.4											
6.1 S, 151.5 E, 16 km											
New Britain											
3	NUR	eP	09	17	51						
	SOD	eP	09	17	47						
3	NUR	ePKP	13	17	56						
	KJN	iPKP	13	17	57.1	1.0	14.2				
	OUL	iPKP	13	17	56.1						
	KEV	eSKSP	13	29	54						
	eSS			36	52						
	e			37	36						
H: 12 58 40.9											
20.2 S, 173.7 W, 48 km (R)											
Tonga Islands											
3	NUR	iP	15	44	42.9 D	0.7	11.6				
	KJN	iP	15	44	18.1 D	0.6	8.2				
	OUL	iP	15	44	12.6 D						
H: 15 33 53.8											
52.4 N, 169.6 W, 46 km											
Fox Islands											
3	NUR	eP	16	40	26						
	ePcP			44	57						
	e			46	20						
	KJN	eP	16	41	11	1.0	15.3				
	OUL	eP	16	41	14						
	SOD	eP	16	41	37						
H: 16 36 19.8											
44.9 N, 10.6 E, 33 km (R)											
Northern Italy											
3	NUR	iP	19	09	07.3 U	1.2	28.5				
	i				12.0						
	i				19.0						
	KJN	iP	19	08	57.2 U	1.1	14.9				
	i			09	09.8						
	OUL	iP	19	08	57.5						
	SOD	eP	19	08	51						
3	SOD	eP	21	53	58						
3	NUR	eP	22	21	49						
	e			22	21						
	KJN	eP	22	21	57						
	OUL	eP	22	22	13						
4	NUR	eP	00	51	39						
	eS			01	03 20						
	ePPS				05 28						
	eSS				10 38						
	KJN	eP	00	51	16						
	OUL	iP	00	51	19.2 U						
	i				27.1						
	SOD	eP	00	51	15						
	KEV	ePS	01	04	07						
	eSS			09	36						
H: 00 37 26.1											
2.3 S, 138.7 E, 11 km											
West New Guinea											
4	NUR	eSKP	01	40	15						
H: 01 19 06											
17.2 S, 178.5 W, 371 km											
Fiji Islands											
4	NUR	eP	02	47	16						
	SOD	eP	02	48	20						

April				T	A	April				T	A
4	NUR	eP	03 51 51			4	NUR	iP	18 09 28.1	0.7	15.5
	KJN	eP	03 52 32					eS	12 09		
	OUL	eP	03 52 37				KJN	eP	18 10 12		
	H: 03 47 17							eS	13 31		
	40.3 N, 26.3 E, 44 km (R)							e	48		
	Turkey						OUL	iP	18 10 22.9		
4	NUR	iP	04 05 09.5 D	0.9	23.5			i	11 42.4		
		i	22.0				SOD	iP	18 10 41.7		
		e	51					i	11 10.4		
	KJN	iP	04 04 45.9 D	0.8	32.3		H: 18 06 04.3				
		i	57.4	1.0	50.1		45.7 N, 26.2 E, 131 km				
		e	05 42				Rumania				
	OUL	iP	04 04 43.7 U			4	NUR	eP	20 26 09		
		i	55.7					i	19.3		
	SOD	iP	04 04 30.4				KJN	eP	20 25 44		
		i	43.1				SOD	eP	20 25 18		
	KEV	iP	04 04 17.2 U	1.0	52.0		H: 20 16 04.2				
		i	29.8	0.9	37.0		59.8 N, 151.6 W, 46 km				
	H: 03 54 26.2						Kenai Peninsula, Alaska				
	45.5 N, 152.2 E, 42 km (R)					4	NUR	eP	22 27 19		
	Kurile Islands					5	NUR	iP	02 46 53.2 D	1.3	242.1
4	NUR	eP	04 44 45					i	54.3		
4	NUR	iP	09 16 45.7 D	0.7	19.4			i	47 07.4		
		epP	18 04					ePP	50 10		
	KJN	iP	09 16 26.8 D	1.0	36.0			eS	57 32		
		i	30.3				KJN	iP	02 46 38.2 D	0.7	92.5
		ipP	17 43.2					i	52.2		
	OUL	iP	09 16 27.4					e	49 26		
		ipP	17 45.4					ePP	50 05		
	SOD	iP	09 16 18.0				OUL	iP	02 46 38.6 D		
		i	20.7				SOD	iP	02 46 30.2 D		
		epP	17 36					i	44.0		
	KEV	iP	09 16 09.4 D	1.1	50.0			e	49 06		
		i	12.3				KEV	iP	02 46 23.2 D	1.4	233.7
		epP	17 27					i	28.2		
	H: 09 06 01.1							i	38.3		
	33.4 N, 137.5 E, 353 km							ePP	49 27		
	Honshu, Japan							eS	56 32		
4	NUR	iP	17 04 22.3 D	0.8	18.7		H: 02 34 11.1				
		e	33				20.0 N, 147.1 E, 50 km (R)				
	KJN	iP	17 04 55.2 D	0.8	13.1		Mariana Islands				
		i	05 35.3			5	NUR	iP	03 00 38.0 D	0.7	25.8
		eS	09 36					i	42.8		
	OUL	iP	17 05 03.3 D					e	51		
	SOD	iP	17 05 24.2 D				KJN	iP	03 00 22.4 D	0.6	119.9
	KEV	iP	17 05 45.1	0.8	23.0			i	27.4		
	H: 16 59 04.1							i	36.0		
	35.4 N, 23.6 E, 71 km							i	01 06.0		
	Crete								cont.		

April					April				
			T	A			T	A	
	OUL	iP	03 00	23.2 D					
		i		37.2					
	SOD	iP	03 00	14.8 D					
		i		21.0					
	KEV	iP	03 00	07.5 D	0.7			31.0	
		i		14.5					
		i		33.3					
	H: 02 47 55.4								
	20.0 N, 147.2 E, 50 km (R)								
	Mariana Islands								
5	NUR	iP	03 02	42.0					
		e	04 08						
	KJN	iP	03 02	27.0 U					
		i		31.2					
		e	03 24						
	OUL	iP	03 02	27.4					
	SOD	iP	03 02	19.1 U					
	KEV	iP	03 02	11.8 U	1.0			28.0	
5	NUR	iPKP	07 14	37.7					
	H: 06 55 29.1								
	19.2 S, 168.6 E, 48 km								
	New Hebrides Islands								
5	NUR	iP	08 07	40.8					
	KJN	iP	08 07	21.1 D					
	SOD	iP	08 07	12.0					
	H: 07 57 04.0								
	36.0 N, 137.2 E, 272 km								
	Honshu, Japan								
5	NUR	ePKP	12 02	09					
	H: 11 43 49								
	17.7 S, 178.4 W, 480 km (R)								
	Fiji Islands								
5	NUR	eP	16 21	52					
	OUL	eP	16 22	23					
	SOD	eP	16 22	22					
5	NUR	eP	19 04	56					
	KJN	eP	19 04	40					
5	SOD	eP	20 52	35					
	H: 20 41 09.3								
	10.9 N, 43.4 W, 33 km								
	North Atlantic Ridge								
5	NUR	iPKP	22 49	10.0 U			1.2	34.2	
		i		16.9					
	KJN	iPKP	22 49	08.0			1.1	25.7	
	OUL	ePKP	22 49	10					
	SOD	ePKP	22 49	11					
	KEV	ePKP	22 49	10					
	H: 22 29 35								
	53.2 S, 140.6 E, 33 km (R)								
	West of Macquarie Island								
5	NUR	iP	23 09	58.0 D	0.9			11.8	
		i		10 12.0					
	KJN	iP	23 09	55.2 U	0.8			13.1	
		e		10 10					
	OUL	iP	23 10	00.3					
	SOD	iP	23 10	01.4					
	H: 22 57 06								
	5.4 S, 102.4 E, 33 km (R)								
	Southern Sumatra								
5	NUR	iPKP	23 52	40.3 D	0.7			38.7	
		i		44.9	0.8			168.5	
		i		53 14.5					
	KJN	iPKP	23 52	29.3 U					
		i		37.0					
		i		40.2					
		ePKS		56 14					
	OUL	ePKP	23 52	30					
		i		34.1					
		i		39.5					
	SOD	ePKP	23 52	25					
	KEV	ePKP	23 52	22					
	H: 23 33 06.0								
	31.1 S, 178.2 W, 60 km (R)								
	Kermadec Islands								
6	NUR	iP	02 45	45.0					
		i		46 01.0					
	KJN	iP	02 45	27.2					
	SOD	eP	02 45	21					
	KEV	eP	02 45	14					
	H: 02 34 24.1								
	29.6 N, 129.8 E, 31 km								
	Ryukyu Islands								
6	NUR	iP	06 28	50.0			1.1	26.2	
		i		52.5					
	KJN	eP	06 28	29					
		i		32.7					

cont.



April

April

					T	A
	OUL	iP	06 28 30.0	D		
	SOD	iP	06 28 21.2			
	KEV	iP	06 28 12.0		1.1	29.3
	H: 06 17 29.3					
	34.4 N, 139.0 E, 13 km					
	Honshu, Japan					
6	NUR	iP	09 00 59.3			
		i	01 10.3			
	KJN	iP	09 00 39.9	D	1.0	24.0
	OUL	iP	09 00 39.5	U		
	SOD	eP	09 00 29			
	H: 08 49 41.3					
	34.4 N, 139.1 E, 33 km (R)					
	Honshu, Japan					
6	NUR	iP	09 18 03.1	D	1.0	28.0
		i	06.3			
	KJN	iP	09 17 43.2	U	0.8	13.1
		i	46.6			
	OUL	eP	09 17 44			
	SOD	eP	09 17 34			
	KEV	eP	09 17 25			
	H: 09 06 44.0					
	34.4 N, 139.1 E, 25 km					
	Honshu, Japan					
6	NUR	iP	12 34 43.0	D	1.0	102.0
		i	35 05.7			
		ePP	38 15			
	KJN	iP	12 34 27.2	D		
		i	37.7			
		e	36 24			
	OUL	iP	12 34 27.7	D		
	SOD	iP	12 34 19.4	D		
		i	24.3			
		i	33.3			
	KEV	iP	12 34 11.6	D	1.6	172.4
		ePP	37 12			
	H: 12 21 57.0					
	20.1 N, 147.2 E, 22 km					
	Mariana Islands					
6	NUR	iP	13 04 08.8	U	0.8	20.2
		i	11.0			
		e	48			
	KJN	iP	13 04 25.0	U	0.6	24.7
		i	05 10.2			
		iPP	51.4			
		iPPP	06 12.1			
		eS	10 08			
	cont.					

					T	A
	OUL	iP	13 04 34.9	U		
	SOD	iP	13 04 50.4			
		ePP	06 13			
		ePcP	54			
	KEV	iP	13 05 07.1		0.8	26.5
		i	17.0			
		ePP	06 44			
	H: 12 57 14.0					
	30.1 N, 50.9 E, 10 km					
	Iran					
6	NUR	iP	13 09 40.6		0.8	14.4
		e	10 25			
6	KJN	eP	14 14 16			
	OUL	iP	14 14 09.4	D		
		i	15.5			
	SOD	iP	14 14 03.9			
		i	10.0			
	KEV	iP	14 13 58.0			
		i	14 02.7			
	H: 14 01 21.5					
	16.3 N, 98.0 W, 54 km					
	Guerrero, Mexico					
6	NUR	eP	19 43 09			
	OUL	iP	19 43 24.6			
	SOD	eP	19 43 48			
6	NUR	ePKP	19 53 46			
	KJN	ePKP	19 53 40			
	H: 19 34 37.4					
	17.7 S, 167.7 E, 17 km					
	New Hebrides Islands					
6	KJN	eP	21 05 31			
		ipP	06 19.0			
	OUL	iP	21 05 35.9			
		ipP	06 22.4			
	SOD	eP	21 05 33			
		epP	06 20			
	H: 20 52 53					
	0.5 N, 122.1 E, 252 km					
	Northern Celebes					
6	NUR	iP	23 40 12.0	D	1.1	42.8
		i	15.1			
		e	27			
		eS	49 30			
	KJN	iP	23 39 52.5	D	1.0	31.6
		i	55.2			
		e	40 03			
	cont.					

April

April

		T		A				T		A	
	OUL	iP	23 39	52.9	D						
		i		40 11.9							
	SOD	iP	23 39	42.8							
		i		46.2							
	KEV	eP	23 39	34							
		eS		48 20							
		eSS		52 30							
		e		54 46							
	H: 23 28		51.0								
	34.3 N, 139.1 E,		15 km								
	Honshu, Japan										
6	NUR	iP	23 43	20.7	U	1.0	36.0				
		i		34.0							
	KJN	iP	23 43	00.5	U	1.0	66.5				
		i		14.4							
		i		16.5							
	OUL	iP	23 43	00.3	U						
		i		11.0							
	SOD	iP	23 42	50.2							
	KEV	iP	23 42	41.1	D	1.0	36.9				
		e		56							
	H: 23 32		10.6								
	36.3 N, 140.5 E,		44 km								
	Honshu, Japan										
7	KJN	eP	01 13	12							
		e		42							
	SOD	eP	01 13	14							
7	NUR	eP	01 37	53							
7	KJN	eSg	16 05	56							
	OUL	i	16 04	57.2							
		iSn		05 16.7							
		iSg		26.0							
	SOD	iPg	16 04	17.7							
	KEV	eSn	16 05	25							
		eSb		28							
	Felt at Sodankylä										
7	NUR	eP	17 12	31							
		i		52.8							
		i		13 22.0							
		eS		16 48							
		e		17 06							
	KJN	iP	17 12	55.5		0.9	13.4				
		i		13 04.2							
	OUL	eP	17 13	07							
	cont.										
	SOD	eP	17 13	26							
		ePP		14 19							
	KEV	eP	17 13	47							
		ePP		14 50							
	H: 17 07		16.2								
	37.4 N, 36.1 E,		49 km								
	Turkey										
7	NUR	iP	18 38	47.0		1.1	28.6				
		i		39 03.7							
		eS		43 04							
		e		18							
		e		24							
		e		44 08							
	KJN	iP	18 39	13.0	U	1.2	29.2				
		i		36.6							
		e		43 38							
	OUL	iP	18 39	24.2							
		i		54.1							
	SOD	iP	18 39	43.6							
	KEV	eP	18 40	03							
		ePP		41 18							
		eS		45 20							
		e		46 30							
	H: 18 33		31.3								
	37.4 N, 36.2 E,		39 km								
	Turkey										
7	NUR	iP	19 49	08.0	U						
	KJN	iP	19 48	44.2	U	1.1	14.9				
	OUL	iP	19 48	42.7	U						
	SOD	iP	19 48	29.7							
	KEV	eP	19 48	18							
	H: 19 39		13								
	47.0 N, 146.0 E,		296 km								
	Sea of Okhotsk										
7	OUL	eP	22 28	41							
	SOD	eP	22 28	26							
8	SOD	eP	04 19	26							
8	NUR	ePKP	05 53	21							
		i		30.8		0.8	17.3				
		iSKP		56 07.0							
		iPP		12.7							
		ePPP		59 20							
		e		06 00 30							
	cont.										

April

T A

KJN iPKP 05 53 22.2  
 i 55 18.2  
 iSKP 54.3  
 i 56 01.0  
 ePKS 56  
 OUL ePKP 05 53 21  
 eSKP 55 51  
 SOD ePKP 05 53 12  
 iSKP 55 45.5  
 KEV iPKP 05 53 14.9 1.2 39.9  
 eSKP 55 26  
 e 06 04 18  
 e 05 32

H: 05 35 17.1  
 19.9 S, 178.6 W, 616 km  
 Fiji Islands

8 NUR eP 09 06 12  
 SOD eP 09 05 32  
 H: 08 55 40  
 47.3 N, 153.4 E, 60 km (R)  
 Kurile Islands

8 NUR iP 20 26 51.1  
 KJN iP 20 26 41.0 0.8 10.8  
 i 27 42.2  
 OUL eP 20 26 43  
 SOD iP 20 26 39.5  
 H: 20 14 00.8  
 5.7 N, 126.9 E, 140 km  
 Mindanao, P.I.

9 NUR ePP 00 23 24  
 eSKS 29 54  
 eS 30 48  
 ePPS 33 28  
 eSS 38 18  
 KJN eP 00 18 57  
 iPP 23 09.9  
 OUL eP 00 19 04  
 SOD eP 00 18 56  
 KEV ePS 00 32 02  
 e 50  
 e 34 46  
 eSS 37 28  
 H: 00 05 07.0  
 4.0 S, 135.8 E, 15 km (R)  
 West New Guinea

9 NUR eP 01 23 05  
 cont.

April

T A

KJN eP 01 23 04  
 SOD eP 01 23 11  
 e 27  
 H: 01 11 11  
 4.0 N, 96.1 E, 33 km (R)  
 Northern Sumatra

9 NUR eP 01 34 47  
 KJN eP 01 34 36  
 SOD eP 01 34 35  
 H: 01 22 05  
 9.7 N, 126.6 E, 68 km  
 Mindanao, P.I.

9 NUR ePKP 01 46 30  
 KJN ePKP 01 46 23  
 eSKP 49 11  
 SOD eSKP 01 49 02  
 H: 01 27 57.6  
 19.7 S, 178.0 W, 415 km (R)  
 Fiji Islands

9 SOD eP 05 16 15  
 9 NUR ePKP 06 48 43  
 eSKP 51 17  
 KJN ePKP 06 48 33  
 iSKP 51 05.5  
 OUL ePKP 06 48 33  
 iSKP 51 03.8  
 SOD eSKP 06 50 57  
 H: 06 30 30.1  
 20.9 S, 179.3 W, 650 km (R)  
 Fiji Islands

9 KJN iPKP 09 15 11.2  
 H: 08 56 42.1  
 7.0 S, 156.0 E, 33 km (R)  
 Solomon Islands

9 NUR iPKP 09 15 38.7 D 0.8 18.7  
 KJN iPKP 09 15 32.5  
 OUL iPKP 09 15 32.4  
 H: 08 56 59.7  
 7.2 S, 155.8 E, 40 km  
 Solomon Islands

9 KJN eP 17 55 33 1.0 10.9  
 OUL eP 17 55 36  
 SOD eP 17 55 35  
 H: 17 41 56.4  
 7.0 S, 129.7 E, 143 km  
 Banda Sea

April

	T	A	
9	NUR	iP	18 11 35.8
	OUL	iP	18 11 39.7
9	NUR	iPKP	21 37 14.6
	KJN	ePKP	21 37 08
		ePP	38 30
	OUL	ePKP	21 37 08
	H:		21 18 36.5
			7.3 S, 155.7 E, 44 km
			Solomon Islands
9	KJN	iP	22 02 52.7
	H:		21 52 34
			45.6 N, 151.6 E, 33 km (R)
			Kurile Islands
10	NUR	eP	03 08 56
	KJN	eP	03 08 41
	OUL	iP	03 08 27.4
	SOD	eP	03 08 11
10	NUR	eP	04 38 42
10	NUR	ePn	05 15 48
		iSb	17 01.0
	KJN	ePn	05 15 16
		ePb	19
		eSn	44
		iSb	50.1
	OUL	iPg	05 14 59.4 D
		iSg	15 17.3
	SOD	ePn	05 15 21
		ePb	23
		eSn	50
		iSb	56.0
	KEV	ePn	05 15 51
		ePb	59
		eSb	16 58
		i	17 03.0
10	NUR	ePKP	05 18 33
		eSS	35 50
		eSSS	39 24
	KJN	ePKP	05 18 14
		ePP	19 22
	KEV	ePP	05 18 42
		eSKS	25 10
		ePS	28 12
	H:		04 59 53.9
			7.4 S, 155.7 E, 37 km
			Solomon Islands

April

	T	A	
10	NUR	ePKP	05 29 41
	H:		05 11 05.6
			7.2 S, 155.8 E, 72 km
			Solomon Islands
10	NUR	iPKP	10 21 14.0
	OUL	ePKP	10 21 06
	H:		10 02 23
			10.8 S, 165.8 E, 60 km (R)
			Santa Cruz Islands
10	NUR	iP	10 32 37.9
	KJN	eP	10 32 21
	OUL	iP	10 32 22.5 U
	SOD	iP	10 32 14.6
10	NUR	ePKP	15 21 22
		ePP	22 24
		eSKS	28 20
		eS	30 06
		e	50
		ePS	31 59
		ePKKP	32 04
		e	24
		eSPP	33 09
		eSS	38 36
		eSSS	42 52
		eLQ	15 51.1
	KJN	eP	15 17 22
		iPKP	21 17.0
		i	19.6
		iPP	22 06.3
		e	35
		ePKKP	32 14
	OUL	eP	15 17 23
		iPKP	21 15.5
		ePP	22 06
	KEV	eP	15 17 08
		iPKP	21 18.2
		ePP	42
		e	23 24
		e	25 42
		eS	29 34
		eSP	31 02
		ePPS	32 20
		eSS	36 36
		eSSS	41 12
	H:		15 02 42.2
			7.3 S, 155.8 E, 29 km (R)
			Solomon Islands
10	SOD	eP	16 25 52
	KEV	eP	16 25 25



## April

10 NUR eP 16 27 52  
KJN eP 16 27 57  
e 28 15  
OUL eP 16 27 52  
Moscow:  
H: 16 20 40  
37.5 N, 69.6 E, 64 km  
Tadzhik SSR

10 NUR ePKP<sup>2</sup> 17 09 26  
eSKKS 20 22  
e 21 38  
eSKSP 23 36  
ePPS 28 35  
eSS 34 28  
OUL ePKP<sup>2</sup> 17 09 24  
KEV eSS 17 34 16  
e 39 16  
eSSS 41 18  
H: 16 47 50  
63.6 S, 167.3 W, 33 km (R)  
South Pacific Cordillera

10 NUR eP 19 11 49  
H: 19 00 25.6  
39.9 N, 104.8 W, 5 km (R)  
Colorado

10 NUR iP 20 07 41.3 1.0 68.0  
i 50.8  
i 08 12.4  
i 19.5  
i 32.8  
e 12 19  
eS 15 53  
eScS 17 20  
KJN iP 20 07 17.1 D 1.2 77.4  
i 26.3  
iPcP 08 10.0  
i 18.1  
i 26.3  
eS 15 09  
eScS 16 58  
OUL iP 20 07 09.7  
iPcP 08 05.9  
SOD iP 20 06 53.0  
iPcP 07 56.1  
KEV eP 20 06 36  
e 07 12  
e 38  
iPcP 48.0  
cont.

## April

eS 13 52  
H: 19 57 34.4  
58.6 N, 154.3 W, 86 km  
Alaska Peninsula

10 NUR ePKP 21 22 38  
KJN ePKP 21 22 49  
KEV ePKP 21 22 21 1.1 28.6  
H: 21 03 32  
24.1 S, 176.3 W, 205 km  
South of Fiji Islands

10 NUR iPcP 21 26 21.0  
KJN ePKP 21 26 10  
OUL ePKP 21 26 15  
H: 21 07 47.5  
7.4 S, 155.7 E, 103 km  
Solomon Islands

10 NUR ePKP 22 07 59  
KJN ePKP 22 07 51  
OUL ePKP 22 07 53  
H: 21 49 19.5  
7.3 S, 155.9 E, 39 km  
Solomon Islands

11 KJN eP 03 21 21  
SOD eP 03 21 30  
H: 03 09 31.9  
6.9 N, 97.1 E, 33 km (R)  
Nicobar Islands

11 KJN e 05 22 40  
SOD eP 05 22 26  
H: 05 09 12.1  
3.3 S, 119.2 E, 21 km  
Celebes

11 KJN eP 11 42 24 1.0 10.9  
SOD eP 11 42 23  
H: 11 31 12  
23.6 N, 121.7 E, 61 km  
Taiwan

11 NUR iP 12 54 10.4 1.0 14.0  
i 22.0  
eS 13 03 34  
eSS 08 08  
KJN iP 12 54 16.3 0.8 6.9  
SOD eP 12 54 10  
KEV iP 12 54 15.0 0.8 15.8  
eS 13 03 32  
H: 12 42 47.7  
18.8 N, 62.7 W, 49 km  
Leeward Islands

April						April				
				T	A					
						T			A	
11	NUR	eP	13 54 58				eP'P'	30 43		
	KJN	iP	13 54 39.1	1.0	8.7	KJN	iP	05 03 22.1		
	KEV	eP	13 54 22				i	27.0		
	H: 13 43 23.7						iS	13 03.5		
	31.9 N, 141.7 E, 53 km						i	26.2		
	South of Honshu, Japan						eP'P'	30 42		
11	NUR	ePKP	19 21 35			OUL	iP	05 03 28.2 U		
	H: 19 03 40.0						i	33.6		
	17.6 S, 179.1 W, 630 km					SOD	iP	05 03 30.9		
	Fiji Islands						i	33.1		
12	NUR	eP	01 05 04			KEV	iP	05 03 33.5		
		e	14				i	40.2		
	KJN	e	01 04 52				ePP	06 42		
	OUL	iP	01 04 44.4 U				eS	13 27		
	SOD	eP	01 04 27				eSS	18 36		
	KEV	e	01 04 11				eLQ	05 25.5		
	H: 00 54 42.1						H: 04 51 40.2			
	56.2 N, 136.0 W, 37 km						5.3 N, 96.5 E, 55 km			
	Southeastern Alaska						Northern Sumatra			
12	SOD	eP	01 10 23			12	OUL	eP	05 16 16	
							SOD	eP	05 15 42	
12	NUR	iPKP	04 50 35.2	0.9	15.1	12	NUR	eP	05 23 01	
		epPKP	51 16				KJN	iP	05 22 59.1 U	
		eSKP	53 46				OUL	iP	05 23 05.0 U	
	KJN	iPKP	04 50 27.5				SOD	iP	05 23 07.7 U	
		epPKP	51 09				KEV	iP	05 23 10.5	0.8 15.8
	OUL	iPKP	04 50 28.1				H: 05 11 14.1			
	SOD	ePKP	04 50 24				5.5 N, 96.7 E, 33 km (R)			
	H: 04 31 45						Northern Sumatra			
	19.2 S, 168.9 E, 200 km					12	KJN	eP	05 29 49	
	New Hebrides Islands						OUL	iP	05 29 55.5	
12	NUR	eP	04 52 18				SOD	iP	05 29 58.1	
	KJN	iP	04 52 23.1				H: 05 18 12			
	OUL	iP	04 52 18.3				5.6 N, 96.7 E, 102 km			
	SOD	eP	04 52 17				Northern Sumatra			
	H: 04 40 53.0					12	KJN	iP	05 39 39.5	
	19.3 N, 63.6 W, 38 km						SOD	eP	05 39 40	
	Leeward Islands					12	NUR	eP	05 55 15	
12	NUR	eP	05 03 25				KJN	eP	05 55 00	
		i	29.2				OUL	iP	05 55 01.2 D	
		i	56.0				SOD	eP	05 54 55	
		i	05 32.3				KEV	eP	05 54 48	
		e	06 07				H: 05 42 20.9			
		e	08 20				13.8 N, 144.6 E, 139 km			
		e	12 16				Mariana Islands			
		eS	13 07							
		eSS	17 50							
			cont.							

April				April				
		T	A		T	A		
12	SOD eP	06 15 30					SOD iP	19 45 38.3
	H:	06 03 37					H:	19 33 47.3
		5.3 N, 96.6 E, 33 km (R)						5.2 N, 96.7 E, 56 km
		Northern Sumatra						Northern Sumatra
12	NUR iPKP	14 13 35.7			12	NUR iPKP	21 41 07.0 D	0.9 20.2
	ePP	14 39				i	18.2	
	eSKS	21 43			KJN iPKP	21 41 11.1	0.9 16.1	
	ePS	24 18			i	22.8		
	e	26 18			OUL iPKP	21 41 09.8		
	eSS	30 44			i	21.2		
	KJN ePKP	14 13 29			SOD iPKP	21 41 11.1		
	OUL iPKP	14 13 29.4			i	22.0		
	H:	13 54 57.2			H:	21 22 09.3		
		7.3 S, 155.6 E, 52 km				35.5 S, 73.3 W, 12 km		
		Solomon Islands				Central Chile		
12	NUR eP	14 34 38			12	KJN eP	22 17 04	
	KJN iP	14 34 23.2	0.7	6.9		SOD eP	22 16 58	
	OUL eP	14 34 24						
	SOD eP	14 34 17			13	NUR ePKP	04 33 31	1.0 16.0
	H:	14 21 32.6				ePKS	36 56	
		14.1 N, 146.5 E, 61 km				KJN ePKP	04 33 25	
		Mariana Islands				OUL iPKP	04 33 24.5 D	
						H:	04 14 33.6	
12	NUR ePKP	15 10 32					18.7 S, 168.8 E, 123 km	
	H:	14 51 49.4					New Hebrides Islands	
		7.4 S, 155.7 E, 21 km						
		Solomon Islands			13	NUR eP	08 37 27	1.0 12.0
12	NUR eP	16 07 18				KJN iP	08 37 24.1 U	0.8 14.6
	KJN eP	16 06 54				OUL iP	08 37 30.4 U	
	OUL eP	16 06 46				SOD iP	08 37 33.0	
	SOD iP	16 06 29.7				H:	08 25 43.8	
	H:	15 57 09.6					5.5 N, 96.6 E, 68 km	
		59.4 N, 144.5 W, 10 km					Northern Sumatra	
		Gulf of Alaska			13	NUR ePn	08 48 10	
12	NUR eP	19 12 31				e	20	
	H:	19 01 01				eSn	49 32	
		19.3 N, 63.5 W, 30 km				eSg	50 22	
		Leeward Islands			OUL iPn	08 47 12.4		
					i	17.1		
					i	21.4		
12	NUR eP	19 38 00				eSn	56	
	e	19				iSb	48 07.0	
	KJN eP	19 38 15			SOD iPn	08 46 54.0		
	H:	19 28 55			e	57		
		14.4 N, 56.7 E, 33 km (R)			e	47 00		
		Arabian Sea			eSn	22		
					eSg	28		
12	NUR iP	19 45 33.0	0.9	10.1	KEV iSn	08 46 56.5		
	KJN iP	19 45 30.2	0.8	12.3	i	47 04.0		
	OUL iP	19 45 36.0 D			eSn	30		
		cont.			iSg	39.8		



April							April									
				T	A					T	A					
14	NUR	eP	19 55 57							15	NUR	iP	23 46 31.2	0.6	25.0	
											KJN	iP	23 46 09.0	1.0	29.4	
15	NUR	iPKP	01 00 49.2	0.7	9.0						OUL	iP	23 46 07.7 U			
	KJN	iPKP	01 00 38.0 U	1.2	27.5						SOD	eP	23 45 56			
	OUL	ePKP	01 00 36								KEV	eP	23 45 47			
	H: 00 41 06										H: 23 35 51.1					
	33.1 S, 178.7 W, 35 km										41.9 N, 142.3 E, 66 km					
	South of Kermadec Islands										Hokkaido, Japan					
15	NUR	eP	01 14 45							16	NUR	eP	05 57 52			
	KJN	iP	01 14 29.1	0.6	6.9											
	OUL	iP	01 14 30.1 D								16	NUR	iPKP	07 37 26.0		
	SOD	eP	01 14 23									OUL	ePKP	07 37 18		
	H: 01 02 02											H: 07 18 11.8				
	18.2 N, 147.0 E, 99 km											19.4 S, 175.9 E, 38 km				
	Mariana Islands											South of Fiji Islands				
15	NUR	eP	02 01 37							16	NUR	eP	10 06 01			
											KJN	eP	10 06 23			
15	NUR	iPKP	09 19 33.1	0.8	34.6						H: 09 55 01					
	KJN	ePKP	09 19 15								0.1 N, 17.3 W, 33 km (R)					
	OUL	iPKP	09 19 22.0								North of Ascension Island					
		i	28.0													
	H: 09 00 40										16	NUR	iP	10 20 49.0 U	0.7	37.4
	29.1 S, 179.7 W, 349 km											KJN	iP	10 20 24.8 U	1.0	28.3
	Kermadec Islands											OUL	iP	10 20 22.2 U		
												SOD	iP	10 20 09.2		
												H: 10 10 06.7				
												46.4 N, 153.3 E, 24 km				
												Kurile Islands				
15	NUR	iPKP	12 30 46.2	0.7	12.9						16	NUR	eP	16 44 18		
	KJN	iPKP	12 30 35.0 D	1.0	19.6							KJN	iP	16 44 09.5		
	OUL	ePKP	12 30 33									OUL	eP	16 44 12		
	H: 12 11 01											SOD	eP	16 44 10		
	33.2 S, 178.6 W, 18 km											H: 16 32 17				
	South of Kermadec Islands											4.2 N, 123.2 E, 590 km				
												Celebes Sea				
15	NUR	ePKP	16 15 16								17	KJN	iP	06 03 32.0	0.8	23.1
	KJN	ePKP	16 15 06									H: 06 00 39				
	OUL	ePKP	16 15 07									73.8 N, 6.9 E, 33 km (R)				
	H: 15 56 07.4											Greenland Sea				
	16.7 S, 167.6 E, 10 km															
	New Hebrides Islands															
15	NUR	iP	19 55 41.0	0.8	11.5					17	KJN	iP	11 16 34.8			
	KJN	iP	19 55 30.4	0.8	7.7											
											17	NUR	eP	11 18 36		
												KJN	iP	11 18 22.0	1.0	17.4
												i	28.1			
												OUL	iP	11 18 24.7		
												SOD	iP	11 18 19.7		
												i	25.8			
												H: 11 07 12.9				
												24.9 N, 122.2 E, 31 km				
												Taiwan				

April		T	A	April		T	A
17	NUR iPKP 11 37 15.9 D	0.8	31.7	19	NUR iP 18 23 04.1	0.8	15.8
	KJN iPKP 11 37 08.8 D	0.8	15.4		KJN iP 18 22 44.1 D	0.8	16.1
	i 17.0				OUL iP 18 22 34.9		
	iPP 38 37.1				SOD iP 18 22 21.0 D		
	OUL iPKP 11 37 07.9				H: 18 12 25		
	H: 11 18 19.3				52.7 N, 131.4 W, 33 km (R)		
	12.5 S, 166.3 E, 45 km (R)				Queen Charlotte Islands		
	Santa Cruz Islands						
17	NUR ePKP 18 04 09			19	NUR iP 22 08 43.0		
	iSKP 06 57.6				ipP 09 09.5		
	KJN ePKP 18 03 56				KJN iP 22 08 46.8		
	eSKP 06 48				ipP 09 13.2		
	OUL ePKP 18 04 03				esP 25		
	H: 17 45 52.2				OUL iP 22 08 39.4		
	20.6 S, 178.2 W, 570 km				ipP 09 07.4		
	Fiji Islands				isP 17.9		
17	NUR iP 19 51 45.8	1.1	21.4		SOD eP 22 08 38		
	KJN iP 19 51 29.0 D				epP 09 06		
	OUL iP 19 51 31.0 D				esP 17		
	SOD iP 19 51 24.6				KEV epP 22 09 03		
	H: 19 40 10				H: 21 57 05.1		
	25.9 N, 128.7 E, 33 km (R)				18.8 N, 69.6 W, 103 km (R)		
	Ryukyu Islands				Dominican Republic		
17	NUR iP 21 43 30.0	1.0	20.0	20	NUR ePKKP 00 31 04		
	KJN eP 21 43 59				KJN iP 00 14 52.0 D	1.0	24.0
	OUL iP 21 44 08.0 D				ePKKP 31 07		
	i 14.1				OUL eP 00 14 55		
	SOD iP 21 44 29.2				ePKKP 31 06		
	H: 21 37 54.5				SOD eP 00 14 52		
	34.6 N, 33.0 E, 33 km (R)				H: 00 01 24.9		
	Cyprus				5.5 S, 129.7 E, 163 km		
					Banda Sea		
17	NUR eP 22 10 55			20	KJN iP 03 03 10.0		
	OUL eP 22 11 30				OUL iP 03 03 14.8		
	H: 22 05 18				SOD iP 03 03 27.4		
	34.5 N, 33.1 E, 40 km				H: 02 50 58		
	Cyprus				16.7 S, 28.2 E, 33 km		
					Zambia		
18	NUR eP 04 40 37			20	NUR iP 04 14 22.5 U	0.7	34.8
					i 58.1		
					e 15 12		
18	OUL iP 19 05 08.6 D				KJN iP 04 14 09.5 U	0.8	50.0
	H: 18 55 12				i 41.4		
	56.6 N, 151.7 W, 21 km				i 54.5		
	Kodiak Island				OUL iP 04 14 16.4		
					i 55.3		
18	NUR eP 20 33 35				SOD iP 04 14 16.6 U		
	OUL eP 20 34 11				e 49		
					cont.		

April				T	A	April				T	A
	KEV	iP	04 14 19.4 U	0.7	32.8		SOD	eP	08 28 03		
		i	15 14.8				KEV	eSKS	08 38 40		
	H:		04 07 57.6					ePS	40 51		
			49.7 N, 78.1 E, 0 km (R)					ePPS	41 50		
			Eastern Kazakh SSR					eSS	46 12		
20	KJN	eS	05 37 05				H:		08 14 25.0		
		e	38 31						5.4 S, 126.9 E, 33 km (R)		
	OUL	iP	05 34 34.0						Banda Sea		
		iS	36 35.6			21	NUR	ePKP	14 56 35		
	SOD	eP	05 34 03				KJN	ePKP	14 56 27		
		eS	35 42				OUL	ePKP	14 56 25		
	KEV	e	05 34 51				H:		14 38 03		
20	NUR	eP	10 06 47						20.6 S, 177.5 W, 454 km		
	KJN	iP	10 06 54.0 D	0.7	19.2				Fiji Islands		
		i	07 13.0			22	NUR	e	08 54 32		
	OUL	iP	10 06 48.3					ePP	55 30		
	SOD	eP	10 06 51					ePPP	57 36		
	H:		09 54 49.1					eSKS	09 01 34		
			11.0 N, 62.2 W, 91 km					ePS	04 22		
			Windward Islands					e	07 15		
20	KJN	iP	12 02 45.9 D				KJN	eP	08 50 59		
	H:		11 51 05					i	51 26.4		
			17.3 N, 120.1 E, 62 km				OUL	iP	08 51 05.4		
			Luzon, P.I.				KEV	eP	08 51 05		
21	NUR	eP	04 26 35					ePP	54 54		
	SOD	eP	04 25 58				H:		08 37 25.5		
	H:		04 15 51						5.6 S, 126.8 E, 33 km (R)		
			43.3 N, 146.3 E, 48 km						Banda Sea		
			Kurile Islands			22	NUR	eP	12 20 57		
21	NUR	eP	07 05 37					i	21 07.0		
21	NUR	iP	07 58 04.3				KJN	iP	12 20 21.8 U	1.2	86.0
21	NUR	ePP	08 32 14					eS	22 31		
		e	33 31				OUL	iP	12 20 03.1		
		eSKS	38 40					i	14.1		
		eS	39 28					e	27 01		
		ePS	41 20				SOD	eP	12 19 39		
		e	45 05				KEV	eP	12 19 16		
		eSS	46 48					e	28		
		eLQ	08 54.0					eS	20 40		
	KJN	eP	08 28 02				H:		12 17 35		
		i	13.7	1.5	86.6				73.4 N, 8.4 E, 33 km (R)		
		i	38.5						Greenland Sea		
		ePP	32 03			22	NUR	eP	13 19 25	0.8	8.6
			cont.					i	20 01.0		
								ePP	22 26		
								eS	29 06		
									cont.		

April		T	A	April		T	A	
	e	32	08		KJN eP	07	30 09	
	eSS	33	58		H:	07	19 28	
	eSSS	37	34		40.9 N, 143.4 E,	33	km (R)	
KJN	iP	13	19 22.7 U	0.8	20.8		Honshu, Japan	
	i		27.2					
	i		58.9		23	NUR eP	09 36 11 1.0 10.0	
OUL	iP	13	19 28.0			e	40	
	i		32.3		KJN	iP	09 36 43.1 U 0.9 12.5	
	i		47.0		OUL	iP	09 36 45.8	
SOD	iP	13	19 29.7			ePcP	39 36	
KEV	iP	13	19 34.0 D	0.7	22.4	SOD	iP	09 37 03.8
	e		20 15			KEV	iP	09 37 21.2 U 0.9 31.0
	ePP		22 24			H:	09 30 22.0	
	e		25 40			36.3 N, 2.4 E,	33 km (R)	
	eS		29 22			Algeria		
	H:	13	07 38.1			23	NUR iP	13 03 13.2 U 1.0 28.0
	5.1 N, 96.4 E,	42	km			e	31	
	Northern Sumatra					KJN	iP	13 03 02.7 U 1.5 59.9
22	KJN eP	14	56 23			i	12.2	
	H:	14	43 21.4			i	38.1	
	8.3 N, 82.8 W,	40	km			OUL	eP	13 03 05
	Panama-Costa Rica border					SOD	eP	13 02 57
22	NUR eP	17	40 37			KEV	iP	13 03 05.1
	KJN eP	17	40 26			H:	12 50 24.7	
	SOD eP	17	40 25			8.6 N, 126.5 E,	43 km	
	H:	17	27 49.0			Mindanao, P.I.		
	8.3 N, 127.2 E,	67	km			23	NUR eP	14 01 00
	Philippine Islands					23	NUR eP	14 11 32
22	KJN iP	19	55 40.2			OUL	eP	14 11 18
	SOD eP	19	55 44			SOD	eP	14 11 12
	H:	19	41 57.8			H:	13 58 35	
	7.0 S, 129.5 E,	82	km			18.4 N, 103.0 W,	69 km	
	Banda Sea					Michoacan, Mexico		
22	KJN ePKP	22	20 22			23	NUR eP	15 12 31 1.0 10.0
	OUL ePKP	22	20 20			i	38.7	
	H:	22	02 02			KJN	eP	15 12 35
	18.6 S, 177.8 W,	460	km			i	42.8	
	Fiji Islands					e	13 17	
23	NUR iP	05	40 24.0	1.0	12.0	OUL	iP	15 12 41.8
	H:	05	29 47.3			i	48.7	
	52.3 N, 174.2 E,	42	km			SOD	e	15 12 56
	Near Islands					KEV	eP	15 12 52
23	NUR eP	07	30 28			H:	15 01 06.8	
	cont.					1.6 N, 80.2 E,	33 km (R)	
						North Indian Ocean		







April						April										
				T	A											
				T	A											
26	NUR	iP	13 23 43.8	0.9	15.1	KJN	eP	11 32 46								
		i	50.4					e	33 15							
		i	24 14.2					OUL	eP	11 32 40						
		e	26 28			SOD	eP	11 32 38								
	KJN	iP	13 23 44.6	0.9	13.4					27	NUR	iP	14 28 36.9 U	0.6	12.5	
		i	52.3								i	44.8				
		i	24 04.2					KJN	iP	14 28 09.0						
		i	17.2				e	30 07								
	OUL	iP	13 23 50.6			OUL	iP	14 27 50.3								
		i	58.3			SOD	eP	14 27 31								
	SOD	iP	13 23 54.7				i	40.0								
		i	24 03.2													
	H: 13 11 42.3															
	1.3 S, 89.5 E, 33 km (R)															
	South Indian Ocean															
26	NUR	eP	14 59 56													
26	NUR	ePKP	22 05 42	0.9	13.4	27	SOD	eP	15 57 23							
	KJN	iPKP	22 05 35.0													
	OUL	iPKP	22 05 33.5					27	NUR	iP	20 55 26.6					
	H: 21 46 41							i	30.7							
	16.5 S, 175.6 E, 116 km						KJN	eP	20 55 40							
	Fiji Islands						OUL	eP	20 55 50							
							H: 20 47 48									
27	NUR	eP	01 00 31				26.5 N, 58.0 E, 35 km									
	KJN	eP	01 00 39				Southern Iran									
	e		04 27													
	OUL	eP	01 00 32			27	NUR	eP	23 14 23							
27	NUR	eP	03 50 25													
	SOD	eP	03 50 21													
27	NUR	eP	04 49 07			27	NUR	iP	23 22 46.0 U	1.0	48.0					
	KJN	iP	04 48 56.0 D	0.7	12.3		i	53.7								
	OUL	iP	04 48 58.8						i			23 05.0				
	SOD	eP	04 48 55						e	29 03						
27	NUR	eSKKS	08 35 12				KJN	iP	23 22 36.8 U	1.0	38.2					
		ePS	37 08				e	23 10								
		eSS	42 18				ePP	24 10								
	KJN	eP	08 23 34				OUL	iP	23 22 44.2 U							
		i	53.2				SOD	eP	23 22 45							
	OUL	iP	08 23 35.1					e	24 06							
		i	49.2				H: 23 15 19.7									
	H: 08 09 47.9						41.7 N, 82.3 E, 33 km (R)									
	1.8 S, 138.7 E, 33 km (R)						Southern Sinkiang, China									
	West New Guinea															
27	NUR	eP	11 32 31			27	NUR	iP	23 42 09.8							
	e		34 01				H: 23 30 28									
	cont.						12.7 S, 41.1 E, 33 km (R)									
							Malagasay Republic									
27	NUR	eP	11 32 31			28	NUR	iP	01 02 19.2 D	0.8	18.7					
	e		34 01				KJN	iP	01 02 09.7 U			0.9	32.1			
	cont.							e	35							
							cont.									



April		T	A	April		T	A
29	KJN iP 22 23 36.8 H: 22 12 45 35.9 N, 140.9 E, 28 km Honshu, Japan			30	NUR eS 17 24 48 eSS 31 36 eSSS 35 56 KJN iP 17 12 46.0 U 0.8 10.8 i 57.8 OUL iP 17 12 48.2 i 53.2 SOD eP 17 12 44 H: 16 59 00.6 1.8 S, 138.7 E, 33 km (R) West New Guinea		
29	KJN iP 22 50 32.4 OUL eP 22 50 35 H: 22 39 40 35.8 N, 141.0 E, 28 km Honshu, Japan			30	NUR eP 17 44 35 KJN iP 17 44 25.0 H: 17 31 49 8.9 N, 126.6 E, 33 km (R) Mindanao, P.I.		
30	NUR eP 01 20 49 KJN iP 01 20 29.1 U 0.6 13.7 OUL iP 01 20 29.2 U SOD eP 01 20 19 Moscow: H: 01 09 39 36.5 N, 140.6 E Japan						
30	NUR iP 05 25 56.1 1.1 30.9						
30	OUL eP 11 21 06 SOD eP 11 20 50 e 21 27 H: 11 11 45.1 59.9 N, 153.9 W, 146 km Southern Alaska						
30	NUR iP 14 42 44.6 SOD eP 14 42 40						

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Aili Huovila



May				May			
	T	A		T	A		
2	NUR	iP	09 08 26.0				
		ePP	09 55				
	OUL	iP	09 08 35.1 D				
		ipP	09 20.4				
	SOD	iP	09 08 42.0				
	H: 09 01 29.5						
	36.5 N, 71.0 E, 226 km						
	Hindu Kush						
2	KJN	iP	17 24 05.1				
	OUL	eP	17 24 07				
	H: 17 10 04.7						
	5.6 S, 147.2 E, 148 km						
	East New Guinea						
2	KJN	eP	18 12 13				
	OUL	eP	18 12 16				
	H: 17 59 09.0						
	2.4 N, 126.7 E, 39 km						
	Molucca Passage						
2	NUR	eP	19 34 07	0.8	13.1		
	KJN	iP	19 34 45.7				
	OUL	iP	19 34 52.8 U				
	SOD	eP	19 35 14				
	H: 19 29 24						
	40.0 N, 21.4 E, 7 km						
	Greece						
3	NUR	iP	05 24 08.0				
		e	15				
	KJN	eP	05 24 38				
		e	29 07				
	OUL	iP	05 24 50.3				
		e	59				
	SOD	iP	05 25 10.3				
	H: 05 19 42						
	42.4 N, 36.4 E, 32 km						
	Black Sea						
3	NUR	iPKP	11 08 29.8 U	0.7	43.9		
	KJN	iPKP	11 08 21.3 U	0.6	31.5		
	OUL	iPKP	11 08 20.8 U				
		isPKP	55.8				
	SOD	iPKP	11 08 16.3				
	H: 10 48 51.1						
	38.7 S, 175.8 E, 107 km						
	North Island, N.Z.						
3	NUR	iP	18 46 28.0				
		i	36.0				
		eS	50 20				
	cont.						
	KJN	iP	18 47 06.7			0.9	23.2
		i	18.5				
	OUL	iP	18 47 15.4 D				
		i	25.4				
	SOD	eP	18 47 36				
	H: 18 41 47.0						
	39.7 N, 21.5 E, 35 km						
	Greece						
	3	NUR	eP	19 24 48			
	3	NUR	eP	23 26 01			
		KJN	eP	23 26 38			
		OUL	eP	23 26 47			
	4	NUR	eP	04 50 59			
		KJN	iP	04 51 37.7	0.8	10.0	
		OUL	eP	04 51 44			
		SOD	eP	04 52 05			
	H: 04 46 20						
	39.8 N, 21.5 E, 47 km						
	Greece						
	4	NUR	iP	05 19 53.3	0.7	11.6	
		KJN	iP	05 19 28.2	0.6	4.1	
		OUL	eP	05 19 22			
		SOD	eP	05 19 07			
	H: 05 09 05						
	52.6 N, 169.1 W, 38 km						
	Fox Islands						
	4	KJN	eP	05 29 33			
		OUL	eP	05 29 45			
	4	NUR	eP	06 16 28	1.0	14.0	
	4	NUR	iPKP	08 36 25.0	1.0	16.0	
		i	34.6				
		eSS	54 48				
		KJN	iPKP	08 36 31.8 U	1.0	20.7	
		OUL	iPKP	08 36 32.3 U			
		i	42.5				
		SOD	iPKP	08 36 36.4			
		i	43.6				
	H: 08 17 32.1						
	55.7 S, 27.9 W, 33 km (R)						
	South Sandwich Islands						
	4	KJN	eP	09 01 08			
		OUL	eP	09 01 15			

May		T	A	May		T	A
4	SOD eP 12 39 25 H: 12 29 44 53.1 N, 168.2 E, 33 km (R) Komandorsky Islands			5	NUR eP 04 35 56		
4	KJN eP 13 15 13			5	NUR iP 06 31 16.8 D 0.8 14.4 i 19.5 i 25.7 KJN iP 06 31 55.4 D 0.9 22.3 OUL iP 06 32 01.5 U SOD iP 06 32 23.8 H: 06 26 37.9 39.6 N, 21.5 E, 55 km Greece		
4	NUR eP 13 18 14 KJN iP 13 18 51.2 0.7 9.6 OUL iP 13 18 58.1 SOD eP 13 19 20 H: 13 13 34 39.8 N, 21.5 E, 43 km Greece			5	NUR eP 14 54 47 KJN iP 14 55 22.8 0.8 6.9 OUL iP 14 55 30.1 H: 14 50 03 39.6 N, 21.2 E, 33 km (R) Greece		
4	NUR iP 13 35 48.0 1.0 20.0 KJN iP 13 36 25.8 0.9 30.4 OUL iP 13 36 33.4 SOD eP 13 36 55 H: 13 31 08.5 39.8 N, 21.5 E, 40 km Greece			5	NUR iP 15 17 55.0 U KJN iP 15 17 30.7 U 0.7 8.9 OUL iP 15 17 21.9 D SOD iP 15 17 06.2 U H: 15 07 49.5 59.3 N, 151.4 W, 57 km Kenai Peninsula, Alaska		
4	KJN eP 17 16 26 0.8 8.5 OUL iP 17 16 33.4 SOD eP 17 16 55			5	NUR ePKP 15 18 58 e 19 18 ePP 20 55 ePS 30 08 eSS 37 08 e 38 53 OUL ePKP 15 18 47 H: 15 00 07.7 10.5 S, 161.3 E, 41 km Solomon Islands		
4	KJN eP 23 36 22 OUL eP 23 36 21 SOD eP 23 36 11 H: 23 25 33 36.3 N, 138.3 E, 8 km Honshu, Japan			5	NUR eP 16 29 48		
4	KJN iP 23 43 17.9 0.8 10.0 OUL iP 23 43 22.5 SOD iP 23 43 20.9			5	NUR iP 17 15 44.0 0.7 12.9 i 46.6 KJN iP 17 15 18.8 0.9 20.5 OUL iP 17 15 10.0 U i 12.2 SOD iP 17 14 53.8 i 56.2 H: 17 06 14.9 63.7 N, 148.5 W, 102 km Central Alaska		
5	NUR iP 00 18 10.7 D 0.8 21.6 KJN iP 00 17 58.9 D 1.0 41.4 OUL iP 00 18 03.0 U SOD iP 00 18 01.4 D i 06.1 H: 00 08 07 29.2 N, 103.5 E, 33 km (R) Szechwan, China			5	NUR iP 17 48 54.0 cont.		
5	NUR eP 03 18 38 KJN eP 03 18 39 OUL iP 03 18 47.6 H: 03 11 24 36.1 N, 68.8 E, 18 km Hindu Kush						



May				May							
			T	A		T	A				
	KJN	ePKP	17 48 47	0.8	7.7	6	NUR	eP	14 12 25		
	OUL	iPKP	17 48 45.1					i	35.3		
	SOD	ePKP	17 48 37					eS	22 04		
	H:		17 29 54.4					eSS	27 20		
			14.1 S, 166.8 E, 48 km					eSSS	30 33		
			New Hebrides Islands				KJN	iP	14 12 27.9	1.0	17.4
5	NUR	iP	17 51 22.0					i	35.0		
		i	33.6				OUL	iP	14 12 20.8		
		ePP	55 04					i	27.6		
		eSKS	18 01 50				SOD	eP	14 12 21		
		eS	02 12					i	27.1		
	KJN	iP	17 51 14.9 U	1.4	62.1		H:		14 00 41.4		
		i	27.3						19.3 N, 70.0 W, 39 km		
	OUL	iP	17 51 19.0 U						Dominican Republic		
	SOD	iP	17 51 19.9			6	NUR	iPKP	18 48 38.3 D	0.9	65.4
	H:		17 38 05.3				KJN	ePKP	18 48 26		
			8.0 S, 107.2 E, 33 km (R)				OUL	iPKP	18 48 26.8		
			Java					i	32.9		
5	SOD	eP	18 15 27				SOD	ePKP	18 48 20		
							H:		18 29 36		
5	NUR	eP	20 23 16						29.4 S, 179.3 W, 285 km		
	KJN	eP	20 23 46						Kermadec Islands		
		i	53.9	0.8	6.9	6	NUR	iP	19 59 03.0		
	OUL	eP	20 24 01				KJN	iP	19 58 40.1	1.3	34.7
5	KJN	eP	21 36 31				OUL	iP	19 58 38.8 D		
							SOD	eP	19 58 28		
5	NUR	iP	22 06 10.0				H:		19 48 31.6		
		i	18.1						42.9 N, 139.3 E, 33 km (R)		
	KJN	eP	22 05 36						Hokkaido, Japan		
		i	38.4	0.8	17.7	6	NUR	iP	23 51 35.1	0.8	11.8
	OUL	eP	22 05 21					i	44.8		
	SOD	eP	22 05 01				KJN	eP	23 51 21		
	H:		22 02 40					e	33		
			72.7 N, 3.0 E, 33 km (R)				OUL	eP	23 51 30		
			Norwegian Sea								
6	KJN	eP	02 32 40			7	KJN	iP	06 17 49.1	0.6	5.5
							OUL	iP	06 17 49.8 U		
							SOD	eP	06 17 42		
							H:		06 05 33.7		
									18.1 N, 145.3 E, 189 km		
6	NUR	iP	04 59 26.4 U	0.7	15.5				Mariana Islands		
		i	30.2								
		i	38.2								
	KJN	iP	04 59 02.0	0.8	10.8	7	NUR	iP	06 51 54.4	0.9	18.9
	OUL	iP	04 58 55.0				KJN	iP	06 51 28.8	0.7	10.3
	SOD	iP	04 58 40.3					e	56		
	H:		04 48 36.9					ePP	53 55		
			52.7 N, 168.1 W, 34 km				OUL	iP	06 51 22.5		
			Fox Islands				SOD	eP	06 51 08		
6	SOD	eP	13 44 55				H:		06 41 05.8		
									52.2 N, 171.9 W, 52 km		
									Fox Islands		

May		T	A	May		T	A
7	KJN eP 07 50 40 OUL iP 07 50 34.2 H: 07 40 15.9 52.2 N, 171.8 W, 45 km Fox Islands			KJN iP 18 54 59.4 U epP 55 44 esP 56 10 ePP 28 OUL iP 18 55 08.7 U ipP 53.7 iPP 56 50.2 SOD iP 18 55 15.5 U H: 18 48 04.8 36.4 N, 70.2 E, 215 km Hindu Kush	0.8	54.6	
7	NUR eP 11 14 32 KJN eP 11 14 06 OUL eP 11 14 01 H: 11 03 49.5 51.8 N, 173.8 E, 18 km Near Islands			8 NUR ePKP 19 04 36 i 39.0 D i 53.5 KJN iPKP 19 04 28.5 D i 41.7 i 05 08.3 OUL iPKP 19 04 26.9 D i 39.8 SOD iPKP 19 04 20.6 H: 18 44 56.8 33.2 S, 178.4 W, 50 km (R) South of Kermadec Islands	0.9	197.8	
7	NUR eP 17 34 54			8 NUR eP 20 43 11 KJN iP 20 43 11.2 OUL iP 20 43 20.2 D SOD eP 20 43 26 H: 20 36 01 36.2 N, 71.1 E, 111 km Afghanistan-USSR border	0.7	4.1	
8	NUR eP 06 29 27 H: 06 23 53.9 34.1 N, 26.4 E, 41 km Crete			8 KJN iP 21 51 05.2 OUL eP 21 51 06 SOD eP 21 50 58 H: 21 38 45.6 19.1 N, 145.8 E, 129 km Mariana Islands			
8	KJN eP 07 30 22 OUL iP 07 30 26.8			8 KJN eP 23 36 43 OUL eP 23 36 48 SOD eP 23 36 46 H: 23 23 23 10.4 S, 108.1 E, 33 km (R) South of Java	1.1	9.5	
8	NUR iP 07 33 33.4 KJN iP 07 33 19.6 OUL iP 07 33 21.1 SOD eP 07 33 15 H: 07 20 25 11.1 N, 141.5 E, 44 km West Caroline Islands			8 NUR eP 00 48 25 KJN eP 00 48 14			
8	KJN eP 08 19 19 H: 08 06 27.1 6.8 N, 73.4 W, 29 km Northern Colombia			9 NUR eP 01 17 47			
8	NUR eP 13 09 07 1.1 12.2	1.1	12.2				
8	NUR iP 14 58 29.3 KJN iP 14 58 12.1 i 15.4 OUL iP 14 58 13.4 i 26.2 SOD eP 14 58 05 H: 14 47 11.1 30.1 N, 131.6 E, 64 km Kyushu, Japan	0.7	11.6				
8	NUR iP 18 54 59.0 U epP 55 44 iPP 56 25.4 cont.	0.9	79.1				

May		T	A	May		T	A
9	NUR eP 03 13 29 KJN eP 03 13 09 OUL eP 03 13 10 SOD eP 03 12 52 H: 03 02 40.3 36.5 N, 138.3 E, 167 km Honshu, Japan			OUL iP 11 09 45.6 epP 10 46 SOD eP 11 09 35 H: 11 00 09.8 44.8 N, 140.6 E, 256 km Eastern Sea of Japan			
9	NUR eP 04 09 57 KJN e 04 10 44 H: 04 05 11.2 39.6 N, 27.0 E, 29 km Turkey			9 NUR iP 12 47 04.7 D 0.9 43.7 i 11.8 i 19.0 eS 55 36 eScS 56 56 eSS 59 40 KJN iP 12 46 40.6 D 1.0 34.9 i 47.7 e 47 09 OUL iP 12 46 32.6 i 36.8 SOD iP 12 46 16.4 D H: 12 36 36.8 56.6 N, 152.6 W, 33 km (R) Kodiak Island			
9	NUR iP 06 25 42.0 U 0.7 54.2 i 54.8 eS 34 33 eSS 38 52 KJN iP 06 25 18.4 D 1.0 104.6 i 31.4 i 26 06.6 OUL iP 06 25 16.1 i 27.3 SOD iP 06 25 04.3 i 17.1 H: 06 14 57.1 44.2 N, 149.0 E, 40 km (R) Kurile Islands			9 NUR iP 15 17 27.2 0.8 14.4 i 34.7 KJN iP 15 17 03.4 OUL iP 15 16 55.6 U SOD iP 15 16 39.7 H: 15 06 58.6 56.6 N, 152.3 W, 17 km Kodiak Island			
9	NUR eP 08 05 24 1.0 10.0 KJN iP 08 06 03.6 OUL eP 08 06 11 SOD eP 08 06 35 H: 08 00 48 39.8 N, 21.5 E, 54 km Greece			9 NUR eP 16 10 38 0.9 10.1 KJN iP 16 10 25.0 U 1.0 13.1 OUL iP 16 10 25.9 SOD eP 16 10 18 H: 15 57 41.5 12.7 N, 143.3 E, 120 km South of Mariana Islands			
9	NUR iP 08 09 15.0 i 24.1 1.0 18.0 KJN iP 08 08 43.4 U 0.6 8.9 i 53.4 OUL iP 08 08 29.6 D SOD iP 08 08 07.4 H: 08 04 08.4 78.9 N, 20.8 W, 33 km (R) Eastern Greenland			9 NUR eP 16 44 03 Moscow: H: 16 37 02 39.2 N, 71.4 E Pamir			
9	NUR eP 11 10 10 epP 11 08 KJN iP 11 09 47.0 0.5 5.1 epP 10 44 cont.			9 KJN eP 19 37 41 SOD eP 19 37 48 H: 19 24 45 2.4 N, 127.1 E, 95 km Molucca Passage			
				9 NUR eP 19 51 23 0.8 7.2			

May		T		A		May		T		A	
9	KJN ePKP	20	32	31			10	NUR eP	17	51	33
	H: 20 13	32.4						KJN iP	17	51	18.0 U
	15.5 S, 173.4 W,	89 km						i			1.0 16.4
	Tonga Islands							OUL iP	17	51	20.7
9	NUR iP	21	43	03.8 U	1.4	57.4		SOD iP	17	51	16.1
	ipP			38.4				H: 17 40	06.7		
	ePP	46	37					23.7 N, 121.5 E,	44 km		
	epPP	47	12					Taiwan			
	e	49	20				11	KJN eP	06	20	55
	eSKS	53	20					H: 06 08	19.9		
	eS		52					6.8 N, 73.1 W,	176 km		
	esS	54	40					Northern Colombia			
	KJN iP	21	42	53.3 U	1.0	45.8					
	ipP	43	23.9				11	NUR iP	14	58	07.4 U
	e	44	14					i		10.0 U	1.0 360.0
	ePP	46	29					ePP	59	28	
	eSKS	53	10					eS	15	03	48
	iS		34.2					e	04	20	
	e		49					e	05	40	
	esS	54	21					eLR	15	07.2	
	OUL iP	21	42	55.2 U				KJN iP	14	58	03.8
	ipP	43	30.1					i		06.3 U	
	SOD iP	21	42	52.2 U				i		58.0	
	H: 21 30	08.3						ePP	59	14	
	5.2 N, 127.5 E,	119 km						OUL iP	14	58	12.4
	Philippine Islands							i		14.9	
10	NUR eP	03	42	24				SOD iP	14	58	17.1
10	NUR eP	04	53	24				i		19.9	
10	NUR eP	07	33	52				H: 14 50	58.8		
	SOD eP	07	34	34				39.4 N, 73.8 E,	21 km		
								Tadzhik-Sinkiang border			
10	KJN eP	13	38	33			11	NUR ePKP	15	23	40
	OUL eP	13	38	35				ePP	24	04	
	H: 13 25	41						ePKKP	34	45	
	1.4 N, 120.5 E,	75 km						KJN iP	15	23	43.2
	Northern Celebes							ePP	24	19	
								e		50	
								iPKKP	34	41.3	
								i		50.5	
								OUL ePKP	15	23	40
								ePP	24	04	
10	KJN iP	13	51	43.4	0.8	6.2		e		14	
	OUL iP	13	51	35.5				iPKKP	34	43.2	
	SOD iP	13	51	24.8				i		53.4	
10	NUR eP	15	00	48	0.8	8.6		SOD ePKP	15	23	42
	KJN eP	15	00	39				ePKKP	34	41	
								i		52.0	
10	NUR eP	17	24	17				H: 15 05	16.8		
								20.3 S, 68.5 W,	67 km		
								Chile-Bolivia border			



May				T	A	May		T	A	
	eScS	39	24			KJN	iP	05 22 29.3	1.0 13.1	
	e	42	16			OUL	iP	05 22 29.9 U		
KJN	iP	05 28 58.9 U		1.0	49.1	SOD	iP	05 22 21.5		
	i	29 05.7				H: 05 11 36.6				
	iPcP	48.8				27.5 N, 139.6 E, 452 km				
OUL	iP	05 28 51.2 U				Bonin Islands				
SOD	iP	05 28 36.9 U				14	NUR	iP	09 08 03.0	0.9 20.2
	e	52					e	09 18		
H: 05 18 55.4						KJN	iP	09 07 59.6		
56.5 N, 152.6 W, 33 km (R)							i	08 05.7		
Kodiak Island							e	59		
13	KJN	iP	07 10 45.8			OUL	eP	09 08 07		
	ipP	11 04.7				SOD	iP	09 08 12.8		
OUL	eP	07 10 52				H: 09 00 54.8				
H: 06 57 58.1						39.2 N, 73.9 E, 33 km (R)				
4.6 N, 126.8 E, 79 km						Tadzhik-Sinkiang border				
Talaud Islands						14	NUR	eP	10 55 06	1.0 12.0
14	NUR	eP	03 07 44	0.7	10.3	KJN	iP	10 54 56.0 U	0.7 6.9	
	KJN	iP	03 07 20.0	0.8	5.4		epP	55 25		
OUL	iP	03 07 12.8 D				SOD	eP	10 54 53		
SOD	iP	03 06 56.7				H: 10 43 03				
H: 02 57 19						13.7 N, 120.7 E, 112 km				
56.9 N, 152.7 W, 33 km (R)						Mindoro, P.I.				
Kodiak Island						14	NUR	iPKP	14 50 55.7	0.7 9.0
14	NUR	eP	03 24 21				i	51 07.8		
14	NUR	eP	04 18 29			KJN	ePKP	14 50 48		
KJN	eP	04 18 26				H: 14 31 22.1				
						28.0 S, 176.6 W, 19 km				
						Kermadec Islands				
14	NUR	iP	04 20 59.7			14	NUR	eP	16 35 00	
	i	21 01.8					e	03		
	isP	26.2				KJN	eP	16 34 45		
	eS	25 05				15	NUR	eP	00 17 22	
	esS	42					e	18 28		
KJN	iP	04 21 35.7 D	0.9	12.5		KJN	eP	00 17 03		
	i	37.9					e	18 09		
OUL	iP	04 21 42.8 D				OUL	eP	00 17 01		
	i	45.3				SOD	iP	00 16 52.3		
	i	57.3				H: 00 05 53.3				
SOD	iP	04 22 04.2				32.9 N, 141.3 E, 63 km				
	i	11.5				South of Honshu, Japan				
	e	49				15	NUR	eP	00 25 06	
H: 04 16 01.7						KJN	eP	00 24 46		
37.7 N, 21.2 E, 66 km							i	56.8		
Southern Greece						OUL	eP	00 24 46		
14	NUR	eP	04 22 31			SOD	eP	00 24 36		
KJN	iP	04 23 12.6					e	47		
14	NUR	eP	05 22 46	0.8	11.5	H: 00 13 36.3				
cont.						32.9 N, 141.4 E, 58 km				
						South of Honshu, Japan				

May							May						
					T	A					T	A	
15	NUR	iP	02 39	08.7	U	1.0	30.8	15	NUR	eP	08 37	44	
		ePP	41 52						KJN	eP	08 38	14	
		ePPP	43 44						OUL	eP	08 38	19	
		eS	48 37						H: 08 32 09				
		eScS	49 14						34.5 N, 26.8 E, 33 km (R)				
		e	53 40						Crete				
	KJN	iP	02 38	49.5	U	1.0	29.4	15	KJN	eP	15 58	35	
		i	39 33.6						SOD	eP	15 58	31	
		ePP	41 26						H: 15 46 59				
	OUL	iP	02 38	49.3	U				28.2 N, 142.7 E, 33 km (R)				
		i	39 01.3						Bonin Islands				
		ePP	41 25										
	SOD	iP	02 38	39.2	U			15	NUR	eP	19 01	54	
		i	44.5						SOD	eP	19 02	00	
		ePP	41 08						H: 18 50 08.9				
	H: 02 27 36.0								5.3 N, 96.6 E, 51 km				
	32.5 N, 141.4 E, 40 km								Northern Sumatra				
	South of Honshu, Japan												
15	NUR	eP	02 47	27				16	NUR	eP	04 17	31	
	KJN	eP	02 47	06					KJN	eP	04 17	10	
		e	27						H: 04 06 02				
	SOD	eP	02 46	55					32.9 N, 141.4 E, 60 km				
	H: 02 35 50.7								South of Honshu, Japan				
	32.6 N, 141.5 E, 24 km												
	South of Honshu, Japan												
15	KJN	eP	02 49	57				16	NUR	eP	05 19	10	
	SOD	eP	02 49	44					KJN	eP	05 18	45	
	H: 02 38 37.6								OUL	eP	05 18	45	
	32.4 N, 141.5 E, 13 km								SOD	eP	05 18	30	
	South of Honshu, Japan								H: 05 08 31.6				
									45.5 N, 149.8 E, 52 km (R)				
									Kurile Islands				
15	KJN	eP	03 22	13				16	KJN	eP	05 32	38	
	SOD	eP	03 21	51					H: 05 21 27.4				
		e	22 04						34.9 N, 140.0 E, 44 km				
	H: 03 11 00.5								Honshu, Japan				
	32.6 N, 141.5 E, 38 km												
	South of Honshu, Japan												
15	NUR	iP	08 18	27.1	D	1.0	41.0	16	NUR	eP	13 11	04	
		i	33.0						e	13 24			
		i	19 29.9						ePP	14 36			
		eS	22 56						eSKS	21 36			
		e	23 12						ePS	23 15			
	KJN	iP	08 18	59.3	D	0.9	17.9		eSS	28 08			
		iPP	19 47.1						H: 12 58 09.5				
		eS	23 51						13.5 N, 90.6 W, 95 km				
	OUL	iP	08 19	07.4					Near coast of Guatemala				
	SOD	iP	08 19	28.3				16	NUR	eP	16 16	03	
	H: 08 12 57.1								KJN	iP	16 15	59.5	
	34.6 N, 26.7 E, 33 km (R)								OUL	eP	16 15	46	
	Crete												

cont.

May		T	A	May		T	A
	SOD eP	16	15 44				
	H: 16 11 22.2			17	KJN eP	0.7	5.5
	63.7 N, 19.1 W, 4 km				OUL iP		
	Iceland				SOD iP		
16	KJN iP	16	33 27.5		H: 02 27 21		
	H: 16 14 22.9				60.8 N, 143.8 W, 33 km (R)		
	15.2 S, 173.5 W, 33 km (R)				Southern Alaska		
	Tonga Islands			17	NUR eP		
16	NUR iP	19	36 32.0 U 0.9 25.2		i		
	KJN iP	19	36 11.8 U 0.9 29.5		eS		
	i		15.4		e		
	i		34.4		KJN iP		
	OUL iP	19	36 11.9 U		i		
	ePP		38 47		e		
	SOD iP	19	36 02.9		OUL eP		
	i		13.3		SOD eP		
	H: 19 24 58.6				H: 04 28 51.9		
	32.4 N, 141.3 E, 36 km				38.7 N, 44.2 E, 39 km		
	South of Honshu, Japan				Turkey-Iran border		
16	NUR eP	19	45 24	17	NUR ePKP		
	e		35		KJN iP	0.9	13.4
	KJN iP	19	44 59.4		OUL iP		
	OUL iP	19	44 57.9		H: 08 22 20.3		
	i		45 09.9		15.1 S, 168.1 E, 36 km		
	SOD eP	19	44 46		New Hebrides Islands		
	Moscow:			17	NUR iP		
	H: 19 34 34				KJN iP	1.0	26.2
	44.2 N, 150.5 E				i		
	Kurile Islands				OUL iP		
16	NUR eP	19	50 52		SOD iP		
	KJN eP	19	50 28		Moscow:		
	OUL eP	19	50 27		H: 09 34 42		
	SOD eP	19	50 14		38.3 N, 142.2 E		
					Honshu, Japan		
16	KJN ePKP	23	30 10	17	NUR eP		
	OUL ePKP	23	30 10		KJN iP	1.0	13.1
	H: 23 11 08				e		
	25.9 S, 177.6 W, 154 km				OUL eP		
	South of Fiji Islands				SOD eP		
17	NUR iP	00	43 10.3 1.0 20.0		H: 09 50 09.4		
	i		13.6 1.0 50.0		24.4 N, 122.1 E, 50 km		
	KJN iP	00	42 46.2 U 0.8 13.1		Taiwan		
	i		50.1 0.8 30.8	17	KJN iP	1.0	12.0
	e		43 33		OUL eP		
	OUL iP	00	42 37.3		SOD eP		
	SOD iP	00	42 21.1		H: 11 19 38.2		
	i		24.9		19.7 N, 69.7 W, 54 km		
	H: 00 33 12.3				Dominican Republic		
	60.8 N, 143.7 W, 15 km			17	NUR ePKP	0.8	8.6
	Southern Alaska						

cont.



May		T	A	May		T	A
	KJN iPKP 16 32 35.5 D	0.9	15.2		OUL iP 11 32 56.2 U		
	OUL ePKP 16 32 33				SOD iP 11 32 44.8 U		
	H: 16 13 37.6				H: 11 22 31.6		
	16.6 S, 175.5 E, 80 km				41.9 N, 144.7 E, 41 km		
	Fiji Islands				Hokkaido, Japan		
17	NUR iP 17 58 28.4 U			18	NUR eP 11 38 11		
	i 33.2				KJN iP 11 38 06.5		
	ePP 18 00 14				OUL iP 11 38 16.5		
	eS 04 48				i 21.4		
	eSS 07 58				SOD eP 11 38 23		
	KJN iP 17 58 52.4 U	2.0	224.8		H: 11 31 20.4		
	e 59 27				40.6 N, 70.4 E, 14 km		
	OUL iP 17 59 01.1 U				Tadzhik SSR		
	SOD iP 17 59 18.5 U			18	NUR iP 12 00 43.5	1.0	24.0
	i 26.4				OUL eP 12 00 32		
	H: 17 50 39.6			18	NUR iPKP 13 11 35.8	1.0	50.0
	19.7 N, 38.7 E, 38 km				KJN iPKP 13 12 24.0 U	1.0	18.5
	Red Sea				OUL iPKP 13 12 24.4		
17	NUR iP 18 42 27.3	0.8	11.5		SOD ePKP 13 12 29		
					i 33.2		
18	NUR iP 04 17 42.4 U	0.8	30.2		H: 12 53 20		
	e 18 07				59.2 S, 25.4 W, 33 km (R)		
	eS 26 32				South Sandwich Islands		
	eSS 31 10			18	NUR iP 14 11 44.9 U	0.9	37.0
	e 33 50				KJN iP 14 11 22.2 U	1.0	37.1
	KJN iP 04 17 19.3 U	1.1	56.7		OUL iP 14 11 20.7 U		
	i 24.4				SOD eP 14 11 09		
	OUL iP 04 17 18.5 U				H: 14 00 56.1		
	SOD iP 04 17 07.0				42.0 N, 144.7 E, 40 km		
	i 19.8				Hokkaido, Japan		
	H: 04 06 54.7			18	NUR iP 22 34 40.5	0.8	20.2
	41.9 N, 144.6 E, 44 km						
	Hokkaido, Japan			18	KJN eP 23 33 10		
18	NUR iP 04 49 58.8 U	0.5	7.9		H: 23 20 39		
	KJN iP 04 49 36.1 U	0.6	7.5		10.0 N, 126.1 E, 32 km		
	OUL eP 04 49 34				Mindanao, P.I.		
	SOD iP 04 49 23.3			18	NUR iP 23 50 28.2 D	0.9	139.4
	H: 04 39 08				KJN iP 23 50 09.8 U	0.8	107.7
	41.9 N, 144.6 E, 33 km (R)				i 26.2		
	Hokkaido, Japan				OUL iP 23 50 10.8		
18	NUR iP 11 33 20.0 U	0.9	75.6		SOD iP 23 50 03.8 D		
	e 55				i 14.0		
	ePP 35 47				i 24.4		
	eS 42 12				H: 23 39 15.2		
	e 44 16				31.1 N, 130.7 E, 43 km		
	eSS 46 24				Kyushu, Japan		
	KJN iP 11 32 58.0 U	1.0	67.6	19	NUR iPKP 05 28 58.0	1.0	120.0
	i 33 06.5				i 29 20.0		
	cont.				cont.		

May							May						
					T	A					T	A	
	KJN	iPKP	05 28	48.4 U	0.9	71.4		SOD	eP	08 54	35		
		i	29	00.0					i		40.0		
	OUL	iPKP	05 28	47.4 U				H:	03 47	19.8			
		e		59					39.2 N, 72.8 E,	33 km (R)			
		e	29	08					Kirgiz SSR				
	SOD	iPKP	05 28	41.3			20	NUR	iP	15 11	56.8 U	1.0 52.0	
		i	29	03.5					e	12	09		
	H:	05 09	10.9					KJN	iP	15 11	43.3 U	1.0 92.7	
		34.9 S, 179.0 W,	35 km						i		49.4		
		South of Kermadec Islands						OUL	iP	15 11	35.4 U		
19	NUR	iPKP	12 21	58.0	0.7	40.0			e		52		
	KJN	iPKP	12 21	53.6				SOD	iP	15 11	24.7 U		
	OUL	iPKP	12 21	47.5					i		26.4		
		i		52.7									
	H:	12 02	20				20	KJN	iP	21 56	08.4	0.9 16.1	
		30.3 S, 177.9 W,	25 km					OUL	iP	21 56	18.8		
		Kermadec Islands						SOD	eP	21 56	33		
19	NUR	iP	16 01	09.8	0.9	35.3		H:	21 48	55			
	KJN	iP	16 01	32.1	0.9	21.4			29.7 N, 52.2 E,	42 km			
		i		51.0					Southern Iran				
	OUL	iP	16 01	40.6			20	NUR	ePn	23 19	57		
	SOD	iP	16 01	57.0					i	20	00.4		
	H:	15 52	34.2						i		20.2		
		14.5 N, 40.3 E,	13 km						e	21	10		
		Ethiopia							iSn		15.0		
20	NUR	eP	01 16	35					i		51.9		
	KJN	iP	01 16	10.9	0.7	13.0		KJN	iPn	23 19	08.1		
	OUL	eP	01 16	04					i		11.4		
	H:	01 05	53						iSn		45.0		
		52.5 N, 170.5 W,	89 km					OUL	iPn	23 19	08.5		
		Fox Islands							i		09.3		
20	NUR	eP	03 03	52					e		34		
	KJN	iP	03 03	36.0 D	0.9	31.3		SOD	iPn	23 18	59.5		
		i		57.6					i	19	03.1		
	OUL	iP	03 03	36.4					i		41.5		
	SOD	iP	03 03	28.5				H:	23 18	11.7			
		i		40.3					66.4 N, 33.4 E,	17 km			
	H:	02 51	09.4						Western Russia				
		19.8 N, 146.0 E,	42 km				21	NUR	eP	07 30	50		
		Mariana Islands							eS		41 12		
20	NUR	eP	08 54	23				KJN	i	07 30	49.0		
	KJN	iP	08 54	20.7	0.6	13.7			i		31 12.2		
		i		25.3	0.8	40.8		OUL	eP	07 30	33		
		i	55	36.4					e		48		
	OUL	iP	08 54	29.9				SOD	eP	07 30	27		
		i		33.9				H:	07 18	13			
		cont.							27.9 N, 111.3 W,	33 km (R)			
									Gulf of California				

May						May			
			T	A		T	A		
21	NUR	eP	18 41 52			22	NUR	eP	02 53 21
		i	54.2				KJN	eP	02 53 01
	KJN	iP	18 41 53.1 D	0.8	8.5		OUL	eP	02 53 01
		i	55.2				SOD	eP	02 52 50
	OUL	iP	18 42 02.9 D				H: 02 42 13.2		
		i	04.1				35.9 N, 139.4 E, 55 km		
		i	24.8				Honshu, Japan		
	SOD	eP	18 42 09			22	NUR	ePKP	03 38 16
	H: 18 34 46						KJN	ePKP	03 38 10
	35.6 N, 69.7 E, 138 km						epPKP 35		
	Hindu Kush						OUL	ePKP	03 38 09
21	NUR	iP	18 57 25.3 U	1.1	333.2		H: 03 19 22.5		
		ipP	58 10.0				15.0 S, 167.2 E, 102 km		
		ePP	19 00 36				New Hebrides Islands		
		epPP	01 24			22	NUR	eP	07 37 44
		e	04 30			22	NUR	iP	11 43 23.6 U
		eS	07 28				KJN	eP	11 43 12
		eSP	08 16				OUL	eP	11 43 11
		ePS	40			22	NUR	eP	16 10 25
		eSS	13 08			22	NUR	eP	17 48 20
		ePKKP	15 35				KJN	eP	17 48 21
		eP'P'	23 40				OUL	eP	17 48 33
	KJN	iP	18 57 22.1 U				H: 17 41 21		
		ipP	58 08.8				37.0 N, 68.0 E, 37 km		
		i	40.8				Afghanistan-USSR border		
		iPP	19 00 41.0			22	NUR	eP	19 26 18
		ipPP	01 22.8				KJN	eP	19 26 26
		e	03 18				ePP 27 53		
		eS	07 25				OUL	eP	19 26 36
		ePS	08 42				H: 19 19 25		
		ePKKP	15 39				37.1 N, 68.3 E, 48 km		
		eP'P'	23 40				Afghanistan-USSR border		
		iSKPP'	26 47.1			22	NUR	eP	19 51 14
	OUL	iP	18 57 27.8 U				KJN	eP	19 51 45
		i	58 10.0				SOD	eP	19 52 14
		eS	19 07 28				H: 19 46 02		
		iPKKP	15 39.0				36.7 N, 29.5 E, 54 km		
	SOD	iP	18 57 28.8 U				Turkey		
		i	33.3			22	NUR	eP	21 03 16
		ipP	58 16.4				KJN	eP	21 03 00
		e	59 06				OUL	iP	21 03 02.8
		e	19 01 04				SOD	iP	21 02 57.0
		ePKKP	15 36				H: 20 51 57		
	H: 18 45 11.7						24.9 N, 124.2 E, 127 km		
	1.0 S, 101.5 E, 173 km (R)						Southwestern Ryukyu Islands		
	Southern Sumatra								
21	NUR	eP	20 39 01						
	H: 20 28 29								
	55.2 N, 159.6 W, 58 km								
	Alaska Peninsula								

May		T	A	May		T	A
23	NUR iP 01 33 07.0 D	0.5	21.1	23	NUR iP 14 11 56.2	0.8	28.8
	KJN iP 01 32 42.8 U	0.7	16.4		e 12 12		
	OUL iP 01 32 41.3 D				KJN iP 14 11 42.5 U	0.9	43.8
	SOD iP 01 32 28.6 D				i 12 10.8		
	H: 01 22 22.2				OUL iP 14 11 34.0 U		
	44.6 N, 150.2 E, 33 km (R)				SOD iP 14 11 24.2		
	Kurile Islands						
23	NUR iP 02 03 25.8 U	0.7	19.4	23	NUR iPKP 15 44 50.8 U	0.7	16.8
	KJN iP 02 03 00.8 U	0.8	26.1		KJN ePKP 15 44 41		
	iPcP 41.3				OUL ePKP 15 44 46		
	OUL iP 02 02 59.0 U				H: 15 25 26.3		
	SOD iP 02 02 46.8				28.0 S, 176.7 W, 91 km		
	H: 01 52 39.1				Kermadec Islands		
	44.6 N, 150.5 E, 22 km			23	NUR iPKP 19 36 29.0 U	1.0	30.0
	Kurile Islands				epPKP 37 01		
23	NUR iP 06 03 45.5	0.7	7.7		epPP 38 32		
	KJN iP 06 03 19.0 U	0.7	10.3		eSKP 39 50		
	i 29.1				ePKS 40 04		
	OUL iP 06 03 15.9 D				eSP 48 08		
	SOD eP 06 03 00				KJN iPKP 19 36 36.0 U	1.0	59.9
	H: 05 53 29				i 41.2		
	52.4 N, 160.2 E, 44 km				ipPKP 37 07.1		
	Kamchatka				eSKP 39 40		
23	NUR eP 07 31 55	0.8	8.6		OUL iPKP 19 36 36.0 U		
	KJN eP 07 31 03				i 41.0		
23	NUR iP 08 47 13.0 U	1.0	38.0		ipPKP 37 08.0		
	e 22				eSKP 39 40		
	KJN iP 08 47 09.9 U	1.1	39.2		SOD iPKP 19 36 40.3		
	OUL iP 08 47 14.9 U				ipPKP 37 12.9		
	e 29				eSKP 39 48		
	SOD iP 08 47 16.4				H: 19 17 47.5		
	H: 08 34 35.8				56.2 S, 27.3 W, 130 km (R)		
	3.1 S, 101.5 E, 59 km				South Sandwich Islands		
	Southern Sumatra			23	NUR iP 21 07 12.0 D	0.8	18.7
23	NUR iP 12 05 41.1	0.6	8.8		i 22.2		
	i 56.0				KJN iP 21 06 45.8 U	0.8	26.9
	KJN iP 12 05 07.2	0.7	52.7		i 55.9		
	i 09.0				OUL iP 21 06 42.0 U		
	i 18.7				i 52.0		
	i 40.0				SOD eP 21 06 28		
	OUL eP 12 04 51				e 38		
	SOD eP 12 04 29				H: 20 56 52.6		
	H: 12 02 18				52.3 N, 160.3 E, 33 km (R)		
	72.8 N, 5.6 E, 33 km (R)				Kamchatka		
	Norwegian Sea			24	NUR eP 01 46 04		
					KJN i 01 45 51.3		
					cont.		

May						May			
			T	A				T	A
	SOD	iP	01 45 21.8			SOD	eP	10 36 08	
		e	34			H:	10 33 17		
	H:	01 35 37				71.4 N, 5.3 W, 33 km (R)			
		50.0 N, 159.3 E, 43 km				Jan Mayen Island			
		Kurile Islands							
24	NUR	eP	02 28 46	0.8	13.0	26	NUR	eP	15 11 58
	KJN	eP	02 28 40				KJN	iP	15 11 44.4
							OUL	eP	15 11 38
							SOD	eP	15 11 25
24	OUL	iP	04 09 10.4			26	NUR	eP	15 41 31
	SOD	eP	04 08 55				KJN	eP	15 41 07
	H:	03 59 14					OUL	eP	15 40 47
		56.7 N, 152.1 W, 14 km					SOD	eP	15 40 26
		Kodiak Island					H:	15 37 43	
24	NUR	eP	16 07 24	1.0	22.0		71.2 N, 6.7 W, 33 km (R)		
							Jan Mayen Island		
24	NUR	eP	17 29 51	0.8	13.0	26	NUR	eP	17 36 25
	KJN	iP	17 30 15.9	1.0	20.7		KJN	iP	17 37 07.3 U
	SOD	iP	17 30 35.1				e	42 17	0.6 5.5
	H:	17 18 29					OUL	iP	17 37 18.3 U
		12.1 S, 34.2 E, 33 km (R)					SOD	iP	17 37 43.1 U
		Malawi					H:	17 32 59	
24	NUR	iP	22 48 49.2				45.5 N, 26.3 E, 133 km		
		i	59.6				Rumania		
	KJN	iP	22 48 23.1 D	0.7	11.6	26	NUR	iP	19 45 07.0
		i	32.9				KJN	iP	19 44 50.3 D
	OUL	iP	22 48 19.2				OUL	iP	19 44 50.9 D
		e	29				SOD	iP	19 44 43.2
	SOD	eP	22 48 04				H:	19 33 38.0	
		i	14.7				25.7 N, 140.6 E, 362 km		
	H:	22 38 29					Volcano Islands		
		52.3 N, 160.2 E, 27 km							
		Kamchatka							
25	NUR	iP	03 40 09.0			27	NUR	eP	01 50 05
		i	35.5				KJN	iP	01 49 59.5
		e	41 35				i	50 12.3	
		e	43 37				e	51 11	
	KJN	eP	03 40 48				OUL	iP	01 50 08.2
		e	45 10				SOD	eP	01 50 11
							H:	01 42 47.1	
25	NUR	eP	19 02 08	0.6	24.3		39.9 N, 77.3 E, 33 km (R)		
	KJN	iP	19 01 45.7 D	0.7	11.0		Southern Sinkiang, China		
	OUL	iP	19 01 44.1 D						
	H:	18 52 17.1							
		46.0 N, 143.0 E, 325 km							
		Hokkaido, Japan							
26	NUR	eP	10 37 08			27	NUR	eP	02 00 28
	KJN	eP	10 36 42				KJN	eP	02 01 04
		cont.					SOD	eP	02 01 19
							H:	01 54 26.0	
							35.8 N, 0.3 W, 28 km		
							Algeria		

May							May						
					T	A					T	A	
27	NUR	iP	06 36	58.0	0.7	7.9							
	KJN	iP	06 36	45.2 U	0.8	15.4							
		i		47.6									
	OUL	iP	06 36	50.1									
	SOD	iP	06 36	47.8									
27	NUR	iP	12 50	05.0 U	0.6	21.8							
		i		09.2									
	KJN	iP	12 50	04.8 U	0.6	24.0							
		epP		27									
		ePP		51 25									
	OUL	iP	12 50	14.1 U									
	SOD	iP	12 50	20.8									
	H: 12 42 54.1												
	36.2 N, 71.5 E, 109 km												
	Afghanistan-USSR border												
27	NUR	iP	17 33	40.2 U	1.2	277.4							
		i		49.8									
		iPcP		34 09.2									
		ePP		36 04									
		ePPP		37 48									
		eS		42 24									
		eScS		43 33									
		e		46									
		eSS		47 08									
		e		49 56									
		eP'P'	18 02	14									
		eLR	17	54.1									
	KJN	iP	17 33	15.2 U	1.2	271.8							
		i		24.4									
		iPcP		56.6									
		i		34 24.2									
		eS		41 36									
		eScS		43 06									
		e		19									
		eP'P'	18 02	18									
		e		30									
	OUL	iP	17 33	09.9 U									
		eP'P'	18 02	26									
	SOD	iP	17 32	55.2 U									
		i		33 02.1									
	H: 17 22 58.7												
	51.9 N, 176.1 E, 34 km (R)												
	Rat Islands												
27	NUR	iP	19 13	33.2 U	1.0	92.3							
		i		36.4									
		i		14 10.6									
		i		27.0									
		iPP		15 06.6									
		e		18 38									
	cont.												
		iS		19 45.5									
		eSS		22 28									
		eLQ	19	24.0									
	KJN	iP	19 13	28.9 U	0.7	50.7							
		i		40.3									
		i		14 54.6									
		ePP		15 12									
		iS		19 39.4									
		i		41.0									
	OUL	iP	19 13	37.2									
	SOD	iP	19 13	41.7 D									
		i		51.2									
		e		15 11									
	H: 19 05 48.5												
	36.1 N, 77.8 E, 35 km												
	Kashmir-Sinkiang border												
27	NUR	iP	20 21	51.5									
	KJN	iP	20 21	29.4	0.6	4.1							
		i		46.0									
	OUL	eP	20 21	27									
	SOD	eP	20 21	17									
	H: 20 11 11												
	41.9 N, 142.3 E, 68 km												
	Hokkaido, Japan												
28	NUR	iP	01 42	35.0 U	1.0	67.7							
		i		47.4									
		e		43 14									
	KJN	iP	01 42	09.3 U	1.0	45.8							
		i		21.4									
		iPcP		51.7									
	OUL	iP	01 42	04.4 U									
		i		15.0									
	SOD	iP	01 41	49.4 U									
		ePcP		42 40									
	H: 01 31 56.7												
	52.1 N, 175.0 E, 45 km												
	Rat Islands												
28	NUR	eP	04 12	17									
	KJN	iP	04 11	59.2									
	OUL	iP	04 12	00.7									
	SOD	eP	04 11	53									
	H: 04 00 58												
	30.3 N, 130.8 E, 33 km (R)												
	Kyushu, Japan												
28	NUR	iP	04 14	21.7 U	0.7	27.7							
		i		37.2									
		e		56									
		i		15 10.6									
	cont.												

May							May								
					T	A						T	A		
	KJN	iP	04 14	08.6 U	0.7	44.5		OUL	iP	04 58	42.8 U				
		i		39.1				SOD	iP	04 58	36.5 U				
		i		42.4				H:	04 45	43.9					
		e		55					11.9 N,	143.3 E,	33 km (R)				
	OUL	iP	04 14	15.7					South of Mariana Islands						
		i		52.2				29	NUR	ePKP	11 28	37			
	SOD	iP	04 14	15.9 U						eSKP	31 56				
		i		19.0					KJN	ePKP	11 28	37			
		i	15	19.7						eSKP	31 45				
	BCIS:									ePKS	32 06				
	H: 04 08 00								OUL	ePKP	11 28	38			
	50.0 N, 78.0 E								SOD	eSKP	11 31	35			
	Kazakh SSR								H:	11 09	54				
28	NUR	eSKP	06 51	09					19.2 S,	176.3 W,	236 km				
	KJN	ePKP	06 48	13					Fiji Islands						
		iSKP	50	58.2				29	NUR	eP	19 24	17			
	SOD	eSKP	06 50	50					KJN	eP	19 24	41			
	H: 06 29 45.6								H:	19 19	23				
	23.8 S, 179.7 W, 441 km								40.2 N,	38.5 E,	36 km				
	South of Fiji Islands								Turkey						
28	OUL	eP	07 29	11				29	NUR	iP	21 12	22.2 U	0.6	175.4	
	SOD	eP	07 29	02					ipP		45.0				
	H: 07 16 31								e	14	11				
	16.6 N, 146.6 E, 95 km								eS	21	01				
	Mariana Islands								eScS	22	05				
28	NUR	eP	12 10	17					eSS	25	12				
	KJN	iP	12 10	16.6				KJN	iP	21 11	59.3 U				
		ePP	11	38					i	12	10.4				
	OUL	eP	12 10	31					i		20.6				
	SOD	eP	12 10	31					i		50.4				
	H: 12 03 01.7								i	13	47.3				
	37.7 N, 73.4 E, 33 km (R)								OUL	iP	21 11	58.1 U			
	Tadzhik SSR								i	12	19.8				
28	NUR	eP	12 29	27					e		43				
	KJN	iP	12 29	50.3	0.9	10.7			SOD	iP	21 11	46.2 U			
	OUL	iP	12 29	57.6					i		59.5				
	SOD	eP	12 30	12					e	12	27				
	H: 12 19 32								H:	21 01	44.3				
	1.9 N, 31.4 E, 40 km								43.3 N,	145.7 E,	88 km (R)				
	Uganda								Hokkaido, Japan						
29	KJN	eP	00 12	58				30	KJN	ePKP	07 25	12			
	SOD	eP	00 12	57					H:	07 06	20				
									19.4 S,	175.8 W,	185 km				
									Tonga Islands						
29	NUR	iP	04 58	55.6	1.0	32.8		30	NUR	iP	10 05	38.0	1.0	24.6	
	KJN	iP	04 58	41.4 U	1.2	70.5			i		41.1				
		e	05 00	34					KJN	iP	10 05	14.0 D	0.9	28.6	
	cont.								i		22.4				
									cont.						

May		T	A	May		T	A
	OUL iP 10 05 08.2 D			31	NUR iP 00 14 04.6	1.0	14.4
	SOD iP 10 04 53.5				KJN eP 00 13 53		
	H: 09 54 38.3			31	NUR iP 11 50 25.4	0.9	27.5
	50.1 N, 176.6 W, 30 km (R)				epP 43		
	Andreanof Islands				KJN eP 11 50 30	1.0	27.3
30	NUR eP 10 11 18				i 32.8		
	KJN iP 10 10 53.3	1.0	6.5		ipP 50.1		
	OUL eP 10 10 47				OUL iP 11 50 27.1		
	SOD eP 10 10 33				epP 46		
	H: 10 00 23				SOD eP 11 50 28		
	51.8 N, 168.6 W, 33 km (R)				H: 11 38 39.0		
	Fox Islands				12.5 N, 60.3 W, 60 km		
					Windward Islands		
30	OUL eP 13 36 41			31	NUR iP 16 19 34.0	0.6	10.2
	SOD eP 13 36 49				epP 20 32		
	H: 13 23 56.4				ePP 21 05		
	11.9 N, 143.7 E, 26 km				KJN eP 16 19 34		
	South of Mariana Islands				epP 20 30		
30	KJN eP 14 40 16				ePP 21 07		
	OUL eP 14 40 00				OUL eP 16 19 43		
	SOD eP 14 40 06				SOD eP 16 19 49		
	H: 14 27 37				H: 16 12 44		
	24.2 N, 108.7 W, 33 km (R)				36.7 N, 70.8 E, 274 km		
	Gulf of California				Hindu Kush		
30	NUR eP 19 04 12			31	NUR iP 16 39 04.0	0.9	12.0
	KJN eP 19 04 29				KJN iP 16 38 53.2 D	0.8	29.2
	OUL eP 19 04 24				i 39 00.4		
	e 33				OUL iP 16 38 56.1		
	H: 18 56 29				i 39 02.4		
	31.7 N, 70.1 E, 36 km				SOD iP 16 38 52.0 U		
	West Pakistan				i 39 02.1		
					H: 16 26 32.5		
					11.4 N, 125.5 E, 66 km		
					Samar, P.I.		
30	KJN iP 19 04 15.1	0.7	4.8	31	NUR ePKP 18 07 28		
	H: 18 54 42				OUL ePKP 18 07 20		
	60.0 N, 152.6 W, 90 km				H: 17 49 07.5		
	Southern Alaska				15.8 S, 179.7 W, 465 km		
					Fiji Islands		
30	NUR eP 23 59 07	1.0	18.5	31	NUR iP 19 20 10.6	0.9	15.5
	i 09.3	0.6	47.4		KJN eP 19 19 36		
	KJN iP 23 59 38.0	0.8	5.4		SOD eP 19 19 07		
	i 24 00 24.2						
	OUL iP 23 59 47.3						
	e 24 00 03						
	SOD iP 24 00 07.3						
	i 01 09.1						
	H: 23 53 30.9						
	34.2 N, 28.8 E, 33 km (R)						
	Eastern Mediterranean Sea						

November 27, 1967

M. T. Porkka  
Aili Huovila



26 FEB 1968

Since June 1, 1967 after reinstallation the new location of Kevo station is 69°45'19" N, 27°00'24" E, elevation 80 m.

June				T	A	June				T	A
1	NUR	iP	03 46 59.5	0.9	72.2	1	NUR	eP	10 53 42		
		e	47 13								
		e	22			1	NUR	eP	11 14 33		
		iScP	51 29.0				KJN	eP	11 14 11	1.0	13.1
		eS	55 40				OUL	iP	11 14 09.3		
		eScS	56 48				SOD	iP	11 13 56.1		
		eSS	04 00 12				H: 11 03 52.4				
		e	03 16				44.5 N, 149.0 E, 58 km				
		eP'P'	15 26				Kurile Islands				
	KJN	iP	03 46 35.0	0.6	30.8	1	NUR	eP	19 10 27		
		i	46.4								
		iPcP	47 12.0			1	NUR	iPKP	21 06 24.7	0.7	9.2
		iScP	51 12.2					ePP	07 12		
		eS	54 55					ePS	16 36		
		eScS	56 20					eSS	23 10		
		eP'P'	04 15 37				KJN	ePKP	21 06 20		
		i	40.2				KEV	ePP	21 06 40		
	OUL	iP	03 46 28.6 U					ePS	15 56		
		eP'P'	04 15 43					eSS	21 36		
	SOD	iP	03 46 13.2					eSSS	26 21		
		iScP	50 57.7				H: 20 47 45.6				
		eP'P'	04 15 32				6.8 S, 155.0 E, 31 km				
		e	46				Solomon Islands				
	H: 03 36 19.0										
	53.7 N, 165.6 W, 60 km (R)										
	Fox Islands										
1	NUR	iP	10 26 19.3	0.9	22.4	1	NUR	eP	22 27 45	1.0	10.3
	KJN	iP	10 25 52.2	0.8	14.6		KJN	iP	22 27 25.2	0.9	15.2
	OUL	iP	10 25 48.2 U					i	34.2		
	SOD	eP	10 25 33				OUL	eP	22 27 24		
	H: 10 16 09.4						H: 22 16 31				
	53.9 N, 160.6 E, 28 km						36.2 N, 141.7 E, 40 km				
	Kamchatka						Honshu, Japan				
1	NUR	iP	10 44 34.0	1.2	172.3	2	NUR	iP	04 35 27.7	1.1	19.5
		i	35.4				KJN	iP	04 35 15.5 U	0.5	12.5
		eS	48 56					i	21.2		
	KJN	iP	10 45 05.2 D	1.0	29.4			e	36 27		
		i	31.4				OUL	iP	04 35 22.2 U		
	OUL	iP	10 45 14.4 D				SOD	eP	04 35 22		
		ePcP	48 24				KEV	iP	04 35 24.9 U	0.8	11.8
	SOD	iP	10 45 36.1				H: 04 27 33.2				
	H: 10 39 22.8						41.0 N, 88.1 E, 33 km (R)				
	36.9 N, 29.2 E, 36 km						Southern Sinkiang, China				
	Turkey										





June				T	A	June				T	A	
7	KJN	eP	19 50 34	1.3	28.2	SOD	ePKP	13 41 10				
		i	41.4			KEV	iPKP	13 41 06.8 U	1.0	24.6		
		i	51.5				ePKS	44 40				
	OUL	eP	19 50 34				e	49 52				
		i	42.2				e	55 40				
		i	53.2				eSS	14 00 28				
	SOD	eP	19 50 31			H:	13 22 13.7					
	KEV	iP	19 50 30.5	0.8	14.7		21.4 S, 170.3 E, 90 km (R)					
		i	38.9				Loyalty Islands					
7	NUR	iP	22 42 52.4			8	NUR	eP	14 04 20			
	OUL	eP	22 43 15				KJN	iP	14 04 09.6 D	0.7	6.9	
	SOD	eP	22 43 27				OUL	eP	14 04 11			
	H:	22 35 16					SOD	eP	14 04 08			
		26.9 N, 58.0 E, 41 km					KEV	eP	14 04 05			
		Southern Iran					H:	13 51 23.3				
								5.3 N, 127.0 E, 104 km				
8	NUR	iP	07 14 37.0	0.9	26.9			Philippine Islands				
	KJN	iP	07 14 27.5 D	1.0	27.3							
	OUL	iP	07 14 29.9			8	NUR	eP	16 22 20			
	SOD	iP	07 14 26.6				KJN	eP	16 21 45			
	KEV	iP	07 14 23.4	1.0	16.4		OUL	eP	16 21 10			
	H:	07 01 54.6					SOD	eP	16 21 11			
		6.1 N, 125.8 E, 158 km					KEV	eP	16 21 39			
		Mindanao, P.I.										
8	NUR	eP	12 14 59	1.0	20.0	8	NUR	iP	20 22 43.9			
	KJN	iP	12 14 49.7 D	0.9	27.7	8	NUR	eP	23 27 38			
	OUL	eP	12 14 51				SOD	eP	23 27 35			
	SOD	iP	12 14 48.4					e	49			
	KEV	iP	12 14 45.5	0.8	14.7		H:	23 17 48.7				
	H:	12 01 57.3						26.6 N, 96.0 E, 73 km				
		4.6 N, 127.1 E, 73 km						Burma				
		Talau Islands										
8	NUR	iPKP	13 41 22.1 U	0.9	47.0	9	NUR	eP	02 19 59			
		eSKP	44 42				KJN	eP	02 19 37			
		ePKS	50				OUL	eP	02 19 36			
		e	50 24				H:	02 09 47				
		eSKSP	53 36					44.1 N, 140.9 E, 188 km				
		ePPS	55 40					Eastern Sea of Japan				
		e	56 52									
		eSS	14 01 40			9	NUR	iP	11 35 03.2	1.0	22.0	
		eSSS	06 20				KJN	iP	11 34 51.4	0.7	31.5	
	KJN	iPKP	13 41 14.7 U	0.9	34.8		OUL	iP	11 34 54.7 D			
		iSKP	44 28.9					i	56.6			
		iPKS	38.4				SOD	iP	11 34 51.1			
	OUL	iPKP	13 41 14.0 U				KEV	iP	11 34 49.2	0.6	12.8	
		ePP	44 09				H:	11 21 57.7				
		eSKP	30					4.0 N, 126.0 E, 55 km				
			cont.					Talau Islands				

June						June					
				T	A					T	A
9	NUR	ePKP	13 00 54	0.9	15.1	OUL	iPKP	05 45 51.1			
	OUL	ePKP	13 00 54				i	52.9			
		i	01 02.6			SOD	iPKP	05 45 52.0			
	SOD	ePKP	13 00 51				i	53.2			
		i	01 02.5			H: 05 26 44.4					
	KEV	iPKP	13 01 03.8			41.3 S, 73.6 W, 37 km (R)					
	H: 12 41 22					Southern Chile					
	52.4 S, 143.5 E, 33 km (R)										
	West of Macquarie Island					10	NUR	iP	05 57 05.5		
9	NUR	iP	13 22 52.4	1.0	18.0		KJN	iP	05 57 28.6	1.2	37.8
							SOD	iP	05 57 40.8		
							KEV	eP	05 57 51	0.9	22.4
						H: 05 45 53					
						3.6 S, 12.1 W, 12 km					
						North of Ascension Island					
9	NUR	ePKP	17 24 21			10	NUR	iP	06 40 24.2	0.7	16.8
	KJN	iPKP	17 24 12.7	0.7	6.9		KJN	iP	06 40 04.9	0.8	22.3
	OUL	iPKP	17 24 09.4				OUL	eP	06 40 09		
	H: 17 05 59						SOD	eP	06 40 03		
	20.6 S, 178.6 W, 546 km					H: 06 32 43.0					
	Fiji Islands					49.5 N, 97.3 E, 33 km (R)					
						USSR-Mongolia border					
9	NUR	iP	19 37 08.6			10	NUR	iPKP	14 16 57.0		
	KJN	iP	19 36 58.5	0.7	17.1			i	17 07.0	0.7	12.9
	OUL	iP	19 37 01.2					iSKP	19 43.2		
	SOD	eP	19 36 58					i	50.2		
	KEV	eP	19 36 56				KJN	ePKP	14 16 57		
	H: 19 24 06.8							iSKP	19 31.2		
	2.8 N, 125.7 E, 119 km						OUL	iPKP	14 16 58.8		
	Talaud Islands							e	17 09		
								iSKP	19 29.7		
								e	40		
							SOD	ePKP	14 16 53		
								iSKP	19 22.1		
							KEV	eSKP	14 19 16		
						H: 13 58 53.3					
						19.3 S, 178.2 W, 596 km					
						Fiji Islands					
9	NUR	iP	22 24 47.2			10	NUR	ePKP	14 25 38		
	KJN	iP	22 24 36.2	0.7	5.5			iSKP	28 12.6		
	SOD	eP	22 24 36				KJN	ePKP	14 25 27		
	H: 22 12 14							iSKP	28 01.5		
	9.9 N, 125.9 E, 113 km						OUL	ePKP	14 25 28		
	Mindanao, P.I.						SOD	eSKP	14 27 50		
10	NUR	eP	00 38 34								
10	NUR	eP	04 00 36								
	KJN	eP	04 00 12								
	OUL	eP	04 00 16								
	SOD	eP	03 59 49								
	H: 03 49 47.2										
	52.7 N, 169.1 W, 32 km										
	Fox Islands										
10	NUR	iPKP	05 45 47.0	1.0	38.0						
		eSKP	48 56								
	KJN	iPKP	05 45 52.2	0.8	20.0	10	NUR	eS	18 24 20		
		iPKS	49 17.5					eSS	28 40		
	cont.					cont.					

June				T	A	June				T	A
	KJN	iP	18 15 40.7 U	1.4	24.3	12	KJN	ePKP	01 08 19		
	OUL	eP	18 15 37				OUL	ePKP	01 08 10		
	SOD	eP	18 15 41				H: 00 48 59.2				
	KEV	eP	18 15 42	1.1	24.4		21.1 S, 174.4 W, 13 km				
		eS	24 44				Tonga Islands				
		eSS	29 16								
	H: 18 04 39.6					12	KJN	iP	01 22 22.4	0.8	6.9
	16.4 N, 46.6 W, 33 km (R)						SOD	eP	01 22 20		
	North Atlantic Ridge						KEV	eP	01 22 15		
11	NUR	eP	05 40 04				H: 01 10 50				
	KJN	eP	05 40 40				19.0 N, 121.1 E, 75 km				
	H: 05 35 04						Philippine Islands				
	38.1 N, 22.9 E, 37 km					12	NUR	eP	01 34 06		
	Greece						i		14.0		
11	NUR	iP	12 00 53.7	0.8	14.4		KJN	e	01 34 48		
	KJN	iP	12 00 29.2	1.2	20.6		H: 01 29 06.9				
	OUL	eP	12 00 27				38.2 N, 22.8 E, 27 km				
	SOD	eP	12 00 14				Greece				
	H: 11 50 17.4					12	KJN	eP	02 10 33		
	47.5 N, 154.4 E, 36 km						OUL	eP	02 10 29		
	Kurile Islands						H: 01 59 28.1				
11	KJN	iP	15 34 42.2	0.6	6.9		16.7 N, 46.7 W, 33 km (R)				
	OUL	eP	15 34 46				North Atlantic Ridge				
	H: 15 21 06.5					12	NUR	iP	02 56 00.8		
	10.8 S, 115.1 E, 46 km (R)						i		03.8		
	South of Bali Islands						eS	03 00 03			
11	KJN	eP	16 30 17				KJN	eP	02 56 36		
	H: 16 19 26.1						i		43.4		
	36.6 N, 142.2 E, 41 km						OUL	eP	02 56 44		
	Honshu, Japan						ePcP	03 00 06			
11	KJN	iP	18 49 48.2				SOD	eP	02 57 06		
	OUL	iP	18 49 49.2				KEV	eP	02 57 22		
	SOD	eP	18 49 41				eS	03 02 40			
	H: 18 37 18						H: 02 51 05.5				
	18.4 N, 146.9 E, 72 km						38.2 N, 22.7 E, 33 km (R)				
	Mariana Islands						Greece				
12	KJN	iP	00 16 06.7 U	1.3	30.4	12	NUR	iP	03 20 16.4 U	1.0	24.0
	OUL	iP	00 16 02.0 U				eS		30 42		
	i		07.9				KJN	iP	03 20 13.5	1.0	15.3
	SOD	eP	00 16 05				OUL	eP	03 20 20		
	KEV	iP	00 16 09.2				e		26		
	H: 00 05 06.5						SOD	iP	03 20 20.3		
	16.6 N, 46.6 W, 33 km (R)						KEV	iP	03 20 22.2	1.0	22.6
	North Atlantic Ridge						eSKS		30 40		
							eS		31 00		
							eSS		36 52		
							H: 03 07 38.8				
							3.0 S, 100.6 E, 33 km (R)				
							Southern Sumatra				

June						June					
				T	A						
				T	A						
12	NUR	ePP	05 39 36			SOD	iP	21 30 30.9			
		e	43 36				e	38			
		eSKS	45 56			KEV	iP	21 30 34.4	1.2	40.9	
		ePS	48 56				ePP	33 52			
		ePPS	49 52				ePPP	35 52			
		eSS	54 10				eS	41 12			
	KEV	ePP	05 40 44				eSS	46 52			
		eS	48 28			H: 21 17 48.9					
		ePS	50 26			3.1 S, 100.6 E, 33 km (R)					
		ePPS	51 24			Southern Sumatra					
		eSS	56 28								
		eSSS	06 00 40			12	NUR	eP	23 33 19	1.0	52.0
		H: 05 21 11					i	19.7			
		44.9 S, 35.7 E, 36 km					i	37.2			
		Prince Edward Islands					ePPP	37 20			
12	NUR	eP	12 47 23				eS	41 44			
12	NUR	eP	12 50 30				eScS	43 10			
	KJN	eP	12 50 17				eSS	46 00			
	OUL	eP	12 49 41				eSSS	49 06			
	SOD	eP	12 49 41			KJN	iP	23 32 54.5	1.2	72.2	
	KEV	iP	12 49 19.4			SOD	iP	23 32 38.6			
						KEV	eP	23 32 25			
12	NUR	eP	18 17 31				iPcP	33 22.0			
	KJN	iP	18 18 09.0	0.6	8.2		eS	40 10			
		i	13.6				eScS	42 08			
	OUL	eP	18 18 17				eSS	44 12			
		i	21.0				eLQ	23 47.0			
	SOD	eP	18 18 38			H: 23 22 45.3					
	KEV	iP	18 18 59.0			47.4 N, 154.3 E, 56 km (R)					
						Kurile Islands					
		H: 18 12 47.4				12	NUR	eP	23 45 30		
		39.2 N, 21.4 E, 55 km					KJN	iP	23 45 19.7 U	1.1	24.3
		Greece						i	31.9		
12	KJN	iP	19 10 56.8				SOD	eP	23 45 20		
	OUL	eP	19 11 00			H: 23 32 46.3					
		H: 18 57 45.2				9.1 N, 126.4 E, 61 km					
		0.5 N, 120.8 E, 109 km				Mindanao, P.I.					
		Northern Celebes				13	KJN	ePKP	00 36 31	1.0	12.0
12	NUR	iP	21 30 27.3	1.4	57.4	H: 00 17 15.6					
		i	35.0			17.5 S, 167.5 E, 9 km					
		ePP	33 40			New Hebrides Islands					
		e	37 20								
		eS	40 52			13	NUR	iP	01 22 43.2	0.9	16.8
		eSS	46 16					i	50.5		
	KJN	iP	21 30 24.2	1.4	56.7		KJN	iP	01 22 40.9 U	1.0	17.4
	OUL	iP	21 30 30.1 U					i	47.4		
		i	37.9					i	57.2		
		cont.					SOD	iP	01 22 47.8 U		
						cont.					

June						June			
			T	A				T	A
	KEV	iP	01 22 50.6	1.0	26.7		KEV	iP	15 53 16.0
			H: 01 10 06					e	59 40
			3.0 S, 100.6 E, 33 km (R)					eSKS	16 03 28
			Southern Sumatra					eS	05 12
13	NUR	eP	02 53 21					ePS	06 24
	KJN	eP	02 52 57					ePPS	07 36
	SOD	eP	02 52 41					eSS	12 28
			H: 02 42 45.1					esSS	13 44
			47.6 N, 154.3 E, 32 km					eSSS	16 24
			Kurile Islands					e	17 12
								H: 15 39 29.7	
								5.6 S, 148.1 E, 213 km	
								New Britain	
13	NUR	iPKP	03 31 13.3			13	KJN	eP	19 05 15
	KJN	ePKP	03 31 05	0.6	4.8		SOD	eP	19 05 14
			H: 03 11 59.0					H: 18 52 23	
			21.2 S, 169.6 E, 33 km (R)					2.3 N, 128.2 E, 152 km	
			Loyalty Islands					Halmahera	
13	NUR	eP	03 40 15			13	NUR	eP	22 41 58
13	NUR	iP	09 49 43.0	0.9	18.5			e	42 04
		i	50.3				KJN	iP	22 41 48.6 D 0.8 9.2
	KJN	eP	09 49 01				OUL	eP	22 41 51
	OUL	eP	09 48 46				SOD	eP	22 41 48
		i	53.9				KEV	eP	22 41 44
	SOD	iP	09 48 18.8 D					H: 22 28 47	
	KEV	iP	09 47 50.6	0.7	10.6			2.4 N, 126.8 E, 63 km	
			H: 09 45 22					Molucca Passage	
			78.6 N, 8.2 E, 33 km (R)			13	NUR	eP	23 14 48
			Svalbard					i	15 18.8
								e(S)	19 08
13	NUR	iP	12 07 54.8					e	18
13	KJN	eP	15 37 38				KJN	iP	23 15 07.2
			H: 15 24 29					i	14.2
			0.3 N, 125.5 E, 33 km (R)					i	21.0
			Molucca Passage					e(S)	19 45
13	NUR	ePP	15 58 12				OUL	eP	23 15 18
		eS	16 05 28					i	26.3
		esS	07 10				SOD	eP	23 15 36
		eSPP	08 28					H: 23 09 52	
		eSS	13 28					42.0 N, 45.3 E, 33 km (R)	
		esSS	14 44					Eastern Caucasus	
		e	19 12						
		e	25 28			14	NUR	eP	02 43 01
	KJN	iP	15 53 25.2	0.9	5.4	14	NUR	iP	03 55 57.5 D 0.7 31.0
		ePP	57 55					ePcP	56 38
	OUL	eP	15 53 25				KJN	iP	03 55 34.9 D 0.9 34.8
	SOD	eP	15 53 21						cont.



June					June				
			T	A			T	A	
	OUL	iP	03 55	34.1 D					
		ePcP	56 23						
	SOD	iP	03 55	23.8 D					
	KEV	iP	03 55	12.0 D	0.7	19.8			
	H: 03 46 20.3								
	45.3 N, 136.9 E, 360 km (R)								
	Coast of Eastern Russia								
14	NUR	iPKP	05 25	32.8					
		i		46.0					
		ePP	28 02						
		ePKS	29 00						
		e		11					
		eSKS	32 40						
		e	34 44						
		eSKSP	37 48						
		ePPS	39 52						
		eSS	45 44						
		e	47 44						
	KJN	iPKP	05 25	25.2 U	1.2	25.8			
		i		38.4					
		i		42.6					
		ePKS	28 45						
		e		58					
	OUL	iPKP	05 25	23.8					
		i		36.5					
		i		47.0					
	SOD	ePKP	05 25	19					
		e		35					
	KEV	iPKP	05 25	15.8					
		e		28					
		i		38.8					
		ePP	27 08						
		e	29 36						
		ePS	36 48						
		e	42 20						
		eSS	43 32						
		e	46 32						
	H: 05 06 16.3								
	15.2 S, 173.6 W, 11 km								
	Tonga Islands								
14	NUR	eP	05 56	49	0.8	7.2			
14	NUR	iP	08 16	32.9	0.9	23.5			
		i		46.9					
		e		51					
		i	17 07.3						
		ePPP	20 36						
		eS	25 12						
		ePS	32						
	cont.								
	KJN	iP	08 16	08.0			1.2	36.1	
		i		24.2					
	OUL	eP	08 16	06					
	SOD	iP	08 15	53.3					
	KEV	eP	08 15	39					
		eS		23 28					
		eSS		27 40					
	H: 08 05 58.6								
	47.5 N, 154.4 E, 55 km (R)								
	Kurile Islands								
14	NUR	iP	08 23	37.0 D	1.1	64.3			
	KJN	iP	08 23	12.6 D	1.2	55.0			
		e		24 27					
	OUL	eP	08 23	10					
	SOD	eP	08 22	58					
	KEV	eP	08 22	43					
	H: 08 13 02.2								
	47.5 N, 154.5 E, 53 km (R)								
	Kurile Islands								
14	NUR	eP	09 33	44					
	KJN	eP	09 33	33					
14	OUL	eP	10 49	48					
	SOD	eP	10 49	04					
14	NUR	iP	15 46	26.7	0.9	8.4			
	KJN	eP	15 46	02					
	OUL	eP	15 46	00					
	SOD	eP	15 45	50					
	H: 15 35 46.3								
	46.5 N, 153.2 E, 33 km (R)								
	Kurile Islands								
14	NUR	eP	18 07	16					
	KJN	iP	18 06	57.1					
	OUL	eP	18 06	57					
	H: 17 56 36.2								
	33.3 N, 136.8 E, 384 km								
	Southern Honshu, Japan								
14	SOD	iP	18 50	38.9					
15	NUR	eP	00 47	34					
	KJN	iP	00 47	39.9 U	0.8	7.7			
		i		42.2					
	OUL	eP	00 47	36					
	SOD	eP	00 47	35					
	H: 00 35 21.7								
	10.6 N, 65.3 W, 31 km								
	Near coast of Venezuela								

June				T	A	June				T	A
15	NUR	eP	08 45 26			16	NUR	ePKP	06 23 01		
	SOD	eP	08 44 36					i	07.0		
15	KJN	eP	11 00 33				KJN	ePKP	06 23 01		
								i	11.6		
15	NUR	iP	12 08 53.3	0.9	13.4		OUL	iPKP	06 23 02.2		
	SOD	eP	12 07 35					i	07.4		
15	NUR	eP	15 01 41					i	14.2		
		i	50.0				SOD	iPKP	06 23 04.1		
	KJN	eP	15 02 13				KEV	iPKP	06 23 02.8		
	OUL	eP	15 02 24					i	07.7		
		i	32.3				H:	06 03 17			
	H: 14 56 05.6						55.6 S, 147.3 E, 33 km (R)				
	34.1 N, 32.5 E, 62 km						West of Macquarie Island				
	Cyprus					16	NUR	iP	16 07 50.2	0.8	19.1
15	NUR	eP	18 53 07				KJN	eP	16 07 39		
		i	16.0				OUL	eP	16 07 44		
	KJN	iP	18 53 22.4 D	0.9	18.8	16	NUR	ePKP	20 31 27		
		i	30.5				KJN	iPKP	20 31 19.5	0.9	8.9
	OUL	iP	18 53 19.3				OUL	ePKP	20 31 19		
		e	27				KEV	ePKP	20 31 08		
	SOD	iP	18 53 25.5				H: 20 12 15.1				
	KEV	iP	18 53 30.1	0.8	21.6		19.4 S, 175.2 W, 90 km				
	H: 18 41 57.7						Tonga Islands				
	9.1 N, 40.4 W, 33 km (R)					16	NUR	e	20 35 54		
	Central Mid-Atlantic Ridge						KJN	e	20 35 56		
16	NUR	eP	02 36 14				OUL	e	20 35 56		
16	NUR	iP	02 42 28.1				SOD	eP	20 35 41		
	KJN	eP	02 42 28	1.0	5.5		KEV	i	20 35 51.0		
	OUL	iP	02 42 37.8 U				H: 20 23 00.3				
	Moscow:						8.8 N, 77.6 W, 78 km				
	H: 02 35 32						Panama-Colombia border				
	38.3 N, 69.5 E,					17	NUR	eP	00 27 16	0.9	10.3
	Tadzhik, SSR							eSS	37 00		
16	NUR	iPKP	06 03 50.0	1.2	17.1		KJN	eP	00 27 04		
	KJN	iPKP	06 03 48.4				KEV	eSS	00 36 40		
		i	54.2				H: 00 19 08				
	OUL	iPKP	06 03 50.9 U				40.7 N, 89.6 E, 0 km				
		i	56.7				Southern Sinkiang, China				
		i	04 01.9			17	NUR	ePS	01 25 20		
		i	10.0					eSS	31 36		
	SOD	iPKP	06 03 50.9					eSSS	35 40		
	KEV	iPKP	06 03 51.0	0.9	21.8		KEV	e	01 28 20		
	H: 05 44 02							eSS	30 16		
	55.7 S, 146.8 E, 27 km							eSSS	34 21		
	West of Macquarie Island							e	40 32		
							H: 00 56 29.4				
							4.5 S, 104.7 W, 33 km (R)				
							Northern Easter Islands				

June				June			
		T	A		T	A	
17	NUR	eP	05 15 56				
		ePKP	18 45		eSKSP	31 20	
		i	54.8		eSPP	33 24	
		ipPKP	19 41.0		e	35 08	
		epPP	21 12		eSS	39 08	
		i	52.4		H: 05 00 11.8		
		iSKP	22 13.4		58.3 S, 26.6 W, 140 km		
		iPKS	30.5		South Sandwich Islands		
		i	23 43.0	17	NUR	eP	10 01 10
		iSKS	25 40.6		KJN	iP	10 01 26.4 U
		i	27 24.4			i	40.2
		ePKKP	28 20		OUL	eP	10 01 38
		e	29 17		H: 09 56 10		
		e	31 25		41.7 N, 45.3 E, 33 km (R)		
		eSS	37 12		Eastern Caucasus		
		e	38 42	17	NUR	eP	10 09 07
KJN	iPKP	05 18 45.9		17	NUR	eP	13 24 03
	i	19 01.4			H: 13 14 05		
	ipPKP	47.3			23.1 N, 94.7 E, 120 km		
	iSKP	22 04.2			Burma-India border		
	iPKS	21.2		17	OUL	eP	17 56 34
	iSKS	25 51.4			H: 17 43 55.2		
	i	26 11.5			14.1 N, 90.0 W, 103 km		
	i	40.2			Guatemala		
	i	27 47.9		17	NUR	iP	20 52 52.0
	i	28 08.7			KJN	iP	20 52 15.2
	e	29 09			OUL	iP	20 52 04.0
	eSKKP	32 06			SOD	eP	20 51 34
	e	38 24				i	40.8
OUL	ePKP	05 18 48			KEV	eP	20 51 08
	i	19 03.3				e	20
	epPKP	49			H: 20 48 04		
	iSKP	23 07.3			80.4 N, 2.2 W, 33 km (R)		
	eSKKP	31 58			North of Svalbard		
SOD	eP	05 15 23		17	NUR	eP	00 55 28
	iPKP	18 52.0			KJN	iP	00 55 46.2
	i	19 06.4			OUL	eP	00 55 58
	i	21 29.0		18	NUR	eSS	01 39 12
	iSKP	22 14.7			H: 01 20 22		
	i	23 31.0			35.2 N, 87.6 E, 33 km (R)		
KEV	ePKP	05 18 56	1.0 146.0		Tibet		
	i	19 10.0		18	NUR	iP	05 34 06.7 U 1.0 28.7
	epPKP	48			H: 05 28 54.1		
	ePP	21 42			36.8 N, 29.5 E, 43 km		
	iSKP	22 21.6			Turkey		
	iPKS	40.0					
	e	23 20					
	e	25 11					
	eSKS	26 04					
	i	28 16.5					
	e	29 36					
		cont.					

June						June			
				T	A				
18	NUR	eSS	14 26 40			19	NUR	eP	16 53 10
		eLR	14 48				KJN	iP	16 53 34.0
	H:		13 52 21				OUL	eP	16 53 41
			3.3 S, 149.2 E, 61 km				KEV	eP	16 54 10
			Bismarck Sea				H:		16 43 07
									0.6 N, 30.2 E, 38 km
18	NUR	eP	16 46 18						Uganda
		i	42.5			19	NUR	iP	16 57 11.0 U
	OUL	eP	16 46 34					i	16.6
	SOD	eP	16 46 32				KJN	iP	16 57 25.7
	H:		16 39 11.7					i	27.2
			37.4 N, 71.9 E, 83 km					i	17 00 15.8
			Afghanistan-USSR border				OUL	iP	16 57 36.8
							SOD	eP	16 57 59
18	NUR	ePKP	20 22 55			19	NUR	iP	17 18 33.5
	KJN	iP	20 18 42.3	0.8	42.3			i	42.8
		ePKP	22 48					ePP	20 56
	OUL	iP	20 18 43.8					ePcS	23 10
		iPKP	22 49.5					eS	27 25
	H:		20 04 56.7					ePPS	28 08
			3.9 S, 151.6 E, 301 km					eScS	28
			New Ireland					eSS	32 06
19	NUR	iP	01 50 16.7					e	35 20
	KJN	iP	01 50 05.2	1.0	8.7			eP'P'	47 03
19	NUR	eP	03 22 41					eLR	17 39.5
19	NUR	iP	12 55 17.7 D	1.0	39.2		KJN	iP	17 18 09.0
		i	33.2					ePS	26 53
	KJN	iP	12 55 05.2 D	1.0	70.9			eP'P'	47 10
		i	21.7				OUL	iP	17 18 03.2
	OUL	iP	12 55 08.0 D					e	11
		i	24.2					eP'P'	47 16
	SOD	iP	12 55 03.9 U				SOD	iP	17 17 47.2
	KEV	iP	12 55 00.3 U	1.3	44.3		KEV	iP	17 17 30.9 U
	H:		12 42 43					iPcP	18 26.0
			12.2 N, 126.2 E, 33 km (R)					ePP	19 36
			Philippine Islands					eS	25 24
								eScS	27 12
19	NUR	eP	14 43 01					eSS	29 26
	KJN	iP	14 43 26.0 U	1.5	53.3			eLR	17 35.0
	OUL	eP	14 43 38				H:		17 07 45.4
	SOD	eP	14 43 50						52.7 N, 166.9 W, 33 km (R)
	KEV	eP	14 44 12						Fox Islands
	H:		14 35 20.2						
			20.6 N, 38.4 E, 35 km			19	NUR	eP	17 31 39
			Red Sea				KJN	iP	17 31 14.7
							OUL	eP	17 31 09
19	NUR	ePKP	15 26 28			19	NUR	eP	17 32 09
	H:		15 07 49.9				KJN	iP	17 31 45.2
			28.0 S, 66.4 W, 163 km				OUL	eP	17 31 39
			Catamarca, Argentina						

June				T	A	June				T	A
19	NUR	iP	17 36 42.4	0.7	6.3	20	NUR	eP	05 44 57	0.6	3.4
	KJN	iP	17 36 18.3				KJN	iP	05 44 32.9		
	OUL	eP	17 36 12				KEV	eP	05 43 54		
19	NUR	eP	18 01 40			20	NUR	eP	05 59 49		
	KJN	eP	18 01 15				KJN	eP	05 59 25	1.0	4.4
	OUL	eP	18 01 10			20	NUR	iP	06 31 41.5 U	1.0	56.0
19	NUR	eP	18 35 46				KJN	iP	06 31 17.2 U	0.8	23.8
	OUL	eP	18 35 18				OUL	iP	06 31 11.4		
19	NUR	iP	19 35 32.7				SOD	iP	06 30 55.6 D		
	KJN	eP	19 35 08				KEV	iP	06 30 38.4 D	0.8	20.6
	OUL	iP	19 35 02.1				H: 06 20 49.5 52.7 N, 166.9 W, 9 km Fox Islands				
19	NUR	iP	20 33 54.2 D	0.8	8.5	20	NUR	iP	07 46 34.0 D	0.8	14.4
	KJN	iP	20 33 29.9 D	0.8	3.8		KJN	iP	07 46 09.4 D	1.0	12.0
	OUL	iP	20 33 23.5				OUL	eP	07 46 03		
	SOD	eP	20 32 53				KEV	eP	07 45 30		
	KEV	eP	20 32 51				H: 07 35 45 52.9 N, 166.9 W, 29 km Fox Islands				
20	NUR	iP	02 20 44.5	0.6	13.8	20	NUR	iP	07 49 35.6		
	KJN	iP	02 20 20.0 D	0.6	6.2		i		37.7	0.9	132.7
	OUL	iP	02 20 14.3 D				i		48.7		
	SOD	iP	02 19 57.9 D				e		51 44		
	KEV	iP	02 19 41.2	0.6	6.4		ePPP		53 44		
	H: 02 09 53 52.9 N, 166.9 W, 10 km Fox Islands						eS		58 28		
20	NUR	iP	04 04 43.5	0.8	8.6		ePPS		59 06		
	KJN	iP	04 04 19.3	1.0	5.5		eSS		08 03 08		
	OUL	iP	04 04 13.0				e		06 24		
	SOD	eP	04 03 57				KJN	iP	07 49 11.7	1.0	136.3
	KEV	iP	04 03 40.3				i		12.6		
20	NUR	eP	05 17 16				i		23.9		
	KJN	eP	05 17 14				OUL	iP	07 49 05.2		
	SOD	eP	05 17 22				i		06.4		
	KEV	eP	05 17 24				SOD	iP	07 48 51.3		
20	NUR	iP	05 36 11.7 U	0.7	46.4		KEV	iP	07 48 32.5	1.0	8.2
	i		15.3				i		34.6 U		
	KJN	iP	05 35 46.9 U	0.7	26.7		i		46.0		
	OUL	iP	05 35 41.2 D				ePcP		49 28		
	SOD	iP	05 35 25.7 D				ePP		50 44		
	KEV	iP	05 35 08.6 D	0.9	29.2		eS		56 28		
	H: 05 25 22.4 52.8 N, 167.1 W, 31 km Fox Islands						eScS		58 36		
							eSS		08 00 28		
							e		02 36		
							e		05 56		
							H: 07 38 44.9 52.8 N, 167.1 W, 11 km Fox Islands				

June						June			
				T	A				
						T			A
20	NUR	eP	10 27 30						
	KJN	eP	10 27 11	0.7	4.1				
	H: 10 16 11								
	34.2 N, 139.0 E, 33 km (R)								
	Honshu, Japan								
20	NUR	iP	11 32 15.5						
20	NUR	eP	11 37 31						
20	NUR	iP	11 52 13.4	0.7	12.9				
	KJN	iP	11 51 49.0	1.0	10.9				
	OUL	iP	11 51 42.9						
	SOD	eP	11 51 26						
	KEV	iP	11 51 10.5						
	H: 11 41 26.9								
	52.9 N, 167.2 W, 52 km								
	Fox Islands								
20	NUR	iP	11 56 39.0						
	KJN	eP	11 56 31						
	SOD	iP	11 56 37.6 U						
	H: 11 46 51								
	25.3 N, 96.1 E, 142 km								
	Burma								
20	NUR	iP	12 36 42.6 D	0.8	24.5				
		i	51.2						
	KJN	iP	12 36 17.9 D	0.9	17.9				
	OUL	iP	12 36 12.2 D						
	SOD	iP	12 35 56.2						
	KEV	iP	12 35 39.5						
	H: 12 25 50.2								
	52.8 N, 166.9 W, 11 km								
	Fox Islands								
20	NUR	eP	12 52 20						
20	NUR	eP	13 13 30						
20	NUR	eP	16 42 19						
	KJN	eP	16 42 57						
	OUL	eP	16 43 02						
	SOD	eP	16 43 24						
	KEV	eP	16 43 44						
	H: 16 37 25								
	38.5 N, 20.8 E, 33 km (R)								
	Greece								
21	KJN	iP	05 48 46.5 U	0.8	6.9				
	SOD	eP	05 48 37						
	cont.								
	KEV	eP	05 48 28						
	H: 05 40 00								
	48.8 N, 122.2 E, 43 km								
	Northeastern China								
21	NUR	eS	07 14 48						
		ePS	16 12						
		e	17 52						
		e	19 48						
		eSS	21 32						
	KEV	eSKS	07 14 08						
		e	20 36						
		eSSS	25 12						
	H: 06 49 56.6								
	2.2 S, 77.6 W, 49 km								
	Peru-Ecuador border								
21	NUR	eP	14 46 36						
	KEV	eP	14 46 10						
21	NUR	eP	15 57 48	1.0	14.0				
		i	52.2						
		ePP	16 01 28						
		eS	08 04						
		ePS	48						
		ePPS	09 24						
		eSS	14 04						
		eSSS	17 00						
	KJN	iP	15 57 36.5	1.0	27.3				
	OUL	eP	15 57 40						
	SOD	eP	15 57 36						
	KEV	iP	15 57 34.0						
		e	58 56						
		ePP	16 00 44						
		e	03 50						
		eS	07 36						
		ePPS	08 52						
		eSS	12 56						
	H: 15 45 28.3								
	12.7 N, 123.1 E, 56 km								
	Luzon, P.I.								
21	NUR	iPKP	16 05 46.0	0.8	7.2				
		i	55.0						
	KJN	iPKP	16 05 52.5						
	OUL	ePKP	16 05 47						
		i	55.8						
	SOD	ePKP	16 05 48						
	KEV	ePKP	16 05 49						
		i	56.3						
	H: 15 46 02								
	55.4 S, 146.9 E, 33 km (R)								
	West of Macquarie Island								







June				June			
		T	A			T	A
	KEV eP 12 02 53				KJN iPKP 21 49 14.1 U	1.3	39.1
	H: 11 54 33.5				i 26.1		
	64.8 N, 147.5 W, 9 km				OUL ePKP 21 49 24		
	Central Alaska				SOD ePKP 21 49 21		
23	NUR eSKSP 12 21 40				KEV iPKP 21 49 18.2		
	ePPS 24 32				e 50 06		
	eSS 32 08				H: 21 30 11.5		
	eSSS 37 08				19.2 S, 167.7 E, 37 km		
	KEV eSKKS 12 19 08				New Hebrides Islands		
	e 31 48			24	NUR iP 12 38 08.2	1.0	22.0
	eSS 32 40						
	eSSS 37 44			24	KJN iP 14 41 36.5	0.8	7.7
	H: 11 47 29				OUL iP 14 41 29.5		
	62.5 S, 155.2 E, 33 km (R)				H: 14 28 52.7		
	Balleny Islands				18.4 N, 99.8 W, 97 km		
23	NUR ePKP 14 56 47				Guerrero, Mexico		
	e 51			24	NUR iP 16 48 04.5		
	iSKP 59 29.0				KJN iP 16 47 51.0 D	0.7	10.3
	KJN ePKP 14 56 44				OUL eP 16 47 55		
	iSKP 59 18.0				SOD eP 16 47 50		
	OUL iPKP 14 56 42.7				H: 16 35 32.0		
	eSKP 59 16				11.4 N, 125.9 E, 72 km		
	SOD ePKP 14 56 38				Samar, P.I.		
	i 48.5			24	NUR iP 21 13 31.0 D	1.0	36.0
	iSKP 59 09.8				i 43.1		
	KEV iPKP 14 56 35.5				eSKS 23 48		
	iSKP 59 01.0				ePS 25 44		
	H: 14 38 35.7				e 27 30		
	21.3 S, 179.3 W, 605 km				eSS 30 44		
	Fiji Islands				eSSS 34 20		
23	KJN eP 16 42 19				eLR 21 44.3		
	SOD eP 16 42 10				KJN iP 21 13 17.3 D	1.4	137.7
	H: 16 31 33.7				OUL iP 21 13 17.0		
	36.3 N, 138.1 E, 37 km				SOD iP 21 13 12.5		
	Honshu, Japan				KEV iP 21 13 08.0 D		
23	NUR iP 18 57 15.0				eS 23 36		
	KJN iP 18 57 14.9	0.7	5.5		ePS 24 44		
	OUL iP 18 57 23.4				eSS 28 48		
	SOD iP 18 57 31.0				eSSS 32 28		
	KEV eP 18 57 40				eLR 21 41.3		
	H: 18 50 17.2				H: 21 00 23.9		
	36.6 N, 71.1 E, 205 km				12.5 N, 141.6 E, 18 km		
	Afghanistan-USSR border				South of Mariana Islands		
23	NUR iPKP 21 49 21.5 U	0.9	25.2	24	NUR iP 21 16 09.3 U	1.0	42.0
	i 33.4				i 18.4		
	ePKS 52 44				i 25.3		
	i 56.6				KJN iP 21 15 57.7 U	0.9	83.0
	i 53 04.5				i 16 06.8		
	cont.				cont.		



June		T	A	June		T	A
	SOD eP	18 54 44		SOD eP	23 17 57		
	H:	18 43 21.2		KEV iP	23 17 53.3		
		23.3 N, 125.9 E, 33 km (R)		H:	23 06 47.0		
		Southwestern Ryukyu Islands			23.6 N, 121.5 E, 45 km		
					Taiwan		
26	KJN eP	21 40 31		27	NUR eP	23 57 37	
	SOD eP	21 40 33					
	H:	21 27 43.2		28	NUR ePKP	00 33 19	
		0.2 S, 123.0 E, 186 km			KJN ePKP	00 33 16	
		Northern Celebes			H:	00 14 34.5	
26	NUR eP	23 02 45				9.5 S, 157.4 E, 16 km	
						Solomon Islands	
27	KJN eP	15 06 22		28	NUR iP	01 20 43.0	0.5 22.4
	OUL iP	15 06 24.3			KJN iP	01 20 19.3 D	0.9 14.3
	H:	14 53 30			i	54.5	
		12.6 N, 141.5 E, 27 km			OUL iP	01 20 17.3	
		South of Mariana Islands			SOD iP	01 20 04.5	
27	NUR eP	16 59 57			KEV iP	01 19 52.0	1.1 34.2
	KJN eP	16 59 34			H:	01 10 03.0	
	OUL iP	16 59 29.0				46.0 N, 151.5 E, 33 km	
	SOD eP	16 59 14				Kurile Islands	
	H:	16 49 11.6		28	NUR iPKP	05 53 16.8	0.9 10.1
		53.0 N, 166.7 W, 36 km			KJN iPKP	05 53 09.1	1.0 12.0
		Fox Islands			H:	05 34 06.4	
27	NUR iP	20 43 49.0 U	1.0 44.0			14.4 S, 172.6 W, 40 km	
	i	57.5				Samoa Islands	
	KJN iP	20 43 24.2 U	0.8 18.5	28	NUR ePKP	14 53 55	
	OUL iP	20 43 19.2 U			i	54 00.5	1.0 38.0
	i	27.5			i	13.0 U	
	SOD iP	20 43 04.4			ePP	57 50	
	KEV iP	20 42 52.8			eSKSP	15 08 12	
	H:	20 32 59.3			ePPS	10 48	
		51.3 N, 180.0 W, 26 km			e	12 56	
		Andreanof Islands			eSS	17 20	
					eSSS	21 28	
					e	23 52	
27	NUR ePS	22 08 04		KJN iPKP	14 53 48.1 D	1.4 40.5	
	eSS	14 40			i	55.0 U	
	eSSS	19 20			i	54 07.5	
	e	22 38			i	49.2	
	eLR	22 35.2		SOD ePKP	14 53 47		
	KEV eSS	22 16 20			i	53.1	
	eSSS	20 28		KEV iPKP	14 53 50.9 U	1.0 75.9	
	H:	21 37 48.1			i	55.0	
		46.4 S, 96.0 E, 33 km (R)			eSKSP	15 07 40	
		Southeast Indian Rise			ePPS	10 20	
27	NUR iP	23 18 13.7	0.7 6.5		e	12 40	
	KJN iP	23 17 59.1 U	1.0 13.1		e	15 20	
	OUL eP	23 18 01			H:	14 34 04.5	
						47.0 S, 165.8 E, 37 km	
						South Island, N.Z.	

cont.



*more were indicated*

*PAW*

7 MAY 1968

Helsinki, Finland  
Prel. Bull. 1967

July

July

		T	A			T	A
1	KJN eP 03 00 10 H: 02 55 33 44.2 N, 19.1 E, 33 km (R) Yugoslavia			1	NUR iP 21 32 54.2 i 33 06.0 KJN iP 21 32 30.6 U i 42.1 OUL iP 21 32 23.2 U i 34.7 SOD iP 21 32 08.6 KEV iP 21 31 51.3 D i 32 02.7 H: 21 22 10.0 54.0 N, 161.0 W, 19 km Alaska Peninsula	0.9	25.8
1	NUR eP 03 30 00 KJN eP 03 30 28 H: 03 24 42 36.1 N, 31.4 E, 67 km Turkey					0.8	11.5
1	KJN iP 06 54 53.7 OUL iP 06 54 58.8 SOD eP 06 55 01 e 09 H: 06 42 34 0.8 S, 98.8 E, 33 km (R) Southern Sumatra	0.8	6.2				
1	NUR iP 07 41 21.8 U i 29.4 eS 51 36 e 54 08 eSS 57 12 KJN iP 07 41 19.3 U i 27.9 ePP 44 42 OUL iP 07 41 24.0 U i 32.1 SOD iP 07 41 27.4 i 35.7 KEV iP 07 41 30.0 U ePPP 46 44 eS 51 52 e 54 32 eSS 57 20 H: 07 28 57.6 0.8 S, 98.7 E, 26 km Southern Sumatra	1.0	44.0	1	NUR iP 23 20 48.4 U i 58.7 i 22 23.0 iPP 23 17.0 ePcS 25 23 e 27 57 iS 29 31.8 eScS 30 42 e 33 16 eSS 30 iP'P' 49 31.2 eLQ 23 36.5 eLR 23 39.0 KJN iP 23 20 24.9 U iPP 22 32.4 iPPP 24 04.0 iS 28 47.2 e 29 17 eScS 30 13 iP'P' 49 38.4 i 46.8 OUL iP 23 20 17.0 U eS 28 34 eP'P' 49 37 i 50.5 SOD iP 23 20 02.3 U eP'P' 49 52 KEV iP 23 19 45.0 U i 20 40.0 ePcS 25 38 iS 27 33.6 eScS 29 22 eSS 31 18 eP'P' 49 53 eLQ 23 33.7 H: 23 10 07.2 54.4 N, 158.0 W, 33 km (R) South of Alaska	1.0	451.0
1	KJN ePKP 10 04 53 H: 09 45 48 58.7 S, 24.8 W, 33 km (R) South Sandwich Islands					1.0	440.0
1	NUR iP 15 09 56.1 KJN eP 15 09 35 OUL eP 15 09 33 SOD eP 15 09 22 KEV iP 15 09 17.2 H: 14 59 07.1 41.0 N, 143.0 E, 43 km Hokkaido, Japan						

July		T	A	July		T	A
2	KJN eP 01 17 02 OUL eP 01 17 02 H: 01 06 15.0 36.6 N, 140.6 E, 49 km Honshu, Japan	0.9	17.0	2	NUR eP 07 15 14 i 17.4 e 17 42 ePPP 19 38 eS 24 34 eScS 25 21 e 28 06 eSS 29 06 eSSS 32 42 eLR 07 35.5	1.0	77.9
2	NUR e 01 18 14 KJN eP 01 18 43 SOD eP 01 19 21 H: 01 14 03 43.7 N, 19.2 E, 33 km (R) Yugoslavia			KJN iP 07 15 11.7 i 13.9 U i 47.2 iPPP 19 31.7 eS 24 30 iScS 25 17.1	1.2	220.2	
2	NUR iP 01 20 19.0 i 28.0 KJN eP 01 19 54 OUL iP 01 19 47.8 U e 57 SOD eP 01 19 32 H: 01 09 38.1 54.5 N, 158.1 W, 33 km (R) South of Alaska	0.9	8.6	OUL iP 07 15 17.8 i 19.4 SOD iP 07 15 20.5 i 22.7 U i 32.2 KEV iP 07 15 26.9 U i 37.4 ePP 18 15 i 51.4 ePPP 20 04 iS 24 57.0 eLR 07 35.2 eLR 07 37.7 H: 07 03 52.9 8.7 N, 93.8 E, 33 km (R) Nicobar Islands	1.2	171.0	
2	NUR eP 02 32 17 e 25 KJN iP 02 31 53.0 OUL iP 02 31 45.5 U e 54 SOD iP 02 31 30.5 U KEV eP 02 31 13 H: 02 21 36.6 54.6 N, 158.0 W, 33 km (R) South of Alaska			2	NUR iP 07 49 45.5 i 50 08.2 KJN iP 07 49 26.0 i 48.4 OUL iP 07 49 25.8 D SOD eP 07 49 16 KEV eP 07 49 10 H: 07 38 15.0 33.0 N, 141.6 E, 39 km Honshu, Japan	0.9	24.1
2	NUR iP 02 47 00.6 U KJN iP 02 46 36.9 U OUL iP 02 46 29.3 U i 38.4 SOD iP 02 46 14.2 U KEV iP 02 45 56.9 U H: 02 36 19.8 54.5 N, 158.0 W, 33 km (R) South of Alaska	1.0	32.8	0.9	14.3	0.8	21.6
2	NUR iP 03 11 55.6 U KJN iP 03 11 32.4 U OUL iP 03 11 30.4 U SOD iP 03 11 19.1 H: 03 02 03.0 45.7 N, 142.9 E, 334 km Hokkaido, Japan	0.4	15.4	0.5	6.6	0.8	21.6
2	OUL eP 03 35 27 H: 03 26 19.6 62.3 N, 151.0 W, 81 km Central Alaska			2	NUR iP 08 40 34.2 D i 41.0 i 57.7 KJN iP 08 40 33.2 D iPP 42 16.1 OUL iP 08 40 41.4 D SOD iP 08 40 47.8 KEV iP 08 40 55.0 H: 08 32 38.5 33.2 N, 75.6 E, 33 km Eastern Kashmir	1.0	20.5
				1.0	18.5	1.0	16.0

July

July

		T	A			T	A
2	NUR iP 09 50 05.0 D			2	NUR iP 20 45 31.0 U	0.7	41.3
	KJN iP 09 49 54.5 D	0.5	8.8		KJN iP 20 45 13.4 U	0.7	52.1
	H: 09 37 25				ipP 58.1		
	8.7 N, 126.3 E, 96 km				OUL iP 20 45 13.8 U		
	Mindanao, P.I.				i 23.7		
2	NUR iP 10 19 52.0				SOD iP 20 45 07.3		
	KJN iP 10 19 30.3				H: 20 34 36.2		
	OUL iP 10 19 20.7				31.2 N, 130.1 E, 181 km		
	SOD eP 10 19 02				Kyushu, Japan		
	KEV i 10 18 54.3			2	NUR eP 22 13 03		
	H: 10 09 13.2				KJN eP 22 12 47	1.3	19.5
	54.7 N, 157.7 W, 32 km				OUL eP 22 12 47		
	South of Alaska				SOD eP 22 12 39		
2	SOD eP 12 29 26				H: 22 00 38		
	H: 12 20 18.7				23.0 N, 142.7 E, 40 km		
	59.8 N, 153.3 W, 108 km				Volcano Islands		
	Southern Alaska			2	NUR eP 22 40 26		
2	KJN eP 13 34 46			3	NUR eP 02 57 39	1.0	6.0
	H: 13 22 41.6				i 44.8		
	23.2 N, 142.9 E, 41 km				eS 03 00 39		
	Volcano Islands				KJN iP 02 58 25.8 D	1.1	27.0
2	KJN e 14 21 05				i 30.8		
	OUL eP 14 21 04				OUL iP 02 58 33.9		
	i 11.6				SOD eP 02 58 59		
	SOD iP 14 21 06.6				H: 02 53 48		
	i 15.5				44.2 N, 19.2 E, 60 km		
	H: 14 09 37.6				Yugoslavia		
	8.5 N, 93.8 E, 36 km			3	NUR iP 03 09 32.3	0.9	15.1
	Nicobar Islands				KJN iP 03 09 08.5 U	0.8	8.5
2	KJN eP 14 30 35				OUL iP 03 09 01.1 U		
	OUL eP 14 30 40				i 09.2		
	H: 14 19 13.6				SOD iP 03 08 46.1 U		
	8.5 N, 93.8 E, 33 km (R)				H: 02 58 53		
	Nicobar Islands				54.7 N, 157.7 W, 33 km (R)		
2	NUR iP 16 27 22.0	1.0	20.0		South of Alaska		
	KJN iP 16 27 02.7 U	0.8	13.8	3	NUR eP 03 55 28		
	OUL iP 16 27 01.9 U				KJN eP 03 55 14		
	i 13.6				OUL iP 03 55 07.2		
	SOD iP 16 26 52.9				i 20.6		
	H: 16 15 48.4				SOD eP 03 55 09		
	32.9 N, 141.7 E, 19 km				H: 03 42 18.2		
	South of Honshu, Japan				12.3 N, 143.9 E, 33 km (R)		
2	OUL eP 18 47 47				South of Mariana Islands		
	SOD eP 18 47 47			3	NUR iP 05 20 12.8	0.7	15.5
	H: 18 36 19				KJN iP 05 19 50.1	0.8	11.5
	8.6 N, 93.8 E, 33 km (R)				OUL iP 05 19 48.8		
	Nicobar Islands				SOD iP 05 19 35.5		
					H: 05 09 28.1		
					43.6 N, 147.0 E, 33 km (R)		
					Kurile Islands		

July

July

					T	A
3	NUR	iP	07 05	23.2	0.9	11.8
	KJN	eP	07 04	59		
	OUL	iP	07 04	51.7 D		
	SOD	iP	07 04	36.9		
	H: 06 54 43					
	54.6 N, 157.7 W, 33 km (R)					
	South of Alaska					

3	NUR	iP	09 50	19.0 D	0.8	14.4
		i		23.7		
	KJN	iP	09 49	54.8	0.8	5.4
	OUL	iP	09 49	47.5		
	H: 09 39 38.7					
	54.6 N, 158.0 W, 33 km (R)					
	South of Alaska					

3	NUR	ePn	12 01	55		
		eSn		03 40		
		<del>eSb</del>		<del>04 23</del>		
	KJN	eSn	12 04	14		
		<del>eSb</del>		<del>05 01</del>		
		<del>eSg</del>		<del>21</del>		
	OUL	eSg	12 05	02		
	Bergen:					
	H: 11 59 36.3					
	60°49.5'N, 04°49.8'E ✓					
	Explosion					

3	NUR	iP	15 13	14.0 D	0.7	7.7
		e		28		
	KJN	iP	15 13	03.3		
	OUL	eP	15 13	03		

3	KJN	eSn	17 34	05		
		<del>eSb</del>		<del>47</del>		
		<del>eSg</del>		<del>35 10</del>		
	OUL	eSg	17 34	57		
	Bergen:					
	H: 17 29 36.3					
	61°28.4'N, 05°06.5'E ✓					
	Explosion					

3	NUR	iP	22 00	25.2 D	1.0	14.0
		i		31.3		
	KJN	iP	22 00	46.0 D	1.1	27.0
		i		53.0		
	OUL	eP	22 00	48		
	SOD	iP	22 00	58.5		
	H: 21 48 50.9					
	7.5 S, 13.4 W, 33 km (R)					
	Ascension Island					

					T	A
3	NUR	iP	23 33	15.7 D	0.5	6.6
	KJN	iP	23 33	31.4	0.9	10.7
	OUL	iP	23 33	43.2		
		i		48.4		
	SOD	eP	23 34	01		

4	NUR	eP	01 15	22		
4	NUR	eP	02 41	59		
	KJN	iP	02 41	56.5 U	0.8	9.2
	OUL	iP	02 42	00.7 U		
	SOD	eP	02 41	59		

4	NUR	iP	14 22	00.7		
	KJN	iP	14 22	15.6	1.0	15.3
	OUL	eP	14 22	26		

4	NUR	ePKP	14 35	57	0.8	15.8
		ePP		37 40		
		ePKS		39 00		
		e		40 20		
		eSKS		42 36		
		e		44 40		
		e		45 40		
		e		49 20		
		eSS		54 40		
		e		57 36		

KJN	iPKP	14 35	55.4 D	1.2	29.2
	i		36 03.0		
OUL	ePKP	14 35	53		
	i		36 00.2		
SOD	ePKP	14 35	54		
	e		36 02		
KEV	ePP	14 38	04		
	ePKS		39 20		
	eSKSP		48 04		
	ePPS		49 45		
	eSS		55 16		

H: 14 16 51.6  
38.1 S, 73.4 W, 28 km  
Central Chile

4	NUR	eP	21 35	54		
	KJN	eP	21 35	58		
		i		36 08.8		
	OUL	eP	21 36	09		
		e		18		
		e		28		
	SOD	eP	21 36	27		





July				July			
		T	A			T	A
OUL	iP	05 15	22.1				
	ipP		36.8				
	iPcP	16	31.2				
SOD	iP	05 15	06.2 U				
	epP		21				
KEV	iP	05 14	47.4 U	0.8	25.7		
	ipP	15	02.4				
H: 05 06 13.4							
62.4 N, 147.4 W, 59 km							
Central Alaska							
6	KJN	ePKP	05 40 11				
	OUL	ePKP	05 40 11				
	SOD	ePKP	05 40 15				
H: 05 21 25							
56.1 S, 27.3 W, 154 km							
South Sandwich Islands							
6	NUR	iP	08 27 01.0 D	1.0	24.6		
	eS		31 20				
	KJN	eP	08 27 37				
	OUL	eP	08 27 46				
	SOD	eP	08 28 06				
H: 08 21 50.3							
36.7 N, 21.4 E, 35 km							
Southern Greece							
6	NUR	iP	13 44 46.3	0.6	3.8		
	KJN	eP	13 45 29				
	OUL	eP	13 45 36				
6	NUR	iP	13 53 14.5 U	1.1	475.8		
	i		28.0				
	i		38.0				
	ePP		55 40				
	ePPP		57 15				
	eS	14 01	56				
	i	02	06.6				
	iPS		22.0				
	eScS	03	09				
	eSS	06	16				
	e	10	08				
	eP'P'	21	42				
KJN	iP	13 52	50.0 U	1.1	283.5		
	i		59.1				
	i	53	40.1				
	iPP	55	07.7				
	eP'P'	14 21	42				
OUL	iP	13 52	42.8 U				
	eP'P'	14 22	03				
cont.							
	SOD	iP	13 52 28.0				
	KEV	iP	13 52 13.0 U	1.1	202.3		
	i		25.1				
	i		34.6				
	iPcP		53 06.0				
	ePP		54 20				
	ePPP		55 44				
	e	14 00	00				
	eS		14				
	e		44				
	eScS	02	10				
	eSS	04	13				
H: 13 42 22.5							
52.6 N, 168.2 W, 14 km							
Fox Islands							
6	NUR	iP	13 57 43.3 U	0.8	25.0		
	e		54				
	KJN	iP	13 57 18.8 U	0.8	15.4		
	e		30				
	OUL	iP	13 57 12.1 U				
	SOD	iP	13 56 57.3				
	KEV	iP	13 56 41.3				
H: 13 46 53.1							
52.6 N, 168.1 W, 28 km							
Fox Islands							
6	NUR	eP	14 27 38	0.9	6.9		
	KJN	iP	14 27 14.8				
	OUL	iP	14 27 07.5				
	SOD	eP	14 26 53				
6	NUR	iP	16 25 12.9 U	0.9	43.0		
	KJN	iP	16 24 48.3 D	0.8	11.5		
	OUL	iP	16 24 41.4				
	SOD	eP	16 24 27				
	KEV	iP	16 24 10.3				
H: 16 14 24.7							
52.8 N, 168.1 W, 33 km (R)							
Fox Islands							
6	KJN	eP	17 49 22				
	OUL	iP	17 48 56.3				
	SOD	eP	17 48 48				
6	NUR	eP	18 43 35				
	eS		52 54				
	eSS		57 28				
	KJN	iP	18 43 40.7	0.6	4.8		
	i		45.1				
	e		44 08				
cont.							

July

July

				T	A
	OUL	iP	18 43 34.0		
	SOD	eP	18 43 35		
	KFV	eP	18 43 35		
		eS	52 56		
		eSS	57 24		
	H: 18 32 15.1				
	18.9 N, 61.9 W, 57 km				
	Leeward Islands				
6	NUR	eP	19 07 36	1.4	21.0
	KJN	eP	19 07 54	1.3	13.0
	OUL	eP	19 08 02		
	SOD	eP	19 08 18		
	KEV	eP	19 08 32		
	H: 18 58 39.7				
	13.4 N, 50.8 E, 44 km				
	Eastern Gulf of Aden				
6	NUR	eP	19 30 57	1.0	10.3
	KJN	eP	19 31 13		
		i	17.3		
	OUL	eP	19 31 09		
		i	13.9		
	SOD	eP	19 31 17		
	KEV	iP	19 31 23.0		
	H: 19 19 48.4				
	8.1 N, 38.5 W, 33 km (R)				
	Central Mid-Atlantic Ridge				
6	NUR	eP	22 01 21		
6	NUR	eP	22 14 14		
6	NUR	iP	23 26 49.7 U	0.7	16.8
	KJN	iP	23 26 31.9 U	0.5	11.8
		ipP	27 08.1		
	OUL	iP	23 26 32.1 U		
		iPcP	58.9		
		ipP	27 10.8		
	SOD	iP	23 26 24.5		
	KEV	iP	23 26 17.0	0.9	13.4
	H: 23 15 57.2				
	32.5 N, 130.9 E, 159 km				
	Kyushu, Japan				
7	NUR	eP	01 18 57		
	KJN	eP	01 19 14		
	OUL	iP	01 19 22.8		
	KEV	eP	01 19 51		
		ePPP	23 20		
	H: 01 09 59.0				
	13.5 N, 50.8 E, 32 km				
	Eastern Gulf of Aden				

				T	A
7	NUR	iP	04 47 14.3	0.8	10.1
	KJN	iP	04 46 53.1 D	0.8	11.5
	OUL	iP	04 46 52.8		
	SOD	eP	04 46 43		
	KEV	eP	04 46 33		
	H: 04 37 34.8				
	41.5 N, 132.9 E, 474 km				
	Sea of Japan				
7	NUR	eSn	05 02 31		
		<del>eSb</del>	<del>03 05</del>		
		<del>eSg</del>	<del>23</del>		
	KJN	iSg	05 04 20.1		
	OUL	iSg	05 04 06.7		
	SOD	eSg	05 04 49		
	KEV	eSg	05 05 35		
	Bergen:				
	H: 04 58 30.3				
	59°29.3'N, 05°51.4'E ✓				
	Explosion				
7	NUR	eSn	07 03 32		
		<del>eSg</del>	<del>04 22</del>		
	KJN	iSg	07 05 20.0		
	OUL	iSg	07 05 07.2		
	SOD	eSg	07 05 48		
	KEV	eSg	07 06 36		
	Bergen:				
	H: 06 59 30.3				
	59°29.3'N, 05°51.5'E ✓				
	Explosion				
7	NUR	ePKP	10 00 21		
	KJN	eFKP	10 00 21	0.5	11.0
		i	23.1		
		eSKP	03 02		
		ePKS	50		
	OUL	iPKP	10 00 21.1		
	SOD	ePKP	10 00 17		
	KEV	ePKP	10 00 13		
	H: 09 42 08.0				
	20.3 S, 177.7 W, 540 km				
	Fiji Islands				
7	SOD	eP	11 31 21		
7	NUR	iP	13 41 08.4 U	0.9	114.2
	KJN	iP	13 40 57.3 U	0.6	65.1
		epP	41 49		
		ePP	44 21		
	OUL	iP	13 40 59.1 U		
		ipP	41 53.7		
	SOD	iP	13 40 56.2 D		
		ePP	44 18		

cont.

July			T	A	July			T	A
KEV	iP	13 40 53.3	0.8	28.8	KEV	iPKP	01 17 30.3 U	0.8	54.7
	i	54.1				ePP	19 44		
H:	13 28	39.1				ePS	28 26		
	8.7 N,	126.1 E,				eSS	35 15		
	Mindanao, P.I.				H:	00 58	54.7		
7	KJN	eP 15 17 56				15.4 S, 167.5 E, 137 km			
	SOD	eP 15 17 14				New Hebrides Islands			
7	NUR	eP 23 06 01			8	NUR	eP 06 37 31		
	KJN	eP 23 05 54				KJN	iP 06 37 20.8	0.8	3.8
	SOD	eP 23 06 02			8	NUR	iPKP 06 42 00.5	0.8	24.5
H:	22 56	30.8				i	14.6		
	27.8 N,	92.2 E,				ePP	44 00		
	India-China border					KJN	iPKP 06 41 53.2 D	1.2	51.6
7	NUR	eP 23 57 52				i	42 07.2		
	eSS	24 08 12				OUL	iPKP 06 41 52.3 D		
	KJN	eP 23 57 44				i	42 06.2		
	ePcP	59 16				SOD	ePKP 06 41 49		
	OUL	eP 23 57 52				KEV	iPKP 06 41 47.1	0.9	21.8
	SOD	eP 23 57 54				i	42 00.4		
	KEV	eP 23 57 55				ePP	43 15		
H:	23 49	24				ePS	53 06		
	35.5 N,	87.8 E,			H:	06 22	52.8		
	Tibet					16.3 S, 166.8 E, 9 km			
						New Hebrides Islands			
8	NUR	iP 00 53 17.0	0.9	8.4	8	NUR	eP 07 09 24	0.8	5.8
	KJN	iP 00 52 56.0 U	0.9	13.4		KJN	iP 07 09 21.4		
	ipP	53 14.0				OUL	iP 07 09 20.1		
	OUL	iP 00 52 55.0 D			8	NUR	ePKP 10 20 51		
	ipP	53 12.8				eSKP	23 50		
	SOD	iP 00 52 45.1				KJN	ePKP 10 20 50		
	epP	53 03				iSKP	23 40.1		
	KEV	eP 00 52 35				OUL	ePKP 10 20 50		
H:	00 42	18				iSKP	23 37.8		
	38.2 N,	141.7 E,				SOD	eSKP 10 23 32		
	Honshu, Japan				H:	10 02	19.5		
8	NUR	iPKP 01 17 44.3 U	1.0	160.0		25.8 S, 179.8 E, 459 km			
	eSKP	20 55				South of Fiji Islands			
	ePKS	21 03			8	NUR	ePKP 13 31 50	0.7	9.0
	eSKKP	30 09				KJN	ePKP 13 31 42	0.6	7.5
	KJN	iPKP 01 17 37.2 U	1.1	155.3		i	44.1		
	iPKKP	27 22.2				OUL	iPKP 13 31 41.5		
	eSKKP	30 21			H:	13 13	29.1		
	OUL	ePKP 01 17 31				19.9 S, 178.1 W, 520 km			
	i	36.5				Fiji Islands			
	ePKKP	27 22			8	NUR	iP 19 29 29.7		
	eSKKP	30 32				ipP	47.9		
	SOD	iPKP 01 17 33.3				cont.			

July						July			
				T	A				
						T	A		
	KJN	iP	19 29 08.5 U	0.9	12.5	9	KJN	eP	08 01 44
		ipP	26.8				OUL	eP	08 01 45
	OUL	iP	19 29 07.1				H: 07 51 02		
		epP	25				19.4 N, 46.2 W, 33 km (R)		
	SOD	eP	19 28 57				North Atlantic Ridge		
	H: 19 18 22.3								
	37.7 N, 143.7 E, 66 km					9	KJN	eP	09 34 40
	Honshu, Japan						OUL	iP	09 34 45.0
8	NUR	eP	22 08 23				H: 09 23 58		
	KJN	eP	22 08 59				19.4 N, 46.2 W, 33 km (R)		
	SOD	eP	22 09 25				North Atlantic Ridge		
8	NUR	eP	23 12 14			9	NUR	eP	13 03 15
		e	28					eS	06 14
	KJN	eP	23 11 54					e	08 15
		e	12 09				KJN	e	13 07 22
	H: 23 00 57					9	NUR	eP	20 50 24
	34.7 N, 141.4 E, 69 km						KJN	eP	20 50 37
	Honshu, Japan						OUL	iP	20 50 31.9
8	KJN	eP	23 31 29	0.8	3.8		KEV	eP	20 50 40
	Moscow:						H: 20 39 53.6		
	H: 23 24 15						19.2 N, 46.2 W, 33 km (R)		
	39.9 N, 78.2 E						North Atlantic Ridge		
	Sinkiang, China					9	OUL	eP	20 55 56
9	NUR	eP	03 10 21				H: 20 45 17		
		e	29				19.2 N, 46.0 W, 33 km (R)		
		eS	13 16				North Atlantic Ridge		
		i	15 07.8			9	KJN	eP	21 41 54
		i	16.6				OUL	eP	21 41 49
	KJN	eP	03 10 05				KEV	iP	21 41 57.0
		e	40				H: 21 31 07.8		
		eS	12 39				19.2 N, 46.0 W, 18 km		
		e	14 22				North Atlantic Ridge		
	OUL	eP	03 10 16			9	KJN	eP	23 06 13
		eS	12 59				OUL	eP	23 06 09
	SOD	eP	03 10 17				H: 22 55 32		
		eS	13 05				19.2 N, 46.7 W, 33 km (P)		
9	NUR	iP	03 19 33.9 U	0.5	59.4		North Atlantic Ridge		
	KJN	iP	03 19 11.0 U	0.8	50.0	10	NUR	eP	03 27 08
	OUL	iP	03 19 09.3 U				SOD	eP	03 26 19
	SOD	iP	03 18 57.3				H: 03 17 37		
	H: 03 09 03.2						59.8 N, 161.1 E, 33 km (R)		
	44.0 N, 144.7 E, 100 km						Kamchatka		
	Hokkaido, Japan					10	NUR	iP	03 46 11.0 D
9	OUL	eP	05 25 20				KJN	iP	03 45 43.0
	H: 05 14 40						OUL	iP	03 45 37.8 D
	19.5 N, 45.5 W, 33 km (R)						SOD	eP	03 45 22
	North Atlantic Ridge						cont.		

July		T	A	July		T	A
	KEV eP	03 45 07		10	NUR ePKP	10 36 41	
	H: 03 36 39				KJN ePKP	10 36 33	
	59.8 N, 161.1 E, 33 km (R)				OUL ePKP	10 36 33	
	Kamchatka				H: 10 18 25		
10	NUR iP	06 02 35.6			21.6 S, 179.4 W, 621 km		
	KJN iP	06 02 13.9 U	0.7		Fiji Islands		
	i	23.0	7.5				
	SOD iP	06 02 02.3		10	NUR iP	10 59 16.0 D	0.8
	i	11.2			KJN iP	10 58 51.2 D	0.8
	H: 05 51 31.2				OUL eP	10 58 44	
	38.7 N, 143.1 E, 33 km (R)				SOD eP	10 58 30	
	Honshu, Japan				KEV eP	10 58 13	
					H: 10 48 26		
10	NUR iP	06 12 34.0 D	0.8		52.7 N, 168.2 W, 26 km		
	KJN iP	06 12 09.0	0.6		Fox Islands		
	OUL iP	06 12 02.5					
	SOD eP	06 11 47		10	NUR eP	11 05 07	
	KEV eP	06 11 31			KJN iP	11 05 36.2 D	
	H: 06 01 44				KEV eP	11 06 03	
	52.6 N, 168.2 W, 33 km				H: 10 57 54		
	Fox Islands				28.2 N, 53.6 E, 33 km (R)		
					Southern Iran		
10	NUR iP	06 22 50.0					
	KJN iP	06 22 24.0	0.8				
	OUL iP	06 22 20.4					
	SOD iP	06 22 06.2		10	NUR iP	12 13 49.3	0.8
	KEV eP	06 21 53			ipP	15 57.4	
	H: 06 12 29				eSKS	23 28	
	51.6 N, 159.4 E, 33 km (R)				eS	24 08	
	Kamchatka				eSP	25 32	
					esSP	29 08	
					ePKKP	30 46	
10	NUR ePKP	06 47 32			eSS	52	
	i	47.0			esSS	33 32	
	eSKP	50 25			e	38 44	
	ePKS	51 17			KJN iP	12 13 43.9	0.7
	KJN ePKP	06 47 35			i	52.2	9.6
	i	39.7			ipP	15 51.7	
	iSKP	50 12.4			esP	16 49	
	ePKS	51 04			OUL eP	12 13 47	
	OUL ePKP	06 47 38			epP	15 54	
	KEV iP	06 47 30.8 D	0.7		SOD eP	12 13 53	
	H: 06 29 30.5				KEV iP	12 13 48.1	
	17.6 S, 178.8 W, 529 km				epP	15 53	
	Fiji Islands				eSKS	23 25	
					eSP	25 32	
10	NUR eP	07 37 30			esSP	29 06	
	KJN eP	07 37 18			eSS	30 40	
					e	34 20	
10	NUR eP	10 29 47			H: 12 01 31.5		
	KJN eP	10 29 21			5.9 S, 113.1 E, 591 km		
	OUL eP	10 29 18			Java Sea		
	SOD eP	10 29 04					

July				T	A	July				T	A	
10	NUR	eP	19 31 10			11	KJN	ePKP	17 49 52			
		eSKS	41 40					iSKP	52 39.5			
		eS	42 08				OUL	ePKP	17 49 51			
		eSS	48 28					H: 17 31 23				
	KJN	iP	19 31 00.2	1.0	21.8			19.4 S, 177.7 W, 381 km				
		ePP	34 29					Fiji Islands				
		eSKS	41 26				12	NUR	iP	10 42 39.0	0.5	13.5
		eS	47					i	43.3			
	OUL	eP	19 31 01					i	54.4			
	SOD	eP	19 30 58				KJN	iP	10 42 14.8			
		ipP	31 27.2				OUL	iP	10 42 07.1			
	KEV	eP	19 30 57					i	22.7			
		i	31 22.1				SOD	iP	10 41 52.3			
		ePP	34 32					i	42 07.8			
		eSKS	41 20				KEV	eP	10 41 35	0.8	8.8	
		H: 19 18 14.7						H: 10 32 01.6				
		4.8 N, 127.1 E, 118 km						54.9 N, 161.1 W, 33 km				
		Talaud Islands						Alaska Peninsula				
10	KJN	iP	19 56 32.2			12	OUL	eP	15 24 44			
10	NUR	eP	20 24 56					i	25 00.3			
11	KJN	eP	00 16 11					H: 15 15 37.9				
		e	27					62.7 N, 149.5 W, 78 km				
	SOD	eP	00 16 09					Central Alaska				
		H: 00 04 59.3				12	NUR	eP	21 13 37			
		23.6 N, 121.6 E, 40 km						ePP	17 24			
		Taiwan						eSKS	24 06			
11	NUR	eP	01 31 35					ePS	25 52			
	KJN	eP	01 31 51					e	27 26			
		i	32 08.4					eSS	31 06			
		ePP	49					eSSS	34 52			
	SOD	eP	01 32 20					e	35 24			
		e	47					eLR	21 44.0			
		Moscow:					KJN	eP	21 13 37			
		H: 01 25 55						i	44.1	1.0	27.3	
		38.3 N, 48.3 E						ePP	17 23			
		Iran						OUL	eP	21 13 36		
11	NUR	iPKP	04 35 34.8	0.8	7.2		SOD	eP	21 13 32			
		i	48.0				KEV	eP	21 13 24			
	KJN	iPKP	04 35 28.1					i	32.3			
		i	41.5					e	16 57			
		H: 04 17 02.1						ePP	17 08			
		7.0 S, 155.8 E, 88 km						eSKS	24 00			
		Solomon Islands						eS	26			
11	OUL	ePKP	13 35 57					ePS	25 38			
		H: 13 16 21.6						e	27 32			
		41.0 S, 173.9 E, 106 km						eSS	30 28			
		South Island, N.Z.						eLQ	21 39.0			
								H: 21 00 20.9				
								5.6 N, 82.6 W, 33 km (R)				
								South of Panama				

July							July								
				T	A					T	A				
12	KJN	ePKP	21 34 02							13	OUL	eP	20 19 43		
			H: 21 14 53									i	20 00.2		
			16.1 S, 178.3 E, 33 km (R)										H: 20 06 48.9		
			Fiji Islands										0.2 S, 119.5 E, 100 km		
13	NUR	iPKP	01 10 57.5	0.8	11.8					14	NUR	iPKP	03 06 41.3 D	0.8	20.2
		i	11 12.3								KJN	iPKP	03 06 34.2 D	0.7	11.0
	KJN	iPKP	01 10 46.7	1.0	16.4						OUL	iPKP	03 06 33.4 D		
		i	58.2									i	52.3		
	OUL	ePKP	01 10 49								KEV	ePKP	03 06 27		
		i	57.9									ePP	07 36		
			H: 00 51 17									ePS	17 08		
			32.2 S, 178.3 W, 33 km (R)										H: 02 47 53.0		
			South of Kermadec Islands										11.4 S, 166.2 E, 80 km		
13	NUR	eP	02 16 26							14	KJN	eP	03 19 39		
		eS	21 24								OUL	eP	03 19 54		
	KJN	iP	02 16 57.4 D	1.2	53.3						SOD	eP	03 20 07		
		i	17 26.3										H: 03 11 28.2		
	OUL	iP	02 16 59.0 D										19.8 N, 38.9 E, 33 km (R)		
	SOD	iP	02 17 16.3 D										Red Sea		
	KEV	iP	02 17 33.2 D	0.9	20.2					14	SOD	eP	03 30 42		
		i	18 41.3												
			H: 02 10 20.0												
			35.5 N, 0.1 W, 13 km												
			Algeria												
13	NUR	ePP	07 57 34							14	NUR	eP	04 31 27		
		ePKS	58 44												
			H: 07 36 07.2							14	NUR	iP	11 18 27.0	0.9	8.4
			16.2 S, 178.1 E, 50 km								KJN	iP	11 17 34.0		
			Fiji Islands								OUL	iP	11 18 02.1		
13	NUR	iPKP	10 23 29.1	0.7	10.3					14	KJN	iP	11 52 52.0		
		ePKS	26 57								OUL	iP	11 53 02.3		
	KJN	iPKP	10 23 21.9	0.8	6.9								H: 11 46 39		
	OUL	iPKP	10 23 20.3										35.2 N, 46.4 E, 59 km		
	KEV	ePKP	10 23 15	1.0	20.0								Iran-Iraq border		
			H: 10 04 19.0												
			20.4 S, 169.3 E, 46 km												
			New Hebrides Islands							14	NUR	eP	14 04 05	0.8	10.1
13	NUR	eP	14 43 27	0.8	7.2						KJN	iP	14 03 43.3		
		e(S)	47 20								OUL	iP	14 03 33.8		
	KJN	iP	14 44 06.4 U	0.8	14.6								H: 13 53 23.8		
		i	33.6										54.0 N, 164.3 W, 33 km (R)		
	OUL	iP	14 44 13.1										Unimak Island		
	SOD	eP	14 44 35												
			H: 14 38 54							14	NUR	eP	16 19 21		
			40.7 N, 19.5 E, 23 km								KJN	iP	16 18 40.4	0.7	7.5
			Albania								OUL	iP	16 18 03.9		
											SOD	eP	16 18 03		









July				T	A	July				T	A	
20	NUR	ePKP	13 29 56	1.0	10.0	OUL	iP	15 49 22.9				
		epPKP	30 40				ePKKP	16 06 59				
		eSKS	36 30				i	07 11.8				
		e	37 40			SOD	iP	15 49 20.3				
		eSP	40 16				i	22.2				
	KJN	iPKP	13 30 02.8	0.8	10.8		e	52 20				
		ipPKP	45.3			KEV	eP	15 49 14	1.1	126.1		
	SOD	ePKP	13 30 02				i	18.0				
		epPKP	45				e	52 06				
	KEV	epPKP	13 30 51				ePP	40				
		ePP	31 14				e	56 25				
		eSKS	36 40				eSKS	59 42				
		e	37 56				eS	16 00 04				
		eSP	40 44				ePS	01 06				
		eSPP	41 50				e	03 40				
		eSS	47 14				e	05 08				
							eSS	06 16				
							eLQ	16 13.5				
		H:	13 11 35.0					H:	15 36 20.1			
			28.1 S, 66.9 W, 157 km						7.7 N, 134.9 E, 8 km			
			Catamarca, Argentina						West Caroline Islands			
20	NUR	iP	14 37 01.3 D	1.1	35.7							
		eS	45 48									
	KJN	eP	14 36 35	1.1	31.1							
		i	46.9									
		iPcP	37 15.1									
	OUL	iP	14 36 30.2			20	NUR	eP	19 07 58			
								i	08 02.8			
	SOD	iP	14 36 16.4 D				KJN	iP	19 08 38.0 U	0.9	11.6	
								OUL	iP	19 08 44.8		
	KEV	eP	14 36 01					SOD	eP	19 09 06		
		ePcP	53									
		eS	43 48									
		H:	14 26 14.1						H:	19 03 27.3		
			51.4 N, 178.3 E, 33 km							40.8 N, 19.8 E, 33 km (R)		
			Rat Islands							Albania		
20	NUR	eP	15 49 33			20	NUR	iPKP	23 31 14.6	0.8	21.6	
		i	37.0					i	21.2			
		i	45.2					iSKP	33 59.9			
		ePP	53 12					ePKS	34 55			
		e	28				KJN	ePKP	23 31 03			
		e	57 16					i	13.6	0.8	16.9	
		eSKS	16 00 08					iSKP	33 50.0			
		eS	44					ePKS	34 46			
		ePS	01 36				OUL	iPKP	23 31 03.7			
		ePKKP	07 06					i	10.8			
		eSS	10					iSKP	33 48.9			
		eLQ	16 15.9					i	57.0			
		eLR	16 21.0				SOD	ePKP	23 31 07			
	KJN	iP	15 49 22.2	1.0	165.7			eSKP	33 43			
		i	25.0					KEV	ePKP	23 30 59		
		e	52 33						iSKP	33 37.7		
		ePKKP	16 06 51									
		i	07 13.0									
			cont.									
									H:	23 12 54.4		
										26.5 S, 178.5 E, 596 km		
										South of Fiji Islands		





July

July

T A

T A

22 NUR iP 18 13 15.3 1.0 30.0  
KJN iP 18 13 50.0 1.0 21.8  
OUL iP 18 13 56.4  
SOD eP 18 14 24  
KEV eP 18 14 50  
e 15 15

KJN eP 19 52 32 1.0 20.7  
i 33.5  
i 38.0  
eS 56 41  
OUL iP 19 52 41.5 U  
i 53 00.0  
SOD eP 19 53 04  
i 07.0  
KEV e 19 54 01

22 NUR iP 18 14 26.2 0.8 37.4  
eS 18 01  
KJN iP 18 15 02.7 U 1.0 76.3  
OUL iP 18 15 09.1  
i 28.5  
SOD eP 18 15 30  
i 36.0  
i 16 10.9  
KEV eP 18 15 56 1.0 30.0  
H: 18 09 55.7  
40.8 N, 30.4 E, 33 km (R)  
Turkey

H: 19 47 26  
40.8 N, 30.9 E, 33 km (R)  
Turkey

22 NUR eP 20 08 40  
e 12 14  
OUL eP 20 09 24

22 NUR iP 20 40 15.6 0.8 24.5  
iS 43 50.0  
KJN iP 20 40 51.7 0.8 19.2  
i 55.9

22 NUR eP 19 11 48  
e 15 25  
KJN eP 19 12 28  
OUL eP 19 12 31

OUL iP 20 40 58.8 D  
i 41 24.8  
SOD iP 20 41 22.1 U  
e 50  
KEV eP 20 41 44  
e 42 11

22 NUR eSg 19 25 11  
~~e 15~~  
KJN iPn 19 22 53.0  
iSn 23 16.3  
OUL iPg 19 22 36.0  
~~i 37.7~~  
~~i 39.9~~  
iSg 46.7  
~~i 49.4~~  
SOD ePg 19 22 45  
~~i 50.3~~  
iSg 23 03.5  
~~i 04.5~~  
KEV e 19 24 13

H: 20 35 40.8  
40.6 N, 30.4 E, 16 km  
Turkey

22 NUR iP 21 26 09.0 0.9 15.5  
eS 29 41  
KJN iP 21 26 45.5 U 1.0 19.6  
i 48.7

e(S) 31 04  
OUL iP 21 26 52.9 U  
i 27 19.1  
SOD eP 21 27 16  
KEV e 21 28 05

According to the  
Finnish seismograph  
station net:  
H: 19 22 21  
66.0 N, 26.5 E ✓  
Felt at Ranua

H: 21 21 34  
40.5 N, 30.5 E, 16 km  
Turkey

22 NUR eP 21 47 33  
eS 51 09

22 NUR iP 19 51 57.7 U 0.7 11.6  
eS 55 30  
cont.

22 NUR iP 22 13 06.0 0.8 8.8  
eS 16 34  
cont.











July				T	A	July				T	A	
	KJN	eP	09 21 19	1.0	16.4	26	NUR	iPKP	19 11 41.0	0.8	10.1	
	OUL	eP	09 21 24				KJN	iPKP	19 11 10.0			
		i	44.5				OUL	ePKP	19 11 26			
	SOD	eP	09 21 48				H:	18 52 21.2				
	KEV	e	09 22 34					17.4 S, 174.0 W, 15 km				
	H:	09 16 06.4						Tonga Islands				
		40.3 N, 30.6 E, 33 km (R)										
		Turkey					26	KJN	iP	22 04 10.0	0.7	7.5
26	NUR	eP	09 34 04	1.0	20.0		OUL	iP	22 03 57.2			
		eS	36 55				SOD	eP	22 03 51			
	KJN	eP	09 33 30				KEV	eP	22 03 45			
		i	33.2				H:	21 59 50				
	OUL	iP	09 33 13.9					66.5 N, 17.1 W, 33 km (R)				
	SOD	eP	09 32 52					Iceland				
		e	33 56				27	KJN	eP	00 13 47		
	KEV	eP	09 32 30				OUL	eP	00 13 47			
		i	33.9	0.8	14.1		SOD	eP	00 13 31			
		eS	33 50				KEV	eP	00 13 23			
	H:	09 30 43					H:	00 00 47.9				
		73.4 N, 7.2 E, 33 km (R)						19.9 N, 109.4 W, 31 km				
		Greenland Sea						Revilla Gigedo Islands				
26	NUR	iP	12 29 51.6 D			27	NUR	iP	01 47 29.7 D	0.5	13.2	
	KJN	iP	12 29 30.2 D				KJN	iP	01 47 45.4 D	0.5	7.4	
	OUL	iP	12 29 30.8				OUL	iP	01 47 56.1 D			
	SOD	eP	12 29 21				SOD	iP	01 48 11.4			
	KEV	eP	12 29 11				KEV	eP	01 48 28			
	H:	12 20 19.0					H:	01 40 54				
		41.0 N, 133.9 E, 564 km						31.7 N, 50.8 E, 65 km				
		Sea of Japan						Iran				
26	NUR	iP	18 58 06.0	1.5	887.3	27	NUR	eP	05 00 24	1.0	12.0	
		i	31.3					i	01 01.5	0.9	15.1	
		e	19 01 57				KJN	eP	05 00 56			
		iS	02 20.6					e	01 36			
		eLR	19 03.8					e	03 04			
	KJN	iP	18 58 29.1 U				OUL	eP	05 01 01			
		iS	19 02 47.0					i	10.4			
		e	03 00					i	40.9			
	OUL	iP	18 58 39.9 U				SOD	eP	05 01 23			
	SOD	iP	18 58 58.7 D					e	56			
		i	59 25.2				H:	04 54 52				
	KEV	iP	18 59 18.4 D	1.5	145.9			34.3 N, 26.7 E, 53 km				
		i	35.2					Crete				
		iPP	19 00 11.1				27	NUR	iP	05 22 36.3	1.3	34.1
		e	03 04						i	41.6		
		e	48						eS	26 32		
		eS	04 18					KJN	iP	05 22 33.4	1.5	59.9
	H:	18 53 01.3							eS	26 26		
		39.5 N, 40.4 E, 33 km (R)										
		Turkey										

cont.

July				July					
		T	A			T	A		
	OUL iP	05 22 24.0							
	SOD eP	05 22 19							
	KEV eP	05 22 16	1.6	37.2					
	eS	25 56							
	H: 05 17 54.0								
	64.0 N, 20.7 W, 33 km (R)								
	Iceland								
27	KJN eP	16 46 08							
	H: 16 35 31.3								
	52.0 N, 176.2 W, 63 km								
	Andreanof Islands								
27	NUR eP	21 46 04							
	OUL eP	21 46 12							
	Moscow:								
	H: 21 39 04								
	36.8 N, 71.1 E, 245 km								
	Hindu Kush								
27	NUR eP	23 21 55							
	KJN eP	23 22 37							
	OUL eP	23 22 40							
28	NUR eP	02 46 18							
28	NUR eP	02 51 28							
	KJN iP	02 51 20.1	0.8	10.0					
	OUL eP	02 51 07							
	SOD eP	02 51 02							
	KEV iP	02 50 58.2							
	e	55 16							
28	KJN eP	03 59 21							
	KEV eP	03 59 04							
	H: 03 46 29.8								
	16.1 N, 96.6 W, 56 km								
	Oaxaca, Mexico								
28	NUR eP	06 05 40	0.8	7.2					
	KJN iP	06 05 22.5 D	1.0	12.0					
	SOD eP	06 05 10							
	Moscow:								
	H: 05 56 13								
	42.4 N, 114.4 E								
	China								
28	KJN iP	09 54 33.7	0.7	12.3					
	OUL iP	09 54 32.1							
	SOD iP	09 54 20.7							
	KEV iP	09 54 09.3							
	H: 09 44 21.1								
	42.6 N, 145.4 E, 142 km								
	Hokkaido, Japan								
					28	NUR ePKP	14 44 03		
						iSKP	46 50.3		
						KJN ePKP	14 44 02	0.9	11.6
						iSKP	46 39.0		
						OUL iP	14 44 01.1		
						iSKP	46 37.1		
						SOD eSKP	14 46 30		
						H: 14 25 50.1			
						20.7 S, 178.5 W, 555 km			
						Fiji Islands			
					28	NUR eP	15 06 55		
						KJN eP	15 07 32		
						OUL eP	15 07 43		
					28	NUR iP	15 39 46.0	1.3	45.4
						e	41 35		
						eS	43 44		
						KJN iP	15 39 43.3 D	1.0	16.4
						i	49.6		
						e	41 43		
						OUL iP	15 39 32.1		
						SOD eP	15 39 28		
						KEV eP	15 39 26	1.3	19.9
						i	48.0		
						eS	43 04		
						H: 15 35 03.4			
						63.9 N, 20.5 W, 31 km			
						Iceland			
					28	NUR iP	17 39 43.0 U	0.8	19.1
						e	42 45		
						KJN iP	17 39 40.4 U	0.9	26.8
						i	55.3		
						e	42 27		
						OUL iP	17 39 45.5 U		
						i	40 00.2		
						SOD iP	17 39 48.1 U		
						KEV iP	17 39 51.6 U	0.9	23.0
						H: 17 27 35.7			
						2.1 N, 98.0 E, 32 km			
						Northern Sumatra			
					28	NUR ePKP	18 51 10	0.8	5.9
						eSKP	53 59		
						KJN ePKP	18 51 01	0.9	4.5
						KEV ePKP	18 50 52		
						H: 18 32 39.9			
						15.2 S, 178.5 W, 375 km			
						Fiji Islands			
					28	NUR iP	22 56 47.3	1.0	20.5
						e	55		

cont.



July

July

				T	A					T	A
	eS		22 39			30	NUR	iP	02 01 53.0		
	eScS		53					eS	05 25		
OUL	iP	00 12	19.5 U				KJN	iP	02 02 28.8	1.0	10.9
SOD	iP	00 12	19.3 U					eS	06 48		
	i		42.2				OUL	iP	02 03 39.0		
KEV	iP	00 12	18.2	0.8	15.8		SOD	eP	02 03 02		
	i		26.5								
	ePP	15 29				30	NUR	eP	02 30 43		
	ePPP	17 20						eS	34 16		
	eS	22 20					KJN	eP	02 31 22	1.1	8.1
	eScS	50					SOD	eP	02 32 09		
	e	25 23									
	eSS	27 40				30	NUR	iP	03 49 40.8 D	0.7	14.2
	eSSS	31 24						e	57		
H:	23 59 58.7						KJN	iP	03 49 25.3 D	0.7	19.9
	10.6 N, 67.3 W, 10 km							ipP	52.1		
	Near coast of Venezuela						OUL	iP	03 49 25.3		
30	NUR	iPKP	01 20 58.7 U	0.7	27.7			ipP	52.3		
		e	21 12				SOD	iP	03 49 17.8 D		
KJN	iPKP	01 20	48.1 D	0.7	12.3			epP	43		
		e	21 04				KEV	iP	03 49 10.2 D	0.7	15.5
OUL	iPKP	01 20	49.1 U				H:	03 37 22.7			
SOD	ePKP	01 20	42					22.0 N, 143.8 E, 121 km			
H:	01 01 16							Volcano Islands			
	33.0 S, 179.1 W, 33 km (R)					30	NUR	ePKP	05 27 25		
	South of Kermadec Islands						KJN	ePKP	05 27 19		
30	NUR	eP	01 24 03				SOD	ePKP	05 26 50		
		eS	27 37				H:	05 08 07.7			
KJN	eP	01 24	40					26.7 S, 177.4 W, 117 km			
OUL	eP	01 24	50					South of Fiji Islands			
H:	01 19 32					30	NUR	ePKP	08 38 28		
	40.6 N, 30.5 E, 33 km						H:	08 19 28.3			
	Turkey							60.1 S, 28.5 W, 33 km (R)			
								South Sandwich Islands			
30	NUR	eP	01 35 34	1.2	189.8						
		eS	39 07			30	NUR	iP	10 29 42.9	0.8	5.8
KJN	iP	01 36	10.3 D					iS	33 16.0		
		i	12.1				KJN	iP	10 30 18.7 U	1.0	10.9
		i	37 16.2					i	38.8		
		eS	40 26					e	34 43		
OUL	iP	01 36	21.3 D				SOD	eP	10 30 49		
SOD	iP	01 36	42.1								
		i	45.9			30	NUR	ePKP	11 09 17	1.3	23.9
		e	37 05					i	26.0		
		e	41 46					e	10 05		
KEV	iP	01 37	04.0 U	1.1	126.1			eSKS	16 46		
		i	07.2					eSKKS	19 45		
		i	39.0					eSS	32 00		
		e	42 29				KJN	iPKP	11 09 19.6	0.6	6.2
		e	37					i	23.3		
H:	01 31 01.7							e	10 06		
	40.7 N, 30.4 E, 16 km						OUL	iPKP	11 09 20.8		
	Turkey								cont.		





July				T	A	July				T	A
	KJN	iP	20 35 12.8	1.0	16.4	31	NUR	eP	15 49 49	0.7	5.2
		i	16.9					i	56.0		
	OUL	eP	20 35 17								
	SOD	eP	20 35 12								
		i	16.3			31	KJN	ePKP	20 38 06		
	KEV	eP	20 35 09	0.9	14.0		OUL	ePKP	20 38 10		
	H:	20 23	18.1				SOD	ePKP	20 38 06		
			15.9 N, 121.2 E, 17 km				H:	20 18	58.0		
			Luzon, P.I.						57.9 S, 25.2 W, 33 km (R)		
									South Sandwich Islands		
30	KJN	ePKP	22 40 30	0.8	5.4						
	OUL	ePKP	22 40 34								
	SOD	ePKP	22 40 37			31	NUR	ePKP	23 08 36		
	H:	22 21	42.6					ePP	12 49		
			56.3 S, 26.9 W, 118 km					ePSKS	23 08		
			South Sandwich Islands					eSS	32 44		
							KJN	ePKP <sup>2</sup>	23 08 59		
30	NUR	iP	23 13 58.0 D	0.8	10.3		OUL	ePKP	23 09 14		
	KJN	iP	23 13 33.8 D	1.2	18.9		KEV	ePKP	23 08 40		
	OUL	iP	23 13 31.4					e	26 08		
	SOD	eP	23 13 18					eSS	33 28		
	H:	23 03	15.8				H:	22 48	35.6		
			46.0 N, 153.1 E, 33 km (R)						60.0 S, 159.1 E, 33 km (R)		
			Kurile Islands						Macquarie Island		
31	NUR	iP	01 48 24.6	0.9	10.3						
	KJN	iP	01 48 04.3 U	0.7	9.6	31	NUR	iP	23 57 12.0	0.8	7.2
	OUL	iP	01 48 03.8					e	23		
	SOD	iP	01 47 54.0				KJN	eP	23 56 54	0.8	5.4
	H:	01 37	17				OUL	eP	23 56 55		
			36.0 N, 140.3 E, 71 km				SOD	eP	23 56 46		
			Honshu, Japan				KEV	eP	23 56 41		
							H:	23 45	10		
									27.5 N, 142.9 E, 33 km (R)		
									Bonin Islands		
31	NUR	iPKP	07 06 12.5	0.8	7.4						
	H:	06 47	15.5								
			12.8 S, 165.6 E, 33 km (R)								
			Santa Cruz Islands								
31	NUR	eP	07 16 40								
		i	17 11.8								
		eS	20 12								
	KJN	eP	07 17 15								
		i	43.1								
		e	21 50								
	SOD	eP	07 17 55								
		e	18 12								
		e	34								
	H:	07 12	05								
			40.6 N, 27.6 E, 14 km								
			Turkey								

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M. T. Porkka  
Aili Huovila



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August

August

August				T	A	August				T	A
1	NUR	eP	00 18 09			1	NUR	iP	14 10 46.8		
		eS	21 30				KJN	eP	14 10 17		
	KJN	eP	00 18 41				OUL	iP	14 10 15.6 U		
		i	48.8				H:	13 59 58.6			
		eS	22 40					43.9 N, 147.9 E, 52 km			
	OUL	eP	00 18 50					Kurile Islands			
		i	59.7								
	SOD	eP	00 19 10			1	NUR	eP	15 50 07		
		e	20 06								
	H:	00 13 35				1	SOD	iP	16 00 47.1		
		40.8 N, 30.4 E, 33 km (R)									
		Turkey				1	NUR	iP	16 59 57.0		
1	NUR	iP	01 09 43.6	0.6	3.8		eS	17 04 46			
		iS	13 11.2				KJN	iP	17 00 09.0	0.9	15.2
	KJN	eP	01 10 17				i	49.0			
		eS	14 26				eS	05 07			
	OUL	eP	01 10 29				OUL	iP	17 00 19.4		
		i	35.5				i	24.8			
	SOD	eP	01 10 50				SOD	iP	17 00 34.0		
		e	11 12				e	56			
	H:	01 05 11					e	06 20			
		40.8 N, 30.3 E, 33 km (R)					KEV	eP	17 00 49		
		Turkey					ePP	01 56			
1	NUR	iP	02 39 44.3	0.8	5.8		H:	16 54 15			
								39.7 N, 53.3 E, 33 km (R)			
								Turkmen SSR			
1	KJN	iP	03 42 33.1 U	0.8	6.9	1	NUR	ePKP	19 37 22	0.8	33.1
	SOD	eP	03 42 32				i	22.8			
	KEV	eP	03 42 30				KJN	iPKP	19 37 11.0	0.9	31.3
	H:	03 29 25.7					i	12.2			
		0.6 N, 126.4 E, 64 km					OUL	iPKP	19 37 10.8 D		
		Molucca Passage					i	15.4			
1	NUR	eP	07 07 54				SOD	ePKP	19 37 06		
		eS	10 01				H:	19 18 06.2			
		e	11 13					33.4 S, 179.4 E, 228 km			
	KJN	eS	07 11 29					South of Kermadec Islands			
		e	13 20			2	NUR	iP	00 55 06.0	0.9	30.2
1	NUR	ePKP <sup>2</sup>	09 26 17.2				iPcP	38.0			
		eSS	49 48				e	56 15			
		eSSS <sup>2</sup>	55 36				KJN	iP	00 54 42.2	1.1	13.5
	KJN	iPKP <sup>2</sup>	09 26 14.3 D	1.1	23.0		i	50.3			
	OUL	iPKP <sup>2</sup>	09 26 18.6				iPcP	55 24.2			
	SOD	ePKP <sup>2</sup>	09 26 18				OUL	iP	00 54 40.7 U		
	KEV	eSS	09 50 52				i	51.6			
		eSSS	55 30				SOD	iP	00 54 28.6		
	H:	09 05 49.3					KEV	iP	00 54 16.3	0.7	15.5
		60.0 S, 159.2 E, 33 km (R)					ePcP	55 07			
		South of New Zealand					H:	00 44 41.4			
								44.6 N, 146.4 E, 149 km			
								Kurile Islands			



August

August

					T	A
2	NUR	eP	04 21 35			
	KJN	eP	04 21 07			
	OUL	eP	04 20 51			
	SOD	eP	04 20 33			
		e	43			
2	NUR	eP	06 45 45			
	KJN	eP	06 45 35			
	OUL	eP	06 45 38			
	SOD	eP	06 45 31			
			H: 06 34 19.3			
			23.6 N, 121.4 E, 40 km			
			Taiwan			
2	NUR	ePKP	09 55 44			
	KJN	iPKP	09 55 37.6			
		iSKP	58 10.9			
	OUL	iPKP	09 55 36.2 U			
		eSKP	58 10			
	SOD	eSKP	09 58 03			
			H: 09 37 29.5			
			20.8 S, 179.1 W, 592 km			
			Fiji Islands			
2	NUR	iP	11 10 32.0 D	1.3	133.0	
		i	49.8			
		iS	13 31.2			
		i	14 21.7			
	KJN	iP	11 10 08.0	1.1	97.2	
		i	09.9			
		e	11 00			
		i	12 38.1			
		iS	47.5			
	OUL	iP	11 09 51.6			
		iS	12 17.5			
	SOD	iP	11 09 36.2			
		i	39.4			
		eS	11 53			
	KEV	iP	11 09 24.5 D	1.3	306.9	
		i	28.3			
		i	33.4			
		e	55			
		e	10 28			
		eS	11 30			
		eLR	11 12.1			
			H: 11 06 38.7			
			71.2 N, 8.0 W, 33 km (R)			
			Jan Mayen Island			
2	NUR	eP	11 25 36			
	SOD	eP	11 25 29			

					T	A
2	NUR	iP	14 02 07.7 D	0.8	11.5	
	KJN	iP	14 02 21.9 D	1.0	9.8	
	OUL	iP	14 02 32.6 D			
		i	36.5			
	SOD	eP	14 02 47			
	KEV	eP	14 03 04	0.9	13.4	
			H: 13 55 14			
			30.9 N, 53.5 E, 33 km (R)			
			Iran			
2	NUR	iP	14 10 12.1 U	1.3	528.6	
		i	11 03.0			
		iS	13 12.8			
		i	14 02.7			
	KJN	iP	14 09 49.1 U			
		i	10 37.9			
		iS	12 29.2			
		i	46.0			
	OUL	iP	14 09 31.4 D			
		i	32.8			
		eS	11 59			
	SOD	iP	14 09 15.9			
		i	18.0			
		eS	11 33			
	KEV	iP	14 09 04.8 U	1.5	1176.8	
		i	11.0			
		e	32			
		eS	11 14			
			H: 14 06 17.8			
			71.2 N, 8.5 W, 33 km (R)			
			Jan Mayen Island			
2	NUR	iP	15 37 54.8	0.7	6.5	
		eS	41 26			
	KJN	eP	15 38 28	0.9	7.1	
		i	35.0			
	OUL	iP	15 38 40.7 D			
		i	59.2			
	SOD	eP	15 39 01			
			H: 15 33 22.5			
			40.7 N, 30.6 E, 33 km (R)			
			Turkey			
2	NUR	eP	16 24 05			
	KJN	eP	16 23 48			
	OUL	eP	16 23 22			
		eS	25 49			
	SOD	eP	16 23 08			
2	NUR	eP	16 51 00			
	OUL	eP	16 50 19			

cont.

August			August			August		
			T	A		T	A	
	eS	52 44			OUL eP	12 23 42		
	i	48.7			H: 12 12 55.2			
SOD	eP	16 50 05			36.1 N, 139.9 E, 50 km			
2	NUR	eP 17 44 37			Honshu, Japan			
2	NUR	iP 18 30 16.0 U	0.8	41.8	3	NUR	eP 14 45 41	
	i	30.8			KJN	iP 14 45 00.9 D	0.9	17.9
KJN	iP	18 30 13.0 U	1.1	108.0	OUL	iP 14 44 45.7		
	e	29			SOD	eP 14 44 20		
OUL	iP	18 30 18.3 U				eS 45 55		
SOD	iP	18 30 19.3 D			KEV	eP 14 43 54		
	e	33				eS 45 06		
KEV	iP	18 30 22.2 D	1.0	30.0	H: 14 42 08			
	i	31 08.6			74.6 N, 9.8 E, 33 km (R)			
H: 18 17 32.0					Greenland Sea			
4.6 S, 103.2 E, 83 km					3	NUR	iP 16 33 57.6	0.8 7.2
Southern Sumatra					KJN	iP 16 33 43.8 U	0.8 10.0	
3	NUR	ePKP 00 27 29			OUL	iP 16 33 47.4		
	KJN	ePKP 00 27 17			SOD	iP 16 33 42.2		
H: 00 08 13					3	NUR	iP 21 48 14.4	1.0 18.0
20.9 S, 174.3 W, 43 km						eS 57 04		
Tonga Islands					KJN	iP 21 47 50.0	1.0 8.7	
3	KJN	iP 02 07 27.8 U	0.8	13.8		i 48 03.2		
	OUL	iP 02 07 31.6 D			OUL	iP 21 47 44.2 D		
	SOD	eP 02 07 28			SOD	eP 21 47 28		
H: 01 53 56.5						e 59		
6.8 S, 129.4 E, 162 km					KEV	iP 21 47 13.1	0.8 10.1	
Banda Sea						eS 55 06		
3	NUR	ePKP 07 02 17			H: 21 37 26.7			
H: 06 43 24.7					53.0 N, 166.7 W, 29 km			
11.8 S, 165.5 E, 57 km					Fox Islands			
Santa Cruz Islands					3	NUR	iP 23 27 33.0	0.8 14.4
3	NUR	iP 09 04 50.0				epP 28 17		
	KJN	iP 09 04 37.0 U	0.8	10.0	KJN	iP 23 27 08.3 D	0.8 8.5	
	OUL	eP 09 04 39				epP 54		
	SOD	eP 09 04 36			OUL	iP 23 27 02.7		
	KEV	eP 09 04 32				ipP 49.0		
3	NUR	iPKP 11 10 46.0	0.9	13.4	SOD	eP 23 26 47		
H: 10 51 10						epP 27 33		
31.6 S, 178.7 W, 52 km					KEV	epP 23 27 14		
Kermadec Islands					H: 23 17 08.4			
3	NUR	eP 12 24 00			53.8 N, 170.0 W, 194 km			
	KJN	iP 12 23 42.1			Fox Islands			
		cont.			4	KJN	eP 03 27 51	
						SOD	eP 03 27 16	





August				August			
		T	A		T	A	
6	OUL eP	01 01 45		6	NUR iP	22 56 56.0	
	SOD eP	01 01 28			KJN iP	22 56 31.8	
	H:	00 51 41			OUL iP	22 56 26.3	
		55.4 N, 154.9 W, 32 km			SOD eP	22 56 09	
		South of Alaska			H:	22 46 08.1	
6	KJN ePKP	05 04 43				52.7 N, 168.4 W, 44 km	
	OUL iP	05 04 42.2				Fox Islands	
	H:	04 46 29		7	NUR eP	05 56 55	
		20.7 S, 178.4 W, 536 km			KJN eP	05 56 53	
		Fiji Islands			ipP	57 39.1	
6	KJN eP	05 39 58	0.8		ePP	58 24	
	OUL iP	05 40 01.2 D	5.4		OUL iP	05 57 03.7	
	SOD eP	05 39 46			i	55.3	
	i	55.0			SOD eP	05 57 10	
	KEV eP	05 39 32			KEV eP	05 57 13	
					H:	05 49 57.5	
6	NUR eP	10 38 07				36.5 N, 71.2 E, 229 km	
	KJN iP	10 38 04.2				Afghanistan-USSR border	
	OUL iP	10 38 13.9 U		7	KJN eP	11 24 28	1.1 17.6
	SOD iP	10 38 18.1			OUL eP	11 24 21	
	KEV eP	10 38 25			H:	11 14 42.7	
	H:	10 31 06				58.7 N, 154.6 W, 37 km	
		38.0 N, 74.5 E, 215 km				Alaska Peninsula	
		Tadzhik-Sinkiang border		7	NUR iP	17 26 41.8 U	1.0 152.0
6	NUR iP	11 37 59.5			i	47.0	
	KJN iP	11 37 49.7 D	0.9		KJN iP	17 26 32.1 U	0.9 8.9
	OUL iP	11 37 48.9 D	34.8		i	37.4	
	i	38 14.5			OUL iP	17 26 27.2	
	H:	11 18 12			SOD ePKP	17 26 25	
		34.5 S, 179.1 W, 33 km (R)			H:	17 07 20.1	
		South of Kermadec Islands				29.4 S, 177.4 W, 147 km	
						Kermadec Islands	
6	NUR eP	14 14 05		8	NUR iP	01 51 59.0	
	OUL eP	14 15 00			i	52 04.2	
6	NUR eP	14 17 35			e	54 18	
	OUL eP	14 17 59			KJN iP	01 51 49.1	
6	NUR eP	20 47 14			i	52 05.2	
	KJN eP	20 47 14			OUL eP	01 51 48	
	OUL iP	20 46 46.4		8	NUR eP	04 43 32	
	SOD eP	20 47 04			e	44 44	
	KEV eP	20 47 15			SOD eP	04 42 51	
				8	OUL eP	15 06 59	
					H:	14 57 10.1	
						57.2 N, 152.8 W, 33 km (R)	
						Kodiak Island	

August

August

		T		A				T		A					
8	NUR eP	16	17	03				9	NUR iP	13	36	30.4	U	0.8	24.5
	KJN iP	16	16	43.0	U	0.8	9.2		KJN iP	13	36	18.1	U	1.1	33.8
	OUL eP	16	16	43					OUL iP	13	36	09.6	U		
	SOD eP	16	16	30					e			26			
	KEV iP	16	16	26.2					SOD eP	13	36	01			
	H: 16 05 59.1								KEV iP	13	35	48.8	U	0.8	10.1
	37.2 N, 141.1 E, 54 km								H: 13 25 06.2						
	Honshu, Japan								39.9 N, 104.7 W, 5 km						
									Colorado						
8	NUR eP	20	41	08				9	NUR eP	23	33	48			
	KJN eP	20	40	51					KJN eP	23	33	36			
	OUL eP	20	40	52				10	KJN iP	06	22	39.5	U	0.8	10.0
	H: 20 29 08								SOD eP	06	22	39			
	24.7 N, 143.2 E, 98 km														
	Volcano Islands														
9	NUR eP	00	38	19				10	NUR iP	07	10	44.5	U	0.8	13.0
	KJN eP	00	38	52					KJN eP	07	10	39		0.6	2.1
	OUL eP	00	39	00					OUL eP	07	10	35			
	H: 00 33 12								KEV eP	07	10	18			
	37.1 N, 28.8 E, 33 km (R)														
	Turkey														
9	NUR eP	08	33	54		1.2	22.8	10	NUR iP	11	32	03.6		1.1	38.1
	ePKP		38	10					i			16.7			
	ePP			39					iPcP			34.6			
	eSKS		44	22					i		33	04.7			
	ePS		47	12					ePP		34	24			
	KJN iP	08	33	46.2		0.9	10.7		ePPP		36	08			
	i		34	23.7					eS		40	40			
	e		37	36					eScS		41	52			
	ePP		38	10					eSS		45	12			
	OUL iP	08	33	47.6					eSSS		48	08			
	ePP		38	12					KJN iP	11	31	39.1		1.1	17.6
	ePKKP		49	53					i			52.2			
	SOD eP	08	33	45					iPcP		32	19.8			
	KEV ePP	08	38	16					ePP		34	04			
	eSKKS		45	04					OUL iP	11	31	37.8			
	ePS		47	16					i			44.5			
	eSS		52	20					iPcP		32	18.7			
	H: 08 20 03.7								SOD eP	11	31	25			
	6.4 S, 130.4 E, 89 km								iPcP		32	11.4			
	Banda Sea								KEV iP	11	31	14.7			
									iPcP		32	04.4			
9	NUR iPcP	10	41	25.0	D	0.8	25.9		ePPP		34	40			
	KJN iPcP	10	41	13.1	D	0.6	2.7		eS		39	12			
	OUL iPcP	10	41	12.4					H: 11 21 22.3						
	eSKP		44	21					45.4 N, 150.3 E, 37 km						
	H: 10 22 24								Kurile Islands						
	31.2 S, 180.0 W, 333 km														
	Kermadec Islands														
								10	NUR eP	21	28	14			



August					August				
			T	A			T	A	
11	NUR	eP	01 20 58						
	SOD	eP	01 21 54			epPP	03 07		
11	OUL	eP	10 53 50			i	08 37.0		
	H:	10 43 30				e	09 08		
		52.3 N, 171.4 W, 38 km				eSKSP	11 56		
		Fox Islands				eSPP	13 56		
11	NUR	iP	19 06 46.0	0.8	29.6	ePPPS	15 12		
	KJN	iP	19 06 29.8 D	0.7	30.1	eSS	20 12		
		ipP	07 05.4			e	25 56		
		i	13.4			KJN	iPKP 09 58 42.7		
		ePP	09 34			i	51.9		
	OUL	iP	19 06 30.1 D			ipPKP	59 35.0		
		e	59			iPP	10 01 34.1		
	SOD	iP	19 06 22.9 D			iSKP	02 11.2		
		epP	58			iPKS	22.0		
	KEV	iP	19 06 15.5 D	0.7	20.6	esPP	03 08		
	H:	18 54 28.8				e	05 30		
		22.1 N, 144.0 E, 125 km				eSKS	55		
		Volcano Islands				e	06 14		
12	NUR	iP	03 42 43.1 U	0.8	11.3	e	08 18		
	KJN	iP	03 42 32.0 U	0.8	13.8	e	44		
	OUL	iP	03 42 30.3 U			ePSKS	11 10		
12	NUR	iP	04 41 38.3 D	0.7	36.5	SOD	ePKP 09 58 33		
		i	57.3			i	48.9		
		ePcP	42 05			iSKP	10 02 06.6		
	KJN	iP	04 41 17.1 D	0.9	89.3	KEV	eP 09 55 36		
		i	29.4			iPKP	58 36.0		
		e	42 17			i	43.4		
	OUL	iP	04 41 16.1 D			ipPKP	59 20.2		
		i	42.6			ePP	10 01 04		
	SOD	iP	04 41 06.2 D			iSKP	58.3		
	KEV	iP	04 40 55.5 D	0.8	28.8	ePKS	02 13		
	H:	04 30 38.5				e	48		
		38.5 N, 141.9 E, 53 km				eSKS	05 36		
		Honshu, Japan				e	07 50		
12	NUR	iPKP	09 58 53.0	0.7	36.5	ePSKS	10 44		
		ipPKP	59 36.8			eSPP	12 46		
		i	10 01 49.0			eSS	18 32		
		ePP	02 02			e	20 44		
		iSKP	22.0			H:	09 39 44.3		
		i	36.0				24.7 S, 177.5 W, 134 km		
		cont.					South of Fiji Islands		
12	NUR	eP	10 50 55			12	NUR	eP	10 50 55
	KJN	iP	10 50 28.2	0.9	12.5		KJN	iP	10 50 28.2
	SOD	eP	10 50 09				SOD	eP	10 50 09
	KEV	eP	10 49 54	1.1	23.8		KEV	eP	10 49 54
	H:	10 40 43.9					H:	10 40 43.9	
		53.7 N, 160.4 E, 25 km						53.7 N, 160.4 E, 25 km	
		Kamchatka						Kamchatka	







August

August

T A

T A

eSS 10 04  
H: 16 33 04.0  
50.9 S, 29.1 E, 33 km (R)  
South of Africa

13 NUR eP 16 55 46  
KJN eP 16 55 39  
i 45.5  
OUL eP 16 55 32  
i 36.3  
SOD eP 16 55 18  
KEV eP 16 55 10  
H: 16 44 22.3  
43.5 N, 126.9 W, 33 km (R)  
Off coast of Oregon

13 NUR ePKP 17 13 20  
H: 16 54 45.7  
4.3 S, 152.5 E, 25 km  
New Britain

13 NUR eP 19 07 38  
KJN eP 19 07 12  
OUL eP 19 06 58  
e 07 14  
SOD eP 19 06 32  
H: 19 02 39  
78.2 N, 20.1 W, 33 km (R)  
Eastern Greenland

13 NUR iP 20 17 19.8 U 0.8 398.9  
i 26.2  
i 18 20.7  
ipP 39.2  
iPP 19 54.0  
ePPP 21 44  
e 23 44  
iS 25 53.0  
iScS 26 39.0  
esS 28 12  
eP'P' 45 18  
KJN iP 20 17 00.1  
i 18 03.3  
ipP 21.2  
iPP 19 18.1  
i 47.8  
ePPP 21 07  
eS 25 16  
eScS 26 15  
eP'P' 45 20  
e 31  
cont.

OUL iP 20 17 00.8 U  
i 18 59.9  
i 19 27.8  
eP'P' 45 18  
SOD iP 20 16 51.7 U  
i 17 01.1  
eP'P' 45 15  
KEV iP 20 16 43.4 U 1.3 545.6  
i 54.6  
i 17 47.1  
ipP 18 07.0  
iPP 19 05.3  
ePPP 20 36  
e 22 34  
eS 24 45  
eScS 25 56  
esS 27 00  
e 28 36  
eSS 29 00  
esSS 31 04  
eP'P' 45 18  
e 43  
H: 20 06 50.6  
35.3 N, 135.3 E, 357 km  
Southern Honshu, Japan

13 NUR iP 22 12 52.7 D 1.2 59.9  
eS 17 02  
KJN iP 22 13 26.7 D 1.1 33.8  
i 45.0  
OUL iP 22 13 24.0 U  
i 26.8  
SOD iP 22 13 40.8  
KEV eP 22 14 01  
i 23.5  
eS 19 10  
H: 22 07 47.5  
43.2 N, 0.5 W, 15 km  
Pyrenees

13 NUR ePKP 22 33 49  
eSKS 41 12  
ePS 43 48  
ePPS 44 54  
e 49 20  
eSS 50 06  
eSSS 54 38  
eLR 23 07.8  
OUL ePKP 22 33 48  
KEV eSKS 22 40 46  
ePS 42 50  
cont.



August					August				
			T	A			T	A	
15	NUR	iP	07 11 33.4	1.0	18.0	OUL	iP	15 45 46.9 U	
	KJN	eP	07 12 10				iPcP	46 42.9	
	OUL	iP	07 12 18.2			SOD	iP	15 45 36.4	
	SOD	eP	07 12 38				iPcP	46 37.2	
	H: 07 06 36					KEV	iP	15 45 27.2 U	1.0 40.0
	38.9 N, 15.0 E, 33 km (R)						iPcP	46 31.9	
	Sicily					H: 15 36 06.6			
15	NUR	iP	07 47 27.0 U	0.7	24.5	44.8 N, 132.4 E, 33 km (R)			
		epP	48 05			E.Russia-N.E.China border			
	KJN	iP	07 47 27.2 U	0.7	9.6	15	NUR	eP	20 05 58 0.8 6.7
		ipP	48 05.3				KJN	iP	20 05 46.7 0.8 10.0
	OUL	iP	07 47 36.4 U				OUL	eP	20 05 49
		ipP	48 14.2				SOD	eP	20 05 46
	SOD	eP	07 47 43				KEV	eP	20 05 42
		epP	48 21			H: 19 54 06			
	KEV	iP	07 47 52.7	0.7	9.0	16.5 N, 120.2 E, 97 km			
	H: 07 40 28.7					Luzon, P.I.			
	36.3 N, 70.2 E, 189 km					15	NUR	iP	20 21 34.3 0.8 13.4
	Hindu Kush						KJN	iP	20 21 16.0 U 0.9 11.6
15	NUR	iP	09 30 19.7 D	1.0	160.0		OUL	iP	20 21 16.3
		i	22.2				SOD	eP	20 21 09
		e	32 51				KEV	iP	20 21 00.8 U 0.9 11.8
		eS	37 51			H: 20 10 10.3			
		e	38 16			27.1 N, 140.5 E, 349 km			
	KJN	iP	09 30 09.8 U	1.2	194.4	Bonin Islands			
		i	12.5			16	NUR	eP	10 19 15
		i	55.9				KJN	eP	10 19 12 0.7 6.2
		iPcP	31 18.9				OUL	iP	10 19 15.8 D
	OUL	iP	09 30 15.9 U				SOD	eP	10 19 17
		iPcP	31 28.4			16	NUR	iP	12 19 34.5
	SOD	iP	09 30 16.3			16	NUR	ePKP	18 01 37
		i	19.5				KJN	iPKP	18 01 46.2 1.0 8.7
		e	43					i	51.8
		ePcP	31 25					epPKP	02 15
	KEV	eS	09 37 52				OUL	iPKP	18 01 46.5 D
		eScS	40 06					i	52.0
	H: 09 21 02.3							epPKP	02 13
	31.1 N, 93.7 E, 33 km (R)						SOD	iPKP	18 01 51.1
	Tibet							epPKP	02 18
15	NUR	eP	11 32 01				KEV	ePKP	18 01 55
	KJN	eP	11 32 32			H: 17 42 55.7			
15	NUR	iP	15 46 10.0 U	0.7	27.1	56.2 S, 26.9 W, 113 km			
		iPcP	55.4			South Sandwich Islands			
	KJN	iP	15 45 47.4 U	1.0	52.3				
		iPcP	46 42.1						
	cont.								

August		T	A	August		T	A
16	KJN eP 18 44 04 H: 18 33 24 36.3 N, 141.5 E, 121 km Honshu, Japan			17	NUR eP 13 00 22 eS 09 20 KJN eP 13 00 41 SOD eP 13 00 52 KEV eP 13 01 01 eS 10 50 H: 12 49 08.9 0.8 S, 21.1 W, 40 km Central Mid-Atlantic Ridge		
16	NUR iP 19 31 14.0 D 0.8 35.3 i 19.8 i 35.8 ePP 34 20 eS 41 16 eSS 46 16 e 49 08			17	NUR eP 14 42 48 0.8 5.8 i 43 10.0 KJN iP 14 42 27.8 0.8 13.1 i 40.2 i 44.5 OUL eP 14 42 25 i 38.9 i 44.6 SOD eP 14 42 15 e 28 i 34.6 KEV eP 14 42 05 i 22.0 H: 14 31 56.4 39.4 N, 142.3 E, 84 km Honshu, Japan		
	KJN iP 19 31 11.4 D 0.8 16.9 i 21.1 i 32.8 ePP 34 18 eS 41 11			17	NUR iP 20 47 26.3 D 1.1 26.2 KJN ePKP 20 47 34 iSKP 50 56.2 e 51 02 OUL ePKP 20 47 33 i 45.1 iSKP 50 56.9 SOD ePKP 20 47 38 eSKP 51 04 KEV ePKP 20 47 42 eSKP 51 14 H: 20 28 34 60.3 S, 27.0 W, 98 km South Sandwich Islands		
	OUL iP 19 31 16.5 D i 37.6 i 57.2						
	SOD iP 19 31 19.0 i 39.9						
	KEV iP 19 31 22.2 0.9 13.4 i 50.2 eS 41 32 eScS 42 02 eSS 47 04 eSSS 50 20 H: 19 18 57.6 0.9 N, 98.9 E, 26 km Northern Sumatra						
16	NUR eP 19 46 01 OUL iP 19 46 09.3 D SOD iP 19 46 13.5						
16	NUR eP 21 50 07 0.9 10.1 KJN eP 21 49 42 0.7 4.8 OUL iP 21 49 36.0 SOD eP 21 49 21						
17	NUR eP 00 17 15 KJN iP 00 16 49.8 OUL iP 00 16 45.9 D i 56.2 SOD eP 00 16 31 H: 00 06 55 51.9 N, 160.0 E, 33 km (R) Kamchatka			17	NUR eP 20 55 50 0.7 7.7 17 NUR iP 22 52 14.4 U 0.9 31.9 i 26.0 KJN iP 22 51 50.0 U 1.1 51.3 i 52 01.6 iPcP 46.0 cont.		

August							August						
					T	A					T	A	
	OUL	iP	22 51	41.6 U									
		i		55.8									
	SOD	iP	22 51	25.6 U									
	KEV	iP	22 51	07.5 U	1.0	22.0							
	H: 22 42 09.3												
	59.4 N, 151.4 W, 55 km												
	Kenai Peninsula, Alaska												
18	NUR	iP	03 46	56.7 U	0.9	20.2							
		i		47 13.5									
	KJN	eP	03 46	38	1.0	21.8							
		iPcP		47 01.8									
	OUL	iP	03 46	42.8									
		i		53.1									
		iPcP		47 03.1									
		e		37									
	SOD	eP	03 46	36									
		iPcP		58.3									
	KEV	iP	03 46	30.0 U	0.9	11.8							
		iPcP		54.8									
	H: 03 35 40.5												
	27.8 N, 127.7 E, 94 km												
	Ryukyu Islands												
18	KJN	iP	03 50	22.6 U	0.8	6.2							
		i		28.8									
	OUL	iP	03 50	21.0									
		e		31									
	SOD	iP	03 50	22.2									
		i		29.2									
	KEV	iP	03 50	18.2	0.8	6.7							
		i		25.3									
18	NUR	iP	06 00	23.0 D	0.9	15.1							
		i		29.2									
	KJN	iP	05 59	58.1	1.0	14.2							
	OUL	iP	05 59	50.0 U									
		i		56.3									
		e	06 00	23									
	SOD	eP	05 59	33									
	KEV	iP	05 59	14.4	0.9	8.4							
		i		21.2									
	H: 05 50 29.0												
	61.5 N, 151.0 W, 19 km												
	Southern Alaska												
18	NUR	eP	09 49	26									
	KJN	eP	09 49	16	1.0	14.2							
	cont.												
	OUL	eP	09 49	18									
	SOD	eP	09 49	15									
	H: 09 36 42.1												
	5.7 N, 125.8 E, 160 km												
	Mindanao, P.I.												
		iP	01 41	48.0	0.9	28.6							
		i		42 26.4									
	KJN	iP	01 41	47.8	0.8	13.8							
		i		42 08.3									
	OUL	iP	01 41	56.7									
		i		42 06.7									
	SOD	iP	01 42	03.2									
	KEV	eP	01 42	11									
	H: 01 34 43.5												
	36.9 N, 71.5 E, 127 km												
	Afghanistan-USSR border												
		iP	05 28	12.6	19								
	H: 05 17 28												
	29.4 N, 140.1 E, 418 km												
	South of Honshu, Japan												
19	NUR	iP	07 07	45.0									
		eS		09 41									
	KJN	iP	07 07	07.2	0.5	11.0							
		eS		08 33									
		i		09 16.7									
	OUL	iP	07 06	49.3									
		i		52.9									
		i		07 19.4									
		e		52									
		eS		08 01									
		i		03.7									
	SOD	eP	07 06	26									
		iS		07 25.0									
	KEV	eP	07 06	08									
		e		18									
		i		30.0									
		eS		51									
		i		07 20.0									
19	KJN	eP	07 15	45									
	H: 07 03 07.9												
	6.9 N, 73.0 W, 150 km												
	Northern Colombia												
19	NUR	iP	07 17	35.7 D	0.5	14.5							
	cont.												

August				August			
				T	A	T	A
	iS	19	29.5			SOD	iP 13 48 48.5
	e	20	30			KEV	eP 13 48 39
KJN	eP	07 16	56	0.5	26.5	H:	13 38 17.2
	i		57.8				36.3 N, 140.3 E, 100 km
	eS	18	22				Honshu, Japan
	i	19	06.3			19	KJN eP 15 34 22
OUL	iP	07 16	38.9			19	NUR iP 15 40 45.7 U 1.3 170.5
	iS	17	50.5				i 53.0
	e	18	23				i 41 13.3
SOD	iP	07 16	16.7				ePP 44 06
	e		49				eSKS 51 12
	eS	17	12				eLQ 16 06.5
	i		15.5			KJN	iP 15 40 35.0 U 0.8 134.6
KEV	eP	07 15	59				i 42.5
	e	16	20				ePP 43 50
	eS		40				eS 50 50
	e		45			OUL	iP 15 40 36.9 U
	H:	07 14	59				ePP 43 55
		70.7 N, 15.8 E,	33 km (R)			SOD	eP 15 40 33
		Norwegian Sea					i 46.1
19	KJN	eP	08 40 30			KEV	iP 15 40 31.3 U 1.7 187.2
	SOD	iP	08 40 38.9				i 50.5
19	NUR	ePKP	08 41 01				e 43 30
	KJN	ePKP	08 41 01				ePP 40
	OUL	iPKP	08 40 59.1				ePPP 45 44
	H:	08 21	33.1				eS 50 44
		27.1 S, 176.5 W,	33 km (R)				eScS 51 00
		Kermadec Islands					ePS 40
19	NUR	eP	12 25 12	0.7	6.5		e 53 15
	i		20.7			H:	15 28 08.5
KJN	iP	12 24	50.8 D	0.9	10.7		10.4 N, 126.0 E, 58 km
	i	25	03.0				Philippine Islands
OUL	iP	12 24	49.9			19	NUR iP 16 00 42.8 U 0.9 102.5
	i		57.5				ipPKP 01 07.1
	i	25	01.7			KJN	iPKP 16 00 36.0 U 1.0 80.7
SOD	eP	12 24	38				ipPKP 59.8
	i		50.5				e 02 21
KEV	i	12 24	36.2				iPKKP 10 39.0
	H:	12 14	21.7			OUL	iPKP 16 00 35.9 U
		40.8 N, 143.5 E,	45 km				ipPKP 59.4
		Honshu, Japan					iPKKP 10 38.9
19	NUR	iP	13 49 19.0 U	0.7	19.4	SOD	iPKP 16 00 32.1
	KJN	iP	13 48 58.8 U	0.7	30.8		iPKKP 10 45.6
	OUL	iP	13 48 58.4 U			KEV	iPKP 16 00 29.0 U 0.8 20.2
	ipP	49	21.9				ipPKP 52.2
			cont.				cont.

August				August			
		T	A			T	A
	ePKKP	10	50		eS	14	32
	H: 15 41 53.3				i	17	36.7
	12.4 S, 166.6 E, 86 km			KJN	iP	02 08	50.0
	Santa Cruz Islands				i		53.7
19	KJN eP	16	31 09		e	10	56
	eS		33 31		eS	14	11
	OUL eP	16	31 00		e	15	45
	eS		33 10	OUL	eP	02 08	58
	SOD eP	16	30 23		i	09	01.2
	iS		32 18.5		i	12	53.3
	KEV eP	16	29 53	SOD	iP	02 08	58.4
	eS		31 21	KEV	iP	02 09	06.2
					i		53.8
19	NUR eP	23	41 41		i	11	10.2
	KJN iP	23	41 24.0		eS	14	38
	e		42 07		e		56
	OUL iP	23	41 28.7 U		H: 02 02 05.2		
	SOD iP	23	41 25.2		45.3 N, 80.1 E, 33 km (R)		
	KEV eP	23	41 21		Kazakh-Sinkiang border		
	e		42 46	20	OUL eP	07	35 00
	H: 23 31 45				H: 07 25 29.9		
	32.5 N, 106.5 E, 39 km				55.8 N, 164.2 E, 46 km		
	Szechwan, China				Komandorsky Islands		
20	NUR iP	00	17 52.5 U	0.8	13.0	20	NUR iP
	KJN eP	00	17 28				ePKKP
	iPcP		18 18.2				32 53
	OUL iP	00	17 20.5			KJN iP	PKP
	iPcP		18 14.3				15 22 05.6 U
	SOD eP	00	17 05				34.2
	epP		36				ePKKP
	iPcP		18 05.2				32 40
	H: 00 07 46.0						i
	58.1 N, 156.5 W, 127 km						45.6
	Alaska Peninsula						ipPKKP
20	KJN eP	01	22 23			OUL iP	PKP
	OUL eP	01	22 22				15 22 04.4 U
	e		23 00				epPKP
	H: 01 11 49.8						33
	38.4 N, 139.2 E, 39 km						iPKKP
	Honshu, Japan						32 42.8
							i
							48.5
						SOD iP	PKP
							15 22 05.3 U
							iPKKP
							32 45.7
							H: 15 03 36.2
							25.2 S, 69.0 W, 109 km
							Northern Chile
20	NUR iP	02	09 00.6	1.2	42.8	20	KJN eP
	i		05.2				17 28 11
	iPP		10 14.3				i
	i		12 20.3				15.3
	cont.					OUL iP	17 28 21.2 U
							H: 17 19 35
							37.1 N, 95.7 E, 33 km (R)
							Tsinghai, China



August				August				
			T	A		T	A	
20	NUR	ePP	20 18 16			OUL	iP 07 44 58.1 U	
		eSKKS	25 18				eS 54 51	
		ePS	28 08			SOD	iP 07 45 00.7 U	
		eSS	34 32			KEV	iP 07 45 04.3 U 0.9 104.2	
	KEV	eSKS	20 23 48				i 14.5	
		ePS	27 22				i 20.8	
		ePPS	28 24				ePP 48 04	
		e	32 16				ePPP 49 48	
		eSS	33 52				eS 55 00	
	H: 19 58 22						eScS 20	
	8.8 S, 108.3 W, 33 km (R)						e 57 12	
	Northern Easter Island						eSS 08 00 00	
							e 01 00	
							eLQ 08 05.7	
21	NUR	eP	02 30 03	1.0	18.0	H: 07 33 00.6		
	KJN	iP	02 29 41.1 D			3.6 N, 95.8 E, 33 km (R)		
	SOD	eP	02 29 39			Northern Sumatra		
	KEV	eP	02 29 36					
21	KJN	iP	02 45 04.2 U	0.8	10.0	21	NUR	iP 13 44 22.0 0.8 50.8
		i	07.5				eS 46 15	
	OUL	eP	02 45 07				i 19.4	
	SOD	eP	02 45 04				i 47 35.5	
	KEV	eP	02 45 00			KJN	iP 13 44 53.3 D	
21	KJN	eP	06 37 58				iS 47 10.0	
	OUL	eP	06 37 59				i 48 38.5	
	KEV	eP	06 37 43			OUL	iP 13 44 48.4 D	
	H: 06 27 05						eS 47 01	
	31.4 N, 131.6 E, 51 km					SOD	iP 13 45 09.0	
	Kyushu, Japan						eS 47 40	
21	KJN	iP	07 17 38.0			KEV	eP 13 45 32	
	OUL	eP	07 17 45				i 36.1	
21	NUR	iP	07 44 54.3 U	1.2	111.6		eS 48 13	
		i	45 08.5				i 50 05.2	
		ePP	47 52			H: 13 41 48.8		
		ePPP	49 40			57.0 N, 4.9 E, 33 km (R)		
		eS	54 40			North Sea		
		eSS	08 00 04			22	OUL	iP 06 35 03.1
		e	02 40				H: 06 25 18	
		eSSS	03 24				52.6 N, 159.3 E, 33 km (R)	
		eLR	08 09.0				Kamchatka	
	KJN	iP	07 44 52.2 U	0.9	214.3	22	NUR	iP 11 45 58.8 U 0.9 15.1
		i	45 06.6				KJN	eP 11 45 46
		eS	54 37				OUL	eP 11 45 48
		eScS	57			22	NUR	eP 13 17 52
		ePS	55 29				iPKP	21 05.8 D 1.3 136.4
			cont.					cont.

August		T		A		August		T		A	
	ePP	23	02								
	eSKKKS	30	00								
	ePSKS	32	54								
	eSP	33	20								
	e	35	16								
	e	37	44								
	eSS	40	04								
	eSSS	44	16								
	eLQ	13	54.0								
KJN	iPKP	13	21 12.9 U	1.0	70.9						
	ePP	23	24								
	iPKS	24	37.7								
	eSKKP	34	14								
OUL	iPKP	13	21 12.8 D								
	i		16.4								
	ePP	23	32								
	iSKP	25	01.0								
	eSKKP	33	56								
	e	34	11								
SOD	ePKP	13	21 06								
	i		18.8								
	ePP	23	38								
KEV	eP	13	18 32								
	ePKP	21	20	1.5	46.7						
	i		38.2								
	ePP	23	59								
	ePKS	25	00								
	e	27	00								
	e	30	48								
	eSKSP	34	04								
	ePPS	36	00								
	e	39	00								
	eSS	41	48								
	eSSS	46	52								
	eLQ	13	57.0								
	H: 13 02 06.8 60.8 S, 24.6 W, 33 km (R) South Sandwich Islands										
22	NUR	iPKP	13 36 03.8 D	0.9	40.3						
	KJN	iPKP	13 36 10.6 U	0.7	13.7						
		i	23.0								
		iPKS	39 34.9								
	OUL	iPKP	13 36 10.9 D								
		ePP	38 28								
		iSKP	39 36.5								
	SOD	ePKP	13 36 06								
		i	16.2								
	cont.										
	KEV	ePKP	13 36 20						1.0	20.0	
		ePP	38 54								
	H: 13 17 02.5 60.9 S, 23.2 W, 19 km South Sandwich Islands										
	22	NUR	iP	14 17 19.0	0.8	8.6					
		KJN	eP	14 17 07							
	22	OUL	iP	14 36 11.7							
			iS	37.5							
	22	NUR	ePKP	23 13 36							
		KJN	ePKP	23 13 29							
	H: 22 55 15 20.5 S, 178.4 W, 533 km Fiji Islands										
	22	NUR	eP	23 20 19	0.9	13.4					
			e	22 15							
			eS	26 50							
			eSS	29 52							
		KJN	iP	23 19 52.8 U	1.0	21.8					
			i	20 00.0							
			ePP	21 32							
		OUL	iP	23 19 54.0							
			i	20 00.0							
		SOD	iP	23 19 42.3							
			i	44.5							
		KEV	iP	23 19 33.6							
			e	20 48							
			eS	25 20							
			eSS	28 10							
	H: 23 12 18.9 56.2 N, 112.6 E, 22 km Lake Baikal										
	23	NUR	eP	19 01 06							
		KJN	iP	19 00 46.2							
		OUL	eP	19 00 46							
		SOD	eP	19 00 36							
	H: 18 49 48 35.6 N, 141.2 E, 6 km Honshu, Japan										
	23	NUR	eP	20 48 56							
		KJN	eP	20 48 40							
	23	NUR	eP	23 36 40							
		KJN	eP	23 37 04							



August						August			
				T	A				
						T	A		
	SOD	eP	17 26 07						
		epP	49						
	KEV	eP	17 25 59	1.1	16.7				
		epP	26 43						
	H: 17 14 00.1								
	18.5 N, 145.5 E, 197 km								
	Mariana Islands								
24	NUR	eSg	23 14 15						
	KJN	eP	23 12 42						
		e	45						
		eS	13 13						
		i	17.5						
		i	21.9						
	OUL	iP	23 12 27.3						
		i	29.9						
		iS	52.1						
		i	53.9						
	SOD	eP	23 12 54						
		iS	13 35.4						
	KEV	eSg	23 14 36						
24	NUR	eP	23 26 02						
	KJN	iP	23 26 23.2 U	0.9	12.5				
	OUL	eP	23 26 29						
	SOD	iP	23 26 42.3 U						
	KEV	eP	23 26 53						
	H: 23 14 45.0								
	10.5 S, 27.3 E, 21 km								
	Republic of the Congo								
24	KJN	eP	23 48 30						
		e	50 01						
	SOD	eP	23 47 54						
		e	48 14						
25	OUL	iPKP	10 04 43.9						
		i	57.2						
	H: 09 45 43								
	57.3 S, 25.6 W, 33 km (R)								
	South Sandwich Islands								
25	NUR	eP	12 32 50						
	KJN	iP	12 33 07.7 U	0.9	23.2				
		ePP	34 14						
	OUL	iP	12 33 18.4 U						
	SOD	iP	12 33 34.3						
		e	34 22						
	H: 12 26 48.7								
	35.4 N, 49.1 E, 43 km								
	Western Iran								
25	NUR	iP	15 14 09.2			1.1	19.5		
	KJN	iP	15 13 43.7 D			1.0	13.1		
	OUL	iP	15 13 38.6						
	SOD	eP	15 13 23						
		ePcP	14 11						
	H: 15 03 25.1								
	51.7 N, 177.2 E, 37 km								
	Rat Islands								
25	NUR	eP	17 28 38						
	KJN	eP	17 28 13						
	OUL	iP	17 28 07.3						
	SOD	eP	17 27 51						
	KEV	eP	17 27 34						
	H: 17 17 55.8								
	54.0 N, 164.8 W, 43 km								
	Unimak Island								
25	NUR	iP	23 07 23.0			0.8	11.5		
	KJN	iP	23 07 09.0 D			1.0	17.4		
	OUL	iP	23 07 10.5						
	SOD	eP	23 07 05						
	KEV	iP	23 06 59.3						
	H: 22 54 18.3								
	12.2 N, 140.8 E, 33 km (R)								
	West Caroline Islands								
25	NUR	iP	23 11 52.8 U			1.2	51.3		
	KJN	iP	23 11 39.5 U			1.2	55.0		
		i	49.4						
	OUL	iP	23 11 40.5 U						
		e	48						
	SOD	iP	23 11 34.3						
	KEV	iP	23 11 29.3			1.0	30.0		
		i	39.4						
	H: 22 58 48.3								
	12.2 N, 140.9 E, 33 km (R)								
	West Caroline Islands								
26	NUR	iP	00 49 47.0 D			1.3	562.7		
		i	50 10.6						
		ePP	53 32						
		e	54 36						
		ePPP	55 24						
		eSKS	01 00 20						
		e	01 40						
		ePPS	02 02						
		e	03 36						
		eSS	06 04						
		ePKKP	56						
		e	07 50						
		eSSS	10 32						

cont.

August

August

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KJN iP 00 49 33.2 D  
 ePP 52 45  
 eS 01 00 12  
 ePKKP 07 12  
 OUL iP 00 49 34.5 D  
 i 45.1  
 ePKKP 01 07 13  
 SOD iP 00 49 28.6 D  
 i 50 04.6  
 KEV iP 00 49 23.3 D 1.1 416.5  
 e 50 24  
 e 52 12  
 ePP 48  
 ePPP 54 40  
 e 57 22  
 eS 59 56  
 ePS 01 00 54  
 ePPS 01 34  
 eSS 05 28  
 eSSS 09 10  
 eLR 01 18.1

H: 00 36 42.1  
 12.2 N, 140.7 E, 33 km (R)  
 West Caroline Islands

26 NUR iP 01 03 05.7  
 KJN iP 01 02 52.0 0.7 6.2  
 OUL iP 01 02 53.1  
 i 03 02.5  
 SOD eP 01 02 47  
 KEV eP 01 02 41  
 H: 00 50 00.6  
 12.2 N, 140.8 E, 33 km (R)  
 West Caroline Islands

26 NUR iP 01 06 25.0 0.7 28.4  
 i 35.1  
 KJN iP 01 06 11.0 1.2 79.1  
 i 12.1  
 OUL iP 01 06 12.8 U  
 i 22.3  
 SOD iP 01 06 06.7  
 i 17.3  
 KEV iP 01 06 02.0 1.2 68.4  
 H: 00 53 17.4  
 12.2 N, 140.7 E, 14 km  
 West Caroline Islands

26 NUR eP 01 54 54 0.7 6.5  
 KJN eP 01 54 40  
 OUL iP 01 54 42.3 U  
 SOD eP 01 54 36

cont.

KEV eP 01 54 31  
 H: 01 41 49.8  
 12.2 N, 140.7 E, 33 km (R)  
 West Caroline Islands

26 NUR iP 02 20 14.6 D 0.8 24.5  
 i 18.6  
 i 22.8  
 KJN iP 02 20 00.8 D  
 i 05.2  
 i 09.3  
 OUL iP 02 20 01.6 D  
 i 10.6  
 SOD iP 02 19 56.2 D  
 i 20 05.1  
 KEV iP 02 19 51.0 D 1.2 39.9  
 i 58.8

H: 02 07 08.9  
 12.2 N, 140.8 E, 30 km  
 West Caroline Islands

26 NUR eP 02 22 55  
 KJN eP 02 23 25  
 OUL eP 02 22 30  
 e 51

26 NUR iP 02 42 55.5  
 KJN eP 02 42 42 0.9 8.0  
 OUL iP 02 42 43.1 U  
 SOD eP 02 42 37  
 KEV eP 02 42 33 0.8 14.4  
 H: 02 29 51  
 12.1 N, 140.6 E, 33 km (R)  
 West Caroline Islands

26 NUR eP 03 43 04  
 KJN iP 03 42 50.0 D 1.4 45.9  
 i 43 00.4  
 OUL iP 03 42 51.1  
 i 43 01.1  
 SOD eP 03 42 45  
 KEV eP 03 42 39  
 H: 03 29 58.5  
 12.2 N, 140.7 E, 30 km  
 West Caroline Islands

26 NUR eP 05 38 22 0.7 5.2  
 KJN iP 05 38 08.2 D 1.2 24.1  
 OUL iP 05 38 09.5  
 SOD eP 05 38 04  
 KEV eP 05 37 58  
 H: 05 25 17.4  
 12.1 N, 140.7 E, 33 km (R)  
 West Caroline Islands



August				T	A	August				T	A	
26	NUR	eP	05 59 55			KEV	ePKP	18 39 05				
	KJN	iP	05 59 41.7	1.2	18.9	H:	18 19 58.2					
		i	50.0				15.4 S, 172.7 W, 37 km					
	OUL	eP	05 59 43				Samoa Islands					
	KEV	eP	05 59 29	1.0	16.0	26	NUR	iP	21 55 30.3	1.0	22.0	
	H:	05 46 50.1					i	45.9				
		12.1 N, 140.6 E, 33 km (R)					KJN	eP	21 55 06			
		West Caroline Islands					OUL	iP	21 54 58.8			
26	OUL	eP	08 07 51				i	55 13.2				
	H:	07 55 00					SOD	iP	21 54 43.1			
		12.1 N, 140.6 E, 33 km (R)					i	57.0				
		West Caroline Islands					KEV	iP	21 54 26.7	1.0	12.0	
26	NUR	eP	10 38 19			H:	21 44 59.2					
	KJN	iP	10 38 07.9	1.0	13.1		55.3 N, 160.6 W, 65 km					
	OUL	iP	10 38 06.2				Alaska Peninsula					
	H:	10 25 13.5				26	NUR	eP	23 35 03			
		12.2 N, 140.7 E, 33 km (R)					KJN	eP	23 34 49	0.8	5.4	
		West Caroline Islands					OUL	eP	23 34 51			
26	OUL	eP	11 22 42				SOD	eP	23 34 45			
	H:	11 09 48					KEV	eP	23 34 40			
		12.1 N, 140.6 E, 19 km					H:	23 21 58				
		West Caroline Islands						12.3 N, 140.5 E, 33 km				
26	NUR	eP	11 24 28					West Caroline Islands				
	KJN	eP	11 24 14			27	KJN	eP	00 55 28			
	OUL	eP	11 24 15				SOD	eP	00 55 21			
		i	25.4			27	NUR	eP	02 08 01			
	H:	11 11 23					KJN	eP	02 07 57			
		12.2 N, 140.5 E, 33 km (R)					epP	08 44				
		West Caroline Islands					OUL	eP	02 08 02			
26	NUR	eP	14 23 05				SOD	eP	02 08 01			
	H:	14 17 57					H:	01 55 16				
		37.3 N, 30.8 E, 33 km (R)						5.7 S, 106.6 E, 175 km				
		Turkey						Java				
26	OUL	iP	16 08 21.2			27	NUR	iP	02 28 47.7	0.9	16.8	
		iS	47.4				KJN	iP	02 28 23.0	0.7	5.5	
26	NUR	ePKP	18 39 12				OUL	iP	02 28 17.2 D			
		i	25.5				SOD	iP	02 28 02.1			
		ePKS	42 48				KEV	eP	02 27 45			
	KJN	ePKP	18 39 05				H:	02 17 57.2				
		i	16.1					52.4 N, 168.7 W, 33 km (R)				
		ePKS	42 37					Fox Islands				
	OUL	ePKP	18 39 04			27	NUR	iP	04 56 57.8 D	0.7	14.2	
		i	15.1				KJN	iP	04 56 57.8 U	0.7	8.2	
		cont.					OUL	iP	04 57 07.1 D			
								cont.				

August				August			
		T	A		T	A	
SOD	iP	04 57 13.2	D				
KEV	iP	04 57 22.3		0.8		8.6	
H: 04 49 59.7							
36.3 N, 71.1 E, 225 km							
Afghanistan-USSR border							
27	NUR	eP	07 16 55				
	KJN	eP	07 16 42				
	OUL	eP	07 16 42				
	KEV	eP	07 16 32				
H: 07 03 51							
12.0 N, 140.7 E, 33 km (R)							
West Caroline Islands							
27	KJN	eP	11 21 53				
	OUL	eP	11 21 58				
	SOD	eP	11 22 01				
	KEV	eP	11 22 04				
H: 11 11 57							
23.1 N, 94.2 E, 61 km							
Burma-India border							
27	KJN	eP	13 07 12				
	OUL	eP	13 07 03				
H: 12 56 37							
50.3 N, 129.9 W, 33 km (R)							
Vancouver Island							
27	NUR	eP	13 21 32	0.9		15.2	
	ipP	22 16.0					
	ePP	25 08					
	epPP	48					
	eSKS	31 40					
	esS	33 20					
	eSS	38 06					
	esSS	39 20					
	KJN	eP	13 21 31				
	i	33.4					
	i	53.2					
	ipP	22 14.9					
	iPP	25 02.8					
	OUL	iP	13 21 26.8				
	i	48.9					
	ipP	22 09.1					
	ePP	24 54					
	SOD	iP	13 21 22.0				
	epP	22 06					
	ePP	24 41					
	e	50					
cont.							
	KEV	eP	13 21 18				
	e	39					
	epP	22 00					
	ePP	24 44					
	epPP	25 24					
	e	29 00					
	eS	31 36					
	e	32 32					
	esS	33 00					
	e	36					
	eSS	38 32					
H: 13 08 55.9							
12.3 N, 86.2 W, 183 km							
Nicaragua							
27	NUR	eP	13 30 18				
27	NUR	iP	13 45 49.0	U	1.3	37.5	
	KJN	iP	13 45 29.9		1.2	41.3	
	i	34.3					
	OUL	iP	13 45 21.3	U			
	SOD	eP	13 45 07				
	KEV	iP	13 44 52.0		1.1	19.0	
H: 13 34 52.6							
50.2 N, 130.0 W, 24 km							
Vancouver Island							
27	NUR	eP	14 30 13				
	e	19					
	KJN	eP	14 30 04				
	i	10.6					
	e	32 42					
	OUL	eP	14 30 08				
	SOD	iP	14 30 03.8				
	KEV	eP	14 30 01				
H: 14 16 56.1							
0.5 N, 126.1 E, 62 km							
Molucca Passage							
27	NUR	eP	16 47 30		1.1	14.3	
	KJN	iP	16 47 16.0		1.2	20.6	
	OUL	eP	16 47 19				
	i	24.0					
	SOD	iP	16 47 18.2				
	KEV	eP	16 47 12				
H: 16 35 14							
12.5 N, 123.5 E, 127 km							
Luzon, P.I.							





August

August

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SOD eP 18 43 05  
**Moscow:**  
 H: 18 34 44  
 30.3 N, 69.9 E  
 Pakistan

28 NUR iP 21 13 43.2 D 0.9 15.1  
 KJN iP 21 13 37.2 D 0.7 12.3  
 OUL iP 21 13 45.6 D  
 SOD iP 21 13 48.7  
 KEV iP 21 13 55.0 0.8 11.5  
 H: 21 05 51.7  
 36.5 N, 80.1 E, 33 km (R)  
 Southern Sinkiang, China

28 NUR eP 21 22 29  
 KJN iP 21 22 59.2  
 OUL eP 21 22 59  
 SOD iP 21 23 14.7  
 KEV iP 21 23 29.4 0.8 10.1  
 i 37.2  
 H: 21 15 35.7  
 31.5 N, 6.1 W, 33 km (R)  
 Morocco

29 NUR eP 03 09 33

29 NUR iP 03 55 32.3 D 0.7 7.7  
 KJN iP 03 55 13.0 D 0.5 7.4  
 OUL eP 03 55 14  
 SOD iP 03 55 04.7  
 H: 03 44 50.4  
 33.7 N, 137.1 E, 349 km  
 Honshu, Japan

29 KJN eP 04 00 21

29 NUR eP 07 41 23  
 ePP 45 29  
 e 48 48  
 eSKS 51 56  
 ePS 54 12  
 KJN iP 07 41 15.4 0.9 11.6  
 i 21.3  
 e 43 28  
 e 44 24  
 ePP 45 26  
 OUL eP 07 41 17  
 i 25.0  
 ePP 45 27  
 cont.

SOD iP 07 41 15.0  
 KEV eP 07 41 14  
 ePPP 47 24  
 e 50 00  
 eSKS 51 50  
 ePS 54 10  
 e 55 52  
 eSS 59 24

**Moscow:**  
 H: 07 27 37  
 6.8 S, 123.5 E  
 Indonesia

29 NUR eP 08 42 32  
 KJN iP 08 42 31.0  
 OUL eP 08 42 37  
 SOD iP 08 42 39.2  
 KEV eP 08 42 43

29 NUR ePP 11 08 40  
 eSKS 14 52  
 ePS 17 52  
 eSS 23 44  
 KJN e(P) 11 04 11  
 ePP 08 27  
 OUL eP 11 04 08  
 KEV e 11 04 23  
 ePP 08 16  
 eSKS 14 36  
 ePS 17 10  
 eSS 22 44  
 H: 10 50 09.4  
 3.3 S, 141.5 E, 41 km  
 New Guinea

29 NUR iP 15 01 43.7 0.9 13.4

29 KJN eP 19 11 02

29 NUR eP 20 25 22 0.7 9.0  
 KJN eP 20 24 57 0.8 4.6  
 OUL iP 20 24 51.1 D

29 NUR eP 21 54 05  
 e 26  
 KJN eP 21 53 54  
 e 55 12

**Moscow:**  
 H: 21 46 39  
 41.1 N, 79.0 E  
 China

August						August			
				T	A				
						T			A
29	NUR	eP	22 04 01						
	KJN	eP	22 04 41						
30	KJN	iP	01 25 37.2 D						
	SOD	eP	01 25 27						
30	NUR	iP	02 17 19.8 U	0.7	12.9				
		epP	40						
	KJN	iP	02 16 59.5 U	0.7	21.2				
		ipP	17 20.0						
	OUL	iP	02 16 59.4 U						
		epP	17 21						
	SOD	iP	02 16 49.6 U						
	KEV	iP	02 16 41.0 U	0.8	10.1				
		ipP	17 00.7						
	H: 02 06 11.1								
	35.6 N, 140.0 E, 72 km								
	Honshu, Japan								
30	NUR	eP	04 13 08						
	KJN	eP	04 12 57						
	OUL	eP	04 13 03						
	SOD	eP	04 13 00						
30	NUR	iP	04 31 43.0	2.4	2722.1				
		e	32 26						
		ePP	33 48						
		ePPP	35 00						
		e	35 52						
		eS	39 22						
		eSS	43 12						
	KJN	iP	04 31 31.0						
		ePP	33 35						
		ePPP	34 45						
		eS	39 08						
		ePPS	29						
	OUL	iP	04 31 36.2						
	SOD	iP	04 31 35.3						
	KEV	iP	04 31 35.0	1.2	285.0				
		i	38.1						
		ePcP	32 40						
		ePP	33 41						
		e	34 24						
		e	35 56						
		eS	39 15						
		e	40 12						
		eSS	42 52						
	H: 04 22 01.5								
	31.7 N, 100.3 E, 3 km								
	Szechwan, China								
30	NUR	iP	04 42 58.3						
	KJN	iP	04 42 46.5	1.1	13.5				
	SOD	iP	04 42 25.5						
	KEV	eP	04 42 18						
30	NUR	iP	05 07 20.4						
	KJN	iP	05 07 08.2	0.6	8.9				
	OUL	iP	05 07 13.7 U						
	SOD	iP	05 07 12.1						
	KEV	eP	05 07 12						
	H: 04 57 42.6								
	31.7 N, 100.3 E, 33 km (R)								
	Szechwan, China								
30	KJN	iP	05 33 40.0	0.7	3.4				
		i	50.7						
	OUL	iP	05 33 40.4 U						
30	KJN	iP	05 41 35.8 U	0.8	5.4				
	OUL	eP	05 41 37						
	SOD	eP	05 41 38						
30	NUR	iP	08 20 46.2 U	0.8	24.5				
	KJN	iP	08 20 25.5 U	0.8	35.4				
		i	43.0						
		ePP	22 53						
	OUL	iP	08 20 25.6 U						
		i	33.0						
		ePP	22 51						
	SOD	iP	08 20 15.7 U						
	KEV	iP	08 20 06.0	0.7	9.0				
		ePP	22 29						
	H: 08 09 40.8								
	36.2 N, 140.0 E, 77 km								
	Honshu, Japan								
30	NUR	eP	09 59 37						
	SOD	eP	09 59 35						
30	NUR	eP	11 18 27	0.8	17.3				
		i	34.2						
		ePP	20 32						
		eS	26 16						
		eSS	29 48						
	KJN	iP	11 18 14.4	1.0	43.6				
		i	16.3						
		i	32.9						
		ePP	20 22						
		e	21 19						

cont.

August

August

August					T	A	August					T	A			
OUL	iP	11	18	20.0				eScS	54	02						
	i			21.3				eSS	57	12						
	i		21	25.4				KJN	iP	13	43	45.9	1.2	123.8		
SOD	iP	11	18	18.3					iPcP			44	26.3			
	i			29.1					e			46	48			
	e		21	23					eS			52	11			
KEV	iP	11	18	18.3	1.0	20.0			eScS			53	35			
	i			24.7				OUL	iP	13	43	43.2				
	e		19	59					ePcP			44	25			
	ePP		20	24				SOD	iP	13	43	29.3				
	eS		26	00					i			40.0				
	eSS		29	36					i			49.8				
	e		30	34				KEV	iP	13	43	19.4	U	0.9	52.1	
H: 11 08 49.6									i			45.4				
31.6 N, 100.3 E, 33 km (R)									iPcP			44	11.6			
Szechwan, China									ePPP			47	04			
30	KJN	ePKP	12	02	19				eS			51	14			
H: 11 44 02.8									ePS			40				
18.0 S, 178.4 W, 570 km									eScS			53	04			
Fiji Islands									eSS			55	32			
30	NUR	iPKP	12	15	10.2	1.0	260.0	H: 13 33 26.4								
	i			22.3				45.4 N, 151.5 E, 33 km (R)								
	i			37.0				Kurile Islands								
	ipPKP			50.4				30	NUR	iP	13	45	31.7			
	eSKP	18	30						KJN	iP	13	45	07.9			
KJN	iPKP	12	14	59.0	1.1	24.3			iPcP			48.7				
	i		15	06.1				OUL	iP	13	45	06.3				
	e			42					iPcP			47.1				
OUL	iPKP	12	14	58.5				30	KJN	eP	15	53	59			
	i		15	01.4					eS			56	21			
	i			06.1					e			58	01			
	eSKP	18	26					OUL	iP	15	53	50.0				
SOD	ePKP	12	14	52					eS			56	01			
	i		15	07.0				SOD	eP	15	53	18				
KEV	ePKP	12	14	55	1.0	16.0		KEV	eP	15	52	48				
	e		15	55				30	KJN	eP	18	29	06			
	eSKP	18	12						SOD	eP	18	29	24			
H: 11 55 50.5									KEV	eP	18	29	39			
30.4 S, 178.6 W, 161 km									H: 18 21 47							
Kermadec Islands									31.5 N, 6.0 W, 43 km							
30	NUR	iP	13	44	09.4	U	0.9	97.4	Morocco							
	i			27.0					30	NUR	iP	19	09	04.2	1.0	14.0
	iPcP			42.0						KJN	eP	19	09	27		
	ePPP		48	12					30	NUR	eP	20	14	15		
	eS		52	44					cont.							
	ePS		53	24					cont.							

August				T	A	August				T	A	
	KJN	iP	20 13 51.9	0.9	7.1	SOD	eP	18 40 12				
	OUL	eP	20 13 50			H: 18 28 31						
	SOD	eP	20 13 35			25.7 N, 141.5 E, 80 km						
	KEV	eP	20 13 24			Volcano Islands						
	H: 20 03 31.7											
	45.3 N, 151.4 E, 33 km (R)					31	NUR	ePKP	19 12 03			
	Kurile Islands							i	11.8			
								i	34.2			
30	NUR	eP	20 43 44					iSKP	15 19.3			
	KJN	eP	20 43 24					iPKS	42.0			
	OUL	eP	20 43 25					e	17 24			
	SOD	eP	20 43 15			KJN	iPKP	19 12 04.2		0.8	13.1	
	H: 20 32 31.7							i	26.3			
	33.9 N, 136.6 E, 36 km							iSKP	15 06.0			
	Honshu, Japan							iPKS	28.8			
								e	16 36			
30	NUR	iP	23 30 06.5 U					i	17 23.0			
	KJN	iP	23 29 44.0	0.5	16.2	OUL	ePKP	19 12 00				
	OUL	iP	23 29 43.1					i	03.6			
	SOD	iP	23 29 32.2 U					i	25.2			
	KEV	iP	23 29 21.2 U	0.8	10.1			iSKP	15 04.5			
								e	17 20			
31	OUL	ePKP	11 06 08					eSKKP	24 41			
	H: 10 47 30.4						SOD	e	19 11 52 U			
	18.7 S, 169.1 E, 234 km						KEV	iPKP	19 11 55.3	0.9	20.2	
	New Hebrides Islands							i	12 17.1			
								ePP	13 44			
31	NUR	eP	13 50 36	1.0	14.0			eSKP	14 48			
	KJN	iP	13 50 23.1 D	0.8	11.5			eSP	23 20			
	OUL	eP	13 50 27					e	26 40			
	SOD	iP	13 50 22.2					H: 18 53 25.2				
	KEV	eP	13 50 20					17.5 S, 175.2 W, 277 km				
	H: 13 38 50.7							Tonga Islands				
	18.3 N, 121.3 E, 99 km											
	Luzon, P.I.					31	KJN	eP	22 44 37			
31	OUL	eP	15 28 47									
	SOD	iP	15 28 40.0									
	KEV	iP	15 28 33.3	0.9	16.8							
	H: 15 17 14.6											
	18.7 N, 145.3 E, 591 km											
	Mariana Islands											
31	KJN	eP	16 52 03	0.9	5.4							
31	NUR	eP	18 40 33			April 22, 1968						
	KJN	eP	18 40 17			M. T. Porkka						
	OUL	eP	18 40 27			Aili Huovila						

cont.



September

September

September				T	A	September				T	A			
2	KJN	eP	08 08 32					ePKKP	37 32					
		e	09 10					eSS	41 00					
	OUL	iP	08 08 42.3 U					KJN	iP	21 21 48.3 D	1.1	43.2		
	SOD	eP	08 08 57					i	24 57.6					
	KEV	eP	08 09 11	0.7	16.8			i	25 08.8					
	H: 08 02 09							iPP	26 08.2					
	36.8 N, 55.1 E, 33 km (R)							i	40.1					
	Iran							ePPP	28 24					
								ePKKP	37 11					
3	NUR	eP	00 29 27					OUL	iP	21 21 40.0				
	KJN	eP	00 29 12	0.5	4.4			i	24 52.0					
	SOD	eP	00 29 09					iPP	25 59.1					
	KEV	eP	00 29 04					ePKKP	37 38					
	H: 00 18 03.1							SOD	iP	21 21 42.3				
	24.4 N, 121.9 E, 54 km							ePP	25 55					
	Taiwan							ePKKP	37 31					
								KEV	eP	21 21 41	1.1	23.8		
3	KJN	iP	04 56 37.2 U	0.8	17.7			ePKP	25 37					
	OUL	eP	04 56 38					ePP	26 10					
	KEV	eP	04 56 23					e	27 00					
	H: 04 45 57.0							ePPP	28 16					
	31.0 N, 129.8 E, 165 km							eSKS	32 06					
	Kyushu, Japan							ePS	35 08					
								ePKKP	37 39					
								eSS	40 20					
								H: 21 07 30.8						
								10.6 S, 79.8 W, 38 km						
								Off coast of Peru						
								3	NUR	iP	21 55 35.0			
									KJN	iP	21 55 38.7 U	0.8	16.9	
									i	42.3				
									OUL	iP	21 55 38.6			
									SOD	eP	21 55 29			
									KEV	eP	21 55 20			
									4	NUR	iPKP	01 00 47.0	0.8	17.3
										KJN	ePKP	01 00 35		
										OUL	ePKP	01 00 36		
									H: 00 41 07.1					
									31.1 S, 177.2 W, 33 (R)					
									Kermadec Islands					
									4	NUR	iPKP	01 01 50.8	0.9	18.5
										KJN	ePKP	01 01 38		
										OUL	ePKP	01 01 40		
									4	NUR	eS	03 39 36		
										KJN	iP	03 30 37.0	0.8	5.4
										SOD	eP	03 30 42		
										e	52			
										KEV	eP	03 30 55		
									H: 03 18 52.2					
									1.3 S, 23.9 W, 33 km (R)					
									Central Mid-Atlantic Ridge					
3	NUR	eP	21 21 44											
		e	25 07											
		iPP	26 09.4											
		ePPP	28 20											
		e	31 06											
		eSKS	32 24											
		e	34 32											
		ePS	35 24											
									cont.					

September						September					
				T	A					T	A
4	NUR	iPKP	04 11 11.4	1.0	312.0	KJN	eP	08 36 48			
		i	13.7				H:	08 31 01.1			
		ipPKP	12 12.9					36.7 N, 29.3 E, 24 km			
		i	13 45.3					Turkey			
		iSKP	14 29.3			5	NUR	eP	17 44 11		
		e	15 10				SOD	eP	17 45 32		
		eSKKS	20 48			5	KJN	eP	19 19 06		
		ePSKS	25 40				SOD	eP	19 18 35		
		eSS	33 04			6	NUR	iP	00 02 24.0	0.7	7.7
	KJN	iPKP	04 11 01.8 U	1.0	70.9		KEV	eP	00 02 29		
		iSKP	14 15.9			6	NUR	eP	01 53 25		
		i	15 13.9				i	34.5 D	0.7	14.2	
	OUL	iPKP	04 11 00.7 U				KJN	eP	01 53 21		
		iSKP	14 19.2				i	28.9 U	1.0	17.4	
		i	36.6				OUL	eP	01 53 29		
	SOD	ePKP	04 10 56				i	36.4 U			
		i	11 08.3				SOD	iP	01 53 27.7		
		iSKP	14 15.0				i	37.3 U			
		i	27.7				KEV	eP	01 53 31		
	KEV	iPKP	04 10 53.9				i	41.4 D	0.9	23.5	
		e	12 04				H:	01 43 31.8			
		iSKP	14 09.3					24.1 N, 91.7 E, 18 km			
		i	19.6					India-East Pakistan border			
		e	42			6	NUR	iP	03 29 52.7 U	0.9	28.6
		e	20 16				KJN	iP	03 29 28.0 U	1.0	24.0
		eSS	31 44				OUL	iP	03 29 26.5 U		
		esSS	33 14				SOD	iP	03 29 12.6		
	H:	03 51 58.9					KEV	eP	03 28 59		
		31.4 S, 179.4 W, 231 km					H:	03 19 12			
		Kermadec Islands						46.7 N, 154.0 E, 33 km (R)			
								Kurile Islands			
4	KJN	eP	16 32 40			6	NUR	iP	03 50 46.0	0.8	13.0
	OUL	iP	16 32 47.4			6	NUR	eP	05 04 49		
4	NUR	eP	17 59 48				i	52.4 U	0.9	33.6	
	KJN	iP	17 59 27.3 U	0.7	8.2		eS	09 16			
	OUL	eP	17 59 28				KJN	iP	05 05 24.6	0.9	13.4
	H:	17 48 30.6					ePcP	08 33			
		35.5 N, 140.9 E, 23 km					eS	10 11			
		Honshu, Japan					SOD	iP	05 05 51.3		
4	NUR	eP	19 06 32				KEV	eP	05 06 14	0.9	26.9
4	NUR	iP	19 39 58.8	0.7	11.6		eS	11 38			
	KJN	iP	19 39 32.3 D	0.7	12.3		H:	04 59 24.7			
	OUL	iP	19 39 28.8 D					35.0 N, 23.0 E, 33 km (R)			
	SOD	iP	19 39 13.2					Crete			
	KEV	iP	19 38 57.3	0.6	6.3	6	NUR	iP	07 41 01.5	1.0	66.0
	H:	19 30 13.7					i	12.9			
		54.8 N, 159.1 E, 182 km					e	43 22			
		Kamchatka						cont.			
5	NUR	eP	08 36 17					cont.			
		eS	40 40								

September

				T	A
	eS	49 44			
KJN	iP	07 40 57.9	0.9	53.6	
	i	41 08.6			
SOD	iP	07 41 06.3			
	i	18.0			
KEV	iP	07 41 11.1	1.0	54.0	
	i	21.2			
H: 07 30 10.8					
14.7 N, 93.6 E, 33 km (R)					
Andaman Islands					
6	NUR	eP 08 12 27			
	KJN	iP 08 12 05.8 D	1.0	17.4	
	SOD	eP 08 11 54			
H: 08 01 31.5					
38.6 N, 141.0 E, 66 km					
Honshu, Japan					
6	NUR	iP 09 36 23.4 U	0.8	23.0	
	KJN	iP 09 35 59.1 U			
	SOD	eP 09 35 34			
		ePcP 36 16			
H: 09 25 34.2					
52.4 N, 168.6 W, 42 km					
Fox Islands					
6	NUR	iP 17 35 30.0 U	0.8	109.4	
		iPcP 36 03.4			
	KJN	iP 17 35 05.2 U	0.7	52.7	
	SOD	iP 17 34 44.0 U			
		i 54.8			
H: 17 24 40.1					
52.6 N, 168.5 W, 33 km (R)					
Fox Islands					
6	NUR	iPKP 21 07 32.0			
	KJN	ePKP 21 07 24			
H: 20 48 43.8					
15.0 S, 167.5 E, 142 km					
New Hebrides Islands					
7	NUR	eP 00 36 55			
	KJN	eP 00 37 35			
	SOD	eP 00 38 05			
H: 00 32 22					
40.6 N, 19.4 E, 33 km (R)					
Albania					
7	NUR	eP 02 12 22			
H: 01 59 58.1					
31.3 N, 114.4 W, 11 km					
Gulf of California					

September

				T	A
7	KJN	iP 07 25 07.4 U	1.5	339.7	
		i 52.0			
		ipP 26 10.1			
		i 18.0			
		isP 47.7			
		iSKS 35 08.2			
		iS 35.4			
		eSP 36 34			
		esS 37 10			
	OUL	iP 07 25 10.1			
	SOD	iP 07 25 07.6			
		i 15.0			
		epP 26 16			
	KEV	eP 07 25 04			
		epP 26 06			
		e(sP) 27 30			
		epPP 29 36			
		ePS 37 16			
		e 38 30			
		eSS 41 44			
H: 07 12 36.6					
2.7 N, 124.3 E, 274 km					
Celebes Sea					
7	OUL	ePKP 08 19 03			
H: 07 59 22.6					
30.4 S, 177.5 W, 36 km					
Kermadec Islands					
7	NUR	iPKP 09 53 50.0 U	1.0	74.0	
		i 58.1			
		i 54 05.0			
		e 55 27			
	KJN	iPKP 09 53 39.8			
		i 52.9			
	OUL	iPKP 09 53 39.1			
		i 50.9			
	SOD	ePKP 09 53 37			
		i 48.0			
	KEV	e 09 53 43			
H: 09 34 12.1					
30.5 S, 177.6 W, 27 km					
Kermadec Islands					
7	NUR	iPKP 11 27 02.0 U	0.9	226.8	
		i 04.5			
		i 11.8			
		ipPKP 28 49.4			
		esPKP 29 30			
		esPP 32 48			
		eSKKS 36 16			
		ePSKS 40 40			
		e 42 52			
cont.					



September

September

				T	A					T	A	
KJN	iPKP	11 26	52.9 U	1.2	99.8	8	NUR	eP	02 04 59			
	epPKP	28 38					KJN	eP	02 05 39			
	eSKP	30 07					OUL	eP	02 05 48			
	i	33.8										
OUL	iPKP	11 26	51.7			8	NUR	iP	02 09 20.3 U	1.1	38.1	
SOD	iPKP	11 26	46.0					e	44			
	i	48.2						i	10 09.8			
KEV	iPKP	11 26	50.8					eS	13 00			
	i	55.1		0.7	14.2		KJN	iP	02 10 00.0 U	0.7	21.9	
	ePP	29 42						i	08.3			
	esPP	32 04						i	11 10.6			
	ePSP	42 15					OUL	iP	02 10 08.8			
H:	11 08	13.2					SOD	eP	02 10 28			
	31.3 S,	179.6 E,	430 km				KEV	eP	02 10 50			
	Kermadec Islands							e	11 25			
7	NUR	eP	13 56 57				H:	02 04 49.1				
		i	57 03.4					40.7 N, 20.2 E,	30 km			
	KJN	iP	13 56 43.4	0.7	5.5			Greece-Albania border				
	OUL	iP	13 56 35.7				8	NUR	iP	02 59 33.4	1.2	22.8
	SOD	eP	13 56 24									
7	NUR	eP	14 14 08				8	KJN	eP	03 49 52		
	KJN	eP	14 14 51	1.0	7.6			OUL	eP	03 49 56		
	OUL	eP	14 14 54					SOD	eP	03 49 54		
	SOD	eP	14 15 13					H:	03 36 13.4			
	H:	14 09	02.8						6.9 S, 129.4 E,	107 km		
		37.9 N,	15.3 E,	53 km					Banda Sea			
	Sicily						8	NUR	eP	04 14 36		
7	NUR	iP	14 20 11.1				8	NUR	iP	05 30 44.5		
	KJN	iP	14 19 55.2					KJN	iP	05 30 41.4 D		
	OUL	iP	14 19 56.4 U					OUL	iP	05 30 52.2		
	SOD	iP	14 19 48.0					SOD	eP	05 30 54		
	H:	14 07	50					H:	05 23 41			
		21.5 N,	144.0 E,	126 km					38.4 N, 70.5 E,	14 km		
	Mariana Islands								Afghanistan-USSR border			
7	OUL	eP	16 04 52				8	NUR	ePS	09 29 04		
	H:	15 54	37					H:	08 59 59.3			
		53.0 N,	166.9 W,	43 km					23.4 S, 70.7 W,	33 km		
	Fox Islands								Northern Chile			
8	NUR	iP	00 33 09.0 U	0.7	23.2		8	NUR	iP	09 56 29.2	1.1	16.7
		e	51					KJN	iP	09 57 05.7	1.0	12.0
	KJN	iP	00 33 08.0 U	0.8	13.8			OUL	iP	09 57 16.4		
		e	48					H:	09 51 43.1			
	OUL	iP	00 33 18.1 U						39.2 N, 21.7 E,	45 km		
	SOD	iP	00 33 23.5 D						Greece			
		e	34 12									
	KEV	eP	00 33 31				8	NUR	eP	12 51 26		
	H:	00 26	02.5						e	52 08		
		36.9 N,	71.5 E,	111 km								
	Afghanistan-USSR border											

cont.

September

September

				T	A					T	A
	KJN	iP	12 50 51.1 U	0.8	10.0		OUL	iP	22 50 33.0		
		e	51 35				SOD	iP	22 50 26.2		
	OUL	eP	12 50 46					i	27.2		
		i	51 22.6				KEV	iP	22 50 22.0 U	1.0	120.0
	SOD	eP	12 50 28					i	31.1		
		ePP	51 14					i	48.1		
	H: 12 44 45							ePP	53 32		
	78.2 N, 126.3 E, 33 km (R)							ePPP	55 37		
	East of Severnaya Zemlya							eSKS	23 00 48		
8	NUR	eP	14 50 25					ePS	02 00		
	OUL	eP	14 49 56					ePPS	32		
	H: 14 43 34.4							eSS	06 32		
	70.1 N, 62.1 W, 33 km (R)							e	08 00		
	Baffin Bay							eSSS	10 12		
	H: 22 37 39.5							H: 22 37 39.5			
	12.2 N, 140.8 E, 27 km							12.2 N, 140.8 E, 27 km			
	West Caroline Islands							West Caroline Islands			
8	NUR	iP	22 04 07.7			9	NUR	eP	01 48 36		
	KJN	iP	22 03 43.0				SOD	eP	01 48 02		
	OUL	iP	22 03 38.2								
	SOD	eP	22 03 22								
	H: 21 53 46.8										
	52.3 N, 179.6 W, 251 km										
	Andreanof Islands										
8	NUR	iP	22 14 49.0	0.9	10.1	9	KJN	eP	05 45 47		
		i	15 04.0				SOD	iP	05 45 40.9		
	KJN	iP	22 14 31.3				H: 05 33 05.3				
		i	36.0				15.8 N, 144.8 E, 42 km				
		i	49.0				Mariana Islands				
	OUL	eP	22 14 36			9	NUR	iP	06 28 08.0	1.0	12.0
	H: 22 01 43.8							i	15.0		
	12.2 N, 140.7 E, 33 km (R)						KJN	iP	06 27 54.7	1.4	43.2
	West Caroline Islands							i	28 02.0		
							OUL	eP	06 27 56		
								i	28 02.8		
							H: 06 15 01.6				
							12.3 N, 140.7 E, 25 km				
							West Caroline Islands				
8	NUR	iP	22 50 45.0 U	1.3	170.5	9	NUR	iP	08 50 16.0		
		i	54.4				OUL	iP	08 50 00.1		
		i	51 08.2					ipP	59.4		
		e	53 36				SOD	iP	08 49 52.6		
		e	57				H: 08 37 50.4				
		ePP	54 28				18.0 N, 145.5 E, 241 km				
		ePPP	56 30				Mariana Islands				
		e	57 36			9	NUR	eP	09 03 06		
	eSKS	23 01 20					OUL	iP	09 03 29.4		
	eS	44					SOD	eP	09 03 43		
	ePS	03 00									
	e	06 48									
	eSS	07 52									
	eSSS	11 20									
KJN	iP	22 50 30.4	1.2	192.6		9	NUR	ePKP	10 17 39		
	i	39.7					KJN	ePKP	10 17 33		
	e	51 42					OUL	iPKP	10 17 36.4		
	e	52 29					H: 09 58 34				
	ePP	54 06					21.1 S, 176.7 W, 118 km				
	cont.						Fiji Islands				





September

September

		T		A				T		A	
	OUL	ePKP	10 33 40				eS	47 07			
	H:		10 14 30.4				H:	23 42 22			
			21.3 S, 173.7 E, 34 km					71.2 N, 6.1 W, 33 km (R)			
			New Hebrides Islands					Jan Mayen Island			
11	NUR	iP	13 01 48.3	0.6	7.5	12	NUR	iP	00 36 11.0		
		i	53.3 U	1.8	114.4			i	28.2		
		ePP	03 33					i	38 08.2		
		eS	08 28				KJN	eP	00 36 32	1.0	18.5
		eSS	11 54					i	45.8		
	KJN	iP	13 01 31.1 D	0.7	10.3		OUL	eP	00 36 35		
		i	35.8 U	1.2	79.1		SOD	eP	00 36 46		
		i	41.4				KEV	eS	00 48 20		
		ePP	03 14					ePS	49 32		
		e	07 08				H:	00 23 27.7			
	OUL	iP	13 01 40.1					22.8 S, 10.5 W, 33 km (R)			
		ePP	03 22					South Atlantic Ridge			
	SOD	iP	13 01 36.0								
	H:		12 53 34.6				12	NUR	iP	02 54 18.2	0.7 19.4
			45.0 N, 99.3 E, 33 km (R)					i	19.4		
			Mongolia					KJN	iP	02 53 54.3 D	1.1 18.9
								iPcP	54 34.7		
11	NUR	iPKP	15 57 22.0	0.8	10.1		OUL	iP	02 53 52.5		
	KJN	ePKP	15 57 14	0.7	4.8		SOD	iP	02 53 40.4		
	OUL	iPKP	15 57 12.5				KEV	iP	02 53 29.2		
	SOD	ePKP	15 57 07				H:	02 43 33.1			
	H:		15 37 40.3					44.6 N, 149.8 E, 25 km			
			37.8 S, 177.3 E, 62 km					Kurile Islands			
			North Island, N.Z.								
11	KJN	eP	19 06 52				12	NUR	iP	11 22 47.8 U	1.2 28.5
	H:		18 56 43					KJN	iP	11 23 09.8	1.0 10.9
			35.4 N, 135.9 E, 352 km					SOD	eP	11 23 22	
			Southern Honshu, Japan					KEV	eP	11 23 36	
								H:	11 11 31.3		
									5.0 S, 11.5 W, 33 km (R)		
									Ascension Island		
11	NUR	eP	20 06 07								
	KJN	eP	20 06 32								
	OUL	iP	20 06 41.2								
	H:		19 58 23								
			20.3 N, 38.7 E, 33 km (R)								
			Red Sea								
11	NUR	iP	23 46 08.0	1.2	22.8		12	NUR	eP	14 51 30	
		eS	49 02					i	31.2		
		e	51					eS	55 24		
	KJN	eP	23 45 45					KJN	iP	14 52 06.1	0.9 16.1
		eS	48 19					i	07.2		
	OUL	eP	23 45 28					i	31.3		
		eS	47 49					OUL	eP	14 52 11	
	SOD	eP	23 45 12					SOD	eP	14 52 35	
		eS	47 24					H:	14 46 41		
	KEV	eP	23 45 01						39.3 N, 21.2 E, 14 km		
									Greece		
			cont.								
							12	NUR	eP	21 18 00	
								KJN	eP	21 18 48	



September

September

		T	A			T	A
	KJN eP	14 38 16					
	epP	40					
	H:	14 32 31.0					
		36.1 N, 21.9 E, 102 km					
		Southern Greece					
14	NUR iP	14 57 05.7 D	0.9	20.2			
	i	18.2					
	KJN eP	14 57 17					
	SOD eP	14 57 41					
	H:	14 49 41.9					
		28.4 N, 57.1 E, 33 km (R)					
		Southern Iran					
14	NUR iPKP	15 54 05.9 D	1.1	30.9			
	KJN iPKP	15 53 58.2 U	1.0	19.6			
	SOD ePKP	15 53 55					
	H:	15 35 17.3					
		15.4 S, 167.5 E, 142 km					
		New Hebrides Islands					
14	NUR eP	19 03 36	0.7	9.0			
	KJN eP	19 04 14					
	e	45					
	SOD eP	19 04 40					
	KEV eP	19 05 10					
	BCIS:						
	H:	18 58 24					
		36.3 N, 21.5 E					
		Greece					
15	NUR iP	00 39 50.8 U	0.8	38.9			
	i	57.0					
	i	40 10.0					
	e	41 48					
	ePP	42 24					
	eS	48 56					
	e	49 20					
	eScS	50 08					
	eSS	53 24					
	KJN iP	00 39 30.9 U	0.8	70.0			
	i	44.6					
	i	40 17.1					
	ePP	42 01					
	SOD iP	00 39 20.7 U					
	KEV iP	00 39 11.0 U	0.9	21.8			
	i	26.9					
	i	36.0					
	eS	47 44					
	ePS	48 06					
	eScS	49 18					
	H:	00 28 39.8					
		35.6 N, 140.4 E, 59 km					
		Honshu, Japan					
15	KJN iP	06 42 52.2					
	H:	06 30 00					
		6.3 S, 103.8 E, 65 km					
		Southwest of Sumatra					
15	NUR iP	08 15 11.6 D	0.8	60.5			
	KJN iP	08 14 54.1 D	0.6	41.1			
	OUL iP	08 14 56.0 D					
	SOD iP	08 14 46.3 D					
	KEV iP	08 14 39.1 D	0.6	40.0			
	H:	08 04 04.4					
		28.3 N, 139.6 E, 438 km					
		Bonin Islands					
15	NUR iP	10 42 18.0 U	1.3	218.2			
	i	23.2					
	i	38.2					
	ePP	44 16					
	eS	49 56					
	eScS	52 04					
	eSS	53 52					
	KJN iP	10 42 11.1 U	1.3	236.5			
	i	16.1					
	i	39.8					
	ePcP	43 09					
	e	45 07					
	eS	49 48					
	SOD iP	10 42 19.2 U					
	i	24.6					
	e	43 13					
	KEV iP	10 42 22.4	1.3	133.0			
	i	27.5					
	i	39.2					
	ePcP	43 16					
	eS	50 08					
	eSS	53 52					
	H:	10 32 48.7					
		27.4 N, 91.8 E, 57 km					
		Bhutan					
15	KJN eP	17 53 21					
	SOD eP	17 53 23					
	H:	17 40 16.7					
		0.1 S, 124.3 E, 77 km					
		Molucca Sea					
15	NUR eP	22 10 19					
	e	41					
	KJN iP	22 11 04.4	1.0	6.5			
15	NUR ePKP	23 59 11					
	H:	23 40 06.0					
		28.4 S, 178.2 W, 244 km					
		Kermadec Islands					

September							September								
					T	A					T	A			
16	NUR	iP	00 08	51.3	U	0.9	26.9	KJN	iPKP	15 30	08.7	D	0.8	10.0	
		i	09	04.2				SOD	ePKP	15 30	03				
	KJN	iP	00 08	37.2	U	0.9	49.1	KEV	iPKP	15 30	00.9	D	0.7	10.3	
		i		45.4				H:	15 11	15.5					
	OUL	iP	00 08	40.5	U				15.7	S, 167.3	E, 65	km			
	SOD	iP	00 08	35.8	U				New Hebrides Islands						
	KEV	iP	00 08	31.5	D	0.8	20.2								
	H: 23 57 30.1							16	NUR	ePKP	19 31	01			
	24.1 N, 120.7 E, 50 km									H:	19 12	13.6			
	Taiwan										10.1	S, 161.2	E, 31	km	
									Solomon Islands						
16	NUR	eP	03 54	29				16	NUR	iPKP	23 50	23.8	0.7	34.8	
		eSKS	04 05	06						i		24.7			
		ePS	07	22				KJN	iPKP	23 50	12.1	1.1	18.9		
	KJN	eP	03 54	19				SOD	ePKP	23 50	05				
		e		39				KEV	ePKP	23 50	03				
	SOD	eP	03 54	20				H:	23 31	27.3					
	KEV	eSKS	04 04	52					31.5	S, 179.8	E, 377	km			
		ePS	06	56					Kermadec Islands						
		eSS	12	20				17	NUR	eP	01 21	10	1.0	18.0	
	H: 03 40 55.3								KJN	iP	01 20	52.9	D	0.8	7.7
	2.0 S, 128.9 E, 50 km									i		21 07.5			
	Ceram Sea								SOD	eP	01 20	44			
16	NUR	iP	04 10	19.7	U	0.6	18.8	KEV	eP	01 20	36				
		i		35.4				H:	01 09	08.4					
		e		52					27.5	N, 142.4	E, 33	km	(R)		
	KJN	iP	04 10	06.5	U	0.5	29.4		Bonin Islands						
		i		39.0				17	KJN	ePKP	01 40	42			
	OUL	iP	04 10	14.0					H:	01 21	52				
		i		11 00.2					18.6	S, 175.0	W, 200	km	(R)		
	SOD	iP	04 10	14.0	U				Tonga Islands						
	KEV	iP	04 10	16.8	U	0.8	27.4	17	NUR	iP	08 09	11.0			
		i		11 08.0						e		30			
	H: 04 03 58.0									eS		19 52			
	50.0 N, 77.8 E, 0 km								KJN	iP	08 09	06.2	0.7	13.0	
	Eastern Kazakh SSR									i		19.3	0.9	15.2	
16	NUR	iP	07 41	22.8		0.7	9.0		ePP		12 30				
16	NUR	eP	08 42	43				OUL	iP	08 08	58.2				
		i		58.0					i		09 11.5				
		eS	51	34				SOD	eP	08 08	55				
	KJN	eP	08 42	18					e		09 07				
		i		39.2	1.0	27.3		KEV	iP	08 08	50.3	0.7	31.0		
	SOD	eP	08 41	57					i		09 02.2				
		e	42	19					i		19.0				
	KEV	eP	08 41	41				H:	07 56	22.7					
	H: 08 31 58.4									17.2	N, 94.1	W, 45	km		
	52.0 N, 176.4 W, 65 km									Chiapas, Mexico					
	Andreanof Islands							17	NUR	eP	09 58	47			
16	NUR	iPKP	15 30	15.5	0.8	10.1			cont.						
		i		22.3					cont.						
	cont.								cont.						





September

September

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T A

SOD iP 03 39 31.7 U  
i 42.1  
H: 03 28 57.4  
37.3 N, 141.7 E, 53 km  
Honshu, Japan

eSKP 08 01  
KJN iPKP 13 04 36.2  
I 48.0  
i 05 05.7  
e 07 41  
eSKP 08 14

19 NUR eP 05 30 45  
KJN eP 05 30 20

SOD iPKP 13 04 41.8  
e 52  
e 05 18  
KEV ePKP 13 04 46 1.0 16.0  
i 59.4

19 NUR iP 11 06 47.8 U  
ipP 07 10.9  
isP 26.5  
i 08 56.0  
ePP 09 09  
ePPP 10 48  
e 11 44  
eS 15 20  
e 28  
e 41  
e 16 00  
eScS 25  
eSS 19 36  
e 23 52  
eP'P' 35 21  
eLR 11 27.1

H: 12 45 35.3  
57.8 S, 23.4 W, 33 km (R)  
South Sandwich Islands

19 NUR eP 17 16 42 1.2 16.7

19 NUR iP 19 14 12.1 0.7 44.1  
ipP 33.2

KJN iP 11 06 24.7 U  
i 54.3  
ePPP 10 14  
eS 14 43  
ePS 55  
e 15 19  
esS 25  
eScS 53  
e 17 02  
eP'P' 35 30

e 15 41  
e 17 12  
eS 24 30  
KJN iP 19 14 09.3 0.9 52.7  
ipP 30.0  
e 17 43

OUL iP 11 06 23.5 U

OUL iP 19 14 13.0  
SOD iP 19 14 16.3  
e 32

SOD iP 11 06 12.0  
iS 14 22.9

KEV iP 19 14 20.4 0.8 15.8  
i 40.2  
i 48.8  
e 25 04

KEV iP 11 06 00.0 U 1.0 380.0

H: 19 01 47.5  
1.6 S, 100.5 E, 83 km  
Southern Sumatra

19 NUR eP 23 17 47

20 NUR eP 00 30 36 1.0 13.7  
KJN eP 00 31 10  
SOD eP 00 31 42

e 20

ePPP 09 32

e 10 38

eS 14 00

e 53

eScS 15 40

eSS 18 00

eP'P' 35 24

H: 10 56 08.6

43.0 N, 145.2 E, 84 km

Hokkaido, Japan

19 NUR iPKP 13 04 29.6 0.8 19.7

i 40.8

i 05 03.2

cont.

KEV eP 00 43 09

H: 00 32 44.3

36.0 N, 139.9 E, 94 km

Honshu, Japan

September

September

				T	A					T	A	
20	KJN	iP	01 42 43.1	0.8	10.0	SOD	ePKP	10 50 46				
		e	43 04				i	48.1				
	OUL	iP	01 42 44.1			H:	10 30 53.4					
	SOD	iP	01 42 40.6				49.8 S, 163.4 E, 19 km					
	KEV	eP	01 42 36	0.7	11.6		Auckland Islands					
	H:	01 31 40.3										
		24.5 N, 122.2 E, 104 km										
		Taiwan										
20	NUR	eP	06 13 07			20	NUR	iPKP 10 56 22.0	0.8	39.5		
	KJN	eP	06 13 57				iSKP	59 37.0				
	H:	06 09 11					KJN	iPKP 10 56 14.3 U	0.8	35.4		
		44.3 N, 17.7 E, 11 km					iSKP	59 24.0				
		Yugoslavia					iPKS	37.2				
							OUL	iPKP 10 56 11.8				
							iSKP	59 22.0				
							SOD	iPKP 10 56 09.7				
							eSKP	59 17				
20	NUR	iPKP	09 59 08.0	1.6	63.7	H:	10 37 20.3					
		i	15.2				20.8 S, 169.8 E, 129 km					
		i	23.0				New Hebrides Islands					
		iPKP <sup>2</sup>	38.9									
		i	10 01 18.6			20	KJN	ePKP 11 32 26	1.3	28.2		
		e	28				e	32				
		iPP	03 16.0				OUL	ePKP 11 32 24				
		i	23.9				H:	11 12 36				
		ePPP	06 48				49.8 S, 163.5 E, 33 km (R)					
		e	10 04				Auckland Islands					
		e	52									
		eSKSP	13 16			20	NUR	eP 12 14 29				
		e	16 16									
		eSS	22 36			20	NUR	ePKP <sup>2</sup> 12 27 24				
		e	24 00				KJN	ePKP 12 26 49				
		eSSS	27 52				i	54.1				
	KJN	ePKP	09 59 03				OUL	ePKP 12 26 49				
		i	09.7				i	53.5				
		e	10 02 24				SOD	ePKP 12 26 48				
		ePP	58				e	53				
		e	04 08				H:	12 06 52.7				
		e	18				49.8 S, 163.8 E, 33 km (R)					
	OUL	ePKP	09 59 03				Auckland Islands					
	SOD	iPKP	09 59 07.1									
		i	17.1									
	H:	09 39 15.2				20	KJN	ePKP 14 24 19				
		49.8 S, 163.4 E, 30 km					H:	14 04 19				
		Auckland Islands					49.7 S, 164.0 E, 33 km (R)					
							Auckland Islands					
20	NUR	ePKP	10 50 43			20	KJN	ePKP 15 18 08	1.7	54.6		
		i	53.0				OUL	ePKP 15 18 13				
		i	51 10.3				i	25.1				
		ePP	54 52				SOD	ePKP 15 18 13				
	KJN	ePKP	10 50 41	1.6	73.2		H:	14 58 15				
		i	47.4				49.7 S, 163.6 E, 33 km (R)					
		ePP	54 31				Auckland Islands					
	OUL	ePKP	10 50 40			20	NUR	iPKP 18 57 58.7 D	0.9	114.6		
		i	47.0				i	58 12.6				
			cont.					cont.				

September						September							
				T	A					T	A		
	KJN	iPKP	18 57	52.1	1.2	17.2	KJN	iP	05 10	05.9 U	0.5	31.6	
	OUL	ePKP	18 57	54				i		38.1			
	SOD	ePKP	18 57	47				i	11	08.0			
	H: 18 38 25						OUL	iP	05 10	13.2			
	28.6 S, 175.9 W, 39 km							i	11	00.0			
	Kermadec Islands						SOD	iP	05 10	13.4 U			
20	KJN	ePKP	20 36	46				i		16.5			
	OUL	ePKP	20 36	51				e		51			
	H: 20 16 57.5						KEV	iP	05 10	16.2 U	0.6	13.8	
	49.7 S, 163.9 E, 33 km (R)							e		47			
	Auckland Islands						H: 05 03 57.9						
20	KJN	eP	21 48	12	0.6	48.0	50.0 N, 77.6 E, 0 km						
		e		36			Eastern Kazakh SSR						
	SOD	iP	21 48	11.3			22	NUR	iP	08 19	14.4	1.5	102.7
	H: 21 40 23.3							e		21 28			
	48.1 N, 102.8 E, 33 km (R)							ePPP		23 28			
	Mongolia							eS		28 14			
21	KJN	ePKP	00 11	23				eSSS		36 12			
	OUL	ePKP	00 11	23			KJN	iP	08 19	35.2 U	1.2	75.7	
	H: 23 51 22.3						OUL	iP	08 19	35.0			
	59.2 S, 148.6 E, 33 km (R)						SOD	iP	08 19	45.5			
	West of Macquarie Island						KEV	iP	08 19	55.2	0.8	31.7	
21	NUR	eP	16 37	40				i		56.5			
		i		40 24.7				i	20	19.4			
21	KJN	iP	18 05	30.1				ePP	22	54			
	OUL	eP	18 05	30				eS	29	44			
	SOD	eP	18 05	29				ePS	30	22			
	KEV	eP	18 05	21				eSS	34	42			
	H: 08 08 04.3						H: 08 08 04.3						
	0.7 S, 20.1 W, 33 km (R)						0.7 S, 20.1 W, 33 km (R)						
	Central Mid-Atlantic Ridge						Central Mid-Atlantic Ridge						
21	KJN	eP	18 44	54			22	NUR	iP	10 28	40.8 U	0.7	59.3
	OUL	eP	18 45	04				i		29 45.0			
	H: 18 36 26							i		30 09.1			
	17.9 N, 40.0 E, 16 km							ePPP		32 40			
	Red Sea							eS		37 24			
21	OUL	ePKP	20 59	45				eScS		38 32			
	H: 20 40 32.1							eSS		42 12			
	57.7 S, 23.6 W, 33 km (R)							eLR	10	49.0			
	South Sandwich Islands						KJN	iP	10 28	18.2 U	1.3	78.1	
22	KJN	eP	00 08	13				i		37.0			
		i		09 23.6				eS		36 41			
22	NUR	iP	05 10	18.8 U	0.5	23.8	OUL	iP	10 28	15.0			
		e		52			SOD	iP	10 28	03.1			
		i		11 07.1			KEV	iP	10 27	50.2 U	1.0	22.0	
	cont.							i		53.4			
								i		28 18.4			
								i		29 04.3			
								ePPP		31 12			
							cont.						

September

September

				T	A					T	A		
	eS		35 50			23	KJN	ePKP	03 41 05				
	eScS		37 40					iSKP	43 39.5				
	eSS		40 00				H:	03 22 59.7					
	H:	10 17	59.9					17.7 S, 178.7 W,	567 km				
		44.5 N, 149.4 E,	60 km					Fiji Islands					
		Kurile Islands											
22	OUL	eP	11 29 40			23	NUR	iPKP	07 14 52.4				
	SOD	eP	11 29 27					i	15 01.0				
	H:	11 19	21.4					iSKP	17 41.0				
		44.3 N, 149.4 E,	50 km					i	18 03.0				
		Kurile Islands						iPKS	35.0				
22	NUR	iP	12 45 35.2	0.7	15.5		KJN	ePKP	07 14 43				
		e	49					i	53.8	0.8	38.5		
	KJN	eP	12 45 10	0.6	8.2			iSKP	17 28.2				
		i	12.1					i	44.2				
	OUL	iP	12 45 08.4					iPKS	18 24.0				
		e	22				OUL	ePKP	07 14 42				
	SOD	eP	12 44 55					i	47.8				
		i	56.2					i	52.6				
	KEV	eP	12 44 45				SOD	ePKP	07 14 47				
		e	45 52					iSKP	17 27.9				
	H:	12 34	51.6					ePKP	07 14 47				
		44.4 N, 149.4 E,	51 km					iSKP	17 21.6				
		Kurile Islands						i	23.3				
22	NUR	eP	20 18 28				KEV	iPKP	07 14 45.3	0.8	11.5		
	KJN	eP	20 18 20	0.8	10.0			e	16 37				
	OUL	iP	20 18 24.3					iSKP	17 13.7				
	SOD	eP	20 18 24					ePKS	18 22				
	H:	20 09	13					e	19 15				
		31.9 N, 94.6 E,	33 km (R)					H:	06 56 43.6				
		Tibet						21.8 S, 179.7 W,	595 km				
								Fiji Islands					
22	KEV	iP	21 48 57.3	0.8	14.4								
22	SOD	eP	22 15 15										
	H:	22 05	08										
		44.2 N, 149.5 E,	33 km (R)										
		Kurile Islands											
22	NUR	eP	22 18 58				23	NUR	ePKP	07 21 54			
	KJN	iP	22 18 56.4 U	0.7	14.4				e	22 22			
		ePP	20 27						ePP	25 56			
	OUL	iP	22 19 05.9						eSKSP	36 20			
	SOD	iP	22 19 12.2						ePPS	39 05			
	KEV	iP	22 19 21.0	0.8	11.5				e	40 50			
	H:	22 11	48						eSS	45 20			
		36.2 N, 71.4 E,	127 km						KJN	iPKP	07 21 59.0 U		
		Afghanistan-USSR border								i	22 10.2		
									OUL	iPKP	07 22 00.4		
									SOD	iPKP	07 21 59.1		
									KEV	iPKP	07 21 56.7 U	1.2	142.5
										i	22 13.2		
										i	50.9		
										e	23 47		
									H:	07 02 03.3			
									49.7 S, 164.0 E,	15 km			
									Auckland Islands				

September

September

				T	A					T	A
23	KJN	ePKP	07 57 58			24	NUR	eP	10 14 13		
		iSKP	08 00 33.7				KJN	eP	10 13 52		
	OUL	ePKP	07 57 57			24	NUR	eP	20 29 49		
		eSKP	08 00 33				KJN	eP	20 29 26	0.8	6.2
	SOD	eSKP	08 00 26				i		39.9		
	H: 07 39 47.8						OUL	eP	20 29 27		
	22.1 S, 179.6 W, 600 km						i		32.3		
	South of Fiji Islands						SOD	eP	20 29 23		
23	NUR	eP	20 49 51				KEV	eP	20 29 10		
	KJN	iP	20 49 41.0	0.5	7.4		H: 20 17 49				
	SOD	eP	20 49 40				27.6 N, 141.5 E, 33 km (R)				
	H: 20 37 10						Bonin Islands				
	9.9 N, 126.9 E, 62 km					24	NUR	iP	22 15 50.0	1.0	15.7
	Mindanao, P.I.						KJN	iP	22 16 29.0	1.0	17.4
23	NUR	iPKP	23 02 13.0 D	0.8	39.5		OUL	eP	22 16 36		
		epPKP	03 44				SOD	eP	22 17 06		
	KJN	ePKP	23 02 01				H: 22 11 17				
		i	08.1	0.8	11.5		40.8 N, 19.7 E, 16 km				
		e	05 09				Albania				
	OUL	ePKP	23 02 02			25	KJN	ePKP	04 57 48		
	SOD	ePKP	23 01 57				H: 04 38 26.2				
	KEV	ePKP	23 01 45				15.1 S, 173.4 W, 63 km (R)				
		e	03 43				Tonga Islands				
	H: 22 43 16.6					25	NUR	iP	07 13 29.2	1.0	19.6
	29.6 S, 179.3 W, 347 km						e		53		
	Kermadec Islands						KJN	iP	07 13 19.1 D	0.5	19.1
24	NUR	iP	01 10 20.2				i		31.2		
	KJN	iP	01 10 09.4	1.0	15.3		e		14 15		
	OUL	iP	01 10 11.8				OUL	iP	07 13 21.9		
	SOD	iP	01 10 08.1 U				SOD	eP	07 13 18		
	H: 00 57 09.7						KEV	iP	07 13 15.3	0.8	10.1
	4.6 N, 128.6 E, 33 km (R)						H: 07 00 45				
	North of Halmahera						9.8 N, 126.6 E, 31 km				
24	NUR	iPKP	01 29 43.6 U	0.9	86.9		Mindanao, P.I.				
		e	30 27			25	NUR	eP	08 21 33		
	KJN	ePKP	01 29 31				KJN	eP	08 21 40	0.9	9.8
		i	39.3				OUL	iP	08 21 34.8 D		
	OUL	iPKP	01 29 32.8				SOD	eP	08 21 35		
	H: 01 10 15						KEV	eP	08 21 33		
	29.6 S, 177.8 W, 85 km						H: 08 10 06.7				
	Kermadec Islands						17.7 N, 61.5 W, 33 km				
24	NUR	eP	06 23 10				Leeward Islands				
	KJN	eP	06 23 00			25	NUR	iP	09 03 15.4	1.1	21.0
	OUL	iP	06 23 03.7				eS		12 32		
	SOD	iP	06 22 59.8 U				KJN	iP	09 03 21.8 U	1.0	14.2
	KEV	iP	06 22 57.2 U				OUL	iP	09 03 16.4		
	H: 06 10 16.2						SOD	eP	09 03 16		
	2.8 N, 128.5 E, 226 km										
	Halmahera										

cont.

September			T	A	September			T	A
	KEV	eP 09 03 16							
		H: 08 51 49.4							
		17.7 N, 61.6 W, 48 km							
		Leeward Islands							
25	NUR	iP 09 24 06.0	1.0	25.5	26	NUR	eP 04 34 01		
		e 40				KJN	iP 04 33 48.1	1.2	24.1
	KJN	iP 09 23 51.1 U	0.6	13.7			e 35 44		
		e 25 26				OUL	iP 04 33 48.8		
	OUL	iP 09 23 51.2 D					H: 04 20 56		
	SOD	iP 09 23 44.8 U					12.2 N, 140.7 E, 33 km (R)		
		e 24 04					West Caroline Islands		
	KEV	iP 09 23 38.4 U	0.9	73.9	26	NUR	iP 05 09 58.6	1.2	19.5
		H: 09 11 37.7				KJN	eP 05 10 36		
		17.0 N, 145.4 E, 252 km					i 45.2		
		Mariana Islands				OUL	eP 05 10 49		
						SOD	eP 05 11 09		
							H: 05 05 36		
25	NUR	eP 13 16 12					41.7 N, 21.2 E, 39 km		
	KJN	eP 13 16 02	0.9	10.7			Yugoslavia		
	OUL	iP 13 16 04.2			26	NUR	iP 06 57 32.0	0.7	7.6
	SOD	eP 13 16 01					iPcP 58 06.0		
	KEV	eP 13 15 58					i 16.5		
		H: 13 03 06.9				KJN	iP 06 57 09.0	0.9	19.6
		3.6 N, 126.6 E, 78 km					iPcP 51.9		
		Talaud Islands				OUL	iP 06 57 06.5		
25	NUR	iP 17 16 52.8 U	1.0	25.5			iPcP 50.7		
		i 57.2				SOD	iP 06 56 53.5		
	KJN	iP 17 16 43.2					e 57 36		
	OUL	iP 17 16 46.1 U				KEV	iP 06 56 41.2	0.9	28.6
	SOD	iP 17 16 42.7 U					i 57 24.0		
	KEV	iP 17 16 41.0 U	0.8	30.2			H: 06 47 11.6		
		i 56.2					46.9 N, 150.6 E, 136 km		
		e 17 33					Kurile Islands		
		H: 17 03 54.2			26	NUR	iPKP 11 30 06.5		
		3.2 N, 125.5 E, 116 km					ipPKP 31.2		
		Talaud Islands					eSP 41 20		
25	NUR	iP 19 55 36.9	0.7	8.8			e 48		
		e 55					eSS 47 56		
		e 56 09				KJN	ePKP 11 30 10		
	KJN	iP 19 55 12.1 D	0.6	4.8			ipPKP 35.2		
		e 36				OUL	iPKP 11 30 10.2		
		iPcP 56 09.8					ipPKP 34.0		
	OUL	iP 19 55 04.4 D				KEV	ePKP 11 30 19		
		iPcP 56 05.6					eSP 41 48		
	SOD	iP 19 54 47.8					eSS 48 28		
	KEV	eP 19 54 30					e 51 30		
		e 55 16					H: 11 11 23.7		
		H: 19 45 40.6					33.6 S, 70.5 W, 84 km		
		60.3 N, 151.4 W, 70 km					Chile-Argentina border		
		Kenai Peninsula, Alaska							

September

September

September						September						
				T	A					T	A	
26	NUR	iP	15 04 27.3	U	0.5	11.6	27	OUL	iP	00 36 01.4		
	KJN	iP	15 04 07.3	U	0.5	13.2				H: 00 25 48		
	OUL	iP	15 04 07.6	U						51.2 N, 175.5 E, 33 km (R)		
	SOD	iP	15 03 57.2							Rat Islands		
			H: 14 53 14.1									
			35.5 N, 140.9 E, 51 km				27	NUR	iP	07 30 05.0	1.1	30.3
			Honshu, Japan						e	46		
								KJN	eP	07 30 36		
									i	48.0		
26	NUR	eP	16 13 17					OUL	iP	07 30 42.7		
										H: 07 24 30		
										34.4 N, 26.6 E, 20 km		
										Crete		
26	NUR	iPKP	16 30 06.6	D	0.8	14.1	27	OUL	ePKP	09 51 18		
		i	21.3							H: 09 32 38.8		
		i	41.0							11.4 S, 166.3 E, 92 km (R)		
		ePP	31 24							Santa Cruz Islands		
		eSKS	37 16									
		eSKKS	38 12									
		eS	39 10									
		e	36				27	NUR	iP	17 11 57.1	U	1.0 58.8
		ePKKP	40 22						i	59.0		
		e	43						i	12 13.7		
		ePS	41 04					KJN	iP	17 11 43.3	U	0.9 64.3
		e	25						i	49.8		
		eSS	47 36						i	12 03.3		
KJN	ePKP	16 30 10						OUL	iP	17 11 35.0	U	
	i	13.1						SOD	iP	17 11 24.9		
	iPKKP	40 16.2						KEV	iP	17 11 12.9	0.7	23.2
OUL	iPKP	16 30 09.3										
	ePKKP	40 19					28	NUR	iP	03 01 03.0		
SOD	iPKP	16 30 08.4							i	27.0		
	ePKKP	40 16							iPP	02 34.1		
KEV	ePKP	16 30 11							i	03 04.0		
	ePP	31 32						KJN	eP	03 00 56		
	eSKKS	38 20							i	01 03.2		
	eS	39 32							i	24.1		
	ePS	41 32							ePcP	03 19		
	eSS	48 06						OUL	eP	03 01 04		
	e	51 14						SOD	eP	03 01 04		
	eSSS	52 48								H: 02 53 48.4		
		H: 16 11 23.9								42.0 N, 79.5 E, 33 km (R)		
		30.0 S, 71.5 W, 55 km (R)								Alma-Ata		
		Central Chile										
26	NUR	iPKP	17 24 27.0	U	0.7	29.0	28	NUR	iP	03 11 19.1	U	0.6 18.3
	KJN	iPKP	17 24 21.1	D	0.8	16.9		KJN	iP	03 10 54.1	U	0.7 21.2
	OUL	iPKP	17 24 21.4	U				OUL	iP	03 10 48.2	U	
		H: 17 05 55.0						SOD	iP	03 10 32.6		
		7.1 S, 155.8 E, 94 km						KEV	iP	03 10 16.4	U	0.8 14.4
		Solomon Islands								H: 03 00 30.5		
										52.2 N, 171.0 W, 48 km (R)		
										Fox Islands		



September

September

				T	A					T	A	
28	KJN	eP	03 12 53	0.6	10.3		eS	16 03 09				
	OUL	eP	03 12 56				ePS	26				
	SOD	eP	03 12 53				eScS	04 55				
	H: 03 00 00						e	07 32				
	0.0 N, 123.3 E, 154 km						e	08 40				
	Northern Celebes						KJN	iP	15 54 37.8 U	1.4	13.0	
							i	47.8				
28	NUR	eP	05 10 00				OUL	iP	15 54 29.3 U			
							SOD	iP	15 54 13.4			
							KEV	eP	15 53 55			
28	NUR	eP	05 11 41				ePP	56 04				
		iPKP	15 32.0 U	1.0	37.2		ePS	16 01 24				
		iPP	16 30.9				e	03 12				
		e	17 08				eScS	40				
		e	18 06				eSS	04 48				
		ePPP	30				e	05 40				
		eSKS	22 20				H: 15 44 55.7					
		eSKKS	23 20				59.5 N, 147.1 W, 28 km					
		ePS	25 56				Gulf of Alaska					
		e	26 09									
		e	52				28	NUR	eP	16 15 44		
		eSS	32 10									
	KJN	iP	05 11 28.2	0.9	15.2							
		ePKP	15 26				29	NUR	eSKS	05 42 36		
		e	48					ePS	44 06			
		ePP	16 07					KJN	eP	05 31 52		
		ePKKP	26 28					OUL	eP	05 31 46		
	OUL	iP	05 11 26.9					H: 05 18 49.6				
		ePKP	15 26					12.3 N, 91.2 W, 33 km (R)				
	SOD	eP	05 11 21					Central America				
		ePKP	15 25									
	KEV	ePP	05 15 50				29	NUR	iP	09 44 46.0	0.8	14.1
		e	18 48					KJN	eP	09 44 25		
		eSKS	21 52									
		eSKKS	22 48									
		ePS	25 04									
	H: 04 56 56.3						29	NUR	eP	11 18 58	1.0	19.6
	6.6 S, 153.4 E, 44 km (R)							e	23 16			
	New Britain							KJN	iP	11 18 25.0	1.0	21.8
								OUL	eP	11 18 23		
28	NUR	eP	15 40 49					SOD	eP	11 17 39		
	SOD	eP	15 40 23					i	44.2			
								KEV	e	11 22 44		
28	NUR	iP	15 55 01.6	1.2	55.8		30	NUR	eP	02 39 30	1.4	44.1
		i	19.0					e(S)	43 40			
		i	35.0					KJN	iP	02 39 30.0		
		e	56 55					OUL	eP	02 39 20		
		ePP	57 19					SOD	eP	02 39 11		
		ePPP	58 36					H: 02 34 39				
								63.6 N, 22.8 W, 33 km (R)				
								Iceland				

cont.



September

September

					T	A
30	NUR	iP	04 24	36.2	1.1	28.0
		e(S)	28 48			
	KJN	eP	04 24	33		
	OUL	eP	04 24	19		
	SOD	eP	04 24	20		
	H: 04 19 43					
	63.7 N, 22.9 W, 33 km (R)					
	Iceland					

30	NUR	iP	04 25	15.1	1.2	36.3
	KJN	eP	04 25	12	1.3	43.4
	SOD	eP	04 24	56		
	H: 04 20 24					
	63.8 N, 22.4 W, 33 km (R)					
	Iceland					

30	NUR	iP	04 34	58.0	1.0	15.7
	KJN	iP	04 34	57.4	1.3	32.6
	OUL	eP	04 34	43		
	SOD	eP	04 34	37		
	H: 04 30 08					
	63.8 N, 22.7 W, 33 km (R)					
	Iceland					

30	NUR	eP	08 08	42	0.9	16.4
		i		44.1		
		i		52.2		
				cont.		

	eS		18 04			
	eSS		22 44			
	eSSS		26 24			
KJN	iP	08 08	27.1	D	0.6	12.3
	i		37.5			
OUL	iP	08 08	27.1	D		
SOD	iP	08 08	21.9			
KEV	eP	08 08	15		0.9	25.8
	i		20.3			
	i		36.9			
	H: 07 57 19.9					
	28.9 N, 129.9 E, 32 km					
	Ryukyu Islands					

May 21, 1968

M. T. Porkka  
Aili Huovila

5 SEP 1967

October				October			
			T	A		T	A
1	KJN	iP	06 06	50.5			
	OUL	iP	06 07	01.7			
	SOD	eP	06 07	16			
2	NUR	ePKP	00 30	57	1.1	60.6	
		i	31	08.9			
		ipPKP	33	31.0			
		iSKP		48.2			
		ePKS	34	42			
		e	38	04			
	KJN	ePKP	00 30	48	1.0	104.6	
		i	31	01.3			
		iSKP	33	36.1			
		iPKS	34	36.2			
	OUL	iPKP	00 30	47.1			
		i		54.3			
		i	31	00.4			
		epPKP	33	22			
		iSKP		35.3			
	SOD	iPKP	00 30	56.4			
		iSKP	33	28.0			
	KEV	ePKP	00 30	52	1.0	38.0	
		i		53.9			
		eSKP	33	20			
		iPKS	34	16.1			
		eSKS	37	04			
		eSS	49	40			
		e	52	04			
	H: 00 12 52.8						
	21.0 S, 178.8 W, 604 km (R)						
	Fiji Islands						
2	NUR	eP	06 02	53			
2	NUR	e	10 50	32			
		e		44			
		eS	52	05			
		e		13			
	KJN	e	10 51	54			
		eS	53	45			
2	NUR	iPKP	11 47	57.8	1.1	18.6	
	KJN	iPKP	11 47	48.9	0.9	14.3	
	OUL	ePKP	11 47	53			
	H: 11 28 14.4						
	33.0 S, 178.6 W, 33 km (R)						
	South of Kermadec Islands						
2	NUR	eP	15 51	33			
	KJN	eP	15 51	15			
	H: 15 40 20.6						
	28.0 N, 127.9 E, 109 km						
	East China Sea						
2	NUR	eP	17 37	16			
	KJN	iP	17 37	14.1 D	0.7	14.4	
		i		24.5			
	OUL	iP	17 37	18.2			
	SOD	eP	17 37	19			
	H: 17 24 13.2						
	6.6 S, 105.2 E, 33 km (R)						
	Sunda Strait						
3	NUR	iPKP	16 43	44.7	0.8	13.0	
		i		51.0			
	H: 16 24 41						
	31.4 S, 179.1 W, 358 km						
	Kermadec Islands						
3	NUR	eP	18 29	06			
		e	30	16			
		ePP	32	38			
		e	34	20			
		eSKS	39	40			
		e	40	28			
		ePS	41	04			
		e		20			
		e	42	32			
		eSS	45	24			
		eSSS	49	28			
	KJN	eP	18 29	03			
		ePP	32	37			
	OUL	eP	18 29	06			
		e	32	53			
	SOD	eP	18 28	58			
		iPP	32	28.5			
	KEV	eP	18 28	48			
		e	30	05			
		ePP	32	23			
		e	35	40			
		eS	39	21			
		ePS	40	25			
		ePPS		48			
		e	42	24			
		eSS	45	14			
		eSSS	49	06			
		eLR	18	57.0			
	H: 18 16 03.2						
	10.9 N, 85.9 W, 21 km						
	Costa Rica						
3	NUR	eP	20 01	00			
	H: 19 50 25.9						
	52.6 N, 172.5 E, 21 km						
	Near Islands						
3	OUL	iP	21 30	39.1			
	H: 21 20 43						
	56.7 N, 153.4 W, 38 km						
	Kodiak Island						



October

October

			T	A
	eS	12 28		
	H: 12 00	51.2		
	37.8 N, 20.7 E, 15 km			
	Ionian Sea			
5	KJN iP	12 52 33.0		
	SOD eP	12 52 12		
	KEV eP	12 51 44		
5	OUL iP	13 23 20.9		
	Moscow:			
	H: 13 16 22			
	31.7 N, 48.8 E			
	Iran			
5	NUR eP	16 05 45		
	KJN eP	16 05 17		
	i	22.2		
	OUL iP	16 05 18.0		
	i	06 09.0		
	SOD eP	16 05 06		
	KEV eP	16 04 56		
	H: 15 55 02.8			
	45.4 N, 150.7 E, 33 km (R)			
	Kurile Islands			
5	NUR ePKP	18 46 35		
	iSKP	49 55.7		
	KJN ePKP	18 46 32	0.8	9.2
	iSKP	49 44.2		
	OUL ePKP	18 46 31		
	iSKP	49 42.5		
	SOD iSKP	18 49 35.3		
	KEV ePKP	18 46 10		
	eSKP	49 23		
	H: 18 27 38.3			
	22.0 S, 177.0 W, 214 km (R)			
	South of Fiji Islands			
5	NUR eP	19 18 43		
	KJN iP	19 18 03.0 D	0.9	39.3
	i	09.8		
	eS	20 12		
	OUL iP	19 17 46.5 U		
	SOD eP	19 17 21		
	eS	18 46		
	KEV iP	19 16 58.5 U	0.5	28.4
	eS	18 07		
	H: 19 15 11			
	74.4 N, 9.0 E, 33 km (R)			
	Greenland Sea			
6	NUR iP	01 13 15.2	1.0	20.0

			T	A
6	NUR iP	01 22 14.3	0.7	25.8
	e	23		
6	NUR iP	04 11 46.2	0.9	15.1
	i	12 15.0		
	eS	21 20		
	eSS	26 16		
	KJN iP	04 11 56.1	0.8	15.4
	i	12 09.7		
	OUL eP	04 11 58		
	SOD iP	04 12 12.1 D		
	i	15.5		
	KEV iP	04 12 21.5 D	0.9	37.8
	i	27.4		
	eS	22 36		
	eSS	27 53		
	H: 03 59 51.0			
	10.3 S, 66.4 E, 33 km (R)			
	Mid-Indian Rise			
6	KJN iP	07 04 20.9 U		
	i	24.0		
	eS	07 47		
	i	08 13.7		
	e	10 18		
	OUL iP	07 04 30.8		
	e	07 58		
	SOD iP	07 04 32.9 D		
	i	39.3		
	eS	08 14		
	KEV iP	07 04 37.3	0.6	26.9
	eS	08 15		
	e	21		
	H: 07 00 02			
	57.7 N, 65.3 E, 33 km (R)			
	Central Russia			
6	OUL iP	07 54 52.1		
	H: 07 42 04.1			
	11.8 N, 141.2 E, 49 km			
	West Caroline Islands			
6	NUR eP	17 50 36	0.7	7.7
	KJN iP	17 50 32.2	0.6	13.7
	OUL iP	17 50 18.4		
	SOD eP	17 50 16		
6	KJN e	20 52 27		
	e	55 27		
	SOD e	20 51 35		
	e(S)	53 35		
	e	54 10		
	KEV e(S)	20 52 56		

October					T	A	October					T	A
7	NUR	iPKP	01 32	46.3 U	0.8	14.4	7	NUR	iP	14 47	18.8 D	0.9	25.2
		ePS	44 08						i		32.0		
	KJN	iPKP	01 32	50.5	0.9	14.3			eS	55 52			
	OUL	iPKP	01 32	49.0 U				KJN	iP	14 46	53.2 D	1.0	53.4
		e	33 06						i	47 05.0			
	SOD	iPKP	01 32	49.6 U					i		13.8		
		i	33 08.4					OUL	iP	14 46	49.5 D		
	H: 01 14 04.1								i	47 00.0			
	29.6 S, 71.1 W, 42 km								i		22.6		
	Central Chile							SOD	iP	14 46	34.7		
7	NUR	iP	08 38	31.1 D	1.1	40.5		H: 14 36 59.5					
		i		41.9				52.2 N, 160.4 E, 33 km (R)					
		iPcP	39 07.2					Kamchatka					
		i		43.0			7	KJN	iP	21 48	45.5 D	0.7	13.7
		ePPP	42 40						i		56.7		
		eSS	51 38						i		49 06.3		
	KJN	iP	08 38	05.3	1.2	60.2		OUL	iP	21 48	41.6 D		
		iPcP		55.0					i		51.6		
		i		39 02.5					i		49 02.3		
	OUL	iP	08 38	01.8				SOD	eP	21 48	25		
	SOD	iP	08 37	48.6					e		40		
	KEV	ePcP	08 38	47			8	OUL	iP	04 06	58.4 D		
	H: 08 28 01.2								i		07 08.7		
	49.2 N, 156.3 E, 33 km (R)						8	NUR	ePS	17 28	50		
	Kurile Islands								eSS		35 08		
7	NUR	iP	09 17	22.0	1.1	19.0		KEV	eSKS	17 24	44		
		e		49					ePS		27 52		
		e		18 15					eSS		34 04		
	KJN	iP	09 16	57.1 U	1.0	14.2		H: 16 59 34.4					
	OUL	iP	09 16	54.2 U				9.5 S, 148.8 E, 17 km					
	SOD	eP	09 16	40				East New Guinea					
	H: 09 06 52.3						8	NUR	ePKP	18 26	52		
	49.2 N, 156.3 E, 33 km (R)								ePP		27 40		
	Kurile Islands								ePS		37 32		
7	NUR	iPKP	10 51	14.2					eSS		43 30		
		i		22.7	0.6	18.8		KJN	iPKP	18 26	46.2		
		iSKP	54 00.1						iPP		27 46.1		
		i		03.3				OUL	iPKP	18 26	45.7		
		ePKS		51				KEV	ePP	18 27	00		
	KJN	iPKP	10 51	13.8	0.8	12.3			ePS		36 10		
		i		21.7					eSS		42 06		
		iSKP	53 47.0					H: 18 08 18.1					
		iPKS	54 38.1					5.6 S, 154.0 E, 70 km					
	OUL	iPKP	10 51	12.8 D				Solomon Islands					
		iSKP	53 44.0				8	NUR	iP	21 19	42.8		
	SOD	iPKP	10 51	09.8					i		20 11.3		
		eSKP	53 37					KJN	iP	21 19	17.1	0.8	10.0
	KEV	iPKP	10 51	06.1 U	0.9	31.9		OUL	eP	21 19	15		
	H: 10 33 08.2												
	17.3 S, 178.9 W, 563 km												
	Fiji Islands												

cont.

October

October

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T A

SOD eP 21 19 01  
H: 21 09 13.1  
49.2 N, 156.3 E, 33 km (R)  
Kurile Islands

9 KJN ePKP 05 14 22  
OUL ePKP 05 14 22  
H: 04 55 10.3  
60.9 S, 36.1 W, 33 km (R)  
Scotia Sea

9 SOD eP 08 37 48  
KEV eP 08 37 51  
H: 08 27 05.4  
19.4 N, 46.2 W, 33 km (R)  
North Atlantic Ridge

9 NUR eP 10 50 15

9 KJN ePg 13 30 07  
eSn 35  
iSg 39.9  
OUL iPg 13 29 47.8  
iSg 30 06.0  
SOD ePg 13 30 06  
iSg 38.9  
KEV eSn 13 31 28  
iSg 49.5

9 NUR ePP 13 47 06  
ePS 56 50  
eSS 14 03 22  
eSSS 07 32  
KEV eP 13 42 04  
ePP 46 46  
ePS 55 52  
eSS 14 02 08  
H: 13 27 56.7  
5.7 S, 154.0 E, 41 km  
Solomon Islands

9 NUR iP 14 20 19.4 D 0.9 92.4  
i 30.2  
ipP 21 47.3  
i 22 09.4  
iPP 32.2  
eS 27 56  
iScS 29 26.1  
KJN iP 14 19 54.0 D 0.9 82.2  
i 20 06.8  
ipP 21 20.5  
isP 56.6  
iPP 22 07.5  
epPP 23 04  
cont.

isPP 24 08.6  
iS 27 06.7  
eScS 28 58  
OUL iP 14 19 50.7  
iPcP 20 46.2  
epP 21 16  
ePP 53  
e 24 06  
SOD iP 14 19 36.3 D  
ePP 21 36  
KEV iP 14 19 21.3 D 0.8 43.2  
i 42.5  
i 20 08.6  
ePP 21 15  
eScS 28 27  
H: 14 10 57.4  
54.1 N, 155.1 E, 393 km (R)  
Kamchatka

9 NUR eP 17 37 14  
e 54  
iPKP 39 49.6 U 0.9 208.3  
i 40 00.0  
e 42 30  
iSKP 36.1  
ePP 51  
ePKS 43 34  
epPP 45 00  
eSKS 46 00  
esPKS 47 04  
e 36  
i 48 42.0  
e 49 08  
e 50 40  
eSKKP 51 21  
eSKSP 52 00  
ePSKS 53 00  
e 54 52  
e 55 14  
e 57 44  
e 18 01 04  
e 03 32  
esSS 04 00  
e 08 21  
e 12 28  
KJN eP 17 37 13  
e 38 13  
i 40.4  
iPKP 39 37.7 U  
i 41.7  
ipPKP 42 11.8  
iSKP 22.0  
iPKS 43 23.2  
cont.

October

October

	T	A	
eSKS	45	46	
e	47	19	
i	48	08.4	
i		20.0	
e	50	57	
eSKKP	51	25	
e	52	19	
e	53	40	
esSP	55	46	
i	58	04.7	
OUL eP	17	37 15	
iPKP	39	38.5	
eSKKP	51	57	
SOD eP	17	36 55	
ePKP	39	30	
i		37.0	
i		46.2	
e	41	31	
iPP	42	02.9	
iSKP		16.0	
i	52	04.5	
KEV eP	17	36 36	
epP	38	52	
ePKP	39	23	
i		34.4	
i		45.3	
i	41	31.3	
ePP		58	
iSKP	42	09.4	
iPKS	43	08.6	
ipPP	44	35.6	
ePPP	45	08	
eSKS		46	
esPKS	46	36	
e	47	44	
e	50	20	
eSKSP	51	00	
ePSKS	52	02	
eSKKP		26	
iSPP		41.0	
e	54	06	
e	55	14	
e	56	15	
e		32	
e	58	28	
eSS		32	
e	18	00 44	
esSS	02	24	
eSSS	03	52	
e	05	04	
e	06	56	
e	10	24	

H: 17 21 49.5  
21.1 S, 179.3 W, 654 km (R)  
Fiji Islands

	T	A	
9 NUR iP	18	16 04.3 U	0.9 53.8
i		06.9	
i		18 34.2	
e		48	
KJN iP	18	15 47.8 U	1.7 259.4
i		16 23.9	
e		18 28	
OUL iP	18	15 45.5	
SOD iP	18	15 36.1 U	
KEV iP	18	15 27.3	1.2 74.1
i		52.5	
9 NUR iPKP	18	51 15.1	0.8 36.0
i		24.3	
iSKP		54 02.2	
ePKS		55	
KJN iPKP	18	51 15.2 U	0.8 30.8
iSKP		53 48.0	
ePKS		54 45	
OUL iPKP	18	51 01.3	
i		14.2	
iSKP		53 47.4	
SOD ePKP	18	51 11	
iSKP		53 39.2	
KEV iPKP	18	51 08.3 U	0.7 15.5
iSKP		53 32.2	
iPKS		54 29.9	
H: 18 33 08.2			
21.3 S, 179.3 W, 619 km			
Fiji Islands			
9 NUR iP	20	09 37.3	
10 NUR iP	01	03 21.7	
10 KJN eP	01	17 31	
H: 01 07 49.7			
36.9 N, 115.1 E, 33 km (R)			
Eastern China			
10 NUR eP	01	33 17	
10 SOD eP	03	02 51	
H: 02 52 56.3			
52.3 N, 176.1 W, 78 km			
Andreanof Islands			
10 NUR ePS	05	44 04	
eSS		50 44	
KEV ePS	05	43 04	
H: 05 15 13.3			
5.6 S, 153.9 E, 67 km			
New Ireland			



October						October					
				T	A					T	A
10	NUR	iPKP	06 45 54.1	1.0	16.0	KJN	iP	16 03 44.8 D	0.9	58.9	
		iPKS	49 18.9			OUL	iP	16 03 44.6 D			
	KJN	iPKP	06 45 46.1 U	1.0	19.6		i	56.9			
	OUL	iPKP	06 45 45.5			SOD	iP	16 03 35.5 D			
	SOD	ePKP	06 45 41				e	46			
	H: 06 26 46.3					KEV	iP	16 03 27.0	1.0	26.7	
	18.1 S, 171.8 E, 63 km						e	36			
	New Hebrides Islands						e	04 12			
							eS	12 36			
10	NUR	iP	06 58 08.2 U	0.9	16.8		eScS	13 23			
	KJN	iP	06 57 48.0 U	0.9	42.0	H: 15 52 16.8					
		i	58 00.2			30.4 N, 142.6 E, 32 km					
		i	10.0			South of Honshu, Japan					
	OUL	iP	06 57 47.4 U			11	NUR	eP	16 36 47		
	SOD	iP	06 57 37.2 U				KJN	iP	16 36 28.5 U	0.8	13.1
	KEV	eP	06 57 17				SOD	iP	16 36 19.2		
	H: 06 46 58.5						KEV	eP	16 36 08		
	36.9 N, 141.0 E, 25 km						H: 16 25 00.5				
	Honshu, Japan						30.5 N, 142.6 E, 33 km (R)				
10	NUR	eP	07 00 41			South of Honshu, Japan					
	KJN	iP	07 00 12.6			11	NUR	iP	23 05 53.2 D	0.7	10.3
	OUL	iP	07 00 07.9				KJN	iP	23 05 30.7 D	0.6	5.5
	SOD	iP	06 59 51.3				OUL	eP	23 05 28		
	KEV	iP	06 59 33.9				SOD	eP	23 05 17		
10	NUR	eP	08 26 28				KEV	eP	23 05 05		
10	KJN	eP	21 32 29			H: 22 55 07					
	H: 21 20 27					42.4 N, 143.8 E, 33 km (R)					
	23.9 N, 142.5 E, 33 km (R)					Hokkaido, Japan					
	Volcano Islands					12	NUR	iP	04 01 00.4	0.8	10.1
10	NUR	iP	21 53 48.7	1.0	18.0		KJN	iP	04 00 43.6 D	0.8	13.1
11	NUR	eP	05 26 11				OUL	iP	04 00 45.5		
11	NUR	iP	07 54 03.0 U	0.7	12.9			ePcP	01 08		
	H: 07 48 44.8							ipP	34.2		
	36.1 N, 27.2 E, 35 km						SOD	iP	04 00 39.3		
	Dodecanese Islands							e	52		
						H: 03 50 03.4					
						28.3 N, 126.9 E, 225 km					
						East China Sea					
11	KJN	iP	08 05 43.6			12	NUR	iPKP	06 53 09.8	0.8	17.3
	OUL	iP	08 05 34.7 D					i	19.8		
	SOD	iP	08 05 18.1					i	54 58.5		
	H: 07 56 36.1							ipPKP	55 23.3		
	63.0 N, 151.1 W, 115 km							iSKP	55.0		
	Central Alaska							iPP	56 02.7		
11	NUR	iP	16 04 04.0 D	1.0	60.0			ipKS	53.3		
		i	13.0					e	57 44		
		i	27.1					e	58 04		
		eS	13 44					epPP	17		
		eSS	18 40					ePPP	59 12		
						cont.					

October			T	A	October			T	A
	eSKS	32				ePcS		47	
	e	00 24				e	09 01		
	e	02 01				eS	10 40		
	e	22				e	11 32		
	e	04 00				eScS	12 05		
	ePS	06 16				esS	13 38		
	esPS	08 10				eSS	15 26		
	e	11 20				eSSS	17 56		
	eSS	13 24			KJN	iP	13 02 42.7 D		
	e	14 30				i	03 05.0		
	e	17 21				iPcP	32.8		
	e	22 06				i	44.0		
	e	26 02				ipP	04 18.3		
KJN	ePKP	06 53 00				iPP	51.0		
	i	03.6				isP	05 07.7		
	i	12.0				iScP	06 46.1		
	i	20.1				iPcS	07 25.6		
	ipPKP	55 21.2				eS	09 57		
	iSKP	43.5			OUL	iP	13 02 39.3 D		
	i	56 09.4			SOD	iP	13 02 25.9 D		
	iPKS	42.7				ePP	04 28		
	e	57 10			KEV	iP	13 02 12.3 D		
	eSKKP	07 05 28				i	32.8		
OUL	iPKP	06 52 57.1				iPcP	03 17.4		
	i	53 05.8				ipP	44.8		
	i	10.9				ePP	04 20		
	iSKP	55 41.4				eScP	06 30		
SOD	iPKP	06 53 07.0				eScS	11 08		
	e	54 29				esS	40		
	iSKP	55 34.7				eSS	13 36		
	i	45.1				esSS	15 16		
	e	56 11				H: 12 53 46.9			
KEV	ePKP	06 52 52				52.2 N, 152.5 E, 476 km			
	i	53 04.2	0.8	58.8		Kurile Islands			
	i	18.0							
	iSKP	55 27.1			12	NUR	eP	16 41 06	
	e	39				KJN	eP	16 40 57	
	iPKS	56 27.4							
	ePPP	58 29			12	NUR	eP	18 14 31	
	epPPP	59 57					i	15 08.0	
	H: 06 35 06.7					KJN	eP	18 14 27	
	21.1 S, 179.2 W, 636 km								
	Fiji Islands								
12	NUR	iP	13 03 07.6 D	1.2	698.3	12	NUR	eP	18 45 34
		i	27.2					i	49 05.3
		i	47.8					e	44
		i	58.0					iPP	50.3
		i	04 15.0					i	50 09.7
		ipP	33.0					iSKS	56 05.7
		iPP	05 23.1					eSKKS	40
		i	46.0					ePS	59 00
		e	06 07					iPKKP	19 01 26.3
		eScP	07 01.5					e	03 20
		cont.						eSS	04 52
								cont.	





October

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16 KJN iP 17 37 15.0 U  
H: 17 26 40.5  
36.1 N, 138.8 E, 141 km  
Honshu, Japan

16 KJN iP 20 29 38.8 1.2 43.0  
i 47.7  
OUL iP 20 29 53.5  
H: 20 16 56.1  
17.3 S, 66.6 E, 18 km  
Mascarene Islands

16 KJN eP 21 20 28  
i 31.7  
i 37.5  
SOD eP 21 20 24  
i 35.9  
KEV eP 21 20 25  
e 32  
H: 21 08 53.2  
19.9 N, 121.8 E, 35 km  
Philippine Islands

16 KJN eP 23 41 23  
OUL eP 23 41 22  
SOD eP 23 41 08  
H: 23 31 00  
43.9 N, 150.1 E, 33 km (R)  
Kurile Islands

17 NUR iP 05 10 21.8 U 0.6 37.5  
i 57.0  
i 11 12.0  
KJN iP 05 10 08.7 U 0.8 82.3  
i 42.8  
e 11 10  
OUL iP 05 10 15.8 U  
i 54.9  
SOD iP 05 10 16.0 U  
i 25.8  
i 11 12.0  
KEV iP 05 10 19.0 U 0.5 37.0  
e 50  
i 11 14.6  
H: 05 03 58.0  
49.8 N, 78.1 E, 0 km (R)  
Eastern Kazakh SSR

17 NUR ePKP 14 27 02  
i 11.0  
eSKP 29 46  
cont.

October

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KJN ePKP 14 26 56  
i 27 03.0  
iSKP 29 35.7  
OUL ePKP 14 26 55  
i 27 01.9  
SOD ePKP 14 26 58  
iSKP 29 27.5  
H: 14 08 58.4  
21.2 S, 179.1 W, 636 km  
Fiji Islands

17 NUR eP 21 17 23  
i 37.2  
KJN iP 21 17 10.4 D  
i 23.0  
OUL eP 21 17 12  
SOD iP 21 17 09.0  
i 22.3  
KEV iP 21 17 08.7 0.8 14.4  
i 21.8  
H: 21 05 22.5  
17.2 N, 121.8 E, 33 km (R)  
Luzon, P.I.

18 NUR iP 01 05 11.5  
KJN iP 01 05 05.4 U 0.7 11.6  
OUL iP 01 05 11.4  
SOD iP 01 05 12.5  
H: 00 55 07  
23.4 N, 94.9 E, 54 km  
Burma-India border

18 NUR iP 01 16 20.9 U 1.1 1404.2  
eS 20 00  
e 12  
KJN iP 01 15 41.2 U  
eS 18 50  
OUL iP 01 15 25.9 U  
SOD iP 01 14 59.0 U  
e 17 11  
eS 30  
KEV iP 01 14 29.9 1.0 236.0  
e 15 08  
eS 16 12  
e 24  
H: 01 11 45  
79.8 N, 2.4 E, 33 km (R)  
Greenland Sea

18 KJN iP 03 18 27.5 D 0.7 22.6  
OUL iP 03 18 30.6  
cont.





October				October			
		T	A			T	A
	SOD	iP	03 18 25.1 D				
	H: 03 07 11.9						
	23.7 N, 122.9 E, 35 km						
	Taiwan						
18	KJN	ePKP	11 05 34				
	OUL	iPKP	11 05 33.1				
	H: 10 47 22.6						
	19.2 S, 177.5 W, 536 km						
	Fiji Islands						
18	NUR	iP	14 41 57.0 U	0.8	26.8		
		e	42 14				
	KJN	iP	14 41 43.2 U	0.8	44.6		
		i	42 04.0				
	OUL	iP	14 41 34.9 U				
	SOD	iP	14 41 25.0 U				
		i	43.1				
	KEV	iP	14 41 12.4 U	0.9	28.6		
18	NUR	iPKP	22 26 04.3	0.9	24.6		
		i	08.2	0.8	218.6		
		i	19.0				
	KJN	iPKP	22 25 57.7				
		iSKP	29 37.1				
	OUL	iPKP	22 25 56.6 U				
	SOD	iPKP	22 25 50.5				
		i	54.2				
	KEV	iPKP	22 25 51.3	1.1	47.6		
		i	26 06.5				
	H: 22 06 23.5						
	33.9 S, 179.6 W, 26 km (R)						
	South of Kermadec Islands						
18	NUR	eP	23 25 13				
	H: 23 13 45						
	44.2 N, 129.0 W, 33 km (R)						
	Off coast of Oregon						
18	NUR	iPKP	23 54 03.3 D	1.0	37.2		
	KJN	iPKP	23 53 56.7 D	1.0	32.7		
	OUL	iPKP	23 53 55.6 D				
	H: 23 35 11.0						
	13.9 S, 166.5 E, 87 km						
	New Hebrides Islands						
19	KJN	iPKP	15 58 14.4 U	0.9	19.6		
	OUL	ePKP	15 58 15				
	H: 15 39 10.3						
	58.7 S, 25.0 W, 33 km (R)						
	South Sandwich Islands						
	20	NUR	ePKP 01 21 44				
		KJN	iPKP 01 21 50.3 U	1.0	17.4		
		OUL	iPKP 01 21 51.9 U				
			eSKP 25 09				
		SOD	iPKP 01 21 55.6				
		KEV	ePKP 01 21 57				
			ePP 24 20				
			ePKS 25 28				
	H: 01 02 43.8						
	58.6 S, 25.0 W, 12 km						
	South Sandwich Islands						
	20	NUR	iP 06 52 50.6	0.9	23.6		
			i 53 07.0				
			eS 57 16				
		KJN	eP 06 53 14	1.2	36.1		
		OUL	eP 06 53 24				
		KEV	eP 06 53 56				
	H: 06 47 38.0						
	37.9 N, 37.7 E, 33 km (R)						
	Turkey						
	20	OUL	eP 15 12 07				
		SOD	iP 15 12 04.4				
	20	NUR	ePKP 16 14 43				
			i 53.7	0.8	24.0		
			iSKP 17 35.8				
			ePKS 18 25				
		KJN	iPKP 16 14 46.0 U	1.0	26.2		
			iSKP 17 23.9				
			iPKS 18 14.9				
		OUL	iPKP 16 14 44.7 U				
			iSKP 17 21.9				
		SOD	ePKP 16 14 42				
			iSKP 17 14.6				
		KEV	ePKP 16 14 38				
	H: 15 56 33.4						
	20.6 S, 178.1 W, 556 km (R)						
	Fiji Islands						
	20	NUR	ePKP 19 47 07				
		KJN	ePKP 19 47 11				
		OUL	iPKP 19 47 09.8 D				
		SOD	ePKP 19 47 10				
	H: 19 28 21.7						
	33.7 S, 71.3 W, 71 km						
	Central Chile						
	21	NUR	eP 02 03 17				
		KJN	eP 02 03 10				

October				T	A	October				T	A
21	NUR	iP	02 14 57.8	1.0	18.0	21	NUR	eP	17 14 50		
	KJN	iP	02 15 23.9				KJN	eP	17 14 37		
	OUL	iP	02 15 28.8				OUL	iP	17 14 37.7		
	SOD	iP	02 15 27.2				SOD	eP	17 14 31		
	KEV	eP	02 15 31				H: 17 01 46.0				
							11.8 N, 141.2 E, 52 km				
							West Caroline Islands				
21	NUR	ePP	02 55 04			21	NUR	iPKP	18 58 53.5	0.7	9.0
		eS	03 03 06					i	57.3		
		ePS	04 52					eSKP	19 02 24		
		eSS	11 17				KJN	iPKP	18 58 51.1	1.2	22.4
	KJN	iPKP	02 54 05.1	1.0	13.1			eSKP	19 02 13		
	OUL	ePKP	02 53 59				OUL	ePKP	18 58 39		
	SOD	ePKP	02 54 05					i	51.0		
	KEV	ePP	02 55 20				SOD	ePKP	18 58 38		
		eSKS	03 01 08					eSKP	19 02 06		
		ePS	05 05				H: 18 39 40.3				
		e	07 08				24.8 S, 177.3 W, 107 km				
		eSS	11 52				South of Fiji Islands				
	H: 02 35 12.3										
	27.7 S, 71.8 W, 13 km										
	Northern Chile										
21	NUR	iP	05 03 54.7	1.0	740.0	21	KJN	iP	20 15 45.6 D	0.9	12.5
		i	56.1				OUL	iP	20 15 44.7		
		eS	06 56				SOD	iP	20 15 38.4		
		i	07 17.1				H: 20 03 49.0				
	KJN	iP	05 03 05.5 U				19.0 N, 145.1 E, 320 km				
		eS	05 32				Mariana Islands				
	OUL	iP	05 03 00.2 U			22	KJN	iP	01 21 19.8	0.8	13.8
	SOD	iP	05 02 35.7 U				OUL	iP	01 21 22.6		
		i	36.5				SOD	iP	01 21 20.4		
	KEV	iP	05 02 14.9 U			22	KJN	eP	04 28 27		
		eS	03 52				H: 04 15 32.1				
		e	04 04				1.6 N, 127.2 E, 138 km				
	H: 04 59 58.1						Halmahera				
	73.4 N, 54.8 E, 0 km (R)										
	Novaya Zemlya										
21	KJN	iP	11 10 01.8	1.0	16.4	22	NUR	iPKP	15 15 14.0	0.8	14.4
	OUL	iP	11 10 06.9 U				KJN	iPKP	15 15 03.1 D	0.8	10.8
	SOD	iP	11 10 05.6 U				OUL	iPKP	15 15 02.1		
	KEV	eP	11 10 03	1.2	28.5		H: 14 55 28				
	H: 11 00 36						32.9 S, 178.5 W, 9 km				
	31.6 N, 99.9 E, 33 km (R)						South of Kermadec Islands				
	Szechwan, China										
21	NUR	eP	15 12 09			22	NUR	iP	15 21 49.6 D	0.8	14.4
		i	20.0	1.1	35.7		KJN	iP	15 22 04.8		
								i	07.3		
							OUL	eP	15 22 15		
21	KJN	eP	16 59 47			22	KJN	eP	17 33 42		
	OUL	eP	16 59 54				OUL	iP	17 33 42.1		
	SOD	eP	17 00 26				H: 17 21 37				
	H: 16 54 58.3						19.0 N, 145.4 E, 251 km				
	43.3 N, 16.8 E, 34 km						Mariana Islands				
	Yugoslavia										



October				T	A	October				T	A
22	NUR	eP	21 28 55			23	SOD	eP	09 52 50		
22	NUR	iP	23 15 40.6 U	0.6	20.5		KEV	eP	09 52 38		
		i	50.7				H:		09 39 44.8		
	KJN	iP	23 15 23.8 U	0.6	21.2				11.7 N, 146.4 E, 33 km (R)		
	OUL	iP	23 15 25.3 U						South of Mariana Islands		
	SOD	iP	23 15 19.1			24	OUL	iP	01 11 04.1		
		i	42.0								
	KEV	iP	23 15 13.1 D	0.8	31.7	24	NUR	iPKP	01 56 56.6 D	0.8	14.7
	H:		23 04 14.2				KJN	iPKP	01 56 49.6 D	0.8	9.2
			27.4 N, 128.3 E, 34 km					epPKP	57 34		
			Ryukyu Islands				OUL	iPKP	01 56 48.9		
23	NUR	iP	03 04 17.0 D	0.6	21.8		H:		01 38 12.7		
	KJN	iP	03 03 54.3 D	0.7	17.8				14.7 S, 167.2 E, 169 km		
		i	04 13.8						New Hebrides Islands		
	OUL	iP	03 03 51.2			24	NUR	iPKP	03 32 35.9 U	0.8	257.3
	SOD	iP	03 03 40.5 D					i	37.1		
	KEV	iP	03 03 28.8 U	0.7	16.8			i	51.9		
	H:		02 53 30.7					epPKP	33 40		
			43.4 N, 146.9 E, 33 km (R)				KJN	iPKP	03 32 26.1 U	0.6	28.8
			Kurile Islands					i	32.0		
23	NUR	iP	08 38 07.0 D					e	33 06		
		i	24.7					i	34 40.8		
		ipP	39 52.1					iPKS	36 06.8		
		esP	40 36				OUL	iPKP	03 32 24.9		
		ePP	41 26					i	31.4		
		ePPP	43 24				SOD	iPKP	03 32 18.7		
		e	45 10				KEV	ePKP	03 32 12		
		eS	47 08					i	23.5	0.7	11.6
		esS	50 04				H:		03 13 26.5		
		eSS	52 18						31.3 S, 179.7 W, 250 km (R)		
	KJN	iP	08 37 49.1 D						Kermadec Islands		
		epP	39 38			24	NUR	iP	06 19 35.0	0.7	9.2
		e	40 15				KJN	eP	06 20 07		
	OUL	iP	08 37 49.2 D				OUL	eP	06 20 17		
	SOD	iP	08 37 41.2 D				H:		06 14 43.0		
		epP	39 31						38.9 N, 22.0 E, 29 km		
	KEV	iP	08 37 34.4 D	1.0	230.0				Greece		
		i	50.0			24	NUR	iP	11 03 51.2 U	0.8	67.6
		ipP	39 20.9					i	04 05.3		
		ePP	40 04				KJN	iP	11 03 48.8 U	0.8	38.5
		e	42 28					i	04 06.3		
		eS	46 06					iPP	07 12.3		
		eScS	40				OUL	iP	11 03 53.5 U		
		esS	49 05				SOD	iP	11 03 54.7 U		
		e	53 16					i	04 09.2		
	H:		08 27 06.2				KEV	iP	11 03 57.4 U	0.8	36.0
			28.9 N, 139.1 E, 463 km					i	04 10.9		
			Bonin Islands					e	46		
23	NUR	eP	08 54 32	1.0	16.4		H:		10 51 15.1		
	KJN	eP	08 54 10						3.1 S, 101.5 E, 63 km		
									Southern Sumatra		

October				T	A	October				T	A
25	KJN	iP	00 46 51.7			KEV	iP	02 08 24.3	1.2	59.9	
	SOD	eP	00 46 51				e	47			
	H: 00 34 09.6						H: 01 57 23.1				
	5.9 N, 126.6 E, 102 km						24.3 N, 122.2 E, 67 km				
	Mindanao, P.I.						Taiwan				
25	NUR	iP	01 10 43.8 U	0.8	155.8	25	KJN	iP	09 05 47.5 D	0.7	13.0
		i	46.8					i	06 03.1		
		e	13 08				OUL	iP	09 05 49.7 D		
		iPP	30.1					e	06 03		
		ePPP	15 00				SOD	iP	09 05 45.4 D		
		e	17 04				KEV	iP	09 05 40.9	0.6	7.7
		eS	20 00				H: 08 54 40.2				
		eSS	24 20				24.5 N, 122.2 E, 60 km				
		eP'P'	38 17				Taiwan				
		eLQ	01 29.5			25	KJN	eP	09 23 43		
	KJN	iP	01 10 28.8 U				OUL	eP	09 23 45		
		i	11 19.3				H: 09 10 19				
		ePPP	14 53				9.4 S, 112.9 E, 58 km				
		eS	19 32				South of Java				
		e	39			25	NUR	iP	09 32 34.0 D	1.0	30.8
		iP'P'	38 25.8				KJN	iP	09 32 08.6 D	1.0	25.1
		i	34.0				OUL	iP	09 32 03.0 D		
	OUL	iP	01 10 31.4				SOD	iP	09 31 48.8		
		eP'P'	38 23				KEV	eP	09 31 32		
	SOD	iP	01 10 26.4 U				H: 09 21 48.6				
		ePPP	14 48				51.4 N, 176.5 E, 33 km				
		iP'P'	38 27.3				Rat Islands				
	KEV	iP	01 10 22.4 U	0.9	89.0	25	NUR	iPKP	09 35 45.0 U	0.7	81.8
		i	24.2					i	43 39.0		
		iPP	12 59.3				KJN	iPKP	09 35 36.0 U	0.5	46.3
		ePPP	14 28					epPKP	36 23		
		e	16 48				OUL	ePKP	09 35 31		
		eS	19 20					i	35.3 U		
		e	20 08				SOD	iPKP	09 35 30.5 U		
		e	44				KEV	iPKP	09 35 25.5 U		
		e	22 06				H: 09 16 16				
		eSS	23 40				37.1 S, 177.5 E, 189 km				
		e	27 10				North Island, N.Z.				
		iP'P'	38 26.4			25	KJN	eP	15 49 13		
		i	31.4				OUL	eP	15 49 00		
		eLQ	01 28.0					e	07		
		eLR	01 31.0				H: 15 36 20.7				
	H: 00 59 22.6						14.5 N, 93.1 W, 61 km				
	24.5 N, 122.2 E, 65 km						Chiapas, Mexico				
	Taiwan										
25	NUR	eP	02 08 46			26	NUR	iP	00 33 44.2	2.0	310.0
	KJN	iP	02 08 30.7 D	1.0	43.6			eS	42 24		
	OUL	iP	02 08 32.7 D				KJN	iP	00 33 28.7 U		
	SOD	iP	02 08 28.4 D				cont.				
	cont.						cont.				



October

T A

28 KJN eP 00 14 58  
H: 00 02 21  
16.2 S, 66.9 E, 33 km (R)  
Mid-Indian Rise

28 NUR eP 02 21 25

28 NUR eP 07 01 33  
Moscow:  
H: 06 54 25  
37.4 N, 70.4 E  
Pamir

28 KJN eP 18 52 31  
OUL eP 18 52 19  
SOD eP 18 52 28  
H: 18 42 13.7  
24.9 N, 45.9 W, 33 km (R)  
North Atlantic Ridge

29 KJN iPKP 03 17 34.0 D  
H: 02 59 20  
24.0 S, 179.9 E, 548 km  
South of Fiji Islands

29 NUR eP 05 47 48  
OUL eP 05 47 24  
SOD eP 05 46 45

29 OUL ePKP 12 56 30  
H: 12 37 22.2  
60.8 S, 23.1 W, 33 km (R)  
South Sandwich Islands

30 NUR iP 06 10 21.5 U 0.6 21.3  
e 56  
KJN iP 06 10 08.5 U 0.7 41.1  
e 37  
i 41.8  
i 11 08.0  
OUL iP 06 10 16.0  
e 51  
SOD iP 06 10 16.1 U  
H: 06 03 57.9  
49.8 N, 78.1 E, 0 km (R)  
Eastern Kazakh SSR

31 NUR eP 01 02 51  
KJN iP 01 02 28.2 D 0.8 10.0  
SOD eP 01 02 21

October

T A

31 KJN ePKP 10 33 52  
OUL ePKP 10 33 51  
H: 10 14 43.8  
19.7 S, 177.3 E, 40 km  
South of Fiji Islands

31 NUR iP 17 32 27.6 0.4 10.0  
e 59  
i 36 46.2 1.1 23.8  
KJN iP 17 32 41.9 U 0.7 13.0  
i 44.0  
i 33 02.0  
e 37 27  
OUL iP 17 32 53.5  
e 33 11  
SOD eP 17 33 09  
e 38 26

Moscow:  
H: 17 27 16  
42.0 N, 49.4 E  
Caspian Sea

31 NUR iP 21 13 12.7 1.2 196.7  
i 15.2  
i 32.0  
ePPP 52  
eS 17 32  
e 18 06  
eLR 21 19.0  
KJN iP 21 13 50.6 U 1.0 45.8  
OUL iP 21 13 56.0 U  
SOD iP 21 14 16.3  
e 16 22  
KEV eP 21 14 38  
i 15 35.5  
eS 19 48  
e 20 18  
eLR 21 23.1  
H: 21 08 07.2  
37.8 N, 14.6 E, 33 km (R)  
Sicily

July 31, 1968

M. T. Porkka  
Aili Huovila



## November

				T	A				
1	NUR	ePKP	15 19 05						
		i	09.5	1.0	26.0				
		iSKP	22 36.0						
	KJN	ePKP	15 19 02	0.8	30.0				
		i	04.1						
		eSKP	22 23						
		ePKS	31						
	OUL	ePKP	15 18 52						
		i	19 01.8						
		eSKP	22 22						
	SOD	ePKP	15 18 58						
		iSKP	22 15.8						
	KEV	ePKP	15 18 50						
		i	56.2						
	H: 14 59 58.9								
	23.0 S, 176.8 W, 140 km (R)								
	South of Fiji Islands								
1	NUR	eP	16 19 48	0.5	13.2				
	KJN	iP	16 19 22.8 U	0.9	8.9				
	OUL	iP	16 19 19.8						
	SOD	eP	16 19 07						
	KEV	eP	16 18 50						
	H: 16 09 16.7								
	48.2 N, 154.4 E, 47 km								
	Kurile Islands								
1	NUR	iP	16 41 28.0	0.8	17.3				
	KJN	iP	16 41 04.2 D	0.7	17.1				
		i	17.0						
	OUL	iP	16 41 01.5						
	SOD	iP	16 40 47.7 D						
	KEV	eP	16 40 35						
	H: 16 30 57.1								
	48.3 N, 154.4 E, 40 km								
	Kurile Islands								
1	NUR	iSKP	17 41 08.0						
	KJN	ePKP	17 38 25						
		iSKP	40 56.3						
	OUL	ePKP	17 38 26						
		eSKP	40 55						
	SOD	iSKP	17 40 47.3						
	H: 17 20 24.0								
	20.5 S, 179.3 W, 656 km								
	Fiji Islands								
1	NUR	eP	19 11 01						
		eSKS	21 36						
		ePS	24 16						
		eSS	30 16						
		eSSS	34 22						
	KJN	iP	19 10 48.4	1.1	14.9				
	OUL	eP	19 10 50						

cont.

## November

				T	A				
	SOD	eP	19 10 46						
	KEV	eP	19 10 48						
		ePP	14 52						
		eSKS	21 19						
		ePS	23 52						
		eSS	29 04						
	H: 18 56 54.8								
	4.8 S, 135.7 E, 14 km								
	West New Guinea								
1	NUR	iP	19 28 29.0	1.0	26.0				
		i	41.4						
	KJN	iP	19 28 07.8 U	1.0	22.9				
		i	20.6						
	OUL	eP	19 28 08						
		i	20.6						
	SOD	iP	19 27 57.2						
		i	28 10.1						
	KEV	eP	19 27 50						
	H: 19 17 24.7								
	37.1 N, 141.3 E, 72 km								
	Honshu, Japan								
1	NUR	eP	21 13 32	1.1	26.2				
1	KJN	e(Pn)	21 31 47						
		e	32 11						
		e(Sg)	35						
	OUL	e(Pn)	21 31 54						
		e(Sg)	32 53						
	SOD	e(Sg)	21 32 50						
1	KJN	e(Pn)	21 36 16						
		e	47						
		e(Sg)	37 04						
	OUL	e(Pn)	21 36 27						
		e(Sg)	37 25						
		e	28						
	SOD	e(Sg)	21 37 20						
1	NUR	eP	22 06 51						
1	NUR	iP	23 07 54.5						
	KJN	iP	23 07 19.8	0.8	18.5				
		eS	09 25						
		e	14 24						
	OUL	eP	23 07 02						
	SOD	eP	23 06 45						
		e	08 08						
		e	11 03						
	KEV	eP	23 06 17						
		eS	07 32						
		e	08 10						

November

November

T A

T A

2 NUR iP 03 09 12.5  
eS 11 40  
KJN eP 03 08 36  
i 38.6  
i 44.3  
eS 10 38  
e 15 23  
OUL iP 03 08 22.5  
eS 10 08  
i 11.1  
i 14 49.5  
SOD eP 03 07 58  
i 08 13.1  
eS 09 29  
e 12 53  
KEV eP 03 07 34  
i 08 04.8  
eS 51  
H: 03 05 51  
73.2 N, 7.7 E, 33 km (R)  
Greenland Sea

2 NUR iP 04 59 03.7 U 1.0 34.0  
KJN iP 04 59 24.2

2 NUR iPKP 07 11 25.1 U 0.7 23.2  
i 29.3  
i 40.1  
KJN ePKP 07 11 17  
i 21.2  
OUL ePKP 07 11 25  
H: 06 51 54.7  
30.6 S, 177.9 W, 81 km  
Kermadec Islands

3 NUR eP 04 41 29  
KJN iP 04 41 11.3 D 0.9 13.4  
SOD eP 04 41 02  
H: 04 30 12.7  
32.3 N, 140.1 E, 148 km  
South of Honshu, Japan

3 NUR ePKP 07 51 35 0.9 26.9  
i 36.3  
iSKP 54 42.0  
ePKS 55 01  
e 56 20  
eSKSP 08 03 32  
eSS 11 12  
esSS 12 44  
KJN iPKP 07 51 28.0 0.7 10.3  
epPKP 52 31  
eSKP 54 28  
e 45  
cont.

OUL iPKP 07 51 28.0 D  
i 31.3  
eSKP 54 26  
SOD ePKP 07 51 24  
KEV ePKP 07 51 22  
ePPS 08 04 06  
e 05 46  
eSS 09 24  
e 12 42  
H: 07 32 50.1  
18.7 S, 169.0 E, 230 km (R)  
New Hebrides Islands

3 NUR iPKP 22 56 28.0 D 0.9 31.9  
eSS 23 15 04  
KJN iPKP 22 56 35.6 D 1.0 52.3  
OUL iPKP 22 56 36.4 D  
SOD iPKP 22 56 40.3 D  
i 57 12.1  
iSKP 59 48.5  
KEV iPKP 22 56 45.6  
eSS 23 16 24  
H: 22 37 49.6  
56.1 S, 27.2 W, 155 km  
South Sandwich Islands

4 NUR iP 00 49 34.7 D 0.6 12.5  
KJN iP 00 49 17.3 D 0.6 11.0  
OUL iP 00 49 19.9  
H: 00 38 09  
28.1 N, 129.2 E, 39 km  
Ryukyu Islands

4 NUR iP 05 18 39.7 D 0.8 18.7  
KJN iP 05 18 24.4 D 0.5 21.3  
OUL iP 05 18 27.2 D  
SOD iP 05 18 21.7 D  
KEV iP 05 18 17.6 D 0.9 33.6  
H: 05 07 18.0  
24.3 N, 122.2 E, 76 km  
Taiwan

4 NUR eP 09 59 21  
4 NUR iPKP 10 35 16.8  
i 29.0 1.0 128.0  
iSKP 38 08.2  
iPP 27.0  
iPKS 59.0  
e 39 04  
epPKS 41 08  
esPS 50 12  
eSS 55 00  
esSS 58 34  
cont.

November

					T	A					
KJN	iPKP	10	35	16.6							
	i			21.6	0.8	80.0					
	i			26.3							
	ipPKP		37	25.0							
	iSKP			55.4							
	iPKS		38	46.6							
OUL	ePKP	10	35	13							
	e			18							
	i			21.1							
	iSKP		37	53.5							
SOD	iPKP	10	35	16.0 U							
	i			25.2							
	iSKP		37	46.1							
KEV	iPKP	10	35	13.0 U	0.9	62.2					
	eSKP			37 48							
H: 10 17 14.7											
17.8 S, 179.0 W, 573 km (R)											
Fiji Islands											
4	NUR	iP	13	37 54.0 U	1.6	222.6					
		e		39 52							
		ePP		40 36							
		eS		47 00							
		eScS		40							
		eSS		51 36							
		eSSS		55 04							
KJN	iP	13	37	33.4 U	1.0	145.0					
OUL	iP	13	37	33.0 U							
	i			47.7							
SOD	iP	13	37	22.3 U							
KEV	iP	13	37	12.6 U	1.4	135.3					
	i			20.6							
	ePP			39 20							
	ePPP			41 06							
	eS			45 40							
	ePS			46 00							
	eScS			47 04							
	eSS			49 36							
H: 13 26 47.7											
37.4 N, 141.6 E, 46 km											
Honshu, Japan											
4	NUR	iP	14	41 16.8 U	1.0	104.0					
		i		43 20.8							
		eS		50 00							
		ePS		13							
		eSS		54 16							
		e		57 36							
		eLQ	14	59.0							
		eLR	15	02.0							
KJN	iP	14	40	54.4 U	1.7	600.6					
cont.											

November

					T	A					
OUL	iP	14	40	53.2							
	i			41 04.3							
	i			09.1							
SOD	iP	14	40	41.1 U							
	i			52.7							
KEV	iP	14	40	29.4	1.3	61.4					
	e			44							
	ePPP			44 10							
	eS			48 32							
H: 14 30 37.5											
43.5 N, 144.1 E, 30 km (R)											
Hokkaido, Japan											
4	NUR	iP	14	56 40.2 U	1.0	74.0					
		i		58.4							
KJN	iP	14	56	16.6 U							
OUL	iP	14	56	17.2 U							
	i			19.2							
SOD	iP	14	56	05.6							
	e			48							
KEV	eP	14	55	54	0.8	31.7					
H: 14 46 01.9											
43.5 N, 144.0 E, 33 km (R)											
Hokkaido, Japan											
4	NUR	eP	16	12 28							
OUL	eP	16	11	51							
H: 16 02 19.4											
59.4 N, 145.0 W, 33 km (R)											
Gulf of Alaska											
4	NUR	iP	16	14 09.0 D	0.8	10.1					
KJN	iP	16	13	46.6							
H: 16 03 28											
43.3 N, 144.1 E, 33 km (R)											
Hokkaido, Japan											
4	NUR	eP	16	40 18							
	eSKS			50 44							
	ePS			52 56							
	eSS			57 45							
KJN	eP	16	40	18	1.0	16.4					
	ePP			44 28							
OUL	iP	16	40	15.1							
SOD	eP	16	40	14							
KEV	ePPP	16	46	00							
	eSKS			50 40							
	ePS			52 48							
H: 16 26 48.2											
2.8 S, 77.7 W, 99 km (R)											
Peru-Ecuador border											





November

November

November					November							
			T	A			T	A				
8	NUR	iP	02 07 27.8	0.8	15.8	8	NUR	iP	17 20 16.0 U	1.0	42.0	
	KJN	iP	02 07 07.5 U	0.5	13.2		i		32.2			
	OUL	iP	02 07 08.7				iPcP		47.7			
	SOD	eP	02 06 58				i		21 01.6			
	H: 01 56 15.1						e		24 04			
	35.5 N, 140.8 E, 56 km						eS		28 56			
	Honshu, Japan						ePS		29 28			
							eSS		33 28			
8	NUR	iP	02 51 44.6 D	0.9	28.6		e		36 52			
	KJN	iP	02 51 20.0 D	0.8	23.0	8	KJN	iP	17 19 51.7 U	0.7	12.3	
	OUL	iP	02 51 12.7 D				i		20 04.0			
	SOD	iP	02 50 56.2 D				iPcP		26.5			
	H: 02 41 34.1						i		58.6			
	59.0 N, 150.2 W, 34 km						OUL	iP	17 19 47.2 U			
	Kenai Peninsula, Alaska						SOD	iP	17 19 32.4			
							i		46.8			
8	NUR	iP	03 23 28.1	1.1	61.9		ePcP		20 17			
	i		43.2			8	KEV	eP	17 19 17			
	i		24 11.2				eS		27 16			
	eS		33 50				eSS		31 08			
	eSS		39 28				H: 17 09 27.1					
	KJN	iP	03 23 26.3 D	1.1	81.0		51.1 N, 178.5 E, 29 km					
	i		39.7				Rat Islands					
	OUL	iP	03 23 20.9 D									
	i		34.5				8	NUR	iP	17 33 24.2 U	0.9	38.6
	SOD	iP	03 23 16.4 D				i		35.1			
	KEV	eS	03 33 20				iPcP		57.0			
	eSS		38 29				KJN	iP	17 32 59.7 U	0.8	19.2	
	H: 03 10 53.3						OUL	iP	17 32 55.5			
	16.8 N, 85.9 W, 28 km						SOD	iP	17 32 40.1			
	Caribbean Sea						KEV	eP	17 32 24	0.9	9.8	
							H: 17 22 32.1					
8	NUR	eP	03 42 17				51.1 N, 178.4 E, 10 km					
	H: 03 31 04						Rat Islands					
	35.5 N, 140.8 E, 57 km											
	Honshu, Japan						8	OUL	eP	19 50 45		
							H: 19 40 27					
8	KJN	eP	06 21 13				51.1 N, 178.7 E, 38 km					
	OUL	eP	06 21 14				Rat Islands					
	KEV	eSS	06 39 36									
	H: 06 07 21.4						8	NUR	eP	20 04 44	0.9	15.1
	5.3 S, 134.0 E, 33 km (R)							e		05 06		
	Aroe Islands							KJN	eP	20 04 19		
							OUL	iP	20 04 15.7 D			
8	NUR	eP	15 11 57				H: 19 53 55.5					
	KJN	eP	15 11 43				51.1 N, 178.4 E, 32 km					
	OUL	iP	15 11 35.7				Rat Islands					
	SOD	eP	15 11 24									
8	NUR	eP	17 13 53			9	SOD	eP	00 14 47			
	KJN	iP	17 13 27.3									
	OUL	iP	17 13 23.3 D			9	NUR	iP	02 31 34.6	0.9	18.5	
	H: 17 03 04.1						e		34 01			
	51.0 N, 178.6 E, 42 km						e		50			
	Rat Islands						iPP		35 40.0			
							cont.					







November				November			
		T	A		T	A	
12	NUR ePKP	22 18 57					
	KJN ePKP	22 18 51					
	OUL ePKP	22 18 50					
	H: 21 59 50.7						
	25.2 S, 177.2 W, 225 km						
	South of Fiji Islands						
13	NUR iP	06 47 04.3	0.8	21.6			
13	NUR iP	08 08 20.4 D					
13	NUR iP	10 17 06.1					
	KJN eP	10 16 47					
13	KJN eP	11 28 16					
	SOD eP	11 28 06					
	H: 11 17 13.6						
	34.4 N, 142.0 E, 44 km						
	Honshu, Japan						
13	KJN iP	16 03 07.4 D	0.9	31.3			
	OUL eP	16 03 09					
	H: 15 50 38						
	10.6 N, 126.5 E, 81 km						
	Philippine Islands						
13	KJN iP	16 26 35.5					
	OUL eP	16 26 39					
	SOD eP	16 26 35					
	H: 16 13 25.1						
	1.2 N, 126.4 E, 21 km						
	Molucca Passage						
13	SOD eP	20 39 44					
	H: 20 29 05.0						
	1.9 N, 31.7 E, 33 km (R)						
	Uganda						
14	NUR eP	00 14 04					
	KJN eP	00 14 13	0.9	8.9			
	e	28					
	SOD eP	00 14 11					
	KEV iP	00 14 16.0	0.8	14.7			
	H: 00 04 17.8						
	24.0 N, 91.5 E, 33 km (R)						
	India-East Pakistan border						
14	NUR ePKP	05 46 46	0.9	11.8			
	KJN iP	05 42 31.3	0.9	13.4			
	ePKP	46 39					
	i	47 03.9					
	OUL iP	05 42 32.0					
	ePKP	46 40					
	cont.						
	SOD iP	05 42 27.2					
	ePKP	46 37					
	ePKKP	57 58					
	KEV iP	05 42 23.4	1.0	22.6			
	ePKP	46 36					
	eSSS	06 05 28					
	e	12 44					
	H: 05 28 36.9						
	5.4 S, 147.1 E, 201 km						
	East New Guinea						
					14	NUR eP	13 48 41
						KJN eP	13 48 16
						OUL iP	13 48 10.9
						SOD eP	13 47 56
						H: 13 38 07.7	
						51.9 N, 178.1 E, 123 km	
						Rat Islands	
					14	SOD eP	18 30 53
					14	NUR ePKP	20 03 35
						H: 19 44 45.6	
						18.0 S, 175.2 W, 255 km (R)	
						Tonga Islands	
					15	NUR iP	02 51 47.2
						KJN iP	02 52 15.3
						e	45
					15	NUR iP	07 48 32.4
						KJN iP	07 48 22.3
						i	49.2
						OUL iP	07 48 25.0 D
						SOD iP	07 48 22.3
						H: 07 36 36.4	
						6.2 N, 123.7 E, 567 km	
						Mindanao, P.I.	
					15	KJN iP	17 36 58.6
						1.0	13.1
					15	NUR eP	19 42 37
						KJN iP	19 42 53.2
						OUL eP	19 43 02
						SOD eP	19 43 18
						H: 19 35 46.3	
						30.7 N, 51.4 E, 10 km	
						Iran	
					15	NUR iP	21 50 37.7
						i	52.5
						ePP	51 56
						eSKS	57 28
						cont.	

November				November			
				T	A	T	A
	eSKKS	58	44				
	ePS	22	01 26				
	ePPS	02	46				
	eSS	07	14				
	e	12	44				
KJN	iPKP	21	50 41.3 D	1.1	52.7		
	i		52.3				
	i	51	37.2				
	iPKKP	22	00 53.6				
OUL	iPKP	21	50 39.5				
	i		54.0				
	ePKKP	22	00 56				
SOD	iPKP	21	50 40.2 D				
	i		55.1				
KEV	ePKP	21	50 50				
	i	51	01.8				
	i		14.0				
	ePP	52	12				
	e	53	44				
	eSKS	57	32				
	eSKKS	58	57				
	ePS	22	01 38				
	e		56				
	e	04	24				
	eSS	08	28				
	H: 21 31 51.5						
	28.7 S, 71.2 W, 15 km						
	Central Chile						
16	NUR	eP	00 48 20				
	KJN	eP	00 48 26				
	OUL	eP	00 48 36				
	i		40.8				
	H: 00 41 24.7						
	37.6 N, 69.7 E, 33 km (R)						
	Afghanistan-USSR border						
16	KJN	iP	02 30 53.9 U	1.0	39.2		
	i		59.7				
	OUL	iP	02 31 02.6 U				
	SOD	iP	02 31 19.0				
	KEV	iP	02 31 35.8 U	0.8	11.8		
	H: 02 22 03						
	15.1 N, 39.8 E, 33 km (R)						
	Ethiopia						
16	NUR	eP	03 56 47				
	KJN	eP	03 56 31				
	SOD	eP	03 56 21				
16	NUR	iP	09 20 35.0				
	KEV	eP	09 21 11				
	16	NUR	ePKP	16	49	17	
		iSKP			51	57.2	
	KJN	ePKP	16	49	11		
		eSKP			51	45	
	H: 16 31 04						
	20.7 S, 178.8 W, 591 km						
	Fiji Islands						
	17	NUR	ePKP	01	49	31	0.7 12.9
		KJN	iPKP	01	49	24.2	
		OUL	iPKP	01	49	24.0	
		KEV	ePKP	01	49	16	
	H: 01 30 31.1						
	18.8 S, 168.7 E, 102 km						
	New Hebrides Islands						
	17	NUR	iP	05	08	31.3	
		eS			16	08	
		eSS			19	50	
	KJN	iP	05	08	40.4		1.2 41.3
		i			48.8		
	OUL	eP	05	08	36		
	SOD	eP	05	08	33		
	KEV	eP	05	08	46		
		e			11	15	
		eS			16	36	
		eSS			20	20	
	H: 04 58 56.8						
	28.5 N, 43.8 W, 33 km (R)						
	North Atlantic Ridge						
	17	KJN	iP	05	39	54.4 U	0.8 16.9
		i			40	06.0	
		OUL	eP	05	39	55	
		SOD	iP	05	39	48.2 D	
	H: 05 27 17.1						
	17.6 N, 144.8 E, 21 km						
	Mariana Islands						
	17	NUR	iPKP	10	28	42.2	
		KJN	iPKP	10	28	35.4 D	0.8 21.5
		OUL	iPKP	10	28	34.9 D	
		SOD	ePKP	10	28	31	
		KEV	iPKP	10	28	28.8	0.7 11.9
	H: 10 10 04.7						
	13.7 S, 167.3 E, 215 km						
	New Hebrides Islands						
	17	KJN	eP	14	09	48	
		i				50.3	
		SOD	iP	14	09	46.0	

cont.

November				T	A	November				T	A
	KEV	iP	14 09 42.9	0.8	23.5	18	NUR	eP	07 59 05		
	H: 13 58 35.3					18	NUR	eP	12 24 40		
	24.0 N, 122.3 E, 36 km						KJN	eP	12 24 15		
	Taiwan						OUL	eP	12 24 11		
17	KJN	iP	14 59 11.6 U				SOD	eP	12 23 56		
	OUL	eP	14 59 15				H: 12 13 52				
	SOD	iP	14 59 10.1				52.2 N, 171.3 W, 33 km (R)				
	KEV	eP	14 59 06	0.9	15.5		Fox Islands				
	H: 14 48 02.1					18	KJN	eP	14 44 57		
	24.1 N, 122.2 E, 53 km							eS	47 23		
	Taiwan							e	48 19		
17	NUR	iP	15 16 15.8	0.7	19.4			e	49 05		
		e	33 16				OUL	eP	14 44 43		
	KJN	eP	15 16 08					eS	46 58		
	KEV	eP	15 16 07					e	47 12		
17	KJN	eP	20 17 10				SOD	eP	14 44 14		
	SOD	eP	20 17 07					eS	46 03		
	H: 20 04 04.2							e	47 17		
	1.5 N, 126.3 E, 69 km						KEV	eP	14 43 48		
	Molucca Passage							e	52		
18	NUR	iP	00 48 30.3	1.0	28.0			eS	45 11		
								i	23.9		
18	KJN	eP	01 18 53					e	46 11		
	SOD	eP	01 18 50					i	30.8		
	H: 01 05 47.2					18	NUR	eP	20 53 44		
	1.3 N, 126.1 E, 78 km						KJN	eP	20 53 24		
	Molucca Passage						H: 20 42 37.3				
18	NUR	iP	02 36 59.0				36.1 N, 139.8 E, 48 km				
		i	37 05.0				Honshu, Japan				
		eS	41 20			18	KJN	ePKP	22 00 12		
	KJN	eP	02 37 32					iSKP	02 50.2		
		i	34.5				SOD	eSKP	22 02 41		
		ePP	38 27				KEV	iSKP	22 02 34.8		
	OUL	eP	02 37 48				H: 21 41 58.3				
	SOD	eP	02 38 01				22.1 S, 179.6 W, 553 km				
	KEV	eP	02 38 23				South of Fiji Islands				
	H: 02 31 35.4					19	NUR	eP	02 20 42		
	35.2 N, 23.1 E, 43 km							e	21 48		
	Crete					19	NUR	eP	08 35 46		
18	NUR	eP	03 39 05				KJN	iP	08 35 34.2	0.7	6.9
	SOD	eP	03 40 07					i	45.1		
	H: 03 33 34							i	36 05.5		
	35.3 N, 23.0 E, 33 km (R)						OUL	eP	08 35 41		
	Crete						SOD	eP	08 35 49		
18	NUR	iP	05 10 30.2	1.0	36.0		H: 08 28 18				
							43.7 N, 85.8 E, 33 km (R)				
							Northern Sinkiang, China				

November				November			
				T	A		
19	NUR	iP	12 18 10.2 U	1.2	299.3		
		i	14.8				
		iPcP	36.2				
		i	20 01.2				
		iPP	41.6				
		eS	27 17				
		ePS	40				
		e	28 28				
		eSS	31 52				
		e	35 28				
	KJN	iP	12 17 49.8 U				
		iPP	20 15.0				
		i	49.8				
		eS	26 43				
	OUL	iP	12 17 49.9				
		iPP	20 14.2				
	SOD	iP	12 17 38.7 U				
		i	18 29.0				
		iPP	20 02.3				
	KEV	iP	12 17 29.8 U	1.1	122.0		
		i	42.4				
		eS	26 00				
		ePS	22				
		eScS	27 20				
		eSS	30 16				
		e	32				
	H: 12 06 59.5						
	36.4 N, 141.1 E, 41 km (R)						
	Honshu, Japan						
19	NUR	iP	15 32 58.0 D	0.7	6.5		
		i	33 07.3				
		e	36 04				
	KJN	iP	15 32 46.3	0.7	7.5		
		i	56.3	0.8	26.9		
		i	36 03.0				
	OUL	i	15 32 59.4				
	SOD	eP	15 32 45				
		e	55				
	H: 15 20 27						
	11.5 N, 125.4 E, 69 km						
	Samar, P.I.						
19	NUR	iPKP	17 48 37.7	1.2	31.4		
		i	49 01.0				
		ePP	51 12				
		eSKP	52 13				
		e	26				
		e	54 20				
		e	56 24				
		eSKSP	18 01 18				
		ePPS	03 14				
		e	04 28				
		e	09 20				
	cont.						
		eSS	10 19				
		eSSS	14 08				
		e	18 20				
	KJN	iPKP	17 48 32.4	0.7	9.6		
		i	39.2				
		iPKS	52 00.2				
		e	16				
	OUL	ePKP	17 48 32				
	SOD	ePKP	17 48 31				
	KEV	iPKP	17 48 22.5				
		ePP	50 24				
		e	48				
		ePKS	51 40				
		eSKSP	18 00 28				
		e	03 18				
		eSS	07 48				
		eSSS	12 04				
		e	16 08				
	H: 17 29 20.9						
	22.6 S, 170.9 E, 33 km (R)						
	Loyalty Islands						
20	NUR	eP	06 50 18				
20	NUR	iP	10 25 12.3 D	0.8	66.2		
		ePP	27 11				
	KJN	iP	10 24 47.3 D	0.8	36.1		
		epP	26 22				
	OUL	iP	10 24 44.9 D				
	SOD	iP	10 24 31.2 D				
	KEV	iP	10 24 17.8 D	0.6	12.8		
		e	47				
	H: 10 15 43.0						
	51.2 N, 151.3 E, 426 km						
	Sea of Okhotsk						
20	NUR	iP	11 00 02.4 D	1.0	42.0		
		i	19.7				
	KJN	iP	10 59 43.4 D	0.9	28.6		
		e	11 02 07				
	OUL	iP	10 59 44.0				
	SOD	iP	10 59 34.3				
		e	47				
	KEV	iP	10 59 26.3	1.0	26.7		
		e	11 00 20				
	H: 10 48 31.8						
	32.0 N, 140.9 E, 65 km (R)						
	South of Honshu, Japan						
20	OUL	iP	13 48 09.2				
	H: 13 35 28.7						
	12.9 N, 143.4 E, 145 km						
	South of Mariana Islands						



November						November						
				T	A					T	A	
21	NUR	iP	09 04	21.4	0.8	15.8	21	KJN	eP	19 22	13	
		i		30.5					i		15.4	
	KJN	iP	09 04	43.2 U	1.0	25.1			eS	24	10	
		i		54.2				OUL	eP	19 21	55	
	OUL	eP	09 04	42				SOD	eP	19 21	35	
	SOD	iP	09 04	54.2 D					eS	22	59	
	KEV	iP	09 05	05.0 D	0.7	14.5			e	23	15	
		i		16.7				KEV	eP	19 21	17	
									eS	22	24	
	H: 08 53 22.4											
	0.1 N, 17.1 W, 33 km (R)											
	North of Ascension Island											
21	OUL	eP	15 10	45			21	NUR	eP	19 47	04	
								KJN	iP	19 46	27.7	
	H: 15 00 52											
	56.9 N, 152.3 W, 33 km (R)											
	Kodiak Island											
21	NUR	iP	15 11	38.8					i		30.6	
	KJN	iP	15 11	54.5	0.8	7.7			eS	48	17	
	OUL	iP	15 12	05.2 D				OUL	eP	19 46	11	
	H: 15 04 54.7											
	30.8 N, 50.4 E, 33 km (R)											
	Iran											
21	NUR	iP	17 05	37.3 U	0.9	75.6	21			19 45	30	
		e		06 16					H:	19 43	48	
		eS		07 55					71.4 N, 6.8 E, 33 km (R)			
		e		08 16					Norwegian Sea			
		eT		12 43				22	NUR	iP	04 10	19.2
		eLR	17 09	.1					KJN	eP	04 10	06
	KJN	iP	17 05	01.5						e		39
		i		06 48.2					SOD	eP	04 10	14
		eS		52					H: 04 03 57.1			
		e		07 41					49.9 N, 77.3 E, 0 km (R)			
		iT		11 30.4					Eastern Kazakh SSR			
	OUL	iP	17 04	44.6				22	NUR	iP	06 01	31.4
		iS		06 21.6					KJN	eP	06 01	08
		eT		10 58					Moscow:			
		eS		06 14.4					H: 05 50 44			
		eT		10 27					43.5 N, 148.9 E			
	SOD	iP	17 04	21.8					Kurile Islands			
		i		23.2				22	NUR	iP	06 21	21.0
		e		05 19					KJN	iP	06 21	45.4
		eS		06 49					Moscow:			
		i		06 14.4					H: 06 16 10			
		eT		10 27					39.2 N, 40.6 E			
	KEV	eP	17 03	59					Turkey			
		i		04 22.8				22	OUL	ePKP	10 52	20
		e		28					H: 10 33 14.7			
		e		50					59.6 S, 26.4 W, 33 km (R)			
		eS		05 15					South Sandwich Islands			
		e		24				22	NUR	iPKP	15 38	46.9
		eT		07 54						i		52.9
		eLR	17 05	.7						ePKS	42	12
	H: 17 02 25.0											
	72.7 N, 8.5 E, 33 km (R)											
	Norwegian Sea											
										e	43	07
										eSKSP	51	12
										eSS	59	20

cont.



November				T	A	November				T	A	
	KEV	ePKP	06 00 25	0.9	21.8		eSS	34 00				
			H: 05 42 14.0				KJN	iP	00 19 17.1			
			16.4 S, 177.9 W, 428 km (R)					i	27.3			
			Fiji Islands				OUL	iP	00 19 19.2			
24	NUR	iP	11 26 46.0				SOD	iP	00 19 12.4 U			
		eS	37 12				KEV	iP	00 19 06.9 U	0.7	50.3	
	KJN	iP	11 26 35.1					i	12.0			
		i	46.4					ePP	21 36			
	OUL	i	11 26 49.4					eS	28 05			
	SOD	e	11 26 40					H: 00 08 09.8				
			H: 11 14 18					28.6 N, 130.0 E, 33 km (R)				
			11.6 N, 125.7 E, 101 km					Ryukyu Islands				
			Samar, P.I.									
24	KJN	eSn	11 29 00			26	NUR	iP	03 07 17.1			
		eSg	43					i	10 21.0			
	OUL	e(P)	11 27 38					i	37.0			
		iSn	28 33.8					iPP	11 07.5			
		iSg	29 06.8					eSKS	17 38			
	SOD	eSn	11 28 05					e	19 28			
		eSg	28				KJN	iP	03 07 12.3 U	0.9	53.6	
	KEV	eSg	11 28 19					i	18.5			
								i	56.1			
								e	10 26			
24	OUL	eP	18 42 49					ePP	11 06			
			H: 18 32 32.8					eSKS	17 32			
			52.8 N, 166.9 W, 33 km (R)				OUL	iP	03 07 16.7 U			
			Fox Islands				SOD	eP	03 07 16			
								i	29.0			
								i	34.1			
24	NUR	iP	18 59 45.0					e	10 22			
	KJN	iP	18 59 35.1 U	0.8	31.5			e	59			
	OUL	iP	18 59 37.9 U				KEV	iP	03 07 17.0	0.7	18.1	
	SOD	iP	18 59 34.1 U					i	24.8			
	KEV	eP	18 59 31					eSKS	17 35			
			H: 18 46 53					ePS	19 40			
			5.9 N, 126.5 E, 111 km					H: 02 53 57.8				
			Mindanao, P.I.					8.1 S, 112.9 E, 80 km (R)				
								Java				
25	NUR	eP	16 10 39			26	NUR	iP	03 29 41.4			
			H: 16 01 46.1					i	44.3			
			14.6 N, 52.1 E, 39 km					i	30 25.2			
			Eastern Gulf of Aden				KJN	iP	03 30 19.0 U	0.8	36.1	
								i	25.9			
								e	31 17			
26	NUR	iP	00 19 34.0				OUL	iP	03 30 26.6			
		e	22 25				SOD	iP	03 30 47.4 U			
		eS	28 52					H: 03 24 57				
		ePS	29 24					39.4 N, 20.4 E, 44 km				
			cont.					Greece-Albania border				

November

November

				T	A					T	A
26	NUR	iP	08 21 33.8			27	NUR	iP	04 37 01.7		
		eS	30 05					i	07.2		
		eSS	33 52					eS	45 16		
	KJN	iP	08 21 10.1	1.0	53.4		KJN	iP	04 36 38.1 U	1.0	16.4
		i	15.3					i	54.2		
		e	26					i	37 17.2		
	OUL	iP	08 21 02.0				OUL	eP	04 36 29		
	SOD	iP	08 20 46.4 U				SOD	iP	04 36 13.8		
		i	52.8					i	19.1		
	KEV	iP	08 20 30.0 D	0.9	25.2		KEV	eP	04 35 58		
		i	42.7					i	36 12.7		
		eS	28 10					eS	43 12		
	H: 08 11 06.3						H: 04 27 02.4				
	56.6 N, 152.2 W, 28 km						60.3 N, 140.8 W, 16 km				
	Kodiak Island						Southeastern Alaska				
26	NUR	eP	08 32 37			27	NUR	iP	05 20 47.2		
	H: 08 22 13						KJN	iP	05 20 34.0	1.1	20.3
	56.8 N, 151.7 W, 33 km (R)						H: 05 09 22.7				
	Kodiak Island						40.0 N, 104.7 W, 5 km (R)				
							Colorado				
26	OUL	iP	08 36 31.0			27	KJN	eP	09 26 07		
	H: 08 26 38						OUL	iP	09 26 03.8		
	56.7 N, 151.5 W, 33 km (R)						H: 09 16 16.0				
	Kodiak Island						52.3 N, 159.7 E, 33 km (R)				
							Kamchatka				
26	NUR	eP	11 07 00			27	NUR	iP	13 13 11.3		
	KJN	iP	11 06 50.3 D	0.7	13.7			i	20.6		
	OUL	iP	11 06 53.5 D					i	46.0		
	SOD	eP	11 06 50				KJN	iP	13 13 27.7 U	1.0	27.3
	KEV	iP	11 06 48.6 D	0.7	16.8			i	35.3		
		i	07 01.8				OUL	iP	13 13 37.2 U		
	H: 10 53 21.9							i	45.4		
	1.9 S, 127.8 E, 8 km						KEV	iP	13 14 05.6 U	0.9	25.2
	Halmahera							i	14.8		
							H: 13 04 16				
26	NUR	eP	11 36 17				14.1 N, 52.0 E, 33 km (R)				
	KJN	eP	11 35 43				Eastern Gulf of Aden				
	OUL	iP	11 35 29.7			27	NUR	eP	18 28 21		
	SOD	eP	11 35 00			27	NUR	iP	21 57 29.1	0.8	36.0
		i	05.9				KJN	iP	21 57 12.3	0.8	16.1
	KEV	e	11 34 46					i	15.6		
	H: 11 31 30						OUL	iP	21 57 13.8		
	80.9 N, 0.9 E, 33 km (R)						cont.				
	North of Svalbard										
26	NUR	eP	19 11 11								
		i	12.4								
	KJN	eP	19 11 02								
	SOD	eP	19 10 57								

November				November			
			T	A		T	A
	SOD	iP	21 57	06.7			
	KEV	iP	21 57	00.8			
	H: 21 46 02.9						
	28.5 N, 129.6 E, 17 km						
	Ryukyu Islands						
27	NUR	iP	22 02	33.2			
		i		36.2			
28	KJN	iP	00 40	25.8	0.6		9.6
28	NUR	iP	02 47	52.2	1.0		136.0
		i		48 11.6			
		ipP		24.5			
		eS		56 48			
		esS		57 35			
		e	03 01	52			
		esSS		02 12			
		eSSS		05 18			
		e		56			
	KJN	iP	02 47	33.1 U	1.1		13.2
		ipP		48 05.8			
		ipPP		50 33.8			
	OUL	iP	02 47	35.0			
		ipP		48 02.2			
		i		10.6			
	SOD	iP	02 47	27.1 U			
		ipP		56.3			
		e		48 36			
	KEV	iP	02 47	20.2 D	1.0		80.0
		ipP		52.1			
		i		48 02.0			
		eS		55 44			
		e		56 40			
	H: 02 36 54.1						
	32.1 N, 130.8 E, 125 km (R)						
	Kyushu, Japan						
28	NUR	iP	03 05	34.0			
28	NUR	iP	04 23	51.5			
	KJN	iP	04 23	33.3	0.7		10.3
	OUL	iP	04 23	33.8			
	SOD	iP	04 23	25.3			
	KEV	iP	04 23	18.2			
	H: 04 13 05.8						
	30.5 N, 137.5 E, 495 km						
	South of Honshu, Japan						
28	NUR	eP	18 15	07			
		i		15.3			
28	NUR	iP	20 30	05.4			
	KJN	iP	20 29	41.9	1.0		29.4
		i		51.0			
	OUL	iP	20 29	32.8			
	SOD	iP	20 29	18.2			
	H: 20 19 36.8						
	56.6 N, 152.1 W, 14 km						
	Kodiak Island						
29	OUL	eP	01 34	59			
	H: 01 23 34.5						
	18.4 N, 62.4 W, 58 km						
	Leeward Islands						
29	KJN	eP	05 25	56			
	OUL	eP	05 26	04			
	H: 05 19 01						
	36.4 N, 70.8 E, 228 km						
	Hindu Kush						
29	OUL	eP	07 31	24			
	H: 07 21 57						
	48.5 N, 151.0 E, 289 km						
	Kurile Islands						
29	KJN	iP	15 30	27.3	0.9		12.5
30	KJN	iP	03 36	43.0			
	H: 03 23 36						
	0.3 S, 125.1 E, 81 km						
	Molucca Sea						
30	NUR	iP	07 28	14.8			
		e		52			
		e		31 28			
		eS		45			
		eLR		07 33.1			
	KJN	iP	07 28	55.0 U	1.1		139.1
		iS		33 06.2			
	OUL	iP	07 29	02.3 U			
		i		07.2			
	SOD	iP	07 29	23.6			
		i		28.7			
	KEV	iP	07 29	49.5 U	1.2		179.6
		i		30 06.8			
		e		36			
		eS		34 48			
	H: 07 23 51.5						
	41.5 N, 20.5 E, 29 km						
	Albania						

November

T A

30 NUR eP 07 40 42

30 NUR eP 07 47 17  
KJN eP 07 47 56  
OUL iP 07 48 02.5  
H: 07 42 53  
41.3 N, 20.5 E, 33 km (R)  
Albania

30 NUR eP 07 58 12  
KJN eP 07 58 53  
i 57.0  
OUL eP 07 59 00  
i 03.5  
H: 07 53 49  
41.3 N, 20.5 E, 33 km (R)  
Albania

30 NUR eP 08 17 40  
KJN iP 08 18 23.1  
OUL eP 08 18 30  
H: 08 13 20  
41.7 N, 20.8 E, 33 km (R)  
Albania

November

T A

30 NUR eS 11 35 32  
e 36 34  
e 39 52  
KEV eS 11 36 50  
e 47 28

30 KJN iSg 11 51 32.8  
OUL eSg 11 51 33

30 NUR ePKP 16 05 43  
i 52.1  
iSKP 08 26.0  
KJN iPKP 16 05 45.1 0.8 18.5  
iSKP 08 13.0  
OUL iPKP 16 05 43.9  
iSKP 08 11.0  
SOD eSKP 16 08 03  
H: 15 47 44.2  
17.9 S, 178.3 W, 629 km  
Fiji Islands

October 1, 1968

M. T. Porkka  
Aili Huovila



21 OCT 1968

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Helsinki, Finland  
Prel. Bull. 1967

December

T A

1 KJN iP 07 31 20.1  
OUL eP 07 31 24  
H: 07 18 22.7  
2.3 N, 127.1 E, 95 km  
Molucca Passage

1 KJN eP 10 58 08  
OUL eP 10 58 12  
H: 10 45 41  
11.6 N, 126.0 E, 33 km (R)  
Philippine Islands

1 NUR iP 14 07 15.8 0.8 148.1  
epP 54  
ePP 09 38  
e 10 08  
epPP 20  
ePPP 11 00  
e 12 16  
eS 15 34  
esS 16 12  
eScS 52  
eSS 19 40  
eSSS 23 08  
eLR 14 27.0  
KJN iP 14 06 50.8 U 1.1 256.5  
ipP 07 25.3  
iPP 09 01.7  
OUL iP 14 06 48.0  
ipP 07 26.7  
iPcP 37.2  
SOD iP 14 06 34.4 U  
ipP 07 13.0  
i 22.7  
KEV iP 14 06 20.7 U 1.2 265.1  
i 39.7  
ipP 58.6  
iPcP 07 16.6  
i 08 03.8  
iPP 26.6  
esPP 09 24  
ePPP 52  
eS 13 52  
eScS 15 52  
eSS 18 24  
esSS 19 24  
eLR 14 23.0  
H: 13 57 02.4  
49.5 N, 154.4 E, 136 km (R)  
Kurile Islands

1 NUR iP 16 49 46.2  
cont.

December

T A

KJN eP 16 49 41  
H: 16 36 43.0  
5.9 S, 105.5 E, 31 km  
Sunda Strait

1 NUR eP 20 12 16  
KJN eP 20 13 00  
e 21  
OUL iP 20 13 04.6  
SOD eP 20 13 26  
H: 20 07 50.9  
41.2 N, 20.1 E, 33 km  
Albania

2 NUR eP 00 28 40  
KJN iP 00 29 21.7 U 0.9 21.4  
OUL iP 00 29 28.9 D  
SOD iP 00 29 50.7 D  
H: 00 24 16  
41.3 N, 20.6 E, 29 km  
Albania

2 OUL eP 00 43 47  
SOD eP 00 43 42  
KEV eP 00 43 38 0.9 21.8  
H: 00 31 18.9  
24.1 N, 108.6 W, 33 km (R)  
Gulf of California

2 KJN eP 09 32 13  
OUL eP 09 32 22  
H: 09 27 10  
41.4 N, 20.3 E, 33 km  
Albania

2 NUR iP 12 49 09.0 U  
KJN iP 12 49 49.2 U 0.8 111.5  
i 56.0  
OUL iP 12 49 57.2 U  
ePcP 53 38  
SOD iP 12 50 18.2 D  
i 36.4  
i 51 05.8  
KEV iP 12 50 40.3 1.0 52.0  
H: 12 44 42.7  
41.3 N, 20.3 E, 17 km  
Albania

2 OUL eP 14 23 15  
H: 14 18 05  
41.4 N, 20.1 E, 33 km (R)  
Albania

December		T	A	December		T	A
2	OUL eP 14 59 35 H: 14 49 45 56.7 N, 155.5 W, 33 km (R) Alaska Peninsula			3	NUR iP 22 13 54.3 i 14 01.3 i 17 41.7 KJN eP 22 14 44 e 18 17		
2	NUR iPKP 17 42 11.8 1.0 54.9 ipPKP 53.7 KJN iPKP 17 42 02.8 0.7 15.8 OUL iPKP 17 42 03.0 D epPKP 47 SOD iPKP 17 41 58.0 KEV ePKP 17 41 57 0.9 26.9 H: 17 22 39.1 38.5 S, 175.9 E, 166 km North Island, N.Z.				BCIS: H: 22 10 54 48.7 N, 17.5 E Carpatians		
2	KJN eP 20 06 08 eS 08 04 OUL e(P) 20 05 57 e 07 32 iS 40.2 SOD eP 20 05 21 iS 06 48.0 KEV eS 20 05 57			4	KJN eP 03 52 38 NUR eSg 05 02 17 KJN eSg 05 00 34 OUL iPn 04 59 41.6 i 47.9 iSn 05 00 06.6 SOD iPn 04 59 35.8 iSn 57.5 KEV ePg 05 00 09 eSn 42		
2	NUR iP 20 15 48.0 i 52.2 i 16 28.0 KJN iP 20 15 30.6 1.0 21.8 i 34.7 OUL eP 20 15 37 SOD iP 20 15 27.6 i 31.2 KEV eP 20 15 22 H: 20 05 52.4 37.8 N, 115.2 E, 13 km Northeastern China			4	NUR iP 08 28 46.7 KJN iP 08 28 21.5 U 0.8 11.5 OUL iP 08 28 14.4 i 40.9 SOD eP 08 27 57 H: 08 19 08.5 62.4 N, 151.8 W, 96 km Central Alaska		
2	NUR iP 23 12 03.5 KJN eP 23 12 42 OUL eP 23 12 48			4	NUR iP 08 58 36.8 BCIS: H: 08 54 00 48.7 N, 17.5 E Carpatians		
3	NUR eP 18 03 49 OUL eP 18 04 38 SOD eP 18 05 03			4	SOD iP 08 59 45.3 KEV eP 08 59 27 H: 08 48 45.2 43.7 N, 127.4 W, 33 km (R) Off coast of Oregon		
3	NUR iP 21 34 26.1 KJN eP 21 35 09 OUL eP 21 35 15 SOD eP 21 35 35 H: 21 30 00.3 42.5 N, 13.2 E, 33 km (R) Central Italy			4	NUR eP 12 08 44 OUL iP 12 08 14.6 U H: 11 57 54.7 51.1 N, 178.3 E, 33 km (R) Rat Islands		
				4	NUR iP 15 42 41.2 0.8 28.2 i 43 52.0 KJN iP 15 42 41.1 1.0 28.3 OUL iP 15 42 50.8		

cont.





December

			T	A
6	NUR iP	15 07 29.0		
	KJN iP	15 07 06.4	0.9	19.6
	OUL eP	15 07 06		
	SOD eP	15 06 54		
	H: 14 56 37.1			
	40.9 N, 143.0 E, 31 km			
	Honshu, Japan			
7	NUR iP	07 35 16.7		
	i	33.2		
	KJN iP	07 34 52.7	1.0	33.8
	OUL iP	07 34 46.6 D		
	SOD eP	07 34 30		
	KEV iP	07 34 13.8	0.8	14.4
	H: 07 24 28.5			
	52.9 N, 166.7 W, 31 km			
	Fox Islands			
7	OUL e	09 38 17		
	eSg	39 31		
	SOD e	09 38 00		
	eSn	35		
	KEV e	09 38 04		
	eSn	48		
7	NUR ePKP	10 00 09		
	H: 09 41 14.1			
	16.7 S, 174.1 W, 120 km (R)			
	Tonga Islands			
7	NUR iPKP	10 08 23.6	1.0	68.6
	ipPKP	09 09.7		
	KJN iPKP	10 08 16.3	0.6	17.1
	OUL iPKP	10 08 16.6 U		
	e	33		
	epPKP	56		
	SOD ePKP	10 08 14		
	KEV iPKP	10 08 09.2	0.9	28.6
	H: 09 49 37.0			
	14.6 S, 167.3 E, 151 km			
	New Hebrides Islands			
7	KJN eP	18 08 40		
	OUL eP	18 08 46		
	SOD eP	18 09 08		
	H: 18 03 36			
	41.3 N, 20.2 E, 33 km (R)			
	Albania			
7	NUR iPKP	20 47 42.7	1.0	74.5
	KJN iPKP	20 47 30.4	1.2	22.4
	OUL ePKP	20 47 32		
	H: 20 28 46.0			
	30.8 S, 179.7 W, 366 km			
	Kermadec Islands			

December

			T	A
8	NUR iP	06 10 22.0		
	i	39.5		
	e	53		
	KJN iP	06 10 08.5 U	0.6	37.7
	i	44.6		
	OUL iP	06 10 16.1		
	SOD iP	06 10 16.0 U		
	KEV iP	06 10 18.7	0.7	16.8
	H: 06 03 57.1			
	49.8 N, 78.2 E, 0 km			
	Eastern Kazakh SSR			
8	KJN eP	14 03 23		
	i	31.5	1.1	37.8
8	OUL iP	18 36 12.2 D		
8	NUR eP	20 04 49		
	KJN iP	20 04 37.5		
	i	44.4	0.8	13.8
	OUL eP	20 04 48		
	SOD eP	20 04 32		
	Moscow:			
	H: 19 52 09			
	11.3 N, 126.5 E			
	Timor Sea			
8	NUR eP	23 38 31		
	KJN iP	23 38 20.9	0.8	10.0
	e	41 46		
9	NUR iP	03 14 14.0		
	i	20.1	1.0	30.6
	KJN eP	03 14 57		
	i	15 06.6		
	OUL eP	03 15 02		
	e	13		
	SOD eP	03 15 24		
	i	41.4		
	H: 03 09 52			
	42.0 N, 16.5 E, 33 km (R)			
	Adriatic Sea			
9	NUR iP	05 03 10.8		
	H: 04 56 14.3			
	36.3 N, 70.8 E, 225 km			
	Hindu Kush			
9	NUR ePKP	05 46 46		
	i	57.2		
	iSKP	49 39.0		
	KJN ePKP	05 46 42		
	i	51.1	0.8	13.8
	iSKP	49 27.8		
	cont.			



December				December			
		T	A			T	A
11	NUR eP	00 01 52		KJN iP	22 39 32.8 U	1.0	74.1
	H:	23 52 17		i	38.1		
		17.4 N, 73.7 E, 33 km (R)		i	47.2		
		India		OUL iP	22 39 42.8 D		
				e	53		
11	NUR iP	12 27 47.5		SOD iP	22 39 56.3		
	KJN iP	12 27 36.3	1.0	e	41 13		
	i	46.0	21.8	KEV iP	22 40 10.3	1.1	111.9
	OUL eP	12 27 39		ePP	42 21		
	SOD eP	12 27 45		e	43 29		
				eS	48 12		
11	NUR eP	15 58 19		H:	22 30 18.3		
	SOD eP	15 57 38			13.6 N, 51.6 E, 33 km (R)		
					Eastern Gulf of Aden		
11	NUR iP	17 46 20.4					
11	NUR iP	19 14 09.2		11	NUR iP	22 45 46.0	
	H:	19 05 02			KJN eP	22 45 43	
		14.9 N, 56.0 E, 33 km (R)			H:	22 33 02	
		Arabian Sea				5.3 S, 102.5 E, 93 km	
						Southern Sumatra	
11	NUR iP	19 57 42.0	0.9	11	NUR iP	23 13 11.8	
	eS	20 04 52	31.2		KJN eP	23 12 48	
	eSS	08 44			eS	15 24	
	KJN iP	19 57 58.2 D			OUL eP	23 12 32	
	iPP	59 54.7			iS	14 59.3	
	OUL iP	19 58 08.2 D			SOD eP	23 12 15	
	SOD eP	19 58 21		12	NUR iP	06 28 10.2	1.0
	KEV iP	19 58 35.3	1.3		KJN iP	06 28 14.7	0.8
	H:	19 48 43.3	54.6		OUL iP	06 28 24.0 U	10.0
		13.7 N, 51.6 E, 33 km (R)			SOD iP	06 28 31.3 D	
		Eastern Gulf of Aden			KEV iP	06 28 40.8 U	0.8
					H:	06 18 37.9	24.5
11	NUR ePKP	20 00 15				17.6 N, 73.9 E, 29 km	
	KJN ePKP	20 00 07				India	
	H:	19 40 53.3		12	NUR ePKP	08 25 32	
		20.6 S, 174.3 W, 33 km (R)			ePP	28 13	
		Tonga Islands			ePKS	29 10	
11	NUR iP	20 59 24.2			KJN iP	08 25 32.1	0.9
	KJN iP	20 59 29.3	1.2		H:	08 06 16.7	10.7
	OUL eP	20 59 38	20.6			22.7 S, 171.1 E, 39 km	
	SOD iP	20 59 45.0				Loyalty Islands	
	KEV iP	20 59 54.5	0.9				
	H:	20 49 48.5	13.4				
		17.3 N, 73.7 E, 11 km		12	NUR eP	10 22 04	
		India			OUL eP	10 21 54	
					SOD eP	10 21 46	
11	NUR eP	21 56 12			H:	10 10 34.6	
						23.8 N, 123.3 E, 46 km	
						Ryukyu Islands	
11	NUR iP	22 39 16.7	1.0				
	e	41 24	86.0	12	NUR eP	14 31 38	
	eS	46 28			SOD eP	14 31 17	
	eSS	50 25					
		cont.				cont.	

December

T A

KEV eP 14 31 13

Moscow:

H: 14 19 28

16.6 N, 122.1 E

Philippine Islands

12 NUR iP 15 58 29.5  
OUL eP 15 58 42  
SOD iP 15 58 50.0 U  
KEV iP 15 58 59.8 U  
H: 15 48 55.5  
17.4 N, 73.9 E, 27 km  
India

12 NUR iP 17 05 22.1  
i 06 19.0

13 NUR eP 09 11 39  
H: 09 00 31.9  
40.7 N, 143.4 E, 12 km  
Honshu, Japan

13 NUR iP 10 48 45.2 U 0.8 108.0  
ePcP 49 24  
ePPP 52 48  
KJN iP 10 48 21.0 U 0.7 78.8  
i 36.3  
iPcP 49 04.2  
i 43.9  
OUL iP 10 48 18.6 U  
SOD iP 10 48 05.8 U  
iPcP 55.8  
iPP 50 14.0  
KEV iP 10 47 52.7 U 0.7 51.6  
iPcP 48 48.7  
H: 10 38 23.4  
47.6 N, 152.6 E, 124 km  
Kurile Islands

13 NUR iP 11 08 35.0  
KJN iP 11 08 11.1 0.7 13.0  
e 09 20  
OUL iP 11 08 07.8 U  
SOD eP 11 07 53  
H: 10 58 21.6  
49.4 N, 154.5 E, 138 km  
Kurile Islands

13 NUR iP 15 48 51.5  
KJN iP 15 48 42.2 D 0.7 11.0  
i 49 42.5  
OUL eP 15 48 44  
cont.

December

T A

SOD iP 15 48 41.0 D

e 49 03

H: 15 36 00.7

5.3 N, 125.9 E, 108 km

Mindanao, P.I.

13 NUR iP 17 57 43.4 0.6 35.0  
e 59

KJN iP 17 57 19.8 D 0.6 18.5  
OUL iP 17 57 18.3  
SOD iP 17 57 06.2 U  
KEV iP 17 56 54.7 0.6 15.0  
H: 17 47 51.2  
47.1 N, 145.7 E, 312 km  
Sea of Okhotsk

13 NUR iP 19 26 06.1  
i 21.5 0.8 86.4  
i 35.5  
ePP 28 40  
i 29 19.4  
ePKS 47  
e 30 10  
e 35 48  
e 40 24  
eSS 46 40  
KJN iP 19 26 08.4  
i 15.1 0.7 56.9  
i 26.7  
e 28 17  
ePKS 29 36  
OUL ePKP 19 26 08  
i 14.3  
i 28.8  
eSKP 29 33  
SOD iP 19 26 10.4  
eSKP 29 34  
KEV iP 19 26 08.0 D 0.8 63.4  
ePP 27 48  
ePS 37 53  
eSS 44 34  
H: 19 07 14.4  
19.1 S, 168.7 E, 51 km  
New Hebrides Islands

13 NUR iP 21 53 13.3  
i 25.5  
iSKP 56 04.0  
KJN iP 21 53 18.1 0.5 11.8  
OUL iP 21 53 17.5  
H: 21 35 11.4  
17.7 S, 178.1 W, 562 km  
Fiji Islands





December				December			
		T	A		T	A	
18	NUR eP	22 55 44		20	NUR eP	05 56 15	
	e	56 14			H: 05 45 30		
	KJN eP	22 56 00			43.2 N, 146.2 E, 33 km (R)		
	OUL iP	22 56 08.7			Kurile Islands		
	SOD iP	22 56 25.7		20	NUR iP	11 45 26.8	1.1 39.1
	KEV eP	22 56 43			i	35.0	
	H: 22 49 27.6				e	48 24	
	33.6 N, 46.9 E, 39 km				eS	54 22	
	Iran-Iraq border				ePS	54	
19	NUR iP	03 30 56.2 D	0.6 26.8		KJN eP	11 45 23	
	i	31 40.5			OUL iP	11 45 30.1	
	ePP	32 18			i	38.3	
	KJN iP	03 30 54.7 D	0.5 19.1		SOD iP	11 45 33.2 U	
	i	31 24.3			i	41.3	
	iPP	32 13.5			i	51.0	
	iPcP	33 11.0			KEV iP	11 45 37.2 U	0.8 23.0
	OUL iP	03 31 03.1			i	46 14.8	
	SOD eP	03 31 10			eS	54 40	
	KEV e	03 31 54			e	55 12	
	e	32 42			eSS	59 44	
	H: 03 23 49.6				H: 11 34 25.9		
	37.5 N, 72.0 E, 89 km				11.8 N, 93.0 E, 61 km		
	Tadzhik SSR				Andaman Islands		
19	KJN iP	06 06 32.8		20	NUR iP	12 12 28.3	0.5 21.6
	H: 05 55 41			20	NUR eP	16 51 19	
	29.1 N, 139.8 E, 363 km				SOD eP	16 51 11	
	South of Honshu, Japan			20	NUR iP	17 26 38.4 D	0.9 44.7
19	NUR iP	08 36 56.9	0.7 10.1		epPKP	27 16	
	i	37 01.4			KJN iP	17 26 31.6 D	0.8 22.3
	i	26.7			i	42.3	
	KJN iP	08 37 36.0	0.6 17.8		OUL iP	17 26 30.8	
	OUL eP	08 37 44			epPKP	27 09	
	SOD eP	08 38 05			SOD iP	17 26 27.3 D	
	H: 08 32 30.9				KEV iP	17 26 23.8 D	0.8 27.4
	41.5 N, 20.4 E, 19 km				H: 17 07 49.1		
	Albania				15.1 S, 167.4 E, 135 km		
19	NUR eP	13 57 12			New Hebrides Islands		
19	NUR eP	14 51 27		20	NUR eP	18 11 41	
	H: 14 40 41.3				SOD eP	18 10 56	
	51.7 N, 176.9 W, 59 km			20	NUR eP	23 52 50	
	Andreanof Islands				SOD eP	23 53 02	
20	NUR eP	01 47 05		21	NUR iP	00 13 55.3	1.0 18.0
	KJN iP	01 46 48.8	0.8 10.0		KJN iP	00 14 36.8	1.3 43.4
	SOD eP	01 46 46			i	45.4	
	Moscow:				OUL eP	00 14 47	
	H: 01 37 13				cont.		
	35.9 N, 111.6 E						
	China						





December

December

T A

T A

SOD eP 00 15 08  
H: 00 09 39.0  
42.1 N, 20.7 E, 19 km  
Yugoslavia

21 NUR iP 11 50 07.1 U 0.8 31.7  
i 56.9

eS 12 00 36  
KJN iP 11 50 10.6 U 0.9 42.0  
i 51 24.4

OUL iP 11 50 05.7 D

SOD iP 11 50 05.7 D

KEV eP 11 50 03

H: 11 37 22.5

7.0 N, 72.1 W, 33 km (R)  
Northern Colombia

21 NUR eP 02 39 57  
e 40 11  
e 43 42  
ePP 44 25  
i 30.1  
ePPP 46 40  
e 47 10  
eSKS 50 32  
eS 52 08  
ePS 54 00  
ePKKP 55 05  
i 19.3

21 NUR ePKP 12 00 35  
eSKP 03 14

KJN ePKP 12 00 32

eSKP 03 04

OUL ePKP 12 00 32

SOD iSKP 12 02 59.1

H: 11 42 25

21.1 S, 179.2 W, 606 km  
Fiji Islands

KJN e(P) 02 40 12  
i 28.2  
iPKP 44 00.0  
i 21.5  
iPP 48.4  
e 47 45  
e 49 47  
ePKKP 54 48  
i 55 01.2

21 NUR eP 12 37 54

KJN eP 12 38 18

SOD eP 12 37 42

OUL e(P) 02 40 13  
iPKP 43 57.5  
ePP 44 34  
e 58  
ePKKP 54 47  
e 55 03

21 NUR iP 16 22 58.3 D 0.9 15.1

ePcP 23 35

e 24 30

KJN iP 16 22 33.5 0.9 13.4

iPcP 23 22.0

OUL eP 16 22 29

SOD iP 16 22 16.4

H: 16 12 30.7

49.1 N, 156.2 E, 53 km  
Kurile Islands

SOD e(P) 02 40 11  
iPKP 43 58.6  
ePP 44 43  
ePKKP 54 44  
e 55 06

21 OUL eP 16 26 40

H: 16 16 41.0

49.2 N, 156.2 E, 49 km

Kurile Islands

KEV eP 02 40 04  
ePKP 44 00  
ePP 41  
e 46 33  
ePPP 55  
eSKS 50 35  
eS 52 24  
ePS 54 19  
ePKKP 55  
eSS 03 00 24  
eSSS 04 28

21 NUR iPcP 18 05 36.2 1.1 35.7

i 38.3

i 56.7

KJN iPcP 18 05 26.6

i 35.1

e 06 20

OUL ePKP 18 05 28

SOD ePKP 18 05 21

e 31

H: 02 25 21.6  
21.8 S, 70.0 W, 33 km (R)  
Northern Chile

H: 17 45 54.4

31.7 S, 179.1 W, 23 km

Kermadec Islands

December				December			
			T	A		T	A
21	NUR	eP	22	35 28			
21	NUR	eP	23	54 18			
		eS	24	03 45			
	KJN	iP	23	54 13.5	0.8	15.4	
		i		30.6			
	OUL	iP	23	54 19.8			
		i		27.0			
		i		36.8			
	SOD	iP	23	54 22.3			U
		i		39.4			
	KEV	iP	23	54 26.2	0.6	10.0	
		i		43.8			
	H: 23 43 11.4						
	11.8 N, 93.1 E, 33 km						
	Andaman Islands						
22	OUL	ePKP	05	30 13			
	H: 05 11 09.7						
	58.7 S, 25.5 W, 33 km (R)						
	South Sandwich Islands						
22	NUR	eP	18	02 17			
		i		21.9	0.9	29.5	
22	NUR	iPKP	23	28 36.1	1.1	466.0	
		i		37.9			
		ePP		31 40			
	KJN	iPKP	23	28 26.0			
		i		30.5			
		i		30 23.5			
	OUL	iPKP	23	28 25.7			
	SOD	ePKP	23	28 19			
	KEV	ePKP	23	28 22			
	H: 23 08 58.0						
	29.9 S, 177.4 W, 22 km						
	Kermadec Islands						
23	NUR	eP	04	48 34			
23	NUR	ePS	13	52 10			
		eSS		58 40			
		eSSS	14	03 12			
	KEV	ePP	13	42 02			
		eSKS		48 16			
		ePS		51 05			
		eSS		57 12			
		eSSS	14	01 22			
	H: 13 23 15.0						
	5.2 S, 151.8 E, 61 km						
	New Britain						
23	SOD	eP	13	53 14			
23	NUR	iP	16	15 16.8			
		i		27.1			
	KJN	iP	16	14 52.3	U	0.9	18.8
	OUL	eP	16	14 50			
	SOD	iP	16	14 36.0			
	KEV	eP	16	14 23			
	H: 16 04 37.9						
	48.2 N, 157.3 E, 26 km						
	Kurile Islands						
23	NUR	iP	17	26 59.0			
		i		27 22.0			
	KJN	iP	17	26 48.5	U	0.7	30.8
		i		27 09.3			
	OUL	iP	17	26 52.2	U		
		i		27 11.4			
	SOD	iP	17	26 47.8			
		i		27 07.9			
	KEV	iP	17	26 44.2		0.8	11.5
		i		27 04.0			
	H: 17 14 37.6						
	11.0 N, 125.5 E, 154 km						
	Samar, P.I.						
23	OUL	eP	18	13 28			
	SOD	eP	18	12 58			
	KEV	eP	18	12 31			
23	NUR	iP	21	24 46.1			
24	NUR	iPKP	02	43 23.5			
		i		32.4			
		iSKP		46 25.4			
	KJN	iPKP	02	43 24.4			
		iSKP		46 14.3			
	OUL	iPKP	02	43 11.6			
		i		24.2			
	SOD	ePKP	02	43 20			
		eSKP		46 02			
	KEV	iPKP	02	43 16.0			
	H: 02 24 58.4						
	21.0 S, 178.0 W, 428 km						
	Fiji Islands						
24	NUR	iP	04	25 35.9			
		e		28 44			
		e		29 14			
	KJN	iP	04	25 07.5		1.5	253.1
	OUL	iP	04	24 52.5			
		i		25 05.8			
	SOD	iP	04	24 31.7			
	KEV	eP	04	24 17			
		i		24.2		0.9	25.2
		i		37.0			
		e		26 08			
	cont.						

December		T	A	December		T	A
	eLR	04	26.5				
	H:	04 22	01.2				
		71.9 N, 0.9 W,	33 km (R)				
		Jan Mayen Island					
24	NUR	iP	05 52 31.0				
24	NUR	eP	08 43 44				
	OUL	eP	08 43 16				
		i	34.8				
	SOD	eP	08 43 02				
		i	17.6				
	KEV	e	08 42 55				
		eS	49 39				
		e	53 08				
	H:	08 34	13.5				
		54.5 N, 142.5 E,	33 km (R)				
		Sakhalin Island					
24	OUL	eP	15 21 45				
		i	52.8				
	H:	15 11	53				
		57.3 N, 149.5 W,	33 km (R)				
		Gulf of Alaska					
24	NUR	iP	20 14 39.2 U	1.4	384.2		
		i	43.9				
		e	15 08				
		e	18 16				
		ePPP	19 05				
		e	22 16				
		eS	24 08				
		ePS	25 00				
		e	26 40				
		eSS	28 48				
	KJN	iP	20 14 46.1 D	1.3	154.1		
	OUL	iP	20 14 41.5 U				
	SOD	iP	20 14 41.5 U				
	KEV	iP	20 14 40.9 U	1.4	352.6		
		i	44.0				
		e	20 20				
		e	21 08				
		eS	24 09				
		ePS	50				
		eSS	28 32				
		e	30 00				
	H:	20 03	10.9				
		17.4 N, 61.1 W,	24 km				
		Leeward Islands					
24	NUR	iP	21 44 01.2 D	1.0	143.3		
		i	12.2				
		e	46 21				
		ePS	54 08				
		eSS	58 04				
			cont.				
	KJN	iP	21 44 07.6 D	1.1	193.1		
	OUL	iP	21 44 02.6				
	SOD	iP	21 44 02.4 D				
	KEV	iP	21 44 03.0 D	0.9	107.5		
		i	08.7				
		e	51 10				
		eS	53 44				
		e	56 20				
		eSS	58 12				
	H:	21 32	31.3				
		17.4 N, 61.3 W,	20 km				
		Leeward Islands					
24	NUR	iP	23 59 27.2	0.7	11.1		
	KJN	eP	23 59 31				
	SOD	iP	23 59 48.2				
	H:	23 49	54				
		17.5 N, 73.9 E,	33 km (R)				
		India					
25	NUR	eP	01 38 15				
		i	41 42.9				
		iPKP	42 05.4	0.9	43.5		
		i	08.0				
		iPP	50.9				
		i	43 14.1				
		eSKS	48 48				
		e	49 10				
		e	50 00				
		ePS	52 08				
		ePKKP	45				
		i	53 05.2				
		eSS	58 37				
	KJN	iP	01 37 56.5	0.8	16.1		
		i	38 06.4				
		ePKP	42 00				
		ePP	34				
		ePKKP	52 52				
		i	53 11.7				
		i	54 02.5				
		iSKKP	56 05.0				
	SOD	eP	01 37 49				
		i	54.0				
		iPKP	42 01.4				
		ePKKP	52 58				
		eSKKP	55 54				
	KEV	eP	01 37 43				
		i	41 15.4				
		ePKP	52				
		ePP	42 13				
		eSKS	48 28				
		eS	49 24				
		e	50 07				
		ePKKP	53 16				
		e	54 06				
			cont.				

December

December

			T	A				T	A
		eSS							
		eSSS							
		H: 01 23							
		5.3 S, 153.7 E, 64 km							
		New Ireland							
25	NUR	ePP	11 00 48						
		eSKS	06 32						
		e	07 35						
		e	08 14						
		ePS	10 00						
		ePPS	11 12						
		eSS	16 10						
		eSSS	20 16						
	KJN	ePKP	11 00 08						
	KEV	eSKS	11 06 36						
		eS	08 25						
		ePS	10 16						
		e	15 42						
		eSS	16 16						
		eSSS	20 20						
		H: 10 41							
		21.5 S, 70.4 W, 53 km (R)							
		Northern Chile							
25	NUR	eP	14 08 11						
	SOD	eP	14 07 59						
25	NUR	eP	21 30 53	1.4	39.2				
	KJN	eP	21 31 19						
	SOD	iP	21 31 29.5						
		H: 21 19							
		1.9 S, 12.7 W, 33 km (R)							
		North of Ascension Island							
25	NUR	iP	22 43 58.8						
	KJN	eP	22 43 42						
		i	48.3						
	OUL	eP	22 43 47						
26	NUR	eP	00 40 59						
	OUL	eP	00 40 41						
	SOD	eP	00 40 32						
		H: 00 29							
		32.5 N, 139.4 E, 196 km							
		South of Honshu, Japan							
26	NUR	eP	03 58 37						
		e	59 36						
26	NUR	ePP	09 11 56						
		eSS	28 08						
		H: 08 52							
		5.1 S, 153.7 E, 59 km							
		New Ireland							
26	NUR	iP	09 41 07.9			1.2	40.8		
		i	12.6						
	KJN	iP	09 40 49.4			0.9	8.9		
		i	54.5						
	OUL	eP	09 40 43						
	SOD	iP	09 40 28.3						
		H: 09 29							
		44.5 N, 129.7 W, 33 km (R)							
		Off coast of Oregon							
26	OUL	eP	10 00 59						
	SOD	eP	10 00 47						
		H: 09 49							
		44.5 N, 129.8 W, 33 km (R)							
		Off coast of Oregon							
26	NUR	eP	10 39 27			1.1	13.5		
	KJN	iP	10 39 12.9						
	OUL	eP	10 39 06						
	SOD	eP	10 38 50						
		H: 10 27							
		44.7 N, 129.7 W, 33 km (R)							
		Off coast of Oregon							
26	NUR	iP	10 52 10.0			1.4	39.2		
	KJN	iP	10 51 52.4			1.3	41.2		
	OUL	eP	10 51 45						
	SOD	iP	10 51 31.0						
	KEV	eP	10 51 19						
		i	32.2						
		H: 10 40							
		44.5 N, 129.7 W, 33 km (R)							
		Off coast of Oregon							
26	SOD	eP	11 00 14						
		H: 10 49							
		44.6 N, 129.6 W, 33 km (R)							
		Off coast of Oregon							
26	NUR	iP	14 54 09.5			1.0	45.1		
		i	22.2						
	KJN	iPKP	14 53 57.6 D			1.2	55.0		
	OUL	ePKP	14 53 57						
		H: 14 34							
		32.0 S, 178.0 W, 33 km (R)							
		South of Kermadec Islands							
26	NUR	eP	22 34 55						
	OUL	eP	22 34 15						
		i	26.5						
	SOD	eP	22 34 04						
		H: 22 24							
		51.7 N, 174.5 E, 33 km (R)							
		Near Islands							



December						December				
				T	A					
				T	A					
	eSKSP		54 12			SOD	eP	07 47 39		
	ePPS		56 20				i	45.3		
	eSS	17	01 40			H:	07 36 49.8			
	e		02 36				44.4 N, 128.8 W, 33 km (R)			
	e		04 14				Off coast of Oregon			
	e		05 40							
	H:	16 22	48.5			28	SOD	iP	12 57 06.8 D	
		22.3 S,	174.8 W, 33 km (R)							
		Tonga Islands				28	NUR	eP	17 01 15	
27	NUR	eP	17 38 24				i	21.0		
	SOD	eP	17 37 38				i	26.1		
27	KJN	iP	22 28 43.6	0.7	5.5	KJN	eP	17 00 45		
	OUL	eP	22 28 38			OUL	iP	17 00 30.8		
27	NUR	eP	23 45 29	1.3	30.7	SOD	eP	17 00 10		
28	NUR	iP	06 37 49.0	1.5	70.1		i	15.4		
		i	38 27.0			KEV	i	17 00 06.2		
		e	40 22				i	35.3		
		eS	47 16			H:	16 57 42			
KJN	iP	06 37 29.4	0.9	11.6			72.3 N, 0.0 W, 33 km (R)			
OUL	eP	06 37 19					Jan Mayen Island			
	i	27.4				28	SOD	eP	17 39 40	
SOD	iP	06 37 07.2					H:	17 28 45		
	i	09.4						44.4 N, 129.0 W, 33 km (R)		
KEV	iP	06 36 55.2						Off coast of Oregon		
	i	58.0				28	NUR	eP	17 46 08	
	e	40 32					KJN	iP	17 46 10.8	1.1 40.5
	eS	45 40					e	47 14		
	eScS	46 44					OUL	eP	17 46 06	
	e	49 20					SOD	iP	17 46 05.3	
H:	06 26 15.8							epP	56	
	44.2 N, 128.8 W, 33 km (R)						KEV	eP	17 46 03	1.0 28.0
	Off coast of Oregon						H:	17 33 39.8		
28	NUR	iP	07 13 08.2 U	1.2	57.0			6.9 N, 72.8 W, 196 km		
	i	15.0						Northern Colombia		
	i	28.0				28	NUR	eP	20 22 49	
KJN	eP	07 12 49	1.3	73.8			epP	23 20		
	i	53.3					i	39.7		
OUL	iP	07 12 41.7					KJN	iP	20 22 49.4	
	i	44.9					ipP	23 22.7		
SOD	iP	07 12 29.3 U					SOD	eP	20 23 04	
	i	36.1					ipP	39.1		
KEV	eP	07 12 15	1.0	20.0			H:	20 15 48.6		
	i	18.3						37.2 N, 71.8 E, 156 km		
H:	07 01 36.8							Afghanistan-USSR border		
	44.2 N, 129.0 W, 33 km (R)					28	NUR	iP	22 23 07.6	1.0 43.1
	Off coast of Oregon						i	10.7		
28	NUR	eP	07 48 23				eS	32 36		
	KJN	eP	07 48 07				eSS	36 56		
			cont.			KJN	iP	22 22 46.3	1.3 36.9	
								cont.		

December						December					
				T	A					T	A
	SOD	iP	22 22 28.5				eSKSP	02 06			
		i	32.0				e	05 20			
	KEV	eP	22 22 15				eSS	10 24			
		eS	30 50				e	11 36			
	H:	22 11	33.9				eSSS	15 20			
			44.2 N, 128.9 W, 33 km (R)			KJN	iPKP	20 48 53.9			
			Off coast of Oregon				i	49 03.2			
29	OUL	eP	00 26 40				i	18.9			
	SOD	eP	00 26 28				ePP	51 35			
	H:	00 15	37.1			OUL	ePKP	20 48 51			
			44.3 N, 128.9 W, 33 km (R)				e	49 04			
			Off coast of Oregon			SOD	ePKP	20 48 46			
29	KJN	eP	01 16 25	1.1	13.5	KEV	ePKP	20 48 44			
							e	50 56			
29	NUR	iP	04 01 08.2	1.2	64.2		ePP	51 18			
	SOD	eP	04 01 14				ePKS	52 08			
							e	59 20			
29	NUR	eP	06 31 44				eSKSP	21 01 08			
	OUL	eP	06 31 53				eSS	08 30			
	SOD	eP	06 32 01				e	10 58			
	KEV	eP	06 32 10				H:	20 29 32.2			
	H:	06 24	50.3					22.8 S, 175.3 W, 30 km			
			36.3 N, 70.2 E, 230 km					Tonga Islands			
			Hindu Kush			29	OUL	eP	21 55 11		
							SOD	eP	21 54 50		
							H:	21 44 55			
29	NUR	iP	12 46 24.7 D	0.7	12.2			53.7 N, 161.4 W, 37 km (R)			
	KJN	iP	12 45 57.4 D	0.8	10.0			South of Alaska			
	OUL	iP	12 45 53.1 D								
	SOD	eP	12 45 38			29	KJN	ePKP	22 42 24		
	KEV	eP	12 45 22				H:	22 23 06.0			
	H:	12 36	26.4					22.7 S, 175.2 W, 33 km (R)			
			56.3 N, 163.9 E, 36 km					Tonga Islands			
			Kamchatka			29	KJN	iP	23 00 00.2		
29	NUR	eP	19 53 46	0.8	13.6		OUL	eP	23 00 07		
		i	47.7				SOD	eP	23 00 18		
		i	54 07.2								
	KJN	iP	19 54 27.8	0.6	23.3	30	NUR	eP	00 20 23		
		i	46.6				KJN	iP	00 20 14.3	0.7	11.0
		i	55 14.3					i	24.2		
	OUL	iP	19 54 34.2 U					i	38.7		
	SOD	iP	19 54 55.7 U				OUL	iP	00 20 16.9		
	KEV	iP	19 55 17.2 U	0.7	18.1		SOD	eP	00 20 14		
		ePP	56 05					e	38		
	H:	19 49	23.6				KEV	eP	00 20 11		
			41.5 N, 20.4 E, 39 km				H:	00 07 13			
			Albania					3.1 N, 126.5 E, 33 km (R)			
29	NUR	iPKP	20 48 44.0	1.0	21.0			Talau Islands			
		i	49 05.0								
		ePP	51 52			30	NUR	eP	02 38 54		
		e	21 00 56					e	39 18		
			cont.						cont.		

December				T	A	December				T	A
	KJN	iP	02 38 32.5 U	0.7	17.1	30	NUR	eP	23 51 12		
		i	39 10.0				SOD	eP	23 50 20		
	OUL	iP	02 38 32.2								
	SOD	iP	02 38 21.2								
	KEV	iP	02 38 11.3	0.8	10.1	31	KJN	eP	02 40 07		
	H:	02 27 50.3					OUL	iP	02 40 02.5 U		
		38.4 N, 142.0 E, 33 km					SOD	eP	02 39 50		
		Honshu, Japan					H:	02 29 41.2			
30	NUR	iP	04 23 23.0 U	1.3	190.3		51.9 N, 171.8 W, 40 km				
		i	38.4				Fox Islands				
		i	24 09.0			31	SOD	eP	05 27 54		
		eS	26 42								
		e	27 24			31	NUR	iP	07 03 42.0		
	KJN	iP	04 24 06.3 D	1.0	139.5			i	45.8		
		i	32.5								
		i	26 19.7			31	NUR	eP	15 25 45		
		eS	28 05				KJN	eP	15 25 17		
	OUL	iP	04 24 11.6			31	OUL	iP	19 13 06.0 U		
		i	20.6				SOD	eP	19 12 51		
		iS	28 14.3			31	NUR	iP	19 15 42.0 D	0.7	9.5
	SOD	iP	04 24 34.3					e	18 54		
		i	25 21.1				KJN	eP	19 15 10		
	KEV	eP	04 24 54	1.3	68.2	31	NUR	eP	22 31 02		
		i	57.3				KJN	eP	22 30 41	1.3	21.7
		i	25 08.5								
		eS	29 20								
		e	40								
	H:	04 19 21.2									
		44.7 N, 12.2 E, 33 km (R)									
		Northern Italy									
30	KJN	eP	05 35 39								
	SOD	eP	05 35 25								
30	NUR	eP	09 43 08								
	KJN	eP	09 42 32	1.2	24.1						
	OUL	eP	09 42 21								
	SOD	iP	09 41 57.1								
30	KJN	eP	15 21 52								
	SOD	eP	15 21 21								
30	SOD	eP	16 05 51								
30	NUR	eP	21 31 50								
	KJN	eP	21 32 30								
	OUL	eP	21 32 40								
	H:	21 27 21									
		40.7 N, 21.6 E, 53 km									
		Greece									

October 14, 1968

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