BOX 517
S-751 20 UPPSALA
SWEDEN

S E I S M O L O G I C A L B U L L E T I N

U P P S A L A, K I R U N A, S K A L S T U G A N, U M E Å, U D D E H O L M and D E L A R Y

Uppsala	(Up):	59°51.5'N,	17°37.6'E; h = 14 m
Kiruna	(Ki):	67°50.4'N,	20°25.0'E; h = 390 m
Skalstugan	(Sk):	63°34.8'N,	12°16.8'E; h = 580 m
Umeå	(Um):	63°48.9'N,	20°14.2'E; h = 16 m
Uddeholm	(Ud):	60°05.4'N,	13°36.4'E; h = 240 m
Delary	(De):	56°28.2'N,	13°52.2'E; h = 150 m

J U L Y 1 - 31, 1973

1973 July	1	Up	iP	02 04 59.3		
		Ki	iP	02 04 12.6		
		Um	iP	02 04 33.7		
		Ud	iP	02 05 05.3		
		De	iP	02 05 23.1		
		Okhotsk Sea (h = 440 km).				
"	1	Ud	iP	03 06 32.0		
"	1	Ud	iP	04 58 34.8		
"	1	Up	iP	06 12 35.1		
		Um	eP	06 12 10		
		Ud	iP	06 12 41.0		
		Japan (h = N).				
"	1	Up	iP	06 36 28.0		
		Um	iP	06 36 15.0		
		Ud	iP	06 36 40.4		
		Szechwan, China (h = N).				
"	1	Ud	iP	07 03 49.6		
"	1	Up	iSgl	08 02 19.1		
		Ki	iSn	07 59 03.2		
			iSgl	07 59 24.2		
		Sk	iSgl	08 01 51.7		
		Um	iSn	07 59 41.6		
			iSgl	08 00 18.1		
		Ud	iSgl	08 02 54.7		
		De	eSgl	08 04 22		
		Northwest USSR.				
		Explosion.				
"	1	Up	iPKPl	08 00 34.6		
			i	08 00 48.9		
		Ud	iPKPl	08 00 35.6		
			i	08 00 50.2		
		De	ePKPl	08 00 45		
"	1	Ud	eP	09 21 37		
1973 July	1	Ud	iP	09 24 03.5		
"	1	Ud	ePKPl	11 11 08		
		De	iPKPl	11 11 18.0		
"	1	Up	iP	13 43 45.0 C		
			iS	13 52 02		
			iP'P'	14 13 11.3		
				micr	sec	
			P	Z' 0.7	0.9	
			Mx	E 22	23	
			Mx	N 28	24	
			Mx	Z 33	23	
		Ki	iP	13 42 52.1 C		
			iS	13 50 29		
				micr	sec	
			P	Z' 2.0	1.6	
			Mx	E 50	21	
			Mx	N 61	24	
			Mx	Z 59	25	
		Sk	iP	13 43 14.4 C		
			eP'P'	14 13 19		
		Um	iP	13 43 20.7 C		
			iS	13 51 16		
			iP'P'	14 13 16.5		
		Ud	iP	13 43 39.9 C		
			eP'P'	14 13 15		
		De	iP	13 44 03.5 C		
			iP'P'	14 13 01.0		
		Alaska (h = N).				
		m = 6.9, M = 6.6 (Up,Ki).				
"	1	Up	iP	13 58 27.2		
"	1	Up	iP	15 22 16.4 C		
			ipP	15 22 24.3		
				micr	sec	
			P	Z' 0.1	0.9	
		Ki	iP	15 21 23.6 C		
		Sk	iP	15 21 46.9 C		

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	1	(cont.)			
		Sk	ipP	15 21 55.2	
		Um	iP	15 21 51.2	C
			ipP	15 21 59.3	
		Ud	iP	15 22 11.0	C
			ipP	15 22 18.7	
		De	iP	15 22 34.5	C
			ipP	15 22 42.2	
		Alaska.			
		h = 30 km (Up,Sk,Um,Ud,De).			
"	1	Up	iP	16 24 22.7	
		Um	iP	16 24 03.3	
		Ud	iP	16 24 37.0	
		De	iP	16 24 48.3	
"	1	Up	iP	16 30 43.2	
		Ki	iP	16 30 14.5	
		Sk	iP	16 30 40.7	
		Um	iP	16 30 26.8	
		Ud	iP	16 30 49.8	
		Mariana Islands (h = 230 km).			
"	1	Um	iP	21 28 28.2	
		Ud	iP	21 28 48.7	
"	1	Um	iPKP	21 32 08.2	
		Ud	iPKP	21 32 17.9	
"	2	Up	iP	01 10 48.4	
			i	01 10 55.2	
		Ki	iP	01 11 04.0	
		Sk	iP	01 10 27.6	
		Um	iP	01 10 58.0	
		Ud	i(P)	01 10 31.6	
		De	iP	01 10 27.9	
		North Atlantic Ocean (h = N).			
"	2	Ud	iP	01 33 11.6	
		Mindanao (h = 100 km).			
"	2	Sk	eP	01 43 44	
		North Atlantic Ocean (h = N).			
"	2	Ki	iP	01 45 51.8	
		Um	iP	01 46 39.1	
		North of Svalbard (h = N).			
"	2	Up	eP	01 51 18	
		Ki	iP	01 49 51.3	C
				micr	sec
			P Z'	0.3	1.5
			Mx E	0.7	15
			Mx N	0.8	17
			Mx Z	1.0	17
		Sk	iP	01 50 38.5	
		(cont.)			

1973 July	2	(cont.)			
		Um	iP	01 50 38.1	C
			i	01 50 50.2	
		Ud	iP	01 51 14.2	
		De	iP	01 51 47.3	
		North of Svalbard (h = N).			
"	2	Up	iSg1	04 09 28.5	
		Ud	iSg1	04 09 09.9	
		De	iPg1	04 07 23.4	
			iSg2	04 07 33.5	
		Skåne, Sweden,			
		56.2°N, 12.8°E.			
		Origin time = 04 07 11.			
"	2	Up	iP	06 02 30.8	C
			ipP	06 02 47.7	
				micr	sec
			P Z'	0.1	0.8
		Ki	iP	06 01 46.7	
			ipP	06 02 04.4	
				micr	sec
			P Z'	0.1	1.0
		Sk	iP	06 02 21.6	
			ipP	06 02 38.7	
		Um	iP	06 02 06.4	
			ipP	06 02 22.9	
		Ud	iP	06 02 37.1	C
			i	06 02 48.2	
			ipP	06 02 54.5	
		De	iP	06 02 54.3	C
		Japan.			
		h = 60 km (Up,Ki,Sk,Um,Ud).			
		m = 5.8 (Up,Ki).			
"	2	Up	iP	06 06 39.2	D
			ipP	06 06 48.6	
				micr	sec
			P Z'	0.2	1.0
		Ki	iP	06 05 45.1	D
			ipP	06 05 54.2	
				micr	sec
			P Z'	0.2	1.0
		Sk	iP	06 06 21.3	D
			ipP	06 06 31.1	
		Um	iP	06 06 10.5	D
			ipP	06 06 20.0	
		Ud	iP	06 06 42.2	D
			ipP	06 06 51.2	
			iPcP	06 07 17.3	
		De	iP	06 07 04.0	D
			iPcP	06 07 32.0	
		Komandorsky Islands.			
		h = 35 km (Up,Ki,Sk,Um,Ud).			
		m = 6.2 (Up,Ki).			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	2	Up	iSgl	12 17 09.4	
			i	12 17 16.9	
		Ki	iSgl	12 19 14.1	
		Sk	iSgl	12 18 57.4	
		Um	iSgl	12 17 26.2	
			iRg	12 17 58.7	
		Ud	iSgl	12 18 10.2	
		De	eSgl	12 18 40	
		Western USSR.			
		Explosion.			
"	2	Up	iP	12 18 48.5	
		Sk	eP	12 19 27	
			i	12 19 32.6	
		Um	iP	12 19 23.6	
		Ud	iP	12 18 54.1	
			i	12 19 01.3	
		Aegean Sea (h = N).			
"	2	Um	iSgl	12 28 14.3	
		Ud	iSgl	12 28 55.6	
		Western USSR.			
		Explosion.			
"	2	Up	iSgl	12 45 15.2	
		Ki	iPn	12 40 32.9	
			iPgl	12 40 41.1	
			i	12 41 07.8	
			iSn	12 41 19.1	
			iS*	12 41 31.3	
			iSgl	12 41 34.5	
		Sk	iSgl	12 44 22.3	
		Um	iSn	12 42 28.9	
			iSgl	12 43 07.3	
		Ud	eSgl	12 45 38	
		Northwest USSR-Norway			
		border region.			
		Explosion.			
		Unusually large for this area.			
"	2	Up	iP	12 56 04.9	
		Ki	eP	12 56 10	
		Ud	iP	12 56 19.5	
		Tadzhik SSR (h = N).			
"	2	Up	iP	14 46 25.7	
		Ud	iP	14 46 29.8	
		De	eP	14 46 51	
		Kamchatka (h = N).			
"	2	Up	iPKP1	14 59 17.3	
		Ud	iPKP1	14 59 18.5	
		De	iPKP1	14 59 29.4	
"	2	Up	iSgl	15 05 33.8	
		Um	iSgl	15 06 13.1	
		(cont.)			

1973 July	2	(cont.)			
		Ud	eSgl	15 06 35	
		De	eSgl	15 07 13	
		Gulf of Finland,			
		59.9°N, 23.1°E.			
		Origin time = 15 04 05.			
		Explosion?			
"	2	De	e(Sgl)	15 52 19	
"	2	De	eP	16 03 56	
			i	16 04 10.1	
"	2	De	iP	17 18 46.4	
"	2	Up	iP	18 33 51.2	C
		Ki	iP	18 33 51.7	C
		Sk	iP	18 33 37.2	C
		Um	iP	18 33 55.0	C
		Ud	iP	18 33 39.7	C
		De	iP	18 33 42.7	C
		Dominican Republic			
		(h = 25 km).			
"	2	Ud	iP	20 06 07.7	
"	2	Up	iPKP1	20 15 05.0	C
			iPKP2	20 15 08.5	
			ipPKP1	20 15 19.9	
		Ki	ePKP	20 14 47	
		Sk	iPKP1	20 14 58.5	
			ipPKP1	20 15 11.9	
		Um	iPKP1	20 14 52.8	C
			i	20 15 01.5	
		Ud	iPKP1	20 15 06.4	C
			iPKP2	20 15 10.8	
			ipPKP1	20 15 19.7	
		De	iPKP1	20 15 15.1	C
			iPKP2	20 15 25.0	
			ipPKP1	20 15 29.0	
		Kermadec Islands.			
		h = 50 km (Up,Sk,Ud,De).			
"	2	Up	iP	23 04 56.9	
		Ki	eP	23 04 09	
		Sk	iP	23 04 32.5	
		Um	iP	23 04 37.0	
		Ud	eP	23 04 52	
		De	iP	23 05 15.4	
		Alaska (h = N).			
"	3	Up	iP	03 05 57.4	
		Ud	iP	03 06 03.6	
		Kurile Islands (h = 50 km).			
"	3	Up	iP	04 12 26.6	
		(cont.)			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
July 3 (cont.)

	Up	iPP		04 15 51.7	
		iS		04 22 48	
				micr	sec
		P	Z'	0.1	1.1
		Mx	E	1.3	32
		Mx	N	1.5	32
		Mx	Z	1.7	30
	Ki	iP		04 12 10.4	
		iPP		04 15 22.7	
				micr	sec
		P	Z'	0.4	1.5
		Mx	E	1.4	24
		Mx	N	1.4	23
		Mx	Z	1.6	23
	Sk	iP		04 12 08.5	
		i		04 12 29.5	
	Um	iP		04 12 20.4	
		iPP		04 15 40.1	
		iS		04 22 30	
	Ud	iP		04 12 19.3	
	De	iP		04 12 28.5	

Mexico (h = 130 km).
m = 5.9, M = 5.4 (Up,Ki).

"	3	Ud	i(P)	04 16 48.8	
"	3	Ud	iP	04 21 08.9	
"	3	Up	iP	06 50 20.5	
			iS	07 00 56	
				micr	sec
			P Z'	0.1	0.9
			Mx E	5.1	17
			Mx N	4.6	23
			Mx Z	4.6	20
		Ki	iP	06 50 02.6	
			iS	07 00 25	
				micr	sec
			P Z'	0.2	1.0
			Mx E	4.3	19
			Mx N	8.9	20
			Mx Z	5.1	17
		Sk	iP	06 50 25.0	
		Um	iP	06 50 08.8	
			iS	07 00 33	
		Ud	iP	06 50 29.6 C	
		De	iP	06 50 35.9	
			iPP	06 54 10.1	

Samar (h = 45 km).
m = 6.2, M = 6.1 (Up,Ki).

"	3	Up	iP	07 16 32.0 C	
			iSKS	07 26 56	
			iS	07 27 10	

(cont.)

1973
July 3 (cont.)

	Up			micr	sec
		P	Z'	1.7	1.8
		Mx	E	18	17
		Mx	N	26	18
		Mx	Z	39	17
	Ki	iP		07 16 13.0 C	
		iS		07 26 33	
				micr	sec
		P	Z'	1.4	1.8
		Mx	E	21	20
		Mx	N	47	20
		Mx	Z	21	17
	Sk	iP		07 16 34.6 C	
	Um	iP		07 16 19.4 C	
	Ud	iP		07 16 39.9 C	
	De	iP		07 16 46.5 C	
		iPP		07 20 33.0	

Samar (h = N).
m = 7.0, M = 6.8 (Up,Ki).

"	3	Up	iP	07 19 08.8 C	
			iS	07 29 48	
				micr	sec
			P Z'	0.2	1.4
		Ki	iP	07 18 49.7 C	
				micr	sec
			P Z'	0.3	1.5
		Um	iP	07 18 58.4 C	
		Ud	iP	07 19 17.4 C	
		De	iP	07 19 23.7 C	

Samar.
Origin time = 07 06 21.
m = 6.3 (Up,Ki).

"	3	Ud	iP	07 34 12.1
"	3	Ud	iP	07 49 56.6

Tien-Shan.

"	3	Ud	iP	07 58 05.2
"	3	Up	iP	08 02 08.2
		Ki	iP	08 01 50.1
			i	08 01 59.8
		Um	iP	08 01 56.6 C
		Ud	iP	08 02 16.7 C
		De	iP	08 02 23.7

Samar (h = 50 km).

"	3	Up	iP	08 10 10.3	
			ipP	08 10 20.9	
				micr	sec
			P Z'	0.1	0.6
		Ki	iP	08 09 51.8	

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July 3 (cont.)

	Ki	ipP	08 10 02.9	
			micr	sec
		P Z'	0.2	0.9
	Sk	iP	08 10 13.8	
	Um	iP	08 09 57.9	
		ipP	08 10 09.3	
	Ud	iP	08 10 18.8	
		ipP	08 10 30.2	
	De	iP	08 10 25.1	
		ipP	08 10 35.2	

Samar.
h = 40 km (Up,Ki,Um,Ud,De).
m = 6.3 (Up,Ki).

" 3	Up	iP	08 41 22.9	
	Ud	iP	08 41 31.2	

Samar (h = 40 km).

" 3	Ud	iP	08 58 12.0

" 3	Ud	iP	09 16 27.1
		ipP	09 16 37.8

Samar.
h = 40 km (Ud).

" 3	Ud	iP	10 00 27.2
		i	10 00 37.9

" 3	Up	iP	11 08 28.0	
			micr	sec
		P Z'	0.1	0.8
	Ki	iP	11 07 56.4	
			micr	sec
		P Z'	0.1	1.0
	Sk	iP	11 08 27.5	
	Um	iP	11 08 09.2	
	Ud	iP	11 08 36.5	
	De	iP	11 08 48.6	

Japan (h = 140 km).
m = 5.6 (Up,Ki).

" 3	Ud	iP	11 34 09.6

Aleutian Islands (h = 35 km).

" 3	Ud	iP	11 35 28.5
	De	iP	11 35 38.7

" 3	Up	iP	11 46 27.3	
	Ki	iP	11 46 08.3	
	Um	iP	11 46 14.5	
	Ud	iP	11 46 35.2	C
		ipP	11 46 45.2	
	De	eP	11 46 42	

Samar.
h = 35 km (Ud).

1973 July 3

Up	iSgl	12 07 02.9	
Ki	iSgl	12 10 25.3	
Sk	eSgl	12 09 14	
Um	iSgl	12 08 19.0	
Ud	iSgl	12 08 05.9	
De	iSgl	12 08 25.2	

Baltic Sea near Dagö, 59.1°N, 21.9°E.
Origin time = 12 05 50.
Explosion?

" 3	Um	iP	12 18 23.1
	Ud	eP	12 18 41

" 3	Up	iSgl	13 01 53.3
	Ki	iSgl	13 04 45.6
	Sk	iSgl	13 03 51.3
	Um	iSgl	13 02 43.0
	Ud	eSgl	13 02 59
	De	iSgl	13 03 22.2

Esthonia.
Explosion.

" 3	Up	iSgl	15 21 20.6
		iSg2	15 21 29.0
	Um	iSgl	15 23 22.4
	Ud	iSgl	15 21 12.2
	De	iSgl	15 19 20.4

Probably Baltic Sea, south of Sweden.
Explosion?

" 3	Up	iSgl	15 45 26.8
	Sk	eSgl	15 47 42
	Um	iSgl	15 46 43.7
	Ud	iSgl	15 46 29.3
	De	iS*	15 46 42.7
		iSgl	15 46 49.7

Baltic Sea near Dagö, 59.1°N, 21.9°E.
Origin time = 15 44 14.
Explosion?
Cf. July 3, 12 05.

" 3	Up	iPKP2	15 52 12.1
	Um	iPKP2	15 51 54.7
	Ud	iPKP	15 52 03.1
		iPKP2	15 52 14.4

Kermadec Islands (h = 25 km).

" 3	Ki	i(PP)	16 12 45.1

Turkey (h = 5 km).

" 3	Ud	iP	16 14 00.5

Adriatic Sea (h = 45 km).

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	3	Up	iP		16 40 48.0		
		Ki	iP		16 39 54.8		
		Sk	iP		16 40 18.7		
		Um	eP		16 40 23		
		Ud	iP		16 40 42.6		
		De	iP		16 41 06.3		
		Alaska (h = N).					
"	3	Up	iP		17 09 45.8 C		
			iS		17 18 04		
			iP'P'		17 39 07.0		
					micr	sec	
			P	Z'	1.0	1.4	
			Mx	E	4.0	23	
			Mx	N	8.6	20	
			Mx	Z	13	21	
		Ki	iP		17 08 52.7 C		
					micr	sec	
			P	Z'	0.9	1.4	
			Mx	E	9.0	25	
			Mx	N	11	26	
			Mx	Z	12	25	
		Sk	iP		17 09 15.9 C		
		Um	iP		17 09 20.9 C		
			iS		17 17 18		
			iP'P'		17 39 15.0		
		Ud	iP		17 09 40.2 C		
		De	iP		17 10 04.1 C		
			iP'P'		17 39 01.5		
		Alaska (h = N).					
		m = 6.8, M = 6.0 (Up,Ki).					
"	3	Up	iP		17 20 50.7		
		Sk	eP		17 20 21		
		Ud	eP		17 20 46		
		De	eP		17 21 09		
		Alaska.					
		Origin time = 17 10 41.					
"	3	Up	iP		17 48 06.7		
		Ud	iP		17 48 13.5		
"	3	Up	iP		17 54 27.1 C		
					micr	sec	
			P	Z'	0.1	1.0	
		Ki	iP		17 53 34.5 C		
					micr	sec	
			P	Z'	0.1	1.0	
		Sk	iP		17 53 58.0 C		
		Um	iP		17 54 02.3 C		
		Ud	iP		17 54 22.1 C		
		De	iP		17 54 45.7 C		
		Alaska (h = N).					
		m = 5.9 (Up,Ki).					
"	3	Up	iP		18 57 07.2		
		Ud	iP		18 57 13.7		

1973 July	3	Up	iP		20 40 53.8		
		Ki	iP		20 40 35.2		
		Ud	iP		20 41 02.1		
		Samar (h = 60 km).					
"	3	Up	iP		20 50 20.1		
		Ud	iP		20 50 26.6		
		De	eP		20 50 44		
"	3	Up	iP		23 29 28.0		
		Ki	eP		23 29 22		
		Sk	eP		23 29 44		
		Um	eP		23 29 21		
		Ud	iP		23 29 41.4		
"	4	Ki	eP		01 40 34		
		Ud	iP		01 41 00.9		
"	4	Up	iP		01 55 43.4		
		Ud	iP		01 55 49.1		
		Kurile Islands (h = N).					
"	4	Ud	iPP		02 08 09.9		
		Chile (h = N).					
"	4	Ud	iP		03 58 20.1		
"	4	Ki	eP		07 26 22		
		Alaska (h = N).					
"	4	Ki	iPn		09 12 58.3		
			iPgl		09 13 06.8		
			iSn		09 13 44.9		
			iS*		09 13 55.2		
			iSgl		09 13 58.8		
		Sk	eSgl		09 16 45		
		Um	iSn		09 14 55.9		
			i		09 15 11.4		
			iSgl		09 15 32.2		
			iSg2		09 15 42.9		
		Northwest USSR-Norway border region.					
		Explosion.					
"	4	Up	iP		10 01 21.0		
		Ki	iP		10 00 27.6		
		Sk	eP		10 00 59		
		Um	iP		10 00 53.9		
			iPcP		10 01 29.2		
		Ud	iP		10 01 20.4		
		De	iP		10 01 42.9		
		Aleutian Islands (h = 40 km).					
"	4	Up	iSgl		12 53 17.9		
		Ki	iSgl		12 55 53.9		
		Sk	eSgl		12 55 05		

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	4	(cont.)			
		Um	iSgl	12 53 54.4	
		Ud	iSn	12 53 54.3	
			iSgl	12 54 22.0	
			i	12 54 26.1	
		De	eS*	12 54 46	
			iSgl	12 54 52.8	
		Esthonia.			
		Explosion.			
"	4	Ud	eP	13 17 14	
		Japan (h = 55 km).			
"	4	Ud	iP	13 33 57.7	
		Pamir.			
"	4	Up	eP	13 36 31	
		Ki	iP	13 35 39.5	
		Sk	iP	13 36 01.8	
		Ud	iP	13 36 27.1	
		De	iP	13 36 50.1	
		Alaska (h = N).			
"	4	Up	iSgl	13 47 39.5	
		Sk	eSgl	13 49 29	
		Um	iSgl	13 47 55.7	
		Ud	iSgl	13 48 38.6	
		De	e	13 48 44	
			iSgl	13 49 08.5	
		Western USSR.			
		Explosion.			
"	4	Ud	iP	14 24 37.3	
		De	iP	14 24 45.2	
"	4	Ud	iP	14 28 26.5	
		Off coast of Oregon (h = N).			
"	4	Up	iP	16 54 12.4	
			ipP	16 54 19.7	
		Ki	eP	16 54 05	
		Sk	iP	16 54 28.7	
			ipP	16 54 36.0	
		Um	iP	16 54 03.9	
		Ud	iP	16 54 26.0 C	
			ipP	16 54 32.7	
		India-China.			
		h = 25 km (Up,Sk,Ud).			
"	4	Um	iP	17 37 28.1	
			ipP	17 37 41.7	
		Ud	ipP	17 38 10.6	
		Japan.			
		h = 50 km (Um).			
"	4	Ud	iP	17 52 36.6	

1973 July	4	Ud	iP	20 38 25.8	
		Hindu Kush.			
		Intermediate depth.			
"	4	Up	iP	21 15 04.4	C
			ipP	21 15 36.1	
		Ki	iP	21 14 58.0	C
		Sk	iP	21 15 20.0	C
		Um	iP	21 14 56.8	C
			ipP	21 15 28.3	
		Ud	iP	21 15 17.6	C
			ipP	21 15 48.3	
		De	iP	21 15 18.8	C
		Burma-India.			
		h = 130 km (Up,Um,Ud).			
"	4	Ud	iP	21 23 50.6	
"	4	Up	iP	21 40 28.1	
			ipP	21 40 37.3	
		Ki	iP	21 39 44.0	
			isP	21 39 56.6	
		Sk	eP	21 40 20	
		Um	iP	21 40 04.3	
			ipP	21 40 13.6	
		Ud	iP	21 40 34.8	
			ipP	21 40 43.5	
		De	eP	21 40 53	
		Japan.			
		h = 35 km (Up,Um,Ud).			
"	4	Ud	iP	23 52 20.2	
		Sumatra-Java (h = N).			
"	5	Up		micr	sec
			Mx E	0.9	19
			Mx N	1.1	21
			Mx Z	1.9	20
		Ki	iPKP	00 07 31.0	
				micr	sec
			Mx E	1.0	21
			Mx N	1.0	19
			Mx Z	1.0	18
		Um	iPKP	00 07 24.0	
		Ud	iPP	00 08 05.7	
		South of Africa (h = N).			
		M = 5.6 (Up,Ki).			
"	5	Ud	eP	00 58 38	
"	5	Ki	iP	00 59 02.6	
		Sk	eP	00 58 56	
		Um	iP	00 59 06.6	
			i	00 59 10.9	
"	5	Up	iP	01 01 11.7	
		Ud	iP	01 01 05.6	

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	5	Ud	iP		01 01 57.5	
"	5	Up	iP		01 09 45.1	
			ipP		01 09 56.4	
					micr	sec
			Mx	E	0.9	18
			Mx	N	0.8	17
			Mx	Z	1.0	19
		Ki	iP		01 09 00.0	
			ipP		01 09 11.8	
					micr	sec
			Mx	E	0.7	16
			Mx	N	1.2	16
			Mx	Z	1.5	16
		Sk	eP		01 09 37	
		Um	iP		01 09 19.2	
		Ud	iP		01 09 51.9	
			ipP		01 10 03.7	
		De	iP		01 10 09.5	
		Kurile Islands.				
		h = 45 km (Up,Ki,Ud).				
		M = 5.2 (Up,Ki).				
"	5	Ud	iP		02 56 45.0	
"	5	Up	eP		03 37 04	
		Um	iP		03 37 31.4	
		Ud	eP		03 37 20	
			i		03 37 26.2	
		De	eP		03 36 55	
		Turkey.				
"	5	Up	eP		04 48 42	
		Ki	iP		04 47 56.2	
		Um	iP		04 48 16.9	
		Ud	iP		04 48 48.0	
		Japan (h = 40 km).				
"	5	Up	iP		07 55 33.7	
		Sk	eP		07 55 04	
			i		07 55 27.0	
		Ud	eP		07 55 29	
		Alaska (h = N).				
"	5	Up	iP		07 59 15.5 C	
					micr	sec
			P	Z'	0.1	1.1
			Mx	E	0.9	19
			Mx	N	0.9	21
			Mx	Z	1.7	21
		Ki	iP		07 58 22.6 C	
					micr	sec
			P	Z'	0.1	1.1
			Mx	E	0.6	15
			Mx	N	0.7	16
			Mx	Z	0.8	15
		(cont.)				

1973 July	5	(cont.)			
		Sk	iP		07 58 45.9 C
		Um	iP		07 58 50.6 C
			iS		08 06 52
		Ud	iP		07 59 10.5 C
		De	iP		07 59 34.0 C
		Alaska (h = N).			
		m = 5.9, M = 5.1 (Up,Ki).			
"	5	Ud	eP		09 01 32
		Alaska (h = N).			
"	5	Um	iP		09 52 49.5
		Ud	iP		09 53 17.7
		Japan (h = 60 km).			
"	5	Ud	iSgl		10 02 27.1
			iRg		10 02 36.7
"	5	Ud	iP		12 32 10.0
		Kurile Islands (h = 40 km).			
"	5	Up	iSgl		12 40 57.4
		Ki	eSgl		12 42 57
		Sk	iSgl		12 42 45.4
		Um	iSgl		12 41 12.5
		Ud	iSgl		12 41 55.9
		De	eSgl		12 42 26
		Western USSR.			
		Explosion.			
"	5	Ud	eP		13 13 15
"	5	Ud	iP		14 08 26.2
"	5	Up	iP		15 15 55.2
		Ud	iP		15 16 04.1
			ipP		15 16 16.4
		Ryukyu Islands.			
		h = 45 km (Ud).			
"	5	Ki	iP		16 19 31.3
		Ud	eP		16 20 01
"	5	Ud	iP		16 43 09.5
		Sumatra-Java (h = 55 km).			
"	5	Ud	iP		18 09 39.9
"	5	Ud	iP		18 29 34.8
"	5	Ud	iP		18 39 48.0
"	5	De	iPKP		19 42 51.3
		New Britain (h = 150 km).			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	5	Ki	iPgl	20 08 07.8	
			i	20 08 30.0	
			iSgl	20 08 45.2	
		Sk	eS*	20 08 45	
			iSgl	20 08 50.3	
		Um	iPgl	20 08 23.5	
			iSn	20 08 57.8	
			iSgl	20 09 11.9	
		Ud	iSgl	20 10 37.3	
		Nordland, Norway, 66.4°N, 14.4°E. Origin time = 20 07 20. Explosion.			
"	5	Up	iPKP1	20 59 57.0	
		Ud	iPKP1	20 59 59.0	
		De	iPKP1	21 00 09.0	
"	5	Um	iP	21 17 40.7	
		Ud	eP	21 17 20	
		Turkey (h = 40 km).			
"	5	Ud	iP	22 25 34.3	
		Albania (h = N).			
"	5	Up	iP1	22 58 58.3 C	
			iP2	22 59 01.5	
			iP3	22 59 10.7	
				micr sec	
			P2 Z'	0.2 1.0	
			P3 Z'	1.3 1.5	
			Mx E	7.2 23	
			Mx N	25 22	
			Mx Z	21 16	
		Ki	iP1	22 58 39.6 C	
			iP2	22 58 42.7	
			iP3	22 58 52.7	
				micr sec	
			P1 Z'	0.1 1.0	
			P2 Z'	0.3 1.0	
			P3 Z'	1.5 1.5	
		Sk	iP1	22 59 02.8	
			iP2	22 59 06.4	
		Um	iP1	22 58 46.0 C	
			iP2	22 58 49.3	
			iP3	22 58 58.7	
			iS	23 09 08	
			ePKKP	23 17 00	
		Ud	iP1	22 59 06.7 C	
			iP2	22 59 09.9	
			iP3	22 59 20.0	
			iPKKP	23 16 50.2	
		De	iP2	22 59 15.8	
			iP3	22 59 25.3	
		Luzon (h = 40 km). (cont.)			

1973 July	5	(cont.) m = 6.0 (P1), 6.4 (P2), 7.0 (P3) (Up,Ki). Multiple P-phases with successively increasing amplitudes. In average: P3 - P1 = 12.9 sec, P2 - P1 = 3.3 sec.			
"	5	Um	eP	23 46 00	
		Ud	iP	23 46 20.5	
"	6	Up	iP1	00 00 24.3	
			iP2	00 00 31.1	
		Ki	iP2	00 00 12.0	
		Um	iP2	00 00 18.4	
		Ud	eP1	00 00 32	
			iP2	00 00 38.3	
		Luzon (h = 55 km).			
"	6	Up	eP2	01 22 54	
		Um	iP1	01 22 33.5	
		Ud	eP1	01 22 57	
			iP2	01 23 04.0	
		Luzon (h = 55 km).			
"	6	Ud	iP	02 21 39.2	
		Hindu Kush. Intermediate depth.			
"	6	Um	iPKP1	06 50 27.4	
		De	iPKP2	06 50 55.7	
"	6	Ud	i(P)	07 28 40.2	
"	6	Ud	i(P)	08 42 53.2	
"	6	Up	Mx	10 29	
				micr sec	
			Mx E	1.0 20	
			Mx N	0.8 19	
			Mx Z	1.9 20	
		Ki	Mx	10 42	
				micr sec	
			Mx E	1.2 18	
			Mx N	0.9 18	
			Mx Z	0.9 17	
		Chile (h = 35 km). M = 5.5 (Up,Ki).			
"	6	Up	iSgl	11 44 32.4	
		Ki	iPn	11 40 18.6	
			iSn	11 41 17.8	
			iSgl	11 41 44.6	
		Sk	iSgl	11 44 05.9	
		Um	iSn	11 41 57.8	
		(cont.)			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	6	(cont.)			
		Um	i	11 42 12.0	
			iSgl	11 42 31.9	
		Ud	iSgl	11 45 03.1	
		De	iSgl	11 46 33.7	
		Northwest USSR.			
		Explosion.			
"	6	Um	iSgl	12 21 15.4	
		Western USSR.			
		Explosion.			
"	6	Up	eSgl	12 29 46	
			i	12 29 53.0	
		Um	eSgl	12 29 57	
		Ud	iSgl	12 30 42.6	
		De	eSgl	12 31 08	
		Western USSR.			
		Explosion.			
"	6	Up	iSgl	12 43 45.6	
		Um	iSgl	12 45 47.6	
		Ud	iSgl	12 44 25.4	
		De	iSgl	12 44 20.3	
		Baltic Sea, northwest of Gotland, Sweden, 58.2°N, 18.0°E.			
		Origin time = 12 42 52.			
		Explosion?			
"	6	Up	iP	13 49 04.1	
			ipP	13 49 17.2	
				micr	sec
			P Z'	0.1	1.3
		Ki	iP	13 48 22.2	
			ipP	13 48 35.6	
				micr	sec
			P Z'	0.1	1.3
			Mx E	0.6	15
			Mx N	0.7	17
			Mx Z	0.9	16
		Sk	iP	13 48 56.5	
		Um	iP	13 48 40.6	
			ipP	13 48 53.8	
		Ud	iP	13 49 10.7	
			ipP	13 49 24.4	
		De	iP	13 49 26.9	
			ipP	13 49 39.9	
		Japan.			
		h = 50 km (Up,Ki,Um,Ud,De).			
		m = 5.7 (Up,Ki).			
"	6	Ud	i(P)	14 44 35.1	
"	6	Up	iSgl	15 16 50.4	
		Sk	eSgl	15 17 59	
		(cont.)			

1973 July	6	(cont.)		
		Um	iSgl	15 16 09.3
		Ud	eSgl	15 17 46
		De	eSgl	15 18 39
			i	15 18 48.7
		Lake Ladoga region.		
		Explosion.		
"	6	Up	iPKP1	19 16 53.9
		Um	iPKP1	19 16 43.1
		Ud	iPKP1	19 16 55.7
		Kermadec Islands (h = 230 km).		
"	6	Ud	iP	20 18 09.5
		Ionian Sea.		
"	6	Um	iPKP	20 48 33.3
		Chile (h = 30 km).		
"	6	Um	iP	21 22 33.4
		Ud	eP	21 23 03
		Japan (h = 60 km).		
"	6	Um	iP	23 48 44.9
		Ud	eP	23 49 13
		Kurile Islands (h = N).		
"	7	Up	iSKP1	00 29 54.6
		Ki	iPKP	00 27 06.5
		Sk	iSKP1	00 29 47.1
		Um	iPKP	00 27 13.7
			iSKP1	00 29 40.4
		Ud	iPKP	00 27 23.5
			iSKP1	00 29 56.9
		De	i(PKP)	00 27 21.2
			iPKP	00 27 30.3
		Fiji Islands (h = 610 km).		
"	7	Up	iPKP	02 46 32.2
			iSKP1	02 49 55.5
		Ki	iPKP	02 46 18.2
		Sk	i(PKP)	02 46 23.8
			iPKP	02 46 30.1
		Um	iPKP	02 46 24.6
			iSKP1	02 49 41.1
		Ud	iPKP	02 46 34.7
			iSKP2	02 50 03.4
		De	i(PKP)	02 46 29.0
			iPKP	02 46 41.3
		New Hebrides Islands (h = 90 km).		
"	7	Up	iP	03 08 13.9 C
		Ki	iP	03 07 20.2 C
		Sk	eP	03 07 51
		Um	iP	03 07 47.2 C
			ipP	03 07 59.5
		(cont.)		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July 7 (cont.)

	Ud	iP	03 08 13.0 C
	De	iP	03 08 35.6
		ipP	03 08 48.1

Aleutian Islands.
h = 45 km (Um,De).

" 7

	Up	eSgl	08 24 20
	Um	eSgl	08 25 12
	Ud	eSgl	08 25 22

" 7

	Up	iSgl	08 33 19.9
		iRg	08 33 27.0

Åland Islands, Baltic Sea.
Origin time = 08 32 38.
Solution from Finnish regional bulletin.

" 7

	Up	iPKP1	08 38 05.5
	Ud	iPKP1	08 38 07.5
	De	iPKP1	08 38 17.6

Tonga-Kermadec Islands (h = 520 km).

" 7

	Up	iP	10 15 36.7
	Um	iP	10 15 16.2
	Ud	iP	10 15 44.1

Japan (h = 55 km).

" 7

	Up	iSgl	10 54 14.6
	Ki	eSgl	10 56 23
	Sk	iSgl	10 55 59.5
	Um	iSgl	10 54 31.0
	Ud	iSgl	10 55 14.0
	De	iSgl	10 55 44.5

Western USSR.
Explosion.

" 7

	Up	eP	11 47 43
	Ud	iP	11 47 52.9

" 7

	Up	iP	11 49 08.4
	Ki	iP	11 49 05.9
	Um	iP	11 49 00.7
	Ud	iP	11 49 24.4
	De	iP	11 49 25.2

Sinkiang, China.

" 7

	Ki	iPn	12 20 42.9
		iPgl	12 20 51.8
		iSn	12 21 30.4
		iSgl	12 21 48.0
	Um	iSgl	12 23 15.2

Northwest USSR-Norway border region.
Explosion.

1973 July 7

	Ki	iP	12 27 05.9
	Um	iP	12 27 15.6

Mariana Islands (h = 130 km).

" 7

	Um	iPP	13 03 43.0

Chile (h = 90 km).

" 7

	Up	iPKP1	14 20 34.2
	Ki	iPKP	14 20 26.6
	Um	iPKP	14 20 27.5
	De	iPKP1	14 20 46.5 D

" 7

	Ki	ePKP	15 59 07
	Um	iPKP	15 59 12.2
	De	iPKP	15 59 25.7

New Britain (h = 55 km).

" 7

	Up		micr	sec
		Mx E	0.7	19
		Mx N	0.6	18
		Mx Z	1.0	18
	Ki	iPP	19 04 27.3	
			micr	sec
		Mx E	0.7	20
		Mx N	0.5	17
	Um	iPKP	19 03 11.6	
		iPKKP	19 13 49	

Chile (h = 30 km).
M = 5.4 (Up,Ki).

" 7

	Ki	iPKP2	19 55 21.2
	Um	iPKP1	19 55 13.5
	Ud	iPKP1	19 55 07.5

South Pacific Ocean (h = N).

" 7

	Up	Mx	21 04	
			micr	sec
		Mx E	0.7	18
		Mx N	0.8	18
		Mx Z	0.9	16
	Ki	Mx	20 59	
			micr	sec
		Mx E	0.8	18
		Mx N	0.9	18
		Mx Z	1.1	18

Easter Island region (h = N).
M = 5.6 (Up,Ki).

" 7

	Up	eP	21 22 27
	Ki	iP	21 22 08.2
	Um	iP	21 22 15.4
	Ud	iP	21 22 36.2

Samar (h = 100 km).

" 7

	Ud	iP	22 09 35.3

Indian Ocean (h = N).

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	7	Ud	iP		23 58 05.1		
"	8	Up	iP		00 15 33.0	C	
					micr	sec	
			P	Z'	0.1	1.2	
			Mx	E	0.8	15	
			Mx	N	1.8	17	
			Mx	Z	1.2	15	
		Ki	iP		00 15 14.0	C	
			iS		00 25 38		
					micr	sec	
			P	Z'	0.1	1.4	
			Mx	E	0.9	15	
			Mx	N	1.1	15	
			Mx	Z	0.7	14	
		Um	iP		00 15 21.3		
			ipP		00 15 32.4		
			iS		00 25 42		
		Ud	iP		00 15 40.9	C	
			ipP		00 15 53.0		
			isP		00 15 58.6		
		De	iP		00 15 47.8	C	

Samar.
h = 45 km (Um,Ud).
m = 5.9, M = 5.5 (Up,Ki).

"	8	Up			micr	sec	
			Mx	E	0.7	18	
			Mx	N	0.8	17	
			Mx	Z	1.5	18	
		Ki			micr	sec	
			Mx	E	1.2	18	
			Mx	N	0.7	17	
			Mx	Z	0.9	17	
		Um	iPKP		01 13 28.7		

Chile (h = 15 km).
M = 5.5 (Up,Ki).

"	8	Up	iP		04 15 50.8	C	
			i		04 15 51.6		
			i		04 15 57.1		
			i		04 16 05.3		
			iS		04 26 02.5		
					micr	sec	
			P	Z'	0.1	0.8	
		Ki	iP		04 15 54.4	C	
			i		04 15 59.8		
			i		04 16 09.0		
					micr	sec	
			P	Z'	0.3	1.0	
		Sk	iP		04 15 38.4	C	
			i		04 15 43.7		
			ipP		04 16 17.9		
		Um	iP		04 15 55.3	C	
			ipP		04 16 36.5		
		Ud	iP		04 15 40.4	C	
			i		04 15 41.3		

(cont.)

1973 July	8	(cont.)					
		Ud	i		04 15 46.8		
			i		04 15 51.5		
			ipP		04 16 21.2		
		De	iP		04 15 42.0	C	
			i		04 15 42.8		
			i		04 15 47.7		
			i		04 15 57.0		

Colombia.
h = 160 km (Sk,Um,Ud).
m = 5.8 (Up,Ki).
Multiple P-phases, in average 0.8 sec, 5.8 sec and 14.7 sec after the first onset.

"	8	Up	iP		05 05 49.0
		Ud	iP		05 05 55.6
"	8	Up	iP		06 18 44.6
		Um	iP		06 18 18.3
"	8	Ki	iP		06 37 39.0
"	8	Ki	iPKP		09 56 36.0
		Um	iPKP		09 56 42.2

New Hebrides Islands
(h = 55 km).

"	8	Up	iP		10 10 44.5
			ipP		10 10 55.5
		Ki	iP		10 09 59.4
		Sk	eP		10 10 33
		Um	iP		10 10 20.2
		Ud	iP		10 10 51.1
			ipP		10 11 01.5
		De	iP		10 11 08.4

Kurile Islands.
h = 40 km (Up,Ud).

"	8	Up	i		10 58 50.2
			iSgl		10 59 07.8
		Ki	iPn		10 54 53.4
			iSn		10 55 50.4
			iS*		10 56 10.6
		Sk	iSgl		10 58 37.8
		Um	iSn		10 56 30.8
			i		10 56 46.2
			iSgl		10 57 07.2
		De	i(S*)		11 00 59.0
			iSgl		11 01 12.9

Northwest USSR.
Explosion.

"	8	Ki	iP		15 26 11.8

Okhotsk Sea (h = 370 km).

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	8	Ki	iP	17 10 33.0	
			ipP	17 10 39.5	
		Um	iP	17 10 31.8	
			ipP	17 10 38.1	
		Ud	iP	17 10 11.1	
			ipP	17 10 17.9	
		De	iP	17 10 10.1	
			ipP	17 10 17.1	
		Leeward Islands.			
		h = 25 km (Ki,Um,Ud,De).			
"	8	Ki	iP	19 03 53.5	
		Ud	eP	19 04 49	
		Kamchatka (h = N).			
"	8	Up	iP	23 46 16.8	
		Ki	iP	23 45 31.3	
			i	23 45 44.6	
		Um	iP	23 45 52.3	
			i	23 46 05.7	
		Ud	iP	23 46 22.7	
			i	23 46 36.8	
		Kurile Islands (h = 120 km).			
		If the second phase at Ki,			
		Um and Ud is interpreted as			
		pP, the focal depth is 50 km.			
"	9	De	iSn	00 31 14.0	
		Switzerland (h = 20 km).			
"	9	Um	iPgl	00 58 17.2	
			i	00 58 21.3	
			iSgl	00 58 23.7	
"	9	Ud	eP	01 30 16	
		Greece.			
"	9	Up	iP	02 14 30.6	
			i	02 14 34.1	
				micr sec	
			P Z'	0.2 1.1	
		Ki	iP	02 13 35.3	
			i	02 13 39.4	
		Sk	iP	02 14 13.4	
			i	02 14 18.5	
		Um	iP	02 14 01.7	
			i	02 14 05.7	
		Ud	iP	02 14 33.6	
		De	iP	02 14 55.7	
		Kamchatka (h = 100 km).			
"	9	Ki	iP	08 00 43.2	
		Ud	iP	08 01 08.1	
"	9	Up	iSgl	09 01 13.5	
		Ki	iSgl	09 03 58.7	
		Um	iSgl	09 01 52.4	
		(cont.)			

1973 July	9	(cont.)			
		Ud	iSgl	09 02 17.3	
		De	iSgl	09 02 44.6	
		Esthonia.			
		Explosion.			
"	9	Ki	iPKP	11 21 27.2	
		Sk	ePKP	11 21 36	
		Um	iPKP	11 21 33.9	
		Ud	e(PKP)	11 21 39	
			iPKP	11 21 43.0	
		De	i(PKP)	11 21 42.6	
		Tonga Islands (h = 240 km).			
"	9	Ki	iP	14 26 38.3	
		De	iP	14 24 48.6	
"	9	Up	iP	16 31 14.9	C
			isP	16 31 29.8	
			iS	16 40 34	
				micr sec	
			P Z'	0.2 0.9	
			Mx E	1.9 24	
			Mx N	2.9 23	
			Mx Z	1.9 23	
		Ki	iP	16 31 16.0	C
			ipP	16 31 26.1	
			isP	16 31 31.0	
			iS	16 40 41	
				micr sec	
			P Z'	0.2 1.0	
			Mx E	1.0 14	
			Mx N	1.8 18	
			Mx Z	1.0 18	
		Sk	iP	16 31 31.5	C
			ipP	16 31 42.4	
			isP	16 31 46.6	
		Um	iP	16 31 11.2	C
			ipP	16 31 21.2	
			isP	16 31 26.8	
			iS	16 40 24	
		Ud	iP	16 31 26.6	C
			isP	16 31 42.5	
		De	iP	16 31 24.1	C
			isP	16 31 38.6	
		Andaman Islands.			
		h = 40 km (Up,Ki,Sk,Um,Ud,De).			
		m = 6.2, M = 5.6 (Up,Ki).			
"	9	Ki	ePKP	21 46 01	
		Um	iPKP	21 46 03.5	
		Ud	iPKP1	21 46 10.2	
		De	iPKP1	21 46 21.1	
		Fiji Islands (h = 460 km).			
"	10	Ud	iP	00 40 40.2	

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973							
July	10	Up	iP		01 33 52.4	C	
			iPn		01 34 58.6		
					micr	sec	
			P	Z'	0.1	1.0	
		Ki	iP		01 33 37.3	C	
					micr	sec	
			P	Z'	0.2	0.5	
		Sk	iP		01 34 08.1	C	
		Um	iP		01 33 38.1		
			iPn		01 34 39.3		
		Ud	iP		01 34 09.4	C	
			iPn		01 35 22.7		
		De	iP		01 34 16.3	C	
		Kazakh SSR.					
		m = 6.0 (Up,Ki).					
		Underground explosion.					
"	10	Up	iPKP1		04 21 34.0		
					micr	sec	
			Mx	E	0.8	20	
			Mx	N	1.1	20	
			Mx	Z	1.3	19	
		Ki	ePKP		04 21 23		
					micr	sec	
			Mx	N	1.1	20	
			Mx	Z	1.4	20	
		Sk	ePKP		04 21 33		
		Um	iPKP		04 21 30.1		
		Ud	iPKP1		04 21 35.8		
		De	iPKP1		04 21 46.8		
			i		04 21 48.8		
		Tonga-Kermadec Islands					
		(h = 120 km).					
		M = 5.7 (Up,Ki).					
"	10	Um	i(Sg1)		04 29 44.5		
"	10	Up	iPKP1		07 19 01.9		
					micr	sec	
			Mx	E	0.8	20	
			Mx	N	1.1	20	
			Mx	Z	1.6	20	
		Ki	ePKP		07 18 55		
					micr	sec	
			Mx	N	1.1	20	
			Mx	Z	1.9	20	
		Sk	iPKP		07 19 00.3		
		Um	iPKP		07 18 59.6		
			i		07 19 04.9		
		Ud	iPKP1		07 19 03.0		
		De	iPKP1		07 19 14.1		
		Tonga-Kermadec Islands					
		(h = 100 km).					
		M = 5.7 (Up,Ki).					
"	10	Up	iP		08 43 22.3		
		Um	iP		08 42 55.2		
		Ud	iP		08 43 27.3		
		Kamchatka (h = N).					

1973							
July	10	Ki	iP		08 44 33.0		
		Um	iP		08 44 58.6		
"	10	Up	iP		09 20 13.1		
		Ki	iP		09 19 20.5		
		Um	iP		09 19 45.5		
		Ud	iP		09 20 18.2		
		Kamchatka (h = 30 km).					
"	10	Ki	ePKP		12 42 33		
		Um	i(PKP)		12 42 17.9		
			iPKP		12 42 25.2		
		South Sandwich Islands					
		(h = N).					
"	10	Ud	iP		13 25 32.6		
"	10	Ki	Mx		16 23		
					micr	sec	
			Mx	E	0.4	17	
		Chile (h = 20 km).					
"	10	Ud	iPKP1		16 39 46.5		
		De	iPKP1		16 39 56.6		
"	10	Ud	iP		17 54 22.3		
		Kurile Islands (h = 45 km).					
"	10	Ki	iP		19 19 17.5		
		Sinkiang, China.					
"	10	Um	i(P)		21 24 07.8		
"	10	Up	iP		23 36 56.5	C	
			ipP		23 37 05.7		
			i		23 37 13.7		
					micr	sec	
			P	Z'	0.1	1.1	
			Mx	E	0.9	18	
			Mx	N	0.9	17	
			Mx	Z	1.7	18	
		Ki	iP		23 36 16.3	C	
			ipP		23 36 25.4		
			iPP		23 38 42.5		
					micr	sec	
			P	Z'	0.1	1.0	
			Mx	E	1.0	16	
			Mx	N	1.0	16	
			Mx	Z	1.1	18	
		Sk	iP		23 36 49.9	C	
			iPP		23 39 29.6		
		Um	iP		23 36 34.2	C	
			ipP		23 36 42.9		
			i		23 36 51.8		
		Ud	iP		23 37 03.6	C	
			ipP		23 37 12.3		
		De	iP		23 37 19.0	C	
		Japan.					
		h = 35 km (Up,Ki,Um,Ud).					
		m = 6.0, M = 5.2 (Up,Ki).					

Up = Uppsala, Ki = Kiruna. Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	11	Up	iP	00 29 35.6 D	
		Ki	iP	00 28 45.8 D	
		Sk	eP	00 29 22	
		Um	iP	00 29 09.0 D	
		Ud	iP	00 29 40.3 D	
		Kurile Islands (h = N).			
"	11	Ud	iPKPl	02 26 51.2	
		De	iPKPl	02 27 02.0	
"	11	Ud	iP	03 43 12.0	
"	11	Ki	iP	04 28 58.2	
		Molucca Passage (h = 90 km).			
"	11	Up	iP	05 27 34.7	
		Ud	iP	05 27 41.1	
		Kurile Islands (h = 55 km).			
"	11	Ud	iPKPl	05 33 03.8	
"	11	Up	iP	06 10 56.1	
		Ki	iP	06 10 41.6	
				micr sec	
			P Z'	0.1 1.3	
			Mx E	0.8 18	
			Mx Z	0.9 19	
		Sk	eP	06 11 03	
		Um	iP	06 10 46.7	
		Ud	iP	06 11 04.7	
		Molucca Sea (h = N).			
"	11	Up	iPKPl	08 24 01.3 D	
		Ki	iPKP	08 23 50.5	
		Um	iPKP	08 23 55.5	
		Ud	iPKPl	08 24 03.7 D	
		De	iPKPl	08 24 13.6 D	
		Tonga-Kermadec Islands (h = 630 km).			
"	11	Um	iSgl	12 21 55.8	
		Ud	eSgl	12 22 34	
		Western USSR. Explosion.			
"	11	Up	iRg	12 37 29.5	
		Ud	iRg	12 37 13.7	
		Central Sweden.			
"	11	Up	iP	14 40 39.8	
				micr sec	
			P Z'	0.1 1.2	
		Ki	iP	14 40 04.3	
				micr sec	
			Mx E	0.5 17	
			Mx N	0.5 16	
		Sk	iP	14 40 34.8	
		(cont.)			

1973 July	11	(cont.)		
		Um	iP	14 40 19.3
			i	14 40 42.0
		Ud	iP	14 40 46.4
		De	iP	14 41 00.7
		South of Japan (h = 45 km).		
"	11	Ud	iP	20 30 54.0
"	11	Up	iP	22 30 38.1
		Ki	iP	22 30 14.0
		Sk	eP	22 30 42
		Um	iP	22 30 22.5
		Ud	iP	22 30 47.7
		Formosa.		
"	11	Ud	eP	23 20 39
		Afghanistan-USSR (h = 260 km).		
"	11	Ki	iP	23 25 51.1
		Sk	iP	23 26 13.9
		Ud	iP	23 26 38.4
		Alaska (h = 1 km).		
"	11	Up	iP	23 34 05.2
			ipP	23 34 22.9
		Ki	iP	23 33 11.1
			ipP	23 33 28.5
		Um	iP	23 33 37.8
			ipP	23 33 54.8
		Ud	iP	23 34 04.4
			ipP	23 34 22.7
		De	iP	23 34 26.6
			ipP	23 34 44.2
		Aleutian Islands. h = 70 km (Up,Ki,Um,Ud,De).		
"	12	Up	iP	02 11 15.0 D
			ipP	02 11 22.1
				micr sec
			pP Z'	0.1 1.1
		Ki	iP	02 11 37.9 D
			ipP	02 11 45.5
		Sk	iP	02 11 37.7 D
			ipP	02 11 44.8
		Um	iP	02 11 23.5 D
			ipP	02 11 31.1
		Ud	iP	02 11 25.5 D
			ipP	02 11 32.8
		Chagos Islands. h = 25 km (Up,Ki,Sk,Um,Ud).		
"	12	Up	iSgl	06 28 49.3
		Ki	iSgl	06 29 41.3
		Sk	eSgl	06 30 02
		Um	i(S*)	06 28 07.3
			iSgl	06 28 13.8
		(cont.)		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	12	(cont.)					
		Ud	iSgl		06 29 52.2		
		De	eSgl		06 30 31		
		Lake Ladoga region.					
		Explosion.					
"	12	Up	iP		08 01 54.3	C	
					micr		sec
			P	Z'	0.2		1.0
		Ki	iP		08 01 00.4	C	
					micr		sec
			P	Z'	0.1		1.0
		Sk	iP		08 01 34.4	C	
		Um	iP		08 01 26.6	C	
		Ud	iP		08 01 55.7	C	
		De	iP		08 02 17.8	C	
		Aleutian Islands (h = 45 km).					
		m = 6.0 (Up,Ki).					
"	12	Up	iP		08 07 20.8	C	
			ipP		08 07 31.2		
					micr		sec
			P	Z'	0.1		0.8
		Ki	iP		08 06 36.2	C	
			ipP		08 06 46.4		
					micr		sec
			P	Z'	0.1		1.0
			Mx	E	0.6		16
			Mx	N	0.6		16
			Mx	Z	1.0		18
		Sk	iP		08 07 11.0	C	
		Um	iP		08 06 56.4	C	
			ipP		08 07 06.5		
		Ud	iP		08 07 27.2	C	
			i		08 07 34.8		
			ipP		08 07 37.4		
		De	iP		08 07 44.6	C	
		Japan.					
		h = 40 km (Up,Ki,Um,Ud).					
		m = 6.1 (Up,Ki).					
"	12	Um	iSgl		12 30 15.2		
		Ud	eSgl		12 30 58		
		De	eSgl		12 31 34		
		Western USSR.					
		Explosion.					
"	12	Ud	iP		12 48 02.6		
"	12	Ki	iP		13 09 08.3		
		Um	iP		13 09 21.3		
		Ud	iP		13 09 44.4		
		Volcano Islands (h = 180 km).					
"	12	Up	iSn		14 01 05.7		
			iS*		14 01 17.3		
			iSgl		14 01 19.2		
		(cont.)					

1973 July	12	(cont.)					
		Ki	iSgl		14 03 52.4		
		Sk	eSgl		14 03 20		
		Um	iSgl		14 01 52.6		
		Ud	iSn		14 01 53.5		
			iS*		14 02 20.7		
			iSgl		14 02 25.7		
		Esthonia.					
		Explosion.					
"	12	Up	iSP		14 14 26		
					micr		sec
			Mx	E	0.9		18
			Mx	N	1.0		18
			Mx	Z	2.4		18
		Ki			micr		sec
			Mx	E	0.8		17
			Mx	N	0.7		16
			Mx	Z	1.0		18
		Um	iPP		14 04 58		
			iSKS		14 10 56		
			iS		14 12 52		
			iSP		14 14 42		
		Chile (h = 20 km).					
		M = 5.6 (Up,Ki).					
"	12	Up	iSP		16 10 34		
					micr		sec
			Mx	E	1.1		19
			Mx	N	1.0		18
			Mx	Z	1.7		18
		Ki			micr		sec
			Mx	E	1.2		18
			Mx	N	0.7		16
			Mx	Z	0.9		17
		Um	iSKS		16 07 06		
			iSP		16 10 56		
		Chile (h = 15 km).					
		M = 5.6 (Up,Ki).					
"	12	Up	iSn		17 17 39.1		
			iS*		17 18 01.7		
			iSgl		17 18 07.3		
		Ki	iSgl		17 18 48.1		
		Sk	eSgl		17 19 23		
		Um	iSgl		17 17 28.6		
		Ud	eSn		17 18 17		
			iSgl		17 19 05.1		
		De	iSgl		17 19 46.1		
		Lake Ladoga region.					
		Explosion.					
"	12	Up	eP		17 33 06		
		Ud	eP		17 33 17		
"	12	Ud	iP		18 00 26.7		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July 12

Up	iP	19 23 11.9	
Ki	iP	19 22 53.4	
Um	iP	19 22 59.9	
Ud	iP	19 23 21.0	

Samar (h = N).

" 12

Up	iP	20 08 48.4	
Ki	iP	20 08 30.0	
Ud	iP	20 08 56.5	

Samar.
Origin time = 19 56 01.

" 12

Up	iP	21 41 18.6	
	ipP	21 41 50.3	
Ki	iP	21 41 11.8	
	ipP	21 41 43.9	
Sk	eP	21 41 34	
	ipP	21 42 04.7	
Um	iP	21 41 10.3	
	ipP	21 41 42.4	
Ud	iP	21 41 31.3	
	ipP	21 42 03.4	

Burma.
h = 130 km (Up,Ki,Sk,Um,Ud).

" 13

Up	iPKPl	00 38 10.1	
		micr	sec
	Mx Z	0.5	20
Ki	ePKP	00 37 58	
Sk	ePKPl	00 38 03	
Um	iPKPl	00 37 58.5	
	i	00 38 05.0	
Ud	iPKPl	00 38 11.4	
De	iPKPl	00 38 21.0	

Tonga-Kermadec Islands
(h = 35 km).

" 13

Up	iP	01 04 03.3	
Ki	iP	01 04 11.3	
Sk	eP	01 04 28	
Um	iP	01 04 01.0	
Ud	iP	01 04 19.7	
De	eP	01 04 17	

Afghanistan-USSR
(h = 250 km).

" 13

Up	iP	03 10 26.2	
Ud	iP	03 10 19.7	

Vancouver Island (h = N).

" 13

Up	iP	03 10 35.3	
	ipP	03 10 42.0	
		micr	sec
	pP Z'	0.1	1.1
	Mx N	0.8	18
	Mx Z	0.6	18
Ki	iP	03 09 50.5	

(cont.)

1973 July 13 (cont.)

Ki		micr	sec
	Mx E	0.8	14
	Mx N	0.6	14
	Mx Z	0.7	15
Sk	iP	03 10 06.5	
	ipP	03 10 13.4	
Um	iP	03 10 14.2	
	ipP	03 10 21.1	
Ud	iP	03 10 29.0	
	ipP	03 10 35.9	
De	eP	03 10 49	
	ipP	03 10 55.1	

Vancouver Island.
h = 25 km (Up,Sk,Um,Ud,De).
M = 5.2 (Up,Ki).

" 13

Ud	iP	09 12 49.6	

" 13

Ki	iP	10 12 02.4	
Um	iP	10 11 38.0	
Ud	iP	10 11 41.8	

Caspian Sea (h = N).

" 13

Up	iSgl	11 22 56.7	
Um	iSgl	11 23 18.2	
Ud	iSgl	11 23 59.4	

Western USSR.
Explosion.

" 13

Ud	iP	11 49 49.7	

" 13

Ud	iP	12 04 41.5	

Kamchatka (h = N).

" 13

Um	iSgl	12 33 23.3	
Ud	iSgl	12 34 09.1	
De	eSgl	12 34 36	

Western USSR.
Explosion.

" 13

Up	i	13 13 15.2	
	iSgl	13 13 33.0	
Ki	iPn	13 09 18.8	
	iSn	13 10 18.2	
	iS*	13 10 37.4	
	iSgl	13 10 45.1	
Sk	iSgl	13 13 05.9	
Um	iSn	13 10 57.9	
	i	13 11 13.1	
	iSgl	13 11 31.9	
Ud	eSgl	13 14 04	

Northwest USSR.
Explosion.

" 13

Up	iP	13 50 38.6	
Ki	iP	13 49 53.3	C

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July 13 (cont.)

	Sk	iP	13 50 28.2
	Um	iP	13 50 13.5 C
	Ud	iP	13 50 44.4 C
	De	eP	13 51 02

Kurile Islands (h = 60 km).

" 13	Um	iPKP	14 24 41.9
	De	iPKP	14 24 56.5

Solomon Islands (h = 55 km).

" 13	Ud	iP	20 04 58.8

Hindu Kush.
Intermediate depth.

" 13	Up	iP	22 11 58.3
	Ki	iP	22 12 04.3
	Sk	iP	22 12 22.4
	Um	iP	22 11 55.5
	Ud	iP	22 12 14.2
	De	iP	22 12 11.4

Kashmir (h = 50 km).

" 13	Up	iP	23 02 47.7
	Ki	iP	23 02 53.2
	Sk	eP	23 03 12
	Ud	iP	23 03 03.5

Kashmir (h = N).

" 13	Ud	iP	23 20 35.2
" 14	Up	iP	00 15 22.2
	Um	iP	00 14 57.0
	Ud	iP	00 15 27.8 C

Kurile Islands.

" 14	Um	iP	00 36 11.5

Japan (h = 40 km).

" 14	Um	iP	01 10 00.8
	Ud	iP	01 10 32.1
" 14	Ud	iP	01 26 46.9

Kurile Islands.

" 14	Ud	eP	03 12 34

Greece.

" 14	Ud	iP	03 26 45.3

Kurile Islands.

" 14	Up	iP	03 45 07.3
	Ud	iP	03 45 13.6
" 14	Up	iP	05 00 12.8 D
		i	05 00 18.5
		iS	05 07 20

(cont.)

1973 July 14 (cont.)

			micr	sec	
Up					
	P	Z'	0.3	1.0	
	i	Z'	2.2	1.3	
	Mx	E	330	17	
	Mx	N	560	26	
	Mx	Z	610	18	
Ki	iP		05 00 05.2		D
	i		05 00 11.4		
	iS		05 07 08		
			micr	sec	
	P	Z'	0.3	1.1	
	i	Z'	0.5	1.1	
	Mx	E	360	20	
	Mx	N	1130	24	
	Mx	Z	300	20	
Sk	iP		05 00 30.2		D
	i		05 00 36.0		
Um	iP		05 00 03.3		D
	i		05 00 09.4		
	iPP		05 02 01.0		
	iS		05 07 01		
Ud	iP		05 00 27.6		D
	i		05 00 33.4		
	iPP		05 02 30.3		
De	iP		05 00 30.2		D
	i		05 00 36.4		

Tibet (h = N).
m = 6.7, M = 7.5 (Up,Ki).
Multiple P; the onset with the largest amplitudes follows the first onset by about 6.0 sec.

" 14	Up	iP	05 18 35.3
	Ki	iP	05 17 40.4
	Sk	iP	05 18 03.9
	Um	iP	05 18 09.0
	Ud	iP	05 18 29.3

Alaska (h = N).

" 14	Up	iP	05 33 05.3
	Ki	iP	05 32 50.0
	Um	eP	05 32 56
	Ud	iP	05 33 14.0

Mindanao (h = 110 km).

" 14	Up	iP	06 06 36.1
	Um	eP	06 06 27
	Ud	iP	06 06 51.4

Tibet.
Origin time = 05 57 44.

" 14	Um	iP	07 21 11.6
" 14	Up	eP	08 22 46

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
July 14 (cont.)

Up			micr	sec
	Mx	E	0.5	18
	Mx	N	0.8	18
	Mx	Z	0.6	16
Ki			micr	sec
	Mx	E	0.8	12
	Mx	N	2.4	17
	Mx	Z	0.4	11
Sk	iP		08 23 03.0	
Ud	iP		08 23 01.5	

Tibet.
Origin time = 08 13 54.
M = 4.9 (Up,Ki).

" 14

Up	iP	08 30 02.4
Sk	eP	08 30 20
Ud	iP	08 30 17.5

Tibet.
Origin time = 08 21 11.

" 14

Up	iP	09 09 42.3
Ud	iP	09 09 48.4

" 14

Up	iP		09 21 43.3	
			micr	sec
	Mx	E	0.8	16
	Mx	N	2.1	23
	Mx	Z	1.4	15
Ki			micr	sec
	Mx	E	1.0	12
	Mx	N	4.4	18
	Mx	Z	0.6	12
Sk	eP		09 22 01	
Um	eP		09 21 33	
Ud	iP		09 21 57.6	

Tibet.
Origin time = 09 12 51.
M = 5.0 (Up,Ki).

" 14

Ud	iP	09 31 18.7

" 14

Up	iP	10 18 12.4
Ud	iP	10 18 18.7

Kurile Islands (h = N).

" 14

Up	iSn	10 47 29.3
	iSgl	10 47 40.6
Ki	iSgl	10 50 18.5
Sk	iSgl	10 49 32.0
Um	iSgl	10 48 17.5
Ud	iSn	10 48 17.3
	iSgl	10 48 43.3
De	i	10 48 52.6
	iSgl	10 49 09.1

Esthonia.
Explosion.

1973
July 14

Up	iP		12 43 10.3	
			micr	sec
	P	Z'	0.1	0.7
	Mx	E	0.6	12
	Mx	N	0.9	9
	Mx	Z	1.7	12
Ki	iP		12 44 23.9	
			micr	sec
	Mx	E	1.7	16
	Mx	N	0.8	14
	Mx	Z	0.5	11
Sk	iP		12 43 50.4	C
Um	iP		12 43 48.8	C
Ud	iP		12 43 16.2	C
De	iP		12 42 40.3	

Greece (h = 35 km).
M = 4.7 (Up,Ki).

" 14

Up	iSgl	12 54 53.0
	iSg2	12 55 11.5
Ki	ePn	12 51 08
	iSn	12 51 56.5
	iS*	12 52 09.4
Sk	e	12 54 05
	eSgl	12 54 21
Um	iSn	12 52 20.5
Ud	iSgl	12 55 21.8

Northwest USSR-Finland
border region.
Explosion.

" 14

Up	iP		13 48 21.9	D
	iPP		13 50 16.9	
	iS		13 55 34	
			micr	sec
	P	Z'	1.2	1.5
	Mx	E	13	17
	Mx	N	15	21
	Mx	Z	28	17
Ki	iP		13 48 14.4	D
	iPP		13 50 09.2	
	iS		13 55 22	
			micr	sec
	P	Z'	0.7	1.8
	Mx	E	11	16
	Mx	N	20	17
	Mx	Z	8.3	16
Sk	iP		13 48 39.3	D
Um	iP		13 48 12.5	D
	iPP		13 50 05.2	
	iS		13 55 13	
Ud	iP		13 48 36.7	D
De	iP		13 48 39.1	D

Tibet (h = N).
m = 6.5, M = 6.1 (Up,Ki).

" 14

Ud	iP	15 35 33.7

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	14	Up	iP	18 39 53.9
		Sk	iP	18 40 11.1
		Um	iP	18 39 44.7
		Ud	iP	18 40 08.6
		Tibet.		
		Origin time = 18 31 02.		
"	14	Up	iP	18 55 47.2
		Sk	iP	18 56 04.4
		Um	eP	18 55 39
		Ud	iP	18 56 01.7
		Tibet.		
		Origin time = 18 46 55.		
"	14	Up	iP	19 37 13.0
		Ki	iP	19 36 18.7
		Ud	iP	19 37 13.4
"	14	Up	iP	20 10 58.6
		Ki	eP	20 10 59
		Um	iP	20 10 55.5
		Ud	iP	20 11 09.8
		De	iP	20 11 13.3
"	14	Up	eP	21 57 43
		Ki	eP	21 57 20
		Um	iP	21 57 31.2
		Ud	eP	21 57 53
		Formosa.		
"	14	Up	iPKPl	23 52 34.7
		Um	iPKPl	23 52 24.3
		Ud	iPKPl	23 52 36.3
"	15	Ud	iPKPl	00 31 20.9
		De	iPKPl	00 31 31.8
"	15	Up	iPKPl	01 31 03.2
		Sk	ePKP	01 31 01
		Um	iPKP	01 30 54.2
		Ud	iPKPl	01 31 04.6
		De	iPKPl	01 31 13.5
		Tonga-Kermadec Islands		
		(h = 230 km).		
"	15	Ud	iP	02 24 57.0
		Alaska (h = 80 km).		
"	15	Ud	iPKPl	03 18 13.6
"	15	Um	iP	03 21 32.0
		Ud	iP	03 22 03.0
"	15	Ki	iSn	06 14 10.1
			iSgl	06 14 34.1
		Um	iSgl	06 15 25.6
		Northwest USSR.		
		Explosion.		

1973 July	15	Ud	eP	08 14 07
"	15	Up	eS	08 52 13
		Sk	eS	08 52 25
		Ud	iP	08 49 41.7
			i	08 49 48.2
			iS	08 51 37.6
			i	08 51 43.3
"	15	Up	iP	09 46 47.6 C
		Ki	eP	09 46 41
				micr sec
			Mx N	0.9 18
		Sk	iP	09 47 04.8 C
		Um	iP	09 46 38.6
		Ud	iP	09 47 02.5 C
		Tibet.		
		Origin time = 09 37 56.		
"	15	Um	i(P)	11 56 01.8
"	15	Up	iPKPl	13 06 05.4
		Sk	ePKPl	13 05 58
		Um	iPKPl	13 05 54.6
		Ud	iPKPl	13 06 07.1
		Tonga-Kermadec Islands		
		(h = 70 km).		
"	15	Ud	iP	13 39 48.6
"	15	Up	iP	14 17 50.7
			iPcP	14 18 14.6
				micr sec
			P Z'	0.1 0.8
		Ki	iP	14 17 05.2 C
				micr sec
			P Z'	0.1 1.0
		Sk	iP	14 17 40.7
		Um	iP	14 17 25.6 C
			i	14 17 40.5
			iPcP	14 17 57.0
		Ud	iP	14 17 57.0 C
		Kurile Islands (h = 45 km).		
		m = 6.1 (Up,Ki).		
"	15	Ud	iP	14 32 30.1
"	15	Up	iPKPl	18 49 53.8
		Ki	ePKP	18 49 41
		Sk	ePKPl	18 49 47
		Um	iPKPl	18 49 45.1
		Ud	iPKPl	18 49 55.3
		Tonga-Kermadec Islands		
		(h = 60 km).		
"	15	Um	iP	22 02 49.9
		Ud	eP	22 03 18
		Japan (h = 60 km).		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	15	Ud	iPKP1	22 20 28.3
"	15	Sk	ePKP1	22 27 10
		Um	iPKP1	22 27 00.0
		Ud	iPKP1	22 27 12.2
"	16	Ud	iP	00 17 34.9
"	16	Ud	iP	02 04 19.2
"	16	Um	iP	03 46 06.7
		Ud	iP	03 46 27.9
"	16	Um	iPKP	04 18 09.9
			iPP	04 19 26.0
			i	04 20 05.0
		D'Entrecasteaux Islands (h = 40 km).		
"	16	Ki	iP	05 56 39.2
		Sumbawa Island (h = N).		
"	16	Ud	iP	09 58 35.4
"	16	Um	iPP	13 25 58.7
			iSKS	13 31 37.4
		Flores Sea (h = 390 km).		
"	16	Up	eSgl	13 42 34
		Ki	eSgl	13 44 32
		Sk	eSgl	13 44 16
		Um	iSgl	13 42 52.3
		Ud	iSgl	13 43 33.4
		De	eSgl	13 44 05
		Western USSR. Explosion.		
"	16	Up	iP	18 25 45.9
			iPP	18 29 13.9
			iSKS	18 36 12
				micr sec
			Mx E	1.9 24
			Mx N	1.4 20
			Mx Z	4.1 23
		Ki	iP	18 25 29.8 C
			i	18 26 04.5
				micr sec
			P Z'	0.1 1.0
			Mx N	2.3 19
			Mx Z	2.7 17
		Sk	iP	18 25 27.6 C
		Um	iP	18 25 40.1 C
			iPP	18 29 01.5
			iSKS	18 36 09
		Ud	iP	18 25 37.1 C
		De	iP	18 25 45.7
		Mexico (h = 45 km). M = 5.6 (Up,Ki).		

1973 July	16	Ud	iP	18 39 38.7
"	16	Up	iP	19 54 32.9
			ipP	19 54 35.5
			iPcP	19 55 55.3
				micr sec
			pP Z'	0.1 0.8
			Mx E	0.6 10
			Mx N	0.8 9
			Mx Z	1.2 10
		Ki	iP	19 54 25.8 D
			ipP	19 54 28.2
			iPcP	19 55 51.2
			iPP	19 56 23.0
				micr sec
			pP Z'	0.2 1.2
			Mx N	0.8 11
			Mx Z	1.8 13
		Sk	iP	19 54 50.7 D
			ipP	19 54 53.2
		Um	iP	19 54 23.9 D
			ipP	19 54 26.4
			iPcP	19 55 47.7
			iPP	19 56 19.1
		Ud	iP	19 54 47.9 D
			ipP	19 54 50.4
			iPcP	19 56 02.5
		De	iP	19 54 50.5
			ipP	19 54 52.5
		Tibet. h = 10 km (Up,Ki,Sk,Um,Ud,De). m = 5.9, M = 5.1 (Up,Ki).		
"	16	Up	eP	20 55 34
			iPcP	20 56 16.5
		Ki	iP	20 54 42.4
		Ud	iP	20 55 39.8
			iPcP	20 56 19.2
		De	iPcP	20 56 32.7
		Kamchatka (h = 80 km).		
"	16	Up	iPKP1	21 52 48.2 C
			i	21 52 51.1
		Ki	ePKP	21 52 32
		Sk	iPKP1	21 52 41.1 C
			i	21 52 44.0
		Um	iPKP1	21 52 35.9
			i	21 52 40.0
		Ud	iPKP1	21 52 50.0 C
			i	21 52 52.9
		De	iPKP1	21 52 58.6 C
"	16	Up	iPKP1	22 53 21.6
		Ud	iPKP1	22 53 23.6
		De	iPKP1	22 53 34.1
		Tonga-Kermadec Islands (h = 90 km).		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	16	Up	iPKPl	23 17 04.7
		Ud	iPKPl	23 17 07.1
"	17	Ki	iP	00 38 57.8
		Ud	iP	00 39 11.4
		De	eP	00 39 11
"	17	Ud	iP	05 51 10.6
"	17	Up	iP	09 35 23.4 C
		Sk	iP	09 36 02.8
		Um	iP	09 36 03.0
		Ud	iP	09 35 29.9 C
		De	iP	09 34 49.2
		Ionian Sea (h = N).		
"	17	Ud	iP	09 46 19.8
"	17	Um	i(P)	11 25 01.4
"	17	Up	iSn	12 04 30.8
			iSgl	12 04 42.0
		Ki	eSgl	12 07 19
		Sk	eSgl	12 06 35
		Um	iSgl	12 05 16.9
		Ud	eSn	12 05 20
			iSgl	12 05 48.4
		De	iSgl	12 06 13.1
		Esthonia.		
		Explosion.		
"	17	Up	i	13 03 43.2
			iSgl	13 03 51.1
		Ki	i(S*)	13 06 36.3
			iSgl	13 06 43.0
		Sk	iSgl	13 05 47.7
		Um	iSgl	13 04 39.5
		Ud	eSgl	13 04 54
		De	iSgl	13 05 16.9
		Esthonia.		
		Explosion.		
"	17	Up	iP	14 29 44.1
		Ki	iP	14 29 16.3
		Ud	iP	14 29 50.5
		Mariana Islands (h = 600 km).		
"	17	Ud	iPKPl	22 03 26.6
		De	iPKPl	22 03 36.7
"	17	Up	iSgl	22 11 57.3
		Ki	iPgl	22 09 16.5
			iSgl	22 09 53.9
				micr sec
			Sgl Z'	0.1 0.4
		Sk	ePgl	22 09 21
			iS*	22 09 58.2
		(cont.)		

1973 July	17	(cont.)		
		Sk	iSgl	22 10 02.3
		Um	iPgl	22 09 33.2
			iSn	22 10 08.0
			iSgl	22 10 22.3
		Ud	iSgl	22 11 47.9
		Nordland, Norway,		
		66.4°N, 14.4°E.		
		Origin time = 22 08 28.		
		Explosion.		
"	18	Ud	iP	00 14 07.1
			ipP	00 14 15.1
		Japan.		
		h = 30 km (Ud).		
"	18	Up	iP	04 06 01.6 C
				micr sec
			P Z'	0.1 1.1
			Mx E	0.6 17
			Mx N	0.6 16
			Mx Z	0.8 15
		Ki	iP	04 05 44.6
				micr sec
			P Z'	0.1 1.0
			Mx N	0.5 15
		Sk	iP	04 06 07.6
		Um	iP	04 05 50.0
		Ud	iP	04 06 10.9 C
		De	iP	04 06 16.9
		Luzon (h = 55 km).		
		m = 5.8, M = 5.3 (Up,Ki).		
"	18	Um	iP	07 07 50.2
		Caribbean Sea (h = N).		
"	18	Up	iPKPl	07 17 47.5
		Sk	iPKPl	07 17 39.8
		Um	iPKPl	07 17 35.9
		Ud	iPKPl	07 17 48.3
		Kermadec Islands (h = 55 km).		
"	18	Ud	iP	08 36 42.3
"	18	Up	iSgl	10 58 11.2
		Um	iSgl	10 58 30.2
		Ud	iSgl	10 59 12.6
		Esthonia.		
		Explosion.		
"	18	Up	iSgl	12 44 28.7
		Um	iSgl	12 45 58.7
		Ud	iSgl	12 45 23.9
		Probably Latvia.		
		Explosion?		
"	18	Up	iSgl	13 09 44.9
		(cont.)		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	18	(cont.)				
		Ki	eSgl		13 11 51	
		Um	iSgl		13 10 02.7	
		De	eSgl		13 11 14	
		Western USSR.				
		Explosion.				
"	18	Up	iPP		15 39 18	
			iSKS		15 45 34	
			iS		15 46 40	
					micr	sec
			Mx	E	0.8	20
			Mx	N	0.8	22
			Mx	Z	1.0	19
		Ki	iS		15 47 07	
			isS		15 48 19	
					micr	sec
			Mx	N	0.9	20
			Mx	Z	1.1	19
		Um	iPP		15 39 33	
			iSKS		15 45 43	
			iS		15 46 53	
		Ud	iP		15 35 01.4	
		Chile (h = 150 km).				
		M = 5.5 (Up,Ki).				
"	18	Ud	iP		15 36 15.8	
"	18	De	iPKPl		18 00 03.8	
		Fiji Islands (h = 630 km).				
"	18	Ki	iP		22 30 30.1	
		Talaud Islands (h = 150 km).				
"	18	Up	iP		22 58 32.0	
		Ud	eP		22 58 38	
		Crete.				
"	18	Ud	iP		23 03 47.4	
		Kashmir (h = N).				
"	19	Ud	iP		02 32 19.5	
		Kurile Islands (h = 70 km).				
"	19	Ud	iP		03 35 40.4	
"	19	Up	i(PKP)		06 02 34.0	
			iPKP		06 02 44.3	
		Ki	i(PKP)		06 02 17.7	
			iPKP		06 02 28.2	
			iSKPl		06 04 58.6	
					micr	sec
			PKP	Z'	0.1	1.0
			SKPl	Z'	0.3	1.5
		Sk	iPKP		06 02 37.8	
			iSKPl		06 05 16.3	
		Um	i(PKP)		06 02 27.4	
		(cont.)				

1973 July	19	(cont.)				
		Um	iPKP		06 02 34.9	
			iSKPl		06 05 11.8	
		Ud	i(PKP)		06 02 35.0	
			iPKP		06 02 46.0	
			iSKPl		06 05 26.0	
		De	iPKPl		06 02 43.9	
			i		06 02 44.6	
		Fiji Islands (h = 570 km).				
"	19	Ki	iP		07 24 23.4	
		Ud	iP		07 25 19.3	
		Aleutian Islands (h = 45 km).				
"	19	Ud	iPKPl		08 14 44.4	
"	19	Up	iPKPl		09 25 34.4	
		Ki	iPKP		09 25 04.2	
		Um	iPKP		09 25 13.9	
		Ud	iPKPl		09 25 30.3	
			i		09 25 37.5	
"	19	Sk	iP		10 56 15.5	
		Yugoslavia (h = 10 km).				
"	19	Ki	eP		13 25 46	
		Um	iP		13 26 04.3	
		Ud	iP		13 26 36.7 C	
		Kurile Islands (h = 50 km).				
"	19	Ki	iSn		13 34 22.0	
			iSgl		13 34 47.5	
		Um	eSgl		13 35 42	
		Northwest USSR.				
		Explosion.				
"	19	Up	iSgl		15 28 13.9	
		Ki	i		15 29 38.1	
			iSgl		15 30 11.3	
		Sk	iSgl		15 29 58.9	
		Um	eSgl		15 28 30	
		Ud	iSgl		15 29 16.5	
		De	eSgl		15 29 38	
			i		15 29 46.5	
		Western USSR.				
		Explosion.				
"	19	Up	iPKPl		17 46 38.4	
		Sk	iPKPl		17 46 31.1	
		Ud	iPKPl		17 46 40.0	
"	19	Up	iP		19 32 00.9	
		Ki	iP		19 30 24.2	
			i		19 30 32.8	
			iS		19 31 40.1	
			i		19 31 51.2	
			iTPgl		19 35 22.4	
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	19	(cont.)				
		Ki	iTSgl		19 35 51.7	
					micr	sec
			Mx	E	0.6	15
			Mx	N	0.4	11
			Mx	Z	0.5	13
		Sk	iP		19 31 04.9	
			iS		19 32 52.2	
			eTSgl		19 37 59	
		Um	iP		19 31 12.5	
			i		19 31 14.3	
			iS		19 33 05.8	
			iTSgl		19 37 43.1	
		Ud	iP		19 31 53.2	
			i		19 31 56.6	
			e(S)		19 34 30	
		De	iP		19 32 43.4	
		Norwegian Sea, near 72.7°N, 8.2°E.				
		Origin time = 19 28 46.				
		Readings from Finnish and Norwegian stations incorporated in the solution.				
"	20	Ud	iP		00 05 35.3	
"	20	Ki	iP		02 55 04.1	
		Celebes (h = 150 km).				
"	20	Ki	eP		06 31 20	
		Ud	eP		06 31 35	
		Banda Sea (h = N).				
"	20	De	iPKPl		06 52 38.8	
		Tonga Islands (h = N).				
"	20	Ki	iPKP		07 13 52.4	
			i		07 14 02.9	
					micr	sec
			PKP	Z'	0.1	1.0
		Sk	iPKP		07 14 06.8	
			i		07 14 18.7	
		Um	iPKP		07 14 02.1	
		Ud	ePKP		07 14 13	
"	20	Up	ePKP2		08 21 24	
			i		08 21 31.0	
		Ki	iPKPl		08 21 11.0	
			iPKP2		08 21 24.6	
		Sk	iPKP2		08 21 40.4	
		Um	iPKP		08 21 00.6	
			iPKPl		08 21 10.1	
		Ud	iPKP2		08 21 32.7	
		De	iPKP2		08 21 28.7	
		West of Macquarie Islands (h = N).				

1973 July	20	Up	iP		08 24 21.2	C
			iS		08 33 39	
					micr	sec
			P	Z'	0.1	0.9
			Mx	E	2.5	19
			Mx	N	5.2	22
			Mx	Z	8.4	19
		Ki	iP		08 23 42.2	C
			ipP		08 23 54.3	
			iS		08 32 31	
					micr	sec
			P	Z'	0.1	1.0
			pP	Z'	0.2	1.1
			Mx	E	9.5	17
			Mx	N	7.3	18
			Mx	Z	12	18
		Sk	iP		08 24 15.5	C
		Um	iP		08 23 59.1	C
			ipP		08 24 11.2	
			iS		08 33 03	
		Ud	iP		08 24 28.3	C
		De	iP		08 24 42.9	C
		Japan.				
		h = 45 km (Ki,Um).				
		m = 5.7, M = 6.0 (Up,Ki).				
"	20	Ki	iPn		10 19 36.4	
			ePgl		10 19 46	
			iSn		10 20 24.5	
			iS*		10 20 38.2	
		Northwest USSR-Norway border region.				
		Explosion.				
"	20	Ki	ePn		10 59 45	
			iSn		11 00 29.1	
"	20	Up	iSgl		11 54 57.1	
		Ki	iPn		11 50 41.1	
			iSn		11 51 40.7	
			iS*		11 51 58.9	
		Sk	eSgl		11 54 30	
		Um	iSn		11 52 19.8	
			i		11 52 37.7	
			iSgl		11 52 54.0	
		Ud	iSgl		11 55 27.7	
		De	eSgl		11 57 00	
		Northwest USSR.				
		Explosion.				
"	20	Up	iSgl		12 38 05.1	
		Ki	iPn		12 33 49.6	
			iSn		12 34 47.9	
			iS*		12 35 07.8	
		Sk	eSn		12 36 39	
			iSgl		12 37 36.0	
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July 20 (cont.)

	Um	iSn		12 35 29.3
		i		12 35 44.2
		iSgl		12 36 05.3
	Ud	eSn		12 37 26
		eSgl		12 38 35
	De	iSgl		12 40 05.1

Northwest USSR.
Explosion.

				micr	sec
" 20	Up	Mx		14 04	
		Mx	E	0.5	16
		Mx	N	0.6	16
		Mx	Z	0.9	16
	Ki	Mx		14 02	
		Mx	E	0.9	15
		Mx	N	0.7	16
		Mx	Z	0.8	15

Mexico (h = N).
M = 5.3 (Up,Ki).

				micr	sec
" 20	Up	Mx		14 43	
		Mx	E	0.6	17
		Mx	N	0.5	15
		Mx	Z	1.0	18
	Ki	Mx		14 40	
		Mx	E	0.9	18
		Mx	N	0.6	16
		Mx	Z	0.7	14

Mexico (h = N).
M = 5.3 (Up,Ki).

" 20	Ki	iP		16 07 26.8
" 20	Ki	i(Sn)		19 30 23.8
		i(Sgl)		19 30 50.0

				micr	sec
" 20	Up	iP		20 00 09.4	
		P	Z'	0.1	1.2
	Ki	eP		19 58 32	
	Sk	eP		19 59 24	
	Um	iP		19 59 25.9	

Greenland Sea (h = N).

" 20	Ki	iSgl	20 25 34.6
	Um	iSgl	20 25 21.5
" 20	Um	iPKP1	21 40 21.4

				micr	sec
" 20	Up	iP		23 32 28.2	
		P	Z'	0.1	1.1

(cont.)

1973 July 20 (cont.)

				micr	sec
	Up				
		Mx	N	1.0	22
		Mx	Z	1.1	21
	Ki	iP		23 30 56.0	
		P	Z'	0.1	1.1
		Mx	E	0.7	13
		Mx	N	0.4	10
		Mx	Z	0.5	10
	Sk	iP		23 31 43.6	
		i		23 31 51.6	
	Um	iP		23 31 44.9	
		iS		23 34 57	
	Ud	iP		23 32 24.2	
	De	iP		23 33 01.7	

Greenland Sea (h = N).
m = 5.0, M = 4.2 (Up,Ki).

" 20	Ki	i(pP)		23 52 32.3
	Ud	iP		23 53 16.9

Kurile Islands (h = N).

" 21	Ki	iP		01 29 17.1
	Um	iP		01 29 36.9
	Ud	iP		01 30 07.3

Japan (h = 35 km).

" 21	Ki	eP		02 48 02
		eS		02 49 15
		iTSgl		02 53 38.6
		i		02 53 56.1
	Sk	eP		02 48 36
		iS		02 50 24
	Um	iS		02 50 39.7
		e		02 51 14

Norwegian Sea, near 73°N, 8°E.
Origin time = 02 46 20.

				micr	sec	
" 21	Up	iPKP1		04 37 59.4		D
		iSKP1		04 41 01.8		
		iPP		04 41 14.3		
		PKP1	Z'	1.8	0.8	
		SKP1	Z'	0.8	1.4	
		PP	Z'	0.9	1.7	
	Ki	i(PKP)		04 37 35.4		
		i(PKP)		04 37 41.8		
		iPKP		04 37 48.4		
		iPP		04 40 19.4		
		i		04 40 35.8		
		iSKP1		04 40 40.7		
		iSKP2		04 40 44.9		
		ipSKP1		04 42 45		
		PKP	Z'	0.2	0.9	

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	21	(cont.)					
		Ki			micr	sec	
			SKP1	Z'	1.2	1.7	
			Mx	E	1.0	21	
			Mx	N	0.8	17	
		Sk	i(PKP)		04 37 51.4		
			iPKP		04 37 58.2		
			iSKP1		04 40 55.7		
		Um	i(PKP)		04 37 45.7		
			i(PKP)		04 37 47.9		
			iPKP		04 37 53.9		
			iSKP1		04 40 51.2		
			ipSKP1		04 43 07		
		Ud	iPKP1		04 38 01.5	D	
			iSKP1		04 41 03.2		
			iPP		04 41 17.5		
		De	iPKP		04 38 09.5		
			iPKP1		04 38 11.9	D	
			ipPKP1		04 39 51.3		
			iSKP1		04 41 10.9		
		Tonga-Kermadec Islands.					
		h = 420 km (De).					
"	21	Up	iPKP2		05 14 19.6		
		Ki	iPKP1		05 13 45.0		
		Sk	iPKP1		05 14 07.8		
		Um	iPKP1		05 14 00.6		
		Ud	iPKP2		05 14 21.3		
"	21	Up	iP		05 34 49.7	C	
			i		05 34 53.4		
					micr	sec	
			P	Z'	0.1	0.9	
		Ki	iP		05 34 33.5	C	
			i		05 34 37.4		
					micr	sec	
			P	Z'	0.1	1.1	
		Sk	iP		05 35 01.9	C	
			i		05 35 05.5		
		Um	iP		05 34 36.5	C	
			i		05 34 40.0		
		Ud	iP		05 35 03.2	C	
			i		05 35 06.8		
		De	iP		05 35 09.1		
		Tsinghai, China (h = N).					
		m = 5.8 (Up,Ki).					
		Double P, in average 3.7 sec apart.					
"	21	Um	iP		06 50 35.8		
"	21	Ud	iP		08 08 36.4		
		De	eP		08 08 03		
		Crete (h = 5 km).					
"	21	Up	iP		11 58 35.0		
			ipP		11 58 50.6		
		(cont.)					

1973 July	21	(cont.)					
		Up			micr	sec	
			pP	Z'	0.1	0.8	
			Mx	E	0.9	18	
			Mx	N	0.8	17	
			Mx	Z	1.4	15	
		Ki	iP		11 58 14.4		
			i(pP)		11 58 25.9		
		Sk	i(pP)		11 58 51.6		
		Um	iP		11 58 21.1		
			ipP		11 58 35.2		
		Ud	iP		11 58 45.4		
		De	iP		11 58 54.2		
		Luzon-Formosa.					
		h = 55 km (Up,Um).					
"	21	Ud	iP		12 11 51.5		
		Greece.					
"	21	Ud	iP		12 30 22.2		
"	21	Up	eP		12 57 18		
		Ki	iP		12 58 26.5		
		Sk	eP		12 57 57		
		Ud	iP		12 57 25.1		
		De	iP		12 56 53.6		
		Crete (h = N).					
"	21	Up	eP		13 21 12		
		Ki	i(pP)		13 21 00.1		
		Sk	eP		13 21 17		
		Ud	iP		13 21 18.7		
			ipP		13 21 32.2		
		Luzon-Formosa.					
		h = 50 km (Ud).					
"	21	Ud	iPKP1		19 31 52.8		
		De	iPKP1		19 32 04.1		
		Tonga-Kermadec Islands					
		(h = 600 km).					
"	21	Up	iP		19 58 58.1		
		Ki	iP		19 58 50.7		
					micr	sec	
			Mx	E	0.8	14	
			Mx	N	0.9	18	
			Mx	Z	0.7	13	
		Sk	iP		19 59 15.7		
		Um	iP		19 58 48.5		
		Ud	iP		19 59 13.3		
		De	iP		19 59 15.4		
		Tibet (h = N).					
"	22	Up	iP		01 48 57.5		
		Ki	eP		01 48 19		
		Um	iP		01 48 35.8		
		Ud	iP		01 49 04.9		
		Japan (h = 60 km).					

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973						
July	22	Up	ePKP		02 55 40	
			ipPKP		02 55 58.4	
					micr	sec
			Mx	E	0.7	25
			Mx	N	0.7	20
			Mx	Z	0.8	20
		Ki	iPKP		02 55 53.2	
			ipPKP		02 56 10.5	
			iSKP		02 59 06.3	
					micr	sec
			pPKP	Z'	0.1	1.2
			Mx	E	0.6	15
			Mx	N	0.5	14
		Um	i		02 55 56.7	
		Ud	iPKP		02 55 38.4	
			ipPKP		02 55 56.6	
		South Sandwich Islands.				
		h = 60 km (Up,Ki,Ud).				
		M = 5.6 (Up,Ki).				
"	22	Up	epP		03 55 51	
		Ki	iP		03 55 22.8	C
			ipP		03 55 29.7	
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP		03 55 23.7	
		Um	iP		03 55 36.0	C
			ipP		03 55 43.2	
		Ud	ipP		03 55 41.6	
		Mexico.				
		h = 25 km (Ki,Um).				
"	22	Up	i(P*)		04 03 38.4	
			iPgl		04 03 40.3	
			i		04 03 52.8	
			iS*		04 04 12.1	
			iSgl		04 04 14.3	
		Ki	eSgl		04 08 07	
		Sk	iSn		04 05 17.0	
			iSgl		04 05 41.4	
		Um	iSgl		04 06 13.0	
		Ud	iPgl		04 03 26.9	C
			i		04 03 29.2	
			iSgl		04 03 51.3	
		Västergötland, Sweden, 58.3°N, 13.8°E.				
		Origin time = 04 02 56.				
		Felt.				
"	22	Ki	iSn		04 32 47.5	
			iSgl		04 33 09.4	
		Um	iSgl		04 34 02.4	
		Northwest USSR.				
		Explosion.				
"	22	Ki	iP		05 41 15.8	
		Um	iP		05 41 30.9	
		Ud	eP		05 42 01	
		Japan (h = 360 km).				

1973						
July	22	Up	i		07 21 32.4	
			iSgl		07 21 59.6	
			i		07 22 03.8	
		Ki	iPn		07 17 44.7	
			iSn		07 18 44.4	
			iSgl		07 19 07.1	
		Sk	eSgl		07 21 30	
		Um	iSn		07 19 24.3	
			i		07 19 38.6	
			iSgl		07 19 56.7	
		Ud	iSgl		07 22 28.1	
		Northwest USSR.				
		Explosion.				
"	22	Up	iP		08 48 15.8	
		Ki	iP		08 48 14.2	
		Sk	eP		08 48 28	
		Um	iP		08 48 12.2	
		Ud	iP		08 48 24.9	
			iPP		08 52 20.3	
		Sunda Strait (h = 80 km).				
"	22	Up	iP		09 17 10.6	
		Ki	eP		09 16 59	
		Um	iP		09 17 00.9	
		Ud	iP		09 17 23.4	
"	22	Up	iSgl		09 34 43.3	
		Ki	iPn		09 30 28.5	
			iSn		09 31 25.9	
			iSgl		09 31 48.1	
		Sk	iSgl		09 34 16.3	
		Um	iSn		09 32 06.3	
			i		09 32 22.1	
			iS*		09 32 38.1	
			iSgl		09 32 41.8	
		Ud	iSgl		09 35 12.6	
		Northwest USSR.				
		Explosion.				
"	22	Ud	iP		09 55 02.9	
		Iran (h = N).				
"	22	Up	ePKP1		09 56 42	
		Ud	iPKP1		09 56 42.6	
"	22	Up	iPKP		14 56 26.9	
		Ki	iPKP		14 56 42.2	
		Um	iPKP		14 56 35.5	
		Ud	iPKP		14 56 25.8	
		South Sandwich Islands (h = N).				
"	22	Up	iPKP1		15 30 40.2	D
			iPKP2		15 30 45.1	
					micr	sec
			PKP1	Z'	0.1	1.0
			PKP2	Z'	0.1	0.8

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973						
July	22	(cont.)				
		Ki	ePKP		15 30 19	
			iSKP1		15 33 35.1	
		Sk	iPKP1		15 30 33.9	D
		Um	iPKP1		15 30 28.9	D
		Ud	iPKP1		15 30 41.9	D
			iPKP2		15 30 48.4	
		Kermadec Islands (h = 260 km).				
"	22	Ud	iP		15 40 19.2	
		Mindanao (h = N).				
"	22	Ud	iP		16 07 07.1	
		Afghanistan-USSR (h = 220 km).				
"	22	Ud	iP		16 32 13.5	
"	22	Up	iP		18 30 27.2	
		Ki	eP		18 29 53	
		Ud	eP		18 30 33	
		South of Japan (h = N).				
"	22	Up	eP		19 38 41	
		Ud	iP		19 38 47.6	
"	22	Ud	iPKP1		21 52 02.9	
		Tonga-Kermadec Islands (h = 600 km).				
"	23	Up	eP		00 45 02	
		Ud	iP		00 45 06.1	
			i		00 45 17.2	
		Kamchatka (h = 140 km).				
"	23	Up	iP		01 29 55.2	C
			iPn		01 30 57.0	
			iPP		01 31 13.5	
					micr	sec
			P	Z'	2.6	1.0
			PP	Z'	0.5	0.9
			Mx	E	0.8	9
			Mx	N	0.8	5
			Mx	Z	1.9	9
		Ki	iP		01 29 39.2	C
			iPn		01 30 37.7	
					micr	sec
			P	Z'	2.9	1.0
		Sk	iP		01 30 09.9	C
			iPn		01 31 28.1	
		Um	iP		01 29 39.7	C
		Ud	iP		01 30 11.6	C
			i		01 30 48.4	
			iLg2		01 42 56.1	
		Kazakh SSR.				
		m = 7.1 (Up,Ki).				
		Underground explosion.				
"	23	Up	iP		02 09 06.6	
		(cont.)				

1973						
July	23	(cont.)				
		Ki	eP		02 09 13	
		Um	iP		02 09 04.1	
		Ud	iP		02 09 23.2	
		Tadzhik SSR (h = 180 km).				
"	23	Up	iP		08 43 57.1	
		New Guinea (h = N).				
"	23	Up	iP		10 13 51.4	C
					micr	sec
			P	Z'	0.2	1.2
			Mx	E	2.0	18
			Mx	N	1.8	20
			Mx	Z	4.1	19
		Ki	iP		10 13 26.9	C
					micr	sec
			P	Z'	0.1	1.1
			Mx	E	1.4	17
			Mx	N	1.3	17
			Mx	Z	1.1	15
		Sk	iP		10 13 55.1	C
		Um	iP		10 13 36.3	
		Ud	iP		10 14 01.0	C
		Formosa (h = 40 km).				
		m = 6.0, M = 5.5 (Up,Ki).				
"	23	Up	iSn		10 41 22.2	
			iSg1		10 41 34.8	
		Ki	iSg1		10 44 08.8	
		Sk	iSg1		10 43 27.7	
		Um	iSg1		10 42 08.2	
			iSg2		10 42 14.0	
		Ud	iSn		10 42 09.9	
			iSg1		10 42 39.0	
		Esthonia.				
		Explosion.				
"	23	Up	iSg1		12 31 42.6	
		Ki	iSg1		12 33 38.1	
		Sk	iSg1		12 33 31.1	
		Um	iSg1		12 32 00.2	
		Ud	iSg1		12 32 43.1	
		Western USSR.				
		Explosion.				
"	23	Ud	iPKP1		14 43 25.4	
"	23	Up	iP		14 45 56.4	C
			ipP		14 46 14.4	
					micr	sec
			P	Z'	0.2	0.9
		Ki	iP		14 45 33.8	C
					micr	sec
			P	Z'	0.1	1.1
		Sk	iP		14 46 00.3	C
		Um	iP		14 45 41.7	C
		Ud	iP		14 46 05.8	C
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	23	(cont.) Formosa. h = 70 km (Up). m = 5.9 (Up,Ki).			
"	23	Ki	iPKP1	15 13 59.2	
		Um	iPKP1	15 14 09.9	
"	23	Up	iP	15 40 07.1	
			ipP	15 40 17.6	
		Ki	iP	15 39 14.4	
		Um	iP	15 39 40.8	
		Ud	iP	15 40 06.5	
			ipP	15 40 17.0	
		Aleutian Islands. h = 40 km (Up,Ud).			
"	23	Ud	iP	16 36 42.7	
"	23	Up	iP	19 01 51.5	
		Ki	iP	19 00 58.4	
		Sk	iP	19 01 30.2	
		Um	iP	19 01 24.8	
		Ud	iP	19 01 51.5	
		Aleutian Islands (h = 80 km).			
"	23	Up	iP	19 09 23.1	
		Ki	iP	19 09 31.5	
		Ud	iP	19 09 39.3	
		Hindu Kush (h = 230 km).			
"	23	Ki	iP	20 40 31.5	
"	23	Up	eP	20 49 59	
				micr	sec
			Mx E	0.4	15
			Mx N	0.6	16
			Mx Z	0.8	15
		Ki	iP	20 49 28.6	
				micr	sec
			Mx N	0.6	14
			Mx Z	1.0	14
		Sk	eP	20 49 35	
		Ud	iP	20 49 50.1	
		Gulf of California (h = N). M = 5.2 (Up,Ki).			
"	23	Up	eP	22 27 00	
		Ud	iP	22 27 11.8	
"	23	Ud	eP	23 28 56	
		Italy (h = N).			
"	23	Ud	iP	23 40 43.8	
		Afghanistan-USSR (h = 250 km).			
"	24	Ud	iP	04 06 26.7	
1973 July	24	Ud	iPKP	04 38 02.5	
		Solomon Islands (h = 40 km).			
"	24	Ud	iPKP	05 03 55.9	
		Fiji Islands (h = 600 km).			
"	24	Up	eP	05 20 28	
		Ki	iP	05 20 09.6	
		Ud	iP	05 20 35.5	
		Mindanao (h = 70 km).			
"	24	Ud	iP	06 27 20.2	
"	24	Up	iP	08 02 51.4	
		Ki	iP	08 02 29.4	
		Ud	iP	08 03 01.0	
"	24	Up	iPKP2	08 08 31.2	
			i	08 08 43.0	
		Ki	iPKP1	08 08 01.5	
			i	08 08 11.9	
		Um	iPKP1	08 08 10.5	
		Ud	iPKP2	08 08 33.0	
			i	08 08 46.3	
		Kermadec Islands.			
"	24	Up	iPKP1	08 14 05.7	
			iPKP2	08 14 12.4	
				micr	sec
			PKP1 Z'	0.2	1.0
			PKP2 Z'	0.4	0.8
		Ki	iPKP1	08 13 43.8	
		Sk	iPKP1	08 14 00.3	
			iPKP2	08 14 02.9	
		Um	iPKP	08 13 54.7	
			iPKP1	08 13 55.2	
		Ud	iPKP	08 14 02.4	
			iPKP1	08 14 07.8	
			iPKP2	08 14 15.8	
		Kermadec Islands (h = 430 km).			
"	24	Ki	iPn	10 31 42.2	
			iPg1	10 31 50.1	
			iSn	10 32 29.2	
			iS*	10 32 42.0	
		Sk	eSg1	10 35 39	
		Um	iSg1	10 34 18.6	
		Northwest USSR-Norway border region. Explosion.			
"	24	Up	iSn	12 27 33.0	
			iSg1	12 27 44.0	
		Ki	iSg1	12 30 19.6	
		Sk	iSg1	12 29 37.7	
		Um	iSg1	12 28 20.0	
		Ud	eSn	12 28 20	
		(cont.)			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	24	(cont.)			
		Ud	iSgl	12 28 48.3	
		Esthonia.			
		Explosion.			
"	24	Up	i(Sgl)	12 36 11.1	
"	24	Up	ipP	13 11 33.1	
			ePP	13 15 29	
		Ki	eP	13 11 07	
			ipP	13 11 18.7	
		Um	iP	13 11 11.5	
			ipP	13 11 23.7	
		Ud	iP	13 11 29.3	
			ipP	13 11 41.2	
		Celebes.			
		h = 45 km (Ki,Um,Ud).			
"	24	Sk	iP	13 29 31.9	
		Japan (h = 40 km).			
"	24	Up	iSn	13 37 46.0	
			eSgl	13 37 59	
		Ki	iSgl	13 40 33.8	
		Sk	iSgl	13 39 52.2	
		Um	iSgl	13 38 33.5	
		Ud	iSn	13 38 33.4	
			eSgl	13 39 02	
		Esthonia.			
		Explosion.			
"	24	Up	iSgl	14 49 45.7	
		Um	iSgl	14 51 26.4	
		Ud	iSgl	14 50 35.9	
		De	iSgl	14 49 59.8	
			i	14 50 09.6	
		Latvia, 56.6°N, 21.9°E.			
		Origin time = 14 47 41.			
		Explosion?			
"	24	De	i(P)	15 00 40.1	
"	24	Up	iP	15 01 22.0	
		Ki	iP	15 00 37.7	
		Um	iP	15 00 58.1	
		Ud	iP	15 01 28.5	
		De	iP	15 01 45.8	
		Kurile Islands (h = 60 km).			
"	24	Ki	eSgl	15 58 15	
		Um	iSgl	15 56 45.6	
		Ud	iSgl	15 58 20.2	
		De	eSgl	15 58 59	
		Lake Ladoga region.			
		Explosion.			
"	24	Ud	iP	19 20 36.9	
1973 July	24	Ud	iP	20 15 10.4	
		South Atlantic Ocean.			
"	24	Up	iPKP	20 22 09.6	
			i(PP)	20 23 06.1	
				micr	sec
			Mx Z	0.6	18
		Ki	iPKP	20 22 16.8	
		Sk	iPKP	20 22 07.9	
		Um	iPKP	20 22 14.8	
		Ud	iPKP	20 22 04.6	
			i(PP)	20 22 59.3	
		De	iPKP	20 22 05.3	
		Chile (h = 60 km).			
"	25	Up	iP	03 54 58.5	
		Ud	iP	03 55 04.7	
"	25	Up	iPKP	06 27 26.9	
			i	06 27 36.5	
				micr	sec
			Mx E	1.2	20
			Mx N	1.8	20
			Mx Z	3.4	18
		Ki	iPKP	06 27 13.8	
				micr	sec
			Mx E	2.5	16
			Mx N	3.9	20
			Mx Z	3.1	18
		Sk	iPKP	06 27 24.4	
		Um	iPKP	06 27 19.1	
		Ud	iPKP	06 27 28.7	
			i	06 28 06.2	
		De	iPKP	06 27 34.7	
		Solomon Islands (h = 70 km).			
		M = 6.1 (Up,Ki).			
"	25	Ki	iPKP	06 58 44.0	
		Ud	ePKP	06 58 59	
		De	iPKP	06 59 04.9	
		Solomon Islands (h = 80 km).			
"	25	Ud	iP	08 57 50.5	
"	25	Ki	iPn	11 06 49.3	
			iPgl	11 06 59.2	
			iSn	11 07 37.4	
			iS*	11 07 48.0	
		Sk	iSgl	11 10 37.5	
		Um	iSgl	11 09 25.0	
		Ud	eSgl	11 11 48	
		Northwest USSR-Norway			
		border region.			
		Explosion.			
"	25	Um	iP	15 36 27.6	
			i	15 36 41.1	

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	25	Up	iSgl		15 57 48.3	
		Um	iSgl		15 58 27.7	
		Ud	eSgl		15 58 53	
		Esthonia.				
		Explosion.				
"	25	Up	iSgl		16 02 41.9	
		Um	iSgl		16 03 05.2	
			i		16 03 10.2	
		Ud	iSgl		16 03 47.6	
		De	iSgl		16 03 37.4	
		Western USSR, near				
		57°N, 32°E.				
		Solution checked with				
		Kongsberg readings.				
"	25	Ki	iP		18 41 21.1	
		Um	eP		18 41 28	
		Ud	iP		18 41 47.2	
		Mindanao (h = 70 km).				
"	25	Ki	eP		19 27 24	
		Ud	iP		19 28 17.8	
"	25	Up	iP		20 11 45.1	
			ipP		20 11 54.7	
					micr	sec
			P	Z'	0.1	1.5
			pP	Z'	0.2	1.5
			Mx	E	0.5	17
			Mx	N	1.1	16
			Mx	Z	0.6	16
		Ki	iP		20 11 26.7	
			ipP		20 11 36.2	
			iS		20 21 49	
					micr	sec
			P	Z'	0.1	1.3
			pP	Z'	0.2	1.3
			Mx	E	0.6	14
			Mx	N	0.5	15
			Mx	Z	0.7	15
		Sk	iP		20 11 49.8	
		Um	iP		20 11 33.8	
			ipP		20 11 42.7	
		Ud	iP		20 11 53.6	
			ipP		20 12 02.6	
		Samar.				
		h = 35 km (Up,Ki,Um,Ud).				
		m = 6.0, M = 5.3 (Up,Ki).				
"	25	Ud	iP		21 02 11.9	
"	25	Up	eP		21 21 18	
		Ki	iP		21 20 58.5	
			ipP		21 21 07.7	
		Um	iP		21 21 05.1	
			ipP		21 21 14.9	
		(cont.)				

1973 July	25	(cont.)				
		Ud	iP		21 21 25.3	
			ipP		21 21 34.9	
		Samar.				
		h = 35 km (Ki,Um,Ud).				
"	25	Ki	i(Sn)		21 38 31.2	
			i(Sgl)		21 38 45.8	
"	25	Up	iP		22 25 17.9	
		Ki	eP		22 24 31	
		Um	iP		22 24 52.7	
		Ud	iP		22 25 23.8	
"	25	Up	iP		23 22 05.6	
		Ki	iP		23 21 47.8	
		Ud	iP		23 22 14.9	
		Samar (h = 90 km).				
"	26	Ud	eP		02 55 03	
		Greece.				
"	26	Ud	iP		04 28 23.9	
		Tadzhik SSR (h = N).				
"	26	Ki	iP		07 54 21.1	
		Ud	iP		07 54 46.5	
"	26	Up	iP		08 33 20.4	
"	26	Um	i(PKP)		11 13 37.6	
			iPKP		11 13 54.1	
		Ud	i(PKP)		11 13 57.6	
			iPKP		11 14 03.5	
		De	ePKP		11 14 08	
		New Ireland (h = 80 km).				
"	26	Up	iSgl		11 33 37.3	
		Ud	iSn		11 33 25.3	
			iSgl		11 33 42.3	
		De	i(P*)		11 31 37.2	
			iPgl		11 31 39.3	
			iSgl		11 31 56.0	
		Baltic Sea, south of Sweden,				
		55.5°N, 15.1°E.				
		Origin time = 11 31 19.				
		Explosion.				
"	26	Ud	eP		11 39 43	
		Japan (h = 40 km).				
"	26	Up	iSgl		12 23 11.9	
			iSg2		12 23 20.9	
		Ki	iSgl		12 25 08.5	
		Sk	eSgl		12 25 01	
		Um	iSgl		12 23 30.5	
		Ud	iSgl		12 24 14.0	
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	26	(cont.)			
		De	iS*	12 24 28.4	
			iSgl	12 24 37.8	
		Western USSR.			
		Explosion.			
"	26	Ki	ePKP	13 58 57	
			i	13 58 58.4	
			i	13 59 02.2	
		Sk	iPKP	13 59 05.6	
		Um	iPKP	13 58 56.1	
		Ud	iPKP	13 59 05.2	
		De	ePKP	13 59 03	
		West of Macquarie Islands (h = N).			
"	26	Ki	iP	14 25 40.6	
		Andaman Islands (h = N).			
"	26	Up	iSgl	16 15 32.4	
		Ud	iPn	16 14 31.4	
			iPgl	16 14 33.3	
			iSn	16 14 49.9	
			iSgl	16 14 52.8	
		De	iSgl	16 15 23.4	
		Lake Vener, Sweden, 58.8°N, 12.8°E.			
		Origin time = 16 14 09.			
"	26	Ud	iP	16 25 17.5	
		De	eP	16 24 46	
		(Ionian Sea).			
"	26	Ki	iP	19 11 59.3	
		Andaman Islands.			
"	26	Up	iP	19 37 07.1	
		Ki	eP	19 37 07	
		Um	i(pP)	19 37 10.1	
		Ud	eP	19 37 19	
		De	iP	19 37 20.1	
		Andaman Islands (h = N).			
"	26	Up	eP	20 18 08	
			ipP	20 18 13.2	
				micr	sec
			pP Z'	0.1	1.0
			Mx E	0.5	18
			Mx N	0.6	18
			Mx Z	0.8	19
		Ki	iP	20 18 08.0	
			ipP	20 18 14.1	
				micr	sec
			pP Z'	0.1	1.1
			Mx E	1.1	20
			Mx N	0.8	19
			Mx Z	1.0	17
		(cont.)			
1973 July	26	(cont.)			
		Sk	ipP	20 18 30.2	
		Um	iP	20 18 03.5	
			ipP	20 18 10.0	
		Ud	iP	20 18 18.8	
			ipP	20 18 25.0	
		De	eP	20 18 17	
			ipP	20 18 23.6	
		Andaman Islands.			
		h = 25 km (Up,Ki,Um,Ud,De).			
		m = 5.9, M = 5.1 (Up,Ki).			
"	27	Up	eSgl	06 17 28	
		Ki	eSgl	06 18 17	
		Um	iSgl	06 16 49.1	
		Ud	iSgl	06 18 28.0	
		De	eSgl	06 19 08	
		Lake Ladoga region.			
		Explosion.			
"	27	Up	iPKP	07 30 18.5	
		Ki	iPKP	07 30 34.0	
		Sk	ePKP	07 30 24	
		Um	iPKP	07 30 27.2	
		Ud	ePKP	07 30 17	
		South Atlantic Ocean (h = N).			
"	27	Ud	iP	07 39 46.2	
"	27	Um	ePKP	07 53 31	
		De	ePKP	07 53 46	
		Solomon Islands (h = 40 km).			
"	27	Ud	iP	08 24 47.0	
		Mindanao (h = 80 km).			
"	27	Up	iSgl	11 42 33.2	
		Ki	iSgl	11 44 51.1	
		Sk	eSg2	11 44 30	
		Um	iSgl	11 42 56.0	
			i	11 43 09.7	
		Ud	iSgl	11 43 34.7	
		De	eSgl	11 44 05	
		Esthonia.			
		Explosion.			
"	27	Up	iSgl	12 11 32.5	
		Ki	iPn	12 07 21.9	
			iSn	12 08 21.5	
			iS*	12 08 43.7	
		Sk	iSgl	12 11 01.2	
		Um	iSn	12 09 00.4	
			i	12 09 17.7	
			iSgl	12 09 37.3	
		Ud	iSgl	12 12 09.9	
		Northwest USSR.			
		Explosion.			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July 27

Up	iSgl	13 02 15.0	
Ki	iPn	12 58 05.1	
	iSn	12 59 03.9	
	iS*	12 59 23.7	
Sk	iSgl	13 01 47.0	
Um	iSn	12 59 45.0	
	iSgl	13 00 20.6	
Ud	i	13 01 55.0	

Northwest USSR.
Explosion.

" 27

Up	eSgl	13 32 30	
Um	iSgl	13 32 45.6	
Ud	eSgl	13 33 31	

Western USSR.
Explosion.

" 27

Um	iSgl	14 45 14.0	
	iSg2	14 45 21.6	

Lake Ladoga region.
Explosion.
Solution from Finnish regional bulletin.

" 27

Up	iP	15 03 44.7	
Ki	eP	15 03 06	
Sk	eP	15 03 39	
Um	iP	15 03 23.0	
Ud	iP	15 03 52.0	
De	iP	15 04 06.6	

Japan (h = 80 km).

" 27

Ki	iSn	16 16 33.6	
	iSgl	16 16 40.6	
Sk	iS*	16 16 43.5	
	iSgl	16 16 48.1	
Um	iSn	16 16 53.8	
	iSgl	16 17 07.5	
Ud	iSg2	16 18 42.0	

Nordland, Norway,
66.4°N, 14.3°E.
Origin time = 16 15 14.
Explosion.

" 27

Ki	iPKP	16 27 32.4

New Hebrides Islands
(h = 15 km).

" 27

Ki	iP		17 01 39.6	
	iPP		17 05 36.6	
			micr	sec
	P	Z'	0.1	1.0
	Mx	E	0.7	17
	Mx	N	0.5	16
	Mx	Z	0.8	18
Ud	eP		17 01 50	
	ePP		17 05 54	

South of Java (h = 60 km).

1973 July 27

Up	iP	19 31 52.6	
Ki	iP	19 31 07.0	
Sk	eP	19 31 42	
Um	iP	19 31 27.8	
Ud	iP	19 31 58.6	
De	iP	19 32 16.0	

Kurile Islands (h = 60 km).

" 27

Up		micr	sec
	Mx E	0.6	20
	Mx N	1.1	21
	Mx Z	1.4	20
Ki	ePKP	19 45 42	
		micr	sec
	Mx E	1.8	20
	Mx N	1.3	19
	Mx Z	1.9	20
Ud	ePKP	19 46 01	

Tonga Islands (h = N).
M = 5.8 (Up,Ki).

" 27

Up	iP	19 55 07.3	
	ipP	19 55 54.8	
		micr	sec
	pP	Z' 1.1	2.9
Ki	iP	19 54 59.1	
	ipP	19 55 47.9	
		micr	sec
	pP	Z' 1.2	2.9
Sk	iP	19 54 50.7	
	ipP	19 55 37.4	
Um	iP	19 55 06.6	
	ipP	19 55 54.0	
	iS	20 05 09	
Ud	iP	19 54 57.1	
	ipP	19 55 44.5	
De	iP	19 55 02.9	
	i	19 55 17.5	
	ipP	19 55 50.3	

Nicaragua.
h = 190 km (Up,Ki,Sk,Um,Ud, De).
The depth phases exhibit unusually long periods.

" 27

Sk	iP	20 23 13.1
Ud	iP	20 22 24.3

" 27

Up	iP		20 34 14.3	C
	ipP		20 34 41.1	
			micr	sec
	P	Z'	0.2	0.8
Ki	iP		20 34 08.2	C
	ipP		20 34 34.1	
	iPcP		20 34 46.0	
			micr	sec
	P	Z'	0.2	0.9

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	27	(cont.)				
		Sk	iP		20 34 30.1	C
			ipP		20 34 57.2	
		Um	iP		20 34 07.1	C
			ipP		20 34 34.1	
		Ud	iP		20 34 27.3	C
			ipP		20 34 53.9	
		De	iP		20 34 28.3	
			ipP		20 34 55.8	
		Burma-India.				
		h = 110 km (Up,Ki,Sk,Um, Ud,De).				
		m = 6.1 (Up,Ki).				
"	27	Up	ePKPl		23 08 07	
		Ud	iPKPl		23 08 07.3	
		De	iPKPl		23 08 17.4	
			i		23 08 24.6	
"	28	Ud	iP		01 31 14.5	
"	28	Up	eP		03 52 23	
					micr	sec
			Mx	E	0.9	19
			Mx	N	1.1	20
			Mx	Z	1.4	21
		Ki	iP		03 51 39.2	
					micr	sec
			Mx	E	2.4	17
			Mx	N	2.3	18
			Mx	Z	1.7	17
		Sk	eP		03 52 15	
		Um	iP		03 51 57.4	
		Ud	iP		03 52 28.4	
		Japan (h = 40 km).				
		M = 5.4 (Up,Ki).				
"	28	Up	iPKPl		04 20 57.0	
			iPKP2		04 21 04.9	
					micr	sec
			PKP2	Z'	0.1	1.0
		Ki	ePKPl		04 20 38	
		Sk	iPKPl		04 20 52.5	
		Um	iPKPl		04 20 46.9	
		Ud	iPKPl		04 20 59.4	
		De	iPKPl		04 21 09.5	
		South of Kermadec Islands (h = N).				
"	28	Ud	iP		04 31 47.9	
		Japan (h = 80 km).				
"	28	Ki	iP		06 00 03.7	
		Ud	iP		06 00 21.6	
		Sumbawa Island (h = N).				
"	28	Ki	iPn		12 21 01.4	
		(cont.)				
1973 July	28	(cont.)				
		Ki	iPgl		12 21 11.1	
			iSn		12 21 49.1	
			iS*		12 22 04.4	
		Sk	eSgl		12 24 47	
		Um	iSgl		12 23 35.5	
		Northwest USSR-Norway border region.				
		Explosion.				
"	28	Ki	iPn		12 22 04.9	
			iSn		12 22 52.3	
			iS*		12 23 07.3	
		Um	iSgl		12 24 39.5	
		Northwest USSR-Norway border region.				
		Explosion.				
"	28	Up	iSn		12 24 13.5	
			iSgl		12 24 24.7	
		Ki	iS*		12 26 56.8	
			iSgl		12 27 04.1	
		Sk	iSgl		12 26 19.3	
		Um	iSgl		12 25 02.0	
		Ud	e		12 24 55	
			iSn		12 25 01.6	
			iSgl		12 25 26.9	
			iSg2		12 25 34.4	
		De	iSgl		12 25 55.9	
		Esthonia.				
		Explosion.				
"	28	Ki	iSn		12 26 05.0	
			iSgl		12 26 26.9	
		Sk	iSgl		12 29 00.6	
		Um	iSn		12 26 53.9	
			iSgl		12 27 30.3	
		Northwest USSR.				
		Explosion.				
"	28	Up	iP		14 39 52.6	C
					micr	sec
			P	Z'	0.3	1.6
			Mx	E	1.2	21
			Mx	N	1.9	21
			Mx	Z	1.5	22
		Ki	iP		14 39 10.1	C
					micr	sec
			P	Z'	0.1	1.1
			Mx	E	3.9	18
			Mx	N	3.8	18
			Mx	Z	2.7	17
		Sk	iP		14 39 44.9	C
		Um	iP		14 39 29.2	C
		Ud	iP		14 39 59.4	C
		De	iP		14 40 15.9	C
		Japan (h = 35 km).				
		m = 6.1, M = 5.7 (Up,Ki).				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	28	Ud	iP		15 01 57.5		
		Afghanistan-USSR (h = 210 km).					
"	28	Up	iP		18 05 25.8		
					micr	sec	
			P	Z'	0.1	0.9	
			Mx	E	2.0	15	
			Mx	N	5.4	23	
			Mx	Z	4.5	16	
		Ki	iP		18 05 03.5		
					micr	sec	
			P	Z'	0.1	1.0	
			Mx	E	2.7	15	
			Mx	N	2.4	14	
			Mx	Z	3.3	15	
		Sk	iP		18 05 30.3		
		Um	iP		18 05 11.7		
		Ud	iP		18 05 35.9		
		De	iP		18 05 42.6		
		Formosa (h = N).					
		m = 5.9, M = 5.8 (Up,Ki).					
"	28	Up	eP		19 00 33		
		Ki	iP		19 01 35.0		
		Sk	eP		19 01 13		
		Um	iP		19 01 00.9		
		Ud	iP		19 00 43.0		
		De	eP		19 00 15		
		Turkey (h = 70 km).					
"	28	Ud	iPKP		19 34 05.3		
		De	ePKP		19 34 15		
			i		19 34 22.8		
		Fiji Islands (h = 520 km).					
"	28	Up	iP		20 09 00.9		
		Ki	iP		20 08 07.5		
		Sk	iP		20 08 31.4		
		Um	iP		20 08 36.0		
			ipP		20 08 39.7		
		Ud	iP		20 08 55.7		
		De	iP		20 09 18.4		
		Alaska.					
		h = 15 km (Um).					
"	28	Up	iP		20 16 07.3		
			iPcP		20 16 37.6		
			ipP		20 18 05.4		
			iS		20 23 53.3		
			iScS		20 24 58.7		
					micr	sec	
			P	Z'	0.8	0.9	
		Ki	iP		20 15 19.1		
			ipP		20 17 12.1		
			iS		20 22 24.4		
					micr	sec	
			P	Z'	1.2	0.9	
		(cont.)					
1973 July	28	(cont.)					
		Sk	iP		20 15 55.2		
		Um	iP		20 15 41.1		
			iPcP		20 16 21.3		
			ipP		20 17 40.9		
			iS		20 23 05.9		
		Ud	iP		20 16 12.7		
			iPcP		20 16 41.1		
			ipP		20 18 11.4		
			iS		20 24 03.8		
		De	iP		20 16 31.3		
			iPcP		20 16 54.8		
			ipP		20 18 34.2		
		Okhotsk Sea.					
		h = 630 km (Up,Ki,Um,Ud,De).					
		m = 6.1 (Up,Ki).					
"	28	Ki	iP		21 00 51.9		
		Sk	iP		21 00 42.3		
		Um	iP		21 00 58.9		
		Ud	iP		21 00 49.4		
		Nicaragua (h = 80 km).					
"	28	Ki	iP		22 32 10.3		
		Um	iPP		22 36 35.7		
		Peru (h = 110 km).					
"	28	Um	iP		22 37 38.6		
"	29	Up	iP		01 25 21.7		
		Ki	iP		01 26 00.6		
		Sk	iP		01 25 28.7		
		Um	iP		01 25 40.0		
		Ud	iP		01 25 13.8		
		Atlantic Ocean (h = N).					
"	29	Up	iP		01 36 26.4		
		Ki	iP		01 35 41.0		
		Um	iP		01 36 01.4		
		Ud	iP		01 36 33.0		
"	29	Up	iPKP1		01 43 57.9		
		Sk	iPKP1		01 43 50.8		
		Um	iPKP1		01 43 46.6		C
		Ud	iPKP1		01 43 59.3		
"	29	Um	iP		03 39 26.9		
		South of Panama (h = N).					
"	29	Up	iP		04 45 04.9		
		Ki	iP		04 44 38.8		
		Um	iP		04 44 48.5		
			ipP		04 44 58.6		
		Ud	iP		04 45 14.2		
			ipP		04 45 24.1		
		Ryukyu Islands.					
		h = 35 km (Um,Ud).					

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	29	Up	iP		04 51 03.2	
		Ud	iP		04 51 10.2	
"	29	Up	iP		04 55 43.6	
		Ki	iP		04 54 54.8	
		Um	iP		04 55 17.5	
		Ud	iP		04 55 49.1	
"	29	Up	iP		09 21 59.6	
		Ki	eP		09 21 14	
		Um	eP		09 21 34	
		Ud	iP		09 22 04.8	
			ipP		09 22 18.1	
		Kurile Islands.				
		h = 50 km (Ud).				
"	29	Up	iP		11 34 49.8	
		Ki	iP		11 34 52.8	
		Sk	iP		11 35 13.2	
		Um	iP		11 34 45.1	
		Ud	iP		11 35 06.4	
		Tadzhik-Sinkiang (h = 110 km).				
"	29	Ud	eP		12 04 44	
"	29	Up	iP		15 02 05.0 C	
					micr	sec
			P	Z'	0.2	1.1
			Mx	E	0.6	15
			Mx	N	1.0	19
			Mx	Z	1.1	16
		Ki	iP		15 01 20.0 C	
			i		15 01 27.3	
					micr	sec
			P	Z'	0.1	1.1
			Mx	E	1.1	17
			Mx	N	1.6	17
			Mx	Z	2.4	17
		Sk	iP		15 01 55.6 C	
			ipP		15 02 10.1	
		Um	iP		15 01 40.4 C	
			i		15 01 47.6	
			ipP		15 01 54.2	
		Ud	iP		15 02 11.2 C	
			ipP		15 02 25.5	
		De	iP		15 02 28.7 C	
		Kurile Islands.				
		h = 50 km (Sk,Um,Ud).				
		m = 6.0, M = 5.3 (Up,Ki).				
"	29	Up	iP		15 06 30.1	
		Ki	iP		15 07 38.6	
		Ud	iP		15 06 42.7	
		De	eP		15 06 11	
		Turkey (h = 25 km).				
"	29	Um	iP		16 29 43.5	
		Peru (h = 80 km).				
1973 July	29	Up	iP		16 29 02.4	
			ipP		16 29 31.9	
		Ki	iP		16 28 45.4	
			ipP		16 29 13.2	
					micr	sec
			P	Z'	0.1	1.4
			pP	Z'	0.1	1.4
		Sk	eP		16 28 44	
			ipP		16 29 11.7	
		Um	iP		16 28 55.9	
			ipP		16 29 25.2	
		Ud	ipP		16 29 25.0	
		Mexico.				
		h = 110 km (Up,Ki,Sk,Um).				
"	29	Ud	eP		17 41 31	
"	29	Ud	iP		18 38 08.5	
"	29	Up	iP		19 05 58.0	
		Ki	eP		19 07 12	
		Sk	eP		19 06 37	
		Um	iP		19 06 33.5	
		Ud	iP		19 06 03.6	
		De	eP		19 05 32	
		Ionian Sea (h = 50 km).				
"	29	Up	iPKP1		22 02 17.5	
			iPKP2		22 02 30.7	
					micr	sec
			PKP1	Z'	0.1	1.4
			PKP2	Z'	0.1	1.3
		Ki	ePKP		22 02 12	
		Sk	iPKP2		22 02 44.6	
		Um	ePKP		22 02 10	
			iPKP1		22 02 17.7	
		Ud	iPKP2		22 02 40.0	
		De	iPKP1		22 02 20.7	
			iPKP2		22 02 34.5	
		West of Macquarie Islands (h = N).				
"	29	Ud	iP		22 43 25.4	
		Mindanao (h = 90 km).				
"	30	Um	iP		01 53 59.1	
		Ud	eP		01 54 25	
		Japan (h = 40 km).				
"	30	Up	iSg1		07 29 38.8	
		Ki	iPn		07 24 56.8	
			iPg1		07 25 05.7	
			iSn		07 25 43.0	
			iS*		07 25 55.5	
		Sk	eSg1		07 28 42	
		Um	iSg1		07 27 32.7	
		Ud	i		07 29 11.5	

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 July	30	(cont.)				
		Ud	iSgl		07 30 01.6	
		Northwest USSR-Norway border region. Explosion.				
"	30	Ki	e(pP)		14 27 21	
		Um	iP		14 27 29.2	
			i(pP)		14 27 34.5	
		Ud	iP		14 27 53.0	
		Japan (h = 40 km)				
"	30	Ki	iP		15 55 43.1	
		Ud	iP		15 55 52.9	
"	30	Up	iSgl		16 43 21.1	
		Um	iSgl		16 43 46.1	
		Ud	iSgl		16 44 28.0	
		Probably western USSR. Explosion?				
"	30	Ud	i(P)		17 44 13.2	
"	30	Ud	i(P)		17 47 53.6	
"	30	Ud	i(P)		17 51 45.6	
"	30	Ud	i(P)		17 55 25.6	
"	30	Um	iP		21 00 05.6	
"	31	Up	iPKP1		00 47 31.3	
			iPKP2		00 47 42.8	
		Ki	iPKP1		00 47 12.1	
					micr	sec
			PKP1	Z'	0.2	0.9
		Sk	iPKP1		00 47 26.6	
			iPKP2		00 47 34.3	
		Um	iPKP1		00 47 21.7	
			iPKP2		00 47 25.9	
			i(pPKP1)		00 47 37.2	
			i		00 47 45.8	
		Ud	iPKP1		00 47 32.9	
			iPKP2		00 47 46.1	
		De	ePKP1		00 47 40	
			iPKP2		00 47 59.8	
		New Zealand (h = 60 km).				
"	31	Ki	iP2		03 13 59.7	
		Um	iP1		03 13 55.2	
			iP2		03 14 02.8	
		Ud	iP2		03 14 23.3	
		Ceram (h = N).				
"	31	Up	e		06 00 17	
					micr	sec
			Mx	E	1.8	19
		(cont.)				

1973 July	31	(cont.)				
		Up			micr	sec
			Mx	N	1.7	19
			Mx	Z	4.1	19
		Ki	ePKP		06 00 04	
					micr	sec
			Mx	E	1.8	20
			Mx	N	1.6	19
			Mx	Z	2.4	20
		Um	iPKP		05 59 59.8	
			i		06 00 21.9	
		Ud	iPKP		05 59 51.3	
		Chile (h = 30 km). M = 5.9 (Up,Ki).				
"	31	Up	iP		11 05 52	
			iPP		11 10 29.6	
					micr	sec
			Mx	E	7.7	20
			Mx	N	6.4	20
			Mx	Z	15	19
		Ki	ePP		11 10 53	
			iSP		11 20 41	
					micr	sec
			Mx	E	7.2	18
			Mx	N	7.0	16
			Mx	Z	6.4	19
		Um	iP		11 06 00	
			ePKP		11 09 53	
			iPP		11 10 46.3	
		Ud	ePKP		11 09 50	
			iPP		11 10 12.7	
		De	iPKP		11 09 45.4	
			ePP		11 10 12	
		Chile (h = N). M = 6.4 (Up,Ki).				
"	31	Ud	i(P)		11 23 16.2	
"	31	Up	iSgl		12 02 29.5	
			iRg		12 02 32.7	
		Ud	iRg		12 02 46.5	
		Central Sweden.				
"	31	Up	iSgl		13 59 30.4	
		Sk	eSgl		14 01 23	
		Um	eSgl		13 59 53	
		Ud	iSgl		14 00 29.5	
		Western USSR. Explosion.				
"	31	Um	i(P)		16 12 05.8	
"	31	Up	Mx		16 27	
					micr	sec
			Mx	N	0.6	18
			Mx	Z	1.3	19
		Chile (h = N).				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973

July	31	Up	iP		17 02 42.0	
		Ki	iP		17 02 03.2	
		Um	iP		17 02 19.5	
		Ud	iP		17 02 48.6	
		Japan (h = 60 km).				
"	31	Ud	iP		20 18 13.1	
"	31	Up			micr	sec
			Mx	E	1.8	19
			Mx	N	2.9	20
			Mx	Z	4.1	20
		Ki	iPKP		21 03 37.4	
					micr	sec
			Mx	E	4.7	19
			Mx	N	6.7	20
			Mx	Z	5.1	19
		Um	iPKP		21 03 42.4	
		Ud	iPKP		21 03 51.0	
		De	iPKP		21 03 55.4	
		Solomon Islands (h = 30 km).				
		M = 6.2 (Up,Ki).				
"	31	Up	iP		21 16 30.4	
		Ki	eP		21 16 20	
		Um	iP		21 16 19.9	
		Ud	iP		21 16 43.4	
		De	eP		21 16 48	
		Burma-India (h = N).				

Markus Båth
Klaus Meyer
Rutger Wahlström

March 23, 1975

BOX 517
S-751 20 UPPSALA
SWEDEN

S E I S M O L O G I C A L B U L L E T I N

U P P S A L A, K I R U N A, S K A L S T U G A N, U M E Å, U D D E H O L M and D E L A R Y

Uppsala	(Up):	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(Ki):	67°50.4'N,	20°25.0'E;	h = 390 m
Skalstugan	(Sk):	63°34.8'N,	12°16.8'E;	h = 580 m
Umeå	(Um):	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(Ud):	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(De):	56°28.2'N,	13°52.2'E;	h = 150 m

A U G U S T 1 - 31, 1973

1973 Aug. 1

Up	iP		01 47 03	
	i(PKP)		01 49 58.5	
	iPKP		01 50 15.7	C
	iPP		01 52 18.2	
	iSKP1		01 53 21.5	
	iPKS1		01 53 37.0	
			micr	sec
	PKP	Z'	0.7	0.6
	PP	Z'	0.2	1.1
	SKP1	Z'	1.1	1.5
	Mx	E	5.1	22
	Mx	N	9.7	20
	Mx	Z	9.7	18
Ki	i(PKP)		01 49 49.4	
	i		01 49 57.6	
	iPKP		01 50 02.6	C
	iPP		01 51 42.6	
	iPKKP1		01 59 57.9	
			micr	sec
	PKP	Z'	1.6	0.6
	PP	Z'	2.4	2.1
	Mx	E	11	20
	Mx	N	7.8	21
	Mx	Z	10	22
Sk	i(PKP)		01 49 57.9	
	iPKP		01 50 13.1	C
	iSKP1		01 53 17.0	
	i		02 02 34.8	
Um	iP		01 46 48	
	i(PKP)		01 49 55.8	
	i		01 49 58.2	
	iPKP		01 50 08.6	C
	iPP		01 52 02.4	
	iPKKP		02 00 23.0	
	i		02 02 44.8	
Ud	i(PKP)		01 50 01.3	
	i		01 50 02.7	
	iPKP		01 50 17.7	C
	iPP		01 52 35.3	
	iSKP1		01 53 24.7	

(cont.)

1973 Aug. 1 (cont.)

Ud	iPKKP	02 00 14.8	
De	i(PKP)	01 50 09.0	
	iPKP	01 50 24.2	C
	iPP	01 52 54.2	
	iSKP1	01 53 35.8	

New Hebrides Islands
(h = 200 km).
m = 6.6, M = 6.7 (Up,Ki).
M uncorrected for focal depth.

" 1

Up	iPKP2	02 26 05.2	
Sk	iPKP2	02 25 50.0	
Ud	iPKP2	02 26 01.6	

" 1

Um	iPKP	03 08 32.4	
Ud	e(PKP)	03 08 56	
De	e(PKP)	03 09 06	

" 1

Ud	iP	07 55 11.1	
	i	07 55 25.4	

" 1

Ud	iP	09 19 26.0	

" 1

Ud	iPKP1	11 02 53.3	
	i	11 02 57.0	
De	iPKP1	11 03 03.4	

" 1

Um	iSgl	11 24 35.4	
Ud	iSgl	11 25 07.1	
De	iSgl	11 25 27.8	

Esthonia.
Explosion.

" 1

De	i(Sgl)	14 00 13.4	

" 1

Up	iP	14 14 46.2	D
	i	14 15 11.8	

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Aug. 1 (cont.)

Up			micr	sec
	i	Z'	0.1	1.0
Ki	iP		14 14 41.4	D
	i		14 15 06.4	
Sk	iP		14 15 03.5	
	i		14 15 29.2	
Um	iP		14 14 39.2	
	i		14 15 04.2	
Ud	iP		14 15 00.7	D
	i		14 15 25.7	
De	iP		14 15 01.8	
	i		14 15 27.2	

Tibet (h = 70 km).
The second, larger phase follows P by 25.3 sec in average; interpreted as pP, it gives h = 100 km; alternatively, it could be P of another shock with the same location.

" 1 Ud iP 15 56 13.0

" 1 Up

		micr	sec
Mx	E	0.9	19
Mx	N	1.0	18
Mx	Z	2.6	19
Ki		micr	sec
Mx	E	1.5	20
Mx	N	1.3	17
Mx	Z	1.2	20
Um	iSP	16 13 41	

Chile (h = 15 km).
M = 5.6 (Up,Ki).
The Um reading of SP derives from LP records only; the time also fits PS, but the particle motion is that of SP, not of PS.

" 1 Up iP 18 07 48.2
Ki eP 18 07 09
Sk eP 18 07 42
Um iP 18 07 26.4
Ud iP 18 07 55.9
Japan (h = 50 km).

" 1 Up eP 18 46 35
Ki iP 18 45 36.0
Um iP 18 46 11.7
Ud iP 18 46 35.7
Kamchatka.

" 1 Ud iP 20 01 15.6
De eP 20 00 53
Turkey (h = 20 km).

1973
Aug. 1 Up iP 21 43 21.8 C
Ki iP 21 43 05.4
Sk iP 21 43 41.1
Ud iP 21 43 34.6
Szechwan, China (h = N).

" 1 Ud iP 23 13 05.7

" 2 Up eP 00 35 15
Ud iP 00 35 22.2
Sea of Japan (h = 190 km).

" 2 Up i(P) 00 48 59.2
i 00 49 50.5

" 2 Um iP 06 26 25.1

" 2 Ud eP 07 02 26
Japan (h = 70 km).

" 2 Up iP 07 23 12.5
Ud iP 07 23 17.8
De eP 07 23 38
Kamchatka (h = N).

" 2 Up iP 09 08 51.9 C
i 09 08 53.4

		micr	sec
P	Z'	0.3	1.0
Mx	E	0.8	20
Mx	N	0.6	17
Mx	Z	1.1	16

Ki iP 09 08 35.3 C
i 09 08 36.8

		micr	sec
P	Z'	0.2	1.0
Mx	E	1.8	15
Mx	N	1.1	15
Mx	Z	1.7	17

Sk eP 09 09 00
i 09 09 03.1
i 09 09 20.1
Um iP 09 08 39.4
i 09 08 40.7
Ud iP 09 09 04.2 C
i 09 09 05.5
De eP 09 09 10
i 09 09 10.6
Yunnan, China (h = N).
m = 6.4, M = 5.2 (Up,Ki).
Double P, 1.3 sec apart, the second one larger.

" 2 Ki iSgl 12 56 33.7
Um i 12 54 03.1
iSgl 12 54 57.3
(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Aug. 2 (cont.)
De iSgl 12 56 09.1
Western USSR.
Explosion.

" 2 Up iP 20 03 02.5 D
iPP 20 03 55.5

		micr	sec
P	Z'	0.1	1.0
Mx	E	0.4	11
Mx	N	0.6	11
Mx	Z	0.5	10

Ki iP 20 03 30.2
iPP 20 04 41.3

		micr	sec
P	Z'	0.2	1.5
PP	Z'	0.2	1.5
Mx	E	2.2	13
Mx	N	1.8	13
Mx	Z	3.7	16

Sk iP 20 03 36.3
iPP 20 04 49.9
i 20 05 05.1
Um iP 20 03 09.9 D
Ud iP 20 03 19.7 D
De iP 20 03 08.8
Iran (h = 35 km).
m = 5.7, M = 5.0 (Up,Ki).

" 2 Ki e 20 30 35
i(Sgl) 20 30 38.9

" 2 Ki i 20 32 34.9
i(Sgl) 20 32 39.5

" 2 Up iP 20 35 33.5
i 20 36 20.2
Ki iP 20 35 58.4
Sk iP 20 36 06.9
Um iP 20 35 39.7
Ud iP 20 35 49.2
i 20 35 50.7
De iP 20 35 39.7
Iran (h = 35 km).

" 2 Up iP 21 51 37.3
i 21 51 47.0
Ki iP 21 51 20.6
Um iP 21 51 24.1
Ud iP 21 51 41.1
i 21 51 56.4
De iP 21 51 48.6
Talaud Islands (h = 50 km).

" 2 Ki iP 23 04 43.6
Um iP 23 05 01.5
Ud iP 23 05 33.5
(cont.)

1973
Aug. 2 (cont.)
De iP 23 05 51.4
Sea of Japan (h = 180 km).

" 3 Ki e(P) 00 50 10

" 3 Um iP 01 50 40.1
i 01 51 27.3
Ud iP 01 51 05.6
De iP 01 51 27.9
Aleutian Islands.

" 3 Up i(P) 02 24 51.3
Um i(P) 02 23 27.1

" 3 Up iP 04 07 47.9 C

		micr	sec
P	Z'	0.1	1.0

Ki iP 04 06 54.5 C
ipP 04 07 28.1

		micr	sec
P	Z'	0.1	0.8

Sk iP 04 07 25.1 C
Um iP 04 07 21.3 C
Ud iP 04 07 47.1 C
ipP 04 08 21.7
De iP 04 08 09.8 C
Aleutian Islands.
h = 140 km (Ki,Ud).
m = 5.7 (Up,Ki).

" 3 Um i(Sgl) 05 13 06.4

" 3 Up iP 06 37 29.9
Ki iP 06 36 45.9
Sk iP 06 37 21.6
Um iP 06 37 05.4
Ud iP 06 37 36.2
De iP 06 37 53.4
Japan (h = 45 km).

" 3 Up i(P) 07 35 13.2

" 3 Ki iPn 09 51 50.3
iSn 09 52 38.5
iS* 09 52 51.8
Um iSgl 09 54 22.5
Northwest USSR-Norway.
Explosion.

" 3 Up iSgl 11 17 06.7
Um iSgl 11 17 30.0
Ud iSgl 11 18 08.2
Western USSR.
Explosion.

" 3 Up iSn 11 23 39.0
(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	3	(cont.)				
		Up	iSgl		11 23 51.7	
		Ki	iSgl		11 26 28.5	
		Sk	eSgl		11 25 43	
		Um	iSgl		11 24 25.7	
		Ud	iSgl		11 25 01.0	
		Esthonia.				
		Explosion.				
"	3	Up	iSgl		12 19 02.3	
		Ki	iPn		12 14 45.2	
			iSn		12 15 43.2	
			iS*		12 16 03.0	
		Sk	iSgl		12 18 30.8	
			i		12 18 38.8	
		Um	iSn		12 16 22.7	
			iSgl		12 16 58.2	
		Ud	iSn		12 18 23.2	
			iSgl		12 19 33.0	
		Northwest USSR.				
		Explosion.				
"	3	Up	iSgl		12 23 44.7	
		Ki	iPn		12 19 33.1	
			iSn		12 20 32.2	
			iS*		12 20 51.5	
		Sk	iSgl		12 23 22.6	
		Um	i(Sn)		12 21 20.5	
			iSgl		12 21 45.1	
		Ud	iSgl		12 24 12.8	
		De	e(Sgl)		12 25 55	
		Northwest USSR.				
		Explosion.				
"	3	Up	iSgl		12 29 35.9	
		Ki	iSgl		12 31 31.7	
		Sk	iSgl		12 31 25.8	
		Um	iS*		12 29 45.7	
			iSgl		12 29 55.2	
		Ud	iSgl		12 30 35.6	
		De	iSgl		12 31 02.1	
		Western USSR.				
		Explosion.				
"	3	Up	iSgl		13 26 02.4	
		Sk	iSgl		13 26 04.0	
		Ud	i		13 24 45.5	
			iSgl		13 25 04.3	
		De	eSgl		13 25 31	
		South Norway.				
		Origin time = 13 23 32.				
"	3	Ki	iS*		13 59 00.7	
		Sk	iSgl		13 59 31.9	
		Um	iSgl		13 57 41.1	
			iRg		13 58 16.1	
		Ud	iSgl		13 59 17.7	
		(cont.)				

1973 Aug.	3	(cont.)				
		De	iSgl		14 00 00.4	
		Lake Ladoga.				
		Explosion.				
"	3	Um	iSgl		14 33 19.1	
"	3	Um	iP		15 12 38.9	
		Ud	i(P)		15 12 02.3	
"	3	Up	iSgl		15 25 53.7	
		Ud	iPgl		15 25 44.0	
			iSgl		15 26 07.8	
			iRg		15 26 13.6	
"	3	Up	iP		15 55 55.7 C	
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP		15 55 54.5	
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP		15 55 38.5	
		Um	iP		15 55 58.7 C	
		Ud	iP		15 55 44.1	
		De	iP		15 55 48.3	
		Haiti (h = 35 km).				
		m = 5.9 (Up,Ki).				
"	3	Ud	iP		17 26 36.7	
"	3	Up	iP		17 34 17.0	
			ipP		17 34 29.0	
			iS		17 42 40	
					micr	sec
			P	Z'	0.6	2.0
			Mx	E	1.4	19
			Mx	N	2.6	18
			Mx	Z	2.6	19
		Ki	iP		17 33 22.3	
					micr	sec
			P	Z'	0.1	0.8
			Mx	E	1.8	18
			Mx	N	2.2	16
			Mx	Z	4.1	15
		Sk	iP		17 33 59.8 C	
		Um	iP		17 33 48.7 C	
			ipP		17 33 59.7	
		Ud	iP		17 34 20.7	
			ipP		17 34 31.3	
		De	iP		17 34 42.8 C	
		Kamchatka.				
		h = 40 km (Up,Um,Ud).				
		m = 6.2, M = 5.5 (Up,Ki).				
"	3	Up	eP		17 42 03	
		Ki	iP		17 41 08.1	
		Sk	iP		17 41 45.7	
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	3	(cont.)				
		Um	eP	17 41 35		
		Ud	iP	17 42 06.5		
		De	eP	17 42 29		
		Kamchatka (h = N).				
"	3	Up	iP	17 45 40.4	C	
		Ki	iP	17 44 46.1		
		Sk	iP	17 45 23.1	C	
		Um	iP	17 45 11.8	C	
		Ud	iP	17 45 43.9		
		De	eP	17 46 07		
		Kamchatka (h = N).				
"	3	Up	iP	17 56 43.8		
		Ki	iP	17 55 49.0		
		Sk	eP	17 56 27		
		Um	iP	17 56 14.4		
		Ud	iP	17 56 46.9		
		Kamchatka (h = N).				
"	3	Ki	eP	17 58 40		
"	3	Ki	e(P)	17 59 31		
		Ud	e(P)	18 00 13		
"	3	Um	iP	18 02 23.2		
"	3	Ud	iP	18 03 54.5		
"	3	Up	iPKP1	18 40 06.5		
		Sk	iPKP1	18 39 57.0		
		Um	iPKP1	18 39 51.3		
			i	18 39 55.6		
		Ud	iPKP1	18 40 04.9		
		De	ePKP1	18 40 18		
		Kermadec Islands.				
"	3	Ud	iP	18 49 08.3		
"	3	Up	ePKP1	19 17 41		
		Ud	iPKP1	19 17 41.2		
"	3	Up	iP	19 24 10.9		
			ipP	19 24 19.5		
		Ki	iP	19 23 25.1		
				micr	sec	
			Mx E	0.6	18	
			Mx N	0.6	16	
		Um	iP	19 23 49.3		
			ipP	19 23 58.2		
		Ud	iP	19 24 16.0		
		Kurile Islands.				
		h = 35 km (Up,Um).				
"	3	Up	iPKP1	20 39 37.1		
		(cont.)				

1973 Aug.	3	(cont.)				
		Um	iPKP1	20 39 25.5		
			i	20 39 32.4		
		Ud	iPKP1	20 39 40.2		
		De	ePKP1	20 39 49		
"	3	Ud	iP	20 49 08.6		
"	3	Ud	iP	21 18 20.1		
"	3	Um	iP	22 38 14.1		
		Ud	iP	22 38 45.6		
			ipP	22 39 00.1		
		Japan.				
		h = 55 km (Ud).				
"	3	Ki	iP	23 28 44.3		
		Um	iP	23 29 11.0		
		Ud	iP	23 29 42.3		
		Kamchatka (h = N).				
"	3	Ki	iP	23 54 48.1		
"	4	Up	iP	00 27 08.4		
		Ki	eP	00 26 36		
		Sk	eP	00 27 09		
		Um	iP	00 26 47.4		
		Ud	iP	00 27 15.4		
		De	iP	00 27 30.0		
"	4	Um	iPKP1	00 51 17.8		
		Ud	iPKP1	00 51 30.5		
"	4	Up	iP	00 57 28.8		
			iSKS	01 07 46		
				micr	sec	
			Mx E	1.0	20	
			Mx N	1.0	18	
			Mx Z	1.6	20	
		Ki	iP	00 57 23.6		
				micr	sec	
			Mx E	1.8	20	
			Mx N	1.5	18	
			Mx Z	1.5	16	
		Sk	iP	00 57 13.5		
		Um	iP	00 57 29.2		
			iSKS	01 07 51		
		Ud	iP	00 57 19.3		
		De	iP	00 57 23.8		
		Costa Rica (h = N).				
		M = 5.5 (Up,Ki).				
"	4	Up	iP	04 14 30.8	C	
		Ki	eP	04 15 47		
		Sk	iP	04 15 11.8		
		Um	iP	04 15 11.2		
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	4	(cont.)			
		Ud	iP	04 14 36.8	
		De	iP	04 13 59.7	
		Greece (h = 40 km).			
"	4	Up	iP	06 18 09.2	C
		Ki	iP	06 17 25.2	
			ipP	06 17 36.3	
		Sk	iP	06 18 00.0	
		Um	iP	06 17 45.0	
		Ud	iP	06 18 15.8	C
		De	iP	06 18 32.9	
		Japan.			
		h = 40 km (Ki).			
"	4	Ud	iP	07 05 07.6	
"	4	Up	iP	07 06 25.8	
		Ki	eP	07 06 57	
		Sk	eP	07 06 59	
		Um	i(P)	07 06 22.0	
		Ud	iP	07 06 40.1	
			i	07 06 41.5	
		De	iP	07 06 28.6	
		Iran.			
"	4	Up	iP	07 39 43.7	
		Ki	iP	07 40 00.1	
		Sk	eP	07 40 04	
			e	07 40 36	
		Um	iP	07 39 42.7	
			i	07 39 53.7	
			i	07 40 12.7	
		Ud	iP	07 40 02.5	
			i	07 40 21.0	
		De	e(P)	07 40 05	
		Nicobar Islands (h = N).			
		Complicated, probably multiple, beginning.			
"	4	Um	iP	08 13 48.8	
		Kamchatka (h = N).			
"	4	Up	iP	11 51 52.1	
		Ki	eP	11 51 39	
		Um	iP	11 51 43.4	
		Ud	iP	11 52 00.1	
			i	11 52 31.1	
		De	iP	11 52 06.8	
"	4	Sk	eSgl	11 59 54	
		Um	iSn	11 57 51.3	
			iSgl	11 58 16.8	
			eRg	11 58 53	
		De	eSg2	12 02 38	
		Northwest USSR-Finland.			
		Explosion.			

1973 Aug.	4	Up	iP	12 44 23.5	
		Ki	iP	12 44 31.3	
		Um	iP	12 44 21.9	
		Ud	iP	12 44 40.4	
		De	eP	12 44 37	
		Hindu Kush.			
		Intermediate depth.			
"	4	Ki	iSn	12 59 57.5	
			iS*	13 00 15.7	
		Northwest USSR.			
		Explosion.			
"	4	Um	iP	18 18 59.0	
		Ud	iP	18 19 03.0	
		Iran (h = N).			
"	4	Ki	iP	20 03 33.8	
		Um	iP	20 03 16.9	
		Ud	iP	20 03 16.9	
		Indian Ocean (h = N).			
"	4	Up	iP	22 04 55.2	
				micr	sec
			Mx E	0.6	20
			Mx N	0.8	22
			Mx Z	0.7	20
		Ki	iP	22 04 40.3	
				micr	sec
			Mx E	1.4	27
			Mx N	0.9	22
			Mx Z	1.9	27
		Sk	eP	22 05 02	
		Um	iP	22 04 45.7	
			iSKS	22 15 19	
		Ud	iP	22 05 04.4	
		De	i(P)	22 05 15.2	
		Molucca Passage (h = 40 km).			
		M = 5.4 (Up,Ki).			
"	4	Up	iP	23 52 49.1	
		Ud	iP	23 52 56.1	
"	5	Up	Mx	01 48	
				micr	sec
			Mx Z	0.9	23
		Chile (h = 45 km).			
"	5	Up	iP	09 51 51.0	D
		Ki	iP	09 52 30.4	
		Sk	eP	09 52 23	
		Um	iP	09 52 06.2	
		Ud	iP	09 52 06.1	D
			i	09 52 13.1	
		De	iP	09 51 48.5	
		Iran (h = N).			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	5	Up	i(PKP)		16 06 37.6	
			iPKP		16 06 51.5	
			iPP		16 09 14.7	
			i		16 09 26.1	
			iSKP1		16 10 22.2	
					micr	sec
			PP	Z'	0.1	1.3
			Mx	N	1.7	23
			Mx	Z	1.4	20
		Ki	iPKP		16 06 36.0	
					micr	sec
			PKP	Z'	0.2	1.5
			Mx	E	0.9	20
			Mx	N	0.8	19
			Mx	Z	1.2	20
		Sk	i(PKP)		16 06 32.9	
			ePKP		16 06 43	
		Um	i(PKP)		16 06 29.8	
			iPKP		16 06 43.0	
		Ud	i(PKP)		16 06 38.9	
			iPKP		16 06 47.1	
			iPP		16 09 26.3	
			iSKP1		16 10 30.2	
		De	i(PKP)		16 06 50.3	
			iPKP		16 06 57.9	
			iPP		16 09 46.8	
		Tonga Islands (h = N).				
		M = 5.7 (Up,Ki).				
"	6	Up	iP		01 15 44.2	
			i		01 15 53.1	
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP		01 17 07.1	
		Sk	iP		01 16 27.2	
			i		01 16 35.0	
		Um	iP		01 16 30.9	
		Ud	iP		01 15 51.2	
			i		01 15 58.6	
		Greece-Albania (h = 60 km).				
"	6	Up	iP		01 25 14.8 C	
			iPP		01 26 48.4	
					micr	sec
			P	Z'	0.2	0.6
		Ki	iP		01 25 24.1 C	
			iPP		01 26 59.3	
			i(ScP)		01 30 43.4	
					micr	sec
			P	Z'	0.3	1.0
		Sk	iP		01 25 40.4 C	
			iPP		01 27 22.7	
		Um	iP		01 25 13.3 C	
			iPP		01 26 51.8	
			iPcP		01 27 10.7	
		Ud	iP		01 25 31.0 C	
			iPP		01 27 09.8	
		(cont.)				

1973 Aug.	6	(cont.)				
		Ud	i(ScP)		01 30 47.0	
		De	iP		01 25 27.0 C	
			iPP		01 27 08.5	
		Hindu Kush (h = 220 km).				
		m = 5.7 (Up,Ki).				
"	6	Up	iP		05 38 42.2	
		Ki	iP		05 39 20.5	
		Sk	eP		05 39 24	
		Ud	iP		05 38 56.8	
		De	eP		05 38 40	
		Iran (h = 50 km).				
"	6	Sk	iPKP		06 54 40.3	
		Um	iPKP		06 54 34.6	
		Ud	ePKP		06 54 45	
		De	iPKP		06 54 51.2	
		Santa Cruz Islands (h = 40 km).				
"	6	Up	eP		09 27 45	
		Ki	iP		09 27 26.9	
		Sk	i(P)		09 27 59.1	
		Um	i(P)		09 27 40.3	
		Ud	iP		09 27 55.6	
		De	i(P)		09 28 09.5	
		Luzon (h = 6 km).				
"	6	Up	eP		09 55 36	
		Ki	iP		09 54 40.9	
		Sk	iP		09 55 19.0	
		Um	iP		09 55 06.5	
		Ud	iP		09 55 39.2	
		Kamchatka (h = 150 km).				
"	6	Up	i(pP)		13 25 32.5	
		Ki	eP		13 24 41	
		Um	iP		13 24 54.9	
		Ud	i(pP)		13 25 36.0	
		Japan (h = 70 km).				
"	6	Up	iPKP1		17 26 01.3	
		Ki	ePKP1		17 25 44	
"	6	Up	iP		23 22 53.1 C	
		Ki	iP		23 22 07.4	
		Sk	iP		23 22 42.2	
		Um	iP		23 22 27.8	
		Ud	iP		23 22 59.3	
		De	iP		23 23 16.7	
		Kurile Islands (h = 90 km).				
"	7	Up	iSP		04 10 20	
					micr	sec
			Mx	E	2.9	19
			Mx	N	3.4	19
			Mx	Z	8.0	18
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Aug. 7 (cont.)

	Ki	iSKS		04 06 52
		iSP		04 10 44
			micr	sec
		Mx	E 4.0	19
		Mx	N 3.2	18
		Mx	Z 3.4	18
	Um	iSP		04 10 34

Chile (h = 25 km).
M = 6.1 (Up,Ki).
Cf note to Aug. 1, 16 13.

" 7	Up	Mx		08 10
			micr	sec
		Mx	E 2.2	19
		Mx	N 2.5	20
		Mx	Z 4.5	17
	Ki	Mx		08 06
			micr	sec
		Mx	E 3.0	19
		Mx	N 2.5	20
		Mx	Z 2.4	20

South Pacific Ocean (h = N).
M = 6.3 (Up,Ki).

" 7	Up	iSP		10 33 20
			micr	sec
		Mx	E 1.9	20
		Mx	N 2.0	19
		Mx	Z 3.6	18
	Ki		micr	sec
		Mx	E 2.6	20
		Mx	N 1.5	18
		Mx	Z 1.9	18
	Um	iSP		10 33 42

Chile (h = 35 km).
M = 5.9 (Up,Ki).
Cf note to Aug. 1, 16 13.

" 7	Ki	Mx		11 34
			micr	sec
		Mx	N 2.0	18
		Mx	Z 1.9	18

Chile (h = 15 km).

" 7	Um	i	12 34 58.6
		iSgl	12 35 45.7

Western USSR.
Explosion.

" 7	Ki	i(Pgl)	12 38 44.3
		i(Sgl)	12 38 58.3
" 7	Um	iSgl	13 08 32.1
" 7	Ki	i(Sgl)	14 41 55.9

1973
Aug. 7

	Up	iSP		14 51 37
			micr	sec
		Mx	E 5.8	20
		Mx	N 5.7	20
		Mx	Z 15	18
	Ki	iSKS		14 48 25
			micr	sec
		Mx	E 7.3	21
		Mx	N 6.1	18
		Mx	Z 5.7	18
	Um	iSP		14 51 58
	Ud	iPP		14 41 58.7
		i		14 42 05.1

Chile (h = 15 km).
M = 6.4 (Up,Ki).
Cf note to Aug. 1, 16 13.

" 7	Ud	iPKP1	19 38 24.0
" 7	Sk	i(P)	20 38 58.5
	Ud	i(P)	20 39 02.5
	De	iP	20 38 57.5

North Atlantic Ocean (h = N).

" 8	Up	iP	03 32 38.6
	Ki	iP	03 32 10.9
	Um	iP	03 32 19.7
	Ud	iP	03 32 45.6

Bonin Islands (h = 50 km).

" 8	Up	iPKP		04 56 05.1
		i		04 56 17.1
	Ki		micr	sec
		Mx	N 1.4	20
		Mx	Z 1.2	20
	Sk	ePKP		04 56 12
	Um	iPKP		04 56 13.4
	Ud	iPKP		04 56 02.7

South Sandwich Islands
(h = N).

" 8	Up	iP	06 09 49.5
" 8	Up	iP	08 27 59.6
	Ki	iP	08 29 18.2
	Sk	iP	08 28 43.4
	Um	iP	08 28 41.7
	Ud	iP	08 28 05.3 D
	De	iP	08 27 27.7

Albania (h = 25 km).

" 8	Up	i(Sgl)	08 41 27.2
	Ki	i	08 40 52.2
		i	08 41 42.1
		i(Sgl)	08 42 02.3
	Sk	iSgl	08 42 37.8

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	8	(cont.)			
		Um	iSgl	08 40 43.0	
			i	08 40 48.6	
		Lake Ladoga.			
		Explosion.			
"	8	Ud	i(P)	10 00 12.0	
		De	i(P)	10 00 22.5	
"	8	Ki	iPn	10 51 20.6	
			iSn	10 52 07.7	
			iS*	10 52 20.0	
		Northwest USSR-Norway.			
		Explosion.			
"	8	Up	iSn	11 41 01.5	
			iSgl	11 41 15.6	
		Ki	i	11 43 27.0	
			iSgl	11 43 56.4	
		Um	iSgl	11 41 49.4	
		Ud	iSgl	11 42 12.4	
		Esthonia.			
		Explosion.			
"	8	Ki	iP	13 50 43.9	
"	8	Up	iP	14 40 35.6	
				micr	sec
			Mx E	0.7	15
			Mx N	0.8	12
			Mx Z	1.5	11
		Ki	iP	14 41 55.6	
				micr	sec
			Mx E	1.6	14
		Sk	iP	14 41 14.8	
		Um	iP	14 41 18.3	
		Ud	iP	14 40 38.3	
			i	14 40 41.5	
		Italy (h = N).			
		M = 4.6 (Up,Ki).			
"	8	Ud	iPKP	18 28 14.1	
		De	iPKP	18 28 24.7	
"	8	Ud	iP	19 57 41.4	
		Sinkiang, China.			
"	8	Up	iP	22 49 02.6	
		Um	iP	22 48 51.5	
		Ud	iP	22 49 13.4	
		Tibet.			
"	9	Um	iP	00 58 26.2	
		Japan (h = 40 km).			
"	9	Up	eP	02 30 12	
		(cont.)			

1973 Aug.	9	(cont.)			
		Ki	iP	02 29 28.9	
			i	02 29 34.6	
		Um	iP	02 29 51.1	
			i	02 29 58.3	
		Ud	iP	02 29 58.1	
		California (h = 2 km).			
"	9	Um	iPKP	04 00 20.8	
"	9	Up	i(P)	07 02 44.6	
			i	07 03 23.0	
"	9	Up	iPKP	09 56 57.4	
		Ki	ePKP	09 56 45	
		Sk	iPKP	09 56 56.7	
		Um	iPKP	09 56 51.2	C
		Ud	iPKP	09 57 00.3	
		De	iPKP	09 57 05.3	
		Solomon Islands (h = 400 km).			
"	9	Ud	ePKP	10 00 01	
"	9	Up	iP	10 50 12.4	
			ipP	10 50 21.2	
		Ki	iP	10 49 58.7	
		Um	iP	10 50 02.1	
			ipP	10 50 12.0	
		Ud	iP	10 50 22.1	
		De	iP	10 50 27.4	
		Molucca Passage.			
		h = 35 km (Up,Um).			
"	9	Up	iP	10 55 25.0	
			i	10 55 27.1	
			iPcP	10 55 51.4	
				micr	sec
			P Z'	0.4	1.0
			Mx E	1.9	20
			Mx N	3.2	18
			Mx Z	5.1	19
		Ki	iP	10 54 39.8	
			i	10 54 41.7	
			ipP	10 54 51.3	
				micr	sec
			P Z'	0.3	1.0
			Mx E	3.9	18
			Mx N	5.5	19
			Mx Z	8.5	19
		Sk	eP	10 55 16	
			i	10 55 17.4	
		Um	iP	10 55 00.6	C
			i	10 55 02.5	
			iPcP	10 55 35.3	
			iS	11 03 35	
		Ud	iP	10 55 31.1	
		(cont.)			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Aug. 9 (cont.)

Ud	i		10 55 32.9
	ipP		10 55 43.9
De	iP		10 55 48.0
	i		10 55 50.6
	ipP		10 56 01.2

Kurile Islands.
h = 40 km (Ki,Ud,De).
m = 6.4, M = 5.8 (Up,Ki).
Double P, small and large respectively.

" 9

Ud	iP		11 05 52.3
	i		11 06 08.6
De	iP		11 06 10.0

Kurile Islands (h = N).

" 9

Up	iPKP1		13 26 34.7
	iPKP2		13 26 52.1
		micr	sec
	PKP1	Z' 0.1	1.5
	Mx	E 1.2	21
	Mx	N 2.0	19
	Mx	Z 2.6	19
Ki	ePKP1		13 26 31
	e		13 26 35
	iPKP2		13 26 47.1
		micr	sec
	Mx	E 2.3	19
	Mx	N 2.1	20
	Mx	Z 2.1	21
Um	iPKP1		13 26 31.3
	iPKP2		13 26 38.2
Ud	iPKP2		13 26 55.6
	i		13 27 08.3
De	iPKP1		13 26 42.2

West of Macquarie Islands (h = N).
M = 6.1 (Up,Ki).

" 9

Up	i(P)		14 48 16.9

" 9

Up	iPKP		18 05 38.9
Ki	iPKP		18 05 54.2
	ipPKP		18 06 26.4
Um	iPKP		18 05 46.7
Ud	iPKP		18 05 35.3

South Sandwich Islands.
h = 120 km (Ki).

" 9

Up	iSg2		19 36 30.2
Ki	iPg1		19 33 38.4
	iSg1		19 34 15.4
Sk	iPg1		19 33 42.8
	i		19 34 19.6
	iSg1		19 34 24.7
Um	iPg1		19 33 54.6

(cont.)

1973
Aug. 9 (cont.)

Um	iSn		19 34 30.1
	iSg1		19 34 42.5
Ud	iSg1		19 36 10.9
De	iSg2		19 38 10.9

Nordland, Norway,
66.5°N, 14.6°E.
Origin time = 19 32 50.
Explosion.

" 9

De	iPKP		19 52 44.8

New Hebrides Islands (h = 45 km).

" 9

Um	i(P)		21 50 19.4

" 9

Up	iP		22 33 58.7
Sk	iP		22 33 53.4
Um	iP		22 33 37.4
Ud	iP		22 34 04.6

Japan (h = 30 km).

" 10

Up	iP		00 19 45.4
	i(S)		00 29 26
		micr	sec
	P	Z' 0.1	1.3
	Mx	E 2.6	14
	Mx	N 3.7	14
	Mx	Z 3.9	17
Ki	iP		00 19 10.1
	iS		00 28 17
		micr	sec
	Mx	E 3.6	18
	Mx	N 4.1	18
	Mx	Z 3.7	16
Sk	eP		00 19 43
Um	iP		00 19 24.5
	iS		00 28 42
Ud	iP		00 19 54.5
De	iP		00 20 08.5

Japan (h = 55 km).
M = 5.9 (Up,Ki).

" 10

Um	iP		00 27 07.0

" 10

Up	iPKP		00 37 36.6
Ki	iPKP		00 37 53.0
Um	iPKP		00 37 44.8

South Sandwich Islands (h = N).

" 10

Ki	iPKP		03 32 02.0
Um	iPKP		03 32 10.5
	i		03 33 04.4

" 10

Up	iP		09 52 09.0
Ki	iP		09 51 14.7

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Aug. 10 (cont.)

	Sk	i(P)	09 51 45.2
	Ud	iP	09 52 07.4
	De	iP	09 52 30.5

Alaska (h = 55 km).

" 10

Ki	iPn	10 43 56.4
	iSn	10 44 34.7
Sk	iSgl	10 47 32.1

Northwest USSR-Norway.
Explosion.

" 10

Ki	iPn	11 13 43.3
	iSn	11 14 41.9
	iS*	11 14 54.2
Sk	e	11 16 58
	iSgl	11 17 28.1
Um	iSgl	11 15 56.1

Northwest USSR.
Explosion.

" 10

Up	iSgl	12 56 56.2
Um	iSgl	12 57 11.2

Western USSR.
Explosion.

" 10

Up	iSgl	13 32 40.2
Ud	i	13 31 40.9
	iSgl	13 31 43.0

" 10

Up	iP	15 55 50.8
Ki	eP	15 55 05
Ud	iP	15 55 57.6

Kurile Islands (h = 60 km).

" 10

Up	iPKPl	23 40 41.7
Ud	iPKPl	23 40 50.6

" 11

Up	iP	01 51 09.0
Ki	iP	01 51 17.7
Ud	iP	01 51 25.2
De	iP	01 51 22.6

Hindu Kush.
Intermediate depth.
Origin time = 01 43 34.

" 11

Up	iP	03 16 19.1
	i	03 16 22.2

" 11

Ki	ePKP	04 04 34
Ud	iPKP	04 04 44.8
De	iPKP	04 04 52.8

Fiji Islands (h = 400 km).

" 11

Up	iPKPl	05 09 05.8
Ud	iPKPl	05 09 08.4
De	iPKPl	05 09 19.1

1973
Aug. 11

Up	ePKPl	05 33 02
Ud	iPKPl	05 33 02.9

" 11

Up	iP			07 25 45.9
	il			07 25 48.8
	i2			07 25 52.0
	iPP			07 28 02.3
	iS			07 34 02
			micr	sec
	il	Z'	0.5	1.4
	i2	Z'	0.8	1.6
	PP	Z'	0.1	1.2
	Mx	E	7.0	15
	Mx	N	38	20
	Mx	Z	8.7	11
Ki	iP			07 25 26.3
	il			07 25 29.3
	i2			07 25 32.3
	iS			07 33 28
			micr	sec
	il	Z'	0.2	1.4
	i2	Z'	0.3	1.2
	Mx	E	18	11
	Mx	N	26	14
	Mx	Z	18	11
Sk	iP			07 25 55.7
	il			07 25 57.7
	i2			07 26 00.4
Um	iP			07 25 30.8
	il			07 25 34.4
	i2			07 25 37.5
	iS			07 33 35
Ud	iP			07 25 58.9 C
	il			07 26 01.1
	i2			07 26 04.2
De	eP			07 26 06
	il			07 26 07.7
	i2			07 26 11.2

Kansu, China (h = N).
m = 6.2 (il), 6.4 (i2),
M = 6.7 (Up,Ki).
Triple P with successively increasing amplitudes.

" 11

Ud	iP	07 57 47.5

" 11

Up	iP			13 18 43.8
			micr	sec
	Mx	N	0.8	21
	Mx	Z	0.8	22
Ki	eP			13 18 32
	i			13 18 38.6
Ud	i(P)			13 18 59.6

New Guinea (h = 9 km).

" 11

Up	iP	14 15 27.8

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	11	(cont.)		
		Up	i	14 15 39.6
		Ki	eP	14 14 44
		Um	iP	14 15 03.3
		Ud	iP	14 15 34.2
			i	14 15 51.5
		Japan (h = 55 km).		
"	11	Up	eP	16 07 18
		Ud	iP	16 07 18.4
"	11	Up	i(P)	18 15 10.5
		Ud	iP	18 15 07.1
			i	18 15 13.5
		South Atlantic Ocean (h = N).		
"	11	Ud	iPKPl	19 10 08.4
		De	iPKPl	19 10 19.0
"	11	Up	iPKP	23 33 42.9
		Ki	iPKP	23 34 02.8
		Sk	iPKP	23 33 54.7
		Ud	ePKP	23 33 40
		South Sandwich Islands (h = N).		
"	11	Up	eP	23 57 05
		Sk	iP	23 57 37.7
		Ud	iP	23 57 05.1
		De	iP	23 56 29.2
"	12	Sk	eP	00 35 25
		Ud	eP	00 35 34
		Japan (h = 45 km).		
"	12	Up	e(P)	00 40 53
		Ki	iP	00 40 34.1
		Ud	iP	00 40 58.1
		Mindanao (h = 80 km).		
"	12	Up	iSgl	06 31 55.1
		Ki	ePn	06 27 42
			iSn	06 28 40.1
			iS*	06 29 03.3
		Sk	iSgl	06 31 35.6
		Um	iSgl	06 29 53.5
		Ud	iSgl	06 32 24.5
		De	iSgl	06 33 45.1
		Northwest USSR. Explosion.		
"	12	Ki	iSn	06 42 22.6
			iS*	06 42 44.2
		Northwest USSR. Explosion.		

1973 Aug.	12	Ki	eSn	09 31 50
			iS*	09 32 11.6
		Um	iSgl	09 33 02.5
		Northwest USSR. Explosion.		
"	12	Ki	iPn	10 18 36.6
			i	10 18 46.1
			iSn	10 19 23.0
			iS*	10 19 37.5
			i	10 20 37.7
		Um	iSgl	10 21 10.4
		Northwest USSR-Norway. Explosion.		
"	12	Up	iP	10 29 31.5
		Ki	eP	10 29 17
		Sk	iP	10 29 08.5
			ipP	10 29 22.9
		Um	iP	10 29 25.9
		Mexico. h = 55 km (Sk).		
"	12	Up	iSgl	11 09 34.3
			i	11 09 38.9
		Ki	iPn	11 05 23.1
			iSn	11 06 20.0
			iS*	11 06 45.9
		Sk	iSn	11 08 24.3
			iSgl	11 09 09.9
		Um	iSn	11 07 01.7
			i	11 07 17.9
			iSgl	11 07 37.6
		Ud	i	11 09 18.5
			iSgl	11 10 09.6
		De	iSgl	11 11 32.2
		Northwest USSR. Explosion.		
"	12	Up	iP	15 40 13.0
				micr sec
			Mx N	0.9 17
			Mx Z	1.1 20
		Ki	iP	15 38 49.4
			iPP	15 38 57.6
			iS	15 40 13.7
			iSS	15 40 27.7
			iTPgl	15 44 20.5
			iTSgl	15 45 23.5
				micr sec
			PP Z'	0.1 0.8
			S Z'	0.1 1.0
			Mx E	1.7 16
			Mx N	1.0 16
			Mx Z	1.5 16
		Sk	iP	15 39 13.0
			iS	15 40 57.2
		(cont.)		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	12	(cont.)				
		Um	iP		15 39 33.5	
			iS		15 41 26.6	
			iSS		15 41 57.3	
		Ud	iP		15 40 00.7	
		De	iP		15 40 56.1	
		Norwegian Sea (h = N).				
"	12	Up	eP		17 25 03	
		Ud	e(P)		17 25 12	
		De	iP		17 25 17.8	
"	13	Up	iP		02 08 37.4	
					micr	sec
			Mx	E	0.6	13
			Mx	N	0.9	17
			Mx	Z	0.9	13
		Ki	eP		02 08 53	
			i		02 08 58.2	
		Sk	iP		02 09 08.0	
		Um	iP		02 08 42.4	
		Ud	iP		02 08 53.1	
			i		02 08 56.5	
		De	iP		02 08 47.2	
		Pakistan (h = 7 km).				
"	13	Up	eP		04 17 09	
		Ud	iP		04 17 16.6	
		Greece.				
"	13	Up	iP		07 44 45.0	
		Ud	iP		07 44 46.2	
		Ionian Sea.				
"	13	Up	iP		08 42 39.1	
			iPKP		08 46 42.3	
			e(PP)		08 47 12	
			iS		08 54 50	
			iPKKP		08 57 37.0	
			i		08 58 17.4	
					micr	sec
			(PP)	Z'	0.1	1.4
			Mx	E	3.5	20
			Mx	N	6.4	22
			Mx	Z	7.5	22
		Ki	iP		08 42 20.5	
			i(PKP)		08 46 12.8	
			iPP		08 46 49.0	
			iSKS		08 52 52	
			iPS		08 55 54	
			iPKKP		08 57 53.0	
					micr	sec
			Mx	E	5.5	20
			Mx	N	4.7	22
			Mx	Z	3.8	17
		Sk	i(pP)		08 43 16.0	
		(cont.)				
1973 Aug.	13	(cont.)				
		Sk	iPKP		08 46 41.0	
			i(PP)		08 47 11.3	
			iPKKP1		08 57 21.5	
			i		08 58 07.2	
		Um	i(pP)		08 42 51.6	
			iPP		08 47 01	
			iPKKP1		08 57 31.0	
			i		08 58 01.8	
		Ud	iP		08 42 53.9	
			ipP		08 43 23.1	
			iPKP		08 46 40.9	
			i(PP)		08 47 14.8	
			i		08 48 04.9	
			iPKKP		08 57 32.6	
			i		08 58 07.3	
		De	i(pP)		08 43 33.5	
			iPKP		08 46 48.0	
			i(PP)		08 47 18.4	
			iPP		08 47 52.5	
			iPKKP		08 57 27.4	
		New Guinea.				
		h = 110 km (Ud).				
		M = 6.3 (Up,Ki).				
		M uncorrected for focal depth.				
"	13	Ki	iPn		10 12 35.5	
			iPgl		10 12 44.3	
			iSn		10 13 22.0	
			iSgl		10 13 35.7	
		Um	iSgl		10 15 15.2	
		Northwest USSR-Norway.				
		Explosion.				
"	13	Up	i		12 46 10.0	
			iSgl		12 46 21.8	
			iSg2		12 46 27.6	
		Um	i		12 46 33.0	
			iSgl		12 46 40.8	
		Ud	iSgl		12 47 22.6	
		De	e		12 47 30	
			iSgl		12 47 46.9	
		Western USSR.				
		Explosion.				
"	13	Up	iP		14 02 31.4	
		Ud	iP		14 02 36.1	
		De	iP		14 02 09.5	
		Ionian Sea.				
"	13	Up	iP		19 44 23.1	C
		Ki	iP		19 44 06.7	
		Sk	iP		19 44 35.5	
		Um	iP		19 44 08.8	
		Ud	iP		19 44 37.1	
		De	iP		19 44 43.2	
		China.				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	13	Ki	iP		21 16 49.8	
					micr	sec
			P	Z'	0.1	1.2
"	14	Up	iPKPl		01 42 12.9	
		Um	iPKPl		01 42 02.6	C
		Ud	iPKPl		01 42 14.2	
"	14	Up			micr	sec
			Mx	E	1.0	20
			Mx	N	0.8	18
			Mx	Z	1.5	19
		Ki			micr	sec
			Mx	E	0.8	18
			Mx	N	0.7	17
			Mx	Z	0.9	20
		Um	iSP		02 26 13	
		Ud	iPP		02 16 01.2	
		Chile (h = 30 km).				
		M = 5.5 (Up,Ki).				
		Cf note to Aug. 1, 16 13.				
"	14	Up	iP		02 36 00.8	
		Ki	iP		02 37 10.6	
		Sk	iP		02 37 02.6	
		Ud	iP		02 36 07.9	
		De	iP		02 35 36.1	
		Crete.				
"	14	Ud	iP		03 36 29.7	
		Turkey.				
"	14	Up	iPKPl		04 37 36.8	
			iSKPl		04 40 25.6	
		Ki	iPKP		04 37 27.7	
			iSKPl		04 40 05.4	
		Sk	e(PKP)		04 37 31	
			iPKP		04 37 38.0	
		Um	i(PKP)		04 37 25.2	
			iPKP		04 37 37.0	
			iSKPl		04 40 13.8	
		Ud	iPKPl		04 37 38.4	
			iSKPl		04 40 28.1	
		De	iPKPl		04 37 49.9	C
			ipPKPl		04 40 07.9	
			iSKPl		04 40 36.6	
		Tonga-Kermadec Islands.				
		h = 620 km (De).				
"	14	Up	iPKPl		05 00 14.5	
		Um	iPKPl		05 00 05.6	
			i		05 00 14.9	
		Ud	iPKPl		05 00 16.4	
		De	iPKPl		05 00 27.9	C
"	14	Up	iP		09 42 16.0	
		Ud	iP		09 42 31.2	
1973 Aug.	14	Up	iP		10 15 38.3	
		Um	iP		10 15 09.0	
		Ud	iP		10 15 44.2	
"	14	Up	iSgl		11 13 26.3	
		De	i		11 12 52.2	
			iSgl		11 12 58.0	
			i		11 13 08.3	
"	14	Up	iSgl		11 13 52.0	
		De	i		11 13 17.0	
			iSgl		11 13 23.1	
			i		11 13 34.0	
"	14	Up	iSgl		11 36 37.2	
		De	iPgl		11 35 55.3	
			iSgl		11 36 50.3	
		Baltic Sea.				
		Origin time = 11 35 00.				
		Explosion.				
"	14	Up	iSgl		11 41 43.1	
		Ud	iSgl		11 42 26.1	
		De	iPgl		11 41 07.3	
			iSgl		11 41 54.4	
		Baltic Sea, 57.0°N, 19.9°E.				
		Origin time = 11 40 05.				
		Explosion.				
"	14	De	iPgl		11 45 22.8	
			iSgl		11 46 10.5	
		Baltic Sea.				
		Origin time = 11 44 22.				
		Explosion.				
"	14	De	iPgl		12 26 12.2	
			i		12 26 22.5	
			iSgl		12 26 59.8	
			iRg		12 27 17.0	
		Baltic Sea.				
		Origin time = 12 25 11.				
		Explosion.				
"	14	Up	iP		13 37 05.8	
"	14	Ud	i		14 03 16.8	
			iSgl		14 03 41.7	
		De	i		14 04 32.2	
			iSgl		14 05 06.3	
"	14	Up	iP		14 51 20.6	
"	14	Up	iP		15 14 08.5	C
			ipP		15 14 18.2	
		Um	iP		15 14 17.7	C
			ipP		15 14 27.0	
		Ud	iP		15 14 18.2	

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973					
Aug.	14	(cont.)			
		Ud	ipP	15 14 28.9	
		De	eP	15 14 07	
		Indian Ocean.			
		h = 35 km (Up,Um,Ud).			
"	14	Ki	eP	16 40 38	
		Um	iP	16 40 56.1	
		Ud	iP	16 41 24.7	
		Japan (h = 270 km).			
"	14	Ud	i	17 24 06.8	
			iSgl	17 24 09.6	
		De	iSgl	17 24 40.2	
"	14	Up	iP	17 44 48.5	
		Ud	iP	17 45 02.3	
"	14	Sk	iP	17 45 32.2	
		Um	iP	17 45 15.2	
"	14	Ud	iP	18 31 49.7	
		De	iP	18 31 14.1	
"	14	Up	iP	18 32 54.3	C
			ipP	18 33 02.2	
		Ki	eP	18 33 17	
		Sk	iP	18 33 23.7	C
		Um	iP	18 32 59.8	C
			ipP	18 33 07.8	
			i	18 33 29.3	
		Ud	iP	18 33 09.7	C
			ipP	18 33 17.5	
			i	18 33 33.1	
		De	iP	18 32 59.5	C
			ipP	18 33 07.0	
		Pakistan.			
		h = 30 km (Up,Um,Ud,De).			
"	14	Ud	iPKPl	19 01 13.4	
		De	iPKPl	19 01 25.8	D
		Fiji Islands (h = 620 km).			
"	14	Up	eP	20 17 55	
		Ud	iP	20 18 02.8	D
			i	20 18 11.2	
"	14	Ud	i(P)	20 40 34.0	
"	14	Up	i(Sgl)	23 51 17.8	
		Um	i(Sgl)	23 51 45.5	
		Ud	i(Sgl)	23 52 02.9	
"	15	Up	iP	00 38 43.7	
		Um	iP	00 39 06.9	
"	15	Up	iP	02 06 48.5	C
		(cont.)			

1973					
Aug.	15	(cont.)			
		Up	iPn	02 07 35.7	
			iPP	02 07 49.4	
				micr	sec
			P Z'	0.1	1.0
		Ki	iP	02 06 55.6	C
			iPn	02 07 43.6	
			i	02 08 18.7	
				micr	sec
			P Z'	0.2	1.0
		Sk	iP	02 07 14.7	C
			iPn	02 08 26.6	
		Um	iP	02 06 45.2	C
			iPn	02 07 28.0	
			iPP	02 07 47.0	
		Ud	iP	02 07 06.3	C
			iPP	02 08 26.0	
		De	iP	02 07 04.3	C
			iPn	02 07 57.1	
		Kazakh SSR.			
		m = 5.9 (Up,Ki).			
		Underground explosion.			
"	15	Up	iSn	03 07 24.3	
			iSgl	03 08 02.5	
		Ud	iSgl	03 07 07.0	
		De	iPn	03 05 52.1	
			iSn	03 06 48.6	
			iSgl	03 07 01.2	
		South coastal area of Norway.			
"	15	Up	iP	03 32 19.1	
			i	03 32 30.5	
		Ki	iP	03 31 12.9	
			i	03 31 40.7	
		Sk	iP	03 31 22.3	C
		Um	iP	03 31 44.0	C
		Ud	iP	03 32 07.8	
		Norwegian Sea.			
"	15	Up	iP	04 42 41.8	
		Ki	eP	04 43 21	
		Um	iP	04 42 58.6	
		Ud	iP	04 42 56.9	
		De	iP	04 42 42.7	
		Iran (h = N).			
"	15	Up	iSgl	05 03 17.3	
		Sk	iSgl	05 02 42.9	
		Ud	iSgl	05 02 14.1	
		De	i	05 03 07.4	
			iSgl	05 03 15.0	
		South Norway,			
		near 60.3°N, 7.6°E.			
		Origin time = 05 00 39.			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	15	Up	iP	05 49 38.9
"	15	Um	iP	05 56 31.4
		Ud	iP	05 57 02.6
"	15	De	i(Rg)	07 59 05.6
"	15	Ud	iPKPl	08 55 09.3
		De	ePKPl	08 55 14
"	15	Up	iP	09 11 07.6
			ipP	09 11 19.1
		Ki	iP	09 11 00.6
			ipP	09 11 11.2
		Sk	eP	09 11 23
			ipP	09 11 34.0
		Um	iP	09 10 58.3
			ipP	09 11 10.0
		Ud	iP	09 11 20.5
			ipP	09 11 32.4
		De	eP	09 11 25
			ipP	09 11 35.1
		Burma-India. h = 40 km (Up,Ki,Sk,Um,Ud, De).		
"	15	Ki	iPKP	09 44 48.0
		Sk	ePKPl	09 44 57
		Ud	iPKPl	09 44 56.5
		De	iPKPl	09 44 58.1
		South Pacific Ocean (h = N).		
"	15	Ki	eP	11 31 29
		Sk	iP	11 31 41.8
		Um	iP	11 31 21.2
		Ud	iP	11 31 36.0
		De	iP	11 31 34.6
			i	11 31 59.5
		Sumatra (h = N).		
"	15	Ki	iSgl	13 20 56.7
		Um	iSgl	13 19 41.1
			iSg2	13 19 50.2
		Ud	iSg2	13 21 26.6
		De	eSg2	13 22 07
		Lake Ladoga. Explosion.		
"	15	Ud	iSgl	13 32 41.8
		De	iSgl	13 33 13.4
"	15	Ud	iSgl	13 46 50.0
		De	iSgl	13 47 30.0
"	15	Um	iSgl	13 58 38.8
		Ud	iSgl	13 59 18.6
		(cont.)		

1973 Aug.	15	(cont.)		
		De	iSgl	13 59 50.1
		Western USSR. Explosion.		
"	15	Up	iSgl	14 11 24.9
		Ki	i	14 12 34.3
			iSgl	14 13 16.6
		Sk	iSgl	14 13 01.6
			iSg2	14 13 15.0
		Um	i	14 11 31.5
			iSgl	14 11 43.8
		Ud	iSn	14 11 44.7
			iSgl	14 12 22.7
		De	iS*	14 12 46.5
			iSgl	14 12 54.2
		Western USSR. Explosion.		
"	15	De	i	15 15 07.0
			i(Sgl)	15 15 13.2
"	15	Up	iP	15 16 33.2 C
			iPP	15 18 05.3
				micr sec
			P Z'	0.1 1.0
		Ki	iP	15 16 42.3 C
				micr sec
			P Z'	0.1 1.0
		Sk	iP	15 16 58.7 C
		Um	iP	15 16 31.7 C
		Ud	iP	15 16 49.8 C
			iPP	15 18 33.5
		De	iP	15 16 46.0
			iPP	15 18 26.4
		Hindu Kush (h = 200 km). m = 5.3 (Up,Ki).		
"	15	Ud	i(Sgl)	15 21 13.0
		De	iSgl	15 21 44.0
"	15	De	iSgl	15 26 00.4
"	15	Ud	iSgl	15 28 04.6
		De	i	15 29 11.4
			iSgl	15 29 18.5
"	15	Ud	iSgl	15 33 34.7
			i	15 33 35.8
"	15	De	iSgl	15 36 36.6
"	15	De	e	15 38 09
			iSgl	15 38 16.9
"	15	De	i(Sgl)	15 44 58.3

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973					
Aug.	15	De	iSgl	15 51 40.0	
"	15	De	iSgl	15 53 32.8	
"	15	De	iSgl	15 59 25.1	
"	15	De	e(Sgl)	16 02 16	
"	15	De	e(Sgl)	16 31 16	
"	15	Up	i	17 21 38.1	
			iSgl	17 21 50.1	
		Sk	iSgl	17 23 39.4	
		Um	iSgl	17 22 08.2	
		Ud	iSgl	17 22 55.2	
		De	iSgl	17 23 17.7	
		Western USSR.			
		Explosion.			
"	15	Up	iP	17 24 25.6	
		Sk	iP	17 24 43.8	
		Ud	iP	17 24 40.9	
		De	iP	17 24 42.6	
		Tibet.			
"	15	De	i	19 06 20.1	
			iSgl	19 06 58.9	
"	15	Ud	eP	21 51 31	
		De	iP	21 51 24.9	
"	15	Up	iP	22 06 33.0	
"	15	Up	iP	22 45 18.6	
		Ud	eP	22 45 27	
"	15	Ud	iP	23 21 49.6	
		Greece.			
"	16	Up	iP	00 39 21.5	
		Ki	iP	00 39 23.6	
		Um	iP	00 39 13.0	
		Ud	eP	00 39 32	
		De	iP	00 39 15.1	
"	16	Um	i(Sgl)	02 49 32.8	
"	16	Up	iP	04 09 01.8	D
			i	04 09 04.4	
				micr	sec
			P Z'	0.2	1.2
			Mx E	3.0	22
			Mx N	9.1	22
			Mx Z	5.7	21
		Ki	iP	04 08 50.7	C
			i	04 08 54.4	
			iPP	04 11 17.3	
		(cont.)			

1973					
Aug.	16	(cont.)			
		Ki		micr	sec
			P Z'	0.2	1.0
			Mx E	4.5	18
			Mx N	4.5	17
			Mx Z	3.1	16
		Sk	iP	04 09 14.4	D
			i	04 09 18.1	
		Um	iP	04 08 52.2	D
			i	04 08 55.4	
			i	04 09 07.8	
			iS	04 17 30	
		Ud	iP	04 09 14.3	D
			i	04 09 17.8	
		De	iP	04 09 18.6	
			i	04 09 21.0	
		Yunnan, China (h = N).			
		m = 6.3, M = 5.9 (Up,Ki).			
		Double P, small and large,			
		in average 3.2 sec apart.			
"	16	Up	iP	04 58 58.6	
		Um	iP	04 58 39.8	
		Ud	eP	04 59 10	
"	16	Up	iP	06 16 19.1	
			i	06 16 23.1	
		Ki	iP	06 16 08.0	
			i	06 16 12.1	
		Sk	iP	06 16 31.4	C
			i	06 16 34.8	
		Um	iP	06 16 09.5	
			i	06 16 13.4	
		Ud	iP	06 16 31.9	
			i	06 16 35.8	
		Yunnan, China (h = N).			
		Double P, in average 3.9			
		sec apart; cf Aug. 16, 04 09.			
"	16	Um	i(Sgl)	07 48 06.9	
"	16	Up	eP	08 07 35	
		Sk	iP	08 07 52.6	
		Ud	iP	08 07 48.7	
		Tibet.			
		Origin time = 07 58 30.			
"	16	Um	i(Sgl)	08 09 48.1	
"	16	Up	iP	08 11 59.0	D
				micr	sec
			P Z'	0.2	1.1
			Mx E	1.6	11
			Mx N	3.7	16
			Mx Z	3.6	11
		Ki	eP	08 11 53	D
		(cont.)			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug. 16 (cont.)

Ki			micr	sec
	P	Z'	0.1	1.2
	Mx	E	5.1	14
	Mx	N	9.0	19
	Nx	Z	4.4	14
Sk	iP		08 12 16.8	D
Um	iP		08 11 50.7	D
Ud	iP		08 12 13.7	D
De	iP		08 12 15.3	D

Tibet (h = N).
m = 5.8, M = 5.7 (Up,Ki).

" 16

Up	iP	08 26 30.8
Sk	iP	08 26 47.9
Ud	iP	08 26 45.1

Tibet.
Origin time = 08 17 25.

" 16

Up	iP	08 29 43.6
Ud	iP	08 30 00.9

Tibet.
Origin time = 08 20 40.

" 16

Ud	iP	08 33 07.5

" 16

Up	iP	08 44 04.7
Sk	iP	08 44 22.3
Um	iP	08 43 55.3
Ud	iP	08 44 18.8
De	eP	08 44 19

Tibet.
Origin time = 08 34 59.

" 16

Up	iP	11 05 09.3
Sk	iP	11 05 39.1
Um	iP	11 05 23.1
Ud	iP	11 05 21.0
	i	11 05 30.7
De	iP	11 05 07.4

Indian Ocean (h = N).

" 16

Up	iP		12 27 58.1	
	i		12 27 59.6	
	ipP		12 28 13.5	
	eP'P'		12 56 15	
			micr	sec
	P	Z'	0.2	1.0
	Mx	E	1.8	19
	Mx	N	4.0	22
	Mx	Z	4.1	20
Ki	iP		12 27 05.8	
	ipP		12 27 20.3	
	iS		12 35 13	
	iP'P'		12 56 41.1	

(cont.)

1973 Aug. 16 (cont.)

Ki			micr	sec
	P	Z'	0.1	1.1
	Mx	E	3.5	17
	Mx	N	5.3	20
	Mx	Z	4.8	17
Sk	iP		12 27 38.4	
	iPcP		12 28 10.1	
	eP'P'		12 56 19	
Um	iP		12 27 32.7	
	ipP		12 27 50.3	
	iPcP		12 28 06.3	
	iP'P'		12 56 18.0	
Ud	iP		12 27 58.2	
	iP'P'		12 56 12.2	
De	iP		12 28 21.4	
	ipP		12 28 39.6	

Aleutian Islands.
h = 60 km (Up,Ki,Um,De).
m = 6.0, M = 5.8 (Up,Ki).

" 16

Up	iP	12 29 56.3
Ki	eP	12 29 07
Um	iP	12 29 29.9
	iPcP	12 30 04.0
Ud	iP	12 29 57.2
De	iP	12 30 21.3

Aleutian Islands.
Origin time = 12 18 59.

" 16

Up	iP	12 42 24.1
Ki	iP	12 41 26.3
Sk	eP	12 41 57
Ud	iP	12 42 15.0

Aleutian Islands.
Origin time = 12 31 20.

" 16

Up	iP	12 47 27.3
	ipP	12 47 45.0
Ki	iP	12 46 35.1
	iPcP	12 47 19.1
Sk	iP	12 47 08.2
	iPcP	12 47 39.3
Um	iP	12 46 59.3
	i	12 47 30.8
	iPcP	12 47 34.2
Ud	iP	12 47 26.8
	ipP	12 47 44.5
De	iP	12 47 49.8

Aleutian Islands.
h = 70 km (Up,Ud).

" 16

Up	i	13 25 02.2
	iSgl	13 25 11.4
Um	iSgl	13 25 47.5
Ud	i	13 26 09.9

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Aug. 16 (cont.)

Ud	iSgl	13 26 20.1	
De	iSgl	13 26 44.5	

Esthonia.
Explosion.

" 16

Up	iP	14 36 31.2	
	ipP	14 36 47.3	
	iPcP	14 36 57.1	
	eP'P'	15 04 42	
		micr	sec
	P	Z' 0.1	1.0
	Mx	E 0.5	19
	Mx	N 0.8	21
	Mx	Z 0.8	22
Ki	iP	14 35 37.6	
	iPcP	14 36 23.1	
		micr	sec
	PcP	Z' 0.1	1.0
	Mx	E 0.8	18
	Mx	N 0.7	18
	Mx	Z 0.9	17
Sk	iP	14 36 09.0	
	iPcP	14 36 42.4	
Um	iP	14 36 03.0	
	iPcP	14 36 39.2	
	iP'P'	15 05 03.1	
Ud	iP	14 36 31.0	
	ipP	14 36 47.6	
	eP'P'	15 04 51	
De	iP	14 36 53.4	
	ipP	14 37 09.6	

Aleutian Islands.
h = 60 km (Up,Ud,De).
m = 5.8, M = 5.0 (Up,Ki).

" 16

Um	iPKP	15 13 47.9	
Ud	iPKPl	15 13 49.2	
De	iPKPl	15 14 01.0	C

Fiji Islands (h = 620 km).

" 16

Ud	iP	17 51 21.2	

Afghanistan.

" 16

Ud	iP	21 47 01.7	
	iPcP	21 47 31.1	

" 16

Up	iPKPl	21 54 51.2	
Ki	ePKPl	21 54 34	
Sk	iPKPl	21 54 46.4	
Um	iPKPl	21 54 40.0	C
	ipPKPl	21 54 53.9	
Ud	iPKPl	21 54 52.7	
De	iPKPl	21 55 01.8	
	ipPKPl	21 55 14.9	

" 16

Ud	iP	23 17 25.1	

1973
Aug. 17

Up	iP	01 04 04.7	
Ki	iP	01 03 17.3	
Sk	iP	01 03 53.1	
Um	iP	01 03 39.0	
	ipP	01 03 53.6	
Ud	iP	01 04 09.9	
	ipP	01 04 24.8	
De	iP	01 04 28.8	

Kurile Islands.
h = 55 km (Um,Ud).

" 17

Up	iP	01 54 06.3	C
	iS	02 03 50	
		micr	sec
	P	Z' 0.1	1.0
	Mx	E 4.4	25
	Mx	N 9.6	24
	Mx	Z 4.3	17
Ki	iP	01 53 42.1	
	i	01 53 44.1	
		micr	sec
	P	Z' 0.1	1.2
	Mx	E 2.7	17
	Mx	N 2.9	19
	Mx	Z 2.7	15
Sk	iP	01 54 10.7	
	i	01 54 30.6	
Um	iP	01 53 50.7	
	i	01 53 52.0	
	iS	02 03 22	
Ud	iP	01 54 15.5	
De	iP	01 54 24.5	
	i	01 54 26.8	

Ryukyu Islands (h = 30 km).
m = 5.9, M = 6.0 (Up,Ki).

" 17

Up	iSgl	08 10 52.8	
	iRg	08 11 10.8	
Sk	iSgl	08 10 55.1	
Um	iSgl	08 10 34.5	
Ud	iSgl	08 11 12.6	
	iRg	08 11 28.1	

Medelpad, Sweden,
62.4°N, 17.6°E.
Origin time = 08 09 35.
Near-surface phenomenon.

" 17

Ki	iP	08 58 30.9	
Um	iP	08 58 09.4	

North Atlantic Ocean
(h = N).

" 17

Up	iSgl	09 02 36.9	
Ki	i	09 02 53.9	
Sk	iS*	09 03 42.4	
	iSgl	09 03 47.2	

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Aug. 17 (cont.)

	Um	i		09 01 17.6
		iSgl		09 01 57.2
	Ud	iSn		09 02 51.6
		iSgl		09 03 40.7
	De	e		09 03 21
		i		09 03 40.6
		iSgl		09 04 24.0

Lake Ladoga.
Explosion.

" 17	Up	iP		10 19 07.4
		iPcP		10 19 30.8
	Ki	eP		10 18 13
		iPcP		10 18 59.4
	Um	iP		10 18 40.4
		iPcP		10 19 15.5
	Ud	iP		10 19 08.4
	De	iP		10 19 30.6

Aleutian Islands (h = 50 km).

" 17	Ki	i		11 52 15.9
		iS*		11 52 57.9
	Sk	iSgl		11 55 27.2
	Um	iSn		11 53 19.5
		iSgl		11 53 57.0

Northwest USSR.
Explosion.

" 17	Ki	iSn		12 06 19.5
		iSgl		12 07 01.5
	Sk	i		12 05 57.7
		iSgl		12 06 13.4
	Um	iSgl		12 04 58.2
	Ud	iSgl		12 05 28.4
	De	iSgl		12 05 53.1

Esthonia.
Explosion.

" 17	Up	iP		14 06 40.8
	Ki	iP		14 05 47.4
	Um	iP		14 06 13.6
	Ud	iP		14 06 43.1
	De	iP		14 06 59.4

Aleutian Islands (h = 40 km).

" 17	Sk	eP		14 53 29
	Um	i(P)		14 53 07.8
		iP		14 53 28.7
	Ud	iP		14 53 40.0

" 17	Up	iP		19 00 57.9
	Ki	iP		19 00 40.9
			micr	sec
		P	Z' 0.1	1.0
		Mx	E 0.9	15

(cont.)

1973
Aug. 17 (cont.)

	Ki		micr	sec
		Mx	N 0.5	15
		Mx	Z 0.6	14
	Sk	iP		19 01 03.0
	Um	iP		19 00 47.0
	Ud	iP		19 01 06.6
	De	iP		19 01 12.2

Panay (h = 40 km).

" 17	Um	iPKP		20 50 21.6
	Ud	iPKP		20 50 33.0

" 17	Up	iP		21 40 47.8

" 18	Up	iP		02 19 29.3 C
		ipP		02 19 53.3
			micr	sec
		P	Z' 0.1	0.9
	Ki	iP		02 18 46.3 C
			micr	sec
		P	Z' 0.1	1.0
	Sk	iP		02 19 21.4 C
	Um	iP		02 19 05.5 C
		ipP		02 19 27.2
	Ud	iP		02 19 36.2 C
	De	iP		02 19 53.0

Japan.
h = 90 km (Up,Um).
m = 5.7 (Up,Ki).

" 18	Ud	iP		06 27 01.4

South Atlantic Ocean (h = N).

" 18	Up	iP		08 38 28.6
		iPP		08 41 50.9
		iS		08 49 04
			micr	sec
		P	Z' 0.1	1.5
		Mx	E 7.2	23
		Mx	N 17	24
		Mx	Z 15	20
	Ki	iP		08 38 11.3
		i		08 38 12.8
		i		08 38 31.1
		iS		08 48 30
			micr	sec
		P	Z' 0.2	1.2
		Mx	E 16	19
		Mx	N 19	21
		Mx	Z 10	14
	Sk	iP		08 38 33.5
		i		08 39 08.3
	Ud	iP		08 38 36.1
		i		08 38 38.0
		i		08 38 53.3
	De	iP		08 38 42.1

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Aug. 18 (cont.)
Panay (h = 15 km).
m = 6.0, M = 6.5 (Up,Ki).

" 18 Up iP 10 06 12.4
Ki iP 10 05 57.1
Ud iP 10 06 21.1
Panay (h = 90 km).

" 18 Up iP 10 26 22.6
i 10 26 25.0
Um iP 10 26 02.3
Ud iP 10 26 36.1
i 10 26 40.7
De iP 10 26 48.2
USSR-Mongolia (h = N).

" 18 Ki iPn 12 49 06.4
iSn 12 50 02.0
iS* 12 50 25.5
Northwest USSR.
Explosion.

" 18 Ki iPn 13 17 23.3
iSn 13 18 11.4
iSgl 13 18 29.6
Um i 13 19 36.7
iSgl 13 19 55.2
Northwest USSR-Norway.
Explosion.

" 18 Ki iPn 13 17 48.7
Northwest USSR.
Explosion.

" 19 Up iPKPl 00 15 06.8
Ud iPKPl 00 15 08.5
De iPKPl 00 15 18.0

" 19 Up i(P) 03 42 43.8

" 19 Ki i 11 33 35.5
i 11 34 04.2
i(Sgl) 11 34 21.4

" 19 Up iP 16 38 10.2
Um iP 16 38 55.7
Ud iP 16 38 18.1 C
De iP 16 37 39.3
Albania (h = 5 km).

" 19 Up iP 19 42 03.1
ipP 19 43 16.9
iPP 19 45 27.9

		micr	sec
P	Z'	0.1	1.0

Ki iP 19 41 34.8
(cont.)

1973
Aug. 19 (cont.)

		micr	sec
Ki			
P	Z'	0.2	0.8

Sk iP 19 42 00.5
iPP 19 45 27.6
Um iP 19 41 46.8
ipP 19 42 58.6
Ud iP 19 42 09.7
ipP 19 43 22.7
iPP 19 45 43.0
De iP 19 42 21.4
Mariana Islands.
h = 310 km (Up,Um,Ud).
m = 5.9 (Up,Ki).

" 19 Ki iP 21 53 21.7
i 21 54 31.5
iS 21 54 55.3
Um iP 21 54 13.2
Ud iP 21 55 03.7
i 21 55 13.1
Norwegian Sea.
Origin time = 21 51 26.

" 19 Ki iP 23 21 17.1
i 23 21 23.4
Sk eP 23 22 02
Um iP 23 22 08.0
i 23 22 17.2
Ud iP 23 22 56.8
De iP 23 23 36.0
Norwegian Sea (h = N).
Ud, at an epicentral distance of about 15°, has unusually large amplitude of P Z'.

" 20 Um iP 02 42 26.3

" 20 Up e(pP) 04 57 34
Ki e(pP) 04 57 21
Um iP 04 57 15.5
ipP 04 57 25.2
Molucca Passage.
h = 35 km (Um).

" 20 Up iP 15 21 54.7
i 15 22 06.6
iS 15 24 35.5
i 15 24 51.3

		micr	sec
P	Z'	2.1	0.8
S	Z'	0.9	0.9
Mx	E	2.4	5
Mx	N	1.9	5
Mx	Z	1.3	5

Ki iP 15 23 21.5
i 15 23 26.9
(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	20	(cont.)					
		Ki	iS		15 27 18.3		
			i		15 27 25.4		
					micr	sec	
			P	Z'	0.8	0.9	
			Mx	E	2.0	6	
		Sk	iP		15 22 51.3		
			i		15 22 54.4		
			iS		15 26 16.1		
		Um	iP		15 22 36.3		
			iS		15 25 52.7		
		Ud	iP		15 22 11.3		
			i		15 22 13.8		
			iS		15 25 05.8		
		De	iP		15 21 30.4		
			i		15 21 32.3		
			iS		15 23 54.3		
		Rumania (h = 70 km). m = 6.3 (Up,Ki). Up, at a distance of about 15°, exhibits unusually large amplitude of P Z'; cf similar remark to Aug. 19, 23 21.					
"	20	De	iP		18 42 01.7		
		Crete.					
"	20	Ud	iP		20 05 14.0		
"	20	Up	iP		22 37 09.2		
		Ki	iP		22 36 15.2		
		Um	iP		22 36 42.6		
		Ud	iP		22 37 07.6		
		De	iP		22 37 31.3		
		Aleutian Islands.					
"	21	Ki	eP		01 59 05		
		Ud	iP		01 59 22.9		
		Molucca Passage (h = 60 km).					
"	21	De	iP		02 01 36.3		
"	21	Ki	eP		03 53 32		
		Um	iP		03 54 01.5		
		Ud	iP		03 54 26.9		
		Aleutian Islands (h = 100 km).					
"	21	Up	iPKPl		07 39 57.4		
		Ud	iPKPl		07 40 01.3		
"	21	Ki	iSn		12 20 10.8		
		Um	iSgl		12 19 25.4		
			iRg		12 19 53.8		
		Ud	iSgl		12 20 05.0		
		De	iSgl		12 20 37.6		
		Western USSR. Explosion.					
1973 Aug.	21	Um	iS*		12 53 32.6		
			iSgl		12 53 41.4		
		Gulf of Finland. Explosion.					
"	21	Um	iSgl		12 54 58.3		
		Gulf of Finland. Explosion.					
"	21	Um	iSgl		12 58 50.0		
		Ud	iSgl		12 59 15.8		
		De	iSn		12 59 23.9		
			iSg2		13 00 04.0		
		Gulf of Finland. Explosion.					
"	21	Um	iSgl		13 00 12.4		
		Gulf of Finland. Explosion.					
"	21	Um	iSgl		13 00 52.0		
		Gulf of Finland. Explosion.					
"	21	Ki	iSg2		13 05 57.3		
		Sk	iSgl		13 05 02.2		
		Um	iSgl		13 03 54.1		
		Ud	iSgl		13 04 09.3		
		De	i		13 04 32.5		
		Gulf of Finland. Explosion.					
"	21	Ki	i		13 19 50.9		
			iSgl		13 20 10.5		
		Um	iSgl		13 18 52.3		
		Ud	i(S*)		13 20 18.2		
		De	iSg2		13 21 20.9		
		Lake Ladoga. Explosion.					
"	21	Ud	i(P)		13 41 10.2		
			i		13 41 18.9		
		De	i(P)		13 41 09.5		
"	21	Up	iP		14 15 50.9		
					micr	sec	
			P	Z'	0.1	1.0	
			Mx	E	1.0	20	
			Mx	N	1.1	20	
			Mx	Z	1.3	19	
		Ki	iP		14 15 50.7		C
			ipP		14 16 08.7		
					micr	sec	
			P	Z'	0.2	1.0	
			Mx	E	3.0	20	
			Mx	N	2.3	18	
			Mx	Z	2.4	20	
		(cont.)					

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	21	(cont.)			
		Sk	iP	14 16 04.7	
			ipP	14 16 22.3	
		Um	iP	14 15 48.0	
			ipP	14 16 05.9	
		Ud	iP	14 16 00.7	
			ipP	14 16 19.1	
		De	iP	14 15 59.6	
		Sumatra.			
		h = 70 km (Ki,Sk,Um,Ud).			
		m = 6.3, M = 5.7 (Up,Ki).			
"	21	Ki	eP	14 18 14	
			i	14 18 22.9	
			i	14 18 36.5	
		Sk	eP	14 18 27	
		Um	iP	14 18 11.9	
			ipP	14 18 29.1	
		Sumatra.			
		Origin time = 14 05 08.			
		h = 60 km (Um).			
"	21	Up	iP	14 30 12.7	
		Ki	iP	14 30 51.2	
"	21	Up	iPKP1	16 47 37.6	C
			iPKP2	16 47 44.3	
		Sk	iPKP1	16 47 32.3	C
		Um	iPKP1	16 47 26.7	
		Ud	iPKP1	16 47 39.5	C
			iPKP2	16 47 47.1	
		De	iPKP2	16 48 01.1	
		South of Kermadec Islands			
		(h = 250 km).			
"	21	Ud	iP	17 09 29.5	
		Greece.			
"	21	Ud	iP	21 22 18.9	
		Dodecanese Islands.			
"	21	Ud	iP	22 52 15.5	
"	22	Up	iP	01 12 03.7	
			ipP	01 12 13.7	
		Ki	iP	01 11 10.6	
		Sk	iP	01 11 44.6	
		Ud	iP	01 12 05.6	
			ipP	01 12 13.4	
		De	iP	01 12 28.1	
		Aleutian Islands.			
		h = 35 km (Up,Ud).			
"	22	Up	iP	02 04 54.4	
		Ki	iP	02 04 19.2	
		Sk	iP	02 04 51.9	
		(cont.)			

1973 Aug.	22	(cont.)			
		Um	iP	02 04 34.6	
		Ud	iP	02 05 03.6	D
		De	iP	02 05 17.3	
		Sea of Japan (h = 380 km).			
"	22	Up	iP	03 51 12.2	
		Ki	iP	03 51 20.4	
		Um	iP	03 51 09.8	
		Ud	iP	03 51 28.5	C
		De	eP	03 51 25	
		Afghanistan-USSR (h = 240 km).			
"	22	Up	iPKP1	05 29 43.7	
		Ud	iPKP1	05 29 45.9	
		De	iPKP1	05 29 57.5	
"	22	Up	iPKP	06 59 01.7	
			iPKP1	06 59 08.4	
			i	06 59 29.5	
			i	07 01 30.9	
				micr	sec
			PKP1 Z'	0.2	0.9
			Mx E	1.9	20
			Mx N	4.5	21
			Mx Z	5.7	21
		Ki	iPKP1	06 58 47.3	
				micr	sec
			PKP1 Z'	0.1	0.9
			Mx E	3.6	22
			Mx N	2.5	20
			Mx Z	3.3	20
		Sk	iPKP	06 59 01.2	
			iPKP1	06 59 02.9	
		Um	iPKP	06 58 56.3	
			iPKP1	06 58 58.4	
		Ud	iPKP	06 59 04.2	
			iPKP1	06 59 10.2	
			i	06 59 30.9	
		De	iPKP	06 59 08.6	
			iPKP1	06 59 18.2	
			i	07 01 00.9	
		South of Kermadec Islands			
		(h = N).			
		M = 6.3 (Up,Ki).			
"	22	Up	iPKP1	08 18 09.0	
			i	08 18 14.9	
		Sk	iPKP1	08 18 03.4	
		Um	iPKP1	08 17 58.8	
		Ud	iPKP1	08 18 12.0	
		De	iPKP2	08 18 32.4	
"	22	Up	iSg1	12 31 16.6	
		Ud	iPg1	12 30 26.1	
			iSg1	12 30 46.6	
		(cont.)			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Aug. 22 (cont.)

		De	iSgl	12 31 07.5

Västergötland, Sweden,
58.7°N, 13.8°E.
Origin time = 12 30 02.

"	22	Ud	i(Sgl)	14 01 56.6
"	22	Up	iP	16 41 05.8
		Ud	iP	16 41 10.1
"	22	Up	iP	17 08 10.3
		Ki	iP	17 07 41.9 C
				micr sec
			P Z'	0.2 1.0
		Sk	iP	17 08 07.6
		Um	iP	17 07 54.2
		Ud	iP	17 08 17.8
		De	iP	17 08 28.2

Mariana Islands (h = 80 km).

"	22	Up	iPKPl	17 47 19.2
			iPKP2	17 47 25.6
				micr sec
			PKP2 Z'	0.1 0.8
		Sk	iPKPl	17 47 16.3
		Um	iPKPl	17 47 08.8 D
		Ud	iPKPl	17 47 21.2
			iPKP2	17 47 28.6
		De	iPKPl	17 47 28.9
			iPKP2	17 47 42.5

Kermadec Islands (h = 460 km).

"	22	Up	iP	18 25 02.2 D
			ipP	18 25 12.4
			iS	18 33 29
				micr sec
			P Z'	0.5 1.2
			pP Z'	1.3 1.5
			Mx E	0.6 17
			Mx N	1.4 20
			Mx Z	2.0 21
		Ki	iP	18 24 07.5 D
			ipP	18 24 17.5
			iS	18 31 48.7
				micr sec
			P Z'	0.6 1.0
			pP Z'	0.8 1.0
			Mx E	1.5 18
			Mx N	2.7 21
			Mx Z	2.6 21
		Sk	iP	18 24 35.3 D
			ipP	18 24 45.2
		Um	iP	18 24 36.1 D
			ipP	18 24 45.9
			iS	18 32 36
		Ud	iP	18 24 59.3 D

(cont.)

1973
Aug. 22 (cont.)

		Ud	ipP	18 25 09.7
		De	iP	18 25 22.6 D
			ipP	18 25 32.5

Kodiak Island.
h = 35 km (Up,Ki,Sk,Um,Ud, De).
m = 6.6, M = 5.4 (Up,Ki).

"	22	Ki	eP	18 38 33
		Um	iP	18 38 33.9
		Ud	iP	18 38 59.0
"	22	Um	iPKPl	19 56 22.9
"	22	Ki	i	21 06 23.5
			i	21 06 43.1
			i(Sgl)	21 06 47.8
"	22	Up	iPKPl	21 50 57.5
		Ud	iPKPl	21 50 59.4
		De	iPKPl	21 51 09.6
"	22	Ud	iP	22 18 10.0
"	22	Um	iP	22 18 32.6
		Ud	iP	22 18 57.1
"	22	Up	iP	22 26 14.6
		Ki	iP	22 26 53.1
		Sk	eP	22 26 22
		Um	iP	22 26 36.2
		Ud	iP	22 26 05.0

Atlantic Ocean (h = N).

"	23	Ki	iP	05 36 05.9
		Ud	iP	05 35 10.0
"	23	Up	iP	05 50 05.1
		Ki	iP	05 49 32.7
		Sk	iP	05 50 01.3
		Um	iP	05 49 44.1
			i	05 49 46.4
		Ud	iP	05 50 11.2
		De	iP	05 50 24.1

Bonin Islands (h = 170 km).

"	23	Um	iP	06 01 55.7
		Ud	iP	06 02 23.8

Japan (h = 340 km).

"	23	Ki	iPn	08 03 52.0
			iSn	08 04 43.2

Northwest USSR-Norway.
Explosion.

"	23	Um	iSgl	12 29 54.7

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	23	(cont.)				
		Ud	iSgl		12 30 37.1	
		De	iSgl		12 31 06.5	
		Western USSR.				
		Explosion.				
"	23	Up	iP		12 33 21.2	
		Ki	iP		12 33 57.7	
			i		12 34 10.0	
		Sk	iP		12 33 58.7	
		Um	iP		12 33 36.3	
		Ud	iP		12 33 36.3	
		De	iP		12 33 20.3	
			i		12 33 22.1	
		Iran (h = 40 km).				
"	23	Ud	iP		12 39 21.2	
			i		12 39 30.2	
			i		12 39 41.2	
		De	iP		12 39 24.7	
"	23	Up	i(P)		12 51 33.5	
		De	i(P)		12 52 08.6	
"	23	Ud	iSgl		13 31 40.4	
"	23	Up	iSgl		13 36 02.5	
			iRg		13 36 08.2	
		Ud	iSgl		13 36 48.0	
		De	iSgl		13 37 10.2	
		Coast of Södermanland, Sweden.				
		Explosion.				
"	23	Ki			micr	sec
			Mx	E	1.6	14
		Ud	i(P)		14 56 04.4	
			iP		14 56 15.4	
		De	iP		14 55 28.3	
		Rumania (h = 40 km).				
"	23	Up	iPKP2		16 40 31.3	D
		Um	iPKP1		16 40 11.5	
			i		16 40 14.7	
		Ud	iPKP1		16 40 26.9	
			iPKP2		16 40 33.4	
		De	iPKP2		16 40 47.4	
"	23	De	iP		16 59 12.6	
		Rumania (h = 50 km).				
"	23	Up	iPKP		17 13 58.6	
					micr	sec
			Mx	E	1.2	25
			Mx	N	1.1	24
			Mx	Z	1.5	22
		(cont.)				

1973 Aug.	23	(cont.)				
		Ki	iPKP		17 13 49.0	
					micr	sec
			Mx	E	1.5	25
			Mx	N	0.8	19
		Sk	iPKP		17 13 59.3	
		Um	iPKP		17 13 52.3	
		Ud	iPKP		17 14 01.3	
		De	iPKP		17 14 06.7	
			i		17 14 19.5	
		New Britain (h = 80 km).				
		M = 5.6 (Up,Ki).				
"	23	Up	iP		17 16 03.2	
"	23	Ki	eP		17 37 36	
		Ud	iP		17 38 06.4	
		De	eP		17 38 16	
		Luzon (h = 60 km).				
"	23	Ki	eP		18 10 52	
		Ud	iP		18 11 20.6	
"	23	De	iP		18 26 27.9	
		Rumania (h = 90 km).				
"	23	Ud	iP		18 51 07.4	
		Samar (h = N).				
"	23	Up	iP		19 27 56.8	
			ipP		19 28 25.5	
		Ki	iP		19 27 18.6	
		Sk	iP		19 27 52.5	
		Um	iP		19 27 34.9	D
		Ud	iP		19 28 04.2	
			ipP		19 28 33.0	
		De	iP		19 28 19.3	
		Japan.				
		h = 120 km (Up,Ud).				
"	23	Up	iP		21 09 13.0	
		Ud	iP		21 09 11.0	
		Aleutian Islands (h = 40 km).				
"	24	Up	iP		00 01 59.6	C
			ipP		00 02 12.4	
			iS		00 11 22	
					micr	sec
			P	Z'	0.4	1.3
			Mx	E	1.9	17
			Mx	N	1.9	18
			Mx	Z	3.4	17
		Ki	eP		00 01 19	C
					micr	sec
			P	Z'	0.1	1.2
			Mx	E	3.4	16
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973						
Aug.	24	(cont.)				
		Ki			micr	sec
			Mx	N	3.2	17
			Mx	Z	3.1	16
		Sk	iP		00 01 53.5	C
		Um	iP		00 01 37.7	C
			iS		00 10 42	
		Ud	iP		00 02 07.1	C
		De	iP		00 02 22.1	C
		Japan.				
		h = 45 km (Up).				
		m = 6.0, M = 5.7 (Up,Ki).				
"	24	Up	iP		02 13 32.8	
			i		02 13 36.4	
					micr	sec
			P	Z'	0.1	0.9
		Ki	iP		02 14 10.5	
			i		02 14 13.7	
					micr	sec
			P	Z'	0.1	0.9
		Sk	iP		02 14 08.8	
			i		02 14 12.1	
		Um	iP		02 13 46.8	
			i		02 13 51.2	
		Ud	iP		02 13 47.0	
			i		02 13 51.5	
		De	iP		02 13 32.0	
			i		02 13 35.1	
		Iran (h = N).				
		m = 5.6 (Up,Ki).				
		Double P, small and large,				
		in average 3.7 sec apart.				
"	24	Up	iP		02 20 12.1	
		Ki	iP		02 20 49.4	
		Um	iP		02 20 26.0	
		Ud	iP		02 20 25.3	
		De	eP		02 20 10	
		Iran (h = N).				
"	24	Ki	iPKP		03 42 43.8	
		South Sandwich Islands				
		(h = 70 km).				
"	24	Ud	iP		08 03 46.2	
"	24	Ud	i(Sgl)		08 54 22.0	
		De	i		08 52 07.9	
			i		08 52 24.5	
			i(Sgl)		08 52 46.8	
"	24	Up	iP		09 41 42.0	C
		Ki	iP		09 42 19.3	C
		Sk	iP		09 42 17.2	
		Um	iP		09 41 55.9	
		Ud	iP		09 41 57.1	C
		(cont.)				

1973						
Aug.	24	(cont.)				
		De	iP		09 41 40.6	
		Iran (h = N).				
"	24	Ki	iPn		10 17 54.9	
			iSn		10 18 43.1	
			iS*		10 18 56.6	
		Sk	eSgl		10 21 42	
		Um	iSgl		10 20 23.8	
		Northwest USSR-Norway.				
		Explosion.				
"	24	Ud	iP		10 38 42.9	
		West of Crete.				
"	24	Ki	i		11 32 28.9	
			iSgl		11 33 10.0	
		Um	iSgl		11 31 05.0	
"	24	Ud	iP		14 12 10.4	
"	24	Up	iP		16 58 56.1	
		Ud	iP		16 59 02.2	
		Greece.				
"	24	Up	iPKP		20 37 02.3	
			iPKKP1		20 47 19.2	
			i		20 47 33.6	
		Ki	iPKKP1		20 47 40.8	
					micr	sec
			Mx	E	1.4	22
			Mx	N	1.1	20
		Um	iPKP		20 36 55.3	
		Ud	iPKP		20 37 05.4	
			iPKKP1		20 47 14.1	
		De	iPKP		20 37 10.9	C
		Solomon Islands (h = 60 km).				
"	24	Up	iP		20 42 09.9	
"	25	Up	iPKP1		03 11 30.2	
		Ud	iPKP1		03 11 29.1	
		De	iPKP1		03 11 40.0	
"	25	Up	iP		03 57 58.3	
					micr	sec
			Mx	E	1.7	18
			Mx	N	4.8	18
			Mx	Z	3.3	20
		Ki	iP		03 57 32.9	
					micr	sec
			P	Z'	0.2	1.5
			Mx	E	3.3	24
			Mx	N	5.2	23
			Mx	Z	2.1	19
		Sk	iP		03 57 58.7	
		Um	iP		03 57 40.8	
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug. 25 (cont.)

	Ud	iP	03 58 04.1	
Caroline Islands (h = N).				
M = 6.1 (Up,Ki).				
" 25	Up	iPKP2	04 45 01.8	
	Ki	iPKP1	04 44 32.2	
			micr	sec
		PKP1 Z'	0.1	1.1
	Sk	iPKP1	04 44 46.2	
	Um	iPKP1	04 44 40.3	
		i	04 44 51.1	
	Ud	iPKP2	04 45 00.7	
New Zealand (h = 60 km).				
" 25	Ud	iP	07 08 01.6	
" 25	Up	iP	12 26 04.8	
			micr	sec
		P Z'	0.1	1.1
	Ki	iP	12 25 10.9	C
			micr	sec
		P Z'	0.1	1.4
		Mx N	0.4	14
	Sk	iP	12 25 48.1	
	Um	iP	12 25 37.1	
	Ud	iP	12 26 09.2	
	De	iP	12 26 31.8	C
Kamchatka (h = N).				
m = 5.9 (Up,Ki).				
" 25	Ki	iPg1	12 37 19.9	
		iSn	12 37 53.9	
		iSg1	12 38 12.5	
	Um	iSn	12 38 31.5	
		iS*	12 38 55.3	
Northwest USSR-Finland.				
Explosion.				
" 25	Ki	iP	12 54 54.7	
	Sk	eP	12 54 26	
	Ud	iP	12 53 54.4	
	De	iP	12 53 22.0	
Crete (h = N).				
" 25	Um	iSg1	14 40 55.9	
	Ud	iS*	14 42 06.5	
Lake Ladoga region.				
Explosion.				
" 25	Up	iP	14 51 11.8	
			micr	sec
		P Z'	0.2	1.2
		Mx E	1.3	17
		Mx N	0.8	16
		Mx Z	3.2	16
	Ki	iP	14 50 44.0	

(cont.)

1973 Aug. 25 (cont.)

	Ki		micr	sec
		P Z'	0.1	1.3
		Mx E	1.1	15
		Mx N	1.4	14
		Mx Z	1.6	15
	Sk	eP	14 51 12	
	Um	iP	14 50 54.7	
	Ud	iP	14 51 20.6	D
	De	iP	14 51 31.3	D
Ryukyu Islands (h = N).				
m = 6.0, M = 5.4 (Up,Ki).				
" 25	Up	iP	15 05 51.9	
	Ki	iP	15 06 24.0	
		ipP	15 06 33.3	
			micr	sec
		P Z'	0.1	1.0
	Sk	iP	15 06 25.7	
	Um	iP	15 06 03.1	
		ipP	15 06 12.5	
	Ud	iP	15 06 07.4	
		ipP	15 06 15.2	
		iPP	15 07 55.0	
	De	iP	15 05 53.1	
		ipP	15 06 01.5	
Iran.				
h = 40 km (Ki,Um,Ud,De).				
" 25	Up	iP	15 26 41.8	
	Ki	iP	15 25 56.8	
	Sk	iP	15 26 31.8	
	Um	iP	15 26 16.8	
	Ud	iP	15 26 48.2	
		iPcP	15 27 10.4	
	De	eP	15 27 04	
Kurile Islands (h = 40 km).				
" 25	Ud	i(P)	16 03 57.9	
" 25	Ud	eP	16 39 54	
	De	iP	16 39 39.6	
Iran (h = 60 km).				
" 25	Um	iPKP1	21 56 38.5	
" 25	Ud	iP	22 00 38.6	
Crete.				
" 25	Up	iP	22 02 07.3	C
		ipP	22 02 22.9	
			micr	sec
		P Z'	0.1	0.7
	Ki	iP	22 01 46.6	
			micr	sec
		P Z'	0.1	0.9
	Sk	iP	22 02 11.7	

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	25	(cont.)			
		Sk	ipP	22 02 30.9	
		Um	iP	22 01 53.7	
			ipP	22 02 11.5	
		Ud	iP	22 02 16.8	C
			ipP	22 02 31.8	
		De	iP	22 02 24.7	
		Luzon.			
		h = 60 km (Up,Sk,Um,Ud).			
		m = 5.8 (Up,Ki).			
"	25	Sk	ePKPl	22 04 10	
		Um	iPKPl	22 04 02.3	
		Ud	iPKPl	22 04 14.7	
"	25	De	iP	22 42 54.3	
"	26	Um	iPKPl	00 25 55.5	
		Ud	iPKPl	00 26 09.5	
		De	iPKPl	00 26 22.5	
"	26	Up	iPKPl	00 41 46.7	
		Sk	iPKPl	00 41 40.9	
		Um	iPKPl	00 41 35.3	
		Ud	iPKPl	00 41 49.1	
		De	iPKPl	00 41 57.8	
"	26	Up	iP	01 59 44.7	
		Ki	iP	01 59 30.4	
		Sk	eP	01 59 50	
		Um	iP	01 59 34.7	
		Ud	iP	01 59 53.2	
		De	iP	01 59 58.2	
		Molucca Sea (h = 90 km).			
"	26	Ud	iP	07 43 40.4	
"	26	Ud	iP	08 59 33.6	
"	26	Um	iP	14 12 30.5	
"	26	Up	iPgl	17 08 34.5	
			iSn	17 09 12.4	
			iSgl	17 09 37.0	
		Ki	e	17 09 50	
			iS*	17 10 25.0	
			iSgl	17 10 35.6	
		Sk	iSgl	17 10 52.6	
		Um	iPgl	17 08 14.9	
			iS*	17 09 03.8	
			iSgl	17 09 06.3	
		Ud	iSgl	17 10 41.7	
		De	eSn	17 10 42	
			iSgl	17 11 22.9	
		Lake Ladoga region.			
		Explosion.			

1973 Aug.	26	Um	iPKP	18 18 37.9	
		Ud	iPKP	18 18 43.4	
		De	iPKP	18 18 51.1	
		Fiji Islands (h = 630 km).			
"	26	Up	iPKPl	21 47 12.9	C
				micr sec	
			PKPl Z'	0.3 1.5	
		Ki	ePKPl	21 46 52	
		Sk	iPKPl	21 47 05.1	C
			ipPKPl	21 47 20.9	
		Um	iPKPl	21 47 00.4	C
			ipPKPl	21 47 15.3	
		Ud	iPKP	21 47 10.3	
			iPKPl	21 47 14.8	C
			ipPKPl	21 47 30.1	
		De	iPKP	21 47 16.4	
			iPKPl	21 47 23.6	
			ipPKPl	21 47 39.1	
		Kermadec Islands.			
		h = 50 km (Sk,Um,Ud,De).			
"	26	Up	iP	21 58 09.2	C
				micr sec	
			P Z'	0.2 0.8	
			Mx E	1.1 19	
			Mx N	1.3 18	
			Mx Z	1.7 18	
		Ki	iP	21 57 16.4	
				micr sec	
			P Z'	0.1 0.8	
			Mx E	1.1 15	
			Mx N	1.6 17	
			Mx Z	1.7 17	
		Sk	iP	21 57 48.9	
		Um	iP	21 57 41.9	
			i	21 58 02.7	
		Ud	iP	21 58 09.7	
		De	iP	21 58 31.9	
		Aleutian Islands (h = 50 km).			
		m = 6.1, M = 5.3 (Up,Ki).			
"	26	Up	iP	23 40 48.4	
		Um	iP	23 40 22.4	
		Ud	iP	23 40 49.1	
		Aleutian Islands.			
		Origin time = 23 29 50.			
"	26	Up	iP	23 41 19.1	
		Ki	eP	23 40 27	
		Sk	iP	23 40 57.6	
		Um	iP	23 40 52.5	
		Ud	iP	23 41 19.6	
		De	iP	23 41 42.4	
		Aleutian Islands.			
		Origin time = 23 30 21.			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973				
Aug.	27	Up	iP	00 18 21.5
		Ki	iP	00 17 28.1
			iPcP	00 18 13.5
		Sk	iP	00 18 01.8
			iPcP	00 18 33.7
		Um	iP	00 17 55.4
			iPcP	00 18 29.5
		Ud	iP	00 18 22.9
			i	00 18 59.8
		De	iP	00 18 43.9
		Aleutian Islands (h = 60 km).		
"	27	Ki	eP	00 27 57
			i	00 28 07.9
		Um	i(P)	00 28 06.9
			iP	00 28 19.0
		Ud	iP	00 28 38.4
		Japan (h = 55 km).		
"	27	Up	iP	00 39 18.2
		Ki	eP	00 38 25
		Ud	iP	00 39 18.3
		Aleutian Islands (h = 55 km).		
"	27	Up	eP	02 09 05
		Ud	iP	02 09 07.7
		Aleutian Islands (h = 40 km).		
"	27	Up	iP	02 22 49.7
		Ki	iP	02 21 57.0
		Um	iP	02 22 23.2
		Ud	iP	02 22 49.9
		Aleutian Islands (h = 50 km).		
"	27	Up	iP	03 10 12.4
		Ki	iP	03 09 40.2
		Sk	iP	03 10 09.7
		Um	iP	03 09 54.1
		Ud	iP	03 10 19.7
		De	iP	03 10 32.2
		Bonin Islands (h = 420 km).		
"	27	Um	iP	04 40 45.1
		Caroline Islands (h = N).		
"	27	Up	iP	04 48 03.6
		Ki	iP	04 47 10.4
		Um	iP	04 47 36.7
			iPcP	04 48 11.0
		Ud	iP	04 48 02.4
			ipP	04 48 19.4
		De	iP	04 48 25.8
			ipP	04 48 44.1
		Aleutian Islands. h = 70 km (Ud,De).		
"	27	Up	iP	06 37 42.9
		(cont.)		

1973				
Aug.	27	(cont.)		
		Ki	iP	06 36 50.5
			iPcP	06 37 33.8
		Um	iP	06 37 15.6
		De	iP	06 38 05.9
		Aleutian Islands (h = 50 km).		
"	27	Up	iP	06 56 40.7
		Ki	iP	06 55 47.8
		Um	iP	06 56 14.0
		Ud	iP	06 56 41.2
		De	iP	06 57 03.3
		Aleutian Islands (h = 60 km).		
"	27	Up	i(P)	07 43 26.7
			i	07 43 38.0
"	27	Ud	iPKPl	08 58 55.9
		De	iPKPl	08 59 06.9
"	27	Ki	eSgl	09 17 31
		Um	iSgl	09 16 16.6
		Lake Ladoga. Explosion.		
"	27	Up	eP	11 27 42
		Ki	eP	11 28 05
		Um	iP	11 27 50.6
		Ud	eP	11 27 53
"	27	Ud	iP	12 55 32.3
"	27	Up	Mx	13 17
				micr sec
			Mx E	0.6 20
			Mx Z	0.6 18
		Chile (h = N).		
"	27	Up	iSKPl	14 11 06
				micr sec
			Mx E	0.7 19
			Mx N	0.8 19
			Mx Z	1.9 20
		Ki		micr sec
			Mx E	0.9 20
			Mx N	0.9 20
			Mx Z	0.9 20
		New Hebrides Islands (h = 10 km). M = 5.6 (Up,Ki).		
"	27	Up	iP	14 14 47.3
		Ki	iP	14 13 54.4
		Ud	iP	14 14 48.1
		De	iP	14 15 10.1
		Aleutian Islands (h = 60 km).		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	27	Ud	iPKP	14 41 12.9
		De	iPKP	14 41 21.8
		Fiji Islands (h = 610 km).		
"	27	Ud	iPKP	14 45 05.7
		De	iPKP	14 45 16.2
		Fiji Islands (h = 630 km).		
"	27	Up	e(P)	14 48 27
"	27	Up	iP	16 50 30.1
		Ud	iP	16 50 31.6
		De	iP	16 50 52.4
		Aleutian Islands (h = 60 km).		
"	27	Up	iPKP	17 19 23.1
		Ud	iPKP	17 19 22.6
			i	17 19 34.6
		De	iPKP	17 19 31.4
			i	17 19 45.8
"	27	Ki	i(Sn)	17 33 23.2
			iSgl	17 33 35.3
		Sk	i(Sn)	17 33 38.6
			iSgl	17 33 43.7
		Um	iSn	17 33 48.5
			iSgl	17 34 02.1
		Ud	iSgl	17 35 30.6
		Nordland, Norway, 66.4°N, 14.7°E.		
		Origin time = 17 32 11.		
		Explosion.		
"	28	Um	iPKP	00 53 03.4
		Ud	iPKP	00 53 08.8
"	28	Up	iPKPl	02 35 43.8
		Um	iPKPl	02 35 27.1
		Ud	iPKPl	02 35 40.1
"	28	Up	iP	03 06 06.2 C
			iPn	03 06 30.1
			iSn	03 11 53.8
		Ki	iP	03 06 00.0 C
			iPn	03 06 24.7
		Sk	iP	03 06 27.0 C
		Um	iP	03 05 55.6
			iPn	03 06 14.9
		Ud	iP	03 06 23.9 C
			iPn	03 07 01.5
		De	iP	03 06 27.9
			iPn	03 07 06.5
		Kazakh SSR.		
		Underground explosion.		
		The Pn observations of this event line up very well with (cont.)		

1973 Aug.	28	(cont.) those of Aug. 15, 02 06, together covering the distance range from 28.1° to 37.2° with a velocity in good agreement with M. Båth, Pure Appl. Geophys., 1966, 64:19-32, and 1967, 66:30-36.		
"	28	Ud	ePKPl	05 02 23
"	28	Sk	eP	06 02 12
		Ud	iP	06 01 59.1
"	28	Ki	iP	06 09 54.1
		Sk	eP	06 09 55
		Um	iP	06 09 29.3
		Ud	iP	06 09 32.1
		De	eP	06 09 18
"	28	Ki	e	06 46 51
			iSgl	06 47 11.7
		Sk	iSgl	06 47 37.1
		Um	i	06 45 32.1
			iSgl	06 45 47.2
		Ud	iSgl	06 47 20.6
		De	iSgl	06 48 06.5
		Lake Ladoga.		
		Explosion.		
"	28	Ki	iP	08 52 36.6
		Um	iP	08 52 26.3
		Ud	iP	08 52 43.0
		De	iP	08 52 40.9
		Hindu Kush (h = 200 km).		
"	28	Sk	iSgl	09 00 33.7
		Um	iSn	08 58 22.7
			iS*	08 58 41.4
			iSgl	08 58 45.6
		Ud	iPn	08 58 06.1
		De	iPn	08 58 25.8
		Lake Ladoga.		
		Explosion.		
"	28	Up	iPKPl	09 19 30.7
		Sk	iPKPl	09 19 24.0
		Um	iPKPl	09 19 18.6
		Ud	iPKPl	09 19 32.4
		De	iPKPl	09 19 41.2
		Kermadec Islands.		
		Origin time = 08 59 50.		
"	28	Up	iPKPl	09 38 16.8 C
			ipPKPl	09 38 25.7
		Ki	ipPKPl	09 38 06.1
		(cont.)		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Aug. 28 (cont.)

Sk	iPKP1	09 38 09.5	C
	ipPKP1	09 38 18.9	
Um	iPKP1	09 38 04.5	
	ipPKP1	09 38 13.7	
Ud	iPKP1	09 38 18.5	C
	ipPKP1	09 38 27.3	
De	iPKP1	09 38 27.4	C
	ipPKP1	09 38 36.3	

Kermadec Islands.
h = 30 km (Up,Sk,Um,Ud,De).

" 28

Up	iP		10 03 11.6	D
	ipP		10 03 32.6	
	isP		10 03 42.7	
	iSKS		10 13 28	
	iS		10 13 42	
	iPKKP		10 21 10.8	
	iP'P'		10 29 15.9	
			micr sec	
	P	Z'	3.4 1.5	
	sP	Z'	6.6 1.8	
	PKKP	Z'	0.4 2.0	
	P'P'	Z'	0.7 2.3	
	Mx	E	19 28	
	Mx	N	42 30	
	Mx	Z	72 30	
Ki	iP		10 02 57.3	D
	ipP		10 03 17	
	isP		10 03 24.9	
	iPP		10 06 04.9	
	iS		10 13 12.8	
	isS		10 13 48	
	iPKKP		10 21 18.6	
	iP'P'		10 29 21.9	
			micr sec	
	P	Z'	9.6 1.5	
	sP	Z'	10 2.2	
	PP	Z'	2.0 1.9	
	PKKP	Z'	0.3 1.8	
	P'P'	Z'	0.7 2.2	
	Mx	E	37 22	
	Mx	N	28 23	
	Mx	Z	36 22	
Sk	iP		10 02 53.1	D
	isP		10 03 21.8	
	iS		10 13 02.5	
	iPKKP		10 21 21.6	
	iP'P'		10 29 22.5	
Um	iP		10 03 07.0	D
	ipP		10 03 28.0	
	isP		10 03 37.4	
	iPP		10 06 05.0	
	eSKS		10 13 33	
	iPKKP		10 21 13.8	
	iP'P'		10 29 17.0	
Ud	iP		10 03 02.8	D

(cont.)

1973
Aug. 28 (cont.)

Ud	ipP	10 03 23.4	
	iSKS	10 13 24.8	
	iPKKP	10 21 13.4	
	i	10 23 05.1	
	iP'P'	10 29 17.2	
De	iP	10 03 11.5	D
	ipP	10 03 31.8	
	isP	10 03 41.1	
	iPP	10 06 26.8	
	eSKS	10 13 40	
	iPKKP	10 21 12.5	
	iP'P'	10 29 16.7	

Mexico.
h = 80 km (Up,Ki,Sk,Um,Ud, De).
m = 7.3, M = 6.8 (Up,Ki).
Relatively long periods, typical for this region.

" 28

Up	iSg1	11 23 35.1	
Ki	iSg2	11 26 35.2	
Sk	iSn	11 25 05.7	
	iSg1	11 25 43.2	
Um	iPg1	11 23 27.7	
	i	11 23 59.6	
	iSg1	11 24 35.4	
	i	11 24 49.0	
Ud	iPn	11 23 26.7	
	iS*	11 24 49.9	
	iSg1	11 24 59.7	
De	ePn	11 23 37	
	iPg1	11 23 56.9	
	iSg1	11 25 19.6	

Gulf of Finland.
Explosion.

" 28

Up	i(P)	11 36 32.6	
De	i(P)	11 37 09.8	
	i	11 37 14.7	

" 28

Um	iPKP	11 49 40.9	

New Hebrides Islands
(h = 35 km).

" 28

Ud	iPKP1	11 59 51.7	
De	iPKP1	12 00 01.1	

" 28

Um	iSg1	12 34 00.3	
	i	12 34 06.6	

Esthonia.
Explosion.

" 28

Up	iP	12 34 18.1	
Ki	iP	12 34 56.3	
Sk	iP	12 34 54.8	
Um	iP	12 34 32.2	

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug. 28 (cont.)

	Um	i	12 34 34.0
	Ud	i(P)	12 34 28.6
		iP	12 34 31.9
	De	iP	12 34 17.9

Iran (h = 70 km).

" 28	Ki	iSgl	13 18 47.1
	Sk	eSgl	13 18 29
	Um	iSgl	13 17 09.6
	Ud	iSgl	13 17 50.4
	De	iSgl	13 18 18.6

Western USSR.
Explosion.

" 28	Um	iP	13 39 27.5
	Ud	iP	13 39 56.2

Japan (h = 25 km).

" 28	Sk	iSgl	14 08 51.8
	Um	iSgl	14 07 01.6
	De	eSg2	14 09 36

Lake Ladoga.
Explosion.

" 28	Ud	i(P)	14 48 45.1

" 28	Up	iP2			15 12 43.1
		iP3			15 12 53.2
		iP4			15 13 03.3
		iS2			15 21 28
		iS4			15 21 49.7
		eP'P'4			15 41 44
				micr	sec
		P2	Z'	0.2	1.2
		P3	Z'	0.7	1.4
		P4	Z'	2.1	1.5
		Mx	E	49	25
		Mx	N	110	26
		Mx	Z	170	29
	Ki	iP2			15 13 26.5
		i			15 13 29.1
		iP4			15 13 48.2
		iS4			15 23 12.5
				micr	sec
		P2	Z'	0.3	1.5
		P4	Z'	4.5	2.0
		Mx	E	59	17
		Mx	N	69	16
		Mx	Z	68	19
	Sk	iP2			15 12 53.1
		i			15 12 54.5
		iP4			15 13 12.8
		iS4			15 22 10.5
	Um	iP1			15 13 00.8
		iP2			15 13 08.5
		iP4			15 13 28.1

(cont.)

1973 Aug. 28 (cont.)

	Um	iS4	15 22 32
		iP'P'4	15 41 37.3
	Ud	iP1	15 12 31.1
		iP2	15 12 36.3
		iP4	15 12 56.6
		iS4	15 21 35.3
		iP'P'4	15 41 54.0
	De	iP2	15 12 18.0 C
		iP3	15 12 28.6
		iP4	15 12 38.2
		iP'P'4	15 41 46.7

Atlantic Ocean (h = N).
m = 6.2 (P2), 6.7 (P3), 7.2 (P4), M = 7.1 (Up,Ki).
Multiple P: four onsets with successively increasing amplitudes.
P2 provides the best fit to the NEIS solution, preceding the main phase P4 by 20.3 sec in average.

" 28	Ud	iP	15 35 54.0
" 28	Um	i(Sgl)	17 09 55.3
" 28	Ki	i	17 13 32.6
		i	17 13 49.8
		i(Sgl)	17 13 58.7
" 28	Ki	iSgl	17 39 33.5
	Sk	iSgl	17 39 38.3
	Um	iSgl	17 39 58.5

Nordland, Norway.
Explosion.

" 28	Up	iP	18 24 45.7
		i	18 24 54.4
	Ki	eP	18 25 29
	Sk	iP	18 24 56.1
	Um	iP	18 25 09.6
	Ud	iP	18 24 38.3
		i	18 24 47.8
" 28	Ud	iP	20 53 12.6
	De	eP	20 53 10

Tadzhik SSR.

" 28	Ud	iP	23 35 03.8
" 28	Up	iP	23 40 58.0
	Um	iP	23 41 22.6
	Ud	iP	23 40 51.2
		i	23 41 08.2
" 29	Up	iPKP2	01 31 39.9

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	29	(cont.)		
		Ki	ePKP1	01 31 04
		Um	iPKP1	01 31 14.6
			iPKP2	01 31 24.3
		Ud	iPKP2	01 31 45.3
"	29	Up	e(P)	02 46 38
		Ud	i(P)	02 45 56.4
"	29	Up	ePKP2	05 02 51
		Ki	iPKP1	05 02 18.6
			iPKP2	05 02 24.8
		Ud	iPKP2	05 02 56.9
			i	05 03 03.6
		New Zealand (h = N).		
"	29	Ud	i	10 11 12.6
		De	i	10 08 51.7
			i(Sgl)	10 09 16.1
"	29	De	iPKP1	11 02 43.0
			i	11 02 44.2
"	29	Up	iP	11 40 51.9
		Ki	iP	11 40 22.6
		Sk	epP	11 41 22
		Um	iP	11 40 33.5
			ipP	11 41 04.0
			i	11 41 35.4
		Ud	iP	11 40 58.5
		Volcano Islands.		
		h = 120 km (Um).		
"	29	Up	iSn	12 09 02.6
			iSgl	12 09 25.4
		Ki	iSgl	12 12 28.1
		Sk	i	12 09 28.3
			iSgl	12 09 43.0
		Um	iPn	12 08 32.5
			i	12 10 42.3
			iSgl	12 11 05.2
		Ud	iPgl	12 07 37.8
			iSn	12 08 11.6
			iSgl	12 08 26.9
		De	iPgl	12 07 44.4
			i	12 07 45.7
			iSn	12 08 15.9
			iSgl	12 08 35.7
		South coast of Norway, near 58°N, 7 1/2°E.		
		Origin time = 12 06 33.		
"	29	De	i(Sgl)	12 51 07.7
"	29	Sk	eSgl	12 57 24
		Um	iSgl	12 55 53.8
			iRg	12 56 25.3
		(cont.)		

1973 Aug.	29	(cont.)		
		Ud	iSgl	12 56 39.4
		De	e	12 56 38
			iSgl	12 57 08.4
		Western USSR. Explosion.		
"	29	Ki	iSgl	14 00 38.4
		Um	iSgl	13 58 59.2
		Ud	iSgl	13 59 46.1
		De	iSgl	14 00 12.6
		Western USSR. Explosion.		
"	29	Up	i(Rg)	14 57 19.6
		Ud	i	14 57 25.5
			i(Rg)	14 57 26.5
"	29	Up	i(P)	15 23 02.6
"	29	Up	eSgl	16 24 37
		Sk	iSgl	16 26 55.5
		Um	i	16 25 33.7
			iSgl	16 26 02.4
		Ud	iSgl	16 25 16.5
		De	iSgl	16 24 26.3
		Probably region of Lithuania. Explosion?		
"	29	Ud	iPKP1	17 03 57.5
		De	iPKP1	17 04 09.3
"	29	Um	iP	17 38 14.7
		Ud	iP	17 37 43.9
"	29	Up	iPgl	18 03 49.0
			iSgl	18 04 02.1
		Sk	eSgl	18 05 49
		Um	iSgl	18 05 56.8
		Ud	iSgl	18 04 18.0
		De	iSgl	18 05 26.4
		Västmanland, Sweden, 59.7°N, 16.0°E.		
		Origin time = 18 03 36.		
"	29	Up	iP	18 25 21.7
		Um	iP	18 25 02.2
		Ud	iP	18 25 29.2
		South of Japan (h = N).		
"	29	Ud	i(P)	18 29 10.0
"	29	Ki	iP	18 43 40.9
			i	18 43 58.6
		Um	eP	18 43 43
"	29	Up	iP	19 26 34.0
		(cont.)		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	29	(cont.)			
		Sk	iP	19 27 11.1	
		Um	iP	19 27 09.5	
		Ud	iP	19 26 38.8	
		Greece.			
"	29	Ud	iP	19 27 10.9	
"	29	Ud	iP	19 30 20.5	
"	29	Up	iP	21 33 42.3	
		Ki	iP	21 32 50.4	
		Um	iP	21 33 16.7	
		Ud	iP	21 33 41.4	
		Aleutian Islands.			
		Origin time = 21 22 44.			
"	30	Ud	iP	00 08 08.6	
"	30	Um	iPKP	00 13 30.3	
		Ud	iPKP	00 13 45.4	
		Solomon Islands (h = 25 km).			
"	30	Up	iP	01 25 10.7	
		Um	iP	01 24 46.6	
		Ud	iP	01 25 17.7	
			i	01 25 31.0	
		Kurile Islands.			
		Origin time = 01 14 12.			
"	30	Um	iP	01 35 19.1	
"	30	Up	iPKP1	01 37 41.9	
			ipPKP1	01 37 52.5	
		Sk	ePKP1	01 37 37	
			ipPKP1	01 37 43.8	
		Um	iPKP1	01 37 30.6	
		Ud	iPKP1	01 37 44.1	
			ipPKP1	01 37 52.9	
		De	ipPKP1	01 38 01.6	
		Kermadec Islands.			
		Origin time = 01 18 02.			
		h = 30 km (Up,Sk,Ud).			
"	30	Up	ipPKP1	01 43 32.4	
		Um	iPKP1	01 43 09.7	
			ipPKP1	01 43 23.3	
		Ud	ePKP1	01 43 23	
		Kermadec Islands.			
"	30	Up	iPKP2	02 06 40.9	
		Um	iPKP1	02 06 20.2	
			iPKP2	02 06 28.2	
		Ud	iPKP2	02 06 45.0	
"	30	Up	iPKP1	02 10 09.7	
		(cont.)			

1973 Aug.	30	(cont.)			
		Up	ipPKP1	02 10 18.4	
		Sk	iPKP1	02 10 03.2	
			ipPKP1	02 10 13.8	
		Um	iPKP1	02 09 58.1	C
		Ud	iPKP1	02 10 11.5	
			ipPKP1	02 10 20.2	
		De	iPKP1	02 10 20.3	
			ipPKP1	02 10 31.0	
		Kermadec Islands.			
		Origin time = 01 50 29.			
		h = 30 km (Up,Sk,Ud,De).			
"	30	Up	iPKP1	02 31 26.8	
			i	02 31 39.7	
		Sk	iPKP1	02 31 21.0	C
			ipPKP1	02 31 28.9	
		Um	iPKP1	02 31 15.9	
			ipPKP1	02 31 22.8	
		Ud	iPKP1	02 31 29.0	C
			ipPKP1	02 31 37.8	
		De	iPKP1	02 31 38.6	
			ipPKP1	02 31 46.8	
			i	02 31 56.9	
		Kermadec Islands.			
		h = 25 km (Sk,Um,Ud,De).			
"	30	Ki	i(Sgl)	02 49 29.9	
		Um	i(Sgl)	02 48 36.5	
"	30	Up	iP	02 57 59.0	
		Um	iP	02 57 39.9	
		Bonin Islands (h = N).			
"	30	Um	iP	03 01 02.4	
"	30	Up	iPKP1	03 52 33.0	
			ipPKP1	03 52 41.6	
		Sk	iPKP1	03 52 26.1	
		Um	iPKP1	03 52 21.2	
		Ud	iPKP1	03 52 34.4	
			ipPKP1	03 52 44.4	
		De	ipPKP1	03 52 52.1	
		Kermadec Islands.			
		h = 30 km (Up,Ud).			
"	30	Up	iP	05 00 31.3	
		Ki	iP	05 00 34.5	
		Sk	eP	05 00 19	
		De	iP	05 00 22.3	
		Colombia (h = 160 km).			
"	30	Up	iP	07 42 04.7	
			iPn	07 42 30.0	
				micr	sec
			Mx E	1.1	15
		(cont.)			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Aug. 30 (cont.)

				micr	sec	
Up						
	Mx	N	1.5	17		
	Mx	Z	1.1	12		
Ki	iP		07 42 50.6			C
	i		07 42 54.9			
			micr	sec		
	P	Z'	0.2	1.0		
	Mx	E	1.7	12		
	Mx	N	1.3	12		
	Mx	Z	1.1	13		
Sk	iP		07 42 47.0			
	i		07 42 55.3			
Um	iP		07 42 22.8			
	i		07 42 26.2			
	i		07 42 30.3			
Ud	iP		07 42 19.2			
	i		07 42 23.9			
	iPn		07 42 43.5			
De	iP		07 42 00.1			

Turkey (h = N).
M = 5.0 (Up,Ki).

" 30

Ud	iPKP1	09 09 31.3
De	iPKP1	09 09 42.2

" 30

				micr	sec	
Up	iPKP1		09 14 29.3			
	iPKP2		09 14 45.8			
			micr	sec		
	PKP1	Z'	0.3	2.0		
	Mx	E	0.9	19		
	Mx	N	1.1	21		
	Mx	Z	1.4	21		
Ki	iPKP1		09 14 11.6			C
			micr	sec		
	PKP1	Z'	0.3	1.5		
	Mx	E	0.9	18		
	Mx	N	0.9	18		
	Mx	Z	1.3	19		
Sk	iPKP1		09 14 24.0			
Ud	iPKP1		09 14 28.0			
	iPKP2		09 14 41.1			
De	iPKP1		09 14 33.0			

New Zealand (h = 45 km).
M = 5.7 (Up,Ki).

" 30

Sk	eP	10 52 56
Um	iP	10 52 38.1
Ud	iP	10 53 04.9

" 30

Ki	iP	10 57 42.1
Um	eP	10 57 54

Revilla Gigedo Islands
(h = N).

" 30

Up	i	11 51 46.3
	iRg	11 51 49.4
Ud	iRg	11 52 01.7

1973
Aug. 30

Up	iPKP1	12 12 25.9
	ipPKP1	12 12 36.5
Sk	ePKP1	12 12 19
	ipPKP1	12 12 26.1
Um	iPKP1	12 12 13.5
	ipPKP1	12 12 20.2
Ud	iPKP1	12 12 26.7
	ipPKP1	12 12 34.3
De	ipPKP1	12 12 43.6

Kermadec Islands.
Origin time = 11 52 45.
h = 25 km (Up,Sk,Um,Ud).

" 30

Um	iPKP1	13 06 54.3
Ud	iPKP1	13 07 08.6
De	iPKP1	13 07 19.8

" 30

Up	iPKP1	13 19 15.4
Ud	iPKP1	13 19 17.7 C
De	iPKP1	13 19 28.5

Tonga-Kermadec Islands
(h = 510 km).

" 30

Sk	iSg1	13 29 24.2
Um	iSg1	13 27 57.7

Probably western USSR.
Explosion.

" 30

Um	iP	16 23 29.1
	i	16 23 39.8
Ud	iP	16 23 53.5 C

" 30

				micr	sec	
Up	iP		18 37 53.3			C
	ipP		18 38 38.9			
	iS		18 47 56			
	isS		18 49 16			
	iSKPP'		19 07 14.6			
			micr	sec		
	P	Z'	0.3	0.7		
	Mx	E	0.9	18		
	Mx	N	1.1	20		
	Mx	Z	1.7	24		
Ki	iP		18 37 56.9			C
	ipP		18 38 43.0			
	iS		18 48 02			
	ipS		18 49 06			
	eP'P'		19 04 16			
	iSKPP'		19 07 13.8			
			micr	sec		
	P	Z'	0.7	1.5		
	Mx	E	1.0	19		
	Mx	N	2.6	17		
	Mx	Z	1.1	18		
Sk	iP		18 37 40.8			C
	ipP		18 38 27.3			
	iS		18 47 39.2			
	iP'P'		19 04 12.3			

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Aug. 30 (cont.)

	Sk	iSKPP'	19 07 25.4
	Um	iP	18 37 58.2 C
		ipP	18 38 45.1
		iS	18 48 01
		ipS	18 49 07
		isS	18 49 26
		iP'P'	19 04 03.3
		iSKPP'	19 07 12.7
	Ud	iP	18 37 43.4 C
		ipP	18 38 28.8
		iS	18 47 48.4
		iSKPP'	19 07 22.2
	De	iP	18 37 44.3 C
		ipP	18 38 30.3
		eS	18 47 45
		iSKPP'	19 07 23.4

Colombia.
h = 190 km (Up,Ki,Sk,Um,Ud, De).
m = 6.2, M = 5.5 (Up,Ki).
M uncorrected for focal depth.

"	30	Up	iP		20 01 25.6 C
			ipP		20 01 38.6
					micr sec
			P	Z'	0.8 1.5
			Mx	E	1.5 20
			Mx	N	2.4 17
			Mx	Z	2.7 20
		Ki	iP		20 01 34.7 C
			ipP		20 01 47.1
			iS		20 11 02
					micr sec
			P	Z'	0.2 1.3
			Mx	E	2.7 19
			Mx	N	2.4 16
			Mx	Z	2.3 18
		Sk	iP		20 01 45.8 C
			ipP		20 01 58.8
		Um	iP		20 01 26.4 C
			i		20 01 32.8
			ipP		20 01 39.6
			iS		20 10 43
		Ud	iP		20 01 37.5 C
			ipP		20 01 50.8
		De	iP		20 01 32.3 C
			ipP		20 01 45.2

Bay of Bengal.
h = 50 km (Up,Ki,Sk,Um,Ud, De).
m = 6.3, M = 5.7 (Up,Ki).

"	30	Um	iP	20 56 10.9
		Ud	iP	20 56 07.5

1973
Aug. 30

	Up	iP	21 12 41.7 C
	Ki	iP	21 12 58.4
	Sk	iP	21 13 09.3 C
	Um	iP	21 12 44.4
	Ud	iP	21 12 57.6 C
	De	iP	21 12 50.2

Pakistan (h = N).

"	30	Up	eP	21 25 37
		Ki	eP	21 25 02
		Sk	eP	21 25 34
		Um	iP	21 25 17.6
		Ud	iP	21 25 44.9

Japan (h = 40 km).

"	30	Up	iPKPl	23 26 50.1
		Ki	iPKP	23 26 44.9
			i	23 26 52.0
		Sk	iPKP	23 26 54.7
		Um	i(PKP)	23 26 39.8
			i	23 26 45.5
			iPKP	23 26 50.7
		Ud	iPKPl	23 26 53.0
		De	iPKPl	23 27 04.6

Fiji Islands (h = 630 km).

"	31	Ki	ePKP	00 51 34
		Um	iPKP	00 51 42.8

"	31	Ki	iPKP	01 20 40.9
		Um	iPKP	01 20 47.6

New Hebrides Islands (h = 35 km).

"	31	Up	iPKPl	02 22 16.4
		Um	iPKPl	02 22 00.4

"	31	Up	iP		02 40 51.8
			ipP		02 41 00.1
					micr sec
			pP	Z'	0.1 1.3
		Ki	iP		02 39 56.4
			ipP		02 40 05.1
					micr sec
			P	Z'	0.1 1.3
			pP	Z'	0.2 1.2
		Sk	iP		02 40 23.3
			ipP		02 40 31.2
		Um	iP		02 40 25.0
			ipP		02 40 33.4
		Ud	iP		02 40 48.9
			ipP		02 40 57.0
		De	iP		02 41 13.3
			ipP		02 41 21.3

Alaska.
h = 30 km (Up,Ki,Sk,Um,Ud, De).

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Aug.	31	Um	iSKP1	03 44 23.3		
		Ud	iPKP1	03 41 41.9 C		
		De	iPKP1	03 41 53.0 C		
		Tonga-Kermadec Islands (h = 520 km).				
"	31	Up	iP	05 02 24.9		
			i	05 07 33.2		
				micr sec		
			Mx E	0.6 13		
			Mx N	0.5 13		
			Mx Z	0.5 12		
		Ki	eP	05 03 04		
			iPn	05 03 26.6		
			i	05 03 37.4		
				micr sec		
			Mx N	0.5 15		
		Sk	iP	05 03 01.4		
			iPn	05 03 23.7		
			i	05 04 08.2		
		Um	iP	05 02 38.3 C		
		Ud	iP	05 02 42.2		
			i	05 08 26.0		
			eLg2	05 11 01		
		De	iP	05 02 34.0		
		Caucasus (h = N). M = 4.4 (Up,Ki).				
"	31	Ud	iP	08 03 40.9		
		De	iP	08 03 38.2		
			i	08 03 44.0		
"	31	Ki	iP	09 24 11.7		
		Luzon (h = 25 km).				
"	31	Up	iP	09 35 55.2		
		Ud	iP	09 36 14.1		
		Hindu Kush. Intermediate depth.				
"	31	Ud	iP	14 31 39.9		
"	31	Ki	iSgl	14 38 42.9		
		Sk	eSgl	14 38 19		
		Um	iSgl	14 36 59.8		
		Ud	i	14 36 40.9		
			iSgl	14 37 44.7		
		De	eSgl	14 38 11		
		Western USSR. Explosion.				
"	31	Um	iP	19 28 23.8		
"	31	Up	iP	23 36 31.7 C		
		Sk	iP	23 37 15.2		
		Ud	iP	23 36 42.4		
		De	iP	23 35 58.9		
		Greece.				
1973 Aug.	31	Ki	iP	23 42 21.7		
"	31	Ud	ePKP	23 49 08		
		Samoa Islands (h = N).				

Markus Båth

April 4, 1975

SEISMOLOGICAL INSTITUTE
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SWEDEN

S E I S M O L O G I C A L B U L L E T I N

U P P S A L A, K I R U N A, S K A L S T U G A N, U M E Å, U D D E H O L M and D E L A R Y

Uppsala	(Up):	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(Ki):	67°50.4'N,	20°25.0'E;	h = 390 m
Skalstugan	(Sk):	63°34.8'N,	12°16.8'E;	h = 580 m
Umeå	(Um):	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(Ud):	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(De):	56°28.2'N,	13°52.2'E;	h = 150 m

S E P T E M B E R 1 - 30, 1973

1973 Sept.	1	Ud	i(P)		02 24 03.9
"	1	Up	iPKPl		05 58 05.1
		Sk	ePKPl		05 57 57
		Um	iPKPl		05 57 54.4
		Ud	iPKPl		05 58 06.9
		De	iPKPl		05 58 17.2
			ipPKPl		05 58 34.0
		Kermadec Islands.			
		h = 60 km (De).			
"	1	Up	iP		11 35 23.7
		Sk	i(pP)		11 35 55.5
		Um	iP		11 35 45.8
		Ud	iP		11 35 26.2
		Zambia (h = N).			
"	1	Ki	iP		12 39 52.8
				micr	sec
			Mx E	0.4	10
			Mx N	0.6	10
		Ud	iP		12 40 12.5
			ipP		12 40 23.6
		Alma-Ata.			
		h = 40 km (Ud).			
"	1	Up	iP		13 49 24.4
		Ud	iP		13 49 31.2
		Japan (h = 80 km).			
"	1	Up	iPKPl		16 03 28.9
		Ud	iPKPl		16 03 31.2
		De	iPKPl		16 03 41.8
"	1	Ki	eP		16 19 34
		Ud	iP		16 19 14.0
1973 Sept.	1	Up	i(pPKPl)		18 26 43.1
		Ud	iPKPl		18 26 32.7
		De	iPKPl		18 26 43.8
		Tonga-Kermadec Islands			
		(h = N).			
"	1	Ki	iP		20 48 13.9
		Um	iP		20 48 26.9
		Ud	iP		20 48 55.9
		Japan (h = 20 km).			
"	2	Up	iP		00 41 28.3 D
				micr	sec
			P Z'	0.1	1.4
		Ki	iP		00 41 12.5 D
				micr	sec
			P Z'	0.2	1.4
		Sk	iP		00 41 33.2 D
		Um	iP		00 41 17.5 D
		Ud	iP		00 41 36.7 D
		De	iP		00 41 41.7 D
		Mindanao (h = 620 km).			
		m = 5.7 (Up,Ki).			
"	2	Ki	eSgl		04 11 35
		Sk	iSgl		04 11 24.2
		Um	eSgl		04 11 52
		Nordland, Norway.			
"	2	Ki	iSn		06 43 01.1
			iSgl		06 43 21.3
		Northwest USSR.			
		Explosion.			
		Solution checked with			
		Finnish station readings.			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Sept. 2 Up iP 07 31 46.8
micr sec
P Z' 0.1 1.2
Mx E 0.5 14
Mx N 0.6 12
Mx Z 0.7 13
Ki iP 07 32 12.1
micr sec
Mx E 1.2 14
Mx N 1.4 14
Mx Z 1.7 14
Sk iP 07 32 17.5
Um iP 07 31 54.1
Ud iP 07 32 01.9
ipP 07 32 10.0
iPP 07 33 55.9
De eP 07 31 49
Pakistan.
h = 30 km (Ud).
M = 5.2 (Up,Ki).

" 2 Ud iP 08 51 00.1

" 2 Up iP 10 01 13.0
Ki iP 10 01 12.8
Um iP 10 01 09.0
Ud iP 10 01 25.1
Andaman Islands (h = N).

" 2 Up iP 16 02 53.9
Ki iP 16 02 10.4
Um iP 16 02 29.6
Ud iP 16 03 01.1
Japan (h = 140 km).

" 2 Ki iPKP 16 25 35.0
Um iPKP 16 25 41.1
New Hebrides Islands (h = N).

" 3 Up iPKPl 03 41 54.9
iSKPl 03 44 41.5
Ki e(PKP) 03 41 37
iPKP 03 41 48.5
iSKPl 03 44 18.1
micr sec
SKPl Z' 0.1 1.1
Sk i(PKP) 03 41 47.6
iPKP 03 41 56.0
iSKPl 03 44 34.7
Um i(PKP) 03 41 43.7
iPKP 03 41 49.8
iSKPl 03 44 30.1
(cont.)

1973
Sept. 3 (cont.)
Ud iPKPl 03 41 56.8
i 03 42 06.4
iSKPl 03 44 43.2
De iPKPl 03 42 08.5 D
iSKPl 03 44 52.1
Fiji Islands (h = 640 km).

" 3 Up iPKPl 08 55 10.7
Ud iPKPl 08 55 11.9

" 3 Up i(P) 11 13 17.9

" 3 Up iSgl 13 30 22.9
Um iSgl 13 30 37.2
Western USSR.
Explosion.

" 3 Up ipP 17 30 19.6
Hindu Kush (h = 220 km).

" 3 Ki ePKP 19 28 19
Um iPKP 19 28 18.5
West of Macquarie Islands
(h = N).

" 4 Sk iP 00 10 26.9
Hindu Kush.
Intermediate depth.

" 4 Ki e(S*) 00 35 42
i(Sgl) 00 35 46.9

" 4 Ki iSgl 00 48 24.7
Northwest USSR.
Explosion.
Solution checked with
Finnish station readings.

" 4 Um i(P) 02 33 22.2

" 4 Ud i(Sgl) 10 04 09.4

" 4 Ki iSn 12 48 53.1
iSgl 12 49 07.6
Sk eSgl 12 51 59
Um iSn 12 50 04.6
iSgl 12 50 40.4
Northwest USSR-Norway.
Explosion.

" 4 Sk eSgl 13 02 02
Um iSgl 13 00 51.4
Esthonia.
Explosion.

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Sept. 4

Ki	eSgl	13 06 55
Sk	e	13 06 22
Um	iSgl	13 05 10.8
Ud	eSgl	13 05 57
De	eSgl	13 06 21

Western USSR.
Explosion.

" 4

Up	iSgl	13 40 38.9
Sk	iSgl	13 40 45.1
Um	iSgl	13 42 08.0
Ud	iSn	13 39 26.3
	i	13 39 37.6
	iSgl	13 39 43.7
De	iSgl	13 39 37.0

Near coast of south Norway,
58.0°N, 7.3°E.
Origin time = 13 37 38.
Solution obtained by
combination with Kongsberg
readings.

" 4

Ud	i(Sgl)	14 04 20.4

" 4

Up	iPKPl	14 47 37.8
	ipPKPl	14 47 46.7
Ki	ePKPl	14 47 26
Sk	iPKPl	14 47 31.9
Um	iPKPl	14 47 27.0
	ipPKPl	14 47 34.4
Ud	iPKPl	14 47 39.7
	ipPKPl	14 47 48.3
De	iPKPl	14 47 48.7
	ipPKPl	14 47 56.3

Kermadec Islands.
h = 25 km (Up,Um,Ud,De).

" 4

Um	i(P)	14 59 21.0

" 4

Up	iPgl	15 06 37.2
	i	15 06 48.9
	iSgl	15 06 51.3
	i	15 07 03.2
Sk	i	15 09 23
Um	iSgl	15 08 53.3
	i	15 09 05.0
Ud	i	15 07 15.4
	iSgl	15 07 37.4
	i	15 07 51.0
De	ePn	15 07 09

Off coast of Södermanland,
Sweden, 58.8°N, 17.8°E.
Origin time = 15 06 20.
Explosion.
The unidentified phases at
Up,Sk,Um,Ud could be T-phases.

1973
Sept. 4

Ki	iPn	15 08 48.5
	iPgl	15 08 55.9
	iSgl	15 09 33.8
Sk	iSgl	15 09 41.2
Um	i	15 09 39.0
	iSgl	15 09 59.0

Nordland, Norway,
66.4°N, 14.3°E.
Origin time = 15 08 07.
Explosion?

" 4

Up	iPgl	15 12 45.3
	iSgl	15 12 59.5
	iRg	15 13 07.1
Um	iSgl	15 15 01.4
	i	15 15 13.4
Ud	ePgl	15 13 14
	iSgl	15 13 45.2
De	ePn	15 13 17
	iSgl	15 14 11.3

Off coast of Södermanland,
Sweden, 58.8°N, 17.8°E.
Origin time = 15 12 28.
Explosion.
The unidentified phase at Um
could be TSgl.

" 4

Up	iSgl	15 13 26.3
	iRg	15 13 33.4
Um	iSgl	15 15 27.5
	i	15 15 38.9
Ud	iSgl	15 14 14.2
De	ePn	15 13 45
	iSgl	15 14 35.2

Off coast of Södermanland,
Sweden, 58.8°N, 17.8°E.
Origin time = 15 12 55.
Explosion.
The unidentified phase at Um
could be TSgl.

" 4

Up	iSgl	16 04 00.1
Sk	eS*	16 03 37
	iSgl	16 03 43.5
Um	iSgl	16 05 07.9
Ud	eSgl	16 02 58
De	eS*	16 03 39
	iSgl	16 03 44.7

South Norway,
59.7°N, 6.5°E.
Origin time = 16 01 10.
Solution obtained by
combination with Bergen and
Kongsberg readings.

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Sept. 4 Up iP 17 37 46.6
micr sec
Mx E 1.8 23
Mx N 1.6 22
Mx Z 4.5 25
Ki iP 17 37 33.3
micr sec
Mx E 3.5 23
Mx N 1.7 16
Mx Z 2.6 21
Sk iP 17 37 25.7
Um iP 17 37 43.3
iSKS 17 48 08
Ud iP 17 37 36.6
De eP 17 37 46
Mexico (h = 50 km).
M = 5.6 (Up,Ki).

" 4 Um iPKPl 17 59 28.3

" 4 Um i(P) 18 24 56.3

" 4 Up iPKPl 21 01 38.5
iPKP2 21 01 42.7
ipPKPl 21 01 46.3
i 21 01 53.4
micr sec
PKPl Z' 0.3 1.3
PKP2 Z' 0.1 1.0
Mx N 1.3 24
Mx Z 1.6 23
Ki iPKPl 21 01 17.5
Sk ePKP 21 01 29
iPKPl 21 01 31.8
ipPKPl 21 01 39.6
Um iPKP 21 01 25.4
iPKPl 21 01 27.1
Ud iPKP 21 01 35.6
iPKPl 21 01 40.7
iPKP2 21 01 45.6
ipPKPl 21 01 48.2
De iPKP 21 01 41.1
iPKPl 21 01 48.7
ipPKPl 21 01 56.7
Kermadec Islands.
h = 25 km (Up,Sk,Ud,De).

" 5 Ud iP 00 40 25.7
Hindu Kush.
Intermediate depth.

" 5 Up iP 00 41 39.1 D
ipP 00 42 27.3
(cont.)

1973
Sept. 5 (cont.)
Up
micr sec
P Z' 0.2 1.3
Ki iP 00 40 58.0 D
micr sec
P Z' 0.2 0.9
Sk iP 00 41 32.2 D
Um iP 00 41 15.8 D
ipP 00 41 59.3
Ud iP 00 41 46.2 D
ipP 00 42 31.1
De iP 00 42 01.8 D
Japan.
h = 180 km (Up,Um,Ud).
m = 5.9 (Up,Ki).

" 5 Ki iP 01 17 42.8
Ud iP 01 18 34.6
Aleutian Islands (h = 40 km).

" 5 Ki iSKPl 04 05 30.9
micr sec
SKPl Z' 0.1 1.0
De ePKP 04 03 04
Fiji Islands (h = 400 km).

" 5 Ud iP 07 42 19.3

" 5 Ki iP 08 31 36.3
Um iP 08 31 54.3
Ud iP 08 32 24.3
Japan (h = 45 km).

" 5 Ki iP 09 18 29.2
Ud iP 09 19 20.6
Kurile Islands (h = 45 km).

" 5 Up iSgl 11 36 01.1
Ud iSgl 11 36 03.9
De iPgl 11 34 01.3
iSgl 11 34 28.8
South Baltic Sea,
55.1°N, 16.3°E.
Origin time = 11 33 27.
Explosion.
The two following events are from the same area.

" 5 Up iSgl 11 36 11.8
Ud iSgl 11 36 13.5
De iPgl 11 34 12.8
iSgl 11 34 39.7
Origin time = 11 33 38.
Explosion.

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept.	5	Up	iSgl	11 36 20.0		
		Ud	iSgl	11 36 22.0		
		De	iPgl	11 34 20.7		
			iSgl	11 34 47.4		
		Origin time = 11 33 46.				
		Explosion.				
"	5	Ki	iPn	12 13 50.2		
			iPgl	12 13 58.4		
			iSn	12 14 36.2		
			iS*	12 14 48.1		
		Um	iSgl	12 16 23.7		
		Northwest USSR-Norway.				
		Explosion.				
"	5	Up	iP	13 14 29.6		
			ipP	13 14 44.3		
			iS	13 23 42		
				micr	sec	
			P	Z' 0.1	1.0	
			pP	Z' 0.1	1.0	
			Mx	E 9.2	18	
			Mx	N 13	17	
			Mx	Z 17	19	
		Ki	iP	13 13 48.6 C		
			ipP	13 14 02.1		
				micr	sec	
			P	Z' 0.1	0.9	
			Mx	E 18	15	
			Mx	N 14	16	
			Mx	Z 22	15	
		Sk	iP	13 14 24.0 C		
		Um	iP	13 14 06.9 C		
			ipP	13 14 21.1		
			iS	13 22 59		
		Ud	iP	13 14 37.2 C		
			ipP	13 14 49.7		
		De	iP	13 14 52.4 C		
			ipP	13 15 07.0		
		Japan.				
		h = 50 km (Up,Ki,Um,Ud,De).				
		m = 5.8, M = 6.5 (Up,Ki).				
"	5	Ki	iP	14 19 36.8		
		Ud	iP	14 20 24.2		
		Japan (h = N).				
"	5	Up	i(Rg)	15 01 11.8		
		De	i(Rg)	15 02 08.2		
"	5	Ki	eP	15 57 54		
		Ud	iP	15 58 42.2		
		Japan (h = 50 km).				
"	5	Ud	iP	16 06 37.5		
1973 Sept.	5	Ki	iP	16 14 14.6		
		Ud	iP	16 15 03.2		
		Japan (h = 20 km).				
"	5	Ki	iP	20 28 39.8		
		Um	iP	20 28 57.9		
		Ud	iP	20 29 28.1		
		Japan (h = N).				
"	5	Ki	iP	21 16 29.3		
		Ud	iP	21 15 48.7		
"	6	Ki	eP	01 18 05		
		Ud	iP	01 18 09.8		
		Sumatra (h = 40 km).				
"	6	Ki	iP	01 36 12.9		
		Ud	iP	01 36 23.1		
		Sumatra (h = N).				
"	6	Ud	iP	01 42 51.6		
"	6	Ud	iP	03 19 48.6		
		Japan (h = N).				
"	6	Up	iP	11 09 32.8		
			ipP	11 09 41.5		
				micr	sec	
			P	Z' 0.1	1.0	
			pP	Z' 0.1	1.1	
		Ki	iP	11 08 37.1		
			ipP	11 08 44.7		
			iS	11 15 53		
				micr	sec	
			P	Z' 0.1	1.0	
			pP	Z' 0.1	1.0	
			Mx	E 0.9	20	
			Mx	N 0.6	18	
			Mx	Z 0.8	18	
		Sk	iP	11 09 03.5		
			i(pP)	11 09 13.3		
		Um	iP	11 09 06.4		
			i	11 09 20.2		
			iS	11 16 47		
		Ud	iP	11 09 29.7		
			ipP	11 09 37.5		
		De	iP	11 09 53.2		
			ipP	11 10 01.8		
		Alaska.				
		h = 30 km (Up,Ki,Ud,De).				
		m = 5.8 (Up,Ki).				
"	6	Ki	iP	11 14 14.9		
		Ud	iP	11 15 04.9		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept.	6	Up	iSgl	12 40 48.5
		Um	iSgl	12 41 02.3
		Ud	iSgl	12 41 48.6
		Western USSR. Explosion.		
"	6	Up	iSgl	12 59 31.8
		Sk	iSgl	12 58 42.5
		Um	iSgl	13 00 23.1
		Ud	i	12 58 14.3
			iSgl	12 58 24.6
		De	iSgl	12 59 31.8
		Near Bergen, Norway, 60.4°N, 4.7°E. Origin time = 12 56 05. Solution obtained by combination with Bergen readings.		
"	6	Sk	i(P)	14 30 38.6
"	6	Up	iSgl	14 47 45.5
		Ki	eSgl	14 50 27
		Um	iSgl	14 48 19.3
		Ud	iSgl	14 48 47.0
		De	iSgl	14 49 16.4
		Esthonia. Explosion.		
"	6	Ud	iP	15 26 53.7
"	6	Ud	iPKPl	16 38 49.9
		De	iPKPl	16 39 00.5
"	7	Um	i(Rg)	08 16 53.3
"	7	Ki	iPKP	09 49 39.4
		Um	iPKP	09 49 44.6
		De	iPKP	09 49 57.9
		New Britain (h = 60 km).		
"	7	Ud	iP	09 55 23.4
"	7	Sk	iP	10 56 24.9
		New Guinea (h = 30 km).		
"	7	Ki	ePl	11 19 21
			iP2	11 19 28.7
		Um	iPl	11 20 09.8
		Ud	iP2	11 20 50.0
		Greenland Sea (h = N).		
"	7	Ki	iPn	11 55 48.5
			iSn	11 56 47.7
			iS*	11 57 06.3
		(cont.)		

1973 Sept.	7	(cont.)		
		Um	iSgl	11 58 00.4
		Northwest USSR. Explosion.		
"	7	Ki	Mx	12 12
				micr sec
			Mx E	0.8 18
			Mx N	0.6 16
			Mx Z	0.9 20
		Revilla Gigedo Islands (h = N).		
"	7	Up	i(P)	12 58 07.0
"	7	Um	i(P)	13 00 22.4
"	7	Up	iSgl	13 15 20.1
		Ki	iSgl	13 17 54.1
		Um	iSgl	13 15 53.7
		Ud	iSgl	13 16 19.1
		De	iSgl	13 16 50.1
		Esthonia. Explosion.		
"	7	Ki		micr sec
			Mx E	1.5 23
			Mx N	0.9 20
			Mx Z	1.6 25
		Um	iPKP	14 17 00.8
		De	iPKP	14 17 15.1
		New Britain (h = 70 km).		
"	7	Um	iSgl	14 24 39.1
		Ud	eSgl	14 25 30
		Western USSR. Explosion.		
"	7	Ud	iP	16 15 30.5
		De	iP	16 15 04.3
"	7	Ki	eP	18 57 50
		Um	iP	18 58 07.3
			ipP	18 58 15.8
		Ud	iP	18 58 37.8
		Japan. h = 30 km (Um).		
"	7	Up	iP	19 41 16.7
			i	19 41 22.0
				micr sec
			P Z'	0.1 0.8
		Ki	iP	19 42 40.0
			i	19 42 46.0
		(cont.)		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept. 7 (cont.)

			micr	sec
Ki	P	Z'	0.1	0.8
Sk	iP		19 42 08.6	
	i		19 42 14.0	
Um	iP		19 41 57.5	
	i		19 42 03.3	
Ud	eP		19 41 30	
	i		19 41 34.8	
De	iP		19 40 54.0	
	i		19 41 00.2	

Rumania (h = 140 km).
m = 5.3 (Up,Ki).
Double P, in average 5.6 sec apart.

" 8

Up	iP	01 24 48.4

			micr	sec
	P	Z'	0.1	1.0
Ki	iP		01 23 55.6	
Sk	eP		01 24 27	
Um	iP		01 24 21.3	
Ud	iP		01 24 49.4	
De	eP		01 25 12	

Aleutian Islands (h = 55 km).

" 8

Sk	iP	02 07 16.5
Ud	iP	02 06 49.6

Turkey.

" 8

			micr	sec
Ki	Mx	E	0.9	20
	Mx	N	0.9	20
Um	iP		04 34 45.3	

Japan (h = 10 km).

" 8

Um	iPKPl	05 28 01.2
Ud	ePKPl	05 28 15
De	ePKPl	05 28 25

" 8

Up	i	05 33 25.1
	iS*	05 33 30.4
	iSgl	05 33 37.1
Ki	iSgl	05 35 05.8
	i	05 35 14.0
Sk	ePgl	05 31 31
	i	05 31 59.7
	iS*	05 32 22.7
	iSgl	05 32 27.4
Um	iSn	05 33 26.5
	i	05 33 41.2
	i	05 33 53.7
	iSgl	05 34 12.3
Ud	iPn	05 31 19.2

(cont.)

1973 Sept. 8 (cont.)

Ud	iPgl	05 31 32.1
	iSn	05 32 12.7
	iSgl	05 32 35.8
De	e	05 33 03
	iS*	05 33 39.0
	iSgl	05 33 44.5

Off coast of west Norway, 61.1°N, 4.6°E.
Origin time = 05 30 13.
Solution obtained by combination with Bergen and Kongsberg readings.

" 8

Up	i(P)	06 24 35.5
De	i(P)	06 24 53.5

" 8

Ud	iP	07 04 12.7

Caucasus.

" 8

			micr	sec
Up	iP		07 34 47.6	
	iS		07 42 10	
	P	Z'	0.3	1.0
	Mx	E	6.1	11
	Mx	N	12	14
	Mx	Z	12	12
Ki	iP		07 34 41.8	
	iS		07 41 54	
	P	Z'	0.2	1.1
	Mx	E	17	15
	Mx	N	41	19
	Mx	Z	15	14
Sk	iP		07 35 05.6	
Um	iP		07 34 39.5	
	iS		07 41 56	
Ud	iP		07 35 02.6	
De	iP		07 35 04.3	

Tibet (h = N).
m = 6.1, M = 6.2 (Up,Ki).

" 8

			micr	sec
Up	iP		08 00 11.5	
	ipP		08 00 48.1	
	P	Z'	0.1	1.3
Ki	iP		08 00 18.1	
	ipP		08 00 57.1	
Sk	iP		08 00 06.6	
	ipP		08 00 42.8	
Um	iP		08 00 20.1	
Ud	iP		08 00 02.2	
	i		08 00 06.3	
	ipP		08 00 40.9	

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept.						
8	(cont.)					
	De	iP			08 00 01.4	
	Peru-Brazil.					
	h = 150 km (Up,Ki,Sk,Ud).					
" 8	Up	iP			08 08 35.8	
					micr	sec
		P		Z'	0.1	1.0
	Sk	iP			08 08 52.9	
	Um	iP			08 08 27.0	
	Ud	iP			08 08 50.2	
	De	iP			08 08 52.4	
	Tibet (h = N).					
" 8	Um	iSgl			08 15 36.8	
	Esthonia.					
	Explosion.					
	Solution checked with					
	Finnish station readings.					
" 8	Ud	eP			08 52 33	
" 8	Up	iRg			11 27 10.6	
	Ud	iRg			11 27 01.6	
" 8	Ki	iSn			12 13 31.3	
		iSgl			12 13 53.2	
	Sk	eSgl			12 16 28	
	Um	eSgl			12 14 53	
	Northwest USSR.					
	Explosion.					
" 8	Ud	iP			12 33 50.0	
" 8	Ki	iPn			13 05 01.5	
		iSn			13 05 49.5	
	Northwest USSR-Norway.					
	Explosion.					
" 8	Ki	iPn			13 05 19.6	
		iSn			13 06 07.8	
		iSgl			13 06 23.3	
	Northwest USSR-Norway.					
	Explosion.					
" 8	Ki	iPn			13 05 23.8	
		iPgl			13 05 32.7	
		iSn			13 06 12.0	
		iSgl			13 06 27.4	
	Um	iSgl			13 07 55.0	
	Northwest USSR-Norway.					
	Explosion.					
" 8	Um	iP			19 40 46.8	
	Japan (h = 70 km).					

1973 Sept.						
8	Up	iPKP1			20 00 57.1	
					micr	sec
		PKP1		Z'	0.1	1.1
	Ki	ePKP			20 00 41	
	Sk	iPKP1			20 00 50.6	
	Um	iPKP1			20 00 45.0	
	Ud	iPKP			20 00 55.6	
		iPKP1			20 00 59.1	
	De	iPKP			20 01 00.4	
		iPKP1			20 01 07.5	
	Kermadec Islands (h = 140 km).					
" 8	Um	iP			20 58 15.2	
" 8	Ud	iPKP1			21 37 03.1	
" 9	Up	iP			02 23 40.5	D
					micr	sec
		P		Z'	0.2	1.1
		Mx		E	0.5	11
		Mx		N	0.7	13
		Mx		Z	0.9	13
	Ki	iP			02 23 24.8	D
					micr	sec
		P		Z'	0.4	1.0
		Mx		E	1.3	15
		Mx		N	1.4	16
		Mx		Z	1.2	14
	Sk	iP			02 23 52.0	D
	Um	iP			02 23 27.9	D
	Ud	iP			02 23 53.5	D
	De	iP			02 23 58.8	
	Szechwan, China (h = N).					
	m = 6.3, M = 5.2 (Up,Ki).					
" 9	Up	iP			02 52 34.9	
		i			02 52 37.9	
					micr	sec
		P		Z'	0.1	1.1
	Ki	iP			02 52 19.1	
		i			02 52 22.2	
					micr	sec
		P		Z'	0.1	0.9
	Sk	iP			02 52 46.7	
		i			02 52 49.3	
	Um	iP			02 52 22.2	
		i			02 52 25.2	
	Ud	iP			02 52 47.4	
		i			02 52 50.6	
	De	iP			02 52 53.1	
		i			02 52 56.3	
	Szechwan, China (h = N).					
	m = 5.8 (Up,Ki).					
	Double P, in average 3.0					
	sec apart.					

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept.	9	Ki	ipP	05 09 48.7		
		Um	ipP	05 10 06.2		
		Ud	iP	05 10 28.5		
			ipP	05 10 36.3		
		Japan.				
		h = 30 km (Ud).				
"	9	Up	iP	05 27 49.1		
		Ki	iP	05 27 07.4		
			ipP	05 27 15.6		
		Um	iP	05 27 25.6		
			ipP	05 27 34.1		
		Ud	iP	05 27 55.8		
			ipP	05 28 04.2		
		Japan.				
		h = 30 km (Ki,Um,Ud).				
"	9	Ud	iPKPl	06 56 57.6		
"	9	Up	iSgl	08 45 27.6		
		Ki	iSn	08 42 10.4		
			iSgl	08 42 31.7		
		Sk	iSgl	08 44 58.9		
		Um	i	08 43 05.7		
			iSgl	08 43 26.1		
		Ud	iSgl	08 46 02.6		
		Northwest USSR.				
		Explosion.				
"	9	Up	iP2	08 43 32.9		
			ipP2	08 43 39.0		
				micr	sec	
			pP2	Z' 0.1	1.0	
		Ki	iP2	08 44 16.5		
			ipP2	08 44 22.6		
			iS	08 54 12		
				micr	sec	
			pP2	Z' 0.1	1.0	
			Mx	E 0.6	16	
			Mx	N 1.1	20	
			Mx	Z 1.0	18	
		Sk	iP2	08 43 46.1		
		Um	iPl	08 43 55.1		
			iP2	08 43 57.1		
			ipP2	08 44 03.2		
		Ud	iPl	08 43 25.8		
			iP2	08 43 28.4		
			ipP2	08 43 34.4		
		De	iP2	08 43 09.0		
		Ascension Island.				
		h = 25 km (Up,Ki,Um,Ud).				
		Double P, in average 2.3 sec apart. The amplitudes of P2 are considerably larger than those of Pl.				

1973 Sept.	9	Up	iP2	18 37 08.2		
			iP3	18 37 12.1		
			ipP3	18 37 21.2		
			iS	18 46 24		
				micr	sec	
			P2	Z' 0.4	1.3	
			P3	Z' 0.4	1.0	
			pP3	Z' 0.3	1.0	
			Mx	E 7.2	18	
			Mx	N 9.9	18	
			Mx	Z 17	20	
		Ki	iPl	18 36 26.2 C		
			iP2	18 36 27.6		
			iP3	18 36 30.6		
			ipP2	18 36 37.0		
			ipP3	18 36 39.9		
			iS	18 45 05		
				micr	sec	
			P2	Z' 0.3	1.4	
			P3	Z' 0.3	1.0	
			pP3	Z' 0.3	1.0	
			Mx	E 35	20	
			Mx	N 22	20	
			Mx	Z 19	16	
		Sk	iP2	18 37 01.1		
		Um	iPl	18 36 44.7 C		
			iP2	18 36 46.6		
			ipP2	18 36 55.2		
			iS	18 45 41		
		Ud	iPl	18 37 14.2 C		
			iP2	18 37 16.3		
			iP3	18 37 19.0		
			ipP3	18 37 27.9		
		De	iP2	18 37 32.4		
			ipP3	18 37 44.2		
		Japan.				
		h = 35 km (Up,Ki,Um,Ud).				
		m = 6.4 (P2), 6.5 (P3),				
		M = 6.4 (Up,Ki).				
		Complex multiple event.				
"	9	Ud	iP	19 35 19.0		
		Japan (h = 30 km).				
"	9	Ud	iP	19 36 39.2		
"	9	Up	iP	20 20 30.4		
			ipP	20 20 41.0		
				micr	sec	
			P	Z' 0.1	1.0	
			pP	Z' 0.1	1.2	
			Mx	E 1.2	16	
			Mx	N 0.9	17	
			Mx	Z 1.5	19	

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Sept. 9 (cont.)

Ki	iP		20 19 49.7	D
	ipP		20 20 00.4	
			micr	sec
	P	Z'	0.1	1.2
	Mx	E	4.1	20
	Mx	N	3.2	20
	Mx	Z	3.1	16
Um	iP		20 20 07.9	D
	ipP		20 20 18.4	
Ud	iP		20 20 37.9	D
	ipP		20 20 48.5	

Japan.
h = 40 km (Up,Ki,Um,Ud).
m = 5.9, M = 5.6 (Up,Ki).

" 9 Ki iPKP 20 36 36.2
Easter Island Ridge (h = N).

" 10

Up	eP		03 07 32	
			micr	sec
	P	Z'	0.1	1.0
Ki	iP		03 08 21.0	
			micr	sec
	Mx	E	0.4	15
	Mx	N	0.5	14
	Mx	Z	0.4	13
Um	iP		03 07 55.1	
Ud	iP		03 07 47.0	
De	eP		03 07 24	

Turkey (h = N).

" 10

Ki	iP	04 52 10.9
Ud	iP	04 52 53.7

Japan (h = 55 km).

" 10

Up	eP	07 04 02
Ki	iP	07 03 05.8
Sk	iP	07 03 32.9
Um	iP	07 03 33.9
Ud	iP	07 03 57.1
De	iP	07 04 23.3

Kodiak Island (h = 30 km).

" 10

Up	iP		07 53 13.7	
	iPcP		07 53 42.4	
	ipP		07 55 07.2	
	iPP		07 55 43.9	
	iS		08 01 05	
	iScS		08 02 04	
			micr	sec
	P	Z'	3.0	1.4
	pP	Z'	0.5	1.1
	PP	Z'	1.3	1.5

(cont.)

1973
Sept. 10 (cont.)

Up			micr	sec
	Mx	E	1.9	13
	Mx	N	3.6	13
	Mx	Z	3.1	14
Ki	iP		07 52 35.4	
	ipP		07 54 24.9	
	iPP		07 54 51.1	
	i		07 55 27.6	
	iS		07 59 54	
			micr	sec
	P	Z'	1.7	1.1
	pP	Z'	0.5	1.5
	PP	Z'	1.7	1.9
	Mx	E	5.0	19
	Mx	N	7.1	19
	Mx	Z	6.8	19
Sk	iP		07 53 09.7	
	ipP		07 55 02.4	
	iPP		07 55 38.3	
	iS		08 00 59.7	
	i(P'P')		08 21 20.4	
Um	iP		07 52 51.2	
	ipP		07 54 44.1	
	iS		08 00 24.2	
Ud	iP		07 53 22.0	
	ipP		07 55 16.3	
	iS		08 01 23.0	
	iScS		08 02 18.8	
	i(P'P')		08 21 15.0	
De	iP		07 53 36.9	
	ipP		07 55 29.9	
	iS		08 01 50.8	

Russia-China.
h = 590 km (Up,Ki,Sk,Um,Ud, De).
m = 6.6, M = 5.9 (Up,Ki).
M uncorrected for focal depth.
The phases denoted (P'P') could be interpreted as P'dP' (Whitcomb 1973).

" 10

Up	iSg1	09 34 15.1
Ki	iSg2	09 35 10.7
Um	iSg1	09 33 38.7
Ud	iSg1	09 35 15.2
De	iSg1	09 35 56.9

Lake Ladoga region.
Explosion.

" 10

Ki	iP	10 05 05.3
Ud	iP	10 05 33.4

Luzon (h = 45 km).

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept.	10	Um	iP	17 07 13.1	
		Ud	iP	17 07 43.5	
		Japan (h = 30 km).			
"	10	Ki	iSgl	21 43 13.3	
		Um	iSgl	21 43 16.1	
		Southeastern Finland, 65.6°N, 29.0°E. Origin time = 21 41 08. Solution obtained by combination with Finnish station readings.			
"	11	Ud	iPKP1	01 50 27.9	
"	11	Ki	iS*	10 33 36.3	
			iSgl	10 33 37.2	
		Sk	iS*	10 33 42.0	
			iSgl	10 33 45.7	
		Um	eSn	10 33 50	
			iSgl	10 34 02.5	
		Nordland, Norway, 66.4°N, 14.4°E. Origin time = 10 32 11. Explosion?			
"	11	Ud	iS*	10 34 51.7	
			iSgl	10 34 55.9	
"	11	Ud	i(P)	13 23 55.4	
"	11	Ud	i(P)	13 27 47.9	
			i	13 27 49.4	
"	11	De	i(P)	13 32 28.4	
"	11	Ud	iP	14 36 24.6	
		De	iP	14 36 21.3	
		Pamir.			
"	11	Ud	iP	15 30 34.9	
"	11	Um	iPKP1	15 53 16.5	
		Ud	iPKP1	15 53 29.3	
"	11	Up	iP	16 05 58.6	
		Ki	iP	16 05 52.2	
		Ud	iP	16 06 12.6	
			i	16 06 23.2	
		India-China (h = 55 km).			
"	11	Up	iP	19 06 07.1	
		Ki	iP	19 05 25.1	
		(cont.)			

1973 Sept.	11	(cont.)			
		Um	eP	19 05 43	
		Ud	iP	19 06 13.3	
		Japan (h = 30 km).			
"	11	Ud	eP	19 38 47	
"	11	Up	iP	23 30 23.3	D
			ipP	23 31 02.5	
			iS	23 39 50	
				micr	sec
			P Z'	0.5	0.8
			Mx E	2.9	19
			Mx N	8.0	18
			Mx Z	4.1	17
		Ki	iP	23 29 57.3	D
			ipP	23 30 33.2	
			iS	23 39 02	
				micr	sec
			P Z'	0.4	0.8
			Mx E	2.2	17
			Mx N	4.4	18
			Mx Z	2.1	17
		Sk	iP	23 30 25.7	D
		Um	iP	23 30 07.0	D
			iS	23 39 20	
		Ud	iP	23 30 32.6	D
		De	iP	23 30 42.6	
		Formosa. h = 150 km (Up,Ki). m = 6.3, M = 5.7 (Up,Ki).			
"	12	Ki	iPKP2	00 05 44.7	
		Sk	iPKP2	00 05 56.8	
		Um	iPKP2	00 05 51.9	
		Ud	iPKP2	00 06 02.7	
		New Zealand.			
"	12	Up	iP	01 31 50.5	
		Ud	iP	01 31 59.5	
		De	iP	01 31 27.6	
		Dodecanese Islands (h = 150 km).			
"	12	Up	iP	07 04 22.4	
			iS	07 07 38	
			iSS	07 08 00	
				micr	sec
			P Z	10	2
			Mx E	46	4
			Mx N	58	9
			Mx Z	66	6
		Ki	iP	07 02 51.9	C
		(cont.)			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept. 12 (cont.)

Ki	iS		07 05 04	
			micr	sec
	P	Z	18	3
	Mx	E	51	6
	Mx	N	66	5
	Mx	Z	51	5
Sk	iP		07 04 01.0	C
Um	iP		07 03 29.5	C
	iPP		07 03 40	
	iS		07 06 10	
Ud	iP		07 04 32.5	C
De	iP		07 05 05.5	C

Novaya Zemlya.
m = 6.7 (Up,Ki).
P amplitudes are measured on long-period Z components.
Underground explosion.

" 12

Ud	iP		07 41 07.3	
De	iP		07 40 59.3	

" 12

Up	iP		09 41 08.7	C
			micr	sec
	P	Z'	0.1	0.8
Ki	iP		09 42 26.9	
Sk	iP		09 41 52.4	
	i		09 41 58.7	
Um	iP		09 41 49.1	C
	i		09 41 56.4	
Ud	iP		09 41 15.5	
	i		09 41 18.7	
De	iP		09 40 37.6	C

Greece (h = 90 km).

" 12

Ud	i(S*)	13 39 44.8
	iSgl	13 39 48.4

" 12

Up	eSgl	14 08 45
Ki	eSgl	14 10 44
Um	iSgl	14 08 58.2
Ud	iSgl	14 09 44.4
De	iSgl	14 10 13.6

Western USSR.
Explosion.

" 12

De	i(P)	15 20 06.5

" 12

Ud	iPKPl	15 46 17.5

" 12

Up	iSgl	16 12 04.5
Ki	i	16 09 14.5
	iPgl	16 09 23.8
	i	16 09 39.3
	iSgl	16 10 01.2

(cont.)

1973 Sept. 12 (cont.)

Ki			micr	sec
	Sgl	Z'	0.1	0.4
Sk	iPgl		16 09 25.5	
	iSgl		16 10 04.4	
Um	iPn		16 09 31.5	
	iPgl		16 09 39.1	
	iSn		16 10 13.4	
	iSgl		16 10 26.9	
Ud	iSgl		16 11 53.5	

Nordland, Norway,
66.3°N, 14.5°E.
Origin time = 16 08 35.
Explosion.

" 12

Ud	iP	20 23 08.2	C
De	eP	20 23 29	

Kurile Islands (h = 160 km).

" 12

Ud	iPKPl	23 14 44.9
De	iPKPl	23 14 55.8

" 13

Ud	iP	00 05 13.7

Hindu Kush.
Intermediate depth.

" 13

Up	iP		06 32 43.5	C
			micr	sec
	P	Z'	0.3	1.3
Ki	iP		06 32 25.4	C
			micr	sec
	P	Z'	0.3	1.0
	Mx	E	0.9	15
	Mx	N	0.9	18
	Mx	Z	0.8	16
Sk	iP		06 32 47.6	C
Um	iP		06 32 31.4	C
De	iP		06 32 57.9	C

Mindanao (h = 70 km).
m = 6.5 (Up,Ki).

" 13

Um	iP	06 47 57.9
Ud	iP	06 48 18.2

Tadzhik SSR (h = 45 km).

" 13

Um	iSgl	10 49 58.3

Esthonia.
Explosion.

" 13

Ki	iSn	11 52 56.3
	iSgl	11 53 13.4

Northwest USSR-Norway.
Explosion.

" 13

Ud	iP	17 30 52.0

Japan (h = 110 km).

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Sept. 14 Ud i(P) 10 35 52.9

" 14 Ki iPn 11 30 55.8
iPgl 11 31 03.8
iSn 11 31 42.0
iSgl 11 31 57.2
Um iSgl 11 33 29.7
Northwest USSR-Norway.
Explosion.

" 14 Ki eP 11 37 29
micr sec
Mx E 0.4 12
Mx N 1.1 15
Um iP 11 37 19.4
Ud iP 11 37 36.3
i 11 37 39.3
De iP 11 37 34.6
Afghanistan-USSR (h = 90 km).

" 14 Ki eSgl 12 08 44
Northwest USSR.
Explosion.

" 14 Ki iSn 12 14 01.9
iSgl 12 14 25.2
Sk eSgl 12 16 50
Um iSgl 12 15 12.1
Northwest USSR.
Explosion.

" 14 Up iSgl 12 52 02.7
Um iSgl 12 52 17.3
Ud eSgl 12 53 01
Western USSR.
Explosion.

" 14 Ud iP 19 33 45.7
Greece.

" 14 Ud iP 20 20 56.9
Pamir.

" 14 Ud iRg 21 27 54.9

" 15 Ki iP 01 06 34.9 C
micr sec
P Z' 0.1 0.9
Sk iP 01 06 49.1
Um iP 01 06 32.3 C
Ud iP 01 06 44.8 C
Sumatra (h = 90 km).

" 15 Up iP 01 50 20.5
iS 01 53 58
(cont.)

1973
Sept. 15 (cont.)
Up
micr sec
P Z' 0.1 1.5
Mx E 2.7 20
Mx N 5.8 15
Mx Z 6.7 13
Ki iP 01 50 06.9
micr sec
P Z' 0.3 1.5
Mx E 12 14
Mx N 6.6 12
Mx Z 12 15
Sk iP 01 49 38.7
Um iP 01 50 17.0
iS 01 53 45
Ud iP 01 50 01.4
De iP 01 50 23.2
Iceland (h = 1 km).
m = 5.0, M = 5.1 (Up,Ki).
Long-period records exhibit a well developed train of Love waves, starting right at the arrival of S (cf. Geofis. Pura Appl., 1958, 39: 35-54).

" 15 Ki eP 02 26 22
Um iP 02 26 35.3
Ud iP 02 26 16.8
Iceland (h = N).

" 15 Up iP 02 56 30.3
micr sec
Mx E 0.7 18
Mx Z 0.9 16
Ki iP 02 56 09.4
Um iP 02 56 16.1
Ud iP 02 56 39.3
Luzon (h = 60 km).

" 15 Up iP 04 36 49.2 C
micr sec
P Z' 0.1 0.8
Mx E 0.8 16
Mx N 0.7 14
Mx Z 2.0 15
Ki iP 04 36 18.6 C
micr sec
Mx E 1.1 20
Mx N 1.0 19
Mx Z 1.1 19
Sk iP 04 36 48.8 C
Um iP 04 36 30.8 C
Ud iP 04 36 58.0 C
De iP 04 37 09.7 C
Ryukyu Islands (h = 35 km).
M = 5.3 (Up,Ki).

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept.	15	Ud	iP	07 28 29.2
"	15	Up	eSgl	12 27 32
		Um	iSgl	12 28 11.8
		Esthonia.		
		Explosion.		
"	15	Ki	iSn	13 17 56.4
			iS*	13 18 14.2
		Um	iSgl	13 19 26.7
		Northwest USSR.		
		Explosion.		
"	15	Ki	iPn	13 27 32.7
			iSn	13 28 17.5
			iSgl	13 28 31.5
		Sk	eSn	13 30 11
			iSgl	13 30 59.6
		Um	iSgl	13 29 27.3
		Northwest USSR-Finland.		
		Explosion.		
"	15	Up	iPKPl	13 56 42.5
		Ud	iPKPl	13 56 44.5
		De	iPKPl	13 56 54.3
"	15	Ki	iP	14 23 42.3
		Hindu Kush.		
		Intermediate depth.		
"	15	Ud	iP	15 48 10.0
"	15	Up	iP	16 09 59.4
		Ki	iP	16 09 15.1
		Sk	eP	16 09 50
		Um	iP	16 09 34.6
		Ud	iP	16 10 05.5
		Japan (h = 130 km).		
"	15	Ud	iPKP	17 18 56.1
		Tonga Islands (h = N).		
"	15	Ud	iPKPl	17 52 17.6
		De	iPKPl	17 52 29.8
		Tonga Islands (h = 40 km).		
"	15	Ki	eP	18 01 29
		Ud	iP	18 01 55.9
"	15	Ki	eP	19 20 19
		Ud	iP	19 20 45.4
"	15	Ud	iPKPl	20 28 47.2
		De	ePKPl	20 28 58
1973 Sept.	15	Ud	iPKP	23 27 48.5
		De	iPKP	23 27 54.6
		Solomon Islands (h = 60 km).		
"	16	Up	iP	05 05 40.1 D
		Ki	iP	05 05 40.8 D
				micr sec
			P Z'	0.1 1.1
			Mx E	1.1 22
			Mx N	0.7 20
			Mx Z	1.2 20
		Sk	iP	05 05 27.0 D
		Um	iP	05 05 43.4 D
		Ud	iP	05 05 30.7 D
		De	iP	05 05 32.8 D
		Colombia (h = N).		
"	16	Up	iP	08 34 27.4
		Ki	iP	08 34 28.1
		Sk	iP	08 34 14.5
		Um	iP	08 34 30.5
		Ud	iP	08 34 17.3
		De	iP	08 34 20.1
		Colombia (h = N).		
"	16	Up	i(S*)	09 47 11.4
			iSgl	09 47 25.3
		Ki	iPn	09 43 09.4
			iSn	09 44 07.2
			iSgl	09 44 29.1
		Sk	iSgl	09 46 57.5
		Um	iSn	09 44 47.9
			i	09 45 00.4
			iSgl	09 45 22.0
		Ud	iSn	09 46 45.8
			iSgl	09 47 55.7
		De	iS*	09 49 18.3
			iSgl	09 49 31.7
		Northwest USSR.		
		Explosion.		
"	16	Ud	iP	18 16 25.5
		De	eP	18 16 23
		Hindu Kush.		
		Intermediate depth.		
"	16	Ki	iP	19 21 08.1
				micr sec
			Mx E	0.6 15
			Mx N	0.5 14
			Mx Z	0.6 14
		Um	iP	19 21 20.2
		Ud	iP	19 21 48.3
		Japan (h = 30 km).		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973						
Sept.	16	Up	eP		21 31 20	
			i		21 31 23.0	
			iS		21 34 54	
					micr	sec
			P	Z'	0.1	1.3
			Mx	E	2.6	14
			Mx	N	3.3	17
			Mx	Z	5.9	14
		Ki	iP		21 31 03.7	
			iS		21 34 29	
					micr	sec
			P	Z'	0.3	1.5
			Mx	E	8.5	14
			Mx	N	6.6	12
			Mx	Z	8.9	16
		Sk	iP		21 30 33.8	
			i		21 30 37.9	
		Um	iP		21 31 13.6	
			iS		21 34 40	
		Ud	iP		21 30 58.4	
		De	iP		21 31 22.3	

Iceland (h = 2 km).
m = 5.1, M = 5.0 (Up,Ki).
Cf. remark to Sept. 15, 01 50.

"	16	Up			micr	sec
			Mx	E	0.4	15
			Mx	N	0.6	14
			Mx	Z	0.5	15
		Ki			micr	sec
			Mx	E	0.8	14
			Mx	N	0.4	11
			Mx	Z	0.6	14
		Um	eP		22 37 55	
		Ud	eP		22 37 38	

Iceland (h = 5 km).
M = 4.1 (Up,Ki).

"	16	De	i(P)	23 11 08.9 C

"	17	Up	iP		04 12 24.1	
					micr	sec
			Mx	E	0.7	18
			Mx	N	1.0	23
			Mx	Z	0.6	15
		Ki	iP		04 12 59.7	
					micr	sec
			Mx	E	0.6	11
			Mx	N	0.8	14
			Mx	Z	0.8	12
		Sk	iP		04 12 59.5	
		Um	iP		04 12 35.9	
		Ud	iP		04 12 40.8 C	

(cont.)

1973				
Sept.	17	(cont.)		
		De	iP	04 12 25.6 C

Iran (h = 45 km).
M = 4.7 (Up,Ki).

"	17	Up	iSgl	05 18 04.6
		Um	eSgl	05 20 07
		Ud	i(S*)	05 18 33.7
			iSgl	05 18 43.4
		De	iPn	05 16 17.7
			iPgl	05 16 27.9
			iSgl	05 17 22.5

Near coast of Danziger Bucht, 54.6°N, 20.1°E.
Origin time = 05 15 16.
Explosion?
Solution checked with Finnish station readings.

"	17	Um	iPKP1	05 43 11.1 C

"	17	Ki	iPKP1	07 15 32.3
		Um	iPKP1	07 15 31.3
		Ud	iPKP2	07 15 42.6

South of Australia (h = N).

"	17	Ud	iP	07 32 42.2

"	17	Up	i(PKP)	07 40 41.9
		Ki	i(PKP)	07 40 29.7
			iPKP	07 40 38.9
		Sk	iPKP	07 40 52.3
		Um	i(PKP)	07 40 40.7
			iPKP	07 40 47.0
		Ud	i(PKP)	07 40 44.9
			iPKP	07 40 56.4
		De	i(PKP)	07 40 54.2
			iPKP	07 41 00.3

Tonga Islands (h = 140 km).

"	17	Up	iSn	12 19 03.1
			iSgl	12 19 15.8
		Ki	eSgl	12 21 08
		Sk	eSgl	12 21 01
		Um	iSgl	12 19 26.0
		Ud	eSgl	12 20 14
		De	iS*	12 20 24.2
			iSgl	12 20 33.6

Western USSR.
Explosion.

"	17	Up	eSn	12 55 58
			iSgl	12 56 12.2
		Ki	iSgl	12 58 45.2

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept. 17 (cont.)

	Sk	eSgl		12 57 52
	Um	iSgl		12 56 45.9
	Esthonia.			
	Explosion.			
" 17	Up	iP		14 52 36.9
			micr	sec
		P	Z' 0.1	0.9
		Mx	N 0.5	15
		Mx	Z 0.6	14
	Ki		micr	sec
		Mx	E 0.6	18
	Sk	iP		14 53 18.0
	Um	iP		14 53 16.7
	Ud	iP		14 52 43.1
		i		14 52 47.9
	De	iP		14 52 06.4
	Greece (h = 4 km).			
	M = 4.3 (Up,Ki).			
" 17	Up	iP		15 42 32.9
		ipP		15 42 45.3
	Sk	eP		15 43 12
	Um	ipP		15 43 23.6
	Ud	iP		15 42 40.3
	De	iP		15 42 04.6
		ipP		15 42 16.5
	Ionian Sea.			
	h = 60 km (Up,De).			
" 17	Ud	iPKP1		15 51 05.7
		i		15 51 17.7
	De	iPKP1		15 51 16.0
		i		15 51 22.1
	Tonga Islands (h = N).			
" 17	Up	iPKP2		16 38 42.4
	Sk	iPKP1		16 38 32.3
		i		16 38 42.4
	Um	iPKP1		16 38 25.8
		i		16 38 29.2
	Ud	iPKP1		16 38 38.2
		iPKP2		16 38 45.3
	De	iPKP2		16 38 58.7
" 17	Ki	i(Pgl)		18 48 09.4
		i(Sgl)		18 48 44.2
" 17	Up	iP		22 20 53.5
		i		22 20 58.9
	Ki	iP		22 20 28.6
	Sk	eP		22 20 56
		i		22 21 02.5
	(cont.)			

1973 Sept. 17 (cont.)

	Um	iP		22 20 37.6
	Ud	iP		22 21 03.5
		i		22 21 08.0
	De	eP		22 21 12
	Formosa (h = 90 km).			
" 17	Up	epP		23 12 13
	Sk	epP		23 11 46
	Um	ipP		23 11 54.8
	Ud	eP		23 12 01
		ipP		23 12 06.6
	Off coast of Oregon.			
	h = 20 km (Ud).			
" 17	Up	iP		23 44 58.2
		ipP		23 45 03.2
	Ki		micr	sec
		Mx	E 0.6	16
		Mx	N 0.6	19
		Mx	Z 0.5	15
	Sk	eP		23 44 31
		ipP		23 44 36.6
	Um	iP		23 44 38.4
		ipP		23 44 44.0
	Ud	iP		23 44 51.6
		ipP		23 44 56.9
	Off coast of Oregon.			
	h = 20 km (Up,Sk,Um,Ud).			
" 18	Up	iP		00 41 07.5
	Sk	iP		00 40 41.9
	Ud	iP		00 41 02.2
	Off coast of Oregon (h = N).			
	These phases correspond probably to pP.			
" 18	Um	iPKP1		01 46 25.6
" 18	Ud	iP		03 11 43.7
" 18	Sk	eP		03 59 54
	Ud	iP		03 59 20.5
	Aegean Sea.			
" 18	Up	ipP		08 53 04.1
			micr	sec
		pP	Z' 0.1	0.9
	Ki	iP		08 54 03.0
		ipP		08 54 08.5
			micr	sec
		pP	Z' 0.1	1.0
		Mx	E 0.5	16
		Mx	N 0.4	11
		Mx	Z 0.4	11
	(cont.)			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept.	18	(cont.)				
		Sk	eP			08 53 44
			ipP			08 53 49.3
		Um	ipP			08 53 34.1
		Ud	iP			08 53 10.1
			ipP			08 53 14.6
		De	ipP			08 52 42.1
		Turkey.				
		h = 25 km (Ki,Sk,Ud).				
"	18	Up	iPKP1			09 24 21.1
		Sk	iPKP1			09 24 14.7
		Um	iPKP1			09 24 08.5
		Ud	iPKP1			09 24 22.6
		De	iPKP1			09 24 31.4
"	18	Up	iP			10 25 17.0
		Ki	iP			10 24 25.6
		Um	iP			10 24 52.5
		Ud	iP			10 25 18.0
		Aleutian Islands (h = N).				
"	18	Um	iPKP1			11 17 11.6
"	18	Up	iSgl			11 46 28.7
		Um	iSgl			11 47 00.2
		Ud	iSgl			11 47 32.7
		De	iSgl			11 48 00.5
		Esthonia.				
		Explosion.				
"	18	Up	eSgl			13 00 27
		Ki	iSgl			13 03 14.6
		Sk	iSgl			13 02 19.8
		Um	iSgl			13 01 10.9
		De	iSgl			13 01 52.3
		Esthonia.				
		Explosion.				
"	18	Up	iP			13 11 47.1
			ipP			13 12 21.4
					micr	sec
			P	Z'	0.2	1.5
		Ki	iP			13 11 51.6
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP			13 11 37.0
		Um	iP			13 11 51.5
		Ud	iP			13 11 37.6
			ipP			13 12 11.8
		De	iP			13 11 37.5
		Peru.				
		h = 140 km (Up,Ud).				
		m = 6.3 (Up,Ki).				

1973 Sept.	18	Up	iP			13 45 54.7
		Greece.				
"	18	Up			micr	sec
			Mx	E	2.7	23
			Mx	N	6.3	23
			Mx	Z	8.4	22
		Ki	ePKP2			13 53 38
					micr	sec
			Mx	E	4.3	19
			Mx	N	7.1	23
			Mx	Z	7.8	25
		South Pacific Ocean (h = N).				
		M = 6.5 (Up,Ki).				
"	18	Ud	i(P)			16 23 52.8
"	18	Um	iPKP1			19 18 25.5
"	18	Up	iRg			21 11 55.3
		Sk	iSgl			21 13 26.6
		Um	iSgl			21 13 42.0
		Ud	iSgl			21 11 44.4
			iRg			21 11 49.8
		De	iSgl			21 13 05.8
		Bergslagen, Sweden,				
		59.8°N, 15.4°E.				
		Origin time = 21 11 20.				
		Explosion?				
"	18	Up	iRg			21 12 56.3
		Ud	iRg			21 12 49.7
		Bergslagen, Sweden,				
		59.8°N, 15.4°E.				
		Origin time = 21 12 20.				
		Explosion?				
"	18	Ud	iPKP1			22 04 16.3
		De	iPKP1			22 04 26.8
"	18	Um	iPKP1			23 12 29.1
"	19	Up	iP			03 06 31.6
			iPn			03 07 02.9
			i			03 07 08.7
			iPP			03 07 50.9
		Ki	iP			03 06 33.8
		Sk	iP			03 06 55.5
			i(Pn)			03 07 37.7
		Um	iP			03 06 25.5
			i			03 07 01.6
			iPn			03 07 14.0
		Ud	iP			03 06 49.2 C
			iPn			03 07 52.8
		De	iP			03 06 49.9
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept.	19	(cont.) Kazakh SSR. Underground explosion.				
"	19	Um	iP		05 47 33.8	
"	19	Ud	iP		07 02 01.3	
"	19	Up	iPKP1		10 01 56.8	C
			ipPKP1		10 02 35.0	
					micr	sec
			PKP1	Z'	0.1	0.9
			pPKP1	Z'	0.1	0.9
		Ki	iPKP		10 01 38.4	
		Sk	ePKP1		10 01 50	
		Um	iPKP1		10 01 45.0	
		Ud	iPKP1		10 01 58.3	C
			ipPKP1		10 02 37.1	
		De	iPKP1		10 02 08.4	C
			iPKP2		10 02 13.2	
		Tonga-Kermadec Islands. h = 140 km (Up,Ud).				
"	19	Up	eP		10 42 42	
		Ki	iP		10 41 48.5	
			ipP		10 41 55.6	
					micr	sec
			P	Z'	0.1	0.9
		Sk	iP		10 42 15.8	
			ipP		10 42 23.1	
		Um	iP		10 42 16.3	
			ipP		10 42 23.1	
		Ud	iP		10 42 39.2	
		Kodiak Island. h = 25 km (Ki,Sk,Um).				
"	19	Up	iP		11 12 27.1	
		Sk	eP		11 12 21	
		Um	iP		11 12 06.4	
		Ud	iP		11 12 34.1	
		Japan (h = 60 km).				
"	19	Up	iSg1		11 47 25.3	
		Um	iSg1		11 47 51.5	
		Ud	iSg1		11 48 28.0	
		De	eSg1		11 48 52	
		Esthonia. Explosion.				
"	19	Up	iP		11 55 04.6	
		Ki	eP		11 54 47	
		Sk	iP		11 55 13.1	
		Um	iP		11 54 50.3	
		Ud	iP		11 55 15.6	
		Szechwan, China (h = N).				
1973 Sept.	19	Up	iP		12 01 01.4	
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP		12 01 11.7	
		Um	iP		12 00 48.5	
		Ud	iP		12 01 13.9	
		Szechwan, China. Origin time = 11 50 32.				
"	19	Up	eSg1		13 13 46	
		Sk	eSg1		13 15 00	
		Um	iSg1		13 13 14.1	
		Lake Ladoga region. Explosion.				
"	19	Ud	i(P)		15 26 11.7	
"	19	Um	iSg1		15 57 42.3	
		Ud	iSg1		15 59 12.4	
		Lake Ladoga region. Explosion.				
"	19	Ud	iPKP1		18 40 54.8	
"	19	Ud	iP		21 24 16.7	
"	19	Um	iPKP1		22 12 37.4	
"	19	Up	iP		22 59 47.5	
		Sk	iP		23 00 29.2	
		Um	iP		23 00 30.5	
		Ud	iP		22 59 57.5	
		Greece.				
"	19	Ki	eP		23 55 18	
		Sk	eP		23 55 09	
		Nicaragua (h = 55 km).				
"	20	Up	i		06 50 32.6	
			iSg1		06 50 40.7	
		Sk	iSg1		06 52 28.5	
		Um	i		06 51 13.0	
			iSg1		06 51 21.5	
		Ud	i		06 51 36.1	
			iSg1		06 51 46.5	
		Esthonia. Explosion.				
"	20	Up	i		07 27 31.2	
			iSg1		07 27 40.3	
		Ki	eSg1		07 30 17	
		Sk	eSg1		07 29 25	
		Um	iSg1		07 28 19.6	
		Ud	iSg1		07 28 43.8	
		De	eSg1		07 29 12	
		Esthonia. Explosion.				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept. 20 Um iSgl 07 27 56.5
Ud iSgl 07 28 20.4
De eSgl 07 28 44
Esthonia.
Explosion.

" 20 Ki ePn 07 51 47
iPgl 07 51 56.3
iSn 07 52 33.6
iS* 07 52 45.3
Sk eSgl 07 55 39
Um iSgl 07 54 24.2
Northwest USSR-Norway.
Explosion.

" 20 Ud i(P) 12 03 08.2

" 20 Up eSgl 12 39 12
Um iSgl 12 39 22.8
Ud eSgl 12 40 12
Western USSR.
Explosion.

" 20 Ud iP 14 08 03.9

" 20 Ud iPKPl 14 43 10.3

" 20 Um iP 15 01 09.6
Ud iP 15 01 36.2

" 20 Up eP 19 09 01
Ud iP 19 09 00.1
De iP 19 09 24.1
Aleutian Islands (h = 40 km).

" 20 Up iP 20 55 39.3 D
i 20 55 41.9
i(PP) 20 59 13.7
iSKS 21 05 14
iS 21 05 42

		micr	sec
P	Z'	0.1	1.0
i	Z'	0.6	1.0
Mx	E	1.8	19
Mx	N	3.6	20
Mx	Z	3.1	18

Ki iP 20 55 22.5 D
i 20 55 25.0
ipP 20 57 26.8
iPP 20 58 57.1
iSKS 21 04 55
iS 21 05 12

		micr	sec
P	Z'	0.1	1.0
i	Z'	1.4	1.0

(cont.)

1973 Sept. 20 (cont.)
Ki

		micr	sec
PP	Z'	4.7	3.3
Mx	E	3.3	20
Mx	N	4.2	17
Mx	Z	4.9	16

Sk iP 20 55 44.4
i 20 55 46.6
iPP 20 59 33.8
Um iP 20 55 28.4 D
i 20 55 31.0
iPP 20 59 08.4
iSKS 21 05 00
iS 21 05 23
Ud iP 20 55 47.7 D
i 20 55 50.3
ipP 20 57 54.3
De iP 20 55 53.5
i 20 55 55.9
i(PP) 20 59 42.0
iPP 20 59 51.6
Negros.
h = 570 km (Ki,Ud).
m = 6.5, M = 5.9 (Up,Ki).
M uncorrected for focal depth.
Double P, in average 2.5 sec apart.

" 20 Ud iPKPl 21 40 17.0

" 20 Up iPKPl 22 08 34.9
Ud iPKPl 22 08 36.8

" 20 Up iPKPl 22 15 10.9
Ud iPKPl 22 15 13.1
De ePKPl 22 15 23

" 21 Um iP 01 03 33.7
Ud iP 01 04 08.9

" 21 Up iP 02 32 27.3 C
Ki iP 02 31 51.7

		micr	sec
P	Z'	0.1	1.0

Sk iP 02 32 25.2 C
Um iP 02 32 06.5 C
Ud iP 02 32 35.8 C
Japan (h = 25 km).

" 21 Up iP 05 18 09.1
ipP 05 19 27.1

		micr	sec
pP	Z'	0.1	1.2

Ki iP 05 17 34.3
(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept.	21	(cont.)				
		Sk	iP		05 18 05.3	
		Um	iP		05 17 49.2	D
			ipP		05 19 07.3	
		Ud	iP		05 18 16.8	D
			ipP		05 19 35.6	
		Japan.				
		h = 340 km (Up,Um,Ud).				
"	21	Um	iP		05 34 05.3	
		Ud	iP		05 34 34.6	
		Japan (h = 270 km).				
"	21	Up	iPP		07 32 20.3	
			iSP		07 41 46	
		Ki	iPP		07 32 05.3	
		Sk	iPP		07 31 55.8	
		Easter Island Ridge (h = N).				
"	21	Up	iPP		07 49 54.1	
					micr	sec
			Mx	E	1.2	21
			Mx	N	1.0	19
			Mx	Z	3.3	22
		Ki			micr	sec
			Mx	E	3.0	20
			Mx	N	2.2	22
			Mx	Z	4.1	22
		Sk	iPP		07 49 26.4	
		De	iPP		07 49 49.6	
		Easter Island Ridge (h = N).				
		M = 5.8 (Up,Ki).				
"	21	Up	iP		10 46 19.8	
					micr	sec
			P	Z'	0.1	1.3
		Ki	iP		10 45 25.3	
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP		10 45 51.9	
		Um	iP		10 45 53.4	
		Ud	iP		10 46 16.5	
		De	iP		10 46 40.4	
		Kodiak Island (h = 45 km).				
		m = 5.8 (Up,Ki).				
"	21	Up	iSgl		11 43 37.6	
		Ki	iPn		11 39 23.6	
			iSn		11 40 24.0	
			iSgl		11 40 46.8	
		Sk	eSgl		11 43 08	
		Um	iSn		11 41 02.3	
			i		11 41 18.5	
			iSgl		11 41 36.8	
		(cont.)				

1973 Sept.	21	(cont.)				
		Ud	iSgl		11 44 10.9	
		De	iSgl		11 45 45.5	
		Northwest USSR.				
		Explosion.				
"	21	Ki	iPn		12 06 29.0	
			iSn		12 07 16.9	
			iS*		12 07 30.4	
		Um	iSgl		12 08 58.9	
		Northwest USSR-Norway.				
		Explosion.				
"	21	Up	iSgl		12 20 46.6	
		Um	iSgl		12 21 02.4	
		Ud	iSgl		12 21 46.2	
		De	iSgl		12 22 12.0	
		Western USSR.				
		Explosion.				
"	21	Up	iSgl		13 09 51.0	
		Ud	iPgl		13 09 19.8	
			iSgl		13 09 48.3	
		De	iPgl		13 09 12.9	
			iSn		13 09 35.1	
			iSgl		13 09 36.3	
			iRg		13 09 46.0	
		Östergötland-Småland, Sweden, 58.1°N, 14.7°E.				
		Origin time = 13 08 43.				
"	21	Up	iSn		13 12 56.0	
			iSgl		13 13 06.5	
		Ki	iSgl		13 15 46.0	
		Sk	iSgl		13 15 07.1	
		Um	iSgl		13 13 41.5	
		Ud	iSn		13 13 43.2	
			iSgl		13 14 11.4	
		De	iSgl		13 14 37.0	
		Esthonia.				
		Explosion.				
"	21	Up	iP		14 00 42.1	D
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP		14 00 22.0	D
		Um	iP		14 00 29.3	D
		Ud	iP		14 00 51.8	D
		Luzon (h = 20 km).				
"	21	Up	iPKP1		19 46 51.0	D
			iSKP1		19 49 33.2	
			iSKP2		19 49 52.8	
			i(PP)		19 50 10.6	
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept. 21 (cont.)

			micr	sec	
Up					
	PKPl	Z'	1.8	1.0	
Ki	i(PKP)		19 46 28.8		
	iPKP		19 46 40.1		
	iSKPl		19 49 12.9		
			micr	sec	
	PKP	Z'	0.1	1.0	
	SKPl	Z'	0.2	1.0	
Sk	iPKP		19 46 43.4		
	iSKPl		19 49 27.9		
Um	i(PKP)		19 46 37.5		
	iPKP		19 46 47.9		
	iSKPl		19 49 23.3		
Ud	iPKPl		19 46 53.7	D	
	iSKPl		19 49 35.1		
	iSKKP		19 57 38.6		
De	iPKP		19 46 58.9		
	iPKPl		19 47 02.9	D	
	ipPKPl		19 49 24.6		

Tonga-Kermadec Islands.
h = 650 km (De).

" 21

Up	iPKPl	19 54 27.5	D
Ud	iPKPl	19 54 30.1	D
De	iPKPl	19 54 39.5	D

Tonga-Kermadec Islands.
Origin time = 19 36 06.

" 21

Up	iPKPl	20 26 18.7	D
Ud	iPKPl	20 26 20.9	D
De	iPKPl	20 26 30.4	D

Tonga-Kermadec Islands.
Origin time = 20 07 56.

" 21 Up iPKPl 21 35 47.6

" 22

			micr	sec
Ki	iP		01 53 03.2	
	P	Z'	0.1	1.0
Ud	iP		01 53 27.1	

Mindanao (h = 530 km).

" 22

Up	iPKPl	02 19 14.2
Ud	iPKPl	02 19 16.3
De	iPKPl	02 19 25.6

" 22

Ki	iP	02 37 21.5
Ud	iP	02 36 46.9

North Atlantic Ocean (h = N).

" 22

			micr	sec
Up	iS		03 14 10	
	Mx	E	1.6	21

(cont.)

1973 Sept. 22 (cont.)

			micr	sec
Up				
	Mx	N	1.6	18
	Mx	Z	3.5	23
Ki	iP		03 06 56.8	
			micr	sec
	Mx	E	0.8	17
	Mx	N	0.8	17
	Mx	Z	0.7	15
Sk	iP		03 06 27.1	
Um	iP		03 06 53.0	
Ud	iP		03 06 24.7	

North Atlantic Ocean (h = N).
M = 5.2 (Up,Ki).

" 22

			micr	sec
Up	iP		03 07 05.4	
	P	Z'	0.5	1.8
Ki	iP		03 07 26.1	
			micr	sec
	P	Z'	0.1	1.0
Ud	iP		03 06 51.9	
De	iP		03 06 47.0	

North Atlantic Ocean.
Origin time = 02 57 47.
m = 6.0 (Up,Ki).

" 22

			micr	sec
Ki	iP		05 14 25.4	
	Mx	E	0.8	17
	Mx	N	0.5	17
	Mx	Z	1.0	18
Sk	iP		05 14 48.0	
Ud	iP		05 14 51.9	

Mindanao (h = 35 km).

" 22

Ki	iP	05 55 07.8
Ud	iP	05 55 33.2

Mindanao (h = 55 km).

" 22 Ud iP 06 34 52.2
Aegean Sea (h = 90 km).

" 22

Sk	eP	08 13 10
Ud	iP	08 12 59.4

" 22 Ud iP 09 29 06.2
Iran (h = N).

" 22

Ki	iP	09 37 46.9
Um	eP	09 38 00
Ud	iP	09 38 25.8

Bonin Islands (h = 410 km).

" 22 Ki i(Sgl) 09 58 35.5

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Sept. 22 Up eP 10 12 42
Sk iP 10 12 53.1
Ud iP 10 12 50.0

" 22 Up iP 11 43 37.0
micr sec
P Z' 0.1 0.9
Ki iP 11 43 46.9
iPP 11 45 18.5
Sk iP 11 44 03.0
Um iP 11 43 34.4
Ud iP 11 43 53.2
De iP 11 43 50.3
Hindu Kush (h = 120 km).

" 22 Ki iPn 12 33 42.1
iPgl 12 33 50.5
iSn 12 34 30.7
iSgl 12 34 46.5
Northwest USSR-Norway.
Explosion.

" 22 Ki iSn 12 35 58.1
iS* 12 36 11.8
Um iSgl 12 37 23.3
Northwest USSR.
Explosion.

" 22 Ki iP 12 52 02.4
Ud iP 12 52 22.5
Talaud Islands (h = N).

" 22 Ki iPn 13 09 35.4
iSn 13 10 24.7
iS* 13 10 40.0
Um iSgl 13 12 05.3
Northwest USSR-Norway.
Explosion.

" 22 Ud iPKP1 13 45 31.0

" 22 Ki iP 13 45 42.6
Ud iP 13 46 34.5
Aleutian Islands (h = N).

" 22 Ud iP 16 14 06.3

" 22 Up iP 18 47 24.1
Ki iP 18 46 31.0
iPcP 18 47 15.5
Sk eP 18 47 01
Um iP 18 46 57.8
iPcP 18 47 31.7
Ud iP 18 47 24.1
De iP 18 47 45.9
Aleutian Islands (h = 35 km).

1973
Sept. 22 Up iP 19 38 47.7
Ki iP 19 37 54.0
iPcP 19 38 39.1
Sk iP 19 38 24.6
Um iP 19 38 20.8
iPcP 19 38 55.4
Ud iP 19 38 47.0
iPcP 19 39 12.3
De iP 19 39 09.2
Aleutian Islands (h = 50 km).

" 23 Ki iP 02 28 23.7
Kamchatka (h = 110 km).

" 23 Up iP 03 50 10.4
Ki eP 03 50 51
Sk eP 03 50 50
Ud iP 03 50 25.5
Iran (h = 40 km).

" 23 Ki iP 07 36 25.7
Ud iP 07 37 17.0
Kurile Islands (h = 40 km).

" 23 Ud iP 12 21 36.1
Leyte (h = N).

" 23 Up iP 12 38 46.4
micr sec
P Z' 0.1 1.2
Mx E 1.0 21
Mx N 2.8 22
Mx Z 1.6 20
Ki iP 12 38 28.8
micr sec
Mx E 0.5 14
Mx N 0.7 13
Mx Z 0.7 13
Um iP 12 38 35.3
Ud iP 12 38 54.3
Leyte (h = 40 km).
M = 5.6 (Up,Ki).

" 23 Ki iP 13 36 38.8
Ud iP 13 37 04.1
Mindanao (h = 35 km).

" 23 Ki iP 14 48 09.2
Ud iP 14 48 37.0
Mindanao (h = 45 km).

" 23 Up iP 16 53 32.0
micr sec
P Z' 0.1 1.0
Ki eP 16 53 14
(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept. 23 (cont.)

				micr	sec	
Ki		P	Z'	0.1	1.0	
Sk	iP			16 53 36.2		
Um	iP			16 53 19.9		
Ud	iP			16 53 40.2		
De	iP			16 53 47.7		

Mindanao (h = 45 km).
m = 6.0 (Up,Ki).

" 23	Ki	iP	17 03 32.9
	Um	iP	17 03 39.8
	Ud	iP	17 03 59.3

Mindanao (h = N).

" 23	Ud	iPKPl	18 01 20.7
	De	iPKPl	18 01 32.2

Tonga-Kermadec Islands
(h = 610 km).

" 23	Ki	eP	18 19 13
	Ud	iP	18 19 38.2
" 23	Ud	iP	21 22 49.7
" 23	Ud	iP	21 32 56.8
" 23	Ki	iP	22 14 43.0
	Um	iP	22 14 49.7
	Ud	iP	22 15 11.8

Luzon (h = 35 km).

" 23	Ki	eP	22 26 02
	Um	iP	22 26 06.7
	Ud	iP	22 26 28.5

Mindanao (h = 120 km).

" 23	Ud	iP	23 00 54.2
" 24	De	iP	02 00 50.0

New Guinea (h = N).

" 24	De	iPKPl	03 10 57.1 C

Fiji Islands (h = 580 km).

" 24	Ki	iP	06 58 19.5
		ipP	06 58 30.4

Aleutian Islands.
h = 40 km (Ki).

				micr	sec
" 24	Up				
		Mx	N	0.5	12
		Mx	Z	1.1	16
	Ki	iP		09 12 53.9	

(cont.)

1973 Sept. 24 (cont.)

				micr	sec
Ki		P	Z'	0.1	1.2
		Mx	E	1.2	16
		Mx	N	0.5	13
		Mx	Z	0.7	14
Sk	eP			09 13 42	
Um	iP			09 13 36.8	
	iS			09 17 42	
Ud	iP			09 14 14.2	

Arctic Ocean (h = N).
M = 4.4 (Up,Ki).

" 24	Ki	iP	09 24 56.4 C
	Um	iP	09 25 14.7 C
	Ud	iP	09 25 45.3

Japan (h = 60 km).

" 24	Ud	iP	10 24 18.8
" 24	Up	iP	10 54 09.6 C
	Ki	iP	10 53 51.6 C

				micr	sec
	P		Z'	0.1	1.0
Sk	iP			10 54 13.9 C	
Um	iP			10 53 57.6 C	
Ud	iP			10 54 18.3 C	
De	iP			10 54 24.1	

Mindanao (h = 45 km).

" 24	Up	iSgl	11 45 12.6
	Ki	iSgl	11 47 44.8
	Sk	iSgl	11 47 01.9
	Um	iSgl	11 45 46.2
	Ud	iSgl	11 46 17.4
	De	iSgl	11 46 45.7

Esthonia.
Explosion.

" 24	Um	i(P)	13 29 59.8
" 24	Up	iP	13 52 22.9
	Ki	iP	13 51 35.7
	Ud	iP	13 52 26.5
	De	iP	13 52 41.9

Kurile Islands (h = 45 km).

" 24	Ud	iP	20 41 20.3
" 24	Ki	ipP	22 11 49.4

Mariana Islands (h = 200 km).

" 24	Ki	i(P)	22 46 33.2

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept. 25 Ki iP 02 36 17.8
Sk iP 02 36 43.8
Ud iP 02 36 47.5
Luzon (h = 90 km).

" 25 Ud iP 02 44 37.5

" 25 Ki ePKP 03 42 24
South Sandwich Islands
(h = N).

" 25 Up iSKPl 03 58 35.9
Sk iSKPl 03 58 27.5
Ud iSKPl 03 58 40.2
New Hebrides Islands
(h = 620 km).

" 25 Ud iP 05 35 14.7 C
East of Crete (h = 80 km).

" 25 Ki eSn 09 33 09
iS* 09 33 28.9
Um iSgl 09 34 21.7
Northwest USSR.
Explosion.

" 25 Up iSgl 12 24 25.3
Ki eSgl 12 26 25
Sk iSgl 12 26 12.9
Um eSgl 12 24 43
Ud iSgl 12 25 29.2
De iSgl 12 25 58.5
Western USSR.
Explosion.

" 25 Um iSgl 12 46 30.3
Western USSR.
Explosion.

" 25 Ki iSgl 13 00 49.6
Sk eSgl 13 00 08
Um iSgl 12 58 51.2
Ud iSgl 12 59 14.1
Esthonia.
Explosion.

" 25 Up iP 13 07 42.3 C

		micr	sec
P	Z'	0.1	0.7

Ki iP 13 07 51.3 C

		micr	sec
P	Z'	0.1	0.9

Sk iP 13 08 07.8 C
(cont.)

1973 Sept. 25 (cont.)
Um iP 13 07 40.5 C
ipP 13 08 19.7
Ud iP 13 07 58.6 C
ipP 13 08 42.4
De iP 13 07 55.6
Hindu Kush.
h = 200 km (Um,Ud).
m = 5.4 (Up,Ki).

" 25 Up iSgl 13 22 36.1
Sk iSgl 13 22 38.0
Ud iSgl 13 21 37.1
Near coast of south Norway,
58.3°N, 6.8°E.
Origin time = 13 19 32.
Solution obtained by
combination with Kongsberg
readings.

" 25 Um iP 15 46 34.4
Ud iP 15 47 04.9
Japan (h = N).

" 25 Up iPKPl 16 37 21.2

		micr	sec
PKPl	Z'	0.1	1.1
Mx	E	3.8	20
Mx	N	3.6	20
Mx	Z	5.7	20

Ki iPKP 16 37 17.8
iPKPl 16 37 25.7

		micr	sec
PKPl	Z'	0.2	1.0
Mx	N	3.9	20
Mx	Z	3.8	19

Sk ePKP 16 37 22
iPKPl 16 37 30.8
Um iPKP 16 37 15.0
iPKPl 16 37 21.2
Ud iPKPl 16 37 25.0
iPKP2 16 37 40.6
De iPKPl 16 37 24.0
i 16 37 29.1
West of Macquarie Islands
(h = N).
M = 6.4 (Up,Ki).

" 25 Up iP 18 46 32.7
Ki iP 18 46 40.3
Sk iP 18 46 57.3 C
Um iP 18 46 30.2 C
Ud iP 18 46 49.1 C
Afghanistan-USSR (h = 110 km).

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973				
Sept.	25	Um	i(Pgl)	19 12 07.6
			i(Sg2)	19 12 14.3
"	25	Ki	iP	20 46 23.0
		Ud	iP	20 46 49.6
		Mindanao (h = 140 km).		
"	25	Um	iP	21 07 34.8
		Ud	iP	21 08 05.2
		Japan (h = 30 km).		
"	25	Ud	iP	22 39 44.2
		Mindanao (h = 90 km).		
"	26	Ud	iP	03 30 17.2
"	26	Ki	eP	04 47 39
		Ud	iP	04 48 05.3
"	26	Um	i	07 21 24.2
			i	07 21 36.2
			i(Sgl)	07 21 44.5
"	26	Ki	i(P)	07 34 10.0
"	26	Up	iS*	09 37 10.3
			iSgl	09 37 13.1
		Sk	iSgl	09 37 26.3
		Um	iSgl	09 38 34.0
		Ud	iP*	09 35 49.5
			iPgl	09 35 50.2
			iS*	09 36 11.0
			iSgl	09 36 13.0
		De	iPgl	09 36 26.1
			iSn	09 37 01.0
			iS*	09 37 13.1
			iSgl	09 37 16.4
		Oslo Fjord, Norway, 59.7°N, 10.5°E.		
		Origin time = 09 35 21.		
		Solution checked with Kongsberg readings.		
"	26	Up	iSgl	09 54 22.3
		Um	iSgl	09 54 45.2
		Ud	iSgl	09 55 22.0
		Esthonia.		
		Explosion.		
"	26	Up		micr sec
			Mx E	1.2 20
			Mx N	3.6 20
			Mx Z	2.7 20
		Ki	eP	09 59 25
		(cont.)		

1973				
Sept.	26	(cont.)		
		Ki		micr sec
			Mx N	3.1 21
			Mx Z	2.8 20
		Um	eP	09 59 34
		Ud	iP	09 59 51.0
		Leyte (h = N).		
		M = 5.8 (Up,Ki).		
"	26	Sk	eSgl	10 55 33
		Ud	iSgl	10 55 17.0
		Off coast of southwest Norway, 60.1°N, 4.5°E.		
		Origin time = 10 52 51.		
		Solution obtained by combination with Bergen readings.		
"	26	Ud	iP	14 03 04.3
"	26	Sk	iSgl	15 41 04.8
		Um	iSgl	15 39 18.7
		Lake Ladoga region.		
		Explosion.		
"	26	Ki	e(P)	15 44 08
		Sk	e(P)	15 44 31
"	26	Um	iP	15 52 11.0 D
		Ud	iP	15 52 32.9 D
		Mariana Islands (h = 100 km).		
"	26	Up	iPKP2	16 47 57.7
		Ki	iPKP	16 47 38.7
			iPKP1	16 47 45.6
				micr sec
			PKP1 Z'	0.1 1.2
		Sk	iPKP2	16 48 09.4
		Um	iPKP	16 47 38.4
			iPKP1	16 47 45.3
		Ud	iPKP2	16 48 05.4
		De	iPKP	16 47 43.1
		West of Macquarie Islands (h = N).		
"	26	Ud	iP	20 14 35.0 C
"	26	Ud	iP	21 22 37.2
"	26	Um	i(P)	21 38 56.4
"	27	Ud	iPKP1	01 19 18.3
		De	iPKP1	01 19 29.3

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973					
Sept.	27	Up	iP	02 12 25.4	
		Ki	iP	02 12 35.1	
		Sk	iP	02 12 50.5	
		Um	iP	02 12 24.3	C
		Ud	iP	02 12 41.6	C
		De	iP	02 12 37.3	
		Pakistan (h = 35 km).			
"	27	Ki	iP	02 16 24.4	
		Ud	eP	02 16 55	
"	27	Ud	iPKP	02 26 02.6	
		De	iPKP	02 26 12.5	
"	27	Ki	eP	02 34 45	
		Um	iP	02 34 20.6	
		Ud	iP	02 34 18.9	
		De	iP	02 33 59.6	
		Iran (h = 40 km).			
"	27	Um	i(Sgl)	03 31 15.1	
"	27	Up	iP	04 42 07.7	
		Ki	eP	04 41 50	
		Um	iP	04 41 56.8	
		Ud	iP	04 42 16.2	
		Mindoro (h = N).			
"	27	Ki	iSgl	06 37 24.1	
		Um	iSgl	06 35 29.1	
		Ud	iSgl	06 36 06.6	
		De	eSgl	06 36 39	
		Esthonia.			
		Explosion.			
"	27	Up	i(P)	07 04 09.0	C
			iP	07 04 12.8	
			iS	07 07 25.0	
			i	07 07 48.4	
				micr	sec
			P Z'	0.6	0.9
			Mx E	0.9	2
			Mx N	1.4	2
			Mx Z	0.8	2
		Ki	iP	07 02 48.1	C
			i	07 04 13.9	
			iS	07 04 54.7	
				micr	sec
			P Z'	2.5	0.8
			Mx N	1.0	8
			Mx Z	1.1	8
		Sk	i(P)	07 03 55.3	
			i	07 03 56.2	
			i	07 03 57.8	
		(cont.)			

1973					
Sept.	27	(cont.)			
		Sk	iP	07 03 59.2	
		Um	iP	07 03 20.3	
			i(S)	07 05 54.2	
		Ud	i(P)	07 04 22.9	C
			iP	07 04 26.1	
		De	iP	07 04 54.9	C
		Novaya Zemlya.			
		m = 6.1 (Up,Ki).			
		Underground explosion.			
		Sk,Up,Ud in the distance range about 17°1/2 to 20° exhibit large P onsets, marked P, preceded by considerably smaller P onsets, marked (P), about 3.6 sec earlier. The other stations show no precursors to the large P.			
"	27	Um	iP	08 20 41.3	
		Japan (h = 40 km).			
"	27	Um	iPKPl	09 45 26.9	
"	27	Up	eSgl	10 06 13	
		Ud	iSgl	10 05 11.7	
		De	iSgl	10 05 55.5	
		Off coast of southwest Norway, 60.1°N, 4.5°E.			
		Origin time = 10 02 48.			
		Solution obtained by combination with Bergen and Kongsberg readings.			
"	27	Sk	i(Pgl)	10 25 08.3	
			i(Sg2)	10 25 11.3	
"	27	Up	iSgl	12 21 17.2	
		Ki	eSgl	12 23 11	
		Sk	iSgl	12 23 05.6	
		Um	iSgl	12 21 33.6	
		Ud	iSgl	12 22 15.9	
		De	iSgl	12 22 41.8	
		Western USSR.			
		Explosion.			
"	27	Up	iSn	12 22 10.1	
			iSgl	12 22 19.8	
		Um	iSgl	12 22 55.1	
		Ud	iS*	12 23 15.4	
			iSgl	12 23 21.1	
		De	iSgl	12 23 54.2	
		Esthonia.			
		Explosion.			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Sept. 27 Up eP 12 32 57
micr sec
P Z' 0.1 1.5
Mx E 5.8 20
Mx N 5.7 20
Mx Z 5.7 17
Ki iP 12 31 44.7
micr sec
P Z' 0.1 1.0
Mx N 12 19
Mx Z 6.2 17
Sk iP 12 31 51.2
iS 12 33 59.0
Um iP 12 32 24.2
iS 12 34 46.6
Ud iP 12 32 38.0
De iP 12 33 18.0
Jan Mayen (h = N).
m = 4.8, M = 5.1 (Up,Ki).

" 27 Up iSgl 13 13 43.3
Ki iSgl 13 15 42.0
Sk iSgl 13 15 26.2
Um iSgl 13 13 58.3
iRg 13 14 36.6
Ud iSgl 13 14 42.0
De eSgl 13 15 03
iSg2 13 15 13.8
Western USSR.
Explosion.

" 27 At 13 41, 13 51, 13 55, 13 56, 13 59, 14 00 and 14 44 events are recorded at Um, probably near explosions.

" 27 Sk eSgl 14 39 25
Um iSgl 14 37 34.9
i 14 37 39.5
Ud eSgl 14 39 10
Lake Ladoga region.
Explosion.

" 27 Up eP 22 16 28
Ki iP 22 17 06.6
Ud iP 22 16 42.6
Gulf of Aden (h = N).

" 27 Ud iP 23 17 59.9
Sunda Strait (h = 90 km).

" 28 Up iP 00 20 18.0
Um iP 00 19 56.6 C
Japan (h = 60 km).

1973
Sept. 28 Up iP 01 11 16.4
ipP 01 11 46.9
micr sec
pP Z' 0.1 0.7
Ki iP 01 11 16.0
ipP 01 11 46.7
micr sec
pP Z' 0.1 0.7
Sk iP 01 11 30.8
ipP 01 12 00.7
Um iP 01 11 13.2
ipP 01 11 43.3
Ud iP 01 11 26.6
ipP 01 11 57.2
De iP 01 11 25.7
ipP 01 11 55.5
Sumatra.
h = 120 km (Up,Ki,Sk,Um,Ud, De).

" 28 Ki iP 05 27 15.5
Hindu Kush.
Intermediate depth.

" 28 At 05 53, 06 21 and 09 31 events are recorded at Um, probably near explosions.

" 28 Ki iP 09 23 52.7
Um iP 09 23 42.3
Ud iP 09 24 00.8
Hindu Kush.
Intermediate depth.

" 28 Ki iPn 10 27 41.3
iPgl 10 27 49.3
iSn 10 28 27.4
iSgl 10 28 41.4
Um iSgl 10 30 14.7
Northwest USSR-Norway.
Explosion.

" 28 Ki eSgl 11 35 22
Um iSgl 11 36 13.7
Northwest USSR.
Explosion.

" 28 Up iP 11 41 34.1
Ki iP 11 42 13.7
micr sec
P Z' 0.1 1.5
Mx N 0.6 18
Mx Z 0.5 15
Gulf of Aden (h = N).

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Sept. 28 Um iSgl 12 17 31.6
Ud iSgl 12 18 12.6
Western USSR.
Explosion.

" 28 Ud iP 16 53 00.4
Aleutian Islands (h = 110 km).

" 28 Up iSgl 20 43 44.3
iRg 20 43 49.1
Sk iSgl 20 45 14.0
Um iSn 20 45 00.3
iSgl 20 45 12.8
Ud iSgl 20 44 01.2
i 20 44 05.9
iRg 20 44 09.5
Central Sweden,
60.5°N, 16.5°E.
Origin time = 20 43 17.
Probably explosion.

" 29 Ki iPKPl 00 11 38.5
Um iPKPl 00 11 37.4
Ud iPKP2 00 11 58.9
West of Macquarie Islands
(h = N).

" 29 Up iP 00 53 43.2 D
iS 01 01 30

		micr	sec
P	Z'	4.5	1.0
Mx	E	48	20
Mx	N	58	22
Mx	Z	75	18

Ki iP 00 53 05.3 D

		micr	sec
P	Z'	7.0	0.8
Mx	E	90	20
Mx	N	74	17
Mx	Z	36	15

Sk iP 00 53 39.1 D
Um iP 00 53 21.5 D
ipP 00 55 13
Ud iP 00 53 51.5 D
De iP 00 54 06.1 D
Russia-China.
h = 580 km (Um).
m = 6.9, M = 7.0 (Up,Ki).
M uncorrected for focal
depth; remarkably large
surface waves for this
focal depth.

" 29 Ki iSn 12 48 34.5
iS* 12 48 48.7
Northwest USSR.
Explosion.

1973
Sept. 29 Ki iP 13 57 07.6
Um iP 13 57 23.3
Ud iP 13 57 50.9
Japan (h = 55 km).

" 29 Up iPgl 14 34 13.5
iSgl 14 34 44.4
Ki iSgl 14 36 50.8
Sk iSgl 14 35 52.6
Um i 14 34 30.8
iS* 14 34 42.4
iSgl 14 34 44.3
Ud iSgl 14 35 36.3
Gulf of Bothnia,
61.5°N, 20.7°E.
Origin time = 14 33 35.
Explosion?

" 29 Up iPgl 14 34 32.4
iSgl 14 35 02.1
Ki iSgl 14 37 09.4
Sk iSgl 14 36 11.2
Um i 14 34 49.5
iS* 14 35 00.9
iSgl 14 35 02.6
Ud iSgl 14 35 54.5
Gulf of Bothnia,
61.5°N, 20.7°E.
Origin time = 14 33 53.
Explosion?

" 29 Ud iP 21 20 59.3

" 30 Up iP 05 01 27.2
Ki iP 05 00 59.9 C

		micr	sec
P	Z'	0.1	1.0

Sk iP 05 01 25.1 C
Um iP 05 01 10.6 C
Ud iP 05 01 32.8
Mariana Islands (h = 80 km).

" 30 Up iP 05 04 54.6 C
iLgl 05 11 22.7

		micr	sec
P	Z'	0.4	0.9

Ki iP 05 05 06.0 C
iLgl 05 11 56.9

		micr	sec
P	Z'	0.2	1.0

Sk iP 05 05 24.5 C
iPn 05 05 34.7
iLgl 05 12 59.2
Um iP 05 04 50.1 C
iPn 05 04 53.7
(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Sept. 30 (cont.)

	Ud	iP	05 05 15.6	C
		iS	05 09 35.7	
		iLgl	05 12 27.2	
	De	iP	05 05 14.4	C
		iPn	05 05 21.2	
		iS	05 09 34.0	

Near the River Ural, south of Ural Mountains.
m = 5.7 (Up,Ki).
Underground explosion.

" 30	Ki	iSn	05 40 41.3	
		iSgl	05 41 02.1	
	Um	i	05 41 36.7	
		iSgl	05 41 57.1	

Northwest USSR.
Explosion.

" 30	Up	iP	06 29 21.8	C
		iS	06 38 44	
			micr	sec
		P Z'	0.6	1.2
		Mx E	4.0	25
		Mx N	4.1	25
		Mx Z	4.2	25
	Ki	iP	06 28 43.5	C
		iPP	06 31 13.2	
		iS	06 37 36	
			micr	sec
		P Z'	0.5	1.3
		Mx E	3.5	17
		Mx N	2.2	15
		Mx Z	2.7	17
	Sk	iP	06 29 16.3	
	Um	iP	06 29 00.2	C
		iS	06 38 06	
	Ud	iP	06 29 28.7	
	De	iP	06 29 43.5	C

Japan (h = 60 km).
m = 6.4, M = 5.8 (Up,Ki).

" 30	Sk	eP	09 43 25
	Ud	iP	09 43 29.1

" 30	Ki	iP	10 22 06.5
	Ud	iP	10 22 32.2

Mindanao (h = 80 km).

" 30	Ki	ePKP	10 55 26
	Um	iPKP	10 55 18.3

South Sandwich Islands (h = 30 km).

" 30	Um	iP	13 29 08.8

1973 Sept. 30

	Ki	iSn	14 27 06.4
		iS*	14 27 25.8
	Um	iSn	14 27 44.5
		iSgl	14 28 19.9

Northwest USSR.
Explosion.

" 30	Ki	iP	14 35 20.9

Tibet (h = N).

" 30	Up	iPgl	15 29 04.2
		iSgl	15 29 20.3
		iRg	15 29 26.4
	Um	iSgl	15 31 06.6
	Ud	iSgl	15 29 10.2
		iRg	15 29 13.7
	De	iSgl	15 30 30.7

Bergslagen, central Sweden, 59.9°N, 15.2°E.
Origin time = 15 28 44.

" 30	Ki	iP	17 42 43.4
	Um	iP	17 43 15.5
	Ud	iP	17 43 36.9

Alaska (h = N).

" 30	Ki	iP	20 38 14.9
	Sk	eP	20 37 48
		i	20 37 53.6
	Ud	iP	20 37 50.8

Venezuela (h = 35 km).

" 30	Ki	eP	21 07 07
	Ud	iP	21 06 49.4

Venezuela (h = 35 km).

" 30	Ki	iP	21 07 42.7
	Um	iP	21 07 16.5
	Ud	iP	21 07 16.1

Iran (h = 50 km).

Markus Båth
Klaus Meyer
Rutger Wahlström

April 15, 1975

SEISMOLOGICAL INSTITUTE
BOX 517
S-751 20 UPPSALA
SWEDEN

S E I S M O L O G I C A L B U L L E T I N

U P P S A L A, K I R U N A, S K A L S T U G A N, U M E Å, U D D E H O L M and D E L A R Y

Uppsala	(Up):	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(Ki):	67°50.4'N,	20°25.0'E;	h = 390 m
Skalstugan	(Sk):	63°34.8'N,	12°16.8'E;	h = 580 m
Umeå	(Um):	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(Ud):	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(De):	56°28.2'N,	13°52.2'E;	h = 150 m

O C T O B E R 1 - 31, 1973

1973 Oct.						
	1	Ki	iP		05 09 29.9	
					micr	sec
			Mx	E	1.5	18
			Mx	N	0.7	18
			Mx	Z	1.0	18
		Um	iP		05 09 31.9	
		Ud	iP		05 09 49.7	
		Mindanao (h = 70 km).				
"	1	Um	i		06 26 12.8	
			iSg1		06 26 30.2	
"	1	Ud	i		10 48 10.2	
			i(Sg1)		10 48 19.1	
"	1	Ki	iPg1		11 21 02.6	
			iSn		11 21 40.6	
			iS*		11 21 53.0	
		Um	iSg1		11 23 27.2	
		Northwest USSR-Norway. Explosion.				
"	1	Up	iSg1		11 38 19.7	
		Ki	iSg1		11 40 52.4	
		Um	iSg1		11 38 53.1	
		Ud	iSg1		11 39 26.7	
		De	iSg1		11 39 52.9	
		Esthonia. Explosion.				
"	1	Up	iP		14 27 51.3	
			ipP		14 28 04.9	
			iS		14 37 18	
					micr	sec
			P	Z'	0.2	1.1
			pP	Z'	0.7	1.5
			Mx	E	2.2	17
			Mx	N	3.2	25
			Mx	Z	3.5	23

(cont.)

1973 Oct.						
	1	(cont.)				
		Ki	iP		14 27 13.8	
			ipP		14 27 28.9	
					micr	sec
			P	Z'	0.1	1.0
			pP	Z'	0.2	1.0
			Mx	E	4.1	21
			Mx	N	3.0	22
			Mx	Z	4.3	20
		Um	iP		14 27 30.6	C
			ipP		14 27 46.6	
		Ud	iP		14 27 59.3	C
			ipP		14 28 13.5	
		De	iP		14 28 14.6	
			ipP		14 28 27.5	
		Japan. h = 55 km (Up,Ki,Um,Ud,De). m = 6.0, M = 5.8 (Up,Ki).				
"	1	Um	iPKP		14 40 53.9	
"	1	Um	iP		14 57 12.6	
		Japan (h = 60 km).				
"	1	Up	iPg1		16 45 09.0	
			iSg1		16 45 48.8	
			iSg2		16 45 52.2	
			i		16 45 58.1	
		Ki	iSg1		16 48 50.0	
		Sk	iSg1		16 46 09.7	
		Um	iSg1		16 47 08.5	
			i		16 47 09.7	
		Ud	iPg1		16 44 34.1	D
			iSg1		16 44 48.7	
		De	ePg1		16 45 20	
			i		16 45 47.7	
			iSg1		16 46 06.6	
			i		16 46 09.6	

(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	1	(cont.) Norway-Sweden border region, 60.0°N, 11.9°E. Origin time = 16 44 19. Felt.			
"	2	De	iPKP	00 02 33.5	
		New Britain (h = 230 km).			
"	2	Up	iP	00 20 49.0	
		Ud	iP	00 21 07.0	
			i	00 21 11.9	
		Mongolia (h = N).			
"	2	Up	iP	03 11 20.7	
			ipP	03 11 38.7	
		Ki	iP	03 11 03.0	
				micr sec	
			Mx E	0.6 14	
			Mx N	0.7 15	
		Ud	iP	03 11 38.2	
			i	03 11 49.9	
			ipP	03 11 56.4	
		Formosa. h = 70 km (Up,Ud).			
"	2	Up	iP	08 40 36.6	
				micr sec	
			P Z'	0.1 0.9	
		Ki	iP	08 39 52.6	
		Sk	iP	08 40 27.5	
		Ud	iP	08 40 42.7 C	
			iPcP	08 41 07.5	
		De	iP	08 40 59.7	
		Japan (h = 50 km).			
"	2	Sk	iP	09 48 49.8	
		Mariana Islands (h = 45 km).			
"	2	Ud	iP	09 51 35.6 C	
"	2	Up	iSg1	12 24 13.4	
			i	12 24 22.5	
		Ki	i	12 26 13.7	
			iSg1	12 26 44.3	
		Sk	eSg1	12 26 01	
		Um	iSg1	12 24 46.5	
		Ud	iSg1	12 25 19.4	
		De	iSg1	12 25 45.6	
		Esthonia. Explosion.			
"	2	De	iP	12 25 00.0	
		Hindu Kush. Intermediate depth.			
1973 Oct.	2	Up	iP	12 37 05.3	
		Ki	iP	12 36 49.8	
		Sk	iP	12 37 15.6	
		Um	iP	12 36 59.5 C	
		Ud	iP	12 37 14.3 C	
		Bali (h = 90 km).			
"	2	Um	i(Sg1)	13 24 48.8	
		Ud	i(Sg1)	13 25 16.0	
"	2	Um	i(P)	14 47 51.8	
			i	14 48 04.4	
"	2	Ud	iP	15 18 13.7	
		Leyte (h = 80 km).			
"	2	Up	iP	16 11 29.4	
		Um	iP	16 11 26.2	
		Ud	iP	16 11 45.7	
		De	iP	16 11 44.6	
		Kashmir (h = 70 km).			
"	2	Ki	eP	19 38 27	
		Ud	iP	19 39 18.5	
			ipP	19 39 30.1	
		Kurile Islands. h = 45 km (Ud).			
"	2	Ki	iP	21 17 38.1	
		Um	iP	21 17 42.9	
		Costa Rica (h = 90 km).			
"	2	Up	i(Rg)	21 18 12.7	
		Ud	iRg	21 17 59.1	
		De	i(Sg1)	21 19 11.0	
"	2	Up	iP	21 31 11.1	
		Ki	iP	21 30 55.9	
		Sk	iP	21 31 17.0	
		Ud	iP	21 31 21.8	
		Mindanao (h = 70 km).			
"	2	Up	iP	22 41 56.5	
		Ki	iP	22 41 37.0	
		Um	iP	22 41 44.0	
		Ud	iP	22 42 02.9	
		Leyte (h = 45 km).			
"	3	Up	eP	04 40 12	
				micr sec	
			P Z'	0.2 1.5	
			Mx E	0.9 18	
			Mx N	0.8 19	
			Mx Z	1.2 18	
		(cont.)			

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct. 3 (cont.)

	Ki	iP	04 39 48.9	
			micr	sec
	Mx	E	0.7	16
	Mx	N	0.7	17
	Mx	Z	0.8	16
	Um	iP	04 40 01.2	
	Ud	iP	04 40 04.1	
	De	iP	04 40 17.3	

Gulf of California
(h = 9 km).
M = 5.2 (Up,Ki).

" 3	Ki	iP	05 40 31.9
	Ud	iP	05 40 59.8

Mindanao (h = 130 km).

" 3	Ki	iP	08 17 49.4
	Um	iP	08 17 21.4
	Ud	iP	08 17 20.8
	De	iP	08 17 03.3

Iran (h = 45 km).

" 3	Ud	iPKP1	08 57 47.8
	De	iPKP1	08 57 59.8

Tonga-Kermadec Islands
(h = 90 km).

" 3	Up	iP	08 58 53.3	
		i	08 59 02.5	
	Ki	iP	08 58 00.2	
			micr	sec
		P Z'	0.1	0.7
	Ud	iP	08 58 54.2	

Aleutian Islands
(h = 35 km).

" 3	Up	iP	09 29 41.2	C
	Ki	iP	09 30 29.0	
		i	09 30 41.2	
		ePP	09 31 11	
	Sk	iPn	09 30 40.4	
	Um	iP	09 30 00.3	
		iPn	09 30 20.4	
	Ud	iP	09 29 58.5	
	De	eP	09 29 41	

Caucasus.

" 3	Up	iP	10 43 29.4
	Ud	iP	10 43 47.8

Caucasus.

" 3	Up	iP	10 46 49.5	
			micr	sec
		P Z'	0.1	0.8

(cont.)

1973 Oct. 3 (cont.)

	Up		micr	sec
	Mx	E	1.0	18
	Mx	N	1.2	22
	Mx	Z	1.1	21
	Ki	iP	10 46 03.0	
			micr	sec
	P	Z'	0.1	0.8
	Mx	E	1.4	17
	Mx	N	1.8	20
	Mx	Z	1.1	18
	Sk	iP	10 46 38.4	
	Um	iP	10 46 24.7	
	Ud	iP	10 46 55.5	C
	De	iP	10 47 14.2	C

Kurile Islands (h = N).
m = 6.1, M = 5.3 (Up,Ki).

" 3	Ud	iPg1	11 14 24.6
		iSg1	11 15 13.0

Southwest Norway,
60.3°N, 6.1°E.
Origin time = 11 13 17.
By combination with
Kongsberg readings.

" 3	Ud	iP	11 26 50.1

" 3	Up	iPKP1	11 28 13.5	
		iPKP2	11 28 21.8	
			micr	sec
	PKP2	Z'	0.1	0.6
	Mx	E	0.8	21
	Mx	N	1.3	23
	Mx	Z	1.2	22
	Ki	iPKP1	11 27 58.8	
			micr	sec
	Mx	E	0.9	22
	Mx	N	1.0	21
	Mx	Z	0.9	20
	Sk	iPKP1	11 28 08.0	
		iPKP2	11 28 19.1	
	Um	iPKP1	11 28 02.6	
		iPKP2	11 28 11.9	
	Ud	iPKP	11 28 09.0	
		iPKP1	11 28 15.4	
	De	iPKP	11 28 15.3	
		iPKP1	11 28 23.3	

South of Kermadec Islands
(h = 35 km).
M = 5.8 (Up,Ki).

" 3	Ki	iPn	12 06 46.7
		iSn	12 07 35.5
		iSg1	12 07 53.1

(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	3	(cont.)			
		Sk	e	12 09 57	
			iSg1	12 10 38.1	
		Um	i(Sn)	12 08 45.6	
			iSg1	12 09 16.7	
		Ud	iSg1	12 11 54.1	
		De	iSg1	12 13 34.6	
		Northwest USSR-Norway. Explosion.			
"	3	Ud	iSg1	12 48 19.8	
		Southwest Norway, 60.3°N, 6.1°E. Origin time = 12 46 25. By combination with Bergen and Kongsberg readings.			
"	3	Up	iP	12 52 57.0	
		Um	iP	12 52 34.7	
			ipP	12 52 45.5	
		Ud	iP	12 53 04.3	C
			ipP	12 53 15.3	
		De	iP	12 53 19.6	
			ipP	12 53 32.9	
		Japan. h = 45 km (Um,Ud,De).			
"	3	Up	iP	13 05 50.4	
		Ki	iP	13 05 03.5	
		Um	iP	13 05 25.1	
		Ud	iP	13 05 56.1	C
		De	iP	13 06 14.6	
		Kurile Islands (h = N).			
"	3	Up	iSg1	15 27 32.1	
		Ud	i	15 28 44.9	
		De	iSg1	15 26 54.3	
			iRg	15 27 05.0	
			i	15 27 56.3	
		Probably southern Baltic Sea. Explosion?			
"	3	Ud	iPg1	15 34 36.8	
			iSg1	15 35 26.6	
		Southwest Norway, 60.3°N, 6.1°E. Origin time = 15 33 29. By combination with Bergen and Kongsberg readings.			
"	3	Up	iPKP	16 04 33.0	
		Um	iPKP	16 04 30.2	
		New Zealand (h = 170 km).			
"	3	Ud	iPKP1	17 29 17.9	
1973 Oct.	4	Up	iP	05 19 33.0	
			i	05 19 39.5	
		Ud	iP	05 19 47.2	
"	4	Ki	iP	06 13 26.8	
		Ud	iP	06 12 58.0	
		De	iP	06 12 39.3	
"	4	Ki	i(P)	10 27 50.7	
		Um	iP	10 27 15.9	
"	4	Ud	iPKP1	11 31 09.9	
"	4	Up	iSg1	12 18 52.6	
		Sk	iSg1	12 18 13.1	
		Um	iSg1	12 19 45.6	
		Ud	iPg1	12 17 01.9	
			iSg1	12 17 53.9	
		De	iSg1	12 18 47.1	
		Southwest Norway, 60.3°N, 6.1°E. Origin time = 12 15 54. By combination with Kongsberg and Bergen readings.			
"	4	Up	iSn	12 48 44.2	
			iSg1	12 48 56.5	
		Sk	iSg1	12 50 48.9	
		Um	iSg1	12 49 32.2	
		Ud	iSn	12 49 34.3	
			iSg1	12 50 04.9	
		Esthonia. Explosion.			
"	4	Up	iP	13 49 43.1	
		Ki	iP	13 48 55.9	
		Um	iP	13 49 17.4	C
		Ud	iP	13 49 48.7	
		Kurile Islands (h = N).			
"	4	Um	iP	14 25 51.6	
		Ud	iP	14 26 22.9	
"	4	Up	i(Sg1)	14 47 50.5	
"	4	Ud	iP	15 37 44.8	
		De	iP	15 38 12.0	
"	4	Up	iP	16 47 51.0	
		Ud	iP	16 47 47.7	
"	4	Up	iPKP1	18 17 56.6	
		Sk	ePKP	18 17 52	
		(cont.)			

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	4	(cont.)			
		Um	iPKP	18 17 51.0	
			i	18 17 56.4	
		Ud	iPKP1	18 17 59.1	
			i	18 18 08.0	
		De	iPKP1	18 18 10.6	C
		Fiji Islands (h = 640 km).			
"	4	Up	iP	19 07 59.6	
		Ki	iP	19 07 12.9	
		Um	iP	19 07 34.4	
		Ud	iP	19 08 05.4	
		Kurile Islands (h = N).			
"	4	Up	iPKP1	23 33 44.2	D
		Ud	iPKP1	23 33 49.1	
		De	iPKP1	23 33 56.4	
"	5	Ud	iPKP1	04 45 44.0	
"	5	Up	iP	04 57 20.6	
		Sk	iP	04 58 01.3	
		Ud	iP	04 57 27.0	
		De	eP	04 56 53	
		Greece (h = 25 km).			
"	5	Up	ePKP	06 04 19	
			iPP	06 05 22.1	
			iPKKP	06 15 01.0	
				micr	sec
			PP Z'	0.1	1.5
			Mx E	11	19
			Mx N	17	20
			Mx Z	30	20
		Ki	iPP	06 05 51	
				micr	sec
			Mx E	21	18
			Mx N	14	17
			Mx Z	15	17
		Um	eP	06 00 43	
			iPKP	06 04 20.4	
			iPP	06 05 35	
			iPKKP	06 15 03.8	
			i	06 15 09.1	
		Ud	ePKP	06 04 07	
			iPP	06 05 10.8	
			ePKKP1	06 14 50	
			iPKKP	06 15 08.6	
		De	iPKP	06 04 07.9	
			iPP	06 05 05.2	
			iPKKP2	06 14 57.1	
			iPKKP	06 15 03.3	
			i	06 15 14.8	
		Chile (h = 15 km).			
		M = 6.8 (Up,Ki).			

1973 Oct.	5	Up	iPKP	06 06 36.9	
			iPP	06 07 47	
			iPKKP	06 17 18.2	
		Ki	iPKP	06 06 40.5	
		Sk	iPP	06 07 29.5	
		Um	iP	06 03 06	
			ePKP	06 06 37	
			iPP	06 07 59	
		Ud	iPKP	06 06 29.7	
			iPP	06 07 34.0	
			iPKKP1	06 17 11.6	
			iPKKP	06 17 24.8	
		De	iPKP	06 06 29.3	
			iPP	06 07 28.1	
			iPKKP1	06 17 04.9	
		Chile (h = N).			
		Surface waves mixed with those of the preceding event.			
"	5	Up	iPP	07 27 29.4	
				micr	sec
			Mx E	1.9	20
			Mx N	1.9	18
			Mx Z	3.1	18
		Ki		micr	sec
			Mx E	2.7	17
			Mx N	2.9	17
			Mx Z	2.7	18
		Ud	iPKP	07 26 13.8	
			iPP	07 27 16.6	
			iPKKP1	07 36 51.4	
		Chile (h = 25 km).			
		M = 6.1 (Up,Ki).			
"	5	Um	iSg1	07 50 41.3	
		Western USSR.			
		Explosion.			
"	5	Up	i(P)	08 14 03.4	
		Ud	iP	08 13 59.2	
"	5	Ud	iP	08 32 55.9	
"	5	Sk	eSg1	12 20 52	
		Um	iSg1	12 19 18.8	
		Western USSR.			
		Explosion.			
"	5	Up	iP	12 48 17.6	
		De	iP	12 48 54.3	
"	5	Up	i(Rg)	13 40 17.1	
		Ud	i(Rg)	13 40 36.5	

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	5	Up	iPKP1	15 02 42.0	
		Ud	iPKP1	15 02 36.5	
		De	iPKP1	15 02 47.1	
"	5	Up	iP	19 01 11.7	
"	5	Up	iP	20 30 38.0	
		Um	iP	20 30 36.2	C
		Ud	iP	20 30 54.5	C
		De	iP	20 30 53.2	
		Hindu Kush (h = 230 km).			
"	5	Up	iPg1	21 15 01.2	
			iSg1	21 15 17.6	
			iRg	21 15 20.6	
		Sk	iSg1	21 16 48.5	
		Um	iSg1	21 17 03.6	
		Ud	iRg	21 15 10.8	
		De	iSg1	21 16 24.3	
		Central Sweden, 59.8°N, 15.3°E. Origin time = 21 14 40. Near-surface phenomenon (explosion?), as evidenced by clear Rg waves.			
"	5	Up	iP	21 31 25.7	C
		Ki	iP	21 30 41.0	
		Sk	iP	21 31 17.1	
		Um	iP	21 31 00.9	C
		Ud	iP	21 31 32.0	C
		De	iP	21 31 49.5	C
		Kurile Islands (h = N).			
"	6	Up	iSg1	00 43 58.3	
		Sk	iSg1	00 43 16.2	
		Um	iPg1	00 41 34.3	C
			iSg1	00 41 48.8	
			iRg	00 41 56.8	
		Ud	iSg1	00 44 17.2	
		Västerbotten, Sweden, 64.8°N, 20.5°E. Origin time = 00 41 17. Explosion (in connection with power plant construction at Krångfors).			
"	6	Up	iSg1	08 38 04.2	
		Ud	iPg1	08 36 49.7	
			iSg1	08 37 14.3	
		De	iSg1	08 37 30.7	
		Bohuslän-Dalsland, Sweden, 58.5°N, 11.8°E. Origin time = 08 36 19.			
"	6	Ki	iPn	10 28 34.3	
		(cont.)			

1973 Oct.	6	(cont.)			
		Ki	iPg1	10 28 43.0	
			iSn	10 29 20.8	
			iSg1	10 29 36.8	
		Um	iSg1	10 31 11.1	
		Ud	iSg1	10 33 39.6	
		Northwest USSR-Norway. Explosion.			
"	6	Up	iP	10 37 05.8	
		Ki	iP	10 37 12.4	
		Sk	iP	10 37 30.2	
		Um	iP	10 37 03.2	
		Ud	iP	10 37 22.3	C
		De	iP	10 37 21.0	
		Kashmir (h = 55 km).			
"	6	Um	iP	11 56 08.4	
"	6	Ki	iSg1	13 26 41.7	
		Um	iSn	13 27 10.4	
			iSg1	13 27 41.1	
		Northwest USSR-Finland. Explosion.			
"	6	Sk	iSg1	13 29 46.2	
		Um	iSn	13 27 47.8	
			iSg1	13 28 17.0	
			iRg	13 28 46.8	
		Ud	iSg1	13 30 52.7	
		Northwest USSR-Finland. Explosion.			
"	6	Up	iSg1	13 34 57.6	
		Um	i	13 35 01.0	
			iSg1	13 35 16.8	
		De	eSg1	13 36 30	
		Western USSR. Explosion.			
"	6	Um	iSg1	14 34 46.8	
		Lake Ladoga region. Explosion.			
"	6	Up	i(PKP)	15 26 29.4	
			iPKP	15 26 35.7	
			iPP	15 28 20.6	
			i	15 40 04.3	
			iSKKP	15 40 24.3	
				micr	sec
			PKP Z'	0.1	0.7
			Mx E	13	23
			Mx N	23	23
			Mx Z	35	23
		Ki	iPKP	15 26 49.5	
			ipPKP	15 27 04.3	
		(cont.)			

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct. 6 (cont.)

Ki	iPP		15 29 21.3	
			micr	sec
	PKP	Z'	0.2	1.5
	pPKP	Z'	0.3	1.2
	Mx	E	20	18
	Mx	N	19	18
	Mx	Z	25	18
Sk	iPKP		15 26 40.1	
	ipPKP		15 26 52.2	
	iSKKP		15 40 12.7	
Um	i(PKP)		15 26 30.8	
	iPKP		15 26 43.5	
	ipPKP		15 26 57.2	
	iPP		15 28 37	
	i		15 39 29.4	
Ud	i(PKP)		15 26 31.5	
	iPKP		15 26 35.1	
	ipPKP		15 26 48.1	
	iPP		15 28 31.6	
	iPKKP1		15 36 23.8	
	iSKKP		15 40 18.7	
De	iPKP		15 26 28.4	
	ipPKP		15 26 43.1	
	iPP		15 27 59.2	
	iPKKP1		15 36 45.0	

South Sandwich Islands.
h = 45 km (Ki,Sk,Um,Ud,De).
M = 7.0 (Up,Ki).

" 6

Up	iP		16 47 25.9	
			micr	sec
	Mx	E	5.8	23
	Mx	N	10	23
	Mx	Z	13	23
Ki	iP		16 47 08.3	
			micr	sec
	Mx	E	5.5	20
	Mx	N	9.8	21
	Mx	Z	4.3	19
Sk	iP		16 47 32.3	
Um	iP		16 47 16.0	
Ud	iP		16 47 34.3	

Mindanao (h = 80 km).
M = 6.2 (Up,Ki).

" 6

Up	iPKP1		17 45 46.4
Ud	iPKP1		17 45 55.2
De	iPKP1		17 46 07.8

" 6

Up	iP		21 25 25.2	
			micr	sec
	Mx	E	0.6	12
	Mx	Z	0.5	12
Ki	eP		21 26 32	

(cont.)

1973 Oct. 6 (cont.)

Ki			micr	sec
	Mx	E	1.2	14
Sk	iP		21 26 07.8	
Um	iP		21 25 55.7	
Ud	iP		21 25 32.4	
	i		21 25 47.2	
De	iP		21 25 03.2	

Crete (h = N).
M = 4.6 (Up,Ki).

" 6

Up	iP		23 00 27.9
Um	iP		23 00 10.1
Ud	eP		23 00 34

Volcano Islands
(h = 35 km).

" 7

Up	iP		05 05 50.3 C
	ipP		05 06 01.4
Sk	eP		05 05 38
Um	iP		05 05 25.7
Ud	iP		05 05 55.4
	ipP		05 06 06.5

Kurile Islands.
h = 40 km (Up,Ud).

" 7

Ud	iPKP1		05 47 19.5
De	iPKP1		05 47 30.1

" 7

Ki	iSn		08 46 05.8
	iS*		08 46 30.4
Sk	eSg1		08 48 53
Um	iSg1		08 47 19.2

Northwest USSR.
Explosion.

" 7

Up	iP		09 38 10.9 C	
	ipP		09 38 19.2	
			micr	sec
	P	Z'	0.1	0.9
	Mx	N	0.6	13
	Mx	Z	0.5	12
Ki	iP		09 37 27.0 C	
			micr	sec
	P	Z'	0.1	1.0
	Mx	E	0.6	15
	Mx	N	0.5	13
Sk	iP		09 38 01.3 C	
Um	iP		09 37 46.3 C	
	ipP		09 37 54.2	
Ud	iP		09 38 17.2 C	
	ipP		09 38 25.9	
De	iP		09 38 37.2	
	ipP		09 38 47.0	

Japan.
h = 30 km (Up,Um,Ud,De).
m = 6.0, M = 5.2 (Up,Ki).

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	7	Up	iP	11 23 46.3
		Ki	iP	11 23 25.6
		Sk	eP	11 23 51
		Um	iP	11 23 32.6
		Ud	iP	11 23 54.5
		Luzon (h = 80 km).		
"	7	Up	iP	11 54 30.0
		Ki	iP	11 54 09.6
		Ud	iP	11 54 38.3
		Luzon (h = 60 km).		
"	7	Up	iP	11 56 28.6
		Um	iP	11 56 14.7
		Ud	iP	11 56 37.2
		Luzon.		
		Origin time = 11 44 07.		
"	7	Up	iP	12 33 01.2
		Ki	iP	12 32 41.2
		Sk	iP	12 33 05.4
		Um	iP	12 32 47.5
		Ud	iP	12 33 09.7
		Luzon (h = N).		
"	7	Up	iSg1	14 52 24.2
		Um	iSg1	14 52 35.2
		South Finland.		
		Explosion?		
"	7	Ki	ePn	15 10 56
			eSn	15 11 54
			iSg1	15 12 22.1
		Um	iSg1	15 13 05.7
		Ud	iSg1	15 15 39.6
		Northwest USSR.		
		Explosion.		
"	7	Up	iP	17 17 47.3
			i	17 17 54.1
		Ki	iP	17 17 58.9
		Sk	iP	17 17 37.3
		Um	iP	17 17 52.7
		Ud	iP	17 17 35.4
		De	iP	17 17 40.6
		Venezuela (h = 40 km).		
"	7	Ki	iP	21 29 56.8
		Ud	iP	21 30 24.4
		Luzon (h = 45 km).		
"	7	Um	iP	22 15 38.9
		Ud	iP	22 15 39.6
"	8	Ki	iP	01 41 18.5
		Ud	eP	01 41 47

1973 Oct.	8	Up	iPKP	04 04 28.4
			i	04 04 35.0
			iSKP1	04 07 13.2
		Ki	iSKP1	04 06 48.5
		Sk	iSKP1	04 07 04.7
		Um	iPKP	04 04 21.4
			iSKP1	04 07 00.1
		Ud	iPKP	04 04 29.7
			iSKP1	04 07 14.8
		De	iPKP1	04 04 31.5
		Fiji Islands (h = 540 km).		
"	8	Up	iP	05 37 23.2
		Ki	iP	05 36 36.5
		Um	iP	05 36 57.9 C
		Ud	iP	05 37 29.2
		Kurile Islands (h = 60 km).		
"	8	Up	iPKP1	06 37 24.9
		Sk	iSKP1	06 40 13.5
		Um	iSKP1	06 40 09.2
		Ud	iPKP1	06 37 27.3 C
			i	06 37 51.1
		De	iPKP1	06 37 37.6 C
		Tonga-Kermadec Islands (h = 500 km).		
"	8	Up	iPKP1	06 37 51.9
		Ki	iSKP1	06 40 26.1
		Sk	iSKP1	06 40 41.0
		Um	iSKP1	06 40 36.1
		Ud	iPKP1	06 37 54.1
			i	06 38 18.2
		De	iPKP1	06 38 04.4 C
		Tonga-Kermadec Islands (h = 500 km).		
		In both this and the preceding case, Ud shows a small, clear, unidentified phase, following PKP1 after 24 sec.		
"	8	Up	iP	08 37 15.9
		Ki	iP	08 36 28.8
		Um	iP	08 36 50.4 C
		Ud	iP	08 37 21.4
		Kurile Islands (h = 60 km).		
"	8	Up	i(Sg1)	11 34 25.3
		Ud	i(Sg1)	11 34 46.8
"	8	Um	i(Sg1)	12 06 13.4
"	8	Ki	iPn	12 34 59.9
			iPg1	12 35 08.9
			iSn	12 35 46.6

(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	8	(cont.)				
		Ki	iS*			12 35 59.8
		Um	iSg1			12 37 36.2
		Northwest USSR-Norway.				
		Explosion.				
"	8	Up	iSn			12 47 30.9
			iSg1			12 47 54.6
		Sk	eSg1			12 49 43
		Um	iS*			12 48 08.4
			iSg1			12 48 16.7
		Ud	iSg1			12 48 53.7
		De	iSg1			12 49 27.6
		Western USSR.				
		Explosion.				
"	8	Ud	e(P)			12 53 19
"	8	Um	iP			14 56 52.1
"	8	Ud	iP			16 39 41.0 C
"	8	Up	iP			22 12 47.3
			i			22 12 49.5
		Ki	iP			22 12 11.2
		Um	iP			22 12 26.2 C
		Ud	iP			22 12 51.7
			i			22 12 57.1
		De	iP			22 13 08.8
		Bonin Islands (h = 35 km).				
"	8	Up	iP			22 26 09.1
			i			22 26 14.0
		Ki	iP			22 25 35.4
		Um	iP			22 25 50.7
		Ud	iP			22 26 16.3
			i			22 26 21.8
		De	iP			22 26 31.9
		Bonin Islands (h = 20 km).				
"	9	Up	iP			01 57 21.5
					micr	sec
			Mx	E	0.8	15
			Mx	N	1.4	16
			Mx	Z	1.9	14
		Ki	iP			01 57 01.9
					micr	sec
			P	Z'	0.1	1.2
			Mx	E	1.8	13
			Mx	N	1.3	15
			Mx	Z	1.2	12
		Sk	iP			01 57 28.6
		Um	iP			01 57 10.5 C
			iS			02 07 11
		Ud	iP			01 57 30.9
			ipP			01 57 40.5
		(cont.)				

1973 Oct.	9	(cont.)				
		De	i(P)			01 57 29.8
			i			01 57 40.7
		Luzon.				
		h = 35 km (Ud).				
		M = 5.6 (Up,Ki).				
"	9	Up	iP			04 11 47.8
		Um	iP			04 11 39.3 C
		Ud	iP			04 12 01.7 C
		De	iP			04 12 04.4
		India (h = N).				
"	9	Um	i(Sg1)			06 36 50.7
"	9	Up	iP			07 58 18.1
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP			07 57 33.1
		Sk	iP			07 58 08.9
		Um	iP			07 57 53.4
		Ud	iP			07 58 23.8 C
		Kurile Islands (h = N).				
"	9	Up	iPKP			08 16 53.3
			i			08 17 04.4
					micr	sec
			Mx	E	6.0	22
			Mx	N	8.3	23
			Mx	Z	16	23
		Ki	iPKP			08 16 40.1
					micr	sec
			PKP	Z'	0.1	1.2
			Mx	E	7.3	21
			Mx	N	9.8	21
			Mx	Z	7.9	21
		Sk	iPKP			08 16 53.1
		Um	iPKP			08 16 46.1
		Ud	ePKP			08 16 52
			i			08 17 05.9
		New Hebrides Islands (h = 9 km).				
		M = 6.5 (Up,Ki).				
"	9	Ki	iPn			10 11 42.0
			iPg1			10 11 51.2
			iSn			10 12 28.5
		Origin time = 10 10 38.				
		Explosion?				
"	9	Ud	iP			13 14 59.1
		Japan (h = N).				
"	9	Up	iP			13 50 45.8 C
		Ki	iP			13 50 29.8
		Sk	iP			13 50 56.8 C
		Um	iP			13 50 32.6
		(cont.)				

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Oct. 9 (cont.)
Ud iP 13 50 59.1
Szechwan, China (h = N).

" 9 Up iP 19 16 49.0
Ki iP 19 17 19.2
Ud iP 19 16 41.2
Atlantic Ocean (h = N).

" 9 Ki iP 20 41 50.3 C

		micr	sec
P	Z'	0.1	1.0

Ud iP 20 42 17.5
Samar (h = 55 km).

" 10 Ud iP 02 56 51.7

" 10 Up iSg1 08 12 37.4
Um iSg1 08 13 35.2
Ud eSg1 08 13 41
De eSg1 08 14 17
Gulf of Finland.
Explosion.

" 10 Ud iP 10 31 51.4
Greece.

" 10 Up iP 11 11 05.8
Ki iP 11 12 11.5 C

		micr	sec
P	Z'	0.1	0.6

Sk iP 11 11 45.6
Um iP 11 11 37.0
Ud iP 11 11 15.1 C
i 11 11 29.3
De iP 11 10 45.2
East of Crete (h = 60 km).

" 11 Up iP 02 18 54.5
i 02 19 12.2
iS 02 27 50

		micr	sec
P	Z'	0.1	1.1
Mx	E	9.9	23
Mx	N	6.0	22
Mx	Z	21	19

Ki iP 02 19 33.9
i 02 19 43.6

		micr	sec
P	Z'	0.3	1.5
i	Z'	0.5	1.5
Mx	E	9.2	20
Mx	N	9.5	23
Mx	Z	9.9	20

Sk iP 02 19 01.7
(cont.)

1973
Oct. 11 (cont.)
Um iP 02 19 24.0
iS 02 28 44
Ud iP 02 18 49.2
Atlantic Ocean (h = N).
m = 6.1, M = 6.1 (Up,Ki).

" 11 Ki iP 02 19 23.2
Um iS 02 28 26
Atlantic Ocean (h = N).

" 11 Up iSg1 08 13 24.6
i 08 13 41.0
i 08 13 52.8
Sk iSn 08 12 17.1
iSg1 08 12 40.4
Um iSn 08 13 36.9
iS* 08 14 09.4
iSg1 08 14 24.5
Ud iPg1 08 11 20.3
iSg1 08 12 20.4
i 08 12 56.5
De iSg1 08 13 05.6
Southwest coast of Norway,
59.9°N, 4.7°E.
Origin time = 08 10 00.

" 11 Up iP 11 15 04.7

" 11 Up iSg1 14 55 00.9
Um iSg1 14 56 19.4
Ud i 14 53 53.1
iSg1 14 54 00.5
De iSg1 14 54 21.3
Southwest Norway,
58.8°N, 6.4°E.
Origin time = 14 51 56.
By combination with Bergen and Kongsberg readings.

" 11 Up

		micr	sec
Mx	E	0.6	16
Mx	N	0.7	15
Mx	Z	0.6	14

Ki iP 18 43 33.6

		micr	sec
Mx	E	1.0	16
Mx	N	1.1	15
Mx	Z	1.1	18

Um iP 18 43 50.3
ipP 18 44 03.4
Japan.
h = 50 km (Um).
M = 5.2 (Up,Ki).

" 11 Ud iPKP 21 37 49.1
(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Oct. 11 (cont.)

	De	iPKP	21 37 59.0	
Fiji Islands (h = 620 km).				
" 12	Up	iP	03 01 48.0	
		i	03 01 51.5	
		iPP	03 03 17.0	
			micr	sec
		P	Z' 0.2	1.1
		PP	Z' 0.2	1.2
		Mx	E 0.8	9
		Mx	N 2.5	14
		Mx	Z 0.8	8
	Ki	iP	03 01 54.2	
		i	03 01 56.8	
			micr	sec
		P	Z' 0.1	1.3
		Mx	E 1.6	10
		Mx	N 2.4	10
		Mx	Z 1.6	10
	Sk	iP	03 02 16.0	
		iPP	03 03 57.9	
	Um	iP	03 01 47.9	
		iPP	03 03 21.7	
		iS	03 07 52	
	Ud	iP	03 02 04.5	
		i	03 02 08.4	
		iPP	03 03 48.8	
	De	iP	03 02 02.8	
		i	03 02 06.5	
		iPP	03 03 43.9	
Tadzhik SSR (h = 10 km).				
m = 5.6, M = 5.5 (Up,Ki).				
Double P, small and large, average separation 3.4 sec (Up,Ki,Ud,De).				
" 12	Up	iP	06 06 00.6	
		iS	06 15 25	
			micr	sec
		Mx	E 0.5	18
		Mx	N 0.9	21
		Mx	Z 1.0	15
	Ki	iP	06 05 20.1	
			micr	sec
		Mx	E 0.6	14
		Mx	N 0.5	12
		Mx	Z 1.2	14
	Sk	i	06 05 41.3	
	Um	iP	06 05 40.6	
		iS	06 14 40	
	Ud	iP	06 05 53.8	
Off coast of Oregon (h = 6 km).				
M = 5.2 (Up,Ki).				

1973
Oct. 12

Ki	iP	08 38 18.5	
	i	08 38 29.8	
Um	iP	08 39 10.8	
Ud	iP	08 39 56.2	
	i	08 40 03.5	
Svalbard region (h = N).			
" 12	Ud	i(Sg1)	09 54 14.0
" 12	Ud	i(Sg1)	14 03 06.9
" 12	Ud	iP	17 11 40.3
Nevada.			
Underground explosion.			
" 12	Up	iRg	21 36 41.6
	Ud	iSg1	21 36 23.8
		iRg	21 36 29.2
Central Sweden.			
Explosion?			
" 12	Ud	iP	23 12 49.8
North Atlantic Ocean (h = N).			
" 13	Up	iP	01 56 08.0
	Ki	iP	01 55 42.1 C
	Um	iP	01 55 58.7
	Ud	eP	01 55 59
	De	iP	01 56 15.1 C
Gulf of California (h = 15 km).			
" 13	Up	iP	06 06 00.3
	Ki	iP	06 07 07.4
			micr sec
		P	Z' 0.1 0.9
	Sk	iP	06 06 39.6
	Um	iP	06 06 32.3 C
	Ud	iP	06 06 08.3
	De	iP	06 05 36.9
Crete (h = 40 km).			
" 13	Um	iP	08 58 59.7
	Ud	iP	08 59 34.2
" 13	Ud	iP	09 05 14.7
" 13	Up	iP	10 11 15.7
		ipP	10 11 26.7
	Um	iP	10 10 50.7
	Ud	iP	10 11 21.7
		ipP	10 11 33.7
Japan.			
h = 45 km (Up,Ud).			

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	13	Up	i	11 30 16.4		
			iRg	11 30 34.9		
		Um	iSg1	11 32 19.7		
		Ud	iSg1	11 30 20.1		
			iRg	11 30 25.6		
		De	iSg1	11 31 38.6		
		Central Sweden.				
		Explosion?				
"	13	Up	iP	16 35 25.2		
		Ki	iP	16 34 42.0		
		Um	iP	16 35 00.8		
		Ud	iP	16 35 31.9	C	
		De	iP	16 35 48.2		
		Japan (h = 70 km).				
"	13	Up	iSg1	16 57 03.7		
		Um	iSg1	16 56 31.3		
		Lake Ladoga.				
		Explosion.				
"	13	Ud	iPKP1	17 33 53.8		
"	13	Up	iP	20 36 18.0		
			ipP	20 36 29.3		
		Um	iP	20 35 58.4	C	
			ipP	20 36 10.2		
		Ud	iP	20 36 27.2	C	
		Japan.				
		h = 45 km (Up,Um).				
"	13	Up	iP	21 21 38.9		
			i	21 21 45.0		
				micr	sec	
			Mx E	0.6	17	
			Mx Z	0.6	17	
		Ki	iP	21 22 13.5		
			i	21 22 19.0		
				micr	sec	
			P Z'	0.2	1.5	
		Ud	iP	21 21 29.2		
			i	21 21 35.7		
		Atlantic Ocean (h = N).				
		Double P, 6.0 sec apart,				
		a typical feature of				
		Atlantic earthquakes on				
		our records.				
"	13	Up	Mx	22 04		
				micr	sec	
			Mx E	0.7	18	
			Mx Z	0.8	19	
		Atlantic Ocean (h = N).				
"	13	Up	Mx	23 12		
		(cont.)				

1973 Oct.	13	(cont.)				
		Up		micr	sec	
			Mx E	0.5	17	
			Mx Z	0.7	18	
		Atlantic Ocean (h = N).				
"	13	Um	iP	23 33 13.9		
"	14	Ki	iP	01 07 02.8		
		Atlantic Ocean (h = N).				
"	14	Up	iP	06 32 14.5		
		Ki	iP	06 32 16.1		
		Sk	iP	06 31 45.1		
		Ud	iP	06 31 56.8		
		North Atlantic Ocean				
		(h = N).				
"	14	Ki	iP	10 07 37.5		
		Atlantic Ocean (h = N).				
"	14	Up	iSg1	10 42 44.6		
		Ki	iPn	10 38 36.7		
			iSn	10 39 37.1		
			iSg1	10 40 02.4		
		Sk	iSg1	10 42 26.1		
		Um	iSn	10 40 14.3		
			iSg1	10 40 50.0		
			iSg2	10 41 01.7		
		Ud	iSg1	10 43 19.8		
		Northwest USSR.				
		Explosion.				
"	14	Ki	iP	14 08 14.6		
		Ud	iP	14 08 41.3		
"	14	Ud	iP	14 16 27.3		
		Java (h = 70 km).				
"	14	Up	iP	18 12 31.9		
			i	18 12 48.4		
				micr	sec	
			P Z'	0.1	0.9	
			Mx E	1.1	19	
			Mx N	1.3	15	
			Mx Z	2.7	20	
		Ki	iP	18 13 38.9	C	
				micr	sec	
			P Z'	0.1	0.8	
			Mx E	1.4	17	
			Mx N	1.7	15	
			Mx Z	1.2	14	
		Sk	iP	18 13 11.0	C	
		Um	iP	18 13 03.5		
		Ud	iP	18 12 39.8	C	
		(cont.)				

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	14	(cont.)				
		De	iP		18 12 08.5	
			i		18 12 26.8	
		Crete (h = 45 km).				
		m = 5.6, M = 4.8 (Up,Ki).				
"	14	Up	iP		20 57 07.3	
		Ki	iP		20 57 07.5	
		Um	iP		20 57 03.9	
		Ud	iP		20 57 17.9	
		De	iP		20 57 16.2	
		Sumatra.				
"	14	Up	iP		22 13 50.9	
			iS		22 18 49	
					micr	sec
			Mx	E	1.7	22
			Mx	N	1.4	16
			Mx	Z	2.2	18
		Ki	iP		22 12 36.7	
			i		22 12 47.0	
			iS		22 16 42	
					micr	sec
			P	Z'	0.1	1.0
			i	Z'	0.2	1.1
			Mx	E	2.1	18
			Mx	N	3.0	22
			Mx	Z	1.5	14
		Sk	iP		22 13 24.0	
		Um	iP		22 13 17.2	
			iS		22 17 44	
		Ud	iP		22 13 54.9	
		De	iP		22 14 24.8	
			i		22 14 31.4	
		Arctic Ocean (h = N).				
		M = 4.8 (Up,Ki).				
"	14	Sk	i(PKP)		22 25 29.9	
			iPKP		22 25 48.3	
		Um	iPKP		22 25 39.7	
		Ud	iPKP		22 25 48.9	
		De	iPKP		22 25 53.8	
		Solomon Islands				
		(h = 60 km).				
"	15	Um	iPKP1		00 09 23.8	
		Ud	iPKP1		00 09 33.2	
"	15	Up	iPKP1		00 10 20.1	
		Ki	iPKP1		00 09 48.7	
		Um	iPKP1		00 10 02.1	
		Ud	iPKP1		00 10 26.8	
"	15	Up	iPKP1		02 22 56.8	
		Sk	iPKP1		02 22 46.3	
		(cont.)				

1973 Oct.	15	(cont.)				
		Um	iPKP1		02 22 40.7	C
		Ud	iPKP1		02 22 54.6	C
		De	iPKP1		02 23 03.3	
		Kermadec Islands				
		(h = 20 km).				
"	15	Ud	iP		02 55 47.2	
"	15	Um	iP		03 25 52.4	
"	15	Ki	iP		03 32 03.7	
		Um	iP		03 32 25.6	
		Ud	iP		03 32 56.3	
		Kurile Islands.				
"	15	Ki	iP		04 14 19.7	
		Um	iP		04 14 47.6	
		Ud	iP		04 15 17.4	
		Japan (h = 55 km).				
"	15	Um	iPKP1		06 00 50.1	
		Ud	iPKP1		06 01 02.3	
		South of Kermadec Islands				
		(h = 80 km).				
"	15	Up	iPKP1		06 44 22.7	
			ipPKP1		06 44 28.6	
					micr	sec
			Mx	N	1.0	23
			Mx	Z	0.9	23
		Sk	ePKP1		06 44 18	
		Um	iPKP1		06 44 12.1	
			ipPKP1		06 44 19.1	
		Ud	iPKP1		06 44 23.7	
		De	iPKP2		06 44 46.1	
		South of Kermadec Islands.				
		h = 20 km (Up,Um).				
"	15	Ki	iP		07 15 50.0	
		Ud	iP		07 16 42.5	
		Aleutian Islands				
		(h = 45 km).				
"	15	Up	iPKP1		08 16 51.6	
		Sk	iPKP1		08 16 47.7	
		Um	iPKP1		08 16 35.1	
			ipPKP1		08 16 42.5	
		Ud	iPKP1		08 16 47.4	
		South of Kermadec Islands.				
		h = 25 km (Um).				
"	15	Up	iPKP1		10 12 08.0	
			i		10 12 12.9	
		Um	iPKP1		10 11 56.2	
		(cont.)				

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Oct. 15 (cont.)

	Um	ipPKP1	10 12 03.9
	Ud	iPKP1	10 12 08.7

South of Kermadec Islands.
h = 25 km (Um).

" 15	Up	i(P)	12 53 18.9
	De	iP	12 53 53.9

" 15	Up	iP	13 23 28.4

" 15	Up	iPKP1	13 37 57.1
	Sk	iPKP1	13 37 49.7
	Ud	iPKP1	13 37 57.3
	De	iPKP1	13 38 08.8

South of Kermadec Islands.
Origin time = 13 18 09.

" 15	Um	iPKP1	16 19 21.8
	Ud	iPKP1	16 19 34.7
		i	16 19 41.2

South of Kermadec Islands
(h = N).

" 15	Up	iSg1	22 14 12.8
	Sk	iS*	22 12 39.4
		iSg1	22 12 47.3
	Um	iSg1	22 14 37.1
	Ud	iSg1	22 13 09.3

West coast of Norway.

" 15	Up	iPKP1	23 22 25.0 C
	Um	iPKP1	23 22 08.6
	Ud	iPKP1	23 22 22.5

" 16	Up	iP	00 02 13.9
	Ki	iP	00 02 12.5
		i	00 02 23.9
	Um	iP	00 02 02.6
	Ud	iP	00 02 26.0

" 16	Up	iPKP1	00 38 27.8
	Um	iPKP1	00 38 10.9
		ipPKP1	00 38 18.0
	Ud	iPKP1	00 38 23.5

South of Kermadec Islands.
h = 25 km (Um).

" 16	Up	iP	01 13 54.8
	Um	iP	01 13 35.5
	Ud	iP	01 14 01.8

" 16	Ki	iP	01 53 58.3
	Sk	iP	01 54 28.8
	Um	iP	01 54 25.4
		ipP	01 54 54.5

(cont.)

1973
Oct. 16 (cont.)

	Ud	iP	01 54 50.7
		ipP	01 55 21.0

Aleutian Islands.
h = 120 km (Um,Ud).

" 16	Up	iP	04 53 26.7
	Ki	iP	04 52 33.2
	Ud	iP	04 53 27.9

Aleutian Islands
(h = 60 km).

" 16	Up	iSg1	09 21 59.7
	Ud	iSg1	09 20 56.2
	De	i	09 21 00.9
		iSg1	09 21 14.9

Southwest Norway.
By combination with
Kongsberg readings.

" 16	Up	iP	10 00 03.7	
			micr	sec
		P Z'	0.1	1.0
	Ki	iP	10 00 04.7	C
			micr	sec
		P Z'	0.1	1.0
	Sk	iP	10 00 23.9	
	Um	iP	09 59 58.1	
	Ud	iP	10 00 18.5	
	De	iP	10 00 17.9	

Nepal (h = N).
m = 5.8 (Up,Ki).

" 16	Ud	iSg1	12 08 08.4
	De	iPg1	12 07 46.8
		iSg1	12 08 15.2
		iRg	12 08 27.3

Lake Vener, Sweden.
Origin time = 12 07 11.

" 16	Ki	i	12 26 02.0
		iSg1	12 26 32.6
	Um	eSg1	12 24 41
	De	iSg1	12 25 48.7

Western USSR.
Explosion.

" 16	Um	iPKP	12 56 07.2
	De	iPKP	12 56 24.3

Santa Cruz Islands
(h = 35 km).

" 16	Up	iP	17 03 05.7
	Ki	iP	17 02 12.6
	Um	iP	17 02 39.2
	Ud	iP	17 03 04.6

Aleutian Islands
(h = 30 km).

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	16	Um	iP		17 03 59.2
"	16	Up	iPKP1		18 03 38.0
		Um	iPKP1		18 03 27.9
		Ud	iPKP1		18 03 40.7
"	16	Up	iPKP2		21 20 04.2
		Um	iPKP1		21 19 36.6
		Ud	iPKP2		21 20 01.6
"	16	Up	iP		22 25 52.9
		Ud	iP		22 25 57.5
"	17	Um	iP		02 04 20.4 C
		Ud	iP		02 04 51.8
"	17	Up	iP		03 10 17.2
		Ki	iP		03 09 58.3
		Ud	iP		03 10 26.9
"	17	Up	iP		03 23 42.1 C
			i		03 24 14.5
			ipP		03 24 28.5
			isP		03 24 52.8
			i		03 26 22
			iS		03 29 39
				micr	sec
			P	Z' 1.9	1.5
			Mx	E 2.6	7
			Mx	N 3.5	10
			Mx	Z 4.8	15
		Ki	iP		03 23 51.3 C
			ipP		03 24 39.0
			i		03 26 35
			iS		03 29 56
				micr	sec
			P	Z' 0.7	1.1
			Mx	E 3.3	10
			Mx	N 3.7	10
			Mx	Z 2.2	10
		Sk	iP		03 24 07.7 C
			i		03 27 00.4
		Um	iP		03 23 40.5 C
			ipP		03 24 26.1
			isP		03 24 49
			i		03 26 17
			iS		03 29 30
		Ud	iP		03 23 58.6 C
			ipP		03 24 45.2
		De	iP		03 23 55.2 C
			ipP		03 24 42.7

Afghanistan-USSR.
h = 230 km (Up,Ki,Um,Ud,De).
m = 6.2, M = 5.7 (Up,Ki).
M uncorrected for focal depth.

1973 Oct.	17	Ud	iPKP1	07 04 46.0
"	17	Ud	iP	14 02 34.2
"	17	Up	iP	15 34 44.4
		Ki	iP	15 35 00.6 C
		Sk	iP	15 35 08.6
		Um	iP	15 34 47.9
		Ud	iP	15 34 58.2
		India.		
"	17	Up	iP	16 08 59.5
		Um	i(P)	16 08 46.9
		Japan (h = 40 km).		
"	17	Ki	iP	20 37 33.4
		Sk	iP	20 37 18.9
		Um	iP	20 37 36.4
		Panama-Colombia (h = 15 km).		
"	17	Up	iSg1	21 05 50.9
		Ki	iPg1	21 03 23.2
			iSg1	21 04 09.0
		Sk	ePg1	21 03 10
			iSg1	21 03 43.1
		Um	iSn	21 04 07.4
			iSg1	21 04 23.6
		Ud	iSg1	21 05 42.1
		Coast of Nordland, Norway, 66.3°N, 12.9°E.		
		Origin time = 21 02 21.		
"	17	Ki	iP	21 14 27.8
		Um	iP	21 14 36.6
			ipP	21 15 25.4
		De	iP	21 14 39.6
		Mexico.		
		h = 200 km (Um).		
"	17	Ki	iP	21 29 35.0
		Um	iP	21 29 20.5
"	18	Up	iP	01 21 51.7
		Ki	iP	01 21 47.6
				micr sec
			P	Z' 0.2 1.6
			Mx	E 1.5 16
			Mx	N 1.2 16
			Mx	Z 1.5 16
		Sk	iP	01 21 33.8
		Um	iP	01 21 51.4
		Ud	iP	01 21 41.4
		De	iP	01 21 46.5
		Costa Rica (h = 40 km).		

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	18	Ki	iP		10 21 15.9		
"	18	Up	iP		11 02 24.8	C	
			i		11 02 31.3		
			iS		11 12 55		
					micr	sec	
			P	Z'	0.2	1.3	
			Mx	E	1.9	17	
			Mx	N	2.7	17	
			Mx	Z	4.3	16	
		Ki	iP		11 02 07.8		
			i		11 02 14.2		
			iS		11 12 33		
					micr	sec	
			P	Z'	1.8	2.2	
			i	Z'	3.0	2.5	
			Mx	E	2.5	16	
			Mx	N	2.4	16	
			Mx	Z	3.0	15	
		Sk	iP		11 02 06.5		
			i		11 02 14.1		
		Um	iP		11 02 18.1	C	
			i		11 02 23.9		
			iS		11 12 46		
		Ud	iP		11 02 16.7		
			i		11 02 22.8		

Mexico (h = 45 km).
m = 6.5, M = 5.9 (Up,Ki).
Double P, average separation 6.5 sec.

"	18	Ki	iP		11 45 13.4	
		Um	iP		11 45 53.9	C
			i		11 47 37.2	
		De	iP		11 47 01.3	

Arctic Ocean (h = N).

"	18	Ki	eSg1		13 09 02	
		Um	iSg1		13 07 23.4	
		Ud	iSg2		13 08 22.9	

Western USSR.
Explosion.

"	18	Ki	iP		13 59 43.4	
		Um	iP		13 59 43.3	
		Ud	iP		13 59 28.8	

Lesser Antilles (h = N).

"	18	Ki	iP		22 55 20.9	

Greece.

"	18	Up	iP		23 52 19.6	
		Ki	iP		23 52 27.5	
		Um	iP		23 52 17.0	
		Ud	iP		23 52 35.6	C

(cont.)

1973 Oct.	18	(cont.)				
		De	iP		23 52 32.9	

Afghanistan-USSR.
Intermediate depth.

"	19	Up	iP		00 21 12.0	
		Ki	iP		00 22 10.0	
		Sk	iP		00 21 44.5	
		Um	iP		00 21 42.3	
		Ud	iP		00 21 11.9	
		De	iP		00 20 45.8	

Greece (h = N).

"	19	Up	ePKP2		00 33 29	
					micr	sec
			PKP2	Z'	0.3	1.5
		Ki	iPKP2		00 33 20.7	
					micr	sec
			PKP2	Z'	0.1	1.5
		Sk	ePKP2		00 33 38	
		Um	iPKP2		00 33 23.0	
		Ud	iPKP2		00 33 38.6	
		De	iPKP2		00 33 36.5	

Macquarie Islands (h = N).

"	19	Sk	iP		01 02 20.7	
		Um	iP		01 02 32.5	

Mexico (h = N).

"	19	Up	iP		01 08 40.5	
"	19	Up	iP		03 22 04.3	
		Ki	iP		03 21 39.3	
		Um	iP		03 21 47.8	
		Ud	iP		03 22 13.3	
"	19	Ki	iPn		11 01 36.4	
			iSn		11 02 23.5	
			iS*		11 02 37.3	
		Um	iSg1		11 04 08.1	

Northwest USSR-Norway.
Explosion.

"	19	Sk	iSg1		12 21 42.0	
		Um	iS*		12 20 11.8	
			iSg1		12 20 17.2	
		Ud	iSg1		12 20 58.1	
		De	iSg1		12 21 34.5	

Western USSR.
Explosion.

"	19	Ki	iPn		13 17 42.0	
			iSn		13 18 28.3	
			iS*		13 18 45.6	

(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	19	(cont.)			
		Um	iSg1	13 20 18.3	
		Northwest USSR-Norway.			
		Explosion.			
"	19	Ki	iP	15 47 50.2	
			i	15 47 58.7	
			iTPg1	15 52 53.5	
			iTSg1	15 53 30.9	
		Sk	eP	15 48 33	
			iTSg1	15 55 54.6	
		Um	iP	15 48 41.5	
			iTPg1	15 54 32.4	
			i	15 55 18.2	
			iTSg1	15 55 48.7	
		Ud	iP	15 49 27.5	
			i	15 49 37.5	
		Norwegian Sea.			
"	19	Up	iPKP1	17 35 51.3	
		Ud	iPKP1	17 35 53.7	
"	19	Up	iP	21 15 07.3	
		Um	iP	21 14 43.1	
		Ud	iP	21 15 14.1	
		Kurile Islands			
		(h = 50 km).			
"	19	Ud	iP	21 32 55.1	
		Greece (h = N).			
"	19	Up	iP	23 51 08.7 C	
		Ki	iP	23 50 22.8	
		Sk	eP	23 50 58.1	
		Um	iP	23 50 43.8	
		Ud	iP	23 51 14.9 C	
		De	iP	23 51 32.9 C	
		Kurile Islands			
		(h = 50 km).			
"	20	Up	iP	00 35 36.9	
		Um	iP	00 35 11.8	
		Ud	iP	00 35 42.7 C	
		Kurile Islands			
		(h = 50 km).			
"	20	Ki	iP	03 26 18.6	
		De	iP	03 26 06.5	
		Colombia (h = 150 km).			
"	20	Ud	iP	05 58 43.5	
"	20	Sk	eSg1	07 45 51	
		Um	iSg1	07 43 57.3	
		Ud	iSg1	07 45 35.9	
		De	iSg2	07 46 25.8	
		Lake Ladoga.			
		Explosion.			

1973 Oct.	20	Ud	iP	12 00 35.6	
		Sumatra.			
"	20	Ki	iPn	14 22 47.8	
			i	14 22 56.0	
			iSn	14 23 46.3	
			i	14 24 00.2	
		Um	iSn	14 24 51.3	
			iSg1	14 25 31.6	
		Northwest USSR.			
		Explosion.			
"	20	Up	iP	17 56 56.4	
		Ud	iP	17 57 08.1	
"	20	Ki	iP	18 18 10.5	
		Um	iP	18 18 29.0	
			i	18 18 38.4	
		Ud	iP	18 18 55.6	
			i	18 19 09.2	
		De	iP	18 19 13.5	
		Japan (h = 40 km).			
"	20	Up	iPKP1	20 11 18.5	
		Ki	iPKP	20 11 10.3	
		Um	i(PKP)	20 11 06.3	
			iPKP	20 11 18.4	
			iSKP1	20 13 54.8	
		Ud	iPKP1	20 11 19.8	
			iSKP1	20 14 07.4	
		De	iPKP1	20 11 31.4	
			iSKP1	20 14 16.7	
		Fiji Islands			
		(h = 610 km).			
"	21	Sk	eSg1	10 01 45	
		Um	iSg1	09 59 57.2	
		Ud	iSg1	10 01 33.8	
		De	eSg1	10 02 16	
		Lake Ladoga.			
		Explosion.			
"	21	Up	iP	11 10 48.8	
		Ki	iP	11 09 47.3	
		Sk	iP	11 10 22.7	
		Um	iP	11 10 15.3	
		Ud	iP	11 10 41.0	
		Unimak Island			
		(h = 45 km).			
"	21	Ud	iSKP1	11 42 53.2	
		De	iPKP1	11 40 18.4	
		Tonga-Kermadec Islands			
		(h = 610 km).			
"	21	De	iPKP1	13 57 49.4	
		Fiji Islands			
		(h = 570 km).			

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	21	Up	iPKP1	14 22 06.0	
			i	14 22 30.3	
		Ud	iPKP1	14 22 06.7	
		De	iPKP1	14 22 18.0	
		Tonga-Kermadec Islands (h = 90 km).			
"	21	Ud	iP	15 52 00.2	
"	21	Up	iSg1	17 07 35.3	
			i	17 07 37.4	
		Ki	eSg1	17 08 57	
			iSg2	17 09 08.0	
		Sk	iSg1	17 06 19.1	
			iSg2	17 06 22.3	
		Um	i	17 07 16.3	
			iSg1	17 08 07.8	
		Ud	e(Sn)	17 06 10	
			iSg1	17 06 34.4	
			i	17 06 44.4	
		De	iSg1	17 07 43.1	
		West coast of Norway, 61.5°N, 5.0°E. Origin time = 17 04 14. By combination with Bergen and Kongsberg readings.			
"	21	Ud	iP	19 50 19.2	
"	21	Up	iP	19 51 49.1	
		Ki	iP	19 51 10.7	
		Um	iP	19 51 27.3 D	
		Ud	iP	19 51 56.1	
			ipP	19 52 08.7	
		Japan. h = 45 km (Ud).			
"	21	Um	iPKP1	19 54 54.9	
		Ud	iPKP1	19 55 07.4	
"	21	Up	iPKP1	21 26 41.8	
		Ud	iPKP1	21 26 43.7 C	
		De	iPKP1	21 26 54.6	
		Tonga-Kermadec Islands (h = 560 km).			
"	21	Ud	iP	22 55 31.9	
		Turkey (h = 5 km).			
"	21	De	iPg1	23 20 19.8	
			iSn	23 20 52.7	
			iSg1	23 21 12.5	
		Near south coast of Norway. By combination with Bergen, Kongsberg, and Hagfors readings.			
1973 Oct.	22	Ud	iP	07 30 09.8	
		Greece (h = 5 km).			
"	23	Long-period microseisms (periods around 18 sec), especially clear on Um N component.			
"	23	Ud	iPKP1	04 54 37.3 C	
		De	iPKP1	04 54 46.7	
"	23	Ki	iP	06 22 44.3	
		Um	iP	06 22 56.5	
		Mariana Islands (h = 110 km).			
"	23	Ud	iP	09 15 42.3	
"	23	Up	iP	10 54 22.4	
			i	10 54 25.2	
			i	10 54 37.0	
				micr sec	
			P Z'	0.3 1.1	
		Ki	iP	10 55 43.9	
			i	10 55 51.2	
				micr sec	
			P Z'	0.2 1.0	
			Mx N	1.3 17	
			Mx Z	1.0 17	
		Sk	iP	10 55 14.3	
			i	10 55 16.9	
		Um	iP	10 55 02.6 C	
			i	10 55 07.2	
		Ud	iP	10 54 37.2	
			i	10 54 39.3	
		De	iP	10 53 58.6	
			i	10 54 05.2	
		Rumania (h = 170 km). m = 5.6 (Up,Ki). Multiple onsets.			
"	23	Um	iSg1	12 07 56.0	
		Western USSR. Explosion.			
"	23	Up	iP	14 19 09.5	
"	23	Sk	iSg1	14 30 59.8	
		Ud	iPg1	14 29 36.3	
			iSg1	14 29 59.5	
		South Norway, 60.1°N, 10.3°E. Origin time = 14 29 06. By combination with Kongsberg reading.			

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	24	Up	iP		04 37 43.9	
		Um	iP		04 37 17.9	
			ipP		04 38 55.5	
		Ud	iP		04 37 49.4	
		Okhotsk Sea.				
		h = 490 km (Um).				
"	24	Ki	iP		04 59 11.9	
		Ud	iP		04 59 35.1	
		Kirghiz-Sinkiang (h = N).				
"	24	Up	iP		05 32 13.9	C
			i		05 33 01.6	
					micr	sec
			P	Z'	0.1	1.0
			Mx	N	1.6	13
			Mx	Z	1.3	14
		Ki	iP		05 32 19.8	C
					micr	sec
			P	Z'	0.2	1.0
			Mx	N	2.4	15
			Mx	Z	2.7	15
		Sk	iP		05 32 37.5	C
		Um	iP		05 32 11.1	C
			i		05 32 16.9	
		Ud	iP		05 32 29.7	C
		De	iP		05 32 26.8	C
			i		05 32 34.6	
		Kashmir (h = N).				
		m = 6.0, M = 5.4 (Up,Ki).				
"	24	Ki	iPn		09 57 35.0	
			iPg1		09 57 43.8	
			iSn		09 58 21.4	
		Um	iSg1		10 00 08.1	
		Northwest USSR-Norway.				
		Explosion.				
"	24	Ki	iP		11 02 15.6	
		Sk	iP		11 02 21.5	
			i(S)		11 04 22.0	
"	24	Ud	iPKP1		11 32 10.8	
"	24	Up	iP		11 38 21.0	
		Ki	iP		11 37 34.5	C
		Um	iP		11 37 55.6	C
		Ud	iP		11 38 27.0	C
		De	iP		11 38 45.1	
		Okhotsk Sea (h = 450 km).				
"	24	Ki	i		13 29 28.0	
			iSg1		13 30 08.1	
		Um	iS*		13 28 21.1	
			iSg1		13 28 31.1	
		Ud	i		13 29 06.5	
		(cont.)				

1973 Oct.	24	(cont.)				
		Ud	iSg1		13 29 21.9	
		De	iSg1		13 29 40.8	
		Western USSR.				
		Explosion.				
"	24	Um	iSg1		13 55 58.0	
		Western USSR.				
		Explosion.				
"	24	Sk	iSg1		16 08 16.3	
		Um	iSg1		16 06 50.9	
		Ud	iSg1		16 07 28.0	
		Western USSR.				
		Explosion.				
"	24	Ki	iP		20 05 40.5	C
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP		20 06 02.4	
		Um	iP		20 05 35.9	C
		Ud	iP		20 05 54.5	C
		De	iP		20 05 53.0	C
		Kashmir (h = 50 km).				
"	25	Up	iP		01 22 46.1	
		Um	iP		01 23 26.0	
		De	iP		01 22 21.2	
		Rumania (h = 140 km).				
"	25	Um	iP		01 36 51.8	
		Japan (h = N).				
"	25	Ki	iP		05 08 57.3	
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP		05 09 17.7	
		Um	iP		05 09 02.2	
		Ud	iP		05 09 21.4	
		Talaud Islands				
		(h = 150 km).				
"	25	Up	iP		06 53 37.0	C
			i		06 53 42.4	
			i		06 55 26.7	
			iS		07 03 55	
					micr	sec
			P	Z'	0.2	1.2
			Mx	E	2.6	17
			Mx	N	2.6	15
			Mx	Z	4.5	17
		Ki	iP		06 53 20.0	
			i		06 53 25.7	
			iS		07 03 24	
					micr	sec
			P	Z'	0.9	2.0
		(cont.)				

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct. 25 (cont.)

				micr	sec
Ki					
	Mx	E	11		18
	Mx	N	5.8		18
	Mx	Z	9.6		17
Sk	iP		06	53	44.6
Um	iP		06	53	25.4
	iS		07	03	35
Ud	iP		06	53	45.9
	i		06	53	51.6
De	i		06	54	04.8

Mindoro (h = 60 km).
m = 6.2, M = 6.1 (Up,Ki).

" 25

Ki	iPKP1	11	29	07.7
Um	iPKP1	11	29	18.7

New Zealand (h = 30 km).

" 25

Ud	iPg1	12	23	26.1
	iSg1	12	23	45.9
De	iSg1	12	24	18.3

Dalsland, Sweden.
Origin time = 12 23 01.

" 25

Sk	iSg1	13	14	19.4
Um	i	13	12	03.5
	iSg1	13	12	32.2

Lake Ladoga region.
Explosion.

" 25

Up	ipP	14	24	06.0
	i	14	24	15.0
	i	14	25	28.0
	i(PP)	14	26	28.3
	iSKS	14	31	55
	i	14	32	37
	iS	14	33	09
	iSP	14	34	45
	iPKKP	14	38	10.8

			micr	sec
	pP	Z'	0.1	1.0
	(PP)	Z'	0.2	1.2
	Mx	E	1.7	15
	Mx	N	1.8	17
	Mx	Z	3.2	17
Ki	ipP		14 24	21.0
	iPP		14 26	59.3
	ipPP		14 28	33.5
	iSKS		14 32	17
	iS		14 33	41
	iSP		14 35	27
	i(PKKP)		14 37	41.4
	iPKKP		14 37	55.6

			micr	sec
	pP	Z'	0.2	1.5
	PP	Z'	0.3	1.5

(cont.)

1973 Oct. 25 (cont.)

			micr	sec
Ki				
	Mx	E	2.9	21
	Mx	N	3.8	23
Sk	iP		14 22	04.0
	ipP		14 24	01.8
Um	i(PP)		14 26	26.1
	ipPP		14 28	30.5
	iSKS		14 32	05
	i		14 32	56
	iS		14 33	32
	iSP		14 35	10
	i(PKKP)		14 37	44.3
	iPKKP		14 38	00.9
Ud	iP		14 22	00.3
	ipP		14 23	55.1
	i		14 23	58.4
	i(PP)		14 26	17.0
	iPKKP		14 38	19.1
De	iP		14 21	55.1
	ipP		14 23	48.6
	i		14 23	53.0
	i(PKKP)		14 38	00.8

Argentina.
h = 520 km (Sk,Ud,De).
m = 6.5, M = 6.0 (Up,Ki).
M uncorrected for focal depth.

" 26

Ki	iP	03	32	25.0

Kamchatka (h = N).

" 26

Up	iP	04	33	53.4
	iPn	04	34	59.0
	iPP	04	35	12.3

			micr	sec
	P	Z'	0.1	1.0

Ki	iP	04	33	37.9

			micr	sec
	P	Z'	0.1	0.6

Sk	iP	04	34	09.0 C
Um	iP	04	33	38.5
Ud	iP	04	34	09.7 C
De	iP	04	34	16.7
	iPP	04	35	44.1

Kazakh SSR.
m = 5.8 (Up,Ki).
Underground explosion.

" 26

Sk	iP	05	50	24.4
Ud	iP	05	50	54.9

Alaska (h = N).

" 26

Up	iP	06	04	47.1
	iLg1	06	11	13.3
Ki	iP	06	04	51.9

(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct.	26	(cont.)					
		Sk	iP	06 05 16.9			
		Um	iP	06 04 40.0			
			i	06 04 42.6			
		Ud	iP	06 05 08.6			
		De	iP	06 05 11.0			
			i	06 05 16.1			
		Southern Ural Mountains. Underground explosion.					
"	26	Ud	iP	10 20 11.2			
		Kurile Islands (h = 60 km).					
"	26	Up	i	12 26 09.9			
			i(Sg1)	12 26 44.2			
"	26	Ud	iP	13 16 27.0			
		Pamir. Intermediate depth.					
"	26	Ud	iP	13 17 45.9			
		Caucasus (h = N).					
"	26	Up	iP	14 59 53.9			
		Um	iP	14 59 42.9			
		Ud	iP	15 00 00.9			
			ipP	15 00 18.0			
		Samar. h = 60 km (Ud).					
"	26	Ud	iPKP1	15 30 19.4			
		De	iPKP1	15 30 30.3			
		Fiji Islands (h = 530 km).					
"	26	Up	iP	18 47 43.3			
		Ki	iP	18 47 10.2			
			ipP	18 47 20.6			
		Um	iP	18 47 26.5			
			ipP	18 47 35.6			
		Ud	iP	18 47 49.3			
			ipP	18 48 00.4			
		South of Japan. h = 40 km (Ki,Um,Ud).					
"	26	Um	iP	19 36 07.0			
		Panama (h = N).					
"	26	Up	iP	20 26 45.7			
		Sk	iP	20 27 28.7			
		Um	iP	20 27 26.6			
		Ud	iP	20 26 52.8			
		De	iP	20 26 15.5			
		Greece (h = 55 km).					
"	27	Ud	iP	01 36 26.9			

1973 Oct.	27	Up	iP	07 04 07.7			
			i	07 04 09.9			
				micr	sec		
			P	Z	18	1.0	
			Mx	E	59	4	
			Mx	N	38	3	
			Mx	Z	46	4	
		Ki	iP	07 02 48.6			C
			iS	07 04 56			
				micr	sec		
			P	Z	25	2	
			Mx	E	64	4	
			Mx	N	73	5	
			Mx	Z	64	5	
		Sk	iP	07 03 54.7			C
		Um	iP	07 03 20.1			C
			iS	07 05 54			
		Ud	iP	07 04 23.3			C
		De	iP	07 04 55.4			C
		Novaya Zemlya. m = 7.1 (Up,Ki). Underground explosion.					
"	27	Ki	iP	07 55 15.6			
			iS	07 57 23.1			
		Ud	iP	07 56 51.9			
		De	iP	07 57 21.1			
		Novaya Zemlya. Origin time = 07 52 28.					
"	27	Up	iP	08 08 13.4			
		Ki	iP	08 06 48.2			
			iS	08 08 57.4			
		Um	iP	08 07 23.3			
			i	08 09 32.9			
		Ud	iP	08 08 24.7			C
		De	iP	08 08 54.0			C
		Novaya Zemlya. Origin time = 08 04 01.					
"	27	De	iPKP	08 13 06.4			
		New Hebrides Islands (h = 30 km).					
"	27	Ud	iP	08 14 03.9			
		De	iP	08 14 33.9			
		Novaya Zemlya. Origin time = 08 09 40.					
"	27	Up	iP	08 25 33.9			
		Sk	eP	08 25 21			
		Um	iP	08 24 46.7			
			iS	08 27 19.9			
		Ud	iP	08 25 48.2			
		De	iP	08 26 17.5			C
		Novaya Zemlya. Origin time = 08 21 25.					

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973					
Oct.	27	Ud	iP	09 00 25.4	
"	27	Up	iP	09 18 02.5	
			iS	09 21 19.8	
			i	09 22 29.3	
		Ki	iP	09 16 38.3	
			iS	09 18 47.5	
		Sk	iP	09 17 51.1	
			eS	09 20 48	
			i	09 21 18.2	
		Um	iP	09 17 12.3	
			iS	09 19 43.8	
		Ud	iP	09 18 15.2	C
		De	iP	09 18 44.5	

Novaya Zemlya.
Origin time = 09 13 52.
This series of events marks the first reliable case of aftershocks of Russian nuclear explosions that we have recorded.

"	27	Up	iPKP2	09 45 50.3	
		Um	iPKP1	09 45 31.6	
		Ud	iPKP1	09 45 43.8	

South of Kermadec Islands (h = N).

"	27	Ud	iP	09 59 28.7	

Pakistan (h = N).

"	27	Um	iSg1	12 04 22.1	

Western USSR.
Explosion.

"	27	Ud	eP	14 29 35	

Iran (h = 20 km).

"	27	Up	i(Sg1)	15 03 08.0	

"	27	Up	iP	15 51 00.4	
			i	15 51 05.2	
		Ki	iP	15 51 36.8	
		Um	iP	15 51 15.1	
		Ud	iP	15 51 17.9	

Arabian Sea (h = N).

"	27	Up	iPKP1	17 00 58.3	C
				micr sec	
			PKP1 Z'	0.1 0.8	
		Ki	iSKP1	17 03 32.6	
		Um	iSKP1	17 03 42.7	
		Ud	iPKP1	17 01 00.7	
		De	iPKP1	17 01 10.2	

Tonga-Kermadec Islands (h = 500 km).

1973					
Oct.	27	Up	iPKP	22 21 45.4	
			ipPKP	22 22 02.7	
		Ki	iPKP	22 22 01.7	
			ipPKP	22 22 17.0	
				micr sec	
			PKP Z'	0.2 1.5	
		Ud	iPKP	22 21 43.4	
			ipPKP	22 22 00.8	

South Sandwich Islands.
h = 60 km (Up,Ki,Ud).

"	28	Ud	iP	02 27 50.0	
"	28	Ud	iP	07 51 01.6	
"	28	Ki	iP	10 05 28.6	
		Ud	iP	10 05 39.8	

Iceland (h = N).

"	28	Ki	iP	10 46 24.8	
		Sk	iP	10 46 00.6	
		Ud	iP	10 46 37.2	C
		De	iP	10 47 04.9	

Iceland (h = N).

"	28	Ki	i(P)	10 51 50.5	
			iP	10 51 56.8	
				micr sec	
			P Z'	0.1 1.0	
		Um	iP	10 52 11.7	
		Ud	iP	10 52 07.2	
		De	iP	10 52 34.5	

Iceland (h = N).
Several of these events exhibit (at Ki, Ud) small precursors to P, here denoted (P), preceding P by about 5 to 6 sec, a typical feature on our records of events in this region.

"	28	Sk	iP	10 56 38.5	
		De	iP	10 57 34.2	

Iceland (h = N).

"	28	Ki	i(P)	11 15 31.6	
			iP	11 15 37.3	
				micr sec	
			P Z'	0.1 1.2	
		Um	iP	11 15 52.3	
		Ud	i(P)	11 15 41.1	
			iP	11 15 46.9	

Iceland (h = N).

"	28	Ki	iP	11 19 05.7	

(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Oct. 28 (cont.)
Ud iP 11 19 16.8
Iceland.
Origin time = 11 15 32.

" 28 Ud iP 11 29 26.4
Iceland (h = N).

" 28 Up micr sec
Mx E 1.0 17
Mx N 1.9 21
Mx Z 2.5 17
Ki iP 11 35 17.8
micr sec
P Z' 0.8 2.0
Mx E 2.7 15
Mx N 1.7 15
Mx Z 2.1 16
Um iP 11 35 34.7
Ud i(P) 11 35 28.6
iP 11 35 32.7
De iP 11 35 58.1
Iceland (h = N).
M = 4.6 (Up,Ki).

" 28 Ki i(P) 11 51 04.2
iP 11 51 10.9
micr sec
P Z' 0.1 1.0
Ud iP 11 51 21.2
Iceland (h = N).

" 28 Ki iP 12 05 24.5
Ud iP 12 05 34.3
Iceland (h = N).

" 28 Up iPKP1 14 04 26.6
iPKP2 14 04 34.2
micr sec
PKP1 Z' 0.1 1.0
Ki iPKP1 14 04 04.7
Sk iPKP1 14 04 21.0 C
Um iPKP1 14 04 15.8 C
Ud iPKP 14 04 22.5
iPKP1 14 04 28.5 C
De iPKP1 14 04 35.8
iPKP2 14 04 48.4
South of Kermadec Islands
(h = 100 km).

" 28 Ki iP 14 12 00.6
Um iP 14 12 21.3
Ud iP 14 12 52.4

" 28 Up iPKP1 14 19 58.1
(cont.)

1973
Oct. 28 (cont.)
Up iPKP2 14 20 05.8
Um iPKP1 14 19 47.8
Ud iPKP1 14 19 59.8
De iPKP1 14 20 07.8
South of Kermadec Islands
(h = N).

" 28 Ki iP 14 29 28.1
micr sec
P Z' 0.1 1.0
Mx E 1.1 15
Mx N 1.2 16
Mx Z 1.0 14
Ud iP 14 29 40.3
Iceland (h = N).

" 28 Up iP 15 04 05.9
Ki iP 15 03 48.9
micr sec
P Z' 0.1 1.0
Sk iP 15 04 10.9
Um iP 15 03 54.5
Ud iP 15 04 14.5
De iP 15 04 23.5
Negros (h = 550 km).

" 28 Um iP 22 33 22.0 C
ipP 22 33 32.8
Ud iP 22 33 50.7
De iP 22 34 05.6
Japan.
h = 40 km (Um).

" 29 Ud iP 05 46 39.4

" 29 Up Mx 06 33
micr sec
Mx E 1.2 20
Mx N 1.4 20
Mx Z 2.7 20
Ki Mx 06 33
micr sec
Mx E 2.3 19
New Guinea (h = 35 km).
M = 5.8 (Up,Ki).

" 29 Up iSg1 09 44 42.0
Sk iSg1 09 45 04.0
Ud iPg1 09 43 00.7
iSn 09 43 33.5
iSg1 09 43 48.0
South coast of Norway,
58.1°N, 8.1°E.
Origin time = 09 41 58.
(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Oct. 29 (cont.)
By combination with Kongsberg and Bergen readings.

" 29 Ud iP 09 49 00.2
Greece (h = 80 km).

" 29 Um iSg1 12 16 49.5
Ud iSg1 12 17 20.8
De iSg1 12 17 44.6
Esthonia.
Explosion.

" 29 Ud iP 12 30 06.2
North Atlantic Ocean
(h = N).

" 29 Um iSg1 13 09 18.1
Ud iSg1 13 10 02.3
De iSg1 13 10 28.4
Western USSR.
Explosion.

" 29 Ud iP 14 56 16.4
Kurile Islands (h = 50 km).

" 29 Up iP 16 05 13.9
i 16 05 21.1
Ki iP 16 04 53.4
Um iP 16 05 04.6
Ud iP 16 05 24.3
Luzon (h = 50 km).

" 29 Up iP 21 15 23.9
Sk eP 21 16 09
Um iP 21 16 06.7
Ud iP 21 15 30.9
Albania (h = N).

" 30 Sk iP 01 19 00.3
Um iP 01 19 06.8
Italy (h = N).

" 30 Up iP 02 55 38.3 C
Ki iP 02 55 34.4
Sk iP 02 55 54.5 C
Um iP 02 55 31.6
Ud iP 02 55 51.0
Burma (h = 30 km).

" 30 Ki iP 03 05 37.5
Sk iP 03 06 20.7
Um iP 03 06 23.6
i 03 06 32.6
Ud iP 03 06 59.0
Greenland Sea (h = N).

1973 Oct. 30 Up iPKP1 04 51 49.4
micr sec
PKP1 Z' 0.1 1.0
Sk iPKP1 04 51 41.9
Um iPKP1 04 51 36.0
Ud iPKP1 04 51 50.6 C
De iPKP1 04 51 59.8
Kermadec Islands
(h = 60 km).

" 30 Ud iP 07 30 50.4
Ionian Sea.

" 30 Up iSg1 09 56 24.7
Ud iSg1 09 57 06.8
De iSg1 09 57 37.3
Coast of Södermanland,
Sweden.
Explosion.

" 30 Up iSg1 09 58 43.6
Ud iSg1 09 59 25.9
De i(Pn) 09 59 01.7
iSg1 09 59 57.3
Coast of Södermanland,
Sweden.
Explosion.

" 30 Up iPg1 10 22 37.7
iSg1 10 22 48.3
Ud iSg1 10 23 30.8
De i(Pn) 10 23 04.8
iSg1 10 23 59.7
Coast of Södermanland,
Sweden.
Explosion.

" 30 Up i 10 27 03.6
i(Sg1) 10 27 30.8
Sk iSg1 10 29 24.5
Ud iPg1 10 27 26.3
iSg1 10 27 50.6
De iSg1 10 28 17.9
iRg 10 28 31.8
Eastern Sweden, near
59°N, 17°E.
Origin time = 10 26 50.

" 30 Up iPg1 10 46 46.2
iSg1 10 46 55.3
iRg 10 47 05.9
Ud iSg1 10 47 37.0
De iSg1 10 48 08.0
Coast of Södermanland,
Sweden.
Explosion.

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973					
Oct.	30	Up	iSg1	11 42 44.6	
		Ud	iSn	11 41 30.7	
			iSg1	11 41 50.6	
		Southwest Norway.			
		By combination with			
		Kongsberg readings.			
"	30	Sk	iSg1	12 46 24.8	
		Um	iSg1	12 45 06.9	
		Ud	iSg1	12 45 39.6	
		De	iSg1	12 46 05.8	
		Esthonia.			
		Explosion.			
"	30	Up	iSg1	13 38 58.1	
			i	13 39 24.0	
		Um	iSg1	13 39 51.5	
			iRg	13 40 13.0	
		De	iSg1	13 40 29.2	
		Gulf of Finland.			
		Explosion.			
"	30	Ki	iP	16 06 26.5	
		Ud	iP	16 06 06.2	
		Iran (h = 45 km).			
"	30	Ki	iP	16 45 46.5	
		Ud	iP	16 45 33.3	
		Caspian Sea.			
"	30	Ud	iP	19 45 22.8	
		Turkey (h = 20 km).			
"	31	Ud	iPKP1	08 41 54.0	
"	31	Ud	i(Sg1)	11 39 51.6	
"	31	Um	iP	12 17 00.9	
		Ud	iP	12 17 10.2	
			i	12 17 21.0	
"	31	Ud	iP	12 57 23.5	
"	31	Up	iP	23 18 02.2	C
			iPcP	23 18 25.0	
				micr sec	
			P Z'	0.1 0.9	
		Ki	iP	23 17 17.8	C
		Sk	iP	23 17 53.6	
		Um	iP	23 17 37.8	
		Ud	iP	23 18 08.7	C
		De	iP	23 18 26.5	C
		Japan (h = 55 km).			

Markus Båth

May 24, 1975

SEISMOLOGICAL INSTITUTE
BOX 517
S-751 20 UPPSALA
SWEDEN

S E I S M O L O G I C A L B U L L E T I N

U P P S A L A, K I R U N A, S K A L S T U G A N, U M E Å, U D D E H O L M and D E L A R Y

Uppsala	(Up):	59°51.5'N,	17°37.6'E; h = 14 m
Kiruna	(Ki):	67°50.4'N,	20°25.0'E; h = 390 m
Skalstugan	(Sk):	63°34.8'N,	12°16.8'E; h = 580 m
Umeå	(Um):	63°48.9'N,	20°14.2'E; h = 16 m
Uddeholm	(Ud):	60°05.4'N,	13°36.4'E; h = 240 m
Delary	(De):	56°28.2'N,	13°52.2'E; h = 150 m

N O V E M B E R 1 - 30, 1973

1973 Nov. 1

Ud	iPKP1	05 33 34.7	
De	ePKP1	05 33 45	

Tonga-Kermadec Islands (h = 540 km).

" 1

Up	iPKP1	06 58 21.0	
		micr	sec
	PKP1 Z'	0.1	0.9
Ki	iPKP	06 58 10.2	
		micr	sec
	PKP Z'	0.1	1.2
Sk	iPKP1	06 58 15.7	
Um	iPKP1	06 58 09.9	
	iPKP	06 58 16.9	
Ud	iPKP1	06 58 22.0	
De	iPKP	06 58 31.2	
	iPKP1	06 58 33.2	

Tonga-Kermadec Islands (h = 35 km).

" 1

Um	iSg1	14 29 08.7	
Ud	eSg1	14 30 45	
De	iSg1	14 31 26.5	

Lake Ladoga region. Explosion.

" 1

Ud	iP	16 14 15.3	
De	iP	16 13 57.2	

" 1

Ki	iP	21 12 38.1	

Aleutian Islands (h = 110 km).

" 2

Up	iPKP1	05 07 53.9	
Ud	iPKP1	05 07 54.9	
De	ePKP1	05 08 05	

1973 Nov. 2

Up	iPg1	05 44 54.8	
	iRg	05 45 14.2	
Ud	iRg	05 45 16.7	

Central Sweden.

" 2

Up	iP	05 53 16.6	
		micr	sec
	Mx E	2.8	24
	Mx N	4.1	25
	Mx Z	3.1	25
Ki	iP	05 53 57.0	
		micr	sec
	Mx E	2.2	15
	Mx N	1.6	13
	Mx Z	1.8	12
Sk	eP	05 53 52	
Um	iP	05 53 32.5	
Ud	iP	05 53 30.7	
De	iP	05 53 12.1	

Iran (h = 55 km).
M = 5.2 (Up,Ki).

" 2

Up	iP	06 04 11.2	
Ki	iP	06 04 53.5	
		micr	sec
	P Z'	0.1	1.0
Um	iP	06 04 27.5	
Ud	iP	06 04 26.9	
De	iP	06 04 08.6	

Iran (h = 60 km).

" 2

Ud	iP	07 39 54.5

" 2

Up	iP	07 40 49.0	
		micr	sec
	Mx E	1.1	10

(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Nov. 2 (cont.)

			micr	sec
Up				
	Mx	N	1.3	12
	Mx	Z	1.6	12
Ki	iP		07 40 03.7	
			micr	sec
	Mx	E	2.2	15
	Mx	N	2.0	15
	Mx	Z	2.2	15
Sk	iP		07 40 44.1	
Um	iP		07 40 20.7	
Ud	iP		07 41 00.1	
De	eP		07 41 21	

Eastern USSR (h = N).
M = 5.4 (Up,Ki).

" 2

Up	iSg1	11 19 13.4
Ki	iSn	11 16 02.8
	iSg1	11 16 26.4
Sk	iSg1	11 18 51.0
Um	iSn	11 16 39.4
	i	11 16 58.3
	iSg1	11 17 15.9
Ud	iSg1	11 19 49.9

Northwest USSR.
Explosion.

" 2

Um	eSg1	12 19 44
De	iSg1	12 20 57.1

Western USSR.
Explosion.

" 2

Up	ipP	12 20 07.9
Sk	iP	12 20 19.7
Um	iP	12 19 55.3
	ipP	12 20 03.0
Ud	iP	12 20 15.8

Assam.
h = 30 km (Um).

" 2

Up	iSn	12 23 29.2
	iSg1	12 23 40.3
Ki	eSg1	12 26 21
Sk	iSg1	12 25 34.8
Um	iSg1	12 24 17.8
Ud	iSn	12 24 17.6
	iS*	12 24 41.9
	iSg1	12 24 46.0
De	i	12 24 55.7
	iS*	12 25 08.2
	iSg1	12 25 11.5

Esthonia.
Explosion.

1973 Nov. 2

Up	eSg1	12 44 44
Um	iSg1	12 44 58.6
Ud	iSg1	12 45 41.5
	iSg2	12 45 53.6
De	iSg1	12 46 14.8

Western USSR.
Explosion.

" 2

Ki	iSn	13 50 51.2
	iSg1	13 51 13.7
Um	eSg1	13 52 13

Northwest USSR.
Explosion.

" 2

Up	iP	13 56 57.9
Ki	iP	13 56 26.2
Um	iP	13 56 39.4
Ud	iP	13 57 05.1
De	iP	13 57 16.8

Bonin Islands.

" 2

Ud	iP	14 05 13.7

" 2

Um	i(P)	15 44 34.9

" 3

Up	iP		00 30 07.8
			micr sec
	P	Z'	0.1 1.1
Ki	iP		00 29 13.3
	i		00 29 13.9
			micr sec
	P	Z'	0.1 0.8
Sk	iP		00 29 50.3
	iPcP		00 30 37.2
Um	iP		00 29 38.3
	i		00 29 39.3
	iPcP		00 30 30.0
Ud	iP		00 30 10.1
	i		00 30 11.0
	iPcP		00 30 49.1
De	iP		00 30 33.4

Kamchatka (h = 60 km).
m = 5.9 (Up,Ki).
Double P, small and large, average separation = 0.8 sec (Ki,Um,Ud).

" 3

Up	iP	01 58 43.8
Ki	iP	01 58 49.2
Sk	iP	01 58 30.3
Um	iP	01 58 50.9
Ud	iP	01 58 31.8
	i	01 58 34.8
De	iP	01 58 37.0

Colombia (h = 20 km).

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Nov. 3 Um eP 06 04 09
Ud iP 06 04 34.1
Unimak Island (h = 40 km).

" 3 Ud iP 07 04 26.8

" 3 Up iP 08 39 27.4
Ki iP 08 40 00.3
micr sec
P Z' 0.1 1.0
Sk iP 08 39 57.0
Um iP 08 39 40.3
Ud iP 08 39 38.9
Indian Ocean (h = N).

" 3 Up iSg1 12 08 06.0
Um iSg1 12 09 00.1
Ud eSg1 12 09 11
De eSg1 12 09 45
Off coast of south Finland, 59.8°N, 22.2°E.
Origin time = 12 06 51.
Explosion.

" 3 Up iP 13 19 55.2
Ud iP 13 19 54.5
Aleutian Islands
(h = 60 km).

" 3 Up iSn 13 20 09.4
iSg1 13 20 35.6
i 13 20 41.3
Ki iSg1 13 21 20.8
Sk eSg1 13 21 47
Um iSg1 13 19 59.2
Ud eSg1 13 21 35
De iSg1 13 22 18.5
Lake Ladoga region.
Explosion.

" 3 Up iSP 14 46 02
micr sec
Mx E 1.8 19
Mx N 1.6 18
Mx Z 3.0 20
Ki iSP 14 46 43
micr sec
Mx E 1.2 18
Mx N 1.0 19
Mx Z 1.1 18
Um iSP 14 46 31
Ud i(PP) 14 36 17.2
Argentina (h = 35 km).
M = 5.7 (Up,Ki).
Cf. comment to Aug. 1, 1973, 16 13.

1973
Nov. 3 Ud iP 14 47 36.0

" 3 Ki iPn 14 56 26.9
iSg1 14 57 43.6
Northwest USSR.
Explosion.

" 3 Up iP 19 02 07.1
Ki iP 19 01 52.3
Um iP 19 01 57.2
Ud iP 19 02 15.7
Celebes Sea (h = 270 km).

" 4 Up iS* 05 36 44.0
iSg1 05 36 53.3
Ki i(Pn) 05 32 45.7
iPg1 05 32 56.3
iSn 05 33 36.9
iSg1 05 33 58.0
Sk eSg1 05 36 37
Um iSn 05 34 16.0
i 05 34 31.3
iSg1 05 34 51.5
Ud iSg1 05 37 26.2
De iSg1 05 38 57.5
Northwest USSR.
Explosion.

" 4 Um iPKP1 05 52 10.6

" 4 Ki eSg1 08 35 30
Um eSg1 08 36 15
Northwest USSR.
Explosion.

" 4 Um eSg1 08 42 48
Northwest USSR.
Explosion.

" 4 Ki iP 12 58 35.2
micr sec
P Z' 0.1 1.1
Sk eP 12 59 00
Um iP 12 59 04.7
Ud eP 12 59 29
De iP 12 59 54.7
Yukon (h = 7 km).

" 4 Up iP1 13 11 35.9
iP2 13 11 39.2
Ki iP2 13 10 47.8
Um iP1 13 11 07.9
iP2 13 11 11.3
Ud iP1 13 11 42.3
iP2 13 11 45.4
Sakhalin (h = N).
In average, P2 - P1 = 3.3 sec.

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Nov. 4 Up iP 15 56 57.4 C
iS 16 00 41
micr sec
P Z' 2.6 0.9
Mx E 9.4 11
Mx N 21 12
Mx Z 36 12
Ki iP 15 58 12.9 C
micr sec
P Z' 1.1 1.1
Mx E 44 15
Mx N 16 11
Mx Z 13 11
Sk iP 15 57 38.7 C
Um iP 15 57 36.1 C
iS 16 01 55
Ud iP 15 57 03.5 C
iS 16 01 03.7
De iP 15 56 23.3 C
Greece (h = 8 km).
m = 6.6, M = 5.9 (Up,Ki).

" 4 Up iP 16 16 20.5
micr sec
P Z' 0.1 0.7
Ki iP 16 17 36.0
Sk iP 16 17 01.4
Um iP 16 16 59.7
Ud iP 16 16 26.8
De iP 16 15 50.2
Greece (h = 6 km).

" 4 Up iP 16 32 02.1
Ud iP 16 32 11.0
Greece.

" 4 Up iP 20 09 32.3 C
ipP 20 09 42.8
micr sec
P Z' 0.1 1.0
pP Z' 0.1 1.3
Sk iP 20 09 14.8
Um iP 20 09 03.8
Ud iP 20 09 35.1
De iP 20 09 57.2
Kamchatka.
h = 40 km (Up).

" 5 Up iP 02 28 44.6
Ki eP 02 28 31
Sk iP 02 28 27.3
Ud iP 02 28 34.7
De eP 02 28 47
Mexico (h = 90 km).

1973
Nov. 5 Ud iPKP1 04 17 39.7

" 5 Ud iP 05 43 02.7
De eP 05 42 46
Iran (h = 50 km).

" 5 Ud i 08 02 40.4
iSg1 08 02 54.6

" 5 Ud eP 08 45 00
i 08 45 11.5
Italy (h = N).

" 5 Ud iP 11 26 00.3

" 5 Up iPKP1 11 38 23.0
Um iPKP1 11 38 11.5
Ud iPKP1 11 38 25.5
De iPKP1 11 38 35.5
Tonga-Kermadec Islands
(h = 580 km).

" 5 Up iP 12 02 03.2
Ki iP 12 00 14.6
iS 12 01 41.0
micr sec
P Z' 0.1 0.9
Sk iP 12 01 19.8
Um iP 12 01 14.1
iS 12 03 21.0
Ud iP 12 02 06.9
De iP 12 02 47.2
South of Svalbard.
Origin time = 11 58 21.

" 5 Up iSg1 12 14 35.8
Ki eSg1 12 16 35
Sk eSg1 12 16 22
Um iSg1 12 14 52.4
Ud iSg1 12 15 43.3
De eSg1 12 16 10
Western USSR.
Explosion.

" 5 Ki iPn 12 55 23.3
iSn 12 56 11.4
iSg1 12 56 29.4
Northwest USSR-Norway.
Explosion.

" 5 Ki iPn 12 57 07.1
iSn 12 57 55.2
iSg1 12 58 11.1
Northwest USSR-Norway.
Explosion.

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973						
Nov.	5	Ud	iSg1	13 52 22.2		
"	5	De	iPKP1	14 30 00.4		
		Fiji Islands (h = 630 km).				
"	5	Ki	iP	17 31 15.8		
			i	17 31 25.8		
		Kodiak Island (h = 45 km).				
"	5	Up	iP	20 11 45.4		
		Ud	iP	20 11 51.7		
		Japan (h = 60 km).				
"	5	Ud	iP	20 17 58.6		
		Turkey (h = 45 km).				
"	6	Ud	iP	00 01 00.3		
		Japan (h = 70 km).				
"	6	Sk	iP	01 14 55.3		
		Um	iP	01 15 11.1		
		Guatemala (h = 110 km).				
"	6	Up	iPKP1	05 37 42.9		
				micr	sec	
			PKP1 Z'	0.1	0.8	
		Ki	iPKP	05 37 32.8		
		Sk	ePKP1	05 37 37		
		Um	i(PKP)	05 37 30.0		
			iPKP1	05 37 31.5		
		Ud	iPKP1	05 37 44.7 D		
		De	iPKP1	05 37 55.3 D		
		Tonga-Kermadec Islands (h = 550 km).				
"	6	Ud	iPKP1	06 22 33.1		
		De	iPKP1	06 22 44.0		
		Tonga-Kermadec Islands (h = 590 km).				
"	6	Ud	iP	09 32 10.9		
		South Atlantic Ocean (h = N).				
"	6	Up	iP	09 47 03.1		
			iS	09 56 02		
				micr	sec	
			P Z'	0.2	0.9	
			Mx E	8.1	21	
			Mx N	20	22	
			Mx Z	32	22	
		Ki	iP	09 46 09.9		
				micr	sec	
			P Z'	0.1	1.0	

(cont.)

1973						
Nov.	6	(cont.)				
		Ki			micr	sec
			Mx E		14	22
			Mx N		9.6	20
			Mx Z		10	17
		Sk	iP		09 46 41.8	
		Um	iP		09 46 38.9	
			iS		09 55 14	
		Ud	iP		09 47 03.0	
		De	iP		09 47 25.6	
		Aleutian Islands (h = 35 km).				
		m = 6.1, M = 6.3 (Up,Ki).				
"	6	Ki	iP	09 50 59.9		
		Sk	iP	09 51 21.4		
		Um	iP	09 51 17.3		
"	6	Up	iP	10 34 26.9		
		Ki	iP	10 33 42.2		
		Ud	iP	10 34 34.5		
		Kurile Islands (h = 100 km).				
"	6	Up	i	11 42 00.9		
			iSg1	11 42 26.1		
"	6	Ki	iPn	11 43 24.9		
			iPg1	11 43 33.2		
			iSn	11 44 11.4		
			iS*	11 44 24.2		
		Sk	eSg1	11 47 15		
		Um	iSg1	11 46 00.7		
		Northwest USSR -Norway. Explosion.				
"	6	Um	eSg1	12 05 24		
		Western USSR. Explosion.				
"	6	Ki	iPn	12 23 41.0		
			iSn	12 24 28.0		
			iSg1	12 24 43.7		
		Northwest USSR-Norway. Explosion.				
"	6	Ki	eSn	13 37 05		
		Um	eSg1	13 38 07		
		Northwest USSR-Finland. Explosion.				
"	6	Ki	iP	17 12 33.7		
"	6	Up	iP	18 37 32.6 C		

(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Nov. 6 (cont.)

Up	i		18 37 33.8	
	iS		18 46 26	
	iP'P'		19 05 52.1	
			micr	sec
	P	Z'	0.5	0.9
	Mx	E	9.3	21
	Mx	N	27	21
	Mx	Z	41	22
Ki	iP		18 36 40.1	
	i		18 36 41.3	
			micr	sec
	P	Z'	0.2	1.1
	Mx	E	14	20
	Mx	N	14	20
	Mx	Z	17	19
Sk	iP		18 37 11.6	
Um	iP		18 37 06.6	C
	iS		18 45 38	
	iP'P'		19 05 54.5	
Ud	iP		18 37 32.6	C
	i		18 37 33.7	
De	iP		18 37 54.6	C
	i		18 37 56.1	

Aleutian Islands
(h = 40 km).
m = 6.4, M = 6.4 (Up,Ki).

" 6 Ud iP 18 50 44.6
Aleutian Islands
(h = 50 km).

" 6 Up iP 20 43 38.4
Ud iP 20 43 47.6
Greece (h = 15 km).

" 7 Ud iP 04 55 39.3 C
Aleutian Islands
(h = 160 km).

" 7 Up iSg1 16 38 25.5
Ud iPg1 16 37 07.2
iSg1 16 37 34.9
De iSn 16 37 44.9
iSg1 16 37 53.1
i 16 38 08.0
Off coast of Bohuslän,
Sweden, 58.5°N, 11.1°E.
Origin time = 16 36 32.
Explosion.
Some more explosions from
the same area follow within
the next three min.

" 7 Ud iPKP1 21 17 11.8 D
(cont.)

1973 Nov. 7 (cont.)
De iPKP1 21 17 23.6 D
Tonga-Kermadec Islands
(h = 190 km).

" 8 Up iP 01 07 41.3
Ki iP 01 08 39.8
Aegean Sea (h = N).

" 8 Up iP 09 09 49.5
iS 09 18 27
micr sec
P Z' 0.2 0.9
Mx E 12 20
Mx N 29 20
Mx Z 43 20
Ki iP 09 08 58.5
iS 09 16 54
micr sec
P Z' 0.3 0.8
Mx E 17 20
Mx N 19 23
Mx Z 16 24
Sk iP 09 09 34.6
Um iP 09 09 22.3
Ud iP 09 09 53.7
De iP 09 10 14.9
Kurile Islands (h = N).
m = 6.4, M = 6.4 (Up,Ki).

" 8 Ud iP 11 30 05.8
Aleutian Islands
(h = 50 km).

" 8 Ki iSn 12 29 44.2
iS* 12 29 56.9
Um iSg1 12 31 34.5
Northwest USSR-Norway.
Explosion.

" 8 Ud eP 13 07 49
Iran (h = 45 km).

" 8 Up iP 13 30 55.1
Ki iP 13 30 36.6
micr sec
P Z' 0.1 1.0
Sk iP 13 30 34.4
Um iP 13 30 48.9
Ud iP 13 30 46.0
De iP 13 30 53.4
Mexico (h = 70 km).

" 8 De i(Rg) 14 41 41.9

" 8 De i(Rg) 15 04 15.9

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Nov.	8	Ki	iPKP1		15 07 03.3	
		New Zealand (h = N).				
"	8	De	i(Rg)		15 09 05.0	
"	8	Ud	iSg1		15 12 41.7	
		Near southwest coast of Norway.				
		Origin time = 15 10 38.				
		By combination with Kongsberg readings.				
"	8	Ki	iP		15 56 30.9	
		Syria.				
"	8	Ki	iP		17 35 51.0	
					micr	sec
			P	Z'	0.1	1.0
		Um	iP		17 35 56.5	
		Ud	iP		17 36 15.4	
		Talaud Islands (h = 150 km).				
"	8	Up	iPKP1		17 51 11.8	
		Ud	iPKP1		17 51 13.5	
		De	iPKP1		17 51 22.1	
"	8	Ki	iP		18 31 01.9	
		Hindu Kush.				
		Intermediate depth.				
"	8	Ud	iP		21 29 51.0	
"	9	Ud	iPKP1		03 21 05.4	
"	9	Up	iP		07 11 40.8	
		Ud	iP		07 11 44.3	
		Greece (h = N).				
"	9	Ud	iP		12 10 29.5	
			i		12 10 41.2	
		Luzon (h = 60 km).				
"	9	Up	iP		13 48 18.4	
					micr	sec
			P	Z'	0.1	1.0
			Mx	N	6.6	24
		Ki	iP		13 46 53.7	
					micr	sec
			P	Z'	0.3	1.1
			Mx	E	6.7	15
			Mx	N	6.9	15
		Um	eP		13 47 38	
		Ud	iP		13 48 21.7	
		(cont.)				

1973 Nov.	9	(cont.)				
		De	iP		13 48 54.6	
		Arctic Ocean (h = N).				
		m = 5.4, M = 5.1 (Up,Ki).				
"	9	Up	iP		14 23 36.9	
			ipP		14 24 22.9	
					micr	sec
			P	Z'	0.3	1.2
			pP	Z'	0.3	1.2
		Ki	iP		14 22 43.8	
					micr	sec
			P	Z'	0.2	1.1
		Um	iP		14 23 08.1	
		Ud	iP		14 23 38.0	
			ipP		14 24 25.0	
		De	iP		14 23 59.7	
		Aleutian Islands.				
		h = 190 km (Up,Ud).				
		m = 5.9 (Up,Ki).				
"	9	Up	eP		14 53 12	
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP		14 51 49.6	
					micr	sec
			P	Z'	0.3	1.4
		Um	iP		14 52 33.1	
		Ud	iP		14 53 15.2	
		Arctic Ocean (h = N).				
		m = 5.4 (Up,Ki).				
"	9	Up	iP		15 15 13.3	
					micr	sec
			P	Z'	0.2	1.3
		Ki	iP		15 13 46.4	
					micr	sec
			P	Z'	0.3	1.3
		Um	iP		15 14 30.2	
		Ud	eP		15 15 14	
		Arctic Ocean (h = N).				
		m = 5.5 (Up,Ki).				
"	9	Up	iP		18 58 32.2	
					micr	sec
			P	Z'	0.1	1.1
		Ud	iP		18 58 48.6	
		Iran (h = 40 km).				
"	9	Up	iP		23 38 34.4	
					micr	sec
			P	Z'	0.1	1.1
		Ki	iP		23 38 36.6	
		Um	iP		23 38 32.6	
		(cont.)				

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Nov.	9	(cont.)			
		Ud	iP	23 38 44.8	
		De	iP	23 38 43.4	
		Nicobar Islands (h = N).			
"	10	Ud	iP	05 16 37.6	
		Japan (h = 70 km).			
"	10	Up	iP	08 48 11.5	
		Ki	iP	08 47 38.0	
		Um	iP	08 47 52.5	
		Ud	iP	08 48 19.6	
		South of Japan			
		(h = 350 km).			
"	10	Ud	iPKP	14 12 13.4	
		De	iPKP	14 12 19.0	
"	10	Ud	iP	14 19 14.0	
		Luzon (h = 70 km).			
"	10	Up	iPKP1	22 30 39.5	
			iPKP2	22 30 44.8	
		Sk	iPKP1	22 30 34.1	
		Um	iPKP1	22 30 28.7	
		Ud	iPKP1	22 30 41.4	
		De	iPKP1	22 30 49.7	
		Kermadec Islands			
		(h = 290 km).			
"	10	Up	iP	22 39 05.3	
		Ud	iP	22 39 14.4	
		Luzon (h = 70 km).			
"	10	Um	iPKP1	22 58 17.2	
"	11	Up	iP	02 53 43.9	C
				micr	sec
			P Z'	0.1	0.8
			Mx E	4.9	21
			Mx N	11	20
			Mx Z	18	20
		Ki	iP	02 52 52.5	C
				micr	sec
			P Z'	0.2	0.9
			Mx N	4.7	22
		Sk	iP	02 53 29.0	
		Um	iP	02 53 16.5	C
		Ud	iP	02 53 47.7	
		De	iP	02 54 08.3	
		Kurile Islands (h = 50 km).			
		m = 6.1, M = 5.9 (Up,Ki).			
"	11	Up	iP	07 22 06.6	
		(cont.)			

1973 Nov.	11	(cont.)			
		Up		micr	sec
			P Z'	0.2	1.4
		Ki	iP	07 22 44.4	
				micr	sec
			P Z'	0.1	1.0
		Sk	iP	07 22 43.1	
		Um	iP	07 22 20.0	
		Ud	iP	07 22 22.3	
		De	iP	07 22 06.8	
		Iran (h = 10 km).			
		m = 5.6 (Up,Ki).			
"	11	Up	iSg1	13 47 49.8	
		Sk	eSg1	13 49 28	
		Um	iSg1	13 48 13.8	
		Ud	iSg1	13 48 52.3	
		Western USSR.			
		Explosion.			
"	11	Up	iPKP1	17 12 29.0	
		Ki	ePKP	17 12 21	
		Um	iPKP	17 12 23.0	
		Ud	iPKP1	17 12 31.2	
		De	iPKP1	17 12 42.6	
		Tonga-Kermadec Islands			
		(h = 570 km).			
"	11	Up	i	18 08 59.7	
			iSg1	18 09 02.7	
		Ki	iSg1	18 11 31.5	
		Sk	i	18 08 18.9	
			iSg1	18 08 35.5	
		Um	iSg1	18 10 08.7	
		Ud	ePg1	18 07 09	
			i(Sn)	18 07 38.4	
			iSg1	18 08 01.3	
		De	e(Sn)	18 08 12	
			iSg1	18 08 45.6	
		Near southwest coast of Norway, 59.8°N, 6.2°E.			
		Origin time = 18 06 04.			
		By combination with Bergen and Kongsberg readings.			
"	11	Ud	eP	18 48 00	
		Iran (h = 50 km).			
"	11	Up	iPKP1	22 13 58.6	
				micr	sec
			PKP1 Z'	0.1	1.0
		Ki	iPKP	22 13 53.1	
		Sk	iPKP	22 14 02.7	
		Um	ePKP	22 13 59	
		(cont.)			

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Nov. 11 (cont.)

	Ud	iPKP1	22 14 00.8
	De	iPKP1	22 14 10.1

Fiji Islands (h = 270 km).

" 12	Up	iP	00 12 33.9
	Ki	iP	00 13 39.3
	Sk	iP	00 13 14.0
	Um	iP	00 13 07.4
	Ud	iP	00 12 41.7 D
		i	00 12 46.2
	De	iP	00 12 10.9

Dodecanese Islands
(h = 70 km).

" 12	Ud	iP	00 17 17.7

" 12	Up	iP	00 17 15.9	
			micr	sec
	P	Z'	0.1	0.9
	Mx	E	7.3	20
	Mx	N	8.6	14
	Mx	Z	12	14
	Ki	iP	00 18 20.5	
			micr	sec
	P	Z'	0.1	1.0
	Mx	E	6.4	13
	Mx	N	2.0	12
	Sk	iP	00 17 53.1	
	Um	iP	00 17 46.7	
	Ud	iP	00 17 21.2	
		i	00 17 24.5	
	De	iP	00 16 49.0	
		i	00 16 54.1	

Dodecanese Islands
(h = N).
m = 5.6, M = 5.6 (Up,Ki).

" 12	Um	iP	00 24 37.2

" 12	Ud	iP	00 41 41.9

Dodecanese Islands.

" 12	Up	iPKP1	01 18 17.9
	Ud	iPKP1	01 18 19.7

" 12	Um	iPKP1	03 48 24.6

South of Kermadec Islands
(h = 150 km).

" 12	Up	iPKP	04 12 25.1	
			micr	sec
	Mx	E	1.7	18
	Mx	N	1.6	18
	Mx	Z	1.6	20

(cont.)

1973
Nov. 12 (cont.)

	Ki		micr	sec
	Mx	E	3.7	20
	Mx	N	2.6	18
	Um	iPKP	04 12 19.2	
	Ud	iPKP	04 12 27.4	
	De	iPKP	04 12 33.1	

Solomon Islands
(h = 50 km).
M = 6.0 (Up,Ki).

" 12	Ud	iP	04 22 10.3

Dodecanese Islands.

" 12	Um	iP	06 59 11.1

Mindanao (h = 140 km).

" 12	Ud	iP	07 44 51.9
" 12	Ud	iP	07 59 39.4

Dodecanese Islands
(h = N).

" 12	Sk	eSg1	12 14 30
	Um	iSg1	12 12 58.9
	Ud	eSg1	12 13 47

Western USSR.
Explosion.

" 12	Ki	iPn	12 19 59.6
		iSn	12 20 58.0
		iSg1	12 21 22.6
	Um	iSn	12 21 36.1
		iSg1	12 22 12.8

Northwest USSR.
Explosion.

" 12	Up	iSg1	13 58 37.4
	Um	iSg1	13 59 14.5

Esthonia.
Explosion.

" 12	Ki	eSg1	14 17 41
	Um	iSg1	14 16 19.1

Lake Ladoga region.
Explosion.

" 12	Um	iPKP1	20 09 40.5

" 12	Sk	ePKP1	23 13 47
	Um	iPKP1	23 13 40.6
	Ud	iPKP1	23 13 53.8

" 13	Ki	iP	01 22 45.7
	Um	iP	01 23 03.6 C

(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Nov. 13 (cont.)
Ud iP 01 23 33.3 C
Japan (h = 80 km).

" 13 Up iP 02 57 18.3 C
micr sec
P Z' 0.1 0.8
Ki iP 02 56 29.4 C
micr sec
P Z' 0.1 0.6
Um iP 02 56 52.1
Ud iP 02 57 23.7
Okhotsk Sea (h = 330 km).
m = 5.5 (Up,Ki).

" 13 Ud iP 07 41 44.9

" 13 Ud iP 11 14 03.1
Tadzhik SSR (h = 55 km).

" 13 Ki iPn 11 58 59.8
iSn 11 59 57.8
iSg1 12 00 21.2
Um iSg1 12 01 12.4
Northwest USSR.
Explosion.

" 13 Ki iSg1 12 11 37.0
Um iSg1 12 09 46.9
Ud iSg1 12 10 33.2
Western USSR.
Explosion.

" 13 Up i(P) 12 42 40.9
micr sec
(P) Z' 0.1 1.0

" 13 Up i(PKP) 16 29 08.8
iPKP 16 29 18.3
micr sec
PKP Z' 0.1 1.0
Ki iPKP 16 29 02.3
iSKP1 16 31 33.5
micr sec
PKP Z' 0.1 1.0
SKP1 Z' 0.3 1.4
Sk iPKP 16 29 13.0
Um iPKP 16 29 09.8
Ud i(PKP) 16 29 08.3
i(PKP) 16 29 12.3
iPKP 16 29 20.2
De i(PKP) 16 29 18.4
Fiji Islands (h = 570 km).

" 13 Ki iP 22 26 45.8
(cont.)

1973 Nov. 13 (cont.)
Sk iP 22 26 42.8
Um iP 22 26 14.7
Ud iP 22 26 19.2
Iran (h = 50 km).

" 13 Ud ePKP 22 49 46
De iPKP 22 49 50.4
Fiji Islands (h = 550 km).

" 13 Ki iP 22 59 34.4
Ud iP 22 59 08.5
Iran (h = 60 km).

" 14 Up i(S) 04 04 02.1
Ki iP 03 58 39.9
iS 04 00 28.9
micr sec
P Z' 0.1 1.1
Sk eP 03 59 47
Um iP 03 59 39.3
i 03 59 55.8
iS 04 02 18.7
i 04 04 03.5
Ud iP 04 00 28.7
Svalbard.

" 14 Ki eP 09 40 27
Sk eP 09 40 01
Ud iP 09 39 28.6
De iP 09 38 59.9
Dodecanese Islands
(h = 55 km).

" 14 Um iSg1 12 08 27.0
Ud eSg1 12 09 15.6
Western USSR.
Explosion.

" 14 Ud i(P) 12 53 21.5

" 14 Ki iSn 13 01 21.4
iSg1 13 01 38.5
Northwest USSR-Norway.
Explosion.

" 14 Ki iP 15 56 57.3
Sinkiang, China
(h = 35 km).

" 14 Ki iSg1 16 14 19.3
Sk iSg1 16 14 23.8
Um iSn 16 14 33.6
iSg1 16 14 49.2
Ud iSg2 16 16 19.8
(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Nov. 14 (cont.)
Nordland, Norway,
66.5°N, 13.8°E.
Origin time = 16 12 48.
Explosion.

" 15 Up i(P) 03 08 23.6

" 15 Ki eP 06 17 30
i 06 17 36.1
micr sec
P Z' 0.5 2.0
Um iP 06 17 11.1
i 06 17 16.6
Ud iP 06 16 39.4
i 06 16 45.4
North of Ascension Island
(h = N).

" 15 Ki iP 06 57 27.2
Um iP 06 57 41.6
Ud iP 06 58 08.5
South of Japan (h = N).

" 15 Up iP 08 31 45.1
micr sec
P Z' 0.1 1.0
Ki iP 08 31 46.1
micr sec
P Z' 0.1 0.8
Sk iP 08 32 02.0
Um iP 08 31 41.8
Ud iP 08 31 56.9
De iP 08 31 55.1
Nicobar Islands (h = N).
m = 5.9 (Up,Ki).

" 15 Up iSg1 08 40 21.4
Um iSg1 08 41 29.2
Off coast of southwest
Finland.
Explosion.

" 15 Um iSg1 08 41 12.1
Ud iSg1 08 41 12.3
Off coast of southwest
Finland.
Explosion.

" 15 Up iSg1 09 25 16.3
i(Rg) 09 25 22.0
Um iSg1 09 27 18.7
Ud iSg1 09 26 02.4
De iSg1 09 26 30.8
(cont.)

1973
Nov. 15 (cont.)
Near coast of Södermanland,
Sweden, 59.0°N, 17.5°E.
Origin time = 09 24 50.
Explosion?

" 15 Ki iPg1 10 20 09.7
iSn 10 20 48.3
iS* 10 20 59.7
iSg1 10 21 04.7
Um iSg1 10 22 34.6
Northwest USSR-Norway.
Explosion.

" 15 Ki iPn 10 51 08.5
iPg1 10 51 16.5
iSn 10 51 54.9
iS* 10 52 06.7
iSg1 10 52 10.9
Um iSg1 10 53 41.8
Northwest USSR-Norway.
Explosion.

" 15 Up iSg1 11 28 20.9
Um iSg1 11 28 54.2
Ud iSg1 11 29 22.6
Esthonia.
Explosion.

" 15 Sk iSg1 14 49 21.1
Ud iPg1 14 47 05.7
iSg1 14 47 28.5
De iSg1 14 47 38.3
Västergötland, Sweden.
Origin time = 14 46 37.

" 15 Up iP1 15 17 27.2
micr sec
P1 Z' 0.2 1.4
Ki iP2 15 18 13.8
micr sec
P2 Z' 0.4 1.6
Sk iP1 15 17 33.6
Um iP1 15 17 51.0
iP2 15 17 54.1
Ud iP1 15 17 20.6
iP2 15 17 23.3
North of Ascension Island
(h = N).
m = 6.2 (Up,Ki).
Double P onsets; cf. Nov.
15, 06 17.

" 15 Up iP 17 18 45.8
Ki iP 17 19 01.2
(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Nov. 15 (cont.)

Sk	iP	17 19 13.4	
Um	iP	17 18 48.4	
Ud	iP	17 19 02.0	

Pakistan (h = N).

" 15 Ud iP 19 04 38.1

" 15 Ud iP 23 32 19.1
Mindanao (h = 80 km).

" 16

Up	iP	03 44 25.2	
Ki	iP	03 44 32.0	
Sk	iP	03 44 49.7	
Um	iP	03 44 22.0	
Ud	iP	03 44 41.7	

Tadzhik SSR (h = 210 km).

" 16 Um iP 04 10 14.6

" 16

Up	iSg1	11 23 50.2	
Ki	iPn	11 19 36.9	
	iSn	11 20 37.0	
	iS*	11 20 54.9	
Sk	iSg1	11 23 25.3	
	i	11 23 32.0	
Um	iSn	11 21 15.3	
	i	11 21 29.6	
	iSg1	11 21 49.2	
Ud	iSg1	11 24 27.1	

Northwest USSR.
Explosion.

" 16

Up	iRg	12 01 24.7	
Ud	i(Sg1)	12 01 37.2	
	iRg	12 01 43.4	

Central Sweden.

" 16

Ki	iPn	12 06 14.7	
	iSg1	12 07 18.3	

Northwest USSR-Norway.
Explosion.

" 16 Um iSg1 12 24 17.0
Western USSR.
Explosion.

" 16 Um iSg1 12 42 28.8
Western USSR.
Explosion.

" 16 Sk eP 12 57 41
Kodiak Island (h = 55 km).

" 16 Ud iP 18 54 58.1

1973
Nov. 16 Ud iP 20 10 10.2

" 16

Up	i	21 30 47.6	
	iRg	21 30 52.2	
Ud	i(Sg1)	21 29 29.7	
	iRg	21 29 31.5	

Probably west-central Sweden.

" 16

Up	iPKP1	23 28 30.5		
		micr	sec	
	PKP1 Z'	0.2	1.4	
	Mx N	1.4	19	
Ki	iPKP1	23 28 29.5		C
	i	23 28 33.4		
		micr	sec	
	PKP1 Z'	0.1	1.0	
	i Z'	0.2	1.0	
	Mx E	1.5	18	
	Mx N	1.2	18	
	Mx Z	1.9	20	
Sk	iPKP1	23 28 38.7		C
Um	iPKP1	23 28 28.6		C
Ud	iPKP1	23 28 37.0		
	iPKP2	23 28 41.0		

South of Australia
(h = N).
M = 5.9 (Up,Ki).

" 17

Up	iP	00 37 33.3	
		micr	sec
	P Z'	0.3	1.5
Ki	iP	00 36 47.7	
		micr	sec
	Mx E	1.4	17
	Mx N	1.1	17
	Mx Z	1.2	16
Sk	iP	00 37 24.1	
Um	iP	00 37 07.9	
Ud	iP	00 37 38.9	

Kurile Islands (h = N).

" 17

Sk	eSg1	01 38 14
Um	iSg1	01 37 09.9

" 17

Ki	iP	05 54 40.5
Um	iP	05 55 06.9
Ud	iP	05 55 37.8

Komandorsky Islands
(h = N).

" 17 Um eSg1 09 27 48
Off coast of south Finland.
Explosion.

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Nov. 17 Up iSg1 09 27 56.5
Um eSg1 09 28 49
Ud eSg1 09 29 00
Off coast of south Finland.
Explosion.

" 17 Up iP 11 02 50.6
i 11 03 06.1
iS 11 12 16
micr sec
i Z' 0.1 1.2
Mx E 1.0 17
Mx N 1.0 18
Ki iP 11 03 13.1
micr sec
P Z' 0.1 1.0
Mx E 2.0 16
Mx N 1.7 16
Mx Z 1.5 16
Sk iP 11 03 15.2
Um iP 11 02 59.0
i 11 03 04.7
iS 11 12 29
Ud iP 11 03 02.1
i 11 03 07.9
Indian Ocean (h = N).
m = 5.8, M = 5.5 (Up,Ki).

" 17 Ki iPg1 11 09 49.5
iSn 11 10 27.7
iS* 11 10 40.3
iSg1 11 10 45.0
Um iSg1 11 12 17.6
Northwest USSR-Norway.
Explosion.

" 17 Ki iSn 13 14 13.6
Um iSg1 13 15 32.9
Northwest USSR.
Explosion.

" 17 Um iP 19 36 09.9
Mariana Islands
(h = 120 km).

" 17 Um iP 21 34 54.8
Ud iP 21 35 26.4
Japan (h = 120 km).

" 18 Up iRg 06 38 30.8
Ud iRg 06 38 16.5
Central Sweden.

" 18 Ki eSg1 07 58 13
(cont.)

1973
Nov. 18 (cont.)
Um eSg1 07 59 05
Northwest USSR.
Explosion.

" 18 Up iP 08 50 44.4
Ki iP 08 50 27.4
Um iP 08 50 32.9
Ud iP 08 50 54.4
Luzon (h = N).

" 18 Ud iP 10 31 23.7

" 18 Up iSg1 11 28 36.7
Ki iSn 11 25 20.6
iS* 11 25 36.1
Um iSn 11 26 01.6
i 11 26 17.3
iSg1 11 26 37.4
Ud eSg1 11 29 13
Northwest USSR.
Explosion.

" 18 Up iP 12 18 34.2
Ki iP 12 17 49.6
Um iP 12 18 09.7
Ud iP 12 18 40.0
Kurile Islands (h = 50 km).

" 18 Um iP 16 04 09.8
Japan (h = 45 km).

" 18 Ki eP 16 36 29
Sinkiang, China.

" 19 Up iPKP1 02 47 41.6
micr sec
PKP1 Z' 0.1 1.0
Ud iPKP1 02 47 44.1 D
Tonga-Kermadec Islands
(h = 80 km).

" 19 Ud iPKP1 02 54 55.0

" 19 Up iP 07 34 21.4
Ki iP 07 35 27.7
Sk iP 07 35 00.8
Um iP 07 34 54.7
Ud iP 07 34 30.3 C
De iP 07 34 00.2
Dodecanese Islands
(h = N).

" 19 Ud iP 07 39 22.8
Dodecanese Islands.

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Nov. 19 Ki iP 10 51 32.7
Burma.

" 19 Ki iPP 11 38 57.6
Argentina (h = 40 km).

" 19 Up iP 13 13 11.1 C
iS 13 22 25

		micr	sec
P	Z'	1.1	1.1
Mx	E	26	22
Mx	N	23	19
Mx	Z	49	19

Ki iP 13 12 30.3 C
iS 13 21 14

		micr	sec
P	Z'	0.7	1.3
Mx	E	33	21
Mx	N	33	23
Mx	Z	21	17

Um iP 13 12 48.2 C
Ud iP 13 13 17.7 C
De iP 13 13 33.3 C
Japan (h = 55 km).
m = 6.6, M = 6.7 (Up,Ki).

" 19 Ki iP 18 29 06.2

" 19 Up iP 21 22 32.2
ipP 21 22 44.5

		micr	sec
P	Z'	0.1	1.0

Ki iP 21 21 51.2
Um iP 21 22 09.2
Ud iP 21 22 39.2
Japan.
h = 45 km (Up).

" 20 Up iPKP1 00 44 19.4
Ud iPKP1 00 44 21.3 D

" 20 Up iPKP1 00 48 09.9
Ud iPKP1 00 48 11.8 D

" 20 Ki iP 02 40 57.0 C

		micr	sec
P	Z'	0.1	0.9

Ud iP 02 40 39.3 C
Iran (h = 45 km).

" 20 Ud iP 08 56 40.7
Japan (h = 80 km).

" 20 Um iSg1 12 19 45.5
(cont.)

1973
Nov. 20 (cont.)
Ud iSg1 12 20 32.4
Western USSR.
Explosion.

" 20 Up iSg1 13 01 04.0
Ki iSg1 13 03 53.7
Sk iSg1 13 02 59.8
Um iSg1 13 01 52.4
Esthonia.
Explosion.

" 20 Up iP 13 07 18.3
ipP 13 07 28.0

		micr	sec
pP	Z'	0.4	1.5
Mx	E	2.0	15
Mx	N	2.7	13
Mx	Z	4.8	11

Ki i(pP) 13 08 40.9

		micr	sec
Mx	E	3.1	11
Mx	N	1.4	14
Mx	Z	1.1	10

Sk iP 13 08 00.9
Um eP 13 08 00
iS 13 12 16
Ud iP 13 07 25.7
Aegean Sea.
h = 40 km (Up).
M = 5.1 (Up,Ki).

" 20 Um eSg1 13 40 16
Western USSR.
Explosion.

" 20 Up iP 17 08 10.6

		micr	sec
P	Z'	0.2	1.2
Mx	E	0.9	22

Ki iP 17 07 16.1

		micr	sec
P	Z'	0.2	1.2
Mx	E	1.2	14
Mx	N	1.3	17
Mx	Z	1.5	16

Sk iP 17 07 53.2
Um iP 17 07 41.9
Ud iP 17 08 14.3
De iP 17 08 35.7
Kamchatka (h = N).
m = 6.1, M = 5.2 (Up,Ki).

" 20 Ki iP 19 23 31.1
Ud iP 19 23 44.1
Sumatra (h = N).

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Nov. 21 Um iP 01 01 24.7
Lake Tanganyika (h = N).

" 21 Um iP 04 55 10.0
Japan (h = 340 km).

" 21 Up iSg1 12 16 48.7
Um iSg1 12 17 03.0
Western USSR.
Explosion.

" 21 Up iP 12 18 21.3
Um iP 12 18 07.0
Ud iP 12 18 28.5
Mindoro (h = 40 km).

" 21 Ud i(Sg1) 12 19 57.5

" 21 Up iSg1 12 57 03.0
Um iSg1 12 57 36.7
Esthonia.
Explosion.

" 21 Up iSg1 12 57 12.2
Um iSg1 12 57 46.0
Ud iSg1 12 58 10.7
De iSg1 12 58 38.0
Esthonia.
Explosion.

" 21 Up iSg1 13 38 26.5
Sk eSg1 13 38 26
e 13 38 42
Um eSg2 13 40 00
Ud iSg1 13 37 29.6
Near coast of southwest Norway, 58.5°N, 6.4°E.
Origin time = 13 35 23.
By combination with Kongsberg readings.

" 21 Up iP 13 44 14.1

		micr	sec
Mx	E	1.6	21
Mx	N	2.0	22
Mx	Z	3.4	21
Ki		micr	sec
Mx	E	3.3	19
Mx	N	3.1	21
Mx	Z	3.7	21

Sk iP 13 43 55.5
Um iP 13 44 12.5
Ud iP 13 44 04.7
Mexico (h = 60 km).
M = 5.8 (Up,Ki).

1973
Nov. 21 Um iPKP 15 19 54.1
Ud iPKP1 15 20 03.6
De iPKP1 15 20 13.4
Fiji Islands (h = 620 km).

" 21 Ki ePKP 18 47 29
South Sandwich Islands (h = N).

" 21 De iPKP 19 16 06.9

" 21 Up iP1 19 56 30.5
iP2 19 56 33.6

		micr	sec
P2	Z'	0.1	1.1
Mx	E	1.1	15
Mx	N	1.9	18
Mx	Z	2.0	19

Ki iP1 19 56 28.5
iP2 19 56 32.3

		micr	sec
Mx	N	2.6	16

Sk eP1 19 56 45
iP2 19 56 49.3
Um iP2 19 56 31.9
Ud iP1 19 56 45.9 C
iP2 19 56 49.7
De eP1 19 56 46
iP2 19 56 49.5
Tibet (h = 25 km).
M = 5.3 (Up,Ki).
In average, P2 - P1 = 3.6 sec.

" 21 Up iP 21 16 09.2 C

		micr	sec
P	Z'	0.4	1.3

Ki iP 21 15 21.7 C

		micr	sec
P	Z'	0.3	0.9

Sk iP 21 15 57.0
Um iP 21 15 43.4 C
Ud iP 21 16 14.5 C
De iP 21 16 33.3 C
Kurile Islands (h = 80 km).
m = 6.3 (Up,Ki).

" 22 Ud iP 00 54 01.8

" 22 Up iP 01 39 09.8
Ki iP 01 38 14.6
Um iP 01 38 43.2
Ud iP 01 39 04.1
Yukon (h = N).

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Nov.	22	Ud	iPKP1		10 31 28.1	
		De	iPKP1		10 31 38.7	
"	22	Ki	iSg1		12 38 55.4	
		Um	iSg1		12 37 12.9	
		Ud	iSg1		12 37 57.1	
		Western USSR.				
		Explosion.				
"	22	Um	iSg1		14 41 12.3	
		Lake Ladoga region.				
		Explosion.				
"	22	Um	iP		15 00 09.5	
		Ud	iP		14 59 52.7	
		Turkey (h = N).				
"	23	Up	iSg1		06 51 12.7	
		Sk	iSg1		06 51 09.6	
		Um	iSg1		06 52 19.8	
		Ud	iPg1		06 49 57.0	D
			iSg1		06 50 11.3	
		Southeast Norway,				
		60.5°N, 11.4°E.				
		Origin time = 06 49 40.				
		By combination with Bergen				
		and Kongsberg readings.				
"	23	Up	iSg1		12 38 22.9	
		Ki	iSg1		12 40 53.2	
		Sk	eSg1		12 40 09	
		Um	iSg1		12 38 55.5	
		Ud	eSn		12 39 02	
			iSg1		12 39 28.0	
		Esthonia.				
		Explosion.				
"	23	Um	iSg1		13 25 54.3	
		Western USSR.				
		Explosion.				
"	23	Up			micr	sec
			Mx	E	1.1	15
			Mx	N	2.3	13
		Ki	iP		13 43 53.8	
					micr	sec
			P	Z'	0.3	1.2
			Mx	E	2.2	17
			Mx	N	1.4	14
		Um	iP		13 43 41.0	
		Ud	iP		13 43 10.4	
		Azores Islands (h = 5 km).				
		M = 5.2 (Up,Ki).				
"	23	Up	iP		15 45 09.6	
		Hindu Kush.				
		Intermediate depth.				

1973 Nov.	24	Up			micr	sec
			Mx	N	1.3	15
		Ki	i(P)		00 06 23.1	
					micr	sec
			Mx	N	1.7	16
		Ud	i(P)		00 06 36.8	
			e		00 06 43	
		Sinkiang, China (h = N).				
		M = 5.1 (Up,Ki).				
		Both readings are late,				
		compared to the NEIS				
		solution.				
"	24	Um	iPKP1		00 41 48.6	
"	24	Up	eSg2		12 10 40	
		Sk	eSg1		12 12 18	
		Um	iSg1		12 10 49.8	
		Western USSR.				
		Explosion.				
"	24	Up	iSg1		12 15 15.9	
		Ki	iSg2		12 17 23.3	
		Sk	iSg1		12 17 04.8	
		Um	iSg1		12 15 31.3	
		Ud	iSg1		12 16 16.4	
		De	eSg1		12 16 48	
		Western USSR.				
		Explosion.				
"	24	Ud	iP		14 07 00.2	
		Formosa (h = 80 km).				
"	24	Up	iP		14 11 11.9	
			ipP		14 11 15.2	
					micr	sec
			pP	Z'	0.1	0.8
			Mx	E	1.0	14
			Mx	N	1.2	17
		Ki	iP		14 12 24.7	
					micr	sec
			P	Z'	0.1	1.2
			Mx	E	3.3	15
			Mx	N	2.7	13
		Sk	iP		14 11 38.8	
		Um	iP		14 11 50.8	
		Ud	iP		14 11 05.8	
			ipP		14 11 08.6	
		De	iP		14 10 34.7	
			ipP		14 10 38.0	
		Algeria.				
		h = 15 km (Up,Ud,De).				
		m = 5.6, M = 5.0 (Up,Ki).				
"	24	Up	iP		15 27 35.8	
		(cont.)				

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Nov. 24 (cont.)

	Up	iS	15 32 03	
			micr	sec
		P Z'	0.1	1.0
		Mx E	1.7	18
		Mx N	1.6	18
		Mx Z	2.3	17
	Ki	iP	15 28 48.4	
			micr	sec
		Mx E	6.6	16
		Mx N	2.5	12
		Mx Z	2.0	12
	Sk	eP	15 28 02	
	Um	iP	15 28 13.4	
		iS	15 33 05	
	Ud	iP	15 27 28.4	
	De	iP	15 27 00.1	

Algeria (h = N).
M = 5.1 (Up,Ki).

" 24	Um	iP	19 58 13.9

Japan (h = 370 km).

" 24	Um	iP	22 26 26.4
		i	22 26 37.7

Volcano Islands (h = N).

" 25	Up	iP	04 25 47.6
			micr sec
		P Z'	0.1 1.0
	Ki	iP	04 26 58.1
	Sk	iP	04 26 12.7
	Um	iP	04 26 24.3
	Ud	iP	04 25 40.6
	De	iP	04 25 09.8

Algeria (h = N).

" 25	Up	iP	04 36 16.0 D
		ipP	04 36 29.5
			micr sec
		pP Z'	0.1 1.1
	Ki	iP	04 35 40.3 D
		ipP	04 35 54.1
			micr sec
		pP Z'	0.1 1.0
	Sk	ipP	04 36 28.0
	Um	iP	04 35 55.2 D
		ipP	04 36 08.8
	Ud	iP	04 36 23.2
		ipP	04 36 37.2

Japan.
h = 50 km (Up,Ki,Um,Ud).
m = 5.7 (Up,Ki).

" 25	Up	iSg1	05 22 03.8

(cont.)

1973
Nov. 25 (cont.)

	Ki	iSn	05 18 49.2
		iS*	05 19 07.0
	Sk	iSg1	05 21 39.1
	Um	iSn	05 19 25.9
		iSg1	05 20 00.4

Northwest USSR.
Explosion.

" 25	Up	iSg1	05 54 03.5
	Ki	iSn	05 50 47.6
		iSg1	05 51 10.6
	Sk	iSg1	05 53 36.2
	Um	iSn	05 51 27.9
		iSg1	05 51 58.8

Northwest USSR.
Explosion.

" 25	Um	iP	06 07 53.2
	Ud	iP	06 08 24.9
" 25	Ki	i	07 12 24.6
		i(Sn)	07 12 39.5
		i	07 12 49.1
	Um	iSn	07 13 18.5
		iSg1	07 13 52.9

Northwest USSR.
Explosion.

" 25	Ud	iP	07 44 37.7

North of Ascension Island (h = N).

" 25	Ud	i(Sg1)	08 55 54.7
" 25	Up	iP	09 30 41.3 D
		ipP	09 30 57.3
			micr sec
		P Z'	0.3 1.3
		pP Z'	0.3 1.3
	Ki	iP	09 30 06.5 D
		ipP	09 30 21.3
			micr sec
		pP Z'	0.1 1.2
	Sk	iP	09 30 38.6
		ipP	09 30 54.3
	Um	iP	09 30 21.3 D
		ipP	09 30 36.8
	Ud	iP	09 30 49.8 D
		ipP	09 31 04.2

Japan.
h = 55 km (Up,Ki,Sk,Um,Ud).
m = 5.9 (Up,Ki).

" 25	Ud	iP	10 03 36.1

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Nov.	25	Up	iSg1	10 49 55.3	
		Ki	eSg2	10 50 47	
		Sk	iSg1	10 51 01.9	
		Um	iSg1	10 49 15.0	
		Ud	iSg1	10 50 51.9	
		Lake Ladoga region.			
		Explosion.			
"	25	Ud	iP	15 38 30.2	
"	25	Ki	iPKP	17 30 24.0	
				micr	sec
			PKP Z'	0.2	1.6
		South Sandwich Islands			
		(h = N).			
"	26	Ud	iP	15 48 59.3	
			i	15 49 10.3	
		Japan (h = 70 km).			
"	26	Ud	iP	21 17 28.2	
"	26	Up	iPg1	21 46 31.0	
			iS*	21 47 03.9	
			iSg1	21 47 07.7	
			i	21 47 15.1	
		Ki	iSn	21 47 47.0	
			iSg1	21 48 07.7	
			iSg2	21 48 17.7	
		Sk	ePg1	21 46 24	
			iSg1	21 47 02.5	
		Um	iPg1	21 45 57.8	
			iSg1	21 46 14.0	
		Ud	iPg1	21 46 39.5	
			iSn	21 47 17.6	
			iSg1	21 47 29.2	
		Ångermanland, Sweden,			
		62.9°N, 18.5°E.			
		Origin time = 21 45 38.			
		Felt.			
"	26	Ud	iP	22 03 02.7	
		Tsinghai, China (h = N).			
"	26	Ud	iP	23 27 10.8	
"	27	Um	iP	00 55 53.0	
		Ud	iP	00 56 08.9	
		Pakistan (h = 25 km).			
"	27	Up	iP	06 30 30.0	
		Um	iP	06 30 05.1	
		Ud	iP	06 30 35.7	
		Kurile Islands (h = 55 km).			

1973 Nov.	27	Up	iPKP1	08 21 15.7	
		Ud	iPKP1	08 21 18.3	
		De	iPKP1	08 21 29.4	
		Tonga-Kermadec Islands			
		(h = 460 km).			
"	27	Up	iP	09 40 16.3	
		Ki	eP	09 40 10	
		Sk	iP	09 40 34.1	
		Um	iP	09 40 08.0	
		Ud	iP	09 40 30.9	
		De	iP	09 40 32.5	
		Tibet (h = N).			
"	27	Ki	iP	11 16 53.4	
		Aleutian Islands			
		(h = 20 km).			
"	27	Sk	iP	12 07 13.8	
		Windward Islands			
		(h = 8 km).			
"	27	Ki	iSg1	13 00 46.6	
		Sk	eSg1	12 59 52	
		Um	iSg1	12 58 43.2	
		Esthonia.			
		Explosion.			
"	27	Up	eSg1	13 31 06	
		Sk	eSg1	13 32 56	
		Um	iSg1	13 31 25.0	
		Ud	iSg1	13 32 06.6	
			iSg2	13 32 18.5	
		De	iSg1	13 32 32.5	
		Western USSR.			
		Explosion.			
"	27	Up	iP	14 02 51.0	
			i	14 05 36.5	
				micr	sec
			P Z'	0.9	1.0
			Mx E	1.5	20
			Mx N	2.5	20
			Mx Z	3.4	21
		Ki	iP	14 01 56.5	
			i	14 01 57.9	
				micr	sec
			P Z'	0.6	1.0
			Mx E	1.9	17
			Mx N	3.4	16
			Mx Z	1.9	18
		Sk	iP	14 02 34.6	
		Um	iP	14 02 22.1	
			i	14 02 23.3	

(cont.)

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Nov. 27 (cont.)

	Ud	iP	14 02 54.7
		iPP	14 05 11.8
	De	iP	14 03 16.1

Kamchatka (h = 60 km).
m = 6.8, M = 5.6 (Up,Ki).

" 27

	Ud	iPKP1	16 26 22.8
	De	iPKP1	16 26 33.4

Tonga-Kermadec Islands
(h = 460 km).

" 28

	Ud	iP	02 11 05.7

" 28

	Ki	iP	05 34 09.1
	Sk	iP	05 34 42.7
	Um	iP	05 34 25.8 D
	Ud	iP	05 34 55.4

Japan (h = 220 km).

" 28

	Up	iP	05 51 42.8
	Um	iP	05 51 18.1
	Ud	iP	05 51 48.7

Kurile Islands (h = 60 km).

" 28

	Up	iP		06 57 22.2
		ipP		06 58 19.8
	Ki	iP		06 57 12.7
		ipP		06 58 10.0
			micr	sec
		pP	Z' 0.6	2.1
	Sk	iP		06 57 05.0
		ipP		06 58 01.9
	Um	iP		06 57 20.2
		ipP		06 57 17.9
	Ud	iP		06 57 12.5
		ipP		06 58 10.0
	De	ipP		06 58 17.1

Guatemala.
h = 240 km (Up,Ki,Sk,Um,Ud).

" 28

	Up	iP	07 17 55.5
		ipP	07 18 12.0
	Ki	iP	07 17 57.0
	Um	iP	07 17 53.5
	Ud	iP	07 18 06.4
		ipP	07 18 22.8

Sumatra.
h = 60 km (Up,Ud).

" 28

	Um	iP	08 28 26.0

Hindu Kush.
Intermediate depth.

1973
Nov. 28

	Up			micr sec
		Mx	E	1.7 22
		Mx	N	3.4 19
		Mx	Z	4.1 20
	Ki			micr sec
		Mx	E	3.6 18
		Mx	N	3.9 20
		Mx	Z	1.4 17
	Ud	iPP		08 31 09.6

Prince Edward Island (h = N).
M = 6.1 (Up,Ki).

" 28

	Ki	iSn	08 36 10.9

Northwest USSR-Norway.
Explosion.

" 28

	Ud	iP	09 05 23.8

" 28

	Ud	iP	11 12 43.6

Talaud Islands (h = 80 km).

" 28

	Up	eSg1	12 45 54
	Um	iSg1	12 46 12.4
	Ud	eSg1	12 46 52
	De	iSg1	12 47 23.1

Western USSR.
Explosion.

" 28

	Up	iSg1	13 02 34.1
	Ki	iSg2	13 05 03.5
	Um	iSg1	13 02 52.1
	Ud	iSg1	13 03 37.0
	De	iSg1	13 04 10.8

Western USSR.
Explosion.

" 28

	Up	iP	16 03 36.2
		i	16 03 40.0
	Ki	iP	16 03 31.3
		i	16 03 35.5
	Um	iP	16 03 27.8
		i	16 03 32.0
	Ud	iP	16 03 52.0
		i	16 03 56.2
	De	iP	16 03 53.3
		i	16 03 57.7

Sinkiang, China (h = N).
Double P, in average 4.2 sec apart.

" 28

	Ki	iPKP	17 20 38.3

Solomon Islands (h = N).

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973
Nov. 28 Um iPKP 18 13 17.5
Ud iPKP 18 13 27.9
Santa Cruz Islands
(h = 220 km).

" 28 Ki iP 19 01 19.5
Ud iP 19 01 44.0

" 28 Ud iP 20 06 40.3

" 29 Up iPKP1 01 02 36.1
Ud iPKP1 01 02 38.0
De iPKP1 01 02 47.6

" 29 Up Mx 01 37

		micr	sec
Mx	E	2.4	18
Mx	N	1.9	18
Mx	Z	5.6	19

Ki Mx 01 34

		micr	sec
Mx	E	2.7	19
Mx	N	3.1	21
Mx	Z	2.4	20

New Guinea (h = N).
M = 6.0 (Up,Ki).

" 29 Ki iPKP 04 21 57.6
South Sandwich Islands
(h = N).

" 29 Ud i(Sg1) 10 20 34.1

" 29 Um iSg1 10 49 50.0
Off coast of southwest
Finland.
Explosion.

" 29 Um iSg1 10 51 01.3
Probably of the same kind
and location as the
preceding event.

" 29 Up iP 11 03 03.8
i 11 03 06.2
iS 11 07 24

		micr	sec
P	Z'	0.1	1.1
i	Z'	0.3	1.1
Mx	E	18	18
Mx	N	16	19
Mx	Z	29	16

Ki iP 11 04 12.9
i 11 04 15.2
iS 11 09 25
(cont.)

1973
Nov. 29 (cont.)
Ki

		micr	sec
P	Z'	0.1	0.9
i	Z'	0.4	0.9
Mx	E	19	16
Mx	N	28	19
Mx	Z	11	15

Sk iP 11 03 42.3
i 11 03 44.2
iS 11 08 35.0
Um iP 11 03 36.8
i 11 03 38.8
iS 11 08 22
Ud iP 11 03 10.6
iS 11 07 38.0
De iP 11 02 37.3
i 11 02 39.7
iS 11 06 42.7
Crete (h = 25 km).
m = 6.1, M = 5.9 (Up,Ki).
Double P, in average 2.2
sec apart.

" 29 Up iP 11 10 18.7

		micr	sec
P	Z'	0.1	0.9

" 29 Ud iP 11 34 13.9

" 29 Sk eP 11 49 39
Mexico (h = 60 km).

" 29 Ki iPKP 12 26 42.7

		micr	sec
PKP	Z'	0.1	1.2
Mx	E	1.1	17
Mx	N	1.1	20

South Sandwich Islands
(h = 4 km).

" 29 Ki iSg1 12 28 38.4
Um iSg1 12 27 01.7
Western USSR.
Explosion.

" 29 Um eSg1 13 12 01
Lake Ladoga region.
Explosion.

" 29 Up iSg1 13 47 31.7
Sk eSg1 13 49 30
Um iSg1 13 48 07.5
Ud iSn 13 48 07.4
iSg1 13 48 37.5
De iSg1 13 49 05.6
Esthonia.
Explosion.

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973 Nov.	29	Ki	iPKP	13 48 15.1		
		New Hebrides Islands (h = 90 km).				
"	29	Ud	iP	14 04 11.7		
		Crete.				
"	29	Ki	iSg1	16 27 59.6		
		Sk	iSg1	16 28 07.1		
		Um	iSn	16 28 13.2		
			iSg1	16 28 27.9		
		Nordland, Norway, 66.5°N, 14.2°E. Origin time = 16 26 33. Explosion.				
"	29	Up	iP	17 30 34.6		
		Ki	eP	17 29 51		
		Sk	eP	17 30 27		
		Um	iP	17 30 09.9		
		Ud	iP	17 30 40.9		
		De	iP	17 30 57.1		
		Japan (h = 55 km).				
"	29	Up	iP	18 08 51.6	D	
			iPcP	18 09 25.5		
				micr	sec	
			P Z'	0.2	0.9	
		Ki	iP	18 08 00.3	D	
				micr	sec	
			P Z'	0.3	0.8	
		Sk	iP	18 08 37.0	D	
			iPcP	18 09 16.8		
			ipP	18 10 18.7		
		Um	iP	18 08 24.0	D	
			iPcP	18 09 09.1		
		Ud	iP	18 08 56.0	D	
			iPcP	18 09 29.0		
			ipP	18 10 37.5		
		De	iP	18 09 16.1	D	
		Okhotsk Sea. h = 520 km (Sk,Ud). m = 5.7 (Up,Ki).				
"	29	Sk	iP	19 49 17.8		
		Ud	iP	19 48 46.5		
		Aegean Sea (h = 160 km).				
"	30	Um	iP	00 45 37.9		
		Japan (h = 80 km).				
"	30	Ki	iPKP	08 04 21.6		
		South Sandwich Islands (h = N).				

1973 Nov.	30	Up	iP	08 25 43		
			iPKP	08 28 52.8	C	
			isPKP	08 29 36.0		
			iPP	08 31 03		
			iSKP1	08 32 05.0		
				micr	sec	
			PKP Z'	0.3	1.1	
			SKP1 Z'	0.4	0.9	
			Mx E	4.5	23	
			Mx N	5.2	22	
			Mx Z	7.9	23	
		Ki	iPKP	08 28 36.9	C	
				micr	sec	
			PKP Z'	0.5	1.0	
			Mx E	6.1	21	
			Mx N	11	25	
			Mx Z	7.1	20	
		Sk	i(PKP)	08 28 40.9		
			iPKP	08 28 47.2	C	
			iSKP1	08 32 01.1		
		Um	i(PKP)	08 28 30.7		
			i(PKP)	08 28 37.5		
			iPKP	08 28 42.9	C	
			iPP	08 30 43		
		Ud	i(PKP)	08 28 44.2		
			iPKP	08 28 53.4	C	
			iSKP1	08 32 09.9		
			isSKP1	08 33 10.9		
			iSP	08 41 20.0		
			iPS	08 41 34.8		
		De	i(PKP)	08 28 47.9		
			iPKP	08 29 00.3	C	
			iSKP1	08 32 20.3		
		New Hebrides Islands (h = 120 km). M = 6.4 (Up,Ki). M uncorrected for focal depth.				
"	30	Um	iSg1	13 03 41.9		
		Western USSR. Explosion.				
"	30	Sk	i(Sg1)	14 59 19.6		
"	30	Ki	iP	17 12 09.2		
		Sk	eP	17 12 36		
		Um	iP	17 12 19.4		
		Japan (h = 220 km). Some of these arrivals are close to those expected from the following event, whence a reliable separation cannot be guaranteed.				

Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973

Nov.	30	Ud	iP	17	12	28.8
			i	17	12	37.6

Molucca Passage (h = N).

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Klaus Meyer
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May 31, 1975

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SWEDEN

S E I S M O L O G I C A L B U L L E T I N

U P P S A L A, K I R U N A, S K A L S T U G A N, U M E Å,

U D D E H O L M and D E L A R Y

Uppsala	(Up):	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(Ki):	67°50.4'N,	20°25.0'E;	h = 390 m
Skalstugan	(Sk):	63°34.8'N,	12°16.8'E;	h = 580 m
Umeå	(Um):	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(Ud):	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(De):	56°28.2'N,	13°52.2'E;	h = 150 m

D E C E M B E R 1 - 31, 1973

1973 Dec.						
1	Up	iPKP		00 38 20.5		
		i		00 38 34.6		
				micr	sec	
		PKP	Z'	0.1	0.8	
	Ki	iPKP		00 38 34.0		
		i		00 38 36.1		
				micr	sec	
		PKP	Z'	0.1	1.0	
	Sk	iPKP		00 38 25.1		
		e		00 38 36		
		i		00 38 44.2		
	Um	iPKP		00 38 28.0		
		i		00 38 41.6		
	Ud	iPKP		00 38 18.6		
	South Sandwich Islands (h = 30 km).					
" 1	Ud	iPKP		00 48 29.5		
	South Sandwich Islands (h = N).					
" 1	Ud	iP		07 32 03.5		
" 1	Up	iP		10 49 54.0		
		i		10 50 02.8		
				micr	sec	
		P	Z'	0.2	0.8	
		Mx	E	1.6	17	
		Mx	N	1.3	18	
		Mx	Z	2.3	17	
	Ki	iP		10 49 09.3		
				micr	sec	
		P	Z'	0.1	1.0	
		Mx	E	1.8	18	
		Mx	N	2.6	19	
		Mx	Z	2.4	20	
	(cont.)					

1973 Dec.						
1	(cont.)					
	Sk	iP		10 49 44.2		
	Um	iP		10 49 28.8		
		i		10 49 46.1		
		iS		10 58 04		
	Ud	iP		10 50 00.1		C
	De	iP		10 50 17.4		
	Kurile Islands (h = 35 km). m = 6.2, M = 5.5 (Up,Ki).					
" 1	Um	iP		11 56 09.2		
" 1	Ki	iPn		12 44 12.2		
		iSn		12 45 01.5		
	Northwest USSR-Norway. Explosion.					
" 1	Ki	iPn		13 48 24.9		
		iSn		13 49 24.4		
		iS*		13 49 43.3		
	Sk	iSgl		13 52 15.3		
	Um	iSn		13 50 02.5		
		iSgl		13 50 32.3		
		iSg2		13 50 51.8		
	Northwest USSR. Explosion.					
" 1	Ki	iP		17 02 10.2		
	Zaire (h = 15 km).					
" 1	Up			micr	sec	
		Mx	E	1.2	21	
		Mx	N	1.0	19	
		Mx	Z	2.6	21	
	Ki	iPKP		17 19 50.9		
	(cont.)					

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec. 1 (cont.)

				micr	sec	
Ki						
	Mx	E		1.0	19	
	Mx	N		0.8	19	
	Mx	Z		1.2	20	
Sk	iPKP		17	19	41.3	
Um	iPKP		17	19	48.8	
Ud	iPKP		17	19	40.3	
	iPKKP1		17	29	56.4	
	i		17	30	08.5	

Chile (h = 35 km).
M = 5.7 (Up,Ki).

" 1

Sk	iP	17	31	38.0
Um	iP	17	31	27.6

" 1

Sk	iP	17	36	37.0
Ud	iP	17	36	03.5

" 1

Ki	iPKP	18	07	17.2

South Sandwich Islands
(h = N).

" 1

Ki	iP	19	36	27.9
Ud	iP	19	36	05.9

" 1

Ki	iP	20	06	29.5
	iPP	20	09	42.9
Um	iP	20	06	28.5
Ud	iP	20	06	40.3

Sumatra (h = N).

" 1

Ki	iP	20	11	09.8
Um	iP	20	11	06.7
Ud	iP	20	11	19.7

Sumatra.

" 1

				micr	sec	
Up	iP		23	27	59.7	
	ipP		23	28	12.6	
	P	Z'		0.1	1.0	
Ki	iP		23	27	14.2	
	P	Z'		0.1	0.9	
Sk	iP		23	27	49.1	C
Um	iP		23	27	34.3	C
	ipP		23	27	47.5	
Ud	iP		23	28	05.5	C
	ipP		23	28	18.1	
De	iP		23	28	23.1	

Kurile Islands.
h = 50 km (Up,Um,Ud).
m = 5.8 (Up,Ki).

" 1

Up	iP	23	29	06.9 C
	iS	23	38	07

(cont.)

1973 Dec. 1 (cont.)

			micr	sec	
Up					
P	Z'		0.4	1.0	
Mx	E		4.8	17	
Mx	N		11	18	
Mx	Z		17	16	
Ki	iP	23	28	21.9	C
	iS	23	36	45	
			micr	sec	
P	Z'		0.4	1.0	
Mx	E		20	16	
Mx	N		24	17	
Mx	Z		19	17	
Sk	iP	23	28	57.2	
Um	iP	23	28	42.3	C
	iS	23	37	22	
Ud	iP	23	29	12.7	C
De	iP	23	29	30.3	C
	i	23	30	16.4	

Kurile Islands (h = 40 km).
m = 6.4, M = 6.4 (Up,Ki).

" 2

Ki	ePgl	00	26	09
	iSgl	00	26	17.4
	iRg	00	26	21.4
Um	i(Sgl)	00	27	39.4

" 2

Um	iP	00	39	59.0
	i	00	40	04.7
Ud	iP	00	39	30.7 C

Ascension Island (h = N).

" 2

Up	iP	00	56	39.7
Ki	iP	00	55	56.3
Um	iP	00	56	16.5
Ud	iP	00	56	46.9

Kurile Islands (h = N).

" 2

Ki	iP	01	01	37.6
Um	iP	01	01	51.9

Sea of Japan (h = 410 km).

" 2

Ki	iP	01	40	28.5
Um	iP	01	40	10.1
Ud	iP	01	39	42.3

Ascension Island (h = N).

" 2

Um	iP	01	43	06.4

Japan (h = 110 km).

" 2

Ki	iPKP	04	27	05.6
Um	iPKP	04	26	58.0
Ud	e(PP)	04	28	12

South Sandwich Islands
(h = N).

" 2

Um	iP	10	27	49.3
Ud	iP	10	28	20.3

Kurile Islands (h = N).

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973					
Dec.	2	Ud	iP	12 10 35.2	
		Hindu Kush.			
		Intermediate depth.			
"	2	Up	iPKPl	13 22 00.8	
				micr	sec
			PKPl Z'	0.1	0.5
		Ki	iPKP	13 21 51.0	C
		Um	iPKPl	13 21 48.8	
			iPKP	13 21 54.5	
		Ud	iPKPl	13 22 02.7	C
		De	iPKPl	13 22 13.0	
		Tonga-Kermadec Islands			
		(h = 460 km).			
"	2	Um	iP	14 03 47.6	
		De	iP	14 04 02.4	
		Celebes (h = 110 km).			
"	2	Ki	iP	15 21 47.4	
		Um	iP	15 21 58.9	
"	2	Up	iP	17 49 37.1	
		Ud	iP	17 49 49.6	
"	2	Ki	iPKP	18 38 55.1	
				micr	sec
			PKP Z'	0.2	1.5
		South Sandwich Islands			
		(h = N).			
"	2	Up	iP	22 20 50.6	C
			i	22 21 07.0	
				micr	sec
			P Z'	0.2	1.0
		Ki	iP	22 19 57.8	C
				micr	sec
			P Z'	0.4	1.0
		Sk	iP	22 20 27.4	C
		Um	iP	22 20 24.2	C
			iPcP	22 21 03.1	
		Ud	iP	22 20 49.9	C
		De	iP	22 21 12.4	C
		Aleutian Islands (h = 40 km).			
		m = 6.4 (Up,Ki).			
"	3	Ud	iP	00 08 40.4	
"	3	Ud	iP	04 33 38.8	
			i	04 34 22.3	
"	3	Up	iP	12 08 47.5	
		Ki	iP	12 08 18.1	
		Sk	iP	12 08 47.2	
		Um	iP	12 08 29.2	
		Ud	iP	12 08 56.4	
		Ryukyu Islands (h = 70 km).			

1973					
Dec.	3	Um	iP	17 52 14.6	
"	4	Up	iP	01 37 07.7	
				micr	sec
			P Z'	0.1	0.9
		Ki	iP	01 36 23.1	
				micr	sec
			P Z'	0.1	1.0
		Sk	iP	01 36 56.9	
		Um	iP	01 36 42.5	C
		Ud	iP	01 37 14.1	C
		De	iP	01 37 30.7	
		Kurile Islands (h = N).			
		m = 6.0 (Up,Ki).			
"	4	Up	iP	12 59 17.7	
		Ki	eP	12 59 20	
		Um	iP	12 59 10.6	C
		Ud	iP	12 59 30.9	C
		Burma (h = 60 km).			
"	4	Um	iSgl	15 41 42.0	
		Western USSR.			
		Explosion.			
"	4	Up	i	15 53 00.8	
			iSKPl	15 53 19.1	
				micr	sec
			SKPl Z'	0.3	1.5
		Ki	iPKP	15 49 39.6	
		Um	iPKP	15 49 46.1	
			i	15 50 00.5	
		New Hebrides Islands			
		(h = 9 km).			
"	5	Up	iPKPl	01 25 01.6	
		Ud	iPKPl	01 25 03.9	
		De	iPKPl	01 25 14.1	
"	5	Up	iP	03 56 08.4	
			iS	04 00 43.4	
				micr	sec
			P Z'	0.1	0.7
		Ki	iP	03 57 15.6	
			ipP	03 57 34.4	
			i	04 01 25.7	
				micr	sec
			P Z'	0.2	0.5
		Sk	iP	03 56 47.8	
		Um	iP	03 56 40.9	
			ipP	03 56 57.4	
		Ud	iP	03 56 16.3	
			i	03 56 22.7	
			i	04 01 12.0	
		De	iP	03 55 44.3	
			ipP	03 55 58.8	

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec. 5 (cont.)

	De	i	03 56 31.4

Crete.
h = 80 km (Ki,Um,De).
m = 5.9 (Up,Ki).

" 5	Ki	i(P)	10 32 53.7
	Ud	i	10 31 49.0
" 5	Um	iPKP	10 34 26.0
		i	10 34 28.0

New Hebrides Islands
(h = 35 km).

" 5	Ki	iPgl	11 30 13.6
		iSn	11 30 47.8
		iSgl	11 30 55.0
	Sk	ePgl	11 30 17
		iSgl	11 30 55.3
	Um	ePn	11 30 21
		iPgl	11 30 28.8
		iSn	11 31 05.8
		iSgl	11 31 19.1
	Ud	iSgl	11 32 40.5

Nordland, Norway,
66.4°N, 14.1°E.
Origin time = 11 29 23.

" 5	Ki	iP	11 46 56.6
		i	11 47 06.2

Formosa (h = 70 km).

" 5	Ud	iP	14 49 30.3
" 5	Ki	iP	18 03 08.2
	Sk	iP	18 02 35.4
	Um	iP	18 03 06.3
	Ud	iP	18 02 40.6
	De	iP	18 02 46.3

North Atlantic Ocean
(h = N).

" 5	Um	iPKP	23 17 32.2

South Sandwich Islands
(h = N).

" 6	Um	iP	05 46 24.3
	Ud	iP	05 47 12.9
" 6	Um	iP	07 33 01.7
" 6	Um	iP	08 02 13.9
	Ud	i(P)	08 02 53.9
" 6	Up	iP	08 02 56.1
	Ki	iP	08 03 32.7
	Um	iP	08 03 10.2

(cont.)

1973 Dec. 6 (cont.)

	Ud	iP	08 03 08.5

Arabian Sea (h = N).

" 6	Um	iP	10 28 16.9
	Ud	i	10 29 44.3
" 6	Um	iP	10 41 18.1

Japan (h = 60 km).

" 6	Um	i	11 41 55.7
		iSgl	11 42 05.9
	Ud	i(Sn)	11 42 03.8
		iSgl	11 42 40.6

Esthonia.
Explosion.

" 6	Um	iSgl	12 24 13.6

Western USSR.
Explosion.

" 6	Ki	iPKP	14 55 42.5

South Sandwich Islands
(h = N).

" 6	Up	iPKPl	16 14 45.2
	Um	iPKPl	16 14 27.8
		i	16 14 44.7
	Ud	iPKPl	16 14 40.8
		i	16 15 01.8

Kermadec Islands (h = N).

" 6	Ki	iPKP	18 10 49.8

South Sandwich Islands
(h = N).

" 6	Ki	eP	19 58 27
	Um	iP	19 57 49,7
	Ud	iP	19 57 30.1
		i	19 57 43.3
	De	iP	19 57 02.5

Dodecanese Islands
(h = 40 km).

" 7	Um	i(Sgl)	11 05 18.5
" 7	Ki	i	11 23 17.1
		iSgl	11 23 48.1
	Um	iSgl	11 23 02.0
" 7	Um	i(Sgl)	12 03 52.6
" 7	Ki	ePn	12 06 40
		iPgl	12 06 48.5
		iSn	12 07 26.8
	Um	iS*	12 09 10.2
		iSgl	12 09 15.6

Northwest USSR-Norway.
Explosion.

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec.	7	Um	iSgl	12 12 48.0		
		Western USSR.				
		Explosion.				
"	7	Up	iP	15 37 00.0		
		Ud	iP	15 37 08.1	C	
		Celebes Sea (h = 630 km).				
"	7	Um	iP	16 15 23.6		
"	7	Sk	i(P)	19 10 06.7		
		Um	iP	19 09 34.1		
"	7	Up	iP	21 18 34.2		
				micr	sec	
			P Z'	0.1	1.3	
		Ki	iP	21 17 53.3	C	
		Um	iP	21 18 11.3	C	
			i(pP)	21 18 30.4		
		Ud	iP	21 18 41.7		
		Japan (h = 60 km).				
"	7	Ki	iP	22 45 43.9		
		Talaud Islands (h = 80 km).				
"	7	Um	iPKP1	23 31 23.4		
"	8	Sk	iP	00 06 36.7		
		Um	iP	00 06 49.2		
		Kodiak Island (h = 50 km).				
"	8	Up	iP	01 07 49.2		
		Ki	eP	01 07 41		
		Sk	iP	01 07 32.7		
		Um	iP	01 07 47.1		
		Ud	iP	01 07 40.2		
		De	iP	01 07 46.0		
		El Salvador (h = 90 km).				
"	8	Ud	eP	02 22 29		
		Pamir.				
"	8	Up	iP	02 51 55.3		
		Ki	iP	02 51 02.9		
		Um	iP	02 51 30.1		
		Ud	iP	02 51 54.8		
		De	iP	02 52 17.6	C	
		Unimak Island (h = 45 km).				
"	8	Um	iP	03 12 02.0		
"	8	Up	eP	05 01 16		
		Ki	iP	05 00 54.0		
			i	05 01 02.6		
		Um	eP	05 01 02		
			i	05 01 07.0		
		Ud	iP	05 01 19.1		
			i	05 01 23.5		
		(cont.)				

1973 Dec.	8	(cont.)				
		Mindanao (h = 120 km).				
"	8	Up	iP	06 22 38.7		
			ipP	06 22 46.8		
				micr	sec	
			P Z'	0.1	1.4	
			Mx E	1.0	18	
			Mx N	1.8	20	
			Mx Z	2.7	18	
		Ki	iP	06 22 40.3		
			ipP	06 22 48.5		
			i	06 22 55.5		
			iS	06 33 11		
				micr	sec	
			P Z'	0.2	1.5	
			Mx E	3.6	18	
			Mx N	3.5	21	
		Sk	iP	06 22 56.4		
			i	06 23 01.8		
		Um	iP	06 22 36.2		
			ipP	06 22 44.5		
			iS	06 32 54		
		Ud	iP	06 22 49.3		
			ipP	06 22 56.8		
		De	iP	06 22 47.8		
			ipP	06 22 54.6		
		Sumatra.				
		h = 30 km (Up,Ki,Um,Ud,De).				
		m = 6.0, M = 5.8 (Up,Ki).				
"	8	Ki	iS*	11 33 28.6		
			iSgl	11 33 35.7		
		Um	iSgl	11 31 32.6		
		Ud	iSgl	11 32 03.0		
		De	iSgl	11 32 28.4		
		Esthonia.				
		Explosion.				
"	8	Up	iP	13 03 09.0		
			ipP	13 03 21.2		
		Ki	iP	13 02 52.8	C	
			i	13 02 59.0		
				micr	sec	
			P Z'	0.1	1.0	
		Sk	eP	13 03 17		
			i	13 03 39.2		
		Um	iP	13 02 58.1	C	
		Ud	iP	13 03 17.0	C	
			ipP	13 03 29.6		
		Talaud Islands.				
		h = 45 km (Up,Ud).				
"	8	Um	iPKP	13 28 15.2		
		Santa Cruz Islands				
		(h = 15 km).				
"	8	Ud	iPKP1	13 43 58.9		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec.	8	Um	i(PKP)	14 27 16.1			
			iPKP	14 27 26.3			
		New Hebrides Islands (h = 240 km).					
"	8	Ki	iP	19 46 23.5			
		Ud	iP	19 45 29.3			
		Turkey (h = 15 km).					
"	8	Ud	iP	21 08 16.0			
		De	iP	21 07 49.9			
		Dodecanese Islands (h = N).					
"	9	Up	iP	02 44 47.0			
			iPP	02 46 11.7			
				micr	sec		
			PP	Z' 0.2	1.6		
		Ki	iP	02 44 53.3			
			i	02 44 58.5			
				micr	sec		
			P	Z' 0.1	1.0		
		Sk	iP	02 45 11.3			
		Um	iP	02 44 44.0	C		
		Ud	iP	02 45 03.3	C		
			i	02 45 38.6			
		De	iP	02 45 01.8	C		
		Kashmir (h = N).					
		m = 5.6 (Up,Ki).					
"	9	Ki	iP	04 45 14.8			
		Um	iP	04 45 43.0			
		Kodiak Island (h = 45 km).					
"	9	Ki	iSn	05 05 05.9			
			iS*	05 05 30.3			
		Sk	iSg1	05 07 57.7			
			iSg2	05 08 09.9			
		Um	iSn	05 05 45.4			
			iSg1	05 06 14.8			
			iSg2	05 06 33.1			
		Northwest USSR. Explosion.					
"	9	Up	iSg1	05 29 49.0			
		Ki	iPg1	05 25 50.9			
			e	05 26 29			
			iSn	05 26 35.5			
			iS*	05 26 52.9			
		Sk	iSg1	05 29 19.1			
		Um	i	05 27 27.8			
			i(S*)	05 27 34.9			
			iSg1	05 27 46.5			
		Ud	iSg1	05 30 19.9			
		Northwest USSR. Explosion.					
"	9	Up	iP	17 52 26.3			
		(cont.)					

1973 Dec.	9	(cont.)					
		Up	i	17 52 27.6			
		Ki	iP	17 51 33.6			
		Sk	eP	17 52 09			
		Um	iP	17 51 59.5			
		Ud	iP	17 52 26.9			
		De	iP	17 52 49.7			
		Aleutian Islands (h = 50 km).					
"	9	Um	iP	17 58 06.0			
		Kodiak Island (h = 40 km).					
"	9	Up	ePKP	20 15 01			
			iPP	20 17 41.2			
			iSKP1	20 18 35			
				micr	sec		
			PP	Z' 0.3	1.6		
			Mx	E 8.4	25		
			Mx	N 16	25		
			Mx	Z 17	23		
		Ki	iPKP	20 14 47.5			
			i	20 14 54.0			
			iPP	20 16 54			
			iSKP1	20 18 21			
				micr	sec		
			PKP	Z' 0.4	1.7		
			Mx	E 12	20		
			Mx	N 13	21		
			Mx	Z 11	21		
		Sk	iPKP	20 15 00.0			
			i	20 15 04.8			
		Um	iPKP	20 14 54.5			
		Ud	i(PKP)	20 14 58.6			
			iPKP	20 15 09.2			
			iPP	20 17 30.5			
		De	i(PKP)	20 15 09.7			
			iPKP	20 15 15.1			
			iPP	20 18 03.2			
		New Hebrides Islands (h = 40 km). M = 6.8 (Up,Ki).					
"	9	Ki	iPKP	21 17 02.2			
		Um	iPKP	21 17 07.5			
			i	21 17 18.3			
		New Hebrides Islands (h = 35 km).					
"	10	Um	iP	01 55 01.0			
		Ud	iP	01 55 05.2			
		Iran (h = 60 km).					
"	10	Ud	iP	02 05 35.0			
		Greece (h = N).					
"	10	Um	iP	08 17 50.9			
		(cont.)					

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec. 10 (cont.)

Ud	iP	08 18 17.8	
South of Japan (h = 20 km).			
" 10 Up	iP	16 09 46.2	
Um	iP	16 09 25.2	
Ud	iP	16 09 51.8	
South of Japan (h = 20 km).			
" 10 Ki	iP	19 41 13.1	
Um	iP	19 41 15.3	
Ud	iP	19 41 02.3	
Ecuador (h = 180 km).			
" 10 Up	iSgl	20 07 44.5	
Ki	iPgl	20 04 31.8	
	iSgl	20 05 03.1	
Sk	eSn	20 06 42	
	iSgl	20 07 09.8	
Um	iPgl	20 04 53.0	
	iSn	20 05 32.0	
	iS*	20 05 40.4	
	iSgl	20 05 44.4	
Ud	iS*	20 08 02.8	
	iSgl	20 08 14.0	
Northern Finland, 66.7°N, 25.6°E.			
Origin time = 20 03 50.			
" 10 Ki	iPgl	20 08 38.7	
	iSn	20 09 02.9	
	iSgl	20 09 10.3	
Sk	iSgl	20 11 17.1	
Um	iS*	20 09 45.5	
	iSgl	20 09 51.0	
Northern Finland, 66.7°N, 25.6°E.			
Origin time = 20 07 57.			
" 10 Ki	iP	21 15 24.5	
Um	iP	21 14 59.4	
Ud	iP	21 15 00.6	
De	i(P)	21 14 38.1	
	iP	21 14 45.3	
Iran (h = 15 km).			
The readings, except (P) at De, are 6-13 sec late compared to the NEIS solution - possibly another shock.			
" 11 Ki	iP	00 17 35.1	
	i	00 17 40.4	
		micr	sec
	P Z'	0.3	1.7
Um	iP	00 17 26.0	
Azores Islands (h = N).			

1973 Dec. 11

Ki	iP	02 49 33.7	
		micr	sec
	Mx E	2.3	19
	Mx N	2.6	19
Um	iP	02 49 45.7	
	ipP	02 49 56.0	
Mariana Islands.			
h = 40 km (Um).			
" 11 Up	iP	03 54 32.8	
Ki	iP	03 55 38.1	
Ud	iP	03 54 34.0	
	i	03 54 38.6	
Crete (h = 35 km).			
" 11 Um	iP	09 03 39.4	
	i	09 03 45.6	
Japan (h = 55 km).			
" 11 Um	iSgl	12 15 23.9	
Western USSR.			
Explosion.			
" 11 Um	iSgl	13 00 06.1	
Esthonia.			
Explosion.			
" 12 Um	iP	00 06 37.4	
Austria (h = 5 km).			
" 12 Up	iP	03 36 20.2	
Ki	iP	03 35 54.2	
Um	iP	03 36 07.8	
Ryukyu Islands (h = 70 km).			
" 12 Up	iSgl	13 11 48.7	
Um	iSgl	13 12 03.2	
Western USSR.			
Explosion.			
" 12 Ud	iP	21 44 24.5	
" 13 Up	iP	01 17 10.2	
Um	iP	01 16 52.2	
	ipP	01 17 11.7	
Bonin Islands.			
h = 70 km (Um).			
" 13 Um	iP	02 01 58.6	C
Tyrrhenian Sea.			
Intermediate depth.			
" 13 Um	iP	02 33 18.2	
" 13 Um	iP	05 38 20.7	
" 13 Ki	i(P)	05 41 38.3	
Um	i(P)	05 42 21.6	

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec.	13	Up	iPKP1	06 51 18.6		
		Sk	iPKP1	06 51 11.6		
		Um	iPKP1	06 51 06.6		
		Kermadec Islands (h = 40 km).				
"	13	Ki	iP	09 51 36.9		
		Um	iP	09 51 48.6		
"	13	Um	iSn	12 10 43.3		
			iSgl	12 11 05.2		
		Ud	iSgl	12 12 01.8		
		Western USSR.				
		Explosion.				
"	13	Um	iPKP	20 12 39.1		
		Tonga Islands (h = 30 km).				
"	13	Um	iPKP	21 40 45.6		
		Santa Cruz Islands				
		(h = 55 km).				
"	13	Ud	iP	23 36 24.8		
"	14	Um	iP	00 12 22.9	D	
		Ud	iP	00 12 48.5		
		Aleutian Islands.				
"	14	Up	iP	03 55 39.6		
				micr	sec	
			P	Z' 0.1	1.0	
		Ki	iP	03 54 46.8		
		Um	iP	03 55 13.6		
			iPcP	03 55 47.6		
		Ud	iP	03 55 39.9		
		Aleutian Islands (h = 55 km).				
"	14	Up	iPKP1	06 18 29.6		
		Ud	iPKP1	06 18 38.0		
		Tonga-Kermadec Islands				
		(h = N).				
"	14	Up	iP	07 53 55.0	C	
			iPn	07 54 57.0		
			iPP	07 55 12.7		
				micr	sec	
			P	Z' 1.3	1.0	
			PP	Z' 0.2	0.9	
		Ki	iP	07 53 37.3	C	
				micr	sec	
			P	Z' 0.9	0.6	
		Sk	iP	07 54 09.7	C	
			iPP	07 55 32.5		
			iPcP	07 56 30.5		
			e	08 04 05		
		Um	iP	07 53 39.4	C	
			i	07 57 32.9		
		Ud	iP	07 54 11.0	C	
		(cont.)				
1973 Dec.	14	(cont.)				
		De	iP	07 54 18.2	C	
		Kazakh SSR.				
		m = 6.7 (Up,Ki).				
		Underground explosion.				
"	14	Up	iP	09 17 15.2		
			iPn	09 17 28.3		
			iSn	09 22 07.8		
				micr	sec	
			P	Z' 0.1	1.0	
		Ki	iP	09 17 50.0	C	
			iPn	09 18 24.4		
			iSn	09 23 37.4		
				micr	sec	
			P	Z' 0.2	0.9	
		Sk	iP	09 17 50.4	C	
			iPn	09 18 21.6		
			iPP	09 18 40.7		
			iSn	09 23 42.2		
		Um	iP	09 17 26.1	C	
			iPn	09 17 47.6		
			iSn	09 23 10.0		
		Ud	iP	09 17 32.7	C	
			iPn	09 17 51.4		
			iSn	09 22 51.2		
		De	iP	09 17 16.0	C	
			iPn	09 17 23.6		
		Caspian Sea (h = 80 km).				
		m = 5.5 (Up,Ki).				
		Very clear Pn and Sn phases.				
"	14	Um	iSgl	12 14 47.2		
		De	iSgl	12 15 43.1		
		Esthonia.				
		Explosion.				
"	14	Ki	iP	13 33 26.5		
		Um	iP	13 33 53.5		
		Ud	iP	13 34 20.0		
		De	iP	13 34 42.1		
		Aleutian Islands				
		(h = 210 km).				
"	14	Up	iSgl	15 38 04.6		
		Sk	iSgl	15 37 44.9		
		Ud	iPgl	15 36 43.2		
			iSgl	15 37 05.3		
			iRg	15 37 14.0		
		South Norway,				
		60.8°N, 10.8°E.				
		Origin time = 15 36 14.				
		Near-surface event.				
"	14	Up	iP	17 48 31.8		
			i	17 48 44.4		
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973						
Dec.	14	(cont.)				
		Up			micr	sec
			P	Z'	0.2	1.0
			Mx	N	1.8	20
		Ki	iP		17 47 38.7	C
			i		17 47 55.5	
					micr	sec
			P	Z'	0.2	1.0
			Mx	E	1.5	16
			Mx	N	1.3	17
		Sk	iP		17 48 11.6	
			iPcP		17 48 43.1	
		Um	iP		17 48 04.8	C
			i		17 48 28.3	
			iPcP		17 48 40.1	
			iP'P'		18 16 57.5	
		Ud	iP		17 48 31.7	C
			iPcP		17 48 57.7	
		De	iP		17 48 54.4	
			iPcP		17 49 12.4	
		Aleutian Islands				
		(h = 55 km).				
		m = 6.1, M = 5.4 (Up,Ki).				
"	14	Up	iP		17 49 16.5	
					micr	sec
			P	Z'	0.2	1.0
		Ki	iP		17 48 23.9	
					micr	sec
			P	Z'	0.3	1.0
		Ud	iP		17 49 13.0	
		De	iP		17 49 38.3	
		Aleutian Islands.				
		Origin time = 17 38 19.				
		m = 6.3 (Up,Ki).				
"	14	Ki	iP		18 39 20.5	
		Um	iP		18 39 26.5	
		Ud	iP		18 39 57.9	
		Ryukyu Islands (h = 210 km).				
"	14	Up	iP		21 10 54.8	
"	14	Up	i(PcP)		21 47 20.9	
		Ki	iP		21 46 19.9	
		Um	iP		21 46 39.0	
		Ud	iP		21 47 09.3	
			i		21 47 19.6	
		Japan (h = 50 km).				
"	15	Up	iPKP1		02 38 28.7	
		Ud	iPKP1		02 38 31.7	
		De	iPKP1		02 38 41.9	
		Tonga-Kermadec Islands.				
"	15	Up	iP		04 22 11.3	
		(cont.)				

1973						
Dec.	15	(cont.)				
		Up			micr	sec
			P	Z'	0.1	1.0
		Ki	iP		04 22 33.7	
		Sk	eP		04 22 35	
		Um	iP		04 22 19.9	
			ipP		04 22 27.0	
		Ud	iP		04 22 21.5	C
			ipP		04 22 28.5	
		Chagos Islands.				
		h = 25 km (Um,Ud).				
"	15	Um	iP		04 34 54.4	
		Ud	iP		04 35 18.1	
		Kodiak Island (h = 50 km).				
"	15	Um	iP		04 41 58.6	
		Ud	iP		04 41 59.7	C
		Chagos Islands (h = N).				
"	15	Ki	iP		04 45 01.1	
		Ud	eP		04 44 47	
"	15	Up	iPKP1		07 28 20.3	
		Um	iPKP1		07 28 08.6	
		Ud	iPKP1		07 28 22.5	C
		De	iPKP1		07 28 33.1	C
		Tonga-Kermadec Islands				
		(h = 460 km).				
"	15	Up	iSKP1		11 15 54.4	
		Ki	iPKP		11 12 56.4	
			iSKP1		11 15 31.8	
		Sk	ePKP		11 12 58	
		Um	iPKP		11 13 02.9	
			i		11 13 06.8	
			iSKP1		11 15 42.9	
		Ud	iPKP1		11 13 06.4	
		De	iPKP1		11 13 17.6	
		South of Fiji Islands				
		(h = 570 km).				
"	15	Up	iP		18 18 01.9	
		Um	iP		18 17 39.4	
		Ud	iP		18 18 10.0	
		Kurile Islands (h = 1 km).				
"	15	Up	iP		20 35 00.6	
			i		20 35 05.2	
		Ki	iP		20 34 46.8	C
		Sk	iP		20 35 13.0	
		Um	iP		20 34 49.6	
		Ud	iP		20 35 15.0	
		Tsinghai, China.				
"	15	Ki	iPKP		23 16 03.2	
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec.	15	(cont.)				
		Um	iPKP	23 16 09.9		
		Ud	ePKP	23 16 17		
		De	iPKP	23 16 24.6		
		New Hebrides Islands (h = 7 km).				
"	15	Up	iP	23 39 33.4	C	
			i	23 40 10.9		
		Ki	iP	23 38 31.5		
		Sk	iP	23 39 14.3		
		Um	iP	23 39 02.3		
		Ud	iP	23 39 36.6		
		De	iP	23 40 04.3	C	
		New Siberian Islands (h = N).				
"	15	Ud	iPKPl	23 41 28.6		
"	16	Up	iP	04 22 16.3		
		Ki	iP	04 22 03.6		
		Um	iP	04 22 03.6		
			i	04 22 06.9		
		Ud	iP	04 22 27.2		
		Szechwan, China.				
"	16	Ki	iPn	05 06 28.9		
			iSn	05 07 28.4		
			iS*	05 07 51.2		
		Um	iSn	05 08 09.3		
			iSgl	05 08 43.0		
		Northwest USSR.				
		Explosion.				
"	16	Up	iP	07 33 37.4		
		Um	iP	07 33 37.4		
		Ud	iP	07 33 27.8		
		Costa Rica (h = N).				
"	16	Up	iP	08 32 26.7		
		Ki	iP	08 33 04.6	C	
		Sk	iP	08 33 02.8		
		Um	iP	08 32 41.1		
		Ud	iP	08 32 42.6	C	
		De	iP	08 32 26.1		
		Iran (h = N).				
"	16	Up	iP	09 24 41.7		
		Ki	iP	09 24 48.6		
		Sk	iP	09 25 09.1		
		Um	iP	09 24 41.4		
		Ud	iP	09 25 00.6		
		Kashmir-India (h = N).				
"	16	Up	iP	11 47 43.6		
		Ud	iP	11 47 44.1		
"	16	Up	iP	19 17 54.2		
		(cont.)				

1973 Dec.	16	(cont.)				
		Ki	iP	19 18 01.4		
		Sk	iP	19 18 17.9		
		Um	iP	19 17 52.0		
		Ud	iP	19 18 10.1	C	
		De	iP	19 18 07.3		
		Kashmir (h = 45 km).				
"	17	Ki	iP	10 18 13.3		
			i	10 18 27.2		
		Um	iP	10 18 03.2		
		Ud	iP	10 18 17.0		
		Hindu Kush (h = N).				
"	17	Ud	iP	15 47 31.3		
"	17	Up	iP	22 04 51.5		
			i	22 06 05.8		
				micr	sec	
			P	Z'	0.2	1.2
			Mx	E	0.7	18
			Mx	N	1.1	20
			Mx	Z	2.1	22
		Ki	iP	22 04 02.3		
				micr	sec	
			P	Z'	0.1	1.1
			Mx	E	1.3	19
			Mx	N	1.5	18
			Mx	Z	1.9	18
		Sk	eP	22 04 42		
		Um	iP	22 04 25.3		
		Ud	iP	22 04 56.2		
		De	iP	22 05 15.5		
		Kurile Islands (h = N).				
		m = 6.0, M = 5.2 (Up,Ki).				
"	18	Um	iP	02 46 26.7		
"	18	Um	iPP	04 27 27.1		
		Solomon Islands (h = 410 km).				
"	18	Up	iSgl	12 55 12.5		
		Um	iPgl	12 55 02.6		
			iSn	12 55 45.7		
			iSgl	12 56 03.1		
		Ud	iSn	12 56 04.9		
			iSgl	12 56 32.8		
		De	iSgl	12 56 56.1		
		Esthonia.				
		Explosion.				
"	18	Um	i(P)	13 23 55.7		
"	18	Ud	iP	14 56 08.3		
"	18	Ud	iP	15 38 35.8		

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec.	19	Up	iP		04 56 59.9		
			i		04 57 12.3		
			iPP		05 01 21.3		
					micr	sec	
			P	Z'	0.1	1.0	
			PP	Z'	0.2	1.2	
			Mx	E	4.2	24	
			Mx	N	4.1	25	
			Mx	Z	8.4	27	
		Ki	iP		04 56 50.2		
			iPP		05 01 02.3		
					micr	sec	
			P	Z'	0.3	1.2	
			Mx	E	7.1	24	
			Mx	N	6.1	23	
			Mx	Z	7.7	23	
		Sk	iP		04 57 08.4		
			i		05 01 12.6		
			iPP		05 01 35.0		
		Um	eP		04 56 51		
			i		04 59 34.8		
			iPP		05 00 54.5		
		Ud	iP		04 57 07.7	C	
			i		05 00 18.1		
			iPP		05 01 33.8		
		De	iPP		05 01 38.8		
		Sumba Island (h = 60 km).					
		m = 6.6, M = 6.1 (Up,Ki).					
		The unidentified phases preceding PP at Sk,Um,Ud probably belong to the group of early PP.					
"	19	Ud	iPKPl		07 01 10.3		
"	19	Ki	iP		07 25 54.3		
		Sinkiang, China.					
"	19	Up	iPKPl		13 14 47.5		
			i		13 14 49.7		
			iSKPl		13 18 12.8		
			iSKKP		13 26 42.8		
					micr	sec	
			PKPl	Z'	0.1	0.5	
			SKPl	Z'	0.2	1.2	
		Ki	i(PKP)		13 14 31.4		
			iPKP		13 14 41.0		
			iSKPl		13 17 47.7		
					micr	sec	
			PKP	Z'	0.1	1.0	
			SKPl	Z'	0.4	1.5	
		Sk	i(PKP)		13 14 42.5		
			iPKP		13 14 52.6		
			iSKPl		13 18 06.6		
		Um	i(PKP)		13 14 35.0		
			i		13 14 39.0		
		(cont.)					

1973 Dec.	19	(cont.)					
		Um	iPKP		13 14 43.0		
			iSKPl		13 18 03.0		
		Ud	iPKPl		13 14 48.6		
			iSKPl		13 18 14.6		
		De	iPKPl		13 15 00.8		
			iSKPl		13 18 25.7		
		Tonga Islands (h = 250 km).					
"	19	Ud	iP		18 34 03.2		
		Iran (h = N).					
"	20	Um	iP		05 17 07.3		
		Ud	iP		05 17 38.3		
		Japan.					
"	20	Ud	i(P)		11 22 13.3		
			i(PcP)		11 22 22.6		
		De	eP		11 22 20		
			i		11 22 23.5		
		Japan (h = N).					
"	20	Up	iSgl		11 52 04.7		
		Um	iSgl		11 52 39.6		
		Ud	iSgl		11 53 13.3		
		Esthonia.					
		Explosion.					
"	20	Um	iP		12 43 57.1		
		Ud	iP		12 44 28.4		
		Kurile Islands (h = 55 km).					
"	20	Up	iP		17 48 49.5	D	
			iS		17 52 24.7		
					micr	sec	
			P	Z'	0.3	0.9	
		Ki	iP		17 50 03.1	D	
					micr	sec	
			P	Z'	0.3	0.8	
		Sk	iP		17 49 23.8	D	
		Um	iP		17 49 27.5	D	
			i		17 49 37.4		
		Ud	iP		17 48 50.5	D	
		De	iP		17 48 14.0	D	
		Tyrrhenian Sea (h = 270 km).					
		m = 5.8 (Up,Ki).					
"	20	Up	iP		21 04 45.2		
		Um	iP		21 04 24.2		
			ipP		21 04 56.4		
		Ud	eP		21 04 53		
		Japan.					
		h = 130 km (Um).					
"	20	Um	iP		21 57 33.8		
		Mariana Islands (h = 50 km).					

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec.	21	Up	iP	02 18 39.3	
		Um	iP	02 18 28.9	
		Ud	iP	02 18 52.7	
		De	eP	02 18 55	
		Tibet (h = N).			
"	21	Up	iPKPl	02 34 01.7	
		Um	iPKPl	02 33 42.0	
"	21	Um	iP	02 50 41.7	
		Ud	eP	02 50 15	
		Rumania (h = 170 km).			
"	21	Ki	iP	09 54 26.9	
		Um	iP	09 54 53.7	
		Ud	iP	09 55 19.7	
		De	iP	09 55 41.7	
		Aleutian Islands			
		(h = 45 km).			
"	21	Ki	iP	10 01 44.0	
				micr sec	
			P Z'	0.1 1.0	
		Um	iP	10 02 10.5	D
		Ud	iP	10 02 36.2	
		Aleutian Islands			
		(h = 45 km).			
"	21	Um	iSgl	10 54 45.5	
		Ud	iSgl	10 55 16.3	
		Esthonia.			
		Explosion.			
"	21	Up	iP	15 39 13.9	
				micr sec	
			P Z'	0.1 1.1	
		Ki	iP	15 38 20.7	
				micr sec	
			P Z'	0.1 1.0	
		Um	iP	15 38 47.0	
		Ud	iP	15 39 13.1	C
		De	iP	15 39 35.3	
		Aleutian Islands			
		(h = 50 km).			
		m = 5.8 (Up,Ki).			
"	21	Ki	iP	16 09 03.8	
		Um	iP	16 09 30.6	
		Ud	iP	16 09 56.2	
		Aleutian Islands			
		(h = 50 km).			
"	21	Ki	iP	16 10 45.3	
		Um	iP	16 11 11.4	
		Ud	iP	16 11 37.0	
		Aleutian Islands (h = N).			
"	21	Um	iP	16 20 02.9	
		(cont.)			

1973 Dec.	21	(cont.)			
		Ud	iP	16 19 31.8	
		North of Ascension Island			
		(h = N).			
"	21	Ki	iP	16 28 03.7	
		Um	iP	16 28 29.4	
		Ud	iP	16 28 55.0	
		Aleutian Islands			
		(h = 50 km).			
"	21	Um	iP	16 37 37.3	
		Ud	iP	16 38 02.7	
		Aleutian Islands			
		(h = 35 km).			
"	21	Up	ePKPl	17 11 42	
		Ki	iPKP	17 11 33.8	
		Um	iPKP	17 11 39.0	
		Ud	iPKPl	17 11 47.1	
		De	iPKPl	17 11 58.1	
		Fiji Islands (h = 610 km).			
"	21	Um	iP	19 24 06.6	
			i	19 24 14.4	
		Ud	iP	19 24 16.1	
			i	19 24 24.4	
		California (h = 30 km).			
"	21	Up	iPKPl	21 29 35.8	
		Sk	iPKPl	21 29 31.3	
		Um	iPKPl	21 29 24.1	
		Ud	iPKPl	21 29 37.0	
		South of Kermadec Islands			
		(h = 30 km).			
"	22	Um	iPKPl	01 00 17.1	
"	22	Up	eP	01 31 26	
		Ki	iP	01 30 52.6	
			ipP	01 31 09.5	
		Sk	iP	01 31 26.8	
		Um	iP	01 31 07.9	
			ipP	01 31 27.7	
		Ud	iP	01 31 38.3	
		De	iP	01 31 50.6	
		Japan.			
		h = 70 km (Ki,Um).			
"	22	Ud	iP	02 40 52.7	
		De	iP	02 40 21.2	
		Crete (h = N).			
"	22	Up	iSgl	07 15 25.1	
		Ud	e(Pgl)	07 13 41	
			iSgl	07 14 24.1	
		De	iSgl	07 15 06.0	
		(cont.)			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec.	22	(cont.) Southwest Norway, 59.9°N, 6.6°E. Origin time = 07 12 30. By combination with Bergen and Kongsberg readings.			
"	22	Ki	iPKP	14 38 03.5	
		Um	iPKP	14 38 10.8	
		New Hebrides-Fiji Islands (h = N).			
"	22	Sk	iPKP1	15 04 03.7	
		Um	iPKP1	15 03 58.2	
		Ud	iPKP1	15 04 09.7	
		South of Kermadec Islands (h = 130 km).			
"	22	Ud	iP	15 12 22.4	
"	22	Um	iP	23 32 55.5	
"	22	Ki	iP	23 34 28.8	
			ipP	23 34 41.1	
		Um	iP	23 34 55.3	
			ipP	23 35 08.4	
		Ud	iP	23 35 20.6	
		De	ipP	23 35 56.9	
		Aleutian Islands. h = 45 km (Ki,Um).			
"	23	Up	iSn	04 59 38.0	
			iS*	05 00 27.2	
			i	05 00 30.0	
			iSgl	05 00 34.1	
		Ki	iPn	04 56 19.5	
			iSn	04 57 16.7	
			iS*	04 57 41.6	
		Sk	iSn	04 59 17.2	
			iSgl	05 00 04.7	
		Um	iPn	04 56 43.3	
			iPgl	04 57 03.9	
			iSn	04 57 56.1	
			iSgl	04 58 29.1	
		Ud	iPn	04 57 47.4	
			iSgl	05 01 04.8	
		De	iSgl	05 02 36.3	
		Northwest USSR. Explosion.			
"	23	Up	iP	09 15 16.9	
		Ki	iP	09 14 49.2	
		Ud	iP	09 15 23.9	
		Mariana Islands (h = 170 km).			
"	23	De	iP	22 08 01.7	
		Crete.			
1973 Dec.	23	Ki	iP	23 59 58.7	
		Halmahera (h = 130 km).			
"	24	Up	i(P)	07 28 36.3	
			i	07 28 45.0	
			iPKP1	07 31 03.6	
			iPKP2	07 31 10.5	
			ipPKP1	07 32 00.0	
				micr sec	
			PKP1 Z'	0.1 1.2	
			PKP2 Z'	0.1 1.1	
		Ki	iPKP1	07 30 42.9	
		Sk	iPKP1	07 30 57.9	
			ipPKP1	07 31 54.7	
		Um	iPKP1	07 30 52.7	
			i	07 31 08.7	
			ipPKP1	07 31 48.7	
		Ud	iPKP1	07 31 05.1	
			ipPKP1	07 32 02.3	
		De	iPKP1	07 31 13.7	
		Kermadec Islands. h = 220 km (Up,Sk,Um,Ud).			
"	24	Up	iPKP	08 33 27.3	
		Ki	iPKP	08 33 22.1	
		Sk	iPKP	08 33 31.5	
		Um	iPKP	08 33 19.7	
			i	08 33 28.7	
		Ud	iPKP	08 33 26.8	
		De	iPKP1	08 33 38.4	
			i	08 33 46.8	
		Tonga Islands (h = 120 km).			
"	24	Um	iP	10 12 19.3	
"	24	Um	iPKP	10 50 21.9	
		Ud	iPKP1	10 50 25.7	
		De	iPKP1	10 50 36.3	
		Tonga-Kermadec Islands (h = 560 km).			
"	24	Um	iSgl	12 20 03.5	
		Ud	iSgl	12 20 50.8	
		De	iSgl	12 21 21.9	
		Western USSR. Explosion.			
"	24	Um	iP	13 06 44.9	
			ipP	13 06 54.0	
		Mariana Islands. h = 35 km (Um).			
"	24	Um	iPKP1	13 38 16.2	
"	24	Up	iP	13 59 19.4	
		Ki	iP	14 00 24.2	
		Sk	iP	13 59 59.7	
		(cont.)			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec.	24	(cont.)					
		Um	iP		13 59 53.7		
		Ud	iP		13 59 26.8		
		De	iP		13 58 55.4		
		Dodecanese Islands					
		(h = N).					
"	24	Ud	iP		14 48 02.1		
"	24	Um	iP		15 46 21.7		
		Ud	iP		15 46 52.8		
		Probably Sea of Japan.					
		Deep.					
		Origin time = 15 36 12.					
"	24	Ki	iP		15 48 08.5		
		Um	iP		15 48 24.7		
		Ud	iP		15 48 53.6		
		Sea of Japan (h = 400 km).					
"	24	Ud	iP		18 31 59.1		
		Peru (h = N).					
"	24	Up	iP		20 28 10.3		
			i		20 28 23.2		
		Ki	iP		20 29 18.7		
		Sk	iP		20 28 48.7		
		Um	iP		20 28 42.9	C	
		Ud	iP		20 28 17.7		
		De	iP		20 27 44.9		
		Crete (h = 35 km).					
"	24	Up	iP		20 51 20.9		
					micr	sec	
			Mx	E	0.6	17	
			Mx	Z	1.2	18	
		Ki	iP		20 51 43.0		
		Sk	iP		20 51 11.3		
		Um	iP		20 51 35.7		
		Ud	iP		20 51 07.0		
		De	iP		20 51 02.0		
		North Atlantic Ocean (h = N).					
"	24	Up	iP		21 01 53.2		
					micr	sec	
			Mx	E	1.0	21	
			Mx	N	1.5	21	
			Mx	Z	0.6	15	
		Ki	iP		21 01 29.5		
					micr	sec	
			P	Z'	0.1	1.0	
			Mx	E	0.6	14	
			Mx	N	0.6	16	
			Mx	Z	0.5	14	
		Sk	iP		21 01 56.4		
		Um	iP		21 01 38.3		
		(cont.)					

1973 Dec.	24	(cont.)					
		Ud	iP		21 02 02.5		
		Formosa (h = 25 km).					
		M = 5.3 (Up,Ki).					
"	24	Up	iP		23 49 28.1		
		Ki	iP		23 48 44.0		
		Sk	iP		23 49 18.7		
		Um	iP		23 49 04.4		
			ipP		23 49 13.7		
		Ud	iP		23 49 34.6		
			ipP		23 49 45.0		
		Japan.					
		h = 35 km (Um,Ud).					
"	25	Up	iP		00 50 52.9		
		Um	iP		00 51 26.6		
		Ud	iP		00 50 43.8		
		Gibraltar (h = N).					
"	25	Ki	iP		02 17 30.3		
		Sk	iP		02 17 59.0		
		Um	iP		02 17 59.2		
		Ud	eP		02 18 23		
		Kodiak Island (h = N).					
"	25	Ud	iP		03 04 33.3		
"	25	Sk	iP		09 46 09.1		
		Um	iP		09 46 09.0		
		Ud	iP		09 46 52.0		
		Svalbard (h = N).					
"	25	Up	i		12 50 51.9		
			iSgl		12 51 07.8		
		Sk	iSgl		12 52 54.3		
		Um	i		12 51 05.6		
			iSgl		12 51 23.1		
		Ud	e(Sn)		12 51 30		
			iSgl		12 52 04.9		
		De	iSgl		12 52 38.3		
		Western USSR.					
		Explosion.					
"	26	Um	iP		01 39 38.7		
		Japan (h = N).					
"	26	Up	iP		01 52 49.1		
		Sk	eP		01 53 11		
		Um	iP		01 52 42.2		
		Ud	iP		01 53 02.1		
			ipP		01 53 17.6		
		Burma-India.					
		h = 55 km (Ud).					
"	26	Up	iP		03 11 44.0		
		(cont.)					

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec. 26 (cont.)

Ud	iP	03 11 52.5	
De	iP	03 11 40.9	
	i	03 11 46.6	

Indian Ocean (h = N).

" 26

Up	iPKP1	04 06 40.2	
Ud	iPKP1	04 06 43.0	

" 26

Um	iSg1	09 41 56.1	
Ud	iPn	09 41 17.8	
	iSg1	09 43 35.9	

Lake Ladoga.
Explosion.

" 26

Um	iSg1	12 16 47.9	

Lake Ladoga.
Explosion.

" 26

Um	iSg1	12 40 38.6	
Ud	i(Sn)	12 40 30.0	
	iSg1	12 41 04.3	

Esthonia.
Explosion.

" 26

Ki	iP	13 02 46.7	
Ud	iP	13 03 43.7	

Kurile Islands (h = 55 km).

" 26

Ud	iP	14 25 49.7	

Aleutian Islands (h = 60 km).

" 26

Um	iP	14 45 53.4	C
Ud	iP	14 46 19.8	

" 26

Up	iPKP1	18 05 14.8		
		micr	sec	
	PKP1	Z' 0.1	0.8	
Sk	iPKP1	18 05 07.1		
Um	iPKP1	18 05 03.0		
Ud	iPKP1	18 05 16.7		
De	iPKP1	18 05 26.8		

Tonga-Kermadec Islands
(h = 190 km).

" 26

Up	iP	20 41 47.1		
		micr	sec	
	P	Z' 0.3	1.5	
Ki	iP	20 41 10.2		
	iX	20 43 56.9		
		micr	sec	
	P	Z' 0.2	1.5	
Sk	iP	20 41 42.2		
	iX	20 44 37.8		
Um	iP	20 41 26.4	C	
Ud	iP	20 41 54.2		

(cont.)

1973 Dec. 26 (cont.)

Ud	iPP	20 44 44.9	
	iX	20 45 03.1	
De	iP	20 42 08.6	
	iPP	20 45 00.5	

Japan (h = 60 km).
m = 5.9 (Up,Ki).
Phases marked X could be P of another earthquake.

" 27

Um	iP	02 45 14.0	
Ud	eP	02 45 22	

" 27

Ki	iP	06 01 37.3	
Um	iP	06 01 46.0	

Mariana Islands
(h = 55 km).

" 27

Um	iPKP1	06 28 21.9	
	i	06 29 40.5	

New Zealand (h = 260 km).

" 27

Up	iP	13 40 03.0		
	i	13 40 17.4		
		micr	sec	
	P	Z' 0.1	0.7	
Sk	iP	13 40 43.1		
Um	iP	13 40 42.3		
Ud	iP	13 40 09.6		
	i	13 40 12.7		

Greece (h = 40 km).

" 27

Up	iP	17 42 02.9	
Sk	iP	17 41 43.2	
Um	iP	17 42 03.0	
	i	17 42 12.7	
Ud	i(P)	17 42 02.1	

Caribbean Sea (h = N).

" 27

Ud	iP	17 51 39.5	

" 27

Sk	iPKP1	23 21 30.6	
Ud	iPKP1	23 21 38.2	

" 28

Ud	iP	01 32 54.7	

" 28

Up	iPKP1	05 49 32.2	C	
	ipPKP1	05 51 39.5		
	iSKP1	05 52 21.8		
	isPKP1	05 52 37.7		
	iSKKP	06 00 47.2		
		micr	sec	
	PKP1	Z' 0.9	1.0	
	pPKP1	Z' 1.4	2.0	
	sPKP1	Z' 1.1	1.5	
Ki	i(PKP)	05 49 13.0	C	

(cont.)

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec.	28	(cont.)				
		Ki	iPKP	05 49 21.7		
			i	05 51 09.1		
			iSKP1	05 52 03.6		
			iSKKP	06 01 50.4		
				micr	sec	
			PKP Z'	2.0	2.5	
			SKP1 Z'	4.3	2.7	
		Sk	iPKP1	05 49 24.8		
			iPKP	05 49 31.6		
			ipPKP	05 51 37.9		
			iSKP1	05 52 18.6		
		Um	i(PKP)	05 49 18.8		
			iPKP	05 49 28.5		
			ipPKP	05 51 36.9		
			iSKP1	05 52 14.1		
			iSKKP	06 01 12.8		
			i	06 01 32.7		
		Ud	iPKP1	05 49 33.8	C	
			i	05 49 34.5		
			ipPKP1	05 51 40.1		
			iSKP1	05 52 26.6		
			iSKKP	06 00 38.0		
		De	iPKP1	05 49 43.3	C	
			i	05 50 01.2		
			ipPKP1	05 51 47.2		
			iSKKP	06 00 26.3		
		Tonga-Kermadec Islands.				
		h = 560 km (Up,Sk,Um,Ud,De).				
"	28	Up	i(P)	05 56 11.7		
		Ki	i(P)	05 55 29.4		
				micr	sec	
			(P) Z'	0.1	1.2	
		These phases could belong to the preceding event.				
"	28	Ki	iPKP	05 56 36.6		
		Ud	iPKP1	05 56 44.3	C	
		De	iPKP1	05 56 54.4		
		Tonga-Kermadec Islands.				
"	28	Ud	iPKP1	06 07 42.5	C	
		De	iPKP1	06 07 53.4		
		Tonga-Kermadec Islands.				
"	28	Ud	iPKP1	06 39 01.1	C	
		De	iPKP1	06 39 12.3		
		Tonga-Kermadec Islands.				
"	28	Up	iPKP1	06 39 29.6		
		Um	iPKP	06 39 27.8		
		Ud	iPKP1	06 39 31.5		
		De	iPKP1	06 39 42.2	C	
		Tonga-Kermadec Islands.				
"	28	Ki	iPn	10 01 42.4		
		(cont.)				

1973 Dec.	28	(cont.)				
		Ki	iSn	10 02 42.5		
			iS*	10 03 01.5		
		Um	iSn	10 03 22.8		
			iSg2	10 04 10.3		
		Northwest USSR.				
		Explosion.				
"	28	Um	iSg1	10 02 54.9		
		Northwest USSR.				
		Explosion.				
"	28	Ki	iPn	10 43 12.7		
			iSn	10 43 50.9		
			iS*	10 44 05.9		
		Northwest USSR-Norway.				
		Explosion.				
"	28	Um	iPKP	11 40 08.2		
		New Hebrides Islands				
		(h = 20 km).				
"	28	Um	iSg1	12 34 20.5		
		Ud	iSg1	12 35 16.7		
		Western USSR.				
		Explosion.				
"	28	Um	i(P)	13 18 23.3		
		Ud	iP	13 17 54.0		
"	28	Up	i(PKP)	14 00 56.9		
			iPKP	14 00 58.4		
			iPP	14 03 05		
			i(SKP1)	14 04 19.0		
			iSKP1	14 04 26.4		
				micr	sec	
			PKP Z'	0.4	1.0	
			SKP1 Z'	0.9	1.0	
			Mx E	100	22	
			Mx N	160	22	
			Mx Z	250	21	
		Ki	i(PKP)	14 00 39.1	C	
			iPKP	14 00 46.2		
			i(SKP)	14 04 20.6		
			iSKP	14 04 27.6		
				micr	sec	
			PKP Z'	0.9	1.0	
			SKP Z'	0.1	1.0	
			Mx E	79	20	
			Mx N	74	19	
			Mx Z	150	20	
		Sk	i(PKP)	14 00 50.3		
			i	14 00 54.1		
			iPKP	14 00 58.3		
			iSKP1	14 04 20.1		
		Um	i(PKP)	14 00 44.4		
			iPKP	14 00 50.8		
		(cont.)				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec.	28	(cont.)			
		Ud	i(PKP)	14 00 48.2	
			iPKP	14 01 00.7	
			i(SKP1)	14 04 22.3	
			iSKP1	14 04 28.1	
			i	14 04 54.3	
		De	i(PKP)	14 00 53.7	
			i	14 00 57.6	
			iPKP	14 01 07.2	
			i(SKP1)	14 04 33.2	
			iSKP1	14 04 38.2	
		New Hebrides Islands (h = 25 km). M = 7.7 (Up,Ki). (SKP) and (SKP1) have been interpreted as precursors, analogous to (PKP).			
"	28	Ud	iSKP1	14 08 46.7	
"	28	Up	iP	14 09 52.6	
		Ud	i(P)	14 10 03.4	
"	28	Ki	iPKP	14 10 40.9	
			i	14 11 02.1	
		Um	e	14 11 20	
		Ud	iPKP	14 10 58.9	
		New Hebrides Islands.			
"	28	Up	iP	14 13 47.5	
		Um	iP	14 13 47.9	
		Ud	iP	14 13 37.0	
"	28	Um	iPKP	14 19 47.5	
		De	iPKP	14 19 55.7	
		New Hebrides Islands.			
"	28	Up	iSKP1	14 27 31.8	
		Ki	iPKP	14 23 50.0	
		Um	iPKP	14 23 52.2	
		Ud	iSKP1	14 27 34.1	
			i	14 27 35.8	
		De	iSKP1	14 27 46.3	
		New Hebrides Islands.			
"	28	Ki	iP	14 35 58.1	
"	28	Up	iPKP	14 38 00.5	
		Ki	iPKP	14 37 45.8	
			i	14 38 00.4	
		Sk	iPKP	14 37 58.9	
		Um	iPKP	14 37 53.6	
			i	14 38 10.4	
		Ud	iPKP	14 38 03.5	
			i(SKP1)	14 41 22.7	
			iSKP1	14 41 33.9	
		(cont.)			

1973 Dec.	28	(cont.)			
		De	iPKP	14 38 08.9	
			i	14 38 22.0	
			i(SKP1)	14 41 33.4	
			iSKP1	14 41 42.5	
		New Hebrides Islands (h = N).			
"	28	Ki	ePKP	15 05 34	
		Um	i(PKP)	15 05 29.7	
			iPKP	15 05 33.5	
		Ud	iPKP	15 05 43.0	
		De	iPKP	15 05 50.5	
		New Hebrides Islands (h = N).			
"	28	Um	iP	15 18 24.7	
"	28	Up	iPKP	15 27 18.5	
			iSKP1	15 30 51.5	
		Ki	iPKP	15 27 04.1	
		Sk	iPKP	15 27 17.5	
		Um	i(PKP)	15 27 10.4	
			iPKP	15 27 16.2	
		Ud	iPKP	15 27 22.8	
			i(SKP1)	15 30 46.1	
			iSKP1	15 30 55.5	
		De	iPKP	15 27 32.2	
		New Hebrides Islands (h = N).			
"	28	Ud	iSKP1	15 49 44.9	
		New Hebrides Islands (h = N).			
"	28	Up	iSKP1	16 30 48.7	
				micr sec	
			SKP1 Z'	0.1 1.0	
		Ki	iPKP	16 27 07.4	
		Sk	iPKP	16 27 19.0	
		Um	iPKP	16 27 13.7	
		Ud	iPKP	16 27 23.5	
			i	16 28 34.8	
			i(SKP1)	16 30 44.0	
			iSKP1	16 30 52.9	
		De	iPKP	16 27 29.7	
			iSKP1	16 31 05.1	
		New Hebrides Islands. Origin time = 16 08 09.			
"	28	Ki	e(P)	16 36 14	
		Ud	iP	16 36 45.7	
"	28	Ud	iSKP1	17 23 39.9	
		New Hebrides Islands (h = 35 km).			

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec.	28	Ki	iPKP	17 35 54.0			
		New Hebrides Islands (h = N).					
"	28	Ud	iSKP1	17 36 35.3			
		New Hebrides Islands (h = N).					
"	28	Ud	eSKP1	18 12 59			
		New Hebrides Islands (h = N).					
"	28	Um	iPKP	18 38 30.7			
			i	18 38 32.5			
		Ud	iSKP1	18 42 07.4			
		New Hebrides Islands (h = 45 km).					
"	28	Up	iPKP	21 24 41.2			
		Ki	iPKP	21 24 27.0			
		Sk	ePKP	21 24 42			
		Um	iPKP	21 24 32.4			
			i	21 24 44.4			
		Ud	iPKP	21 24 49.8			
			iSKP1	21 28 10.3			
		De	iPKP	21 24 55.0			
		New Hebrides Islands (h = 50 km).					
"	28	Up	iP	21 56 55.3			
			i	21 57 13.3			
"	28	Up	iP	21 59 44.7			
		Ud	iP	21 59 50.5			
		De	iP	21 59 22.4			
		Greece.					
"	28	Up	iP	23 26 33.8			
		Ki	iP	23 26 04.3			
		Um	iP	23 26 13.6			
			i	23 26 21.5			
		Ud	iP	23 26 38.9			
		De	iP	23 26 52.0			
		Mariana Islands (h = 45 km).					
"	28	Up	iP	23 39 40.5			
			ipP	23 39 50.4			
		Ki	iP	23 39 15.1			
			ipP	23 39 24.0			
		Um	iP	23 39 25.8			
			ipP	23 39 36.8			
		Ud	iP	23 39 51.0			
		Mariana Islands. h = 35 km (Up,Ki,Um).					
"	29	Up	i(PKP)	00 38 36.4			
		(cont.)					
1973 Dec.	29	(cont.)					
		Up	iPKP	00 38 41.0			
			iPP	00 40 49			
			i(SKP1)	00 41 58.5			
			iSKP1	00 42 07.2			
					micr	sec	
			PKP	Z'	0.2	1.0	
			SKP1	Z'	0.3	0.9	
			Mx	E	47	22	
			Mx	N	68	22	
			Mx	Z	120	22	
		Ki	i(PKP)	00 38 22.6			C
			iPKP	00 38 28.6			
					micr	sec	
			PKP	Z'	0.3	0.6	
			Mx	E	33	20	
			Mx	N	56	22	
			Mx	Z	57	20	
		Sk	i(PKP)	00 38 31.3			
			i	00 38 35.2			
			iPKP	00 38 41.3			
		Um	i(PKP)	00 38 20.2			
			i	00 38 27.9			
			iPKP	00 38 31.5			
			iPKKP1	00 48 14.7			
		Ud	i(PKP)	00 38 27.3			
			iPKP	00 38 39.6			
			i	00 40 49.4			
			i(SKP1)	00 42 02.8			
			iSKP1	00 42 08.8			
			iPKKP	00 48 35.8			
		De	i(PKP)	00 38 30.9			
			i	00 38 38.6			
			iPKP	00 38 47.9			
			i(SKP1)	00 42 12.2			
			iSKP1	00 42 17.5			
			iPKKP	00 48 37.0			
		New Hebrides Islands (h = 45 km). M = 7.4 (Up,Ki).					
"	29	Up	iP	00 50 08.1			
"	29	Um	iP	00 50 53.2			
"	29	Up	iP	00 51 03.9			
		Um	iP	00 51 18.5			
		Ud	iP	00 51 28.3			
"	29	Ud	iSKP1	01 35 37.3			
		New Hebrides Islands.					
"	29	Up	i(pP)	01 41 40.6			
		Ki	iP	01 41 05.7			
		Um	i(pP)	01 41 26.7			
		Mariana Islands (h = 80 km).					

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec.	29	Um	iP		02 16 45.3	
		Ud	eP		02 17 15	
		South of Japan (h = 45 km).				
"	29	Ud	iP		03 10 06.0	
"	29	Up	iP		06 23 52.5	D
					micr	sec
			P	Z'	0.1	0.9
		Ki	iP		06 23 20.4	
		Um	iP		06 23 33.8	
		Ud	iP		06 23 58.9	
			iPP		06 27 10.5	
		De	iP		06 24 11.6	
		Bonin Islands (h = N).				
"	29	Ki	ePKP		07 03 12	
		Um	iPKP		07 03 17.5	
		Ud	iPKP		07 03 28.0	
			iSKP1		07 06 54.5	
		De	iPKP		07 03 34.5	
		New Hebrides Islands (h = N).				
"	29	Up	iP		08 30 43.2	
			i		08 30 45.7	
			iS		08 39 15	
					micr	sec
			P	Z'	0.3	1.3
			Mx	E	5.8	20
			Mx	N	6.1	20
			Mx	Z	14	20
		Ki	iP		08 29 49.5	
					micr	sec
			P	Z'	0.4	1.5
			Mx	E	7.6	18
			Mx	N	8.2	18
			Mx	Z	10	20
		Sk	iP		08 30 24.3	
			i		08 30 31.5	
		Um	iP		08 30 13.9	
			i		08 30 17.4	
		Ud	iP		08 30 45.9	
			i		08 30 57.8	
		De	iP		08 31 10.4	
			i		08 31 19.5	
		Komandorsky Islands (h = N).				
		m = 6.3, M = 6.0 (Up,Ki).				
"	29	Ud	iP		08 44 39.5	
"	29	Um	iPKP		09 09 55.3	
		New Hebrides Islands (h = 20 km).				
"	29	Up	i(P)		10 42 56.4	
1973 Dec.	29	Ki	iPn		13 09 27.8	
			iSn		13 10 16.9	
		Um	i		13 11 38.9	
			iSgl		13 12 04.8	
		Ud	iSgl		13 14 26.8	
		Northwest USSR-Norway. Explosion.				
"	29	Ud	iP		14 49 30.1	
		Sinkiang, China.				
"	29	Up	iP		17 35 11.8	
			i		17 35 18.4	
		Ud	iP		17 35 25.2	
		Szechwan, China.				
"	29	Ki	ePKP		19 32 41	
		Um	iPKP		19 32 47.0	C
		Ud	iPKP		19 32 59.5	
			iSKP1		19 36 19.8	
		De	iPKP		19 33 04.2	
		New Hebrides Islands (h = 35 km).				
"	30	Ud	ePKP1		02 03 36	
"	30	Sk	iPKP1		03 19 16.6	
		Um	iPKP1		03 19 13.2	
		Ud	iPKP1		03 19 25.6	
"	30	Um	iPKP		07 01 21.5	
		New Hebrides Islands (h = N).				
"	30	Um	iPKP		07 04 16.8	
		New Hebrides Islands (h = N).				
"	30	Up	iSgl		09 27 03.1	
		Um	iSgl		09 27 46.1	
		Ud	iPgl		09 26 52.9	
			iSgl		09 27 19.6	
		Hälsingland, Sweden.				
"	30	Ud	iP		10 05 14.6	C
		Tibet.				
"	30	Ud	iP		10 36 31.3	
"	30	Up	iP		10 36 35.7	
		Ud	iP		10 36 43.1	
		Mindanao-Leyte (h = 40 km).				
"	30	Up	iP		12 05 14.7	
		Um	iP		12 04 52.3	
		Ud	iP		12 05 18.7	
			i		12 05 36.8	
		South of Japan (h = N).				

Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Dec.	30	Ud	iP		13 32 47.0	
		Tien-Shan.				
"	30	Up	i(PKP)		16 58 43.3	
			iPKP		16 58 50.6	
			iSKPl		17 02 25.0	
					micr	sec
			Mx	E	12	22
			Mx	N	24	23
			Mx	Z	47	25
		Um	iPKP		16 58 38.2	
		Ud	e(PKP)		16 58 46	
			iPKP		16 58 54.4	
			i(SKPl)		17 02 16.1	
			iSKPl		17 02 28.5	
		De	i(PKP)		16 58 51.9	
			iPKP		16 59 05.9	
		New Hebrides Islands (h = 10 km). M = 6.9 (Up).				
"	30	Um	iP		18 31 13.0	
		Ryukyu Islands (h = 110 km).				
"	31	Um	iP		01 53 00.8	
		Ud	iP		01 53 28.2	
		South of Japan (h = N).				
"	31	Up	iPKPl		03 02 24.9	
		Um	iPKPl		03 02 12.1	
		Ud	iPKPl		03 02 26.7	
		De	iPKPl		03 02 35.3	
		Kermadec Islands (h = 45 km).				
"	31	Up	iPKPl		03 19 28.4	D
			ipPKPl		03 20 23.6	
					micr	sec
			PKPl	Z'	0.6	1.0
			pPKPl	Z'	0.3	1.0
		Ki	iPKPl		03 19 13.3	
		Sk	iPKPl		03 19 20.6	
			ipPKPl		03 20 15.5	
		Um	iPKPl		03 19 15.6	
			ipPKPl		03 20 12.4	
		Ud	iPKP		03 19 26.6	
			iPKPl		03 19 30.1	
			ipPKPl		03 20 25.2	
		De	iPKP		03 19 32.3	
			iPKPl		03 19 38.8	
			ipPKPl		03 20 34.1	
		Kermadec Islands. h = 220 km (Up,Sk,Um,Ud,De).				
"	31	Ud	iPKPl		05 04 37.5	
			i		05 04 58.6	
1973 Dec.	31	Up	iPKP		11 06 02.5	
		Ki	ePKP		11 06 20	
		Um	iPKP		11 06 10.1	
		Ud	iPKP		11 06 00.6	
		South Sandwich Islands (h = 40 km).				
"	31	Um	iP		11 10 51.9	
			i		11 11 01.1	
		Ud	iP		11 11 22.4	
		China (h = N).				
"	31	Ki	i(P)		11 14 56.9	
		Ud	i(P)		11 15 51.9	
"	31	Um	iPKP		15 17 24.6	

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September 2, 1975