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

J U L Y 1 - 31, 1974

1974 July	1	Up	iPKP	00 20 11.3
		Ki	iPKP	00 20 00.2
		Ud	iPKP	00 20 15.8
		Alternatively, these readings could be SKP.		
"	1	Ud	iP	01 29 20.6
			iS	01 31 30.2
		De	iP	01 28 42.9
			iS	01 30 20.8
			i	01 31 26.6
		France.		
		Rockburst.		
"	1	Ud	iP	03 20 23.1
		Kurile Islands-Japan.		
"	1	Up	iP	05 16 44.0
		Ki	eP	05 15 09
		Sk	eP	05 16 05
		Um	iP	05 16 04.2
			i	05 16 10.7
		Ud	iP	05 16 38.2
			i	05 16 44.9
		De	eP	05 17 16
		Greenland Sea (h = N).		
"	1	Ud	iP	05 30 30.2
		Lake Baikal (h = N).		
"	1	Up	iPKPl	06 42 02.0
		Ud	iPKPl	06 42 09.8
		De	iPKPl	06 42 19.1
"	1	Ud	i	07 02 27.3
			iSgl	07 02 39.6
		De	i(Pgl)	07 00 25.1
			i	07 00 59.1
			iSgl	07 01 02.1

1974 July	1	Ki	iP		07 09 51.0
		Sk	iP		07 09 23.1
		Um	iP		07 09 35.8
		Ud	iP		07 09 08.4
		Atlantic Ocean (h = N).			
"	1	Ki	iP		07 30 40.7
					micr sec
			P	Z'	0.1 0.8
			Mx	E	0.4 10
			Mx	N	0.9 18
			Mx	Z	0.8 16
		Sk	iP		07 31 27.8
		Um	iP		07 31 32.0
			i		07 31 56.4
		Ud	iP		07 32 15.9
			i		07 32 26.9
			i		07 32 36.4
		De	iP		07 32 57.8
		Greenland Sea (h = N).			
"	1	Ud	iSgl		09 09 46.0
		De	i		09 07 40.8
			iSgl		09 07 53.5
"	1	Ud	iPKPl		13 29 55.4
		De	iPKPl		13 30 05.8
			i		13 30 16.4
"	1	Up	iSn		15 02 49.5
			iSgl		15 03 02.0
		Ki	iSgl		15 05 34.5
		Sk	eSgl		15 04 52
		Um	iSgl		15 03 38.1
		Ud	iSn		15 03 37.1
			eSgl		15 04 06
		De	iSgl		15 04 31.0
			iSg2		15 04 42.1
		Esthonia.			
		Explosion.			

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

1974
July 1 Sk iPKP1 15 04 48.8
Um iPKP1 15 04 38.7
Ud iPKP1 15 04 51.0
South of Kermadec Islands
(h = N).

" 1 De iP 15 56 39.7
Molucca Sea (h = 130 km).

" 1 Up iSKS 17 16 34
iSP 17 19 26

		micr	sec
Mx	E	3.4	18
Mx	N	2.6	18
Mx	Z	6.3	18

Ki iPP 17 10 50.2
iSKS 17 16 54
iSP 17 20 03

		micr	sec
Mx	E	5.9	22
Mx	N	5.2	23
Mx	Z	5.8	21

Um iSKS 17 16 45
iSP 17 19 49
Argentina (h = 15 km).
M = 6.2 (Up,Ki).

" 1 Up iP 21 18 03.8
Ud iP 21 18 14.0

" 1 Up iP 23 23 49.5 C
iSKS 23 34 14

		micr	sec
P	Z'	0.2	1.0
Mx	E	1.0	20
Mx	N	1.1	24
Mx	Z	2.0	19

Ki iP 23 24 26.3

		micr	sec
P	Z'	0.1	1.7
Mx	E	0.9	18
Mx	N	1.3	17
Mx	Z	1.0	17

Sk iP 23 24 01.7
Um iP 23 24 09.7
iSKS 23 34 40
Ud iP 23 23 46.6 C
De iP 23 23 29.2 C
South Atlantic Ocean (h = N).
m = 6.1, M = 5.5 (Up,Ki).

" 2 Up i 05 23 02.7
iSgl 05 23 11.6
Sk eSgl 05 24 55
Um iSgl 05 25 19.1
(cont.)

1974
July 2 (cont.)
Ud i 05 22 57.3
iSgl 05 23 05.5
De iPn 05 20 41.5
i 05 20 50.6
iSgl 05 21 17.9
Near Baltic coast of German Democratic Republic,
near 54°N, 13 1/2°E.
Origin time = 05 20 03.

" 2 De iPKP1 06 50 16.9

" 2 Up iPKP2 07 35 37.3
i 07 35 42.4
Ki iPKP1 07 35 33.0
iPKP2 07 35 41.9

		micr	sec
PKP1	Z'	0.1	1.0

Sk ePKP 07 35 37
iPKP1 07 35 44.8
Um iPKP2 07 35 35.9
Ud iPKP1 07 35 43.0
iPKP2 07 35 50.8
De iPKP 07 35 35.7
West of Macquarie Islands
(h = N).

" 2 Ud iSgl 08 03 31.2
De i 08 02 33.8
iSgl 08 03 31.7

" 2 Up iSgl 08 07 02.2
iRg 08 07 19.9
Sk iSgl 08 07 04.2
Um iSgl 08 06 44.0
iRg 08 06 55.7
Medelpad, Sweden,
62.3°N, 17.3°E.
Origin time = 08 05 41.
Very shallow depth.

" 2 De iPP 09 36 21.0
Off coast of Chile (h = N).

" 2 Up iSgl 13 01 27.2
Sk iSgl 13 03 26.4
Um iSgl 13 02 18.1
Ud iSn 13 02 09.1
iSgl 13 02 32.9
De iSgl 13 03 00.7
Esthonia.
Explosion.

" 2 Ki iP 13 16 54.1
Um iP 13 16 59.8

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

1974 July	2	Up	iP			15 23 26.7	
"	2	Up	iP			16 34 24.0	
			i			16 34 26.1	
		Ki	iP			16 34 22.4	
			i			16 34 24.4	
		Sk	iP			16 34 46.8	
		Um	iP			16 34 17.0	
			i			16 34 19.3	
		Ud	iP			16 34 39.8	
			i			16 34 41.8	
		De	iP			16 34 42.3	
		Kashmir-Tibet (h = N).					
		Double P, with Sk,De only showing the later P.					
"	2	Up	iP			16 48 30.6	
			iLgl			17 01 16	
						micr	sec
			Mx	N		1.7	14
			Mx	Z		0.5	8
		Ki	iP			16 48 29.1	
			eLgl			17 01 22	
						micr	sec
			Mx	E		0.5	9
			Mx	N		1.5	11
			Mx	Z		0.5	8
		Sk	eP			16 48 50	
			i			16 48 58.0	
		Um	iP			16 48 23.0	
			i			16 48 31.7	
			i			17 00 49.5	
			iLgl			17 01 18.5	
		Ud	iP			16 48 47.3	
			i			16 48 51.4	
			i			16 48 56.0	
		De	iP			16 48 48.4	
			i			16 48 53.6	
		Alma-Ata (h = N).					
		M = 5.2 (Up,Ki).					
"	2	Up	i(pP)			17 37 13.8	
		Mindoro (h = 110 km).					
"	2	Ki	iSn			18 10 55.3	
			iSgl			18 11 08.9	
		Um	i			18 12 24.5	
			iSgl			18 12 44.0	
		USSR-Norway.					
		Explosion.					
"	2	Ud	iPKPl			18 40 10.4	
		De	iPKPl			18 40 19.9	
"	2	Up	iP			18 41 43.9	
		Um	iP			18 41 40.8	
"	2	Up	iP			19 31 02.5	
		(cont.)					

1974 July	2	(cont.)					
		Sk	iP			19 30 57.7	
		Um	iP			19 30 39.4	
		Ud	iP			19 31 09.6	
			ipP			19 31 31.1	
		Japan.					
		h = 80 km (Ud).					
"	2	Up	iP			20 36 16.2	
		Ki	iP			20 35 33.8	
		Um	iP			20 35 52.2	
		Ud	iP			20 36 23.1	
		De	iP			20 36 39.4	
		Japan (h = 30 km).					
"	2	Up	eP			23 44 00	C
			iPKP			23 46 05.0	
			iPKPl			23 46 08.5	C
			iPP			23 49 35.8	
						micr	sec
			PKP	Z'		0.2	1.5
			PKPl	Z'		2.1	1.0
			Mx	E		25	24
			Mx	N		60	25
			Mx	Z		72	24
		Ki	i(PKP)			23 45 47.1	
			iPKP			23 45 53.5	
			iSKP			23 49 29	
						micr	sec
			(PKP)	Z'		0.1	1.0
			PKP	Z'		1.0	1.6
			Mx	E		33	21
			Mx	N		73	23
			Mx	Z		51	23
		Sk	iPKPl			23 46 00.2	C
		Um	iPKPl			23 45 55.5	C
			iPP			23 49 25	
		Ud	iPKP			23 46 06.0	
			iPKPl			23 46 09.9	
		De	iPKP			23 46 11.7	C
			iPKPl			23 46 18.9	C
		Kermadec Islands (h = N).					
		M = 7.4 (Up,Ki).					
"	3	Up	iP			02 47 27.1	
		Ki	iP			02 47 19.4	
		Ud	iP			02 47 39.0	
		Burma.					
"	3	De	iPKPl			05 00 27.3	
"	3	Up	eX			05 12 58	
						micr	sec
			Mx	E		0.8	20
			Mx	N		1.4	16
			Mx	Z		1.2	18
		Ki	iP			05 12 03.7	
			iX			05 12 15.4	
		(cont.)					

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

1974 July	3	(cont.)					
		Ki			micr	sec	
			Mx	E	1.0	16	
			Mx	N	0.9	15	
			Mx	Z	1.0	17	
		Sk	eP		05 12 17		
			iX		05 12 28.4		
		Um	iP		05 12 25.5		
			iX		05 12 37.0		
		Ud	iP		05 12 35.7		
			iX		05 12 47.2		
		California (h = 10 km).					
		M = 5.4 (Up,Ki).					
"	3	Ud	iPKPl		06 09 24.1		
"	3	Ud	iP		07 49 59.3		
		Aleutian Islands (h = 90 km).					
"	3	Sk	iPKPl		10 22 09.6		
		Ud	ePKPl		10 22 19		
"	3	De	iP		11 24 31.7		
"	3	Up	iPKPl		14 24 54.8		
		Sk	iPKPl		14 24 46.9		
			ipPKPl		14 24 57.7		
		Um	iPKPl		14 24 42.0		
		Ud	iPKPl		14 24 55.7		
			ipPKPl		14 25 06.4		
		De	iPKPl		14 25 04.7		
			ipPKPl		14 25 15.4		
		Kermadec Islands.					
		h = 35 km (Sk,Ud,De).					
"	3	Up	iSgl		15 50 07.6		
		Ud	iPgl		15 49 23.0		
			iSgl		15 49 46.5		
			iRg		15 49 56.7		
		De	iSgl		15 49 56.8		
		Probably Västergötland, Sweden.					
		Origin time = 15 48 52.					
		Explosion?					
"	3	Sk	iPKPl		22 26 16.7		
		Ud	i(PKPl)		22 26 31.2		
		De	iPKPl		22 26 34.7		
"	3	Up	iPKP		23 44 47.5		
			iPKPl		23 44 51.0		
			iPP		23 48 14		
					micr	sec	
			PKP	Z'	0.3	1.8	
			PKPl	Z'	1.8	1.0	
		(cont.)					

1974 July	3	(cont.)					
		Up			micr	sec	
			Mx	E	4.1	21	
			Mx	N	4.3	20	
			Mx	Z	7.2	21	
		Ki	i(PKP)		23 44 28.8		
			iPKP		23 44 34.6		
			iPP		23 47 28		
			iSKP		23 48 08		
					micr	sec	
			(PKP)	Z'	0.1	1.0	
			PKP	Z'	0.6	1.6	
			Mx	E	4.5	18	
			Mx	N	8.9	20	
			Mx	Z	7.6	20	
		Sk	iPKPl		23 44 43.4 D		
		Um	iPKPl		23 44 38.0 D		
		Ud	iPKP		23 44 48.2		
			iPKPl		23 44 51.6		
		De	iPKP		23 44 54.5		
			i		23 44 57.5		
			iPKPl		23 45 00.6		
		Kermadec Islands (h = N).					
		M = 6.5 (Up,Ki).					
"	4	Up	iP		03 50 11.5		
		Ud	iP		03 50 18.4		
"	4	Ud	iP		07 38 11.6		
		De	iP		07 38 08.7		
"	4	Up	iPKP2		08 37 49.1		
		Sk	iPKPl		08 37 37.6		
		Um	iPKPl		08 37 32.7 D		
		Ud	iPKPl		08 37 46.6		
		Kermadec Islands.					
"	4	Sk	iPKP		11 13 12.6		
		Um	iPKP		11 13 08.2		
		Ud	iPKP		11 13 21.9		
		De	iPKP		11 13 28.2		
"	4	Up	iPKPl		11 17 11.2 C		
		Sk	iPKPl		11 17 04.0 C		
			ipPKPl		11 17 15.0		
		Um	iPKPl		11 16 59.0 C		
		Ud	iPKPl		11 17 12.3 C		
			iPKP2		11 17 16.7		
			ipPKPl		11 17 23.9		
		De	iPKPl		11 17 22.1 C		
			ipPKPl		11 17 33.3		
		Kermadec Islands.					
		h = 35 km (Sk,Ud,De).					
"	4	Ud	iP		11 46 08.2		

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

1974 July	4	Sk	iPKP		12 21 27.3	
		Ud	iPKP1		12 21 34.4	
		De	iPKP1		12 21 46.5	
		Fiji Islands (h = 420 km).				
"	4	Sk	eSgl		13 10 09	
		Um	iSgl		13 08 44.0	
		Ud	iSgl		13 09 25.8	
		Western USSR.				
		Explosion.				
"	4	Up	iPKP1		13 53 59.7	
			iPKP2		13 54 02.9	
					micr	sec
			PKP1	Z'	0.1	0.9
		Sk	iPKP1		13 53 52.1	
		Um	iPKP1		13 53 47.6	
		Ud	iPKP1		13 54 01.0	
			iPKP2		13 54 04.9	
		De	iPKP1		13 54 10.4	
			iPKP2		13 54 19.5	
		Kermadec Islands (h = N).				
"	4	Um	iSgl		14 34 36.5	
		Ud	iSgl		14 36 04.7	
		Lake Ladoga region.				
		Explosion.				
"	4	Ud	iSgl		15 11 19.2	
		De	eSgl		15 10 59	
"	4	Ud	iP		18 43 46.6	
"	4	Up	iP		19 39 03.7	C
			ipP		19 39 10.6	
			iPP		19 40 52	
			iS		19 45 42	
					micr	sec
			P	Z'	0.6	1.0
			pP	Z'	1.5	1.1
			Mx	E	140	12
			Mx	N	190	12
			Mx	Z	150	12
		Ki	iP		19 38 40.8	C
			ipP		19 38 47.8	
			iS		19 45 08	
					micr	sec
			P	Z'	0.1	1.0
			pP	Z'	0.6	1.3
			Mx	E	200	11
			Mx	N	310	17
			Mx	Z	210	12
		Sk	iP		19 39 13.8	C
			ipP		19 39 21.0	
		Um	iP		19 38 46.1	C
			ipP		19 38 53.0	
			iPP		19 40 29	
			iS		19 45 14	
		(cont.)				

1974 July	4	(cont.)				
		Ud	iP		19 39 17.9	C
			ipP		19 39 24.8	
		De	iP		19 39 27.3	C
		Mongolia.				
		h = 25 km (Up,Ki,Sk,Um,Ud).				
		m = 6.3, M = 7.5 (Up,Ki).				
		Alternatively, pP could instead be P of a second, larger shock.				
"	4	Up	iP		19 47 27.6	
					micr	sec
			P	Z'	0.2	1.2
		Ki	iP		19 47 06.0	
					micr	sec
			P	Z'	0.2	1.5
		Sk	iP		19 47 39.3	
		Um	iP		19 47 11.0	
		Ud	iP		19 47 42.6	
		De	i(P)		19 47 48.2	
			iP		19 47 52.0	
		Mongolia (h = N).				
		m = 5.9 (Up,Ki).				
"	4	Up	iP		19 52 48.7	C
					micr	sec
			P	Z'	0.1	1.1
		Sk	iP		19 52 57.8	
		Um	iP		19 52 31.0	
		Ud	iP		19 53 02.9	C
		De	iP		19 53 12.2	C
		Mongolia (h = N).				
"	4	Up	iP		20 10 10.7	
		Ki	iP		20 09 48.0	
		Sk	iP		20 10 21.7	
		Um	iP		20 09 53.3	
		Ud	iP		20 10 24.7	
		De	iP		20 10 34.2	C
		Mongolia.				
		Origin time = 20 01 49.				
		Origin times are based on our own records only, and therefore approximate in case of teleseisms.				
"	4	Ud	iP		20 48 58.0	
		De	iP		20 49 04.3	
"	4	Up	iPKP1		20 57 05.6	
			iPKP2		20 57 08.7	
		Sk	iPKP1		20 56 58.2	
		Um	iPKP1		20 56 53.2	
		Ud	iPKP1		20 57 07.0	
			iPKP2		20 57 10.7	
		De	iPKP1		20 57 16.4	
		Tonga-Kermadec Islands.				

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

1974 July	4	Up	iP	21 34 57.9	C
			ipP	21 35 38.9	
		Ki	iP	21 35 06.3	
		Sk	iP	21 35 23.5	
		Um	iP	21 34 55.6	
		Ud	iP	21 35 14.3	
			ipP	21 35 55.1	
		De	iP	21 35 10.8	

Hindu Kush.
h = 200 km (Up,Ud).

"	4	Ki	iP	22 40 18.9	
		Sk	iP	22 40 15.9	
		Ud	iP	22 40 24.4	

Mexico (h = 80 km).

"	4	Up	Mx	23 36	
				micr	sec
			Mx E	1.2	21
			Mx N	1.9	21
			Mx Z	3.1	21
		Ki	Mx	23 42	
				micr	sec
			Mx E	1.2	16
			Mx N	1.8	18
			Mx Z	1.7	17

South Pacific Ocean (h = N).
M = 6.0 (Up,Ki).

"	5	Up	i(P)	03 56 29.7

"	5	Up	eSgl	04 53 46
		Ki	iSgl	04 51 49.0
		Sk	iSgl	04 51 53.2
		Um	iSn	04 52 03.5
			iSgl	04 52 16.7
		Ud	iSgl	04 53 40.4

Nordland, Norway,
66.5°N, 14.1°E.
Origin time = 04 50 20.
Explosion.

"	5	Up	Mx	06 14	
				micr	sec
			Mx E	0.9	22
			Mx Z	1.1	21

Chile (h = N).

"	5	Ud	iP	06 38 51.2

"	5	Up	iP	07 25 33.2
		Ki	iP	07 25 38.8
		Sk	iP	07 25 57.1
		Um	iP	07 25 29.3
		Ud	iP	07 25 49.1
		De	iP	07 25 47.0

Tadzhik SSR (h = N).

1974 July	5	Up	iSgl	07 41 02.6
		Ki	iSgl	07 41 44.4
		Sk	iSgl	07 42 10.7
		Um	iSgl	07 40 22.7
		Ud	iSgl	07 41 55.6
		De	iSgl	07 42 43.9

Lake Ladoga region.
Explosion.

"	5	Ud	iPKPl	09 09 26.0

"	5	Ud	iP	09 27 19.7
		De	iP	09 27 42.4

"	5	Up	iSgl	11 08 07.1
		Sk	eSgl	11 09 54
		Um	i	11 08 31.8
			iSgl	11 08 40.8
		Ud	iSgl	11 09 08.6
		De	iSgl	11 09 43.6

Esthonia.
Explosion.

"	5	Up	iSgl	11 26 29.7
		Ki	iPn	11 22 21.9
			iSn	11 23 21.2
			iS*	11 23 39.9
			iSgl	11 23 44.8
		Sk	iSgl	11 26 05.5
		Um	iSn	11 23 59.8
			i	11 24 17.4
			iSgl	11 24 34.0
		Ud	eSn	11 26 04
			i	11 27 02.2
			iSgl	11 27 09.1
		De	iSgl	11 28 44.1

Northwest USSR.
Explosion.

"	5	Up	iSgl	11 34 10.7
		Ki	iSgl	11 36 48.2
		Sk	eSgl	11 36 03
		Um	iSgl	11 34 44.4
		Ud	iSgl	11 35 14.6
		De	iSgl	11 35 40.5

Esthonia.
Explosion.

"	5	Up	iSgl	12 23 22.1
		Ki	iSgl	12 25 20.0
		Sk	iSgl	12 25 09.5
		Um	iSgl	12 23 36.0
			iRg	12 24 06.5
		Ud	eSn	12 23 42
			iSgl	12 24 19.5

Western USSR.
Explosion.

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

1974 July	5	Up	iSgl	15 37 02.0	
		Sk	iSgl	15 38 22.9	
		Um	iSgl	15 36 33.4	
		Ud	iSgl	15 37 57.7	
		De	eSgl	15 38 56	
		Lake Ladoga region.			
		Explosion.			
"	5	Up	iSn	16 21 27.1	
			iSgl	16 21 47.7	
		Sk	iSgl	16 23 02.0	
		Um	iSgl	16 23 42.7	
		Ud	iPn	16 20 37.9	
			iPgl	16 20 41.2	
			iSgl	16 21 18.5	
		De	iPn	16 20 11.9	
			iPgl	16 20 13.4	
			iSn	16 20 29.2	
			iSgl	16 20 32.2	
		Halland, Sweden,			
		57.3°N, 12.1°E.			
		Origin time = 16 19 50.			
"	5	Up	iPKPl	18 23 56.2	
			iX	18 24 19.7	
				micr sec	
			X Z'	0.1 1.0	
		Ki	iX	18 24 04.3	
		Sk	iPKPl	18 23 48.9 C	
			i	18 23 57.2	
			iX	18 24 08.3	
		Um	iPKPl	18 23 43.6 C	
		Ud	iPKPl	18 23 56.6	
			iPKP2	18 24 01.2	
			iX	18 24 19.9	
		De	iPKPl	18 24 06.7 C	
			iPKP2	18 24 15.4	
			iX	18 24 25.6	
		Kermadec Islands (h = N).			
		X probably belongs to			
		another, larger shock in			
		the same area, 21 sec later.			
"	5	Ud	iP	18 52 51.5	
"	5	Up	iP	20 21 54.3	
			ipP	20 22 01.5	
		Ki	iP	20 21 49.2	
			ipP	20 21 56.6	
		Sk	iP	20 21 36.7	
			ipP	20 21 44.5	
		Um	iP	20 21 55.0	
			ipP	20 22 02.4	
		Ud	iP	20 21 43.8	
			ipP	20 21 51.4	
		Caribbean Sea.			
		h = 30 km (Up,Ki,Sk,Um,Ud).			
1974 July	5	Ud	iPKPl	23 38 46.0	
"	6	Up	iPKPl	04 50 25.7	
		Sk	iPKPl	04 50 17.6	
		Um	iPKPl	04 50 12.6	
		Ud	iPKPl	04 50 27.0	
		De	iPKPl	04 50 35.9	
		Tonga-Kermadec Islands.			
"	6	Up	iP	06 26 48.5	
		Ud	iP	06 27 04.2	
		De	iP	06 27 09.9	
		Mongolia.			
		Origin time = 06 18 27.			
"	6	Up	iP	09 19 47.8	
		Ki	iP	09 19 14.9	
		Sk	eP	09 19 45	
		Um	iP	09 19 29.0	
		Ud	iP	09 19 55.0	
		South of Japan (h = 450 km).			
"	6	Up	iP	09 47 44.2	
		Ud	iP	09 48 00.3	
"	6	Up	iP	11 06 50.8	
		Ki	iP	11 06 33.1	
		Sk	eP	11 06 56	
		Um	iP	11 06 38.6	
		Ud	eP	11 07 02	
		Luzon.			
"	6	Ki	iPn	11 09 22.4	
			iSn	11 10 11.3	
			iS*	11 10 25.6	
			iSgl	11 10 28.9	
		Um	iSgl	11 11 55.2	
			i	11 12 00.5	
		USSR-Norway.			
		Explosion.			
"	6	Um	iP	11 44 34.2	
		Ud	iP	11 45 04.4	
		Japan (h = 30 km).			
"	6	Ki	i(Pn)	12 31 09.3	
			iSn	12 31 58.9	
			iSgl	12 32 20.6	
		Sk	eSgl	12 34 56	
		Um	eSn	12 32 50	
			iSgl	12 33 26.4	
		Northwest USSR.			
		Explosion.			
"	6	Um	iPKP	12 40 19.3	
			i	12 40 34.4	
		Ud	ePKP	12 40 12	

(cont.)

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

1974
July 6 (cont.)

	Ud	i	12 40 22.5

Easter Island region (h = N).

" 6	De	iP	13 01 42.6
" 6	Sk	iPKPl	13 12 16.6
		ipPKPl	13 12 28.0
	Ud	iPKPl	13 12 25.4
		ipPKPl	13 12 36.9

Kermadec Islands.
h = 40 km (Sk,Ud).

" 6	Sk	iPKPl	13 13 51.2
" 6	Up	iPKP	15 10 25.6
		ipPKP	15 10 33.9
			micr sec
	Mx	N	0.9 20
	Mx	Z	0.8 20
	Ki	ipPKP	15 10 44.6
	Sk	ipPKP	15 10 40.4
	Um	ipPKP	15 10 41.7
	Ud	iPKP	15 10 24.1
		ipPKP	15 10 32.7
	De	ipPKP	15 10 26.2

Scotia Sea.
h = 30 km (Up,Ud).

" 6	Up	iP	15 53 57.4
	Ki	iP	15 53 25.7
	Um	iP	15 53 34.7
		i	15 53 40.6
	Ud	iP	15 54 01.2
" 6	Up	iP	20 24 21.5
			micr sec
	P	Z'	0.1 1.0
	Ki	iP	20 23 47.2 D
	Sk	iP	20 24 19.5
	Um	iP	20 24 01.1 D
	Ud	iP	20 24 29.8 D
		i	20 24 40.0

Japan (h = 70 km).

" 6	Up	iP	20 29 27.9
	Um	iP	20 29 09.6
	De	iP	20 29 51.4

Mongolia (h = N).

" 6	Ud	iP	21 31 38.2
	De	iP	21 31 35.4
" 6	Up	iP	21 38 53.1
	Sk	iP	21 39 05.1

(cont.)

1974
July 6 (cont.)

	Um	iP	21 39 13.5
		ipP	21 39 19.7
	Ud	iP	21 38 49.6
		ipP	21 38 56.1

South Atlantic Ocean.
h = 25 km (Um,Ud).

" 6	Up	iPKPl	23 39 08.5
			micr sec
	PKPl	Z'	0.1 0.8
	Ki	iPKP	23 38 51.5
	Sk	iPKPl	23 39 01.4
	Um	iPKPl	23 38 57.2
	Ud	iPKPl	23 39 10.3
		ipPKPl	23 40 30.6
	De	iPKPl	23 39 19.9
		iPKP2	23 39 25.4

Tonga-Kermadec Islands.
h = 330 km (Ud).

" 7	Sk	iPKPl	00 14 26.7
	Um	iPKPl	00 14 27.0
	Ud	iPKPl	00 14 40.8
" 7	Ki	iP	00 49 58.6
	Ud	iP	00 50 25.0

Mindanao (h = N).

" 7	Up	iPKPl	02 59 41.7
	Sk	iPKPl	02 59 34.2
		ipPKPl	02 59 44.2
	Um	iPKPl	02 59 30.8
	Ud	iPKPl	02 59 43.4
		ipPKPl	02 59 53.6
	De	iPKPl	02 59 52.3
		ipPKPl	03 00 02.4

Kermadec Islands.
h = 35 km (Sk,Ud,De).

" 7	Ki	iSn	06 33 50.0
		iSgl	06 34 13.1
	Um	i	06 34 39.7
		iSgl	06 35 02.1

Northwest USSR.
Explosion.

" 7	Up	iSgl	07 31 43.5
	Ud	eSgl	07 31 29
		e	07 31 46
	De	iPgl	07 29 18.5
		iSgl	07 29 45.3

Baltic Sea, south of Sweden.
Explosion.

" 7	Ud	iP	07 53 30.2

North Atlantic Ocean (h = N).

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

1974 July	7	Up	iP	08 31 36.5	
		Ki	iP	08 31 37.0	C
		Sk	iP	08 31 51.8	
		Um	iP	08 31 33.1	
		Ud	iP	08 31 47.2	C
		De	iP	08 31 45.5	
		Sumatra (h = 170 km).			
"	7	Up	iP	08 36 57.9	
		Um	iP	08 37 14.0	
		Ud	iP	08 37 08.1	
			i	08 37 13.1	
"	7	Sk	eP	10 29 22	
"	7	Up	iSgl	11 56 40.4	
		Ud	eSgl	11 56 20	
		De	ePgl	11 54 11	
			iSgl	11 54 37.6	
		Baltic Sea, south of Sweden. Explosion.			
"	7	Up	iP	13 04 11.9	
				micr	sec
			P Z'	0.1	1.0
		Ki	iP	13 03 24.0	
		Sk	iP	13 03 59.2	
		Um	iP	13 03 45.8	
		Ud	iP	13 04 17.1	
		De	iP	13 04 35.2	
		Kurile Islands (h = N).			
"	7	Sk	iP	14 49 26.0	
		Turkey.			
"	7	Up	iP	16 15 16.8	
		Ki	iP	16 13 51.5	
			iS	16 15 57.3	
		Sk	eP	16 15 05	
			eS	16 18 31	
		Um	iS	16 17 00.5	
		Ud	iP	16 15 28.6	
		De	iP	16 15 59.2	
			e	16 20 17	
		Novaya Zemlya. Origin time = 16 11 00. Possibly underground explosion, alternatively an aftereffect of a nuclear explosion in the southern test area on Novaya Zemlya on Oct. 27, 1973.			
"	7	Ud	eP	18 04 59	
"	7	Up	iP	21 05 39.5	
			i	21 05 44.5	
		Ki	iP	21 05 43.7	C
		(cont.)			

1974 July	7	(cont.)			
		Sk	iP	21 06 01.2	C
		Um	iP	21 05 35.8	C
		Ud	iP	21 05 54.7	C
		De	iP	21 05 52.1	
		India (h = N).			
"	8	De	iS	00 21 50.5	
		Yugoslavia.			
"	8	Up	iPKPl	04 09 53.9	
		Ki	iPKP	04 09 37.1	
		Sk	iPKPl	04 09 46.1	
		Um	iPKPl	04 09 41.3	
			i	04 09 48.5	
		Ud	iPKPl	04 09 55.1	
		De	iPKPl	04 10 03.8	
		Kermadec Islands.			
"	8	Up	iP	05 57 06.2	C
			ipP	05 57 18.1	
			iS	06 06 22	
				micr	sec
			P Z'	1.2	1.5
			Mx E	8.1	16
			Mx N	14	21
			Mx Z	19	18
		Ki	iP	05 56 27.5	C
			ipP	05 56 39.4	
			iS	06 05 18	
				micr	sec
			P Z'	0.4	1.0
			Mx E	30	18
			Mx N	19	19
			Mx Z	21	17
		Sk	iP	05 57 00.3	C
			ipP	05 57 13.4	
		Um	iP	05 56 43.7	C
			ipP	05 56 54.7	
			iS	06 05 49	
		Ud	iP	05 57 13.5	C
			ipP	05 57 25.8	
		De	iP	05 57 28.2	C
			ipP	05 57 40.1	
		Japan. h = 45 km (Up,Ki,Sk,Um,Ud, De). m = 6.7, M = 6.5 (Up,Ki).			
"	8	Up	iP	06 04 48.5	
				micr	sec
			P Z'	0.1	1.0
		Ki	iP	06 04 53.5	
			i	06 09 07.8	
		Sk	iP	06 05 17.5	
		Um	iP	06 04 40.7	
			i	06 04 43.3	
		Ud	iP	06 05 09.2	
		(cont.)			

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

1974					
July	8	(cont.)			
		De	iP	06 05 12.0	
			i	06 05 17.5	
		Sinkiang, China.			
"	8	Ud	eSgl	07 46 15	
			i	07 46 24.8	
		De	ePgl	07 44 02	
			iSgl	07 44 26.7	
		Baltic Sea, south of Sweden.			
		Explosion.			
"	8	Ud	i(Sgl)	08 31 22.2	
			i	08 31 27.4	
		De	iPgl	08 29 01.0	
			iSgl	08 29 28.8	
		Baltic Sea, south of Sweden.			
		Explosion.			
"	8	Ud	iPKPl	10 08 30.4	
"	8	Up	iP	12 20 19.3	
			i	12 20 51.8	
		Ki	iP	12 19 24.6	
		Sk	iP	12 20 01.4	
		Ud	iP	12 20 21.7	
		De	iP	12 20 43.4	
		Kamchatka (h = 60 km).			
"	8	Um	iSgl	12 20 18.9	
		Western USSR.			
		Explosion.			
"	8	Ud	e	13 00 29	
		De	ePgl	12 58 06	
			iSgl	12 58 32.0	
		Baltic Sea, south of Sweden.			
		Explosion.			
"	8	Up	iP	21 01 25.2	
"	8	De	iPKPl	22 36 28.3	
"	8	Ud	iP	23 39 58.4	
		De	iP	23 40 00.5	
		Mongolia.			
"	9	Ud	iPKPl	01 29 13.2	
		De	iPKPl	01 29 24.6	
"	9	Up	iP	02 37 28.2 C	
			ipP	02 37 41.4	
				micr	sec
			Mx E	1.4	15
			Mx N	0.8	15
			Mx Z	0.8	15
		(cont.)			

1974					
July	9	(cont.)			
		Ki	iP	02 38 34.7 C	
				micr	sec
			Mx E	0.5	9
			Mx N	0.4	9
			Mx Z	0.4	9
		Sk	iP	02 38 08.0	
		Um	iP	02 37 58.0	
			i	02 38 05.7	
		Ud	iP	02 37 38.0	
			ipP	02 37 52.5	
		De	iP	02 37 06.7	
			i	02 37 12.0	
		Dodecanese Islands.			
		h = 70 km (Up,Ud).			
		M = 4.7 (Up,Ki).			
"	9	Up	iP	07 13 11.8 C	
		Ki	iP	07 12 40.4 C	
		Sk	iP	07 13 08.5	
		Um	iP	07 12 53.9 C	
		Ud	iP	07 13 18.6	
		De	iP	07 13 30.4	
		Bonin Islands (h = 430 km).			
"	9	Sk	iP	07 27 26.5	
		Ud	iP	07 27 23.8	
		India-China (h = 55 km).			
"	9	Up		micr	sec
			Mx N	0.5	14
		Ki	iP	09 03 38.6	
		Sk	eP	09 04 12	
		Um	iP	09 03 54.7	
		Ud	iP	09 04 23.5	
		Japan (h = 15 km).			
"	9	Um	iSgl	12 08 35.3	
		Ud	iSgl	12 09 29.5	
		De	iSgl	12 09 50.5	
		Western USSR.			
		Explosion.			
"	9	Sk	ePKPl	12 09 49	
		Ud	iPKPl	12 09 57.6	
"	9	Ki	iPn	12 24 46.8	
			iPgl	12 24 54.8	
			iSn	12 25 33.2	
			iSgl	12 25 47.6	
		Sk	eSgl	12 28 36	
		Um	iSgl	12 27 28.0	
		USSR-Norway.			
		Explosion.			
"	9	Up	iSgl	13 41 31.7	
		(cont.)			

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

1974 July	9	(cont.)				
		Sk	eSgl		13 41 47	
		Ud	iPgl		13 40 10.2	
			iSgl		13 40 32.1	
		De	eSgl		13 41 41	
		Southeast Norway, 59.7°N, 10.5°E. Origin time = 13 39 42.				
"	9	Ud	i(Sgl)		14 12 11.8	
		De	iSgl		14 10 20.2	
		Baltic Sea, south of Sweden. Explosion.				
"	9	Up	iP		16 31 02.1 C	
					micr	sec
			P	Z'	0.1	0.7
		Ki	iP		16 30 45.7 C	
					micr	sec
			Mx	E	0.5	12
			Mx	N	0.6	16
			Mx	Z	0.5	12
		Sk	iP		16 31 12.5	
		Um	iP		16 30 49.4 C	
		Ud	iP		16 31 14.3 C	
		Szechwan, China (h = N).				
"	9	Up	iPKP1		17 04 32.7 C	
		Sk	iPKP1		17 04 25.3 C	
		Um	iPKP1		17 04 20.0	
		Ud	iPKP1		17 04 34.3 C	
			iPKP2		17 04 37.6	
		De	iPKP1		17 04 43.0	
		Kermadec Islands (h = N).				
"	9	Up	iSgl		17 27 46.7	
		Um	iSgl		17 28 34.7	
		Ud	iSgl		17 28 48.1	
		Near coast of southwest Finland. Explosion? Solution from Helsinki regional bulletin.				
"	9	Ki	iP		17 49 35.6	
		Sk	eP		17 49 21	
			ipP		17 49 31.1	
		Um	iP		17 49 40.7	
			ipP		17 49 48.9	
		Ud	epP		17 49 38	
		Caribbean Sea. h = 30 km (Sk,Um).				
"	9	Ud	iP		17 58 16.3	
"	9	Ud	iP		18 12 59.1	
"	9	Up	iSgl		20 52 38.0	
		(cont.)				

1974 July	9	(cont.)				
		Ki	iPgl		20 49 57.4	
			iSgl		20 50 32.6	
		Sk	iPgl		20 49 59.3	
			iSgl		20 50 37.0	
			iSg2		20 50 41.0	
		Um	iPgl		20 50 12.5	
			iSn		20 50 46.3	
			iSgl		20 51 00.5	
		Ud	iSgl		20 52 27.6	
		Nordland, Norway, 66.4°N, 14.4°E. Origin time = 20 49 10. Explosion.				
"	9	Up	iP		23 43 33.5	
		Ki	iP		23 43 04.6	
		Um	iP		23 43 20.5	
		De	iP		23 43 53.8	
		Mariana Islands (h = 120 km).				
"	10	Up	iP		03 03 52.9 C	
			iPn		03 04 58.4	
		Ki	iP		03 03 37.4 C	
					micr	sec
			P	Z'	0.1	0.5
		Sk	iP		03 04 08.3	
			iPP		03 05 30.1	
		Um	iP		03 03 37.8	
			iPn		03 04 35.0	
		Ud	iP		03 04 09.3 C	
			iPP		03 05 32.4	
		De	iP		03 04 17.1	
			iPP		03 05 44.1	
		Kazakh SSR. Underground explosion.				
"	10	Um	iP		03 28 29.0	
		Ud	iP		03 28 51.0	
		De	iP		03 28 49.8	
		Fergana.				
"	10	Up	iP		04 19 28.3	
		Ud	iP		04 19 29.8	
"	10	Up	iP		04 42 09.4 C	
			ipP		04 42 20.2	
		Ki	iP		04 42 11.2	
			ipP		04 42 21.9	
		Sk	iP		04 42 24.8	
			ipP		04 42 35.7	
		Um	iP		04 42 07.4	
			ipP		04 42 18.0	
		Ud	iP		04 42 20.1 C	
			ipP		04 42 31.0	
		De	iP		04 42 17.7 C	
			ipP		04 42 29.0	
		(cont.)				

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

1974 July 10 (cont.)
Sumatra.
h = 40 km (Up,Ki,Sk,Um,Ud, De).

" 10 Ki iSgl 07 18 55.4
Sk eSgl 07 21 30
Um iSgl 07 20 07.0
North Finland,
68.0°N, 28.0°E.
Origin time = 07 17 24.
By combination with Finnish station readings.

" 10 Up iP 09 11 39.4
Ud iP 09 11 47.0

" 10 Sk iP 11 56 25.9
Ud iP 11 56 08.6

" 10 Um iP 12 00 39.8

" 10 Ud iP 12 20 38.0
De iP 12 20 05.1
Dodecanese Islands
(h = 45 km).

" 10 Um iSgl 12 38 43.6
Ud iSgl 12 39 33.6
De iSgl 12 39 55.6
Western USSR.
Explosion.

" 10 Ki i 12 47 22.0
iSn 12 47 33.1
iS* 12 47 45.3
USSR-Norway.
Explosion.

" 10 Up iP 12 55 57.8
i 12 56 11.2
Ki iP 12 55 40.7
Sk eP 12 56 09
Ud iP 12 56 10.6
Szechwan, China (h = N).

" 10 Ki iSgl 14 01 32.2
Sk iSgl 14 01 48.8
Um iSgl 14 00 03.2
Ud iSgl 14 01 28.6
Lake Ladoga region.
Explosion.

" 10 Up iP 16 11 48.9 C

		micr	sec
P	Z'	0.2	1.1

Ki iP 16 11 14.7 C
(cont.)

1974 July 10 (cont.)

Ki		micr	sec
P	Z'	0.3	1.5

Sk iP 16 11 22.6 C
Um iP 16 11 34.0 C
Ud iP 16 11 41.0 C
De iP 16 11 57.6
Nevada.
m = 6.2 (Up,Ki).
Underground explosion.

" 10 Up iSn 16 15 54.4
iSgl 16 16 03.4
iRg 16 16 22.0
Ud iPgl 16 14 53.1
iSgl 16 15 13.3
iRg 16 15 22.3
De iSgl 16 15 44.9
Dalsland, Sweden,
58.8°N, 12.4°E.
Origin time = 16 14 28.
Near-surface event.

" 10 Up i 17 48 31.5
i(Sgl) 17 48 43.8

" 10 Up iP 18 20 35.4 C
Ki iP 18 20 24.5
Sk iP 18 20 49.8
Um iP 18 20 25.1 C
Ud iP 18 20 48.9 C
India-China (h = N).

" 10 Up iP 18 36 14.4
Sk iP 18 36 30.5
De iP 18 36 13.6

" 10 Ud iP 18 42 52.9
Molucca Passage (h = N).

" 10 Sk iP 19 40 33.0
Ud iP 19 40 00.8 C
Greece (h = 60 km).

" 11 Ki iP 02 26 41.7
Alaska (h = 90 km).

" 11 Up iP 05 47 43.9

		micr	sec
P	Z'	0.1	1.0
Mx	E	0.7	18
Mx	Z	1.1	17

Ki iP 05 47 17.6 C

		micr	sec
P	Z'	0.1	1.0

Sk iP 05 47 41.7
Um iP 05 47 28.6 C
(cont.)

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

1974 July 11 (cont.)

	Um	i	05 47 35.1
		ipP	05 47 41.6
	Ud	iP	05 47 50.6

Mariana Islands.
h = 50 km (Um).
m = 6.1 (Up,Ki).

" 11

	Up	iSgl	13 41 57.6
	Ki	iSgl	13 44 01.6
	Sk	eSgl	13 43 40
	Um	iSgl	13 42 19.4
	Ud	iSgl	13 43 00.8

Western USSR.
Explosion.

" 11

	Up	iSgl	14 32 48.6
	Sk	eSgl	14 32 48
	Um	iSgl	14 34 10.0
	Ud	iPgl	14 30 54.5
		iSn	14 31 32.9
		i	14 31 44.0
		iSgl	14 31 50.6
	De	eSgl	14 32 11

Southwest Norway,
58.5°N, 6.4°E.
Origin time = 14 29 45.
By combination with Bergen and Kongsberg readings.

" 11

	Up	i(pP)	16 05 28.1
	Ki	eP	16 04 19
	Um	iP	16 04 40.4
		ipP	16 04 58.4
	Ud	iP	16 05 11.1

Japan.
h = 70 km (Um).

" 11

	Up	iP		17 59 43.1	
		i		17 59 54.1	
				micr	sec
		i	Z'	0.1	1.0
		Mx	E	0.8	14
		Mx	N	1.2	14
		Mx	Z	2.0	17
	Ki	iP		17 58 32.1	C
		iS		18 00 14.5	
				micr	sec
		P	Z'	0.2	1.0
		Mx	E	2.5	16
		Mx	N	3.3	15
		Mx	Z	1.4	15
	Sk	iP		17 58 42.5	
		iS		18 00 32.5	
	Um	iP		17 59 08.9	C
		i		17 59 19.0	

(cont.)

1974 July 11 (cont.)

	Ud	iP	17 59 28.6
		i	17 59 41.0
	De	iP	18 00 17.5

Jan Mayen (h = N).
M = 4.3 (Up,Ki).

" 11

	Ud	iPKP1	19 30 28.2
	De	iPKP1	19 30 38.4

Tonga-Kermadec Islands
(h = 220 km).

" 12

	Sk	iPKP1	03 04 27.1

" 12

	Up	iSgl	12 01 23.3
	Um	iSgl	12 01 56.0
	Ud	iSgl	12 02 25.1

Esthonia.
Explosion.

" 12

	Ki	iPn	12 20 41.5
		iSgl	12 21 44.9

USSR-Norway.
Explosion.

" 12

	Up	iSgl	12 47 05.1
	Ki	iPn	12 42 56.3
		iSn	12 43 55.6
	Sk	iSgl	12 46 44.1
	Um	iSn	12 44 36.9
		i	12 44 52.0
		iSgl	12 45 10.5
	Ud	iSgl	12 47 41.9
	De	iSgl	12 49 15.2

Northwest USSR.
Explosion.

" 12

	Um	eSgl	12 48 42

Lake Ladoga region.
Explosion.

" 12

	Sk	iPKP1	13 18 24.5
	Um	iPKP1	13 18 19.2
	Ud	iPKP2	13 18 42.7

" 12

	Up	iPKP1	16 02 04.4
	Sk	iPKP1	16 01 55.5
	Ud	iPKP1	16 02 08.5

" 12

	Up	iPKP1	16 51 39.0
	Sk	iPKP1	16 51 31.9
		ipPKP1	16 51 44.6
	Um	iPKP1	16 51 27.2
	Ud	iPKP1	16 51 40.7 C
		iPKP2	16 51 44.9
	De	iPKP1	16 51 50.2 C

Kermadec Islands.
h = 45 km (Sk).

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

1974 July	12	Sk	iPKP1	18 25 33.4	
			ipPKP1	18 25 46.0	
		Ud	iPKP1	18 25 42.7	
		De	iPKP1	18 25 51.7	
		Kermadec Islands.			
		h = 45 km (Sk).			
		Origin time = 18 06 04.			
"	12	Ki	iP	18 39 58.9	
		Ud	iP	18 40 22.3	
		Molucca Passage (h = 55 km).			
"	12	Ud	iP	19 28 08.8	
"	13	Ki	iPn	00 32 08.2	
			iSn	00 33 04.6	
			eS*	00 33 24	
		Northwest USSR.			
		Explosion.			
"	13	Up	iP	01 31 04.1 C	
			iX	01 31 25.3	
			i	01 31 33.1	
			iSKS	01 41 26	
			iS	01 41 38	
				micr	sec
			P	Z' 1.2	1.5
			X	Z' 3.6	2.0
			Mx	E 79	23
			Mx	N 60	24
			Mx	Z 160	23
		Ki	iP	01 31 04.2 C	
			iX	01 31 26.0	
			iSKS	01 41 31	
			iP'P'	01 57 07.2	
				micr	sec
			P	Z' 3.0	1.8
			X	Z' 8.3	2.4
			Mx	E 120	22
			Mx	N 95	22
			Mx	Z 110	22
		Sk	iP	01 30 49.5	
			iX	01 31 13.0	
			iP'P'	01 57 13.3	
		Um	iP	01 31 06.5	
			iX	01 31 28.7	
			iS	01 41 45	
			iP'P'	01 57 10.8	
		Ud	iP	01 30 53.9 C	
			iX	01 31 15.4	
		De	iP	01 30 57.3	
			iX	01 31 18.5	
		Panama-Colombia (h = 10 km).			
		m = 7.0 (P), 7.4 (X),			
		M = 7.2 (Up,Ki).			
		Complex P-wave group.			
		X - P = 21.9 sec in average,			
		X probably being P of another shock in the same area.			
1974 July	13	Sk	iP	01 37 36.6 C	
		Um	iP	01 37 53.5	
		Panama-Colombia.			
		Origin time = 01 25 10.			
"	13	Up	i(P)	01 38 30.9	
		Sk	iP	01 38 31.0	
		Um	iP	01 38 41.3	
"	13	Um	iP	01 40 44.0	
"	13	Up	iP	01 43 35.9 C	
			iX	01 44 10.2	
			iY	01 44 32.9	
				micr	sec
			X	Z' 0.2	1.5
		Ki	iP	01 43 36.3 C	
			iX	01 44 10.3	
				micr	sec
			P	Z' 0.1	1.2
			X	Z' 1.0	1.9
		Sk	iP	01 43 22.5 C	
			ipP	01 43 26.3	
			iX	01 43 56.6	
		Um	iP	01 43 39.2 C	
			ipP	01 43 43.1	
			iX	01 44 11.9	
		Ud	iP	01 43 25.9 C	
			iX	01 44 02.5	
			iY	01 44 21.0	
		De	iP	01 43 28.7	
			ipP	01 43 32.4	
			iX	01 44 04.7	
			i	01 44 44.6	
		Panama-Colombia.			
		h = 15 km (Sk,Um,De).			
		m = 6.4 (X) (Up,Ki).			
		In average, X - P = 34.6 sec, X probably being P of another shock.			
"	13	Up	iP	01 52 43.1	
		Ki	iP	01 52 44.3	
		Sk	iP	01 52 28.7	
			i	01 52 31.2	
		Um	iP	01 52 46.6	
			i	01 52 47.9	
		Ud	iP	01 52 33.4	
			i	01 52 39.0	
		De	iP	01 52 36.0	
		Colombia (h = 20 km).			
"	13	Sk	iP	02 04 58.5	
		Um	iP	02 05 15.7	
		Ud	iP	02 05 01.5	
		Panama-Colombia.			
		Origin time = 01 52 34.			

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

1974 July 13
Ki iP 02 09 19.1 C
Sk iP 02 09 04.6
Um iP 02 09 22.0 C
Ud iP 02 09 09.1
Panama-Colombia (h = N).

" 13
Up iP 02 14 58.4
Ki eP 02 15 00
Sk eP 02 14 46
Um iP 02 15 03.3
De iP 02 14 53.3
Panama-Colombia (h = N).

" 13
Up iP 02 15 44.6
i 02 15 48.5

" 13
Up iP 02 19 55.3
Ki iP 02 19 53.1 C
micr sec
P Z' 0.1 1.5
Sk iP 02 19 39.3 C
ipP 02 19 43.9
Um iP 02 19 56.6 C
ipP 02 20 00.8
Ud iP 02 19 46.0 C
De iP 02 19 50.3
Panama-Colombia.
h = 15 km (Sk,Um).

" 13
Up iP 02 25 17.7
Ki iP 02 25 18.2 C
Sk iP 02 25 04.0
Um iP 02 25 21.2 C
i 02 25 23.6
Ud iP 02 25 10.3
De iP 02 25 10.9
Panama-Colombia (h = N).

" 13
Ki iP 02 27 33.9
Sk iP 02 27 20.6
Um iP 02 27 37.6
Ud iP 02 27 23.7
De iP 02 27 26.9
Panama-Colombia (h = 25 km).

" 13
Up iP 02 33 00.8
ipP 02 33 16.8
micr sec
P Z' 0.2 1.6
Ki iP 02 33 01.3 C
ipP 02 33 14.8
micr sec
P Z' 0.2 1.5
Sk iP 02 32 47.5 C
ipP 02 33 03.5
Um iP 02 33 04.3 C
(cont.)

1974 July 13 (cont.)
Um ipP 02 33 19.6
Ud iP 02 32 50.9 C
De iP 02 32 53.8
ipP 02 33 09.8
Panama-Colombia.
h = 55 km (Up,Ki,Sk,Um,De).
m = 6.1 (Up,Ki).

" 13
Ki iP 02 43 26.6
Sk iP 02 43 12.6
Panama-Colombia.
Origin time = 02 30 48.

" 13
Up iP 02 51 33.1
Ki iP 02 51 32.2
Sk iP 02 51 18.0
i 02 51 24.9
Um iP 02 51 34.8
Ud iP 02 51 22.4
De iP 02 51 22.8
Panama-Colombia (h = N).

" 13
Ki iP 02 55 44.9
Sk iP 02 55 30.6
Um iP 02 55 46.3
Panama-Colombia (h = 50 km).

" 13
Ki iP 03 00 44.4
Sk eP 03 00 28
Um iP 03 00 48.1
Panama-Colombia (h = N).

" 13
Ki iP 03 11 25.0 C
Sk iP 03 11 11.4
Um iP 03 11 28.0 C
Panama-Colombia (h = N).

" 13
Up iP 03 24 35.6
Ki iP 03 24 19.1
Sk iP 03 24 46.7
Um iP 03 24 22.4
i 03 24 33.5
Ud iP 03 24 47.9
Szechwan, China (h = N).

" 13 Up iP 03 36 50.7

" 13 Sk iP 03 52 53.3

" 13
Ki iP 03 57 56.9
Sk iP 03 57 42.1
Um iP 03 57 59.1
Ud iP 03 57 46.2
Panama-Colombia (h = 40 km).

" 13 Up ipP 04 03 51.2
(cont.)

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

1974
July 13 (cont.)

	Ki	iP		04 03 43.4
		ipP		04 03 52.6
				micr sec
		pP	Z'	0.2 1.7
	Sk	iP		04 03 28.9
		ipP		04 03 37.7
	Um	iP		04 03 46.1
		ipP		04 03 55.1
	Ud	iP		04 03 33.4
		ipP		04 03 43.0
	De	iP		04 03 37.5
		i(pP)		04 03 44.1

Panama-Colombia.
h = 35 km (Ki,Sk,Um,Ud).
Alternatively, pP, being larger than P, could be P of another shock in the same area. This interpretation is more likely, considering the general absence or weakness of pP in this series of shocks.

" 13
Ki	iP		04 42 13.5
Sk	iP		04 42 00.2

Panama-Colombia (h = N).

" 13
Ki	iP		05 07 35.1
Sk	iP		05 07 20.3
Um	iP		05 07 37.0

Panama (h = N).

" 13 Ud iP 05 46 54.8
Kurile Islands.

" 13
Ki	iP		05 58 27.3
De	iP		05 58 20.2

Panama-Colombia (h = N).

" 13
Ki	iP		06 10 11.2
Sk	iP		06 09 56.8

Panama-Colombia (h = 50 km).

" 13 Um iP 06 18 16.3

" 13
Up	iPKPl		07 33 56.8
Ud	iPKPl		07 33 59.2

" 13
Up	iP		08 46 11.7 C
Ki	iP		08 46 11.8
Sk	iP		08 46 37.8
Ud	iP		08 46 28.0

Sinkiang, China (h = 55 km).

" 13
Sk	iP		09 12 21.8
Ud	iP		09 12 26.0

Panama (h = N).

1974
July 13 Sk iP 09 44 49.2

" 13 Ki iP 09 53 28.0
Panama-Colombia (h = N).

" 13
Up	iP		10 34 04.9
	i		10 34 07.4
Ki	iP		10 34 05.7
Sk	iP		10 33 51.8
	i		10 33 54.4
Um	iP		10 34 08.0
	i		10 34 10.5
Ud	iP		10 33 55.4
De	iP		10 33 57.4
	i		10 34 00.5

Panama-Colombia (h = 10 km).

" 13
Up	iP		10 49 43.9
			micr sec
	P	Z'	0.1 1.0
Ki	iP		10 49 15.9
Sk	iP		10 49 45.6
Um	iP		10 49 26.0
Ud	iP		10 49 52.8
	i		10 50 29.8
De	iP		10 50 03.0

Formosa (h = 100 km).

" 13
Ki	iP		11 56 45.0 C
Sk	iP		11 56 30.8
Um	iP		11 56 48.0
Ud	iP		11 56 33.3

Panama-Colombia (h = 40 km).

" 13
Up	eSgl		12 18 47
Ki	iPn		12 14 29.1
	iPgl		12 14 41.0
	iSn		12 15 25.3
	iSgl		12 15 46.9
Sk	eSn		12 17 29
	iSgl		12 18 17.7
Um	iSn		12 16 08.0
	iSgl		12 16 45.0

Northwest USSR.
Explosion.

" 13 Ki iP 12 24 25.7
Panama (h = N).

" 13
Ki	iP		12 53 57.2
	i		12 54 02.8
Sk	iP		12 54 20.5

Alaska (h = 55 km).
Our readings are late compared to the NEIS solution.

" 13 Ki iP 13 00 18.7
(cont.)

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

1974 July 13 (cont.)

	Ki	i	13 00 22.1
	Sk	iP	13 00 07.3
	Um	iP	13 00 21.6
		i	13 00 25.2

Panama-Colombia (h = 30 km).

" 13

	Ki	iP	13 13 35.2
		i	13 14 01.1
	Sk	iP	13 13 19.2
	Um	iP	13 13 37.4
		i	13 13 50.8
	Ud	iP	13 13 25.9
	De	iP	13 13 30.4

Panama-Colombia (h = N).

" 13 Ud iSgl 13 17 36.6
Southwest Norway.
Origin time = 13 15 45.
By combination with Bergen readings.

" 13

	Ki	iP	14 15 05.7
	Sk	iP	14 14 51.3
	Um	iP	14 15 08.5
		i	14 15 13.4

Panama-Colombia (h = N).

" 13 Ki eP 14 57 35
Alaska (h = 90 km).

" 13

	Sk	eP	15 57 20
	Um	iP	15 57 36.5

Panama-Colombia (h = 7 km).

" 13

	Up	iP		16 02 50.2 C
			micr	sec
		P Z'	0.1	1.0
		Mx E	0.4	12
		Mx N	0.6	16
		Mx Z	0.7	17
	Ki	iP		16 03 59.0
			micr	sec
		Mx E	1.0	14
		Mx N	0.5	15
		Mx Z	0.5	12
	Sk	iP		16 03 14.3
	Um	iP		16 03 26.0
	Ud	iP		16 02 43.7
		i		16 04 18.3
	De	iP		16 02 12.3 C
		i(pP)		16 02 21.7

Algeria (h = 35 km).
M = 4.6 (Up,Ki).

" 13

	Up	iP	16 28 33.5
	Ki	iP	16 28 36.3

(cont.)

1974 July 13 (cont.)

	Sk	iP	16 28 22.2
		i	16 28 31.6
	Um	iP	16 28 39.0
	Ud	iP	16 28 25.7
	De	iP	16 28 28.6

Panama-Colombia (h = 20 km).

" 13

	Up	iP	16 40 24.5 C
		i	16 40 31.0

" 13

	Ki	iP	16 47 59.6
	Sk	iP	16 47 45.9 C
	Um	iP	16 48 03.0
	Ud	iP	16 47 49.6 C
	De	iP	16 47 52.4

Panama-Colombia (h = 35 km).

" 13 Ud i(P) 17 07 38.9

" 13

	Up	iP	18 01 32.3
	Ki	iP	18 01 32.5
	Sk	iP	18 01 18.2
	Um	iP	18 01 35.6
	Ud	iP	18 01 22.3
	De	iP	18 01 24.0

Panama-Colombia (h = 20 km).

" 13 Um iP 18 08 16.5

" 13✓

	Up	iP		18 11 24.6
		iS		18 21 55
			micr	sec
		P Z'	0.2	1.7
		Mx E	0.9	18
		Mx N	0.9	20
		Mx Z	1.5	18
	Ki	iP		18 11 23.5
			micr	sec
		P Z'	0.7	2.2
		Mx E	1.4	17
		Mx N	1.3	17
		Mx Z	1.2	16
	Sk	iP		18 11 08.4
	Um	eP		18 11 26
		iS		18 22 05
	Ud	iP		18 11 14.1
	De	iP		18 11 16.1
		i		18 11 19.1

Panama-Colombia (h = 5 km).
m = 6.3, M = 5.4 (Up,Ki).
P Z' exhibits unusually long periods.

" 13

Up		micr	sec
	Mx E	0.7	18
	Mx N	0.8	18
	Mx Z	1.2	18

(cont.)

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

1974						
July	13	(cont.)				
		Ki	iPKP		18 17 25.7	
		Um	iPKP		18 17 33.1	
		New Hebrides Islands				
		(h = 45 km).				
"	13	Ki	iP		19 28 25.6	
		Um	iP		19 28 28.6	
		Ud	iP		19 28 17.6	
		Panama-Colombia (h = 20 km).				
"	13	Ki	iP		19 54 40.2	
		Sk	iP		19 54 26.8	
		Um	iP		19 54 43.0	
			i		19 54 52.5	
		Ud	iP		19 54 30.3	
		Panama-Colombia (h = 20 km).				
"	13	Up	iP		21 11 55.0	
		Ki	eP		21 11 39	
		Ud	iP		21 12 08.1	
		Szechwan, China (h = N).				
"	13	Sk	iP		21 36 34.4	
		Um	iP		21 36 48.8	
		Ud	iP		21 36 16.9	
"	13	Ki	eP		23 17 51	
		Sk	iP		23 17 37.9	
		Um	iP		23 17 54.1	
		Ud	iP		23 17 44.1	
		Panama-Colombia (h = 15 km).				
"	13	Up	eP		23 21 25	
		Ki	iP		23 21 23.9	
					micr	sec
			P	Z'	0.2	1.5
		Sk	iP		23 21 09.4	
			i		23 21 12.7	
		Um	iP		23 21 27.3	C
			i		23 21 29.9	
		Ud	iP		23 21 14.1	
			i		23 21 17.1	
		De	iP		23 21 16.9	
			i		23 21 19.3	
		Panama-Colombia (h = 25 km).				
		Double P, the second one larger.				
"	13	Ki	eP		23 53 20	
		Sk	iP		23 53 02.7	
		Um	iP		23 53 19.0	
		Panama-Colombia (h = 60 km).				
"	14	Sk	iP		00 47 08.8	
		Um	iP		00 47 26.0	
		Panama-Colombia (h = 60 km).				

1974						
July	14	Up	iP		02 01 21.8	C
		Ki	iP		02 01 22.7	C
					micr	sec
			P	Z'	0.2	1.5
		Sk	iP		02 01 08.2	C
		Um	iP		02 01 25.4	C
			i		02 01 37.0	
		Ud	iP		02 01 12.1	C
		De	iP		02 01 15.3	C
		Panama-Colombia (h = 25 km).				
"	14	Up	iP		02 26 30.7	C
			ipP		02 26 36.0	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	0.7	19
			Mx	N	0.6	18
			Mx	Z	1.1	20
		Ki	iP		02 26 31.0	C
			ipP		02 26 35.6	
			iS		02 37 01	
					micr	sec
			P	Z'	0.9	1.8
			Mx	E	0.6	15
			Mx	N	0.6	18
			Mx	Z	0.6	16
		Sk	iP		02 26 17.2	C
			ipP		02 26 22.9	
		Um	iP		02 26 34.0	C
			ipP		02 26 39.0	
		Ud	iP		02 26 21.0	C
			ipP		02 26 26.1	
		De	iP		02 26 23.8	C
			i		02 26 27.1	
		Panama-Colombia.				
		h = 20 km (Up,Ki,Sk,Um,Ud).				
		m = 6.3, M = 5.2 (Up,Ki).				
"	14	Up	iP		03 01 13.8	
		Ki	iP		03 02 19.1	
		Um	iP		03 01 49.3	
			i		03 02 13.3	
		Ud	iP		03 01 08.4	
		Alboran Sea (h = 30 km).				
"	14	Ki	iP		03 02 57.0	
			i		03 03 06.8	
		Sk	iP		03 02 41.6	
			i		03 02 50.4	
		Um	iP		03 02 58.6	
		Ud	iP		03 02 46.0	
		Panama-Colombia (h = 15 km).				
"	14	Um	iP		03 15 22.0	
"	14	Ki	iP		03 23 20.4	

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

1974				
July	14	Up	iP	04 09 27.1
		Ki	iP	04 09 34.1
		Sk	eP	04 09 52
		Um	iP	04 09 24.0
		Ud	iP	04 09 42.3
		De	eP	04 09 42
		Afghanistan-USSR (h = 120 km).		
"	14	Ki	iP	05 44 07.1
		Sk	iP	05 43 52.6
		Um	iP	05 44 08.3
		Panama-Colombia.		
		Origin time = 05 31 28.		
"	14	Up	iP	06 16 52.2
		Ki	iP	06 15 31.1
		Sk	iP	06 16 13.1
		Um	iP	06 16 12.2
		Ud	iP	06 16 47.9
		Greenland Sea (h = 15 km).		
"	14	Up	iSn	06 29 15.2
			i	06 30 12.8
			iSgl	06 30 17.6
		Ki	iPn	06 26 03.8
			iSn	06 27 02.0
			iSgl	06 27 23.4
		Sk	eSn	06 28 53
			iSgl	06 29 49.9
		Um	iSn	06 27 43.1
			iSgl	06 28 15.9
		Ud	iSn	06 29 41.9
			iSgl	06 30 46.5
		De	iSgl	06 32 17.7
		Northwest USSR.		
		Explosion.		
"	14	Ki	i(P)	07 02 04.6
"	14	Sk	iPKPl	07 24 13.7
		Um	iPKPl	07 24 08.6
			iX	07 24 23.3
		Ud	iPKPl	07 24 21.6
			iX	07 24 38.2
		Kermadec Islands (h = 15 km).		
"	14	Ki	eP	07 26 09
		Sk	iP	07 25 55.0
		Um	iP	07 26 12.0
		Ud	iP	07 25 58.0
		Panama-Colombia (h = 35 km).		
		Arranging our stations in order of sensitivity (measured by number of recorded shocks) for the Panama-Colombia series on July 13-14, we find the following sequence and (cont.)		

1974				
July	14	(cont.)		
		relative numbers:		
		Sk:Ki:Um:Ud:De:Up = 2.6: 2.6:2.4:1.8:1.3:1, which is not typical for our stations.		
"	14	Up	iP	09 51 31.2
		Ki	iP	09 51 19.7
			iSKS	10 01 40
				micr sec
			Mx N	0.9 22
		Ud	iP	09 51 39.9
		Flores Island (h = 120 km).		
"	14	Up	eP	11 26 11
		Sk	iP	11 26 48.1
		Ud	iP	11 26 16.0
		Greece (h = 40 km).		
"	14	Up	iP	11 43 52.2
		Sk	iP	11 44 35.2
		Ud	iP	11 43 57.0
		Ionian Sea.		
"	14	Up	iPKPl	13 17 04.0
		Sk	iPKPl	13 16 56.4
		Um	iPKPl	13 16 51.6
		Ud	iPKPl	13 17 05.4
		De	iPKPl	13 17 14.7
		Kermadec Islands.		
		Origin time = 12 57 23.		
"	14	Sk	iPKPl	14 08 53.1
		Um	iPKPl	14 08 48.0
		Ud	iPKPl	14 09 01.4
		Kermadec Islands (h = 35 km).		
"	14	Up	iP	15 36 24.7
		Ki	iP	15 35 48.0
		Sk	iP	15 36 20.4
		Um	iP	15 36 04.0 C
		Ud	iP	15 36 32.1 C
		De	iP	15 36 45.8
		Japan (h = 130 km).		
"	14	Up	iP	16 35 13.8
		Ki	iP	16 34 23.5
		Sk	iP	16 34 59.6
		Um	iP	16 34 47.0
		Ud	iP	16 35 18.6
		De	iP	16 35 39.1
		Okhotsk Sea (h = 380 km).		
"	14	Up	i	17 35 28.3
			iSgl	17 35 31.8
			iRg	17 35 38.1
		(cont.)		

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

1974 July	14	(cont.)			
		Ud	i	17 35 20.9	
			i(Sgl)	17 35 48.8	
		Central Sweden.			
"	14	Ki	iP	18 04 12.4	
		Tanimbar Islands (h = 45 km).			
"	14	Up	iPKPl	19 08 02.0	C
			i	19 08 08.2	
			ipPKPl	19 08 52.5	
				micr sec	
			PKPl Z'	0.2 0.9	
		Ki	e(PKP)	19 07 38	
			iPKP	19 07 48.4	
		Sk	iPKPl	19 07 54.5	C
		Um	iPKPl	19 07 50.9	
			i	19 07 55.7	
			ipPKPl	19 08 37.5	
		Ud	iPKPl	19 08 03.6	C
			i	19 08 10.2	
			ipPKPl	19 08 52.3	
		De	iPKPl	19 08 12.9	C
			ipPKPl	19 08 59.4	
		Kermadec Islands.			
		h = 190 km (Up,Um,Ud,De).			
"	14	Up	iP	19 30 13.4	
		Ki	iP	19 29 56.5	
		Sk	iP	19 30 19.5	
		Um	iP	19 30 02.0	
		Ud	iP	19 30 22.6	
		De	iP	19 30 25.9	
		Luzon (h = 140 km).			
"	14	Sk	iP	20 22 45.4	
		Ud	iP	20 22 12.5	
		Greece (h = 70 km).			
"	14	Ki	iP	21 31 02.6	
			eTPg	21 35 59	
			iTSg	21 36 39.6	
		Sk	iP	21 31 41.1	
			eS	21 33 25	
			eTSg	21 38 51	
		Um	iP	21 31 52.8	
			iTSg	21 38 37.5	
		Ud	iP	21 32 28.9	
		Northeast of Jan Mayen			
		(h = N).			
"	15	Ud	iP	01 31 55.3	
		Afghanistan-USSR (h = 120 km).			
"	15	Ki	iP	09 16 07.6	
		Ud	iP	09 16 58.7	
		(cont.)			

1974 July	15	(cont.)			
		Ud	i(PcP)	09 17 37.2	
		Kamchatka (h = 160 km).			
"	15	Up	iSgl	10 37 59.4	
		Sk	eSgl	10 39 47	
		Um	iSgl	10 38 21.1	
		Ud	eSgl	10 39 01	
		Western USSR.			
		Explosion.			
"	15	Sk	iP	11 01 21.4	
		Panama-Colombia (h = N).			
"	15	Up	iPKPl	11 27 34.7	
		Sk	iPKPl	11 27 27.0	
			i	11 27 38.5	
		Ud	iPKPl	11 27 35.7	
		De	iPKPl	11 27 44.5	
		Kermadec Islands (h = 80 km).			
"	15	Ki	iP	16 51 55.8	
		Kirghiz-Sinkiang (h = N).			
"	15	Up	iP	17 15 25.5	
		Ki	iP	17 14 58.8	C
		Sk	iP	17 15 24.9	
		Um	iP	17 15 11.5	
		Ud	iP	17 15 34.3	C
		Mariana Islands (h = 330 km).			
"	15	Ki	iP	18 05 24.2	
		Sk	iP	18 05 09.5	C
		Ud	iP	18 05 14.1	
		Panama-Colombia (h = N).			
"	15	Ki	i(Sn)	18 37 48.7	
			iSgl	18 38 02.4	
		Sk	i	18 38 06.4	
			iSgl	18 38 10.6	
		Um	iSgl	18 38 30.6	
		Ud	iSgl	18 39 57.4	
		Nordland, Norway,			
		66.4°N, 14.3°E.			
		Origin time = 18 36 35.			
		Explosion.			
"	15	Ki	iP	19 24 32.1	C
		Sk	iP	19 24 17.9	
		Um	iP	19 24 35.8	
		Ud	iP	19 24 21.6	
		De	iP	19 24 24.7	
		Panama-Colombia (h = 7 km).			
"	15	Ki	iP	19 35 48.8	
		Mariana Islands (h = 60 km).			

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

1974 July	15	Ki	iP		19 42 50.4	
		Sk	iP		19 42 38.1	
		Um	iP		19 42 53.4	
		Ud	iP		19 42 43.7	
		Panama-Colombia (h = 40 km).				
"	15	Up	iP		23 24 07.7	C
					micr	sec
			P	Z'	0.1	1.3
		Ki	iP		23 24 08.1	
					micr	sec
			P	Z'	0.1	1.3
		Sk	iP		23 23 54.5	C
		Um	iP		23 24 11.2	C
		Ud	iP		23 23 58.0	C
		De	iP		23 24 00.9	
		Panama-Colombia (h = 30 km).				
		m = 5.9 (Up,Ki).				
"	16	Sk	iPKP1		02 32 26.1	
			i		02 32 39.7	
		Um	iPKP1		02 32 22.0	
		Ud	iPKP1		02 32 36.2	
		De	iPKP1		02 32 45.1	
		Kermadec Islands (h = 60 km).				
"	16	Up	iPKP1		02 39 48.0	
		Sk	iPKP1		02 39 39.8	
		Um	iPKP1		02 39 35.2	
		Ud	iPKP1		02 39 49.6	
		De	iPKP1		02 39 58.2	
		Kermadec Islands (h = 70 km).				
"	16	Ki	iP		04 19 12.9	
		Ud	iP		04 18 59.6	
"	16	Up	iPKP1		07 08 58.9	C
			ipPKP1		07 09 12.1	
		Sk	iPKP1		07 08 51.6	
			ipPKP1		07 09 04.5	
		Um	iPKP1		07 08 46.6	
			ipPKP1		07 08 59.9	
		Ud	iPKP1		07 09 00.5	C
			iPKP2		07 09 04.0	
			ipPKP1		07 09 13.4	
		De	iPKP1		07 09 09.0	
			ipPKP1		07 09 22.4	
		Kermadec Islands.				
		h = 45 km (Up,Sk,Um,Ud,De).				
"	16	Sk	iP		08 02 38.1	
		Ud	iP		08 02 38.8	
		Windward Islands (h = 60 km).				
"	16	Up	iP		12 48 19.4	
		Ki	iP		12 48 20.1	
		Sk	iP		12 48 05.7	
		(cont.)				
1974 July	16	(cont.)				
		Um	iP		12 48 23.5	
		Panama-Colombia (h = N).				
"	16	Up	iSgl		13 01 36.8	
		Ki	iSgl		13 04 31.5	
		Sk	iSgl		13 03 35.8	
		Um	iSgl		13 02 30.5	
		Ud	iSgl		13 02 36.7	
		De	eSgl		13 03 09	
		Esthonia.				
		Explosion.				
"	16	Up	iSgl		13 38 40.6	
		Ki	iSgl		13 40 48.8	
		Sk	eSgl		13 40 29	
		Um	iSgl		13 39 05.5	
		Ud	iSgl		13 39 42.6	
		De	iSgl		13 40 11.9	
		Western USSR.				
		Explosion.				
"	16	Um	iSgl		14 14 38.2	
		Western USSR.				
		Explosion.				
"	16	Ki	iP		16 09 07.6	
		Um	iP		16 08 57.5	
		Ud	e(P)		16 08 25	
		Azores Islands (h = N).				
"	16	De	iPKP		16 35 47.2	
		Solomon Islands (h = 150 km).				
"	17	Up	iP		00 05 37.2	
		Ki	iP		00 05 36.5	C
			ipP		00 05 52.2	
					micr	sec
			P	Z'	0.1	0.9
		Sk	iP		00 05 50.5	C
		Um	iP		00 05 34.3	
			ipP		00 05 50.1	
		Ud	iP		00 05 46.5	C
			i		00 05 52.3	
		De	iP		00 05 46.0	
		Sumatra.				
		h = 60 km (Ki,Um).				
"	17	Ki	iP		02 53 51.9	
		Ud	iP		02 54 49.7	
		Kamchatka (h = N).				
"	17	Up	iP		05 12 46.3	
			i		05 12 51.3	
			iPP		05 13 00.9	
			iS		05 15 23	
			iLg2		05 17 29	
		(cont.)				

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

1974 July 17 (cont.)

Up			micr	sec
	P	Z'	0.2	0.8
	i	Z'	0.4	1.1
	Mx	E	0.6	3
	Mx	N	0.8	3
	Mx	Z	0.8	4
Ki	iP		05 14 09.5	C
	i		05 14 15.8	
	iS		05 18 08	
			micr	sec
	P	Z'	0.3	0.9
	i	Z'	0.7	0.9
	Mx	E	1.3	7
	Mx	N	0.8	9
	Mx	Z	0.8	5
Sk	iP		05 13 39.3	C
	i		05 13 44.3	
Um	iP		05 13 27.9	C
	iS		05 16 42	
Ud	iP		05 13 01.8	
	i		05 13 08.5	
	i		05 13 20.5	
De	iP		05 12 22.6	
	i		05 12 30.7	

Rumania (h = 150 km).
m = 5.8 (Up,Ki).
Double P, smaller and larger, in average 6.2 sec apart.

" 17 Ud iP 05 36 40.7
Kurile Islands (h = 100 km).

" 17 Ud iPKPl 06 51 42.0
De iPKPl 06 51 50.9
Tonga Islands (h = N).

" 17 Ki iPKP 07 38 57.2

		micr	sec
PKP	Z'	0.1	1.5

South Sandwich Islands
(h = N).

" 17 Up iP 10 53 41.3
ipP 10 53 53.2
Ki iP 10 52 48.2
Ud iP 10 53 40.4
De iP 10 54 02.8
Aleutian Islands.
h = 45 km (Up).

" 17 Um eSgl 12 21 22
Ud iSgl 12 22 10.6
De iSgl 12 22 37.2
Western USSR.
Explosion.

1974 July 17 Up iSgl 13 04 29.9
Ki eSgl 13 07 05
Sk eSgl 13 06 23
Um iSgl 13 05 04.7
Ud eSgl 13 05 30
De iSgl 13 06 01.7
Esthonia.
Explosion.

" 17 Um iSgl 15 00 15.5
Ud iSgl 15 01 39.0
Lake Ladoga region.
Explosion.

" 17 Up i 19 59 13.2
iSgl 19 59 25.8
Ki iSgl 20 01 21.8
Sk iSgl 20 01 02
Um iSgl 19 59 46.6
Ud iSgl 20 00 15.7
Western USSR.
Explosion.

" 17 Ud iP 23 32 14.9

" 18 Up iP 00 27 34.6

		micr	sec
P	Z'	0.1	1.0

Ki iP 00 26 40.6

		micr	sec
P	Z'	0.1	1.1

Sk eP 00 27 18
Um iP 00 27 05.7
Ud iP 00 27 37.8
De iP 00 27 59.8
Kamchatka (h = N).
m = 5.9 (Up,Ki).

" 18 Up iP 00 42 08.8
Ki iP 00 41 15.2
Sk eP 00 41 53
Um iP 00 41 40.6
Ud iP 00 42 12.5
De iP 00 42 33.7
Kamchatka (h = N).

" 18 Up ipPKPl 02 00 46.6
Sk iPKPl 02 00 27.5
ipPKPl 02 00 42.5
Um iPKPl 02 00 21.4
ipPKPl 02 00 34.6
Ud iPKPl 02 00 33.7
ipPKPl 02 00 47.8
De ipPKPl 02 00 56.0
Kermadec Islands.
h = 50 km (Sk,Um,Ud).

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

1974 July 18

Up	iSn		02 29 08.1	
	iSgl		02 29 25.2	
Ud	iSgl		02 29 31.1	
De	iPgl		02 27 28.1	
	i		02 27 42.8	
	iSgl		02 27 44.8	
	iRg		02 27 52.4	

Baltic Sea, south of Sweden, 55.5°N, 15.1°E.
Origin time = 02 27 07.
Explosion.

" 18

			micr	sec
Up	iPKP		11 24 01.0	
	iPP		11 26 24.8	
	PP	Z'	0.2	2.0
	Mx	E	1.2	20
	Mx	N	2.6	21
	Mx	Z	3.4	21
Ki	iPKP		11 23 46.1	
	iPP		11 25 39.1	
	PP	Z'	0.2	1.8
	Mx	E	1.8	20
	Mx	N	2.3	21
	Mx	Z	1.9	20
Sk	iPKP		11 23 55.7	
	iPP		11 26 11.5	
Um	iPKP		11 23 53.8	
	iPP		11 26 05.8	
Ud	iPKP		11 24 01.6	C
	ipPKP		11 24 12.4	
	iPP		11 26 25.5	
De	iPKP		11 24 08.7	

Tonga Islands.
h = 40 km (Ud).
m = 6.1, M = 6.0 (Up,Ki).
PP is consistently early.

" 18

Ud	iP		11 40 04.3

Hindu Kush.
Intermediate depth.

" 18

Up	iSgl		12 17 15.1
Sk	eSgl		12 19 10
Um	iSgl		12 17 31.0
Ud	iSgl		12 18 20.4

Western USSR.
Explosion.

" 18

Ud	iP		17 29 25.1

" 18

Ud	iP		17 53 34.8
De	iP		17 53 34.6

" 18

			micr	sec
Up				
	Mx	E	0.9	19
	Mx	N	0.7	19
	Mx	Z	1.7	18

(cont.)

1974 July 18 (cont.)

			micr	sec
Ki				
	Mx	E	0.5	17
	Mx	Z	0.7	17
Ud	ePKP		18 48 56	

Chile (h = N).
M = 5.5 (Up,Ki).

" 18

Up	iP		19 34 08.1	
	ipP		19 34 22.5	
			micr	sec
	P	Z'	0.1	1.5
Ki	iP		19 33 53.0	
Sk	iP		19 33 50.3	
	ipP		19 34 03.9	
Um	iP		19 34 03.6	
	ipP		19 34 17.7	
Ud	iP		19 33 59.6	
De	iP		19 34 08.7	

Mexico.
h = 50 km (Up,Sk,Um).

" 18

De	iPKP1		22 17 04.0

Fiji Islands (h = 300 km).

" 18

Up	iP		22 25 25.7	
	i		22 25 32.8	
Um	iP		22 25 40.1	D
Ud	iP		22 25 43.1	D
De	iP		22 25 28.1	

Caucasus (h = N).

" 18

Up	iP		22 31 51.5
	iS		22 34 31.8
	i		22 34 49.0
	iLg2		22 36 30.0
Ki	eLgl		22 39 41
Sk	iP		22 32 44.5
	i		22 37 23.2
	iLg2		22 38 52.1
Um	iP		22 32 34.4
	i		22 32 46.0
	iLgl		22 38 05.0
Ud	iP		22 32 08.9
	i		22 32 14.3
De	iP		22 31 29.2
	i		22 31 39.9

Probably Rumania.
Intermediate depth.
Origin time = 22 28 29.

" 18

Up	iPKP1		23 18 47.3
Sk	iPKP1		23 18 40.2
Um	iPKP1		23 18 36.4
Ud	iPKP1		23 18 48.9

Kermadec Islands (h = N).

" 18

Up	iPKP1		23 30 31.2

(cont.)

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

1974 July	18	(cont.)		
		Ud	iPKPl	23 30 31.3
		De	iPKPl	23 30 43.3
		Fiji Islands (h = 600 km).		
"	19	Ki	iP	00 17 15.3
		Sk	eP	00 16 56
		De	iP	00 17 02.6
		Colombia (h = 160 km).		
"	19	Up	ePKP	02 00 36
		Ki	iPKP	02 00 21.8
		Sk	iPKP	02 00 32.5
		Um	iPKP	02 00 28.0
		Ud	iPKP	02 00 38.0
		De	iPKP	02 00 44.5
		Santa Cruz Islands (h = 200 km).		
"	19	Ud	iPKP	02 21 28.3
		Chile (h = 45 km).		
"	19	Up	iP	07 45 50.2
		Ud	iP	07 45 59.1
		De	iP	07 45 38.3
		Cyprus (h = 70 km).		
"	19	Events recorded at Up,Ud on July 19: 10 22, 12 00, 14 02, 14 03, 15 49; July 22: 10 39, 14 01; July 23: 14 52; July 24: 11 04, 12 12, 13 22, 16 22 are underwater explosions off coast of Södermanland, Sweden, 58.9°N, 18.4°E. The epicentral distances are: Up 110 km and Ud 300 km.		
"	19	Up	eSgl	11 12 11
		Um	iSgl	11 12 46.4
		Esthonia. Explosion.		
"	19	Ki	iSn	11 32 28.2
			iS*	11 32 47.2
		Northwest USSR. Explosion.		
"	19	Up	iPKPl	13 14 44.6
		Um	iPKPl	13 14 34.6
		Ud	iPKPl	13 14 46.0
"	19	Um	eP	13 15 21
		Panama-Colombia (h = N).		

1974 July	19	Up	iSgl	13 59 44.6
		Sk	eSgl	14 01 32
		Um	iSgl	13 59 58.8
		Ud	iSgl	14 00 42.3
		De	eSgl	14 01 18
		Western USSR. Explosion.		
"	19	Up	iSgl	14 08 38.6
		Um	iSgl	14 08 58.3
		Ud	eSgl	14 09 42
		Western USSR. Explosion.		
"	19	Up	i	14 38 30.4
		Ki	eSgl	14 40 39
		Sk	iSgl	14 40 19.7
		Um	iSgl	14 38 51.7
		Ud	iSgl	14 39 33.2
		Western USSR. Explosion.		
"	19	Up	iPgl	16 24 31.2
			iSgl	16 24 36.1
			iRg	16 24 37.3
		Um	eSgl	16 26 27
			i	16 26 32.7
		Ud	iPgl	16 25 02.0
			iSgl	16 25 29.9
		Upland, Sweden, 60.1°N, 17.5°E. Origin time = 16 24 25. Ore mine explosion at Dannemora.		
"	19	Ud	iP	17 42 13.9
		Japan (h = 50 km).		
"	19	Up	iPgl	17 48 34.1
			iSgl	17 48 58.7
		Ki	iSgl	17 51 31.7
		Um	i	17 49 04.5
			i	17 49 34.6
			iSgl	17 49 40.4
		Ud	iSgl	17 49 54.8
		Off coast of southwest Finland, 60.7°N, 21.0°E. Origin time = 17 48 03. By combination with Finnish station readings.		
"	19	Up	iPKP	18 04 10.2
			iPP	18 05 29.1
		Ki	iPKP	18 03 58.6
			iPP	18 04 41.7
		(cont.)		

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

1974 July 19 (cont.)

			micr	sec
Ki				
	PP	Z'	0.3	2.2
Sk	iPKP		18 04	09.1
Um	iPKP		18 04	03.5
	iPP		18 04	57.0
Ud	iPKP		18 04	12.2
	iPP		18 05	32.7
De	iPKP		18 04	18.7

Solomon Islands (h = 160 km).

" 19	Up	iP	18 48 16.8
	Ud	iP	18 48 36.0

" 19	Up	iP	18 55 54.8
	Ki	iP	18 55 10.7
	Sk	iP	18 55 46.4
	Um	iP	18 55 30.0
	Ud	iP	18 56 01.3
	De	iP	18 56 21.9

Japan (h = 40 km).

" 19	Up	eP	19 05 21
		ipP	19 05 28.7
	Ki	iP	19 05 21.6
		iX	19 05 38.8
	Um	epP	19 05 28
	Ud	iP	19 05 34.1
		ipP	19 05 41.7
	De	iX	19 05 50.1

Sumatra.
h = 30 km (Up,Ud).

" 19	Ki	iP	21 31 27.5

Hindu Kush.
Intermediate depth.

" 19	Ki	eP	23 40 01
	Um	iP	23 40 45.8
		i	23 40 50.5
	Ud	iP	23 41 34.7
		i	23 41 40.3
	De	iP	23 42 19.0

Greenland Sea.

" 20	Sk	iPKPl	00 04 12.1
	Ud	iPKPl	00 04 21.5

Kermadec Islands (h = 45 km).

" 20	Ud	iP	00 09 14.5

" 20	Up	eP	00 59 03
	Ki	iP	00 58 09.5
		iPcP	00 58 54.3
	Um	iP	00 58 37.9

(cont.)

1974 July 20 (cont.)

	Um	iPcP	00 59 10.5
	Ud	iP	00 59 02.4

Aleutian Islands (h = 45 km).

" 20	Ud	iP	01 15 31.9

Aleutian Islands (h = N).

" 20	Ki	iPn	02 22 35.7
		iPgl	02 22 45.5
		iSn	02 23 27.5
		iS*	02 23 43.7
	Um	iSn	02 24 12.3
		iS*	02 24 38.8

Northwest USSR,
67.9°N, 32.2°E.
Origin time = 02 21 27.
By combination with Tromsoe readings.

" 20	Um	i(P)	02 53 16.4

" 20	Ki	iSn	06 38 51.4
		iSgl	06 39 07.3
	Um	iSn	06 40 01.6
		i	06 40 20.3
		iSgl	06 40 39.2

USSR-Norway.
Explosion.

" 20	Ud	iPKPl	11 35 18.7
	De	iPKPl	11 35 29.3

" 20	Ki	iPn	11 51 43.2
		iPgl	11 51 52.9
		iSn	11 52 31.9
		iSgl	11 52 47.7
	Um	iSgl	11 54 20.0

USSR-Norway.
Explosion.

" 20	Ki	iPn	12 31 37.2
		iSn	12 32 33.6
		iS*	12 32 50.1
	Sk	iSgl	12 35 25.6
	Um	iSn	12 33 17.6
		i	12 33 30.3
		eSgl	12 33 54

Northwest USSR.
Explosion.

" 20	Ki	iP	13 09 39.0
	Sk	iP	13 09 25.8
	Um	iP	13 09 42.4
	Ud	iP	13 09 29.2

Panama-Colombia (h = N).

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

1974 July 20 Ud iP 14 55 04.9
Aegean Sea.

" 20 Ud iP 18 25 56.0
Greece (h = 45 km).

" 20 Ki iP 19 43 47.3
i 19 44 02.1
Halmahera (h = N).

" 20 Ud iP 20 14 02.4

" 20 Up iP 20 58 13.8
Ud iP 20 58 30.2
De iP 20 58 26.4
Hindu Kush.
Intermediate depth.

" 20 Up iPKP2 20 59 44.0
Um iPKP1 20 59 26.5
i 20 59 38.5
Ud ePKP1 20 59 38
iPKP2 20 59 48.3

" 21 Ki iP 00 02 50.3
Ud iP 00 01 54.1
Turkey (h = N).

" 21 Up iPKP2 02 34 13.3
Um iPKP1 02 33 55.4
Ud iPKP1 02 34 06.9
iPKP2 02 34 15.3
De ePKP2 02 34 32
South of Kermadec Islands
(h = 30 km).

" 21 Ki eSn 05 08 55
eSgl 05 09 17
Northwest USSR.
Explosion.

" 21 Ud iP 05 28 57.2
Greece-Albania (h = N).

" 21 Ki iSn 06 25 16.7
Northwest USSR.
Explosion.

" 21 Ki iPgl 08 32 53.9
iSgl 08 33 03.7

		micr	sec
Sgl	Z'	0.1	0.4

Um iSgl 08 34 42.0
Swedish Lapland,
67.5°N, 22.3°E.
Origin time = 08 32 42.
By combination with Finnish
station readings.

1974 July 21 Up iP 08 41 15.7

		micr	sec
Mx	E	1.0	17
Mx	N	1.0	18
Mx	Z	2.7	22

Ki iP 08 41 05.8

		micr	sec
Mx	E	2.1	18
Mx	Z	1.8	16

Sk iP 08 40 57.0
Ud iP 08 41 05.9
Mexico (h = 70 km).
M = 5.5 (Up,Ki).

" 21 Up iP 09 40 27.3
Um iP 09 40 10.0
Ud iP 09 40 34.2

" 21 Ud iP 13 04 01.3
Aegean Sea.

" 21 Ki iPgl 15 28 26.7
iSn 15 29 03.9
Um iSgl 15 29 56.6
USSR-Finland.
Explosion.

" 21 Up iSgl 15 32 19.0
Ki i 15 28 42.6
iSn 15 29 23.3
Sk iSgl 15 31 46.1
Um iSn 15 29 45.1
iSgl 15 30 13.9
Ud eSgl 15 32 40
USSR-Finland.
Explosion.

" 21 Um iP 21 54 41.2
Nicaragua (h = 80 km).

" 21 Up

		micr	sec
Mx	Z	0.7	18

Um iP 22 46 16.1
Nicaragua (h = 90 km).

" 21 Ki iP 23 55 50.7
Um iP 23 56 35.1
i 23 56 42.6
Ud iP 23 57 17.5
Arctic Ocean.

" 22 Up iP 01 36 36.7
Ki iP 01 35 13.8
iS 01 37 21.1
Sk iP 01 36 25.7
Um iP 01 35 49.2
iS 01 38 21.7
(cont.)

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

1974 July	22	(cont.)				
		Ud	iP		01 36 50.4	
		De	iP		01 37 20.0	
		Novaya Zemlya.				
		Possibly an aftereffect of				
		a nuclear explosion in the				
		southern test area on Novaya				
		Zemlya on Oct. 27, 1973. Cf				
		July 7, 1974, at 16 15.				
"	22	Up	iP		03 54 01.5	
		Ki	iP		03 53 21.9	C
		Um	iP		03 53 38.9	
		Ud	iP		03 54 09.7	
		Sea of Japan (h = 300 km).				
"	22	Up	iP		07 23 52.5	
			i		07 24 02.0	
			i		07 24 08.6	
					micr sec	
			P	Z'	0.1 0.7	
		Ki	iP		07 25 06.9	
		Sk	iP		07 24 27.9	
			i		07 24 30.5	
		Um	iP		07 24 31.2	
			i		07 24 34.6	
		Ud	iP		07 23 54.2	
			i		07 23 55.5	
		De	iP		07 23 17.0	
		Tyrrhenian Sea (h = 270 km).				
"	22	Ud	iP		11 36 19.5	
"	22	De	iPKPl		12 33 36.8	C
		Fiji Islands (h = 680 km).				
"	22	Um	iSgl		12 46 11.0	
		Western USSR.				
		Explosion.				
"	22	Ud	iP		13 28 56.1	
		Kamchatka (h = 170 km).				
"	22	Up	iP		16 46 38.5	
					micr sec	
			P	Z'	0.1 1.2	
		Ki	iP		16 45 30.2	
"	22	Ud	i(P)		18 12 11.1	
"	22	Up	iPKP		18 30 54.8	
		Ki	iPKP		18 31 02.7	
		Sk	iPKP		18 30 53.6	
		Um	iPKP		18 31 00.6	
		Ud	iPKP		18 30 51.8	
		De	iPKP		18 30 49.3	
		Chile (h = 90 km).				
1974 July	23	De	iPKPl		00 47 44.4	
		Tonga Islands (h = N).				
"	23	Up	iP		03 17 00.5	
			ipP		03 17 11.6	
		Sk	iP		03 17 18.5	
			ipP		03 17 27.9	
		Um	iP		03 16 55.2	
		Ud	iP		03 17 15.0	
		Burma-India.				
		h = 40 km (Up,Sk).				
"	23	Up	iP		07 18 37.3	
					micr sec	
			Mx	N	0.9 20	
		Ki	iP		07 18 39.4	
					micr sec	
			Mx	N	1.4 16	
			Mx	Z	1.5 16	
		Sk	eP		07 19 03	
			iPP		07 20 40.2	
		Um	iP		07 18 30.7	
		Ud	iP		07 18 51.2	
			iPP		07 20 27.2	
		De	iP		07 18 49.7	
		Kirghiz SSR (h = N).				
		M = 4.8 (Up,Ki).				
"	23	Up	eP		07 44 21	
		Ki	iP		07 44 24.7	
		Sk	eP		07 44 45	
			iPP		07 46 24.7	
		Um	iP		07 44 16.8	
		Ud	iP		07 44 37.8	
		De	iP		07 44 35.3	
		Tadzhik-Sinkiang (h = 40 km).				
"	23	Ki	eSgl		08 22 30	
		Sk	eSgl		08 22 55	
		Um	iSgl		08 21 04.4	
		Ud	iSgl		08 22 44.2	
		Lake Ladoga region.				
		Explosion.				
"	23	Ki	iPn		09 09 08.1	
			iSn		09 09 54.6	
			iS*		09 10 08.2	
		Um	iSgl		09 11 41.7	
		USSR-Norway.				
		Explosion.				
"	23	Ki	eSn		09 56 44	
		Northwest USSR.				
		Explosion.				
"	23	Ud	iP		10 29 36.2	
		Pamir.				

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

1974 July	23	Up	iPKP		11 17 47.8	
			iSKP1		11 21 04.6	
		Ki	iPKP		11 17 32.9	C
					micr	sec
			PKP	Z'	0.1	1.0
		Sk	iPKP		11 17 43.9	
			iSKP1		11 21 00.8	
		Um	iPKP		11 17 40.0	
			iSKP1		11 20 50.5	
		Ud	iPKP		11 17 48.9	
			iSKP1		11 21 07.2	
		De	iPKP		11 17 54.7	
			iSKP1		11 21 16.3	
		New Hebrides Islands (h = 160 km).				
"	23	Ud	iPKP1		11 42 35.6	
		De	iPKP1		11 42 46.7	
"	23	Up	eSg1		12 40 49	
		Um	iSg1		12 41 11.8	
		Ud	iSg1		12 41 47.1	
		De	eSg2		12 42 34	
		Western USSR. Explosion.				
"	23	Up	iP		15 06 03.3	
		Um	iP		15 05 41.4	
		Ud	iP		15 06 10.7	
			i		15 06 20.9	
		Japan (h = 15 km).				
"	23	Ki	iP		15 40 50.0	
		Mexico (h = 110 km).				
"	23	Ud	iP		17 46 01.8	
"	23	Up	iPKP1		19 23 44.1	C
		Sk	iPKP1		19 23 36.2	
		Ud	iPKP1		19 23 45.3	
		De	iPKP1		19 23 54.8	
		Kermadec Islands (h = 420 km).				
"	23	Up	iP		20 40 09.1	
		Ki	iP		20 39 32.8	
		Um	iP		20 39 48.0	
		Ud	iP		20 40 16.9	
		De	iP		20 40 29.6	
		Japan (h = 310 km).				
"	24	Ud	iP		01 25 01.6	
"	24	Ki	iPKP		04 26 36.0	
		South Sandwich Islands (h = 35 km).				

1974 July	24	Up	iPKP1		08 47 20.6	
					micr	sec
			PKP1	Z'	0.1	1.3
			Mx	E	0.9	19
			Mx	N	1.0	18
			Mx	Z	1.5	18
		Ki	ePKP		08 47 05	
					micr	sec
			Mx	E	0.9	18
			Mx	N	1.0	19
			Mx	Z	1.9	20
		Sk	iPKP1		08 47 15.0	
		Ud	iPKP1		08 47 22.7	C
			ipPKP1		08 47 35.7	
		De	iPKP1		08 47 31.8	C
			ipPKP1		08 47 44.1	
		Kermadec Islands. h = 45 km (Ud,De). M = 5.7 (Up,Ki).				
"	24	Um	iPKP1		11 00 53.4	
			i		11 01 11.3	
		Ud	iPKP1		11 01 07.0	
		De	iPKP1		11 01 16.1	
		Kermadec Islands (h = N).				
"	24	Up	iSn		11 39 32.6	
			iSg1		11 39 44.8	
		Um	iSg1		11 40 19.2	
		Ud	iSg1		11 40 49.3	
		Esthonia. Explosion.				
"	24	Up	iSg1		12 00 19.5	
			iRg		12 00 24.1	
		Sk	iSg1		12 02 12.0	
		Um	eSg1		12 02 24	
		Ud	iPg1		12 00 12.2	
			iSn		12 00 35.5	
			iRg		12 00 39.2	
		De	i		12 01 11.4	
		Västmanland-Södermanland, Sweden, 59.5°N, 16.1°E. Origin time = 11 59 55. Explosion?				
"	24	Ud	iP		12 28 21.8	
		Japan (h = 170 km).				
"	24	Ud	iP		17 01 47.1	
"	24	Sk	iPKP1		20 10 18.0	
		Um	iPKP1		20 10 10.7	
		Ud	ePKP1		20 10 25	
			i		20 10 29.9	
		Kermadec Islands.				

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

1974 July	24	Up	iP	20 36 19.5	
		Ki	iP	20 35 53.1	
			ipP	20 36 10.9	
				micr sec	
			P Z'	0.1 1.3	
		Sk	iP	20 36 17.8	
		Um	iP	20 36 04.1	D
		Ud	iP	20 36 25.9	
			ipP	20 36 43.1	
		De	eP	20 36 38	
		Mariana Islands.			
		h = 60 km (Ki,Ud).			
"	24	Um	iPKP	23 14 23.5	
			iX	23 14 38.9	
		Ud	iX	23 14 29.4	
		South Sandwich Islands			
		(h = 140 km).			
"	25	Up	iPKP1	03 01 56.3	
		Ud	iPKP1	03 01 58.0	
		De	iPKP1	03 02 09.4	C
		Tonga-Kermadec Islands			
		(h = 570 km).			
"	25	Up	iPKP1	04 07 19.4	C
		Ud	iPKP1	04 07 21.7	
"	25	Up	iX	05 45 08.7	
		Sk	iPKP1	05 44 46.0	
			ipPKP1	05 45 00.6	
		Um	iPKP1	05 44 41.1	
			ipPKP1	05 44 54.9	
		Ud	iPKP1	05 44 53.5	
			iX	05 45 10.4	
		Kermadec Islands.			
		h = 55 km (Sk,Um).			
"	25	Ki	iP	05 55 59.4	
		Sk	iP	05 56 23.3	
		Um	iP	05 55 53.9	
		Ud	iP	05 56 18.0	
		Sinkiang, China (h = 50 km).			
"	25	Ki	iPn	07 46 43.2	
			i	07 46 50.9	
			iSn	07 47 41.8	
			iSgl	07 48 05.4	
		Um	iSn	07 48 42.4	
			iSgl	07 49 24.8	
		Northwest USSR.			
		Explosion.			
"	25	Ud	iP	08 20 37.6	
"	25	Ki	iP	10 05 50.7	
		Um	iP	10 06 00.9	
		Mexico (h = 80 km).			

1974 July	25	Ud	iP	10 32 49.2	
"	25	Ki	iP	10 33 54.4	
		Sk	iP	10 33 38.3	
		Um	iP	10 33 57.0	
		Panama-Colombia (h = N).			
"	25	Ki	i	10 57 45.8	
			iSgl	10 57 56.4	
		Sk	eSgl	10 58 24	
		Um	iSgl	10 56 37.1	
		Lake Ladoga region.			
		Explosion.			
"	25	Up	iSgl	11 18 30.5	
		Ud	iS*	11 19 28.9	
			iSgl	11 19 33.0	
		Off coast of southwest Finland.			
		Explosion.			
		By combination with Finnish station readings.			
"	25	Up	iSgl	11 18 41.8	
		Ud	iS*	11 19 41.7	
			iSgl	11 19 45.0	
		Same area and type as the preceding event.			
"	25	Up	iSgl	11 39 13.7	
		Ud	iSgl	11 40 16.7	
		Same area and type as the 11 18-events.			
"	25	Up	iSgl	11 45 02.5	
		Um	iSgl	11 46 01.5	
		Ud	eSgl	11 46 08	
		Same area and type as the 11 18-events.			
"	25	Ki	eSgl	12 17 07	
		Sk	eSgl	12 16 52	
		Um	iSgl	12 15 23.2	
			iRg	12 15 55.2	
		Ud	iSgl	12 16 05.1	
		Western USSR.			
		Explosion.			
"	25	Um	iSgl	12 59 56.1	
		Ud	eSgl	13 00 38	
		Western USSR.			
		Explosion.			
"	25	Up	iPgl	13 12 17.9	
			iSn	13 12 55.0	
			i	13 13 04.6	
			iSgl	13 13 09.8	
		Ki	i	13 15 19.8	
		(cont.)			

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

1974
July 25 (cont.)

	Ki	iSg1	13 15 45.6
		iSg2	13 15 57.8
		i	13 16 05.8
	Sk	e	13 14 33
		iSg1	13 14 57.7
	Um	iSg1	13 13 42.0
	Ud	iPn	13 12 36.6
		iSn	13 13 43.3
		iSg1	13 14 10.9
	De	iSg1	13 14 37.5

Esthonia.
Explosion.

" 25

Up	iP	14 35 01.0
Ud	iP	14 35 13.1

" 25

Ki	iPKP	14 48 20.2

Easter Island (h = N).

" 25

Up	iPKP		17 36 21.0
Ki	ePKP		17 36 06
		micr	sec
	Mx	E 0.8	19
	Mx	N 0.5	16
	Mx	Z 0.6	16
Um	iPKP		17 36 14.8
Ud	iPKP		17 36 23.3
De	iPKP		17 36 29.1

New Britain (h = N).

" 25

Um	iPKP1	17 40 09.9

" 25

Um	iP	17 56 17.9
Ud	iP	17 56 06.4

" 25

Ud	iSg1	19 11 43.4

Southwest Norway,
59.3°N, 7.0°E.
Origin time = 19 09 51.
By combination with Bergen and Kongsberg readings.

" 25

Sk	eSg1	19 16 19
Ud	iSg1	19 15 29.2

Southwest Norway,
59.3°N, 7.0°E.
Origin time = 19 13 38.
By combination with Bergen and Kongsberg readings.

" 25

Ud	iP	21 21 00.3

Greece.

" 25

Ud	iP	21 37 40.1

" 25

Ud	iP	23 23 54.2

1974
July 26

Sk	ePKP1	02 47 46
Um	iPKP1	02 47 40.5
Ud	iPKP1	02 47 52.5

" 26

Ud	iPKP1	04 45 59.6

" 26

Ki	iP	06 14 12.0
Sk	eP	06 14 23

" 26

Ki	i	10 23 37.2
	iSn	10 24 01.4
	iSg1	10 24 20.5
Um	iSg1	10 25 20.4

Northwest USSR.
Explosion.

" 26

Sk	iP	11 33 55.4

Yugoslavia (h = N).

" 26

Sk	iP	12 09 46.1

" 26

Ki	eSn	12 16 31.2

Northwest USSR,
68.1°N, 39.1°E.
Origin time = 12 13 30.
Solution from Helsinki regional bulletin.

" 26

Um	iSg1	12 20 48.1

Western USSR.
Explosion.

" 26

Up	iP		13 15 01.6
	iSP		13 28 25
		micr	sec
	Mx	E 0.9	18
	Mx	N 1.1	20
	Mx	Z 1.3	19
Ki	iP		13 14 46.1
	ipP		13 14 52.2
	iPP		13 18 49
		micr	sec
	P	Z' 0.1	1.0
	Mx	E 1.1	20
	Mx	N 0.9	20
	Mx	Z 1.6	21
Sk	eP		13 15 08
Um	iP		13 14 51.1
	ipP		13 14 56.8
	i		13 15 15.7
Ud	iP		13 15 09.8

Ceram.
h = 20 km (Ki,Um).
M = 5.4 (Up,Ki).

" 26

Ki	iP	13 23 35.9

" 26

Up	i	14 09 54.2

(cont.)

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

1974 July	26	(cont.)			
		Up	iSg1	14 10 04.1	
			iSg2	14 10 13.2	
		Ud	eSg1	14 10 09	
		De	i	14 08 06.2	
			iSg1	14 08 23.0	
			iRg	14 08 32.9	
		Southern Baltic Sea, near Bornholm. Probably explosion.			
"	26	Ud	iP	16 12 04.2	
			i	16 12 11.7	
		Japan (h = 35 km).			
"	26	Ki	iSg1	18 38 49.1	
		Um	iSg1	18 37 15.2	
"	26	Up	iP	20 48 22.8	
		Ki	iP	20 47 30.1	C
			ipP	20 47 44.0	
		Um	iP	20 47 56.2	
		Ud	iP	20 48 21.7	
			ipP	20 48 36.4	
		De	iP	20 48 44.4	
		Aleutian Islands. h = 55 km (Ki,Ud).			
"	26	Ki	iP	20 53 24.5	
		Sk	iP	20 53 38.7	
		Ud	iP	20 53 30.3	
		Hindu Kush (h = 80 km).			
"	26	Ud	iP	22 16 59.1	
"	27	Up	iP	01 07 07.5	
		Ki	iP	01 06 22.7	
		Sk	iP	01 06 58.5	
		Um	iP	01 06 43.0	
			ipP	01 06 53.6	
		Ud	iP	01 07 13.8	
			ipP	01 07 26.3	
		Kurile Islands. h = 45 km (Um,Ud).			
"	27	Up	iPKP1	01 22 34.5	
			iPKP2	01 22 39.6	
		Sk	iPKP1	01 22 29.6	
		Um	iPKP1	01 22 23.0	
		Ud	iPKP1	01 22 36.8	
			iPKP2	01 22 42.5	
		De	iPKP1	01 22 46.5	
		Kermadec Islands. Origin time = 01 02 55.			
"	27	Sk	iP	01 44 25.7	
		Colombia (h = 240 km).			

1974 July	27	Um	i(PKP1)	03 06 47.3	
			i	03 06 53.4	
"	27	Up	iP	04 37 05.2	
			iS	04 45 28	
				micr	sec
			P	Z' 0.1	1.3
			Mx	E 1.2	20
			Mx	N 1.9	21
			Mx	Z 2.7	22
		Ki	iP	04 36 12.9	
				micr	sec
			P	Z' 0.1	1.3
			Mx	E 2.0	19
			Mx	N 2.8	20
			Mx	Z 2.8	20
		Sk	iP	04 36 51.9	
		Um	iP	04 36 37.9	
			iS	04 44 35	
		Ud	iP	04 37 08.2	
		De	iP	04 37 31.0	
		Komandorsky Islands (h = N). m = 5.8, M = 5.4 (Up,Ki).			
"	27	Ud	iP	08 18 22.5	
"	27	Ki	iP	10 12 51.6	
			i	10 13 05.0	
		Tibet (h = N).			
"	27	Ud	iP	18 31 47.2	
		Aleutian Islands (h = 55 km).			
"	27	Ki	iP	21 32 32.9	C
		Um	iP	21 32 23.0	C
		Azores Islands (h = N).			
"	27	Ki	iP	23 43 59.9	
		Ud	iP	23 44 15.5	
"	28	Up	iP	04 17 48.1	
		Ki	iP	04 17 49.3	C
		Sk	iP	04 18 10.8	
			ipP	04 18 25.5	
		Um	iP	04 17 42.4	C
			ipP	04 17 57.4	
		Ud	iP	04 18 04.7	C
		De	iP	04 18 04.3	C
		Sinkiang, China. h = 70 km (Sk,Um).			
"	28	Up	iP	04 49 53.2	
		Sk	iP	04 50 29.8	
		Ud	iP	04 50 06.5	
"	28	Ud	iP	05 42 45.7	
		Greece.			

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

1974
July 28 Up iPKP1 08 12 35.9
micr sec
PKP1 Z' 0.1 0.9
Sk iPKP1 08 12 28.2 C
Um iPKP1 08 12 22.5
Ud iPKP1 08 12 36.8 C
iPKP2 08 12 40.4
De iPKP1 08 12 46.3 C
Kermadec Islands (h = 60 km).

" 28 Up iP 11 45 54.4 C
i 11 45 55.7
ipP 11 46 11.9
iPa 11 50 15.3
iS 11 54 49
iP'P' 12 14 14.2
micr sec
P Z' 7.2 2.0
Mx E 23 16
Mx N 27 17
Mx Z 38 18
Ki iP 11 45 06.3 C
i 11 45 07.7
iS 11 53 21
micr sec
P Z' 6.3 2.4
Mx E 58 16
Mx N 64 18
Mx Z 80 18
Sk iP 11 45 43.3
Um iP 11 45 28.7 C
iS 11 54 03
iP'P' 12 14 26.4
Ud iP 11 45 59.8 C
i 11 46 00.9
iS 11 55 05.0
iP'P' 12 14 13.6
De iP 11 46 19.1 C
i 11 46 20.0
iS 11 55 27.8
Kurile Islands.
h = 60 km (Up).
m = 7.5, M = 6.9 (Up,Ki).
The initial relatively weak compression is followed after 1.2 sec in average by a strong dilatation (i).

" 28 Up iP 11 51 43.9
micr sec
P Z' 0.1 1.1
Ki iP 11 50 55.8
ipP 11 51 07.6
Um iP 11 51 17.8 C
ipP 11 51 29.5
Ud iP 11 51 49.1
ipP 11 52 01.5
(cont.)

1974
July 28 (cont.)
Kurile Islands.
h = 45 km (Ki,Um,Ud).
Origin time = 11 40 49.

" 28 Um iP 11 56 46.3

" 28 Up iP 12 03 46.0
i 12 03 55.1
micr sec
P Z' 0.1 0.9
Ki iP 12 02 57.8 C
Um iP 12 03 20.0 C
Ud iP 12 03 51.2
De iP 12 04 12.2
Kurile Islands (h = 60 km).

" 28 Um iP 12 07 30.7
Ud eP 12 08 04
Kurile Islands.
Origin time = 11 57 03.

" 28 Up iP 12 10 40.1
micr sec
P Z' 0.1 1.1
Ki iP 12 09 51.6
ipP 12 10 04.4
Um iP 12 10 14.3
ipP 12 10 26.6
Ud iP 12 10 45.7
De eP 12 11 06
Kurile Islands.
h = 45 km (Ki,Um).

" 28 Up iP 12 18 46.2 C
micr sec
P Z' 0.2 1.2
Ki iP 12 17 58.4 C
ipP 12 18 12.1
micr sec
P Z' 0.1 1.1
Sk iP 12 18 35.1
ipP 12 18 47.0
Um iP 12 18 21.0
ipP 12 18 33.2
Ud iP 12 18 52.4
ipP 12 19 03.6
De iP 12 19 11.7
ipP 12 19 24.4
Kurile Islands.
h = 45 km (Ki,Sk,Um,Ud,De).
m = 6.1 (Up,Ki).

" 28 Up iP 12 30 37.0
micr sec
P Z' 0.1 1.2
Ki iP 12 29 48.9
(cont.)

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

1974
July 28 (cont.)

	Sk	iP	12 30 24.7
	Um	iP	12 30 11.1 C
	Ud	iP	12 30 42.2 C

Kurile Islands (h = N).

" 28 Um iP 12 37 52.8

" 28

Up	iP	12 54 25.7
	ipP	12 54 38.5
Ki	iP	12 53 38.3
Um	iP	12 54 00.6 C
Ud	iP	12 54 31.2
De	iP	12 54 48.8

Kurile Islands.
h = 45 km (Up).
Origin time = 12 43 32.

" 28 Um iP 13 08 14.2
Kurile Islands.

" 28

Up	iP		13 15 13.2	
			micr	sec
	P	Z'	0.1	1.1
Ki	iP		13 14 23.7	
Sk	eP		13 15 01	
Um	iP		13 14 47.4	
Ud	iP		13 15 18.0	

Kurile Islands (h = 45 km).

" 28

Um	iP	13 17 40.9
Ud	iP	13 18 11.7

Kurile Islands.
Origin time = 13 07 12.

" 28 Um iP 13 39 15.1
Kurile Islands.

" 28

Up	ipP	13 42 00.8
Ki	iP	13 41 02.4
Um	iP	13 41 24.7
Ud	iP	13 41 55.4

Kurile Islands.
Origin time = 13 30 56.

" 28

Up	iP		13 42 33.0	
	ipP		13 42 48.0	
			micr	sec
	P	Z'	0.9	2.0
Ki	iP		13 41 45.0 C	
	ipP		13 41 59.6	
			micr	sec
	P	Z'	0.9	2.0
Sk	eP		13 42 20	
Um	iP		13 42 07.3 C	
	ipP		13 42 22.1	

(cont.)

1974
July 28 (cont.)

Ud	iP	13 42 38.2 C
	ipP	13 42 52.6
De	iP	13 42 56.6
	ipP	13 43 11.7

Kurile Islands.
h = 55 km (Up,Ki,Um,Ud,De).
m = 6.7 (Up,Ki).

" 28 Um iP 13 48 24.3

" 28

Up	iP		13 52 34.5 C	
			micr	sec
	P	Z'	0.5	1.5
	Mx	E	1.4	15
	Mx	N	3.0	17
	Mx	Z	5.1	18
Ki	iP		13 51 46.7 C	
			micr	sec
	P	Z'	0.1	0.9
	Mx	E	5.1	15
	Mx	N	4.6	16
	Mx	Z	4.9	16
Sk	iP		13 52 22.6	
Um	iP		13 52 08.9 C	
	ipP		13 52 19.1	
Ud	iP		13 52 39.9 C	
	ipP		13 52 51.0	
De	iP		13 52 59.0	

Kurile Islands.
h = 40 km (Um,Ud).
m = 6.2, M = 5.9 (Up,Ki).
Surface waves (Mx) partially mixed with those of 13 42.

" 28

Um	iP	13 53 26.2
Ud	i(pP)	13 54 08.6

" 28

Um	iP	13 59 35.0
Ud	eP	14 00 07

Kurile Islands.
Origin time = 13 49 06.

" 28

Ki	iP	14 02 05.0
Um	iP	14 02 27.4
Ud	iP	14 02 59.1

Kurile Islands.
Origin time = 13 51 59.

" 28 Ud iP 14 05 30.0
Kurile Islands.

" 28

Ki	iP	14 07 22.2
Um	iP	14 07 43.8
	ipP	14 07 56.7
Ud	iP	14 08 15.3

(cont.)

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

1974
July 28 (cont.)
Kurile Islands.
h = 50 km (Um).
Origin time = 13 57 15.

" 28
Up	iP		14 09 11.2	
Ki	iP		14 08 23.3	
	ipP		14 08 37.7	
Um	iP		14 08 45.7	C
Ud	iP		14 09 16.6	

Kurile Islands.
h = 55 km (Ki).
Origin time = 13 58 17.

" 28
Ki	iP		14 23 43.4	
Um	iP		14 24 05.5	
Ud	iP		14 24 36.8	

Kurile Islands.
Origin time = 14 13 37.

" 28
Sk	iP		14 49 29.0	
Um	iP		14 49 41.0	

" 28
Up	iP		15 21 30.5	
			micr sec	
	P	Z'	0.1 0.9	
Ki	iP		15 20 42.6	
Um	iP		15 21 04.7	C
	ipP		15 21 16.6	
Ud	iP		15 21 35.6	C

Kurile Islands.
h = 45 km (Um).

" 28
Um	iP		16 07 38.7	
	ipP		16 07 52.7	
Ud	iP		16 08 09.6	
	ipP		16 08 22.8	

Kurile Islands.
h = 50 km (Um,Ud).

" 28
Up	iP		16 33 54.4	
Ki	iP		16 33 06.5	
Sk	ipP		16 33 54.2	
Um	iP		16 33 28.4	
	ipP		16 33 41.5	
Ud	iP		16 33 59.2	
	i		16 34 04.2	
	ipP		16 34 13.1	

Kurile Islands.
h = 50 km (Um,Ud).

" 28
Up	iP		16 38 29.1	
			micr sec	
	P	Z'	0.1 1.0	
Ki	iP		16 37 40.8	
Um	iP		16 38 03.6	
Ud	iP		16 38 34.4	
De	iP		16 38 53.4	

Kurile Islands (h = 50 km).

1974
July 28
Up	iP		16 44 51.5	
	ipP		16 45 04.2	
			micr sec	
	pP	Z'	0.2 1.3	
	Mx	E	0.8 16	
	Mx	N	0.8 18	
	Mx	Z	0.9 17	
Ki	iP		16 44 03.4	C
	ipP		16 44 16.1	
			micr sec	
	pP	Z'	0.1 0.9	
	Mx	E	1.9 17	
	Mx	N	1.3 17	
	Mx	Z	1.9 18	
Sk	eP		16 44 40	
	ipP		16 44 53.1	
Um	iP		16 44 25.3	C
	ipP		16 44 38.4	
Ud	iP		16 44 56.3	
	i		16 45 02.4	
	ipP		16 45 09.6	

Kurile Islands.
h = 50 km (Up,Ki,Sk,Um,Ud).
M = 5.3 (Up,Ki).

" 28
Up	iP		16 45 13.2	
			micr sec	
	P	Z'	0.1 1.0	
Ki	iP		16 44 26.9	
Sk	iP		16 45 02.4	
Um	iP		16 44 48.1	
Ud	iP		16 45 18.1	

Kurile Islands.
Origin time = 16 34 18.

" 28
Up	eP		17 07 31	
	i		17 07 35.2	
			micr sec	
	P	Z'	0.1 1.2	
Ki	iP		17 06 41.8	
Um	iP		17 07 03.9	C
Ud	iP		17 07 34.6	

Kurile Islands (h = 45 km).

" 28
Up	iP		17 16 36.5	
Ki	iP		17 15 48.2	
Sk	iP		17 16 25.7	
Um	iP		17 16 10.7	
	ipP		17 16 21.8	
Ud	iP		17 16 41.9	
	ipP		17 16 53.1	
De	iP		17 17 00.3	

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

" 28
Up	iP		18 11 40.8	
Ki	iP		18 10 52.5	C

(cont.)

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

1974
July 28 (cont.)

				micr	sec	
Ki						
	Mx	E	0.8	18		
	Mx	N	1.0	16		
	Mx	Z	1.4	17		
Sk	eP			18 11 31		
Um	iP			18 11 15.0	C	
Ud	iP			18 11 46.1		
	ipP			18 11 58.5		
De	iP			18 12 05.3		

Kurile Islands.
h = 45 km (Ud).

" 28 Up iP 18 23 24.7
Sk iP 18 23 51.1

" 28 Ki iP 18 29 30.1
Um iP 18 29 52.2
Ud eP 18 30 23
Kurile Islands (h = 40 km).

" 28 Ki iP 18 39 17.0
Um iP 18 39 39.2
Ud iP 18 40 10.4
Kurile Islands.
Origin time = 18 29 10.

" 28 Um iP 20 11 23.3
Ud iP 20 11 54.9
Kurile Islands.
Origin time = 20 00 54.

" 28 Up ePKPl 20 34 56
Sk ePKPl 20 34 51
Um iPKPl 20 34 45.0
Ud iPKPl 20 34 57.9
Kermadec Islands (h = 15 km).

" 28 Up iP 22 02 40.6 D
Ki iP 22 02 25.6 D

			micr	sec
P	Z'	0.1	1.0	

Um iP 22 02 30.4 D
Ud iP 22 02 49.1 D
De iP 22 02 54.4 D
Talaud Islands (h = 100 km).

" 28 Um iP 23 32 52.1
Kurile Islands.

" 29 Um iP 00 31 21.9
Kurile Islands.

" 29 Um iP 01 17 46.8
Ud iP 01 18 17.7
Kurile Islands.
Origin time = 01 07 18.

1974
July 29 Ki iP 01 22 21.2
Um iP 01 21 51.1
Turkey.

" 29 Up iP 01 25 42.1 C
Ki iP 01 24 53.8
Um iP 01 25 16.1 C
Ud iP 01 25 47.4 C
Kurile Islands (h = 55 km).

" 29 Up iP 01 59 09.1
Ki eP 01 58 21
Um iP 01 58 42.9
Ud iP 01 59 14.1
Kurile Islands (h = N).

" 29 Up iP 02 24 43.4 D

			micr	sec
P	Z'	0.1	1.0	

Ki iP 02 23 55.6 D
Um iP 02 24 17.8 D
Ud iP 02 24 49.2 D
ipP 02 25 02.3
Kurile Islands.
h = 50 km (Ud).

" 29 Up iP 03 26 13.4 C
i 03 26 16.6
iS 03 35 06

			micr	sec
P	Z'	0.7	1.1	
Mx	E	14	27	
Mx	N	7.5	20	
Mx	Z	14	19	

Ki iP 03 25 25.5 C
i 03 25 28.7
iS 03 33 44

			micr	sec
P	Z'	0.4	1.1	
Mx	E	19	17	
Mx	N	23	19	
Mx	Z	34	19	

Sk iP 03 26 01.0 C
i 03 26 04.2
Um iP 03 25 47.4 C
i 03 25 50.8
iS 03 34 20
Ud iP 03 26 18.8 C
De iP 03 26 37.2 C
i 03 26 40.7
Kurile Islands (h = 40 km).
m = 6.7, M = 6.3 (Up,Ki).
Probably double event, the smaller first P followed after 3.2 sec by another larger onset.

" 29 Um iP 03 54 31.2
Kurile Islands.

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

1974
July 29 Um iP 03 56 39.6
Kurile Islands.

" 29 Ki iP 04 09 38.5
Um iP 04 10 00.8
ipP 04 10 12.7
Ud iP 04 10 31.3
Kurile Islands.
h = 45 km (Um).

" 29 Um iP 04 35 56.5
Kurile Islands.

" 29 Um iP 05 26 21.7
Kurile Islands.

" 29 Um iP 05 31 35.4
Kurile Islands.

" 29 Up iP 07 27 23.9 C
ipP 07 27 36.3
iS 07 36 18

		micr	sec
P	Z'	1.4	1.3
Mx	E	8.9	18
Mx	N	16	18
Mx	Z	25	19

Ki iP 07 26 35.5 C
ipP 07 26 49.2
iS 07 34 47

		micr	sec
P	Z'	0.9	1.4
Mx	E	26	17
Mx	N	36	18
Mx	Z	38	18

Sk iP 07 27 11.6 C
Um iP 07 26 57.9 C
ipP 07 27 11.6
iS 07 35 37
Ud iP 07 27 29.0 C
ipP 07 27 42.6
De iP 07 27 47.8 C
ipP 07 28 01.5
Kurile Islands.
h = 50 km (Up,Ki,Um,Ud,De).
m = 6.9, M = 6.5 (Up,Ki).

" 29 Um iP 08 31 41.4
Kurile Islands.

" 29 Up iP 09 05 19.8
ipP 09 05 36.7
Um iP 09 04 53.8
ipP 09 05 10.8
Ud iP 09 05 24.9
ipP 09 05 41.2
Kurile Islands.
h = 60 km (Up,Um,Ud).
Origin time = 08 54 25.

1974
July 29 Up iP 09 08 27.7
Um iP 09 08 01.4 D
Ud iP 09 08 32.4
Kurile Islands.
Origin time = 08 57 33.

" 29 Up eP 09 39 46

		micr	sec
Mx	E	1.3	17
Mx	N	1.8	20
Mx	Z	2.9	18

Ki iP 09 38 57.5

		micr	sec
Mx	E	1.1	17
Mx	N	2.0	18
Mx	Z	1.5	18

Um iP 09 39 19.3 C
ipP 09 39 32.3
Ud iP 09 39 50.4 C
Kurile Islands.
h = 50 km (Um).
M = 5.4 (Up,Ki).

" 29 Um eP 10 37 48
Ud iP 10 38 17.3
Kurile Islands.
Origin time = 10 27 18.

" 29 Up iP 14 32 14.0 D

		micr	sec
P	Z'	0.1	1.0

Ki iP 14 31 26.5
Sk iP 14 32 00.8
Um iP 14 31 48.4 D
Ud iP 14 32 19.1
Kurile Islands (h = 35 km).

" 29 Up iP 15 06 52.6
Ki iP 15 06 35.4

" 29 Up iSn 15 32 00.5
iS* 15 32 04.9
Um iSgl 15 32 54.6
Ud iSn 15 32 49.0
iS* 15 33 08.6
De iPn 15 32 08.6
Off southwest coast of
Finland.
Explosion.

" 29 Up iSn 15 34 17.7
iS* 15 34 21.3
Um iSgl 15 35 10.3
Ud iS* 15 35 23.7
Off southwest coast of
Finland.
Explosion.

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

1974
July 29 Up iPKPl 15 58 34.2
Ud iPKPl 15 58 37.0
De iPKPl 15 58 46.4

" 29 Um iP 15 59 10.3
Ud eP 15 59 42
Kurile Islands.
Origin time = 15 48 41.

" 29 Ki iP 17 36 42.1
Um iP 17 36 31.4
Ud iP 17 37 04.0
Sinkiang, China (h = 55 km).

" 29 Up iSgl 18 01 15.7
Ud iSgl 18 00 06.5
South Norway.
Origin time = 17 58 13.
By combination with
Kongsberg readings.

" 29 Up iP 19 20 55.2
Ki iP 19 20 07.2 C
Um iP 19 20 29.4
i 19 20 34.1
Ud iP 19 21 00.7
Kurile Islands (h = 40 km).

" 29 Um iP 20 00 13.6
Ud iP 20 00 44.8
Kurile Islands.
Origin time = 19 49 41.

" 29 Up iP 20 01 39.5 C

		micr	sec
P	Z'	0.1	0.9

Ki iP 20 00 51.7
Um iP 20 01 13.3 C
Ud iP 20 01 44.9 C
Kurile Islands (h = N).
The order of sensitivity of our stations for the Kurile Islands shocks on July 28-29 (measured in the same way as for the Panama-Colombia series on July 13-14, cf July 14 at 07 26) is as follows:
Um:Ud:Ki:Up:Sk:De = 4.7:3.9:2.9:2.6:1.2:1, which is more typical.

" 29 Um iP 21 22 54.5

" 29 Up i(PKP) 22 32 17.4
iPKP 22 32 21.6
Ki iPKP 22 32 13.4
(cont.)

1974
July 29 (cont.)
Ki iSKPl 22 34 41.9

		micr	sec
SKPl	Z'	0.1	1.5

Sk i(PKP) 22 32 14.9
iSKPl 22 35 00.5
Um i(PKP) 22 32 16.3
iPKP 22 32 20.2
iSKPl 22 34 56.0
Ud i(PKP) 22 32 20.1
iPKP 22 32 24.0
i 22 32 31.2
iSKPl 22 35 09.4
De iPKP 22 32 29.4
Fiji Islands (h = 590 km).

" 29 Up iP 23 50 41.9 C

" 30 Ud iP 00 21 38.1
Kurile Islands.

" 30 Um iP 02 02 15.8
Molucca Passage (h = 90 km).

" 30 Up iP 05 20 04.0 C
ipP 05 20 54.7
iPP 05 21 41
iS 05 25 58

		micr	sec
P	Z'	4.1	1.0
Mx	E	48	13
Mx	N	99	12
Mx	Z	94	10

Ki iP 05 20 13.3 C
ipP 05 21 04.6
iS 05 26 17

		micr	sec
P	Z'	5.2	1.0
Mx	E	80	15
Mx	N	100	12
Mx	Z	190	18

Sk iP 05 20 30.0 C
ipP 05 21 23.1
Um iP 05 20 02.7 C
ipP 05 20 53.8
iS 05 25 57
Ud iP 05 20 20.5 C
ipP 05 21 12.2
De iP 05 20 16.9 C
Hindu Kush.
h = 250 km (Up,Ki,Sk,Um,Ud).
m = 6.9, M = 7.0 (Up,Ki).
M uncorrected for focal depth.

" 30 Ki iP 07 51 45.2
Um iP 07 51 34.8
Ud iP 07 51 52.3
Hindu Kush (h = 230 km).

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

1974 July 30 Up iP 09 33 12.9
Hindu Kush.
Intermediate depth.

" 30 Up iP 11 49 12.9
iPP 11 50 53.1
micr sec
P Z' 0.2 1.0
Ki iP 11 49 22.3
Sk iP 11 49 38.1
Um iP 11 49 11.4
Ud iP 11 49 29.1
iPP 11 51 15.6
De iP 11 49 25.9
iPP 11 51 05.1
Hindu Kush (h = 70 km).

" 30 Ud iSgl 12 18 50.9
South Norway.
Origin time = 12 16 58.
By combination with
Kongsberg readings.

" 30 Up iSgl 12 36 42.1
Ud iSgl 12 35 36.7
South Norway.
Origin time = 12 33 45.
By combination with
Kongsberg readings.

" 30 Up iSgl 12 43 00.6
Ki iSgl 12 45 35.3
Um iSgl 12 43 32.5
Ud iSgl 12 44 06.0
Esthonia.
Explosion.

" 30 Ud iP 13 10 34.4

" 30 Um iSgl 14 04 57.3
Western USSR.
Explosion.

" 30 Um iSgl 14 06 08.2
Western USSR.
Explosion.

" 30 Up iP 17 43 51.5
Um iP 17 44 12.7

" 30 Up iPKPl 18 24 35.3
Ud iPKPl 18 24 37.6

" 30 Um i(Sgl) 18 35 27.8

" 30 Ud iP 21 11 48.3
Kurile Islands.

1974 July 30 Um iSKPl 22 03 56.5
Fiji Islands (h = 610 km).

" 30 Up iP 22 50 40.7 C
micr sec
P Z' 0.1 1.0
Ki iP 22 49 52.0 C
micr sec
Mx E 0.6 15
Mx N 0.9 20
Mx Z 1.1 19
Sk iP 22 50 28.3
Um iP 22 50 14.9 C
Ud iP 22 50 46.0 C
De iP 22 51 06.1
Kurile Islands (h = 40 km).

" 30 Ud iP 23 30 15.5

" 31 Ki iP 00 43 02.4
micr sec
P Z' 0.1 1.1
Um iP 00 43 04.3
Ceram (h = N).

" 31 Up i 01 44 50.4
i(Sgl) 01 45 44.8

" 31 Ud i(P) 08 30 05.8

" 31 Ki iP 09 30 01.9
Alaska (h = 45 km).

" 31 Ud iP 10 48 07.3

" 31 Up iSgl 13 08 39.0
Ki iSgl 13 11 14.1
Sk iSgl 13 10 46.5
Um iSgl 13 09 18.5
Ud i 13 09 35.7
iSgl 13 09 48.3
De iSgl 13 10 14.5
Esthonia.
Explosion.

" 31 Um iP 15 56 25.4

" 31 Ud iP 16 03 28.8

" 31 Um iP 21 24 10.8
Kurile Islands.

" 31 Up iPKPl 22 50 53.6
Sk iPKPl 22 50 45.8
Um iPKPl 22 50 41.7
Ud iPKPl 22 50 55.1
De ePKPl 22 51 05
Kermadec Islands (h = 60 km).

Markus Båth, Rutger Wahlström, Klaus Meyer, Ota Kulhánek January 3, 1976

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

NOTE. As a rule, regional events (within Fennoscandia and neighbouring areas) will henceforth be included only in case of earthquakes or possible earthquakes, whereas regional explosions (of conventional nature, performed for various purposes) will be excluded.

A U G U S T 1 - 31, 1974

1974
Aug. 1 Up eP 00 21 33
Ki iP 00 21 31.8
Sk iP 00 21 19.4
Um iP 00 21 35.0
De iP 00 21 27.1
Panama-Colombia (h = N).

" 1 Up iPKP 01 45 15.8
Solomon Islands (h = 30 km).

" 1 Sk iP 04 03 28.8
Hindu Kush.
Intermediate depth.

" 1 Up iP 05 16 49.0
Ki iP 05 15 54.6
Sk iP 05 16 21.9
Um iP 05 16 22.9 C
Ud iP 05 16 46.3
De iP 05 17 09.3
Kodiak Island (h = 25 km).

" 1 Up iP 05 18 31.4
i 05 18 34.4
iS 05 27 08

		micr	sec
P	Z'	0.1	1.0
i	Z'	0.1	0.8
Mx	E	2.2	17
Mx	N	3.2	18
Mx	Z	6.4	19

Ki iP 05 17 37.1
i 05 17 40.2
iS 05 25 26
(cont.)

1974
Aug. 1 (cont.)
Ki

		micr	sec
P	Z'	0.1	1.1
i	Z'	0.2	0.8
Mx	E	4.3	19
Mx	N	9.7	19
Mx	Z	7.6	20

Sk iP 05 18 04.0
i 05 18 07.0
Um iP 05 18 05.3
i 05 18 08.8
iS 05 26 19
Ud iP 05 18 28.1
i 05 18 30.7
De iP 05 18 52.2
i 05 18 54.9
Kodiak Island (h = 10 km).
m = 6.0, M = 5.8 (Up,Ki).
Double P, smaller and larger, 3.0 sec apart in average.

" 1 De iPKP 05 18 31.7
Loyalty Islands (h = 50 km).

" 1 Up iP 05 21 04.3
Ki iP 05 20 10.0 C

		micr	sec
P	Z'	0.1	1.0

Sk iP 05 20 36.7
Um iP 05 20 38.1 C
Ud iP 05 21 01.2
De iP 05 21 24.6 C
Kodiak Island.
Origin time = 05 10 35.
(cont.)

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

1974
Aug. 1 (cont.)
Origin times for teleseisms are based on our own records only, and therefore accurate only to within a few seconds.

" 1 ✓ Up iP 06 06 06.8 C
iS 06 14 41
iP'P' 06 35 16.6
micr sec
P Z' 0.7 1.3
Mx E 3.4 18
Mx N 6.4 21
Mx Z 9.7 21
Ki iP 06 05 12.6 C
micr sec
P Z' 0.6 1.3
Mx E 8.1 22
Mx N 15 20
Mx Z 14 21
Sk iP 06 05 39.5 C
iP'P' 06 35 25.5
Um iP 06 05 40.8 C
iP'P' 06 35 17.5
Ud iP 06 06 03.4 C
De iP 06 06 27.3 C
Kodiak Island (h = N).
m = 6.6, M = 6.0 (Up,Ki).

" 1 Up iP 06 06 50.8
micr sec
P Z' 0.4 1.5
Sk iP 06 06 22.3
Um iP 06 06 26.3
Ud iP 06 06 48.3
De iP 06 07 09.7
Kodiak Island.
Origin time = 05 56 22.

" 1 Up iP 06 08 38.1
micr sec
P Z' 0.1 1.0
Ki iP 06 07 43.9 C
micr sec
P Z' 0.1 1.0
Sk iP 06 08 10.8
Um iP 06 08 12.8
Ud iP 06 08 34.3
De iP 06 08 58.6
Kodiak Island.
Origin time = 05 58 09.
m = 5.9 (Up,Ki).

" 1 Up iP 06 17 48.7
Ki iP 06 16 53.9 C
Sk iP 06 17 21.9
Um iP 06 17 22.4
Ud iP 06 17 44.3
Kodiak Island (h = 15 km).

1974
Aug. 1 Ki iP 06 26 38.6
Sk i(P) 06 27 11.4
Um iP 06 27 06.4
Kodiak Island (h = 20 km).

" 1 Ki iP 06 41 38.2
Um iP 06 42 05.5
Ud iP 06 42 28.7
Kodiak Island (h = 7 km).

" 1 Up iP 06 58 46.5
Ki iP 06 57 52.1
Sk iP 06 58 19.4
Um iP 06 58 20.1
Ud iP 06 58 43.0
Kodiak Island (h = 15 km).

" 1 Ki iP 07 20 24.0
Sk iP 07 20 51.6
Um iP 07 20 51.9
Ud iP 07 21 16.2
Kodiak Island (h = 15 km).

" 1 Ki iP 07 24 43.2
Kodiak Island (h = N).

" 1 Ki iP 07 27 49.2
Kodiak Island (h = 15 km).

" 1 Up iP 08 10 26.0
ipP 08 10 31.3
micr sec
P Z' 0.1 1.1
Mx E 0.9 18
Mx N 1.1 21
Mx Z 1.3 19
Ki iP 08 09 32.0
ipP 08 09 37.0
micr sec
P Z' 0.1 0.9
Mx E 0.8 14
Mx N 2.3 19
Mx Z 1.9 18
Sk iP 08 09 58.7 C
ipP 08 10 04.1
Um iP 08 09 59.9 C
ipP 08 10 05.6
i 08 10 29.4
Ud iP 08 10 22.8
ipP 08 10 27.7
De iP 08 10 46.3 C
ipP 08 10 52.0
Kodiak Island.
h = 20 km (Up,Ki,Sk,Um,Ud, De).
m = 5.9, M = 5.2 (Up,Ki).

" 1 Sk iP 08 27 28.6
Kodiak Island (h = N).

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

1974					
Aug.	1	Ki	iP	08 36 16.3	
		Sk	iP	08 36 43.1	
		Kodiak Island (h = N).			
"	1	Up	iP	09 48 20.0	C
		Ki	iP	09 49 01.1	C
		Sk	eP	09 48 43	
		Um	iP	09 48 39.5	C
			i	09 48 40.7	
		Ud	iP	09 48 23.3	C
		De	iP	09 48 02.0	
		Zambia (h = 15 km).			
"	1	Ki	e(P)	12 27 41	
		Ud	i(P)	12 26 53.8	
"	1	Sk	iP	15 01 41.0	
		Hindu Kush.			
		Intermediate depth.			
"	1	Sk	iP	15 39 32.1	
		Kodiak Island (h = N).			
"	1	Up	iP	18 36 23.7	C
		Ki	iP	18 35 55.0	C
		Sk	iP	18 36 21.0	C
		Um	iP	18 36 07.3	C
		Ud	iP	18 36 30.2	C
		De	iP	18 36 41.7	
		Mariana Islands (h = 320 km).			
"	1	Um	iP	20 02 31.4	
		Ud	iP	20 02 50.7	
"	1	Up	Mx	21 01	
				micr	sec
			Mx E	1.1	22
			Mx N	0.9	21
			Mx Z	1.3	19
		Ki	Mx	21 06	
				micr	sec
			Mx E	0.9	18
			Mx N	1.2	18
			Mx Z	1.1	19
		Indian Ocean (h = N).			
		M = 5.6 (Up,Ki).			
"	1	Up	eP	21 16 01	
			i	21 16 07.8	
		Ud	iP	21 15 53.3	
"	1	Up	iP	22 50 01.8	
			i	22 50 04.1	
			i	22 50 14.4	
			iX	22 50 32.9	
		(cont.)			

1974					
Aug.	1	(cont.)			
		Up		micr	sec
			Mx E	1.3	22
			Mx N	2.8	22
			Mx Z	4.5	22
		Ki	iP	22 49 10.5	C
			iX	22 49 28.8	
				micr	sec
			Mx E	1.8	20
			Mx N	2.4	23
			Mx Z	2.6	23
		Sk	eP	22 49 48	
			iX	22 50 16.2	
		Um	eP	22 49 35	
			i	22 49 37.3	
			iX	22 49 58.7	
		Ud	iP	22 50 07.4	
			i	22 50 08.8	
			iX	22 50 34.6	
		De	iP	22 50 30.7	
			iX	22 51 05.0	
		Kurile Islands (h = 40 km).			
		M = 5.5 (Up,Ki).			
		Even though X fits PcP for Up,Ud, it is more likely that X stands for P of another earthquake with somewhat different epicenter.			
"	2	Up	iP	00 31 38.6	
		Ki	iP	00 31 15.3	
		Sk	iP	00 31 42.3	
		Ud	iP	00 31 48.9	
		Ryukyu Islands.			
"	2	Um	iP	07 24 15.4	
		Ud	iP	07 24 34.4	C
		De	iP	07 24 47.7	
"	2	Up	iP	08 30 47.7	
		Ki	eP	08 31 28	
			i	08 31 33.2	
				micr	sec
			Mx E	0.5	13
			Mx N	0.5	15
			Mx Z	0.4	11
		Sk	iP	08 31 24.2	
		Um	iP	08 31 02.0	
			iPP	08 32 30.5	
		Ud	iP	08 31 03.0	
			i	08 31 21.3	
		De	iP	08 30 45.8	
			i	08 30 50.8	
		Iran (h = 45 km).			
"	2	Up	iP	09 32 51.6	
		Kodiak Island (h = 60 km).			

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

1974 Aug.	2	Up	eP		10 02 18	
		Ki	eP		10 01 40	
		Sk	iP		10 02 14.9	
		Um	iP		10 01 54.6	
			i		10 01 58.6	
		Ud	iP		10 02 22.8	
		Japan (h = 40 km).				
"	2	Um	iPKPl		10 10 16.4	C
"	2	Up	iP		10 28 33.0	
		Ki	iP		10 28 16.4	
		Sk	iP		10 28 37.1	
		Um	iP		10 28 20.8	
		Ud	iP		10 28 41.4	
		Talaud Islands (h = 55 km).				
"	2	Up	iP		10 35 34.0	
		Ki	iP		10 36 41.0	
		Ud	iP		10 35 41.9	
		De	iP		10 35 10.0	
		Crete (h = 50 km).				
"	2	Up	iPKPl		10 41 15.7	
			iPKP2		10 41 21.2	
					micr sec	
			PKP2	Z'	0.1 1.2	
		Sk	iPKPl		10 41 09.4	
		Um	iPKPl		10 41 04.4	D
		Ud	iPKPl		10 41 17.6	
			i		10 41 32.7	
		De	ePKPl		10 41 27	
			iPKP2		10 41 37.6	
		Kermadec Islands (h = N).				
"	2	Up	iP		12 21 51.0	
		Ud	iP		12 21 58.4	
"	2	Up	i(P)		13 00 10.7	
		Ud	i(P)		12 59 08.3	
"	2	Up	iPl		14 45 09.9	
			iP2		14 45 14.3	
			iPcPl		14 45 26.8	
			iPcP2		14 45 31.6	
					micr sec	
			Pl	Z'	0.1 1.2	
		Ki	iPl		14 44 33.8	
			iP2		14 44 38.2	
					micr sec	
			Mx	E	0.6 15	
			Mx	N	0.8 17	
		Sk	iPl		14 45 05.0	
			iP2		14 45 10.1	
		Um	iPl		14 44 49.4	
			iP2		14 44 53.6	
		Ud	iPl		14 45 16.9	
		(cont.)				
1974 Aug.	2	(cont.)				
		Ud	iP2		14 45 21.9	
		De	iPl		14 45 32.1	
		Japan (h = 25 km).				
		Double P, 4.6 sec apart in average.				
"	2	Up	iPl		16 17 07.1	
			iP2		16 17 10.4	
		Ki	iPl		16 16 31.0	
					micr sec	
			Mx	E	0.6 15	
			Mx	N	0.7 17	
		Sk	iPl		16 17 01.8	
		Um	iPl		16 16 46.4	
			iP2		16 16 50.5	
		Ud	iPl		16 17 14.6	
			iP2		16 17 19.0	
		De	iP2		16 17 32.5	
		Japan (h = 35 km).				
		Double P.				
"	2	Ki	iPl		17 05 00.6	
			iP2		17 05 06.7	
		Um	iPl		17 05 16.3	
			iP2		17 05 22.1	
		Japan (h = 60 km).				
"	2	Um	iP		17 31 52.9	
		Hindu Kush.				
		Intermediate depth.				
"	2	Um	iP		21 11 44.8	
"	3	Up	iP		04 16 44.0	
			i		04 16 49.6	
					micr sec	
			P	Z'	0.1 1.0	
			Mx	N	0.8 15	
			Mx	Z	0.7 10	
		Ki	iP		04 16 40.3	
			i		04 16 45.5	
					micr sec	
			Mx	E	0.5 12	
			Mx	N	2.6 14	
			Mx	Z	0.5 13	
		Sk	iP		04 17 03.6	
			i		04 17 08.7	
		Um	iP		04 16 35.6	
			i		04 16 42.4	
		Ud	iP		04 16 59.3	
			i		04 17 04.8	
		De	iP		04 17 01.1	
			i		04 17 04.8	
		Kashmir-Tibet (h = 20 km).				
		M = 5.2 (Up,Ki).				
"	3	Um	eP		05 53 38	

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

1974 Aug.	3	Um	iP	05 57 14.1	
		Ud	iP	05 57 32.2	
"	3	Ki	iP	06 18 56.2	
		Um	iP	06 19 11.5	
		Japan (h = 60 km).			
"	3	Up	iPKP1	06 36 41.7	
			i	06 36 44.8	
		Um	iPKP	06 36 38.6	
		Ud	iPKP1	06 36 44.1	
			i	06 36 47.2	
		De	iPKP1	06 36 54.5	
			i	06 36 58.0	
		Tonga-Kermadec Islands (h = 330 km).			
"	3	Um	iP	07 10 41.6	
		Ud	iP	07 11 18.3	
		Kurile Islands (h = 60 km).			
"	3	Um	iP	07 20 34.8	
"	3	Up	iP	08 59 29.8	
		Ki	iP	08 58 41.8	
		Sk	eP	08 59 18	
		Um	iP	08 59 04.5	
		Ud	iP	08 59 35.1	
		Kurile Islands (h = 70 km).			
"	3	Ki	iP	10 51 16.9	
		Crete.			
"	3	Up	iP	11 21 29.3	
		Um	iP	11 21 09.5	
		Ud	iP	11 21 36.7	
		South of Japan.			
"	3	Sk	iPKP	11 54 23.7	
		Um	iPKP	11 54 20.8	
		New Hebrides Islands (h = 280 km).			
"	3	Up	iP	12 42 57.6	
		Ki	iP	12 42 09.3	
		Sk	iP	12 42 44.8	
		Um	iP	12 42 31.6	
			ipP	12 42 46.9	
		Ud	iP	12 43 02.8	
			ipP	12 43 19.8	
		De	iP	12 43 21.4	
		Kurile Islands. h = 60 km (Um,Ud).			
"	3	Up	iP	13 55 19.6	
		Hindu Kush. Intermediate depth.			

1974 Aug.	3	Up	iP	13 57 19.1	
		Ki	iP	13 57 20.0	
		Um	iP	13 57 16.7	
		Ud	iP	13 57 29.8	
		De	iP	13 57 27.6	
		Sumatra (h = N).			
"	3	Up	iP	14 05 07.4	
		Ki	iP	14 04 21.3	
		Ud	iP	14 05 13.5	
		Kurile Islands (h = 140 km).			
"	3	Up	iP	18 27 59.6	
			i	18 28 02.7	
			iPP	18 30 51.5	
			i(P'P')	18 55 31.9	
				micr	sec
			P Z'	0.8	1.3
			PP Z'	0.1	1.2
			Mx E	1.9	20
			Mx N	2.0	19
			Mx Z	2.7	22
		Ki	iP	18 27 21.2	C
			i	18 27 24.0	
			iPP	18 29 47.8	
			iS	18 36 13	
				micr	sec
			P Z'	0.4	1.2
			PP Z'	0.1	1.2
			Mx E	2.4	18
			Mx N	2.9	18
			Mx Z	3.4	18
		Sk	iP	18 27 54.8	C
			i	18 27 57.4	
			iPcP	18 28 13.9	
			iPP	18 30 37.5	
		Um	iP	18 27 37.9	C
			i	18 27 41.4	
			iS	18 36 42	
		Ud	iP	18 28 07.0	C
			i	18 28 09.9	
			iPP	18 30 54.2	
		De	iP	18 28 21.7	
			i	18 28 24.5	
			iPP	18 31 19.3	
		Japan (h = 60 km). m = 6.2, M = 5.6 (Up,Ki). Double P, small and large, 2.9 sec apart.			
"	3	Ki	iP	18 38 09.3	
		Ud	i(P)	18 39 00.1	
"	3	Sk	iP	20 13 34.2	
		Kodiak Island (h = N).			
"	4	Ki	iP	00 44 03.3	
		(cont.)			

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

1974							
Aug.	4	(cont.)					
		Ki	ipP		00 44 15.1		
		Um	iP		00 44 25.7		
			ipP		00 44 36.3		
		Ud	iP		00 44 56.7		
		Kurile Islands.					
		h = 40 km (Ki,Um).					
"	4	Up	iP		02 05 12.5		
		Ki	iP		02 04 38.5	C	
		Um	iP		02 04 53.0	C	
			i		02 04 58.8		
		Ud	iP		02 05 19.5		
			i		02 05 26.1		
		De	iP		02 05 32.2		
		South of Japan (h = 90 km).					
"	4	Ud	iP		08 59 46.2		
"	4	Up	Mx		11 16		
					micr	sec	
			Mx	E	0.6	20	
			Mx	N	0.5	19	
			Mx	Z	0.6	19	
		South Pacific Ocean (h = N).					
"	4	Up	iP		13 21 48.3		
		Ki	iP		13 21 31.3		
		Sk	iP		13 21 50.2		
		Um	iP		13 21 35.5		
		Ud	iP		13 21 53.4		
		De	iP		13 21 58.3		
		Molucca Sea (h = 110 km).					
"	4	Up	iP		13 58 54.5		
		Sk	eP		13 59 22		
		Um	iP		13 58 53.7		
		Ud	iP		13 59 10.9		
		De	iP		13 59 06.7		
		Pakistan (h = 30 km).					
"	4	Up	iP		15 11 35.2		
			iPn		15 11 45.7		
			iPP		15 12 08.8		
			iS		15 15 57		
			iSn		15 16 07.2		
					micr	sec	
			P	Z'	0.3	1.1	
			Pn	Z'	0.3	1.1	
			PP	Z'	0.3	1.0	
			Mx	E	1.9	13	
			Mx	N	2.6	15	
			Mx	Z	4.0	15	
		Ki	iP		15 12 14.7	C	
			iPn		15 12 50.8		
		(cont.)					

1974							
Aug.	4	(cont.)					
		Ki	iSn		15 17 55.0		
					micr	sec	
			P	Z'	0.2	1.1	
			Pn	Z'	0.4	1.1	
			Mx	E	2.3	11	
			Mx	N	2.0	12	
			Mx	Z	2.2	12	
		Sk	iP		15 12 12.5		
			i		15 12 19.2		
			iPn		15 12 57.0		
			iSn		15 17 50.2		
		Um	iP		15 11 48.3	C	
			iPP		15 12 24.3		
			iS		15 16 22		
			iSn		15 16 44.7		
		Ud	iP		15 11 52.6	C	
			iPn		15 12 07.9		
			iSn		15 16 56.6		
			iSS		15 17 42.2		
		De	iP		15 11 37.8	C	
			iPn		15 11 52.5		
			i		15 12 27.8		
			iSn		15 16 18.6		
		Caucasus (h = N).					
		m = 5.9, M = 5.1 (Up,Ki).					
		Clear cases of teleseismic Pn and Sn.					
"	4	Up	iP		17 33 22.1		
		Ki	iP		17 33 28.7		
		Sk	iP		17 33 46.6		
		Um	iP		17 33 19.3		
		Ud	iP		17 33 38.7	C	
			ipP		17 34 27.6		
		Afghanistan-USSR.					
		h = 240 km (Ud).					
"	4	Ud	iP		20 40 16.6		
"	4	Up	iP		21 46 44.1		
		Ki	iP		21 45 49.9		
		Sk	iP		21 46 16.9		
		Um	iP		21 46 18.2		
		Ud	iP		21 46 40.9		
		De	iP		21 47 04.6		
		Kodiak Island (h = 40 km).					
"	4	Ud	iP		22 35 00.3		
"	5	Ki	iP		00 28 04.1		
"	5	Ki	iP		00 59 29.8		
"	5	Ki	eP		01 04 07		
		(cont.)					

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

1974
Aug. 5 (cont.)

Ud	iP		01 04 59.3	
	ipP		01 05 18.4	
De	iP		01 05 22.6	
	ipP		01 05 40.8	

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

" 5 Ud iP 06 29 16.4

" 5

Up	iP		13 27 16.0	
Ki	iP		13 27 52.0	C
	iPP		13 29 39.8	
			micr	sec
	P	Z'	0.1	0.8
	Mx	E	0.5	12
	Mx	N	0.4	12
	Mx	Z	0.5	12
Sk	iP		13 27 50.6	C
Um	iP		13 27 29.2	C
	iPP		13 29 09.9	
Ud	iP		13 27 31.1	C
De	iP		13 27 15.4	

Iran (h = 10 km).

" 5

Ud	iPgl		15 06 20.5
	iSgl		15 06 42.8
	iRg		15 06 51.4
De	eSgl		15 07 38

Probably Oslo Fjord region.

" 5

Up	iPKPl		17 58 40.7
Sk	iPKPl		17 58 33.5
	i		17 58 40.9
Um	ePKPl		17 58 26
	i		17 58 30.8
Ud	iPKPl		17 58 42.3
	i		17 58 57.2

Kermadec Islands.

" 5

Up	iPn		18 29 09.4
Ud	iP		18 29 25.0
	iPn		18 29 38.8

Caucasus.

" 6

Ki	iP		02 46 39.3
	ipP		02 47 10.8
Ud	iP		02 47 31.7
	ipP		02 48 03.8
De	iP		02 47 57.0

Alaska.
h = 140 km (Ki,Ud).

" 6

Up	iSgl		08 12 52.5
	e		08 13 34
	i		08 14 11.0
Sk	iSgl		08 12 19.6

(cont.)

1974
Aug. 6 (cont.)

Sk	i		08 12 59.2
Ud	iSgl		08 12 06.7
De	iSgl		08 12 01.3

North Sea, off east coast of Scotland.
By combination with Kongsberg and Bergen readings.

" 6

Up	iP		11 15 34.4	
Ki	iP		11 13 57.0	C
			micr	sec
	P	Z'	0.1	1.3
Sk	iP		11 14 46.7	C
Um	iP		11 14 51.0	
Ud	iP		11 15 27.4	
De	iP		11 16 10.8	C

Greenland Sea (h = N).

" 6

Ki	iP		13 09 33.9
Sk	iP		13 10 00.6

Kodiak Island (h = 15 km).

" 6

Up	iSgl		15 38 51.1
Ud	iPgl		15 37 50.3
	iSgl		15 38 11.6
De	iPgl		15 38 09.2
	iSgl		15 38 41.8

Lake Vener region, Sweden.
Origin time = 15 37 25.

" 6

Up	iP		16 59 57.1	C
	i		16 59 58.1	
			micr	sec
	P	Z'	0.1	0.9
Ki	iP		16 59 09.9	C
	ipP		16 59 55.7	
			micr	sec
	P	Z'	0.4	0.7
Sk	iP		16 59 45.6	
	i		16 59 47.6	
Um	iP		16 59 31.4	C
	i		16 59 32.7	
	ipP		17 00 17.3	
Ud	iP		17 00 02.6	C
	i		17 00 04.1	
	ipP		17 00 50.6	
De	iP		17 00 22.4	

Kurile Islands.
h = 200 km (Ki,Um,Ud).
m = 5.9 (Up,Ki).

" 6

Ki	iP		18 14 59.6
Sk	iP		18 15 26.6
Ud	iP		18 15 51.8

Kodiak Island (h = N).

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

1974 Aug.	6	Up	iPKPl		18 57 32.9	
					micr	sec
			Mx	E	0.9	19
			Mx	N	1.9	21
			Mx	Z	2.3	21
		Ki	iX		18 57 36.6	
					micr	sec
			Mx	E	1.2	18
			Mx	N	1.5	18
			Mx	Z	1.9	18
		Sk	iPKP		18 57 34.3	
		Um	iPKP		18 57 31.5	
		Ud	iPKPl		18 57 32.9	
			iX		18 57 46.6	
		De	iPKPl		18 57 44.2	C
			iX		18 58 02.1	

Tonga Islands (h = 50 km).
M = 5.9 (Up,Ki).

"	6	Ki	iPKP	20 13 08.2

South Sandwich Islands (h = N).

"	6	Ud	iP	20 18 07.8
"	7	Ki	iP	00 53 56.6
			i(S)	00 55 27.0
			iTPg	00 58 54.9
			iTSg	00 59 33.1
		Sk	iP	00 54 36.5
			i	00 54 50.5
			iS	00 56 18.8
		Um	iP	00 54 45.4
		Ud	iP	00 55 23.7
			i(P)	00 55 36.0
			i(S)	00 58 09.8

Norwegian Sea (h = N).

"	7	Up	iP	01 03 46.2
		Ki	iP	01 02 10.0
			iS	01 03 21.6
			eTPg	01 07 12
			iTSg	01 07 50.8
		Sk	iP	01 02 48.8
			iS	01 04 32.9
		Um	iP	01 03 00.5
			iS	01 04 47.0

Norwegian Sea (h = N).

"	7	Ki	iP	01 03 59.1
			iTSg	01 09 32.3
		Sk	iP	01 04 35.9
			iS	01 06 17.3

Norwegian Sea.
Origin time = 01 02 14.

"	7	Ki	iP	01 16 51.0

(cont.)

1974 Aug.	7	(cont.)		
		Ki	iS	01 18 06.3
			i(S)	01 18 21.5
			e(T)	01 22 10
			iTSg	01 22 29.7
		Sk	iP	01 17 30.3
			iS	01 19 12.7
			i	01 19 17.9
		Um	iP	01 17 41.5
		Ud	i(P)	01 18 26.2

Norwegian Sea.
Origin time = 01 15 10.
(S) at Ki is a clear but unidentified phase appearing in average 15.9 sec after S in this series of Norwegian Sea earthquakes, corresponding to a velocity between those of Sn and S*. A similar doubling of P (and S) appears at Ud, where later, larger phases are also put in brackets.

"	7	Ki	iP	01 49 29.4
			iS	01 50 46.8
			i(S)	01 51 03.7
			iTPg	01 54 33.9
			iTSg	01 55 13.3
				micr sec
			Mx E	0.5 14
			Mx N	0.4 15
			Mx Z	0.7 15
		Sk	iP	01 50 08.9
			iS	01 51 52.6
		Um	iP	01 50 19.1
		Ud	i(P)	01 51 09.0
			i(S)	01 53 39.8

Norwegian Sea (h = N).

"	7	Ki	iTSg	02 02 03.5
		Sk	eP	01 57 11
			iS	01 58 53.0
		Ud	i(P)	01 58 10.3

Norwegian Sea.
Origin time = 01 54 49.

"	7	Ki	iP	02 24 50.4
			iS	02 26 04.7
			i(S)	02 26 20.1
			iTSg	02 30 26.4

Norwegian Sea.
Origin time = 02 23 08.

"	7	Ki	eP	02 55 05
			i	02 55 10.0
		Sk	eP	02 55 23
			i	02 55 28.9

(cont.)

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

1974 Aug.	7	(cont.)			
		Um	iP		02 55 50.0
			i		02 55 52.2
"	7	Ud	iP		03 00 25.8
		De	iP		02 59 47.2
		Greece.			
"	7	Ki	iP		03 54 49.7
			iS		03 56 04.8
			i(S)		03 56 20.2
			iTPg		03 59 49.4
			iTSg		04 00 28.7
		Sk	iP		03 55 28.2
			iS		03 57 14.8
		Um	eP		03 55 39
		Norwegian Sea.			
		Origin time = 03 53 08.			
"	7	Ki	iP		03 57 40.8
			iS		03 58 54.6
			i(S)		03 59 11.4
			iTSg		04 03 17.6
		Sk	iP		03 58 19.9
			iS		04 00 03.3
		Um	iP		03 58 29.4
			i		03 58 32.1
		Ud	iP		03 59 07.8
			i(P)		03 59 19.8
		Norwegian Sea.			
		Origin time = 03 55 59.			
"	7	Ki	iP		08 10 34.4
		Ud	iP		08 10 49.3
"	7	Ki	iP		08 30 36.3
		Sk	iP		08 31 02.8
		Ud	iP		08 31 26.8
		De	iP		08 31 50.1
		Kodiak Island (h = 30 km).			
"	7	Up	iP		08 34 05.8
			ipP		08 34 15.4
			iS		08 42 38
				micr	sec
			P	Z' 0.1	0.8
		Ki		micr	sec
			Mx	E 0.8	17
			Mx	N 0.8	17
			Mx	Z 0.9	16
		Sk	iP		08 33 38.0
		Um	iP		08 33 39.9
			ipP		08 33 48.9
			eS		08 41 47
		Ud	iP		08 34 02.2
		De	iP		08 34 26.1
		(cont.)			

1974 Aug.	7	(cont.)		
		De	ipP	08 34 36.5
			iPP	08 36 58.7
		Kodiak Island.		
		h = 40 km (Up,Um,De).		
"	7	Ki	iP	08 36 21.1 C
		Sk	iP	08 36 57.5
		Ud	iP	08 37 17.0
		Kodiak Island.		
"	7	Up	i(P)	09 04 07.9
"	7	Up	iP	11 10 34.6
		Sk	iP	11 10 51.6
		Ud	iP	11 10 32.1
"	7	Ki	iP	11 45 09.0
			iS	11 46 21.0
			i(T)	11 50 32.3
			iTSg	11 50 47.1
		Sk	iP	11 45 48.8
			iS	11 47 31.8
		Um	iP	11 45 59.8
		Norwegian Sea.		
		Origin time = 11 43 28.		
"	7	Ki	iP	12 11 56.5
		Ud	iP	12 12 06.2
		De	iP	12 12 03.5
		Sumatra (h = N).		
"	7	Ud	iP	13 12 11.8
"	7	Ud	iP	15 34 14.8
		Kurile Islands (h = 70 km).		
"	7	Up	iP	15 40 57.6
			ipP	15 41 05.2
		Ki	iP	15 40 03.7
		Sk	iP	15 40 30.7
		Kodiak Island.		
		h = 30 km (Up).		
"	7	Ki	iP	17 23 12.9
			iS	17 24 25.5
			i(S)	17 24 40.9
			eTPg	17 28 03
			iTSg	17 28 38.8
		Sk	iP	17 23 51.4
			iS	17 25 32.3
		Um	iP	17 23 58.5
		Norwegian Sea.		
		Origin time = 17 21 29.		
"	7	Up	iP	19 03 05.5
		(cont.)		

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

1974
Aug. 7 (cont.)

Ki	iP	19 02 49.4
Sk	iP	19 03 10.2
Um	iP	19 02 54.3
Ud	iP	19 03 13.5
De	iP	19 03 20.1

Talaud Islands (h = 160 km).

" 7

Ki	iP	21 16 24.0
Sk	iP	21 16 40.6
Um	iP	21 16 12.9
Ud	iP	21 16 31.2
	ipP	21 16 59.2
De	iP	21 16 28.2

Afghanistan-USSR.
h = 140 km (Ud).

" 7

Ki	iP	23 30 27.4
	iS	23 31 42.7
	e(T)	23 35 36
	iTSg	23 35 58.8
Sk	iP	23 31 06.0
	iS	23 32 53.0

Norwegian Sea.
Origin time = 23 28 46.

" 8

Ki	iP	01 24 38.9
	iS	01 25 52.8
	i(S)	01 26 09.1
	iTSg	01 30 15.0
Sk	iP	01 25 18.2
	i	01 25 22.6
	iS	01 26 59.6
Um	iP	01 25 29.2
Ud	i(P)	01 26 12.3

Norwegian Sea.
Origin time = 01 22 56.

" 8

Up	eP		01 28 32	
	iPP		01 28 51.1	
	iS		01 31 29	
	iTSg		01 36 31.8	
			micr	sec
	Mx	E	2.0	18
	Mx	N	7.8	19
	Mx	Z	9.7	18
Ki	iP		01 26 55.7	
	iS		01 28 10.7	
	iTPg		01 31 51.3	
	iTSg		01 32 31.9	
			micr	sec
	P	Z'	0.1	0.8
	Mx	E	9.7	18
	Mx	N	9.9	20
	Mx	Z	12	19
Sk	iP		01 27 34.4	
	iS		01 29 20.8	

(cont.)

1974
Aug. 8 (cont.)

Sk	iTSg	01 34 24.1
Um	iP	01 27 43.9
	iS	01 29 52
	iTSg	01 34 27.8
Ud	iP	01 28 21.9
	i(S)	01 31 02.6
	iTSg	01 36 25.9
De	iP	01 29 13.4
	iPP	01 29 26.7

Norwegian Sea (h = N).
Clear T phases; notation follows Båth and Shahidi (1971), Pure Appl. Geophys., 92: 74-114.

" 8

Up	i(P)	03 18 46.7
Ki	i(P)	03 18 25.2
Sk	i(P)	03 17 59.1

" 8

Ki	iP	06 02 31.1
	iS	06 03 44.3
	iTSg	06 08 01.1
Sk	iP	06 03 09.1
	iS	06 04 55.6

Norwegian Sea.
Origin time = 06 00 49.

" 8

Ud	iPKP1	09 49 50.0
De	iPKP1	09 50 00.7

" 8

Ki	iP	10 12 45.2
	iS	10 13 59.1
	i(S)	10 14 14.2
	iTPg	10 17 46.1
	iTSg	10 18 21.4
Sk	iP	10 13 24.4
	iS	10 15 08.6
Um	iP	10 13 30.9
Ud	i(P)	10 14 24.1

Norwegian Sea.
Origin time = 10 11 03.

" 8

Ud	iPKP1	10 40 20.8
De	iPKP1	10 40 31.4

Fiji Islands (h = 570 km).

" 8 Ud i(P) 11 18 05.5

" 8

Up	i	12 53 12.4
De	e	12 53 38
	i(Sg1)	12 53 48.6

" 8

Ki	iP	13 09 35.9
Ud	iP	13 09 46.1

" 8 Ud i 14 49 23.4
(cont.)

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

1974
Aug. 8 (cont.)

Ud	i(Rg)		14 49 31.8
De	e		14 49 39
	i(Rg)		14 49 56.1
" 8	Up	iSgl	18 03 38.7
Ud	iPgl		18 02 36.5
	iSgl		18 02 58.2
De	iPgl		18 02 42.0
	iSgl		18 03 14.5

Dalsland, Sweden,
58.7°N, 12.2°E.
Origin time = 18 02 05.

" 8	Up	i(S)		19 11 30.4
		iTSg		19 16 09.8
			micr	sec
	Mx	E	0.6	17
	Mx	N	1.3	18
	Mx	Z	1.5	19
	Ki	iP		19 06 41.6
		iS		19 07 54.3
		i(S)		19 08 11.1
		iTPg		19 11 37.3
		iTSg		19 12 09.8
			micr	sec
	P	Z'	0.1	0.9
	Mx	E	0.8	12
	Mx	N	1.0	14
	Mx	Z	1.9	18
	Sk	iP		19 07 20.2
		iS		19 09 05.7
		eTSg		19 13 56
	Um	iP		19 07 29.2
		iS		19 09 17.2
		iTSg		19 14 07.1
	Ud	iP		19 08 08.2
		i(P)		19 08 19.6
		i(S)		19 10 56.1
		iTSg		19 16 04.2
	De	iP		19 08 56.0

Norwegian Sea (h = N).

" 8 √	Up	iP		19 28 34.3
		i		19 28 41.2
		iS		19 38 08
			micr	sec
	P	Z'	0.2	1.3
	Mx	E	15	21
	Mx	N	38	21
	Mx	Z	17	15
	Ki	iP		19 28 10.2
		i		19 28 15.9
		iS		19 37 26
			micr	sec
	P	Z'	0.5	1.9

(cont.)

1974
Aug. 8 (cont.)

Ki			micr	sec
	Mx	E	19	14
	Mx	N	23	16
	Mx	Z	11	12
Sk	iP			19 28 32.8
	i			19 28 42.1
Um	iP			19 28 22.2
	iS			19 37 43
Ud	iP			19 28 45.4
De	iP			19 28 53.2
	i			19 29 15.2

Formosa (h = 30 km).
m = 6.2, M = 6.7 (Up,Ki).

" 8	Up	i(P)	20 50 38.1
	De	i(P)	20 50 30.8
" 8	Um	iP	23 08 34.8
	Ud	i(P)	23 08 03.0

" 8	Up	i(S)		23 31 13.1
		iTSg		23 35 54.5
			micr	sec
	Mx	N	1.0	19
	Mx	Z	1.2	18
	Ki	iP		23 26 23.4
		iS		23 27 36.6
		i(S)		23 27 52.8
		iTPg		23 31 21.3
		iTSg		23 32 04.0
			micr	sec
	Mx	E	0.9	13
	Mx	N	0.7	15
	Mx	Z	0.9	13
	Sk	iP		23 27 02.8
		i(P)		23 27 11.6
		iS		23 28 48.4
		eTSg		23 33 49
	Um	i		23 27 00.0
		iP		23 27 13.3
		iTSg		23 33 56.8
	Ud	iP		23 27 50.3
		i(P)		23 27 59.2
		i		23 28 11.7
		i		23 30 47.5
		iTSg		23 35 42.6
	De	iP		23 28 39.8

Norwegian Sea (h = N).

" 9	Ki	iP	02 46 03.8
	Um	i(P)	02 45 30.7
	Ud	iP	02 45 10.7

Ascension Island (h = N).

" 9 √	Up	iP	05 06 52.2

(cont.)

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

1974
Aug. 9 (cont.)

Up			micr	sec
	P	Z'	0.1	1.3
Ki	iP		05 06 56.6	
			micr	sec
	P	Z'	0.1	1.3
Sk	iP		05 06 41.5	
Ud	iP		05 06 42.4	
De	iP		05 06 41.5	

Peru-Brazil (h = 160 km).
m = 6.2 (Up,Ki).

" 9	Up	iP	06 49 48.0
	Ki	iP	06 49 33.4 C
		micr	sec
	P	Z' 0.1	1.0
	Um	iP	06 49 38.7 C
	Ud	iP	06 49 57.8
	De	iP	06 50 03.9

Halmahera (h = 100 km).

" 9	Ki	i(P)	10 31 43.4

Mariana Islands (h = 35 km).

" 9	Ki	iP	14 56 30.9
" 9	Um	iP	18 11 37.5
	Ud	iP	18 11 59.6

Hindu Kush (h = 140 km).

" 9	Um	iSKP1	18 36 05.8
	Ud	ePKP1	18 33 25
		i	18 33 26.2
	De	iPKP1	18 33 36.8

Tonga-Kermadec Islands
(h = 520 km).

" 9	Ki	i	19 19 23.2
	Um	iP	19 18 29.2
" 9	Um	iP	19 25 12.8
" 9	Up	iP	20 20 29.3
	Um	iP	20 21 16.0
	Ud	iP	20 20 34.4

Greece.

" 9	Up	iP	22 33 36.4

Albania.

" 9	Um	iPKP	22 36 14.1
	Ud	iPKP	22 36 05.3

Chile (h = N).

" 9	Ud	iP	22 54 06.6
	De	iP	22 54 06.8

Sinkiang, China.

1974
Aug. 10

	Um	i(P)	05 37 39.4
	Ud	iP	05 37 48.8
	De	iP	05 38 02.3
" 10	Up	iPKP	10 05 44.8
		i	10 05 48.9
		iSKP1	10 08 27.3
	Ki	iPKP	10 05 39.2
		iSKP1	10 08 01.6
	Sk	ePKP	10 05 49
		i	10 05 50.8
		iSKP1	10 08 20.1
		i	10 08 26.7
	Um	iPKP	10 05 44.2
		i	10 05 47.2
		iSKP1	10 08 14.8
	Ud	iPKP	10 05 44.9
		iSKP1	10 08 28.9
	De	iPKP	10 05 55.6
		i	10 05 59.5

Fiji Islands (h = 600 km).

" 10	Ud	iPP	10 07 29.0
	De	iPP	10 07 17.6

Chile-Bolivia (h = 120 km).

" 10	Up	iPKP	11 40 38.9
			micr sec
	PKP	Z'	0.1 0.9
	Ki	iPKP	11 40 31.0
		iSKP1	11 43 04.1
			micr sec
	PKP	Z'	0.1 1.0
	SKP1	Z'	0.1 1.2
	Sk	i(PKP)	11 40 31.8
		iPKP	11 40 41.7
	Um	i(PKP)	11 40 26.6
		i(PKP)	11 40 33.8
		iPKP	11 40 37.7
		iSKP1	11 43 14.3
	Ud	iPKP	11 40 40.9
		iSKP1	11 43 29.5
	De	iPKP	11 40 51.7
		iSKP1	11 43 37.9

Fiji Islands (h = 600 km).

" 10	Up	eP	12 52 35
		i	12 53 14.2
		i	12 54 15.2
		iS	12 54 43.9
	Ki	iP	12 53 25.6
		eS	12 56 29
	Sk	eP	12 52 22
		iS	12 54 18.3
		i	12 54 48.8
	Um	i	12 53 22.9

(cont.)

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

1974
Aug. 10 (cont.)

	Um	iS	12 55 32.5
		i	12 55 57.6
	Ud	eP	12 52 05
		iS	12 53 54.5
		i	12 54 15.7
	De	iP	12 52 10.9
		i	12 52 19.5
		iS	12 53 59.7

United Kingdom (h = 10 km).

" 10	Up	iP	15 13 45.1
	Ki	iP	15 13 03.7 C
		ipP	15 13 16.5
	Sk	iP	15 13 37.5
		ipP	15 13 50.5
	Um	iP	15 13 21.8 C
		ipP	15 13 34.8
	Ud	iP	15 13 52.0
		ipP	15 14 06.0
	De	iP	15 14 08.3
		ipP	15 14 23.3

Japan.
h = 50 km (Ki,Sk,Um,Ud,De).

" 10	Sk	eP	17 58 18
	Um	iP	17 58 29.5
	Ud	iP	17 58 00.0

Ascension Island.

" 10	Ki	iP	19 36 47.5
	Um	iP	19 37 09.7
	Ud	iP	19 37 40.4 C

Kurile Islands (h = N).

" 10	Ud	iP	20 42 12.7
" 10	Ud	iP	22 05 34.4
" 10	Ud	iPKP1	23 40 49.5
	De	iPKP1	23 41 00.6
" 11	Ud	iP	00 46 10.2
" 11	Up	iP	01 21 33.0
		iPP	01 23 05.8
		iS	01 27 37

		micr	sec
P	Z'	1.3	1.1
PP	Z'	7.5	2.0
Mx	E	350	13
Mx	N	650	17
Mx	Z	430	17

	Ki	iP	01 21 35.6 C
		iPP	01 23 11
		iS	01 27 47

		micr	sec
P	Z'	1.8	0.8

(cont.)

1974
Aug. 11 (cont.)

		micr	sec
Ki			
Mx	E	200	14
Mx	N	220	14
Mx	Z	310	14

	Sk	iP	01 21 56.4 C
		iPP	01 23 40.2
		iS	01 28 29.6
	Um	iP	01 21 27.7 C
		iPP	01 23 01.9
		iS	01 27 28
	Ud	iP	01 21 49.7 C
		iPP	01 23 32.4
	De	iP	01 21 48.6 C
		iPP	01 23 29.3
		iS	01 28 15.5

Tadzhik-Sinkiang (h = 9 km).
m = 6.7, M = 7.4 (Up,Ki).

" 11	Ki	iP	01 26 38.7
	Ud	iP	01 26 52.6
	De	iP	01 26 51.1

Tadzhik-Sinkiang.
Origin time = 01 19 01.

" 11	Ki	iP	01 54 18.5
	Ud	iP	01 54 32.8

Tadzhik-Sinkiang.
Origin time = 01 46 41.

" 11	Ki	iP	02 01 57.7

Tadzhik-Sinkiang.

" 11	Ud	iP	02 09 06.1
	De	iP	02 09 05.4

Tadzhik-Sinkiang.
Origin time = 02 01 14.

" 11	Ki	iP	02 11 46.8
	Ud	iP	02 12 00.6
	De	iP	02 11 59.4

Tadzhik-Sinkiang.
Origin time = 02 04 09.

" 11	Up	eP	02 14 41
	Ki	iP	02 14 41.9
	Um	iP	02 14 34.2
	Ud	iP	02 14 56.0
	De	iP	02 14 56.2

Tadzhik-Sinkiang.
Origin time = 02 07 05.

" 11	Ki	iP	02 27 14.4
	Ud	iP	02 27 28.8
	De	iP	02 27 28.2

Tadzhik-Sinkiang.
Origin time = 02 19 37.

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

1974
Aug. 11 Ki eP 02 32 11
Sk iP 02 32 33.2
Um iP 02 32 03.8
Ud iP 02 32 25.8
De iP 02 32 24.6
Tadzhik-Sinkiang.
Origin time = 02 24 34.

" 11 Up iP 02 37 22.7
Ki iP 02 37 25.5
Sk iP 02 37 46.6
Um iP 02 37 17.9
Ud iP 02 37 39.7 C
De iP 02 37 38.3
Tadzhik-Sinkiang (h = N).

" 11 Up iP 02 40 59.8
Ki iP 02 41 02.6
Sk iP 02 41 23.8
Um iP 02 40 55.7
Ud iP 02 41 16.7
De iP 02 41 15.5
Tadzhik-Sinkiang.
Origin time = 02 33 25.

" 11 Up iP 02 44 45.0
iPP 02 46 14.1
Ki iP 02 44 47.5
Sk iP 02 45 08.6
iPP 02 46 53.1
Um iP 02 44 39.8
i 02 44 45.2
Ud iP 02 45 01.2 C
De iP 02 45 00.0 C
Tadzhik-Sinkiang (h = N).

" 11 Ud iP 02 51 03.1

" 11 Up iP 02 51 21.7
Ki eP 02 51 24
Tadzhik-Sinkiang.
Origin time = 02 43 46.

" 11 Ki iP 02 52 33.3
Um iP 02 52 24.4
Ud iP 02 52 47.5
De iP 02 52 45.6
Tadzhik-Sinkiang.
Origin time = 02 44 55.

" 11 Ki iP 02 54 12.0
De iP 02 54 25.2
Tadzhik-Sinkiang.
Origin time = 02 46 34.

" 11 Ki iP 02 59 30.9
(cont.)

1974
Aug. 11 (cont.)
Ud iP 02 59 45.9
De eP 02 59 44
Tadzhik-Sinkiang.
Origin time = 02 51 53.

" 11 Ud iP 03 07 17.8

" 11 Ud iP 03 10 17.9

" 11 Ud iP 03 10 47.4

" 11 Ud iP 03 11 22.8

" 11 Ud iP 03 12 28.4

" 11 Up iP 03 12 47.6
Ki iP 03 12 49.0
i 03 12 56.5
Um iP 03 12 43.8
Ud iP 03 13 03.1
De iP 03 13 04.3
Tadzhik-Sinkiang (h = N).

" 11 Ud iP 03 15 58.6

" 11 Ki iP 03 23 32.5
Ud iP 03 23 46.4
Tadzhik-Sinkiang.
Origin time = 03 15 54.

" 11 Ki iP 03 31 48.1
Um iP 03 31 40.6
Ud iP 03 32 03.3
De iP 03 32 01.3
Tadzhik-Sinkiang (h = N).

" 11 Up iP 03 35 32.6
Ki iP 03 35 36.8
Um iP 03 35 30.8
Ud iP 03 35 49.1
Tadzhik-Sinkiang.
Origin time = 03 27 59.

" 11 Ud iP 03 42 30.1

" 11 Ki iP 03 46 35.0
Ud iP 03 46 48.7
Tadzhik-Sinkiang.
Origin time = 03 38 57.

" 11 Ki iP 03 55 35.0
Um iP 03 55 30.7
Tadzhik-Sinkiang.
Origin time = 03 47 59.

" 11 Up eP 03 57 31
(cont.)

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

1974
Aug. 11 (cont.)

	Ki	eP	03 57 30
	Sk	iP	03 57 53.0
	Ud	iP	03 57 43.2
	De	iP	03 57 46.7

Tadzhik-Sinkiang.
Origin time = 03 49 54.

" 11

	Ki	eP	03 59 59
	Sk	iP	04 00 19.1
	Um	iP	03 59 52.4
	Ud	iP	04 00 13.3
	De	eP	04 00 13

Tadzhik-Sinkiang.
Origin time = 03 52 21.

" 11

	Sk	eP	04 06 53
	Ud	eP	04 06 43

Tadzhik-Sinkiang.
Origin time = 03 58 52.

" 11

	Ki	iP	04 22 31.3
	Sk	eP	04 22 56
	Um	eP	04 22 22
	Ud	iP	04 22 46.0

Tadzhik-Sinkiang.
Origin time = 04 14 54.

" 11

	Up	iP	04 36 22.1	
		i	04 36 29.2	
		iPP	04 37 57.4	
		i	04 38 16.4	
		i	04 38 38.6	
	Ki	iP	04 36 24.7	C
		i	04 36 30.7	
			micr	sec
		P Z'	0.1	0.8
	Sk	iP	04 36 45.8	
		i	04 36 51.0	
		iPP	04 38 25.0	
	Um	iP	04 36 17.2	
		i	04 36 22.3	
		iPP	04 37 49.3	
	Ud	iP	04 36 38.9	C
		i	04 36 43.6	
		iPP	04 38 24.8	
	De	iP	04 36 37.9	C
		i	04 36 43.0	
		iPP	04 38 18.9	

Tadzhik-Sinkiang (h = N).
Double P, average separation 5.5 sec.

" 11

	Up	iP	04 43 17.6
	Ki	iP	04 43 19.1
	Um	iP	04 43 11.0

(cont.)

1974
Aug. 11 (cont.)

	Ud	iP	04 43 33.4

Tadzhik-Sinkiang.
Origin time = 04 35 41.

" 11

	Um	iP	04 44 44.2
	Ud	iP	04 45 06.9

Tadzhik-Sinkiang.
Origin time = 04 37 14.

" 11

	Ki	iP	04 48 13.5
	Um	iP	04 48 08.0
	Ud	iP	04 48 28.3
	De	eP	04 48 24

Tadzhik-Sinkiang.
Origin time = 04 40 36.

" 11

	Ud	iP	04 51 47.6

" 11

	Up	iP	05 20 06.8	
		i	05 20 11.2	
		iPP	05 21 26.5	
			micr	sec
		P Z'	0.2	1.0
		Mx E	1.3	14
		Mx N	4.2	14
		Mx Z	2.3	11
	Ki	iP	05 20 10.8	C
		i	05 20 14.0	
			micr	sec
		P Z'	0.2	0.8
		Mx E	1.9	11
		Mx N	3.6	13
		Mx Z	1.7	10
	Sk	iP	05 20 31.4	C
		i	05 20 34.6	
		iPP	05 22 13.6	
	Um	iP	05 20 03.2	C
		i	05 20 06.2	
		iPP	05 21 26.9	
	Ud	iP	05 20 24.8	C
		i	05 20 27.9	
	De	iP	05 20 23.7	C
		i	05 20 26.9	
		iPP	05 22 04.5	

Tadzhik-Sinkiang (h = N).
m = 5.8, M = 5.4 (Up,Ki).
Double P, average separation 3.5 sec.

" 11

	Ki	iP	05 24 43.5
	Ud	iP	05 24 57.4
	De	iP	05 24 55.7

Tadzhik-Sinkiang.
Origin time = 05 17 06.

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

1974 Aug. 11 Up iP 05 27 08.7
Ki iP 05 27 10.0
i 05 27 17.7
micr sec
P Z' 0.1 0.9
Sk iP 05 27 31.4
Um iP 05 27 02.9
Ud iP 05 27 23.8
i 05 27 34.9
De iP 05 27 22.7
i 05 27 24.1
Tadzhik-Sinkiang (h = 30 km).

" 11 Up iP 05 31 27.6 C
iPP 05 32 57.5
iSS 05 40 18.0
micr sec
P Z' 0.2 0.9
PP Z' 0.1 1.0
Mx E 1.8 12
Mx N 6.0 17
Mx Z 4.0 12
Ki iP 05 31 30.3 C
micr sec
P Z' 0.5 0.8
Mx E 4.6 13
Mx N 9.9 13
Mx Z 4.4 13
Sk iP 05 31 51.3 C
iPP 05 33 31.0
Um iP 05 31 22.7 C
iPP 05 32 53.3
Ud iP 05 31 44.5 C
De iP 05 31 43.1 C
iPP 05 33 22.2
Tadzhik-Sinkiang (h = 25 km).
m = 6.0, M = 5.6 (Up,Ki).

" 11 Up iP 05 41 22.8
Ki iP 05 41 25.3
Sk iP 05 41 45.3
Um iP 05 41 17.6
Ud iP 05 41 39.1
De iP 05 41 38.4
Tadzhik-Sinkiang (h = N).

" 11 Ud iP 06 14 41.0

" 11 Ki eP 06 16 13
Ud iP 06 16 27.1
De iP 06 16 26.1
Tadzhik-Sinkiang.
Origin time = 06 08 35.

" 11 Ki iP 06 20 16.0
Ud iP 06 20 29.9
Tadzhik-Sinkiang.
Origin time = 06 12 38.

1974 Aug. 11 Ki iP 06 20 55.9
Ud iP 06 21 10.4
De eP 06 21 10
Tadzhik-Sinkiang.
Origin time = 06 13 18.

" 11 Ud iP 06 25 02.4

" 11 Ud iP 07 07 27.7

" 11 Up iP 07 09 44.6
i 07 10 24.3
iPP 07 11 10.1
i 07 11 24.1
micr sec
P Z' 0.1 1.0
Mx E 2.1 14
Mx N 4.8 18
Mx Z 2.9 13
Ki iP 07 09 46.1
i 07 09 50.4
micr sec
P Z' 0.2 0.8
Mx E 1.7 12
Mx N 6.5 13
Mx Z 1.8 11
Sk iP 07 10 06.1
i 07 10 11.0
iPP 07 11 50.9
Um iP 07 09 38.1
i 07 09 40.9
iPP 07 11 11.5
Ud iP 07 09 59.2
i 07 10 04.8
iPP 07 11 46.4
De iP 07 09 58.3
i 07 10 00.3
i(PP) 07 11 47.6
Tadzhik-Sinkiang (h = N).
m = 5.6, M = 5.4 (Up,Ki).
Multiple P.

" 11 Ki iP 07 22 08.0
Ud eP 07 22 20
i 07 22 28.0
De iP 07 22 18.3
Tadzhik-Sinkiang.
Origin time = 07 14 28.

" 11 Ud iP 07 26 34.1

" 11 Ud iP 08 02 43.7

" 11 Up iP 08 10 31.9
i 08 11 07.8
i(PP) 08 12 07.0
Ki iP 08 10 34.8 C
(cont.)

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

1974
Aug. 11 (cont.)

	Ki	i		08 10 40.3
		iPP		08 12 09.3
				micr sec
		P	Z'	0.1 1.0
	Sk	iP		08 10 55.7 C
		iPP		08 12 35.8
	Um	iP		08 10 27.2 C
		i		08 10 33.6
	Ud	iP		08 10 49.0 C
		iPP		08 12 33.5
	De	iP		08 10 48.1 C

Tadzhik-Sinkiang (h = 10 km).

" 11	Ki	iP		09 09 37.5
	Um	iP		09 09 30.5
	Ud	iP		09 09 51.8
	De	iP		09 09 50.3

Tadzhik-Sinkiang.
Origin time = 09 02 00.

" 11	Ud	iP		09 11 32.9
" 11	Up	iP		09 16 34.8
		iPn		09 17 52.9
		iPP		09 18 09.5
				micr sec
		Mx	E	0.8 14
		Mx	N	1.3 18
		Mx	Z	1.1 14
	Ki	iP		09 16 37.5 C
				micr sec
		P	Z'	0.1 0.8
		Mx	E	0.7 9
		Mx	N	0.9 13
		Mx	Z	0.8 10
	Sk	iP		09 16 58.3
	Um	iP		09 16 29.8
		i		09 16 35.1
	Ud	iP		09 16 51.5 C
	De	iP		09 16 50.1 C
		i		09 16 54.7

Tadzhik-Sinkiang (h = 30 km).
M = 5.1 (Up,Ki).

" 11	Ki	iP		09 21 08.7
	Sk	iP		09 21 29.8
	Ud	iP		09 21 20.1

Tadzhik-Sinkiang.
Origin time = 09 13 30.

" 11	Ud	iP		10 06 10.3
" 11	Ud	iP		10 14 04.0
" 11	Ud	iP		10 19 07.4

1974
Aug. 11

	Ki	iP		10 37 36.4
	Sk	iP		10 37 57.2
	Um	iP		10 37 28.0
	Ud	iP		10 37 50.1
	De	iP		10 37 48.8

Tadzhik-Sinkiang.
Origin time = 10 29 58.

" 11	Ud	iP		10 53 22.6
" 11	Ki	iP		11 09 00.6
	Um	i(P)		11 08 57.7
	Ud	iP		11 09 14.2

Tadzhik-Sinkiang.
Origin time = 11 01 23.

" 11	Ud	iP		11 38 00.6
" 11	Ki	iP		11 45 00.0
	Ud	iP		11 45 13.9

Tadzhik-Sinkiang.
Origin time = 11 37 22.

" 11	Up	iP		12 13 58.7
	Ki	iP		12 14 00.1
				micr sec
		Mx	N	0.5 13
	Sk	iP		12 14 21.6
	Um	iP		12 13 52.2
	Ud	iP		12 14 14.2
	De	iP		12 14 12.7

Tadzhik-Sinkiang (h = N).

" 11	Up	iP		12 28 08.5
	Ki	iP		12 28 09.8
				micr sec
		Mx	E	0.3 12
		Mx	N	0.5 13
	Sk	iP		12 28 31.2
	Um	iP		12 28 02.8
	Ud	iP		12 28 23.7
	De	eP		12 28 21
		i		12 28 23.2

Tadzhik-Sinkiang (h = N).

" 11	Up	iP		12 52 39.1
	Ki	iP		12 52 41.9 C
				micr sec
		Mx	E	0.4 11
		Mx	Z	0.3 13
	Sk	iP		12 53 02.4
		iPP		12 54 43.7
	Um	iP		12 52 34.0 C
	Ud	iP		12 52 55.8 C
	De	iP		12 52 54.7

Tadzhik-Sinkiang (h = N).

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

1974
Aug. 11 Ud iP 13 08 17.4

" 11 Up iP 13 16 21.6
Ud eP 13 16 39
Tadzhik-Sinkiang.
Origin time = 13 08 47.

" 11 Ki iP 13 28 55.2
micr sec
Mx N 0.5 13
Um iP 13 28 48.4
Ud iP 13 29 10.0
De eP 13 29 08
i 13 29 09.0
Tadzhik-Sinkiang (h = N).

" 11 Ki iP 13 40 16.5
Um iP 13 40 10.7
Ud iP 13 40 29.8
De iP 13 40 28.9
Tadzhik-Sinkiang.
Origin time = 13 32 39.

" 11 Up iP 13 46 01.1
Ki iP 13 46 02.1
Sk iP 13 46 24.0
Um iP 13 45 54.7
i 13 45 58.9
Ud iP 13 46 16.4
i 13 46 20.0
De iP 13 46 15.2
Tadzhik-Sinkiang (h = N).

" 11 Up iP 14 07 00.2
Ki iP 14 07 00.8
i 14 07 03.2
micr sec
P Z' 0.1 0.8
Sk iP 14 07 21.6
i 14 07 23.6
Um iP 14 06 53.0
i 14 06 55.4
Ud iP 14 07 14.8
i 14 07 17.3
De iP 14 07 13.6
i 14 07 16.1
Tadzhik-Sinkiang (h = N).
Double P, average separation 2.4 sec.

" 11 Ud iP 14 23 40.4

" 11 Ud iP 14 40 58.6
Tadzhik-Sinkiang.

" 11 Ki eP 15 16 54
(cont.)

1974
Aug. 11 (cont.)
Ud iP 15 17 07.4
Tadzhik-Sinkiang.
Origin time = 15 09 15.

" 11 Ki iP 16 52 18.4
Ud iP 16 52 32.3
Tadzhik-Sinkiang.
Origin time = 16 44 40.

" 11 Ud iP 16 55 29.7

" 11 Up iP 17 29 04.2
Ki iP 17 29 06.1
Ud iP 17 29 20.1
De iP 17 29 19.3
Tadzhik-Sinkiang.
Origin time = 17 21 28.

" 11 Up iP 17 48 18.4
Ki iP 17 48 21.4
Sk iP 17 48 42.2
Um iP 17 48 13.7
Ud iP 17 48 35.4
De iP 17 48 34.4
Tadzhik-Sinkiang (h = N).

" 11 Ki iP 17 50 30.9
Ud iP 17 50 41.7
De iP 17 50 41.0
Tadzhik-Sinkiang.
Origin time = 17 42 51.

" 11 Ud e 18 15 15
iSgl 18 15 55.3

" 11 Ki iP 18 19 35.3
Ud iP 18 19 48.1
Tadzhik-Sinkiang.
Origin time = 18 11 56.

" 11 Ud iP 19 01 42.5

" 11 Ud iP 19 04 29.4
Kurile Islands.

" 11 Ki iP 19 34 57.5
Ud iP 19 35 12.2
Tadzhik-Sinkiang.
Origin time = 19 27 20.

" 11 Up iP 19 38 15.4
i 19 38 19.0
Ki iP 19 38 14.9
i 19 38 22.0
(cont.)

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

1974 Aug.	11	(cont.)					
		Sk	iP		19 38 38.6		
			iPP		19 40 18.4		
		Um	iP		19 38 10.4		
			iPP		19 39 34.1		
		Ud	iP		19 38 28.5		
			i		19 38 32.2		
		De	eP		19 38 27		
			i		19 38 30.3		
		Tadzhik-Sinkiang (h = N).					
"	11	Up	iP		19 42 16.6		
"	11	Up	iP		20 13 03.7	C	
			i		20 13 06.8		
			iPP		20 14 34.0		
			iS		20 19 08		
					micr	sec	
			P	Z'	0.7	1.5	
			PP	Z'	1.1	2.0	
			Mx	E	7.0	15	
			Mx	N	14	18	
			Mx	Z	9.5	12	
		Ki	iP		20 13 06.7	C	
			i		20 13 09.3		
			iS		20 19 13		
					micr	sec	
			P	Z'	0.7	1.2	
			Mx	E	8.4	12	
			Mx	N	24	12	
			Mx	Z	6.6	10	
		Sk	iP		20 13 27.7	C	
			i		20 13 30.7		
			iPP		20 15 10.6		
		Um	iP		20 12 58.9	C	
			i		20 13 02.1		
			iPP		20 14 31.0		
			iS		20 18 55		
		Ud	iP		20 13 20.1		
			i		20 13 23.8		
			iPP		20 14 56.6		
		De	iP		20 13 19.1		
			i		20 13 22.6		
			iPP		20 14 58.8		
		Tadzhik-Sinkiang (h = N). m = 6.1, M = 5.9 (Up,Ki). Double P, average separation 3.2 sec. In this series of aftershocks, Ki is one of our most sensitive stations (for P), while PP Z' almost never shows up clearly at Ki, as distinct from our other stations.					
"	11	Ud	iP		20 33 14.2		
			i		20 33 17.2		
1974 Aug.	11	Ud	iP		20 55 23.4		
"	11	Ud	iPKP1		21 28 16.5		
		De	iPKP1		21 28 28.0	D	
"	11	Up	iP		21 29 10.4	D	
			i		21 29 13.0		
			iPP		21 30 45.2		
			iS		21 35 10		
					micr	sec	
			P	Z'	0.4	1.2	
			PP	Z'	1.6	2.0	
			Mx	E	14	10	
			Mx	N	18	18	
			Mx	Z	28	10	
		Ki	iP		21 29 13.7	D	
			i		21 29 16.5		
			iPP		21 30 45		
			iS		21 35 23		
					micr	sec	
			P	Z'	1.0	1.5	
			Mx	E	49	12	
			Mx	N	50	12	
			Mx	Z	47	12	
		Sk	iP		21 29 33.9	D	
			i		21 29 36.7		
			iPP		21 31 13.2		
		Um	iP		21 29 05.4	D	
			i		21 29 08.6		
			iPP		21 30 34.2		
		Ud	iP		21 29 27.3	D	
			i		21 29 30.3		
			iPP		21 31 06.0		
		De	iP		21 29 26.2	D	
			i		21 29 29.0		
			iPP		21 31 09.4		
		Tadzhik-Sinkiang (h = 9 km). m = 6.1, M = 6.5 (Up,Ki). As distinct from most other aftershocks in this series, this shock shows a very clear P dilatation and not compression.					
"	11	Ud	iP		21 49 42.6		
"	11	Up	iP		21 57 43.1		
		Ki	iP		21 57 44.0		
		Sk	iP		21 58 04.6		
		Um	iP		21 57 36.4		
		Ud	iP		21 57 58.0		
		De	iP		21 57 57.0		
		Tadzhik-Sinkiang (h = N).					
"	11	Up	iP		22 04 04.7		
		Ki	iP		22 04 05.3		
		(cont.)					

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

1974							
Aug.	11	(cont.)					
		Sk	iP			22 04 26.3	
		Um	iP			22 03 57.7	
		Ud	iP			22 04 19.1	
		De	iP			22 04 17.4	
		Tadzhik-Sinkiang (h = N).					
"	11	Ki	iP			22 04 34.8	
		Sk	eP			22 04 59	
		Um	iP			22 04 25.7	
		Ud	iP			22 04 49.0	
		De	iP			22 04 48.7	
		Tadzhik-Sinkiang.					
		Origin time = 21 56 58.					
"	11	De	iPKP			22 11 45.8	
"	11	Up	iP			22 18 02.1	
			i			22 18 04.9	
		Ki	iP			22 18 04.7	
		Sk	iP			22 18 25.7	
		Um	iP			22 17 57.3	
			i			22 18 00.2	
		Ud	iP			22 18 18.8	
			i			22 18 21.7	
		De	iP			22 18 17.6	
			i			22 18 20.6	
		Tadzhik-Sinkiang (h = N).					
		Double P, average separation 2.9 sec.					
"	11	Ki	iP			22 24 28.4	
		Ud	iP			22 24 42.5	
		Tadzhik-Sinkiang.					
		Origin time = 22 16 50.					
"	11	Ki	iP			22 31 03.3	
			i			22 31 07.2	
		Sk	eP			22 31 28	
		Um	iP			22 30 58.9	
		Ud	eP			22 31 16	
			i			22 31 23.6	
		De	eP			22 31 21	
		Tadzhik-Sinkiang.					
"	11	Ki	eP			22 33 13	
		Ud	iP			22 33 22.5	
		Tadzhik-Sinkiang.					
		Origin time = 22 25 33.					
"	11	Ki	iP			22 43 36.3	
"	11	Ki	eP			22 48 58	
"	11	Up	iP			22 51 37.4	
		Ki	i(P)			22 51 09.3	

1974							
Aug.	11	Ud	iP			22 56 26.4	
"	11	Up	iP			23 26 31.0	
			iPP			23 28 01.7	
						micr	sec
			Mx	E		0.5	11
			Mx	N		0.7	15
			Mx	Z		0.7	11
		Ki	iP			23 26 34.2	D
			iPP			23 28 06.7	
						micr	sec
			P	Z'		0.1	0.7
			Mx	E		0.8	12
			Mx	N		0.5	12
			Mx	Z		0.8	12
		Sk	iP			23 26 54.8	D
		Um	iP			23 26 26.7	
		Ud	iP			23 26 48.4	D
		De	iP			23 26 47.1	D
			iPP			23 28 26.8	
		Tadzhik-Sinkiang (h = N).					
		M = 4.9 (Up,Ki).					
"	11	Ud	iP			23 34 32.3	
"	12	Ud	iP			00 18 20.3	
"	12	Ki	iP			00 20 24.3	
		Ud	iP			00 20 37.3	
		Tadzhik-Sinkiang.					
		Origin time = 00 12 45.					
"	12	Ki	eP			00 44 45	
		Ud	iP			00 44 59.5	
		Tadzhik-Sinkiang.					
		Origin time = 00 37 08.					
"	12	Ki	iP			00 51 44.5	
		Um	iP			00 51 36.5	
		Ud	iP			00 51 58.5	
		Tadzhik-Sinkiang.					
		Origin time = 00 44 07.					
"	12	Ki	iP			00 58 38.7	
		Ud	iP			00 58 47.6	
		Tadzhik-Sinkiang.					
"	12	Ki	iP			01 24 41.7	
		Um	iP			01 24 34.6	
		Ud	iP			01 24 55.7	
		Tadzhik-Sinkiang.					
		Origin time = 01 17 04.					
"	12	Ud	iP			01 26 44.4	
"	12	Ki	iP			01 44 09.2	
		Um	iP			01 44 43.9	

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

1974 Aug. 12

	Ki	iP	01 52 48.1
	Um	iP	01 52 40.7
	Ud	iP	01 53 02.0

Tadzhik-Sinkiang.
Origin time = 01 45 10.

" 12

	Up	iP	01 56 35.6
	Ki	iP	01 56 36.3
	Um	iP	01 56 30.7
	Ud	eP	01 56 50
	De	eP	01 56 50

Tadzhik-Sinkiang.
Origin time = 01 49 00.

" 12

	Ud	iP	02 29 42.9

" 12

	Up	eP	02 43 41
	Ki	iP	02 43 43.8
	Um	iP	02 43 38.2
	Ud	iP	02 44 00.0 C
	De	iP	02 43 58.8

Tadzhik-Sinkiang.
Origin time = 02 36 07.

" 12

	Up	ePKP	03 11 52	
		iPP	03 14 24.8	
			micr	sec
		PP	Z' 0.1	1.8
		Mx	E 0.7	18
		Mx	N 1.1	20
		Mx	Z 2.3	21
	Ki	ePKP	03 11 38	
		i	03 11 41.5	
			micr	sec
		Mx	E 1.8	20
		Mx	N 1.5	18
		Mx	Z 1.9	20
	Sk	iPKP	03 11 51.6	
	Um	iPKP	03 11 48.7	
	Ud	e(PKP)	03 11 46.5	
		iPKP	03 11 57.0	
	De	iPKP	03 12 03.3	

Fiji Islands (h = 70 km).
M = 5.8 (Up,Ki).

" 12

	Up	eP	03 24 03

" 12

	Ud	iP	03 29 20.7

" 12

	Up	iP	05 03 28.0
	Ki	iP	05 03 30.6
	Ud	iP	05 03 43.0

Tadzhik-Sinkiang.
Origin time = 04 55 52.

" 12

	Ud	iP	07 09 12.9

Tadzhik-Sinkiang.

1974 Aug. 12

	Ud	iP	10 59 10.6

Kurile Islands.

" 12

	Ud	iP	11 03 18.2

" 12

	Up	iP	11 34 12.2
	Ki	iP	11 33 34.8
	Sk	eP	11 34 04
	Um	iP	11 33 48.6 C
	Ud	iP	11 34 19.1
	De	iP	11 34 45.4

Japan (h = 70 km).

" 12

	Ki	iP	13 47 45.3	
			micr	sec
		Mx	E 0.3	10
		Mx	N 0.6	11
		Mx	Z 0.5	13
	Sk	eP	13 48 10	
	Ud	iP	13 47 58.6	
	De	eP	13 47 58	

Tadzhik-Sinkiang (h = N).

" 12

	Up		micr	sec
		Mx	E 0.4	12
		Mx	N 0.7	15
		Mx	Z 0.5	12
	Ki	iP	13 56 32.6	
			micr	sec
		Mx	E 0.5	12
		Mx	N 1.0	12
		Mx	Z 0.5	12
	Sk	iP	13 56 53.6	
	Um	iP	13 56 25.1	
		i	13 56 31.4	
	Ud	iP	13 56 47.0	
	De	iP	13 56 44.5	

Tadzhik-Sinkiang.
Origin time = 13 48 55.
M = 4.7 (Up,Ki).

" 12

	Ud	iP	14 09 18.0

" 12

	Up		micr	sec
		Mx	E 0.7	12
		Mx	N 1.5	14
		Mx	Z 1.0	13
	Ki	eP	14 22 29	
		i	14 22 32.8	
			micr	sec
		Mx	E 1.3	12
		Mx	N 2.5	12
		Mx	Z 1.4	12
	Sk	eP	14 22 52	
	Um	iP	14 22 20.7	
	Ud	eP	14 22 44	
	De	iP	14 22 44.5	

(cont.)

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

1974
Aug. 12 (cont.)
Tadzhik-Sinkiang (h = N).
M = 5.1 (Up,Ki).

" 12	Up	iP	14 22 42.3
	Ki	iP	14 22 45.3
	Sk	iP	14 23 08.6
	Um	iP	14 22 37.4
	Ud	iP	14 22 59.1
	De	iP	14 22 56.7

Tadzhik-Sinkiang.
Origin time = 14 15 07.

" 12	Ki	eP	14 28 30
	Sk	eP	14 27 55
	Um	iP	14 28 10.1
	Ud	iP	14 27 39.9

North of Ascension Island
(h = N).

" 12	Sk	eP	15 02 09
	Ud	e(P)	15 01 26
		i	15 01 40.7

Greece.

" 12	Ud	iP	16 35 46.4
" 12	Up	iP	17 36 29.4
		i	17 36 35.0
	Um	iP	17 36 51.3
	Ud	iP	17 36 56.2
" 12	Up	iP	19 06 35.3
	Ki	iP	19 06 41.8
	Sk	iP	19 07 00.3
	Um	iP	19 06 32.3
	Ud	iP	19 06 51.9
	De	iP	19 06 49.7

Afghanistan-USSR.
Intermediate depth.

" 12	Ki	eP	20 26 04
	Sk	iP	20 26 30.3
	Ud	iP	20 26 22.9

Tadzhik-Sinkiang.
Origin time = 20 18 30.

" 12	Um	iP	21 01 42.2
		i	21 01 56.2
	Ud	iP	21 02 14.3

Kurile Islands.

" 12	Up	iP	21 25 25.2
		i	21 25 37.1
		i	21 26 11.5
		iPP	21 26 55.8

(cont.)

1974
Aug. 12 (cont.)

Up			micr	sec
	Mx	E	0.6	12
	Mx	N	1.2	17
	Mx	Z	0.8	12
Ki	iP		21 25 27.5	
			micr	sec
	P	Z'	0.1	1.0
	Mx	E	1.3	15
	Mx	N	1.4	13
	Mx	Z	1.1	13
Sk	iP		21 25 48.5	
Um	iP		21 25 19.7	
	i		21 25 23.1	
	iPP		21 26 52.7	
Ud	iP		21 25 41.5	
	iPP		21 27 26.7	
De	iP		21 25 40.5	
	i		21 25 45.0	
	i		21 27 37.9	

Tadzhik-Sinkiang (h = 25 km).
M = 5.0 (Up,Ki).

" 12	Up	eP	21 40 06
		ipP	21 40 19.2
	Ki	eP	21 39 49
		ipP	21 40 04.8
	Sk	eP	21 39 44
		ipP	21 39 58.7
	Um	iP	21 39 56.8
		ipP	21 40 09.1
	Ud	iP	21 40 06.0
		ipP	21 40 18.0
	De	ipP	21 40 19.1

Mexico.
h = 50 km (Up,Ki,Sk,Um,Ud).

" 12	Up	iP	22 04 52.4	
			micr	sec
	Mx	E	0.6	12
	Mx	N	0.8	16
	Mx	Z	0.8	12
	Ki	iP	22 04 55.5	
			micr	sec
	Mx	E	0.6	15
	Mx	N	0.7	13
	Mx	Z	0.5	12
	Sk	iP	22 05 15.8	
		i	22 05 25.8	
	Um	iP	22 04 47.3	
	Ud	iP	22 05 09.6	
		i	22 05 18.1	
	De	iP	22 05 08.3	

Tadzhik-Sinkiang (h = N).
M = 4.9 (Up,Ki).

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

1974					
Aug.	12	Ki	iP	22 10 12.3	
			i	22 10 14.6	
		Sk	eP	22 10 32	
		Um	iP	22 10 06.6	
		Ud	iP	22 10 26.1	
		Tadzhik-Sinkiang.			
		Origin time = 22 02 34.			
"	12	Up	iP	22 52 09.5	
		Ki	iP	22 52 12.8	
		Sk	iP	22 52 33.4	
			i	22 52 36.1	
		Um	iP	22 52 05.6	
		Ud	iP	22 52 26.8	
		De	iP	22 52 23.0	
			i	22 52 28.3	
		Tadzhik-Sinkiang (h = N).			
"	12	Up	iP	23 58 02.8	
		Ki	iP	23 57 38.2	
		Sk	iP	23 58 06.0	
		Um	iP	23 57 47.1	
		Ud	iP	23 58 12.4	
		De	iP	23 58 24.1	
		Formosa (h = 25 km).			
"	13	Ki	iP	00 26 08.7	
		Ud	iP	00 26 30.9	
"	13	Ud	iP	00 53 48.9	
"	13	Ud	iP	03 22 22.5	
"	13	Ki	iPKP	03 30 17.7	
		South Sandwich Islands			
		(h = N).			
"	13	Up	iP	03 57 15.5 C	
			iS	04 06 07	
			iP'P'	04 25 27.8	
				micr	sec
			P Z'	0.2	0.9
			Mx E	5.8	19
			Mx N	5.7	20
			Mx Z	9.8	20
		Ki	iP	03 56 22.7 C	
			iPP	03 58 41	
			iScP	04 01 06.9	
			iP'P'	04 25 42.7	
				micr	sec
			P Z'	0.2	1.4
			Mx E	8.5	20
			Mx N	5.8	19
			Mx Z	6.1	20
		Sk	iP	03 56 57.3	
			iPcP	03 57 29.0	
		(cont.)			

1974					
Aug.	13	(cont.)			
		Sk	iScP	04 01 31.5	
			iP'P'	04 25 35.6	
		Um	iP	03 56 48.7	
			iScP	04 01 28.1	
			iS	04 05 21	
			iP'P'	04 25 35.5	
		Ud	iP	03 57 16.3	
			iP'P'	04 25 32.7	
		De	iP	03 57 38.0 C	
			i	03 57 53.3	
		Aleutian Islands (h = 50 km).			
		m = 6.1, M = 6.0 (Up,Ki).			
"	13	Ud	iP	04 10 49.5	
"	13	Up	iP	04 34 37.4	
			iPP	04 36 15.2	
		Ki	iP	04 34 48.1	
		Sk	iP	04 35 03.8	
			ipP	04 35 37.1	
		Um	iP	04 34 36.7	
		Ud	iP	04 34 54.0	
			ipP	04 35 30.4	
		De	iP	04 34 52.9	
		Hindu Kush.			
		h = 170 km (Sk,Ud).			
"	13	Up		micr	sec
			Mx N	1.0	22
			Mx Z	1.4	21
		Ki	iPKP	06 12 14.3	
				micr	sec
			Mx E	0.7	20
			Mx N	0.8	19
			Mx Z	1.2	20
		Fiji Islands (h = 30 km).			
		M = 5.6 (Up,Ki).			
"	13	Ki	iP	07 31 16.9	
		Molucca Passage (h = N).			
"	13	Up	Mx	08 36	
				micr	sec
			Mx N	0.8	21
			Mx Z	1.5	22
		Fiji Islands (h = N).			
"	13	Ud	iP	10 30 25.2	
"	13	Up	iP	11 22 12.9	
		Ki	iP	11 22 16.6	
		Sk	iP	11 22 38.1	
		Ud	iP	11 22 30.2	
		De	iP	11 22 29.9	
		Tadzhik-Sinkiang (h = 20 km).			

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

1974						
Aug.	13	Up			micr	sec
			Mx	E	1.0	20
			Mx	N	1.9	21
			Mx	Z	2.7	22
		Ki	iPKP		13 11 47.4	
					micr	sec
			Mx	E	1.5	20
			Mx	N	1.6	19
			Mx	Z	2.4	20
		Fiji Islands (h = 55 km).				
		M = 5.9 (Up,Ki).				
"	13	Ki	iPKP		14 00 34.2	
		Fiji Islands (h = N).				
"	13	Ki	iP		14 00 49.4	
		Ud	iP		14 01 04.0	
		Tadzhik-Sinkiang.				
		Origin time = 13 53 11.				
"	13	Ki	iP		14 23 42.9	
		Sk	iP		14 24 03.4	
		Ud	iP		14 23 56.9	
		De	iP		14 23 56.4	
		Tadzhik-Sinkiang (h = N).				
"	13	Um	iP		14 41 53.7	
		Ud	iP		14 42 29.7	
		Kurile Islands (h = N).				
"	13	Ki	iP		14 55 49.1	
			i		14 55 53.4	
		Ud	iP		14 56 03.3	
		Tadzhik-Sinkiang (h = N).				
"	13	Up	iPKP1		15 05 35.9	
					micr	sec
			PKP1	Z'	0.1	1.4
		Ki	ePKP		15 05 30	
			iPKP1		15 05 34.7	
					micr	sec
			PKP1	Z'	0.2	1.2
			Mx	E	0.8	18
			Mx	N	0.6	19
			Mx	Z	0.6	19
		Sk	iPKP1		15 05 44.0	
		Um	iPKP1		15 05 34.1	
		Ud	iPKP2		15 05 56.9	
		De	iPKP1		15 05 38.6	
		West of Macquarie Islands (h = N).				
"	13	Up	iPKP		15 21 43.2	
		Ki	iPKP		15 21 33.5	
		Sk	iPKP		15 21 44.6	
		Um	iPKP		15 21 36.8	
		(cont.)				

1974				
Aug.	13	(cont.)		
		Ud	iPKP	15 21 47.6
		De	iPKP	15 21 51.2
		New Britain (h = 100 km).		
"	13	Ki	iP	16 46 03.1
		Tadzhik-Sinkiang.		
"	13	Sk	iSgl	19 55 28.0
		Ud	iSgl	19 54 48.2
		De	iSgl	19 54 53.3
		Southwest Norway.		
"	13	Ki	iP	21 26 55.5
			i	21 26 57.1
		Sk	iP	21 27 18.1
		Um	iP	21 26 48.6
		Ud	iP	21 27 11.6
		De	iP	21 27 09.1
		Tadzhik-Sinkiang (h = N).		
"	14	Ki	iP	01 23 42.1
		Um	iP	01 23 36.2
		Ud	iP	01 23 58.1
		Tadzhik-Sinkiang.		
		Origin time = 01 16 05.		
"	14	Ki	iP	01 38 40.2
		Sk	eP	01 39 01
		Um	iP	01 38 32.2
		Ud	iP	01 38 54.0
		De	iP	01 38 53.5
		Tadzhik-Sinkiang (h = N).		
"	14	Ki	iP	02 26 28.6
		Sk	iP	02 26 50.0
		Um	iP	02 26 21.3
		Ud	iP	02 26 42.8
			i	02 26 47.7
		De	iP	02 26 42.1
		Tadzhik-Sinkiang.		
		Origin time = 02 18 51.		
"	14	Ud	e	02 42 30
			i	02 42 32.3
			iRg	02 42 38.2
"	14	Ud	iP	03 28 32.1
"	14	Up	iPKP1	03 32 27.6
		Sk	iPKP1	03 32 15.5
			i	03 32 22.7
		Um	iPKP1	03 32 10.7
		Ud	iPKP1	03 32 24.8
			i	03 32 34.9
		De	i	03 32 46.7
		Kermadec Islands.		

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

1974
Aug. 14 Up iP 03 56 15.9
Ki iP 03 55 42.6
Um iP 03 55 57.1
Ud iP 03 56 22.8
De iP 03 56 35.1
Bonin Islands (h = 60 km).

" 14 Ki iPKP 04 05 32.1
Sk iPKP 04 05 43.5
Um iPKP 04 05 38.7

" 14 Ki iP 05 10 08.2
Ud iP 05 10 22.2
Tadzhik-Sinkiang.
Origin time = 05 02 30.

" 14 Up iP 05 43 44.6
Ki iP 05 42 56.5
Sk eP 05 43 30
Um iP 05 43 18.6 C
ipP 05 43 31.2
Ud iP 05 43 49.9
Kurile Islands.
h = 45 km (Um).

" 14 Up iP 05 45 49.8 C
ipP 05 46 02.6
iP'P' 06 13 58.6

		micr	sec
P	Z'	0.2	0.8
Mx	E	0.8	17
Mx	N	1.3	18
Mx	Z	1.9	20

Ki iP 05 44 56.5 C
ipP 05 45 12.2
iPcP 05 45 42.4
iScP 05 49 39.1

		micr	sec
P	Z'	0.1	1.2
Mx	E	1.5	18
Mx	N	1.2	18
Mx	Z	1.4	17

Sk iP 05 45 28.5 C
iPcP 05 46 01.5
iP'P' 06 14 08.9
Um iP 05 45 22.6 C
ipP 05 45 35.6
iPcP 05 45 58.2
iP'P' 06 14 10.6
Ud iP 05 45 49.8 C
iPcP 05 46 16.5
De iP 05 46 12.3 C
ipP 05 46 27.4
Aleutian Islands.
h = 50 km (Up,Ki,Um,De).
m = 6.0, M = 5.3 (Up,Ki).

1974
Aug. 14 Ki iP 06 25 53.4
i 06 25 58.5
Sk iP 06 26 15.4
i 06 26 20.3
Ud iP 06 26 07.5
i 06 26 13.2
De iP 06 26 04.7
i 06 26 10.9
Tadzhik-Sinkiang (h = N).
Double P, average separation 5.5 sec.

" 14 Up iP 07 00 27.8 C

		micr	sec
P	Z'	0.1	1.0

Ki iP 06 59 45.3 C

		micr	sec
P	Z'	0.1	1.0

Sk iP 07 00 20.1 C
Um iP 07 00 03.9 C
Ud iP 07 00 34.5 C
De iP 07 00 51.1 C
Japan (h = 40 km).
m = 6.0 (Up,Ki).

" 14 Ki iP 07 15 13.7
Sk eP 07 15 35
Ud iP 07 15 27.2
De iP 07 15 26.2
Tadzhik-Sinkiang.
Origin time = 07 07 36.

" 14 Up iP 07 58 31.4
Ki iP 07 58 33.9
Sk iP 07 58 55.0
Um iP 07 58 26.0
Ud iP 07 58 47.9
De iP 07 58 46.8
Tadzhik-Sinkiang (h = N).

" 14 Sk iP 10 51 57.7
Ud iP 10 51 23.8
Greece.

" 14 Ud iPKP1 11 27 29.6

" 14 Ki iP 11 46 17.5
Ud iP 11 46 31.4
Tadzhik-Sinkiang.
Origin time = 11 38 39.

" 14 Up iP 13 06 04.1
Ki i(P) 13 07 05.5 C
i 13 07 12.8
Sk e(P) 13 06 54
(cont.)

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

1974
Aug. 14 (cont.)

	Um	iP	13 06 32.0	
	Ud	iP	13 06 23.6	
	De	iP	13 05 58.3	
		i	13 06 03.0	
" 14	Ud	iP	14 26 19.3	
	De	iP	14 26 17.1	

Tadzhik-Sinkiang.
Origin time = 14 18 27.

" 14	Up	iP	15 05 30.6		C
		iPn	15 05 41.6		
			micr	sec	
		P	Z' 0.3	1.0	
	Ki	iP	15 04 30.9		
		i	15 04 41.8		
			micr	sec	
		P	Z' 0.3	1.1	
		i	Z' 0.4	1.0	
	Sk	iP	15 05 25.1		C
		iPn	15 05 34.2		
		i	15 05 45.7		
	Um	iP	15 04 55.7		C
		i(Pn)	15 05 09.1		
		i	15 06 29.8		
	Ud	iP	15 05 42.7		C
		i	15 05 46.6		
		iPn	15 05 57.9		
		i	15 06 08.6		
	De	iP	15 06 05.0		
		iPn	15 06 28.9		

Western Siberia.
m = 5.8 (Up,Ki).
Probably explosion.
Long-lasting reverberation wave trains on SP records.

" 14	Ki	iP	15 55 15.9
	Ud	iP	15 55 29.8

Tadzhik-Sinkiang.
Origin time = 15 47 38.

" 14	Up	iP	16 10 36.2
		iPP	16 11 09.4
	Ki	iP	16 11 44.8
	Sk	iP	16 11 13.6 C
	Ud	iP	16 10 42.0 C
	De	iP	16 10 07.9
		i	16 10 11.9

Crete (h = 60 km).

" 14	Up	i	16 48 55.2
		iSg1	16 49 10.1
	Sk	e	16 47 41
		iSg1	16 47 48.0
		iSg2	16 47 51.6

(cont.)

1974
Aug. 14 (cont.)

	Um	iSg1	16 49 34.2
	Ud	iSg1	16 48 13.9
	De	iSg1	16 49 26.2

West coast of Norway, 61.8°N, 4.8°E.
Origin time = 16 45 46.
By combination with Bergen and Kongsberg readings.

" 14	Ud	iP	17 21 08.0
" 14	Ud	i(Sg1)	18 08 09.8
	De	iSg1	18 08 21.7
" 14	Ki	iPKP	18 15 21.2
	Um	iPKP	18 15 18.7
	Ud	iPKP	18 15 10.4

Argentina (h = 130 km).

" 14	Sk	iPKP1	18 52 40.9
	Um	iPKP1	18 52 35.9
		i	18 52 38.1
	Ud	iPKP1	18 52 51.4

Kermadec Islands.

" 14	Ki	iP	20 04 12.4

Canada (h = N).

" 14	Up	i(P)	21 09 01.7
	Um	i(P)	21 10 44.7
	Ud	e(P)	21 09 02
" 14	Up	iP	21 45 13.0
" 14	Ki	iP	22 05 59.7
	Um	iP	22 06 26.4
	Ud	iP	22 06 51.1
	De	iP	22 07 14.1 C

South of Alaska.

" 14	Up	iP	22 14 28.8	
			micr	sec
		Mx E	0.6	12
		Mx N	1.2	17
		Mx Z	0.8	12
	Ki	iP	22 14 31.5	
		i	22 14 39.5	
			micr	sec
		Mx E	0.5	12
		Mx N	1.1	13
		Mx Z	0.4	10
	Sk	iP	22 14 52.5	
		i	22 15 01.0	
	Um	iP	22 14 23.7	
		i	22 14 32.7	
	Ud	iP	22 14 45.4	

(cont.)

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

1974
Aug. 14 (cont.)

	Ud	i	22 14 54.2
	De	iP	22 14 44.5
		i	22 14 52.7

Tadzhik-Sinkiang (h = N).
M = 4.9 (Up,Ki).
Probably two shocks, 8.5 sec apart.

" 14

Ki	iP	23 57 42.3
Um	iP	23 57 34.7
Ud	iP	23 57 56.6

Sinkiang, China.
Origin time = 23 50 05.

" 15

Ki	iP	00 39 37.2

Mariana Islands (h = 50 km).

" 15

Ki	iP	00 40 12.2
Um	iP	00 40 34.1

" 15

Ud	iPKP1	01 38 31.2
De	iPKP1	01 38 42.8 C

Tonga Islands (h = 170 km).

" 15

Ki	iP		02 14 03.9	
			micr	sec
	P	Z'	0.1	1.1
Sk	iP		02 14 27.0	
Um	iP		02 14 13.6	
Ud	iP		02 14 28.7	

North of Halmahera
(h = 60 km).
Our readings are consistently late compared to the NEIS solution.

" 15

Up	iP	02 24 52.9
Um	iP	02 25 12.1

" 15

Up	iP	03 53 49.1
Sk	iP	03 53 44.9
Um	iP	03 53 29.0
Ud	iP	03 53 56.8

Japan (h = 45 km).

" 15

Up	iPKP		03 54 45.4	
			micr	sec
	Mx	E	0.7	19
	Mx	N	0.7	20
	Mx	Z	0.8	20
Ki	iPKP		03 54 33.0	
			micr	sec
	Mx	E	0.9	20
	Mx	N	0.5	19
	Mx	Z	0.9	20

(cont.)

1974
Aug. 15 (cont.)

Sk	iPKP	03 54 43.9
Um	iPKP	03 54 38.7
Ud	iPKP	03 54 45.9
De	iPKP	03 54 53.2

Solomon Islands (h = 60 km).
M = 5.5 (Up,Ki).

" 15

Up	iP	04 46 14.3
Ki	iP	04 46 17.4 C
Sk	iP	04 46 37.7
Um	iP	04 46 09.6
Ud	iP	04 46 31.2 C
De	iP	04 46 30.3 C

Tadzhik-Sinkiang (h = N).

" 15

Ki	iP	08 34 10.8
Ud	iP	08 34 24.7

Tadzhik-Sinkiang.
Origin time = 08 26 33.

" 15

Ud	iP	08 36 29.2 C
De	iP	08 36 28.0

" 15

Up	iPKP1	08 46 46.4
Ud	iPKP1	08 46 47.1

" 15

Up	iP	10 57 33.3
Ki	iP	10 57 01.1
Sk	iP	10 57 30.4
Um	iP	10 57 15.0
Ud	iP	10 57 40.2
De	iP	10 57 52.4

Bonin Islands (h = 420 km).

" 15

Ki	eP	11 30 29
Ud	iP	11 30 45.1
De	iP	11 30 44.1

Tadzhik-Sinkiang (h = N).

" 15

Ki	iP	13 14 14.4 C
Ud	iP	13 14 29.1
De	eP	13 14 31

Kashmir-Sinkiang (h = 110 km).

" 15

Sk	iPKP1	14 45 19.0
	i	14 45 48.0
Um	iPKP1	14 45 18.1

" 15

Ki	e(P)	15 06 56
Um	e(P)	15 05 52
De	eP	15 05 01
	i	15 05 06.6

" 15

Up	iP	15 41 19.3
	i	15 41 25.3

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

1974
Aug. 15 Um iPKP 18 46 11.1
Ud iPKP 18 46 02.9
Chile (h = 100 km).

" 15 Up iP 18 56 23.8
Um iP 18 57 12.5
i 18 57 22.0
Ud iP 18 56 31.1

" 15 Ki i(P) 20 12 15.3
Ud i(P) 20 12 26.8

" 15 Up iP 23 17 01.1
Ki iP 23 16 42.0
Sk iP 23 17 08.9
Um iP 23 16 51.2
Ud iP 23 17 10.0
Luzon (h = N).

" 15 Up i(P) 23 36 22.5
i 23 36 46.8
Um i(P) 23 34 03.2
Ud i(P) 23 35 15.5

" 15 Up iP 23 51 25.6
Ki iP 23 51 23.0 C
Sk eP 23 51 46
Ud iP 23 51 36.4
Tadzhik-Sinkiang.
Origin time = 23 43 47.

" 16 Up eP 00 03 05
i 00 03 11.5

" 16 Up iP 00 18 42.9
Ki iP 00 18 44.3 C

		micr	sec
P	Z'	0.1	0.8
Mx	E	0.4	11
Mx	N	0.5	12
Mx	Z	0.4	12

Sk iP 00 19 04.7
iPP 00 20 46.8
Um iP 00 18 36.6 C
iPP 00 20 09.9
Ud iP 00 18 58.4 C
iPP 00 20 36.5
De iP 00 18 57.3 C
Tadzhik-Sinkiang (h = 50 km).

" 16 Up iP 01 58 29.5
ipP 01 58 41.1
Ki iP 01 57 41.9
Um iP 01 58 04.1
ipP 01 58 18.3
Ud iP 01 58 34.9
(cont.)

1974
Aug. 16 (cont.)
Ud ipP 01 58 47.0
Kurile Islands.
h = 45 km (Up,Um,Ud).

" 16 Um iP 06 10 26.5
Atlantic Ocean (h = N).

" 16 Ki iP 06 26 29.9
Um iP 06 26 40.1
Mariana Islands (h = 50 km).

" 16 Ki iP 06 33 54.4
Um iP 06 34 05.2
Mariana Islands (h = 20 km).

" 16 Ud iPKP1 07 22 31.5
De iPKP1 07 22 42.2
Fiji Islands (h = 500 km).

" 16 Up iP 08 49 30.1

" 16 Um iP 09 38 46.4
Ud iP 09 38 35.5

" 16 Up iP 09 52 28.4 C
ipP 09 52 42.7
iS 10 01 19
iP'P' 10 20 44.8

		micr	sec
P	Z'	0.1	0.7
pP	Z'	0.2	1.0
Mx	E	3.6	19
Mx	N	4.3	20
Mx	Z	6.8	20

Ki iP 09 51 35.2 C
ipP 09 51 50.9
iPcP 09 52 20.8
iPP 09 53 49
iScP 09 56 18.4
eS 09 59 44

		micr	sec
P	Z'	0.1	0.9
Mx	E	3.7	19
Mx	N	4.0	17
Mx	Z	4.2	18

Sk iP 09 52 09.3 C
ipP 09 52 23.7
iPcP 09 52 40.7
Um iP 09 52 01.6
ipP 09 52 15.5
iPcP 09 52 37.1
iS 10 00 35
i(P'P') 10 20 38.8
iP'P' 10 20 55.0
Ud iP 09 52 28.6 C
(cont.)

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

1974
Aug. 16 (cont.)

	Ud	ipP	09 52 43.2
		iPcP	09 52 54.8
	De	iP	09 52 50.8 C
		ipP	09 53 05.1

Aleutian Islands.
h = 55 km (Up,Ki,Sk,Um,Ud, De).
m = 5.9, M = 5.8 (Up,Ki).
The appearance of clear ScP, especially on Ki Z', from earthquakes in this epicentral region is noteworthy; cf Aug. 13 at 03 57 and Aug. 14 at 05 45.

" 16

Up	i(P)	11 51 14.9
	i	11 51 35.0
Ud	iP	11 51 06.3

" 16

Ud	iP	12 21 47.4

Panama (h = 35 km).

" 16

Ki	iP	13 23 29.3
Sk	iP	13 24 02.6
Um	iP	13 23 44.7
	ipP	13 24 01.6
Ud	iP	13 24 13.0
	ipP	13 24 27.9
De	iP	13 24 25.9

Japan.
h = 60 km (Um,Ud).

" 16

Ki	iP	16 31 40.9
Sk	iP	16 31 57.1
Ud	iP	16 32 27.7 C

" 16

Ki	iSKPl	17 18 40.5
De	iPKPl	17 16 14.7

Fiji Islands (h = 440 km).

" 16

Ud	iP	18 06 50.1

" 16

Up	iP		19 56 57.2
	ipP		19 57 23.9
Ki	iP		19 56 36.7 C
		micr	sec
	P	Z' 0.1	1.0
Sk	iP		19 57 02.1
Um	iP		19 56 43.9
	ipP		19 57 12.0
Ud	iP		19 57 02.0 C
De	iP		19 57 09.9

Mindanao.
h = 110 km (Up,Um).

" 16

Ki	iP	22 26 42.9

1974
Aug. 17

Ki	iP	03 30 45.9
Um	iP	03 30 38.1
Ud	iP	03 31 00.0

Tadzhik-Sinkiang (h = N).

" 17

Up	iP	04 00 11.7
Ki	iP	03 59 19.7
Sk	iP	03 59 59.1
Um	iP	03 59 43.6

Okhotsk Sea (h = 3 km).

" 17

Ud	iP	05 19 47.7

" 17

Up	iP		05 23 02.3 C
	i		05 23 07.2
	iPcP		05 23 53.6
		micr	sec
	P	Z' 0.1	1.0
	Mx	E 0.4	11
	Mx	N 0.6	14
	Mx	Z 0.5	15
Ki	iP		05 22 09.8 C
	i		05 22 14.4
		micr	sec
	P	Z' 0.1	1.2
	Mx	E 0.7	16
	Mx	N 0.9	15
	Mx	Z 1.1	15
Sk	iP		05 22 49.7
	i		05 22 54.9
Um	iP		05 22 33.8 C
	i		05 22 38.7
	iPcP		05 23 38.2
Ud	iP		05 23 08.4 C
	i		05 23 40.7
De	iP		05 23 28.9
	i		05 23 33.5

Okhotsk Sea (h = 1 km).
m = 5.7, M = 5.0 (Up,Ki).
Double P, average separation 4.8 sec.

" 17

Ud	iP	15 19 02.9

" 17

Ki	iP	16 31 38.4
Um	iP	16 31 44.4
Ud	iP	16 32 01.4

Molucca Passage (h = N).

" 17

Um	iP	19 14 43.9

Japan.

" 17

Ud	iP	21 05 56.1

Aleutian Islands (h = 55 km).

" 17

Ki	iP	22 32 17.4
Ud	iP	22 32 39.9

Molucca Passage (h = 120 km).

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

1974
Aug. 17 Up iP 23 16 39.1
Ki iP 23 17 15.4
Ud iP 23 16 53.9
De iP 23 16 39.6
Iran.

" 17 Up i(P) 23 58 41.4
micr sec
Mx E 0.7 13
Mx N 1.5 17
Mx Z 1.5 16
Ki iP 23 58 38.2
micr sec
P Z' 0.1 0.9
Mx E 0.9 15
Mx N 1.4 14
Mx Z 1.2 14
Sk eP 23 58 58
i 23 59 04.1
Um iP 23 58 29.4
i 23 58 36.5
Ud iP 23 58 51.7
i 23 58 59.9
De eP 23 58 50
Tadzhik-Sinkiang (h = 30 km).
M = 4.9 (Up,Ki).
Double P, of which Up (P) corresponds to the latter onset.

" 18 Ki iP 03 06 37.3
Ud iP 03 06 52.2
Tadzhik-Sinkiang.
Origin time = 02 58 59.

" 18 Ud iP 08 37 56.7

" 18 Um iP 10 52 18.9 C
Japan (h = 130 km).

" 18 Up eP 10 59 37
iPKP 11 03 07.8
iPP 11 04 42.6
micr sec
PKP Z' 0.2 1.4
Mx E 50 20
Mx N 35 20
Mx Z 110 19
Ki e(PKP) 11 03 10
iPKP 11 03 15.3
iPP 11 05 03
micr sec
PKP Z' 0.9 2.5
Mx E 63 21
Mx N 43 19
Mx Z 50 22
(cont.)

1974
Aug. 18 (cont.)
Sk i(PKP) 11 03 04.3
iPKP 11 03 12.2
i(PP) 11 04 29.2
Um iP 10 59 49 C
iPKP 11 03 08.9
iPP 11 04 57
Ud iPKP 11 02 59.8
i 11 03 37.7
iPP 11 04 31.0
iPKKP1 11 13 05.8
De iPKP 11 03 02.4
iPP 11 04 30.9
Chile (h = 35 km).
M = 7.4 (Up,Ki).
PP exhibits unusually long periods on the SP records, around 4-5 sec.

" 18 Up iP 11 26 34.3

" 18 Up iP 12 02 42.8
Um iP 12 02 49.9

" 18 Ud iPKP1 12 08 35.2 C

" 18 Ki iP 12 12 06.2
Mexico (h = 50 km).

" 18 Up iP 12 14 13.1

" 18 Up iP 12 21 07.7

" 18 Up iP 12 34 27.9
i 12 34 43.8

" 18 Um iP 13 36 39.6

" 18 Um iP 14 03 46.6

" 18 Up iP 14 19 24.0 C
i 14 19 40.4
micr sec
P Z' 0.1 1.5
Um iP 14 19 21.6

" 18 Ki iP 16 10 55.1
micr sec
Mx N 0.5 13
Um iP 16 10 46.8
Ud iP 16 11 09.8
De iP 16 11 08.0
Tadzhik-Sinkiang (h = 20 km).

" 18 Up iP 17 27 31.6
Ki iP 17 26 40.3
(cont.)

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

1974 Aug.	18	(cont.)				
		Um	iP		17 27 07.0	
			i		17 27 25.0	
		Ud	iP		17 27 34.1	
		Aleutian Islands (h = N).				
"	18	Up	iPKP		18 13 02.5	
		Ki	iPKP		18 12 48.7	
		Sk	iPKP		18 13 00.3	
		Um	iPKP		18 12 55.0	
		Ud	iPKP		18 13 04.5	
		De	iPKP		18 13 11.3	
		New Hebrides Islands (h = 180 km).				
"	18	Up	iP		18 17 28.7	
		Ud	iP		18 17 41.2	
		Iran (h = N).				
"	18	Up	Mx		21 10	
					micr	sec
			Mx	E	0.8	20
			Mx	Z	0.8	19
		Chile (h = 30 km).				
"	18	Ud	iP		21 19 08.1	
"	18	Ud	iP		22 36 26.5	
"	18	Ki	iPKP		23 26 55.7	
		Ud	iPKP		23 26 42.5	
		Chile (h = 20 km).				
"	19	Up	iPKP1		00 25 35.5	
		Ud	iPKP1		00 25 39.3	
"	19	Ud	iP		01 22 54.2	
"	19	Ki	iP		01 31 33.2	
		Ud	iP		01 31 47.2	
		Tadzhik-Sinkiang.				
		Origin time = 01 23 55.				
"	19	Up	iP		12 29 15.6	
			i		12 29 32.9	
					micr	sec
			P	Z'	0.2	1.2
			Mx	E	0.8	20
			Mx	N	0.5	15
			Mx	Z	0.6	16
		Ki	iP		12 28 39.2	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	1.2	18
			Mx	N	1.0	16
			Mx	Z	0.9	17
		(cont.)				

1974 Aug.	19	(cont.)				
		Sk	eP		12 29 11	
			i		12 29 12.6	
		Um	iP		12 28 54.9	
		Ud	iP		12 29 23.0	
			i		12 29 28.5	
		De	iP		12 29 37.1	
		Japan (h = 25 km).				
		m = 6.0, M = 5.3 (Up,Ki).				
"	19	Ki	iP		16 14 48.2	
		Sk	iP		16 15 18.3	
		Um	iP		16 15 03.7	
			i		16 15 14.0	
		Ud	iP		16 15 32.6	
		Japan (h = 25 km).				
"	19	Up	iP1		17 51 14.1	
			iP2		17 51 21.3	
		Ki	eP1		17 50 38	
			iP2		17 50 43.3	
		Sk	iP1		17 51 10.7	
		Um	iP1		17 50 53.5	
			iP2		17 50 58.1	
		Ud	iP1		17 51 20.8	
			iP2		17 51 27.9	
		De	iP2		17 51 40.8	
		Japan (h = 40 km).				
		Double P, denoted P1 and P2.				
"	19	Up	iPg1		19 52 57.8	
			iS*		19 54 14.7	
			iSg1		19 54 21.4	
		Sk	i		19 52 56.8	
			iSg1		19 53 36.4	
		Um	iSn		19 54 27.6	
			i		19 54 51.2	
			iS*		19 55 10.2	
			iSg1		19 55 14.5	
		Ud	iPn		19 52 04.8	
			iPg1		19 52 17.4	
			iSn		19 52 54.4	
			iSg1		19 53 13.9	
		De	iSn		19 53 26.2	
			iSg1		19 53 56.4	
		West coast of Norway, 60.0°N, 5.0°E.				
		Origin time = 19 51 00.				
		By combination with Bergen and Kongsberg readings.				
"	19	Up	iS*		19 57 11.7	
			i(Sg1)		19 57 25.4	
		Sk	iSg1		19 56 31.1	
		Um	iSg1		19 58 10.5	
		Ud	iSg1		19 56 08.5	
		(cont.)				

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

1974 Aug.	19	(cont.)				
		De	iSgl		19 56 48.4	
		West coast of Norway, 60.0°N, 5.0°E.				
		Origin time = 19 53 56.				
		By combination with Bergen readings.				
"	19	Up	iP		20 07 26.3	
			iPP		20 10 53.6	
		Ki	iP		20 07 18.3	
			ipP		20 07 29.2	
					micr	sec
			Mx	E	0.4	14
			Mx	N	0.5	17
		Sk	iP		20 07 10.6	
			iPP		20 10 24.3	
		Um	iP		20 07 25.6	
			ipP		20 07 37.5	
			iPP		20 10 48.9	
			iS		20 17 52	
		Ud	iP		20 07 17.0	
		De	iP		20 07 22.9	
			ipP		20 07 34.1	
		Off Pacific coast of Central America.				
		h = 40 km (Ki,Um,De).				
"	19	Up	iP		22 03 00.8	
		Ki	iP		22 02 14.7	
		Sk	iP		22 02 51.3	
		Um	iP		22 02 36.1	
		Ud	iP		22 03 07.3	
		Kurile Islands (h = N).				
"	19	Up	iP		23 44 33.2	
		Ki	iP		23 44 35.7	
		Sk	iP		23 44 56.9	
		Um	iP		23 44 28.2	
		Ud	iP		23 44 49.3	
		De	iP		23 44 45.8	
		Tadzhik-Sinkiang (h = N).				
"	20	Up	iP		00 17 30.0	
		Ki	iP		00 17 32.4	
			i		00 17 38.3	
"	20	Ki	iP		03 08 55.5	
		Um	iP		03 09 33.1	
		Ud	eP		03 09 49	
			i		03 10 06.3	
"	20	Up	iP		04 51 34.7	
		Ki	iP		04 50 58.5	
					micr	sec
			Mx	E	0.8	18
			Mx	N	0.5	14
		(cont.)				

1974 Aug.	20	(cont.)				
		Sk	iP		04 51 30.9	
		Um	iP		04 51 14.0	
		Ud	iP		04 51 41.0	
		De	iP		04 51 55.8	
		Japan (h = 30 km).				
"	20	Sk	iP		05 03 30.3	
		Um	iP		05 03 42.1	
"	20	Ki	iP		06 43 05.2	
		Ud	iP		06 43 40.4	
			i		06 43 48.1	
		Formosa (h = 70 km).				
"	20	Ud	i(Sgl)		07 48 00.8	
"	20	Up	iP		08 07 10.5	
		Ki	eP		08 06 31	
		Um	iP		08 06 49.8	
		Ud	iP		08 07 14.2	
		Japan (h = 10 km).				
"	20	Um	iP		08 34 46.6	
		Ud	iP		08 35 19.4	
		Japan (h = 140 km).				
"	20	Ki	iP		10 26 19.4	
		Sk	iP		10 26 42.6	
		Ud	iP		10 26 32.5	
		De	iP		10 26 31.6	
		Tadzhik-Sinkiang (h = N).				
"	20	Up	iP		14 25 49.5	
		Ud	iP		14 25 49.[illegible]	
		Greece.				
"	20	Ud	iP		15 01 55.5	
"	20	Ki	iP		15 22 13.0	
					micr	sec
			Mx	N	0.5	13
		Um	iP		15 22 08.3	
		Ud	iP		15 22 27.4	
		De	iP		15 22 25.9	
		Tadzhik-Sinkiang (h = 50 km).				
"	20	Ud	iP		15 41 41.2	
"	20	Ki	iP		16 50 03.4	
		Sk	iP		16 50 24.2	
		Ud	iP		16 50 14.3	
		De	iP		16 50 13.7	
		Tadzhik-Sinkiang (h = N).				
"	20	Ki	iP		17 40 37.3	
		Um	iP		17 40 30.3	
		(cont.)				

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

1974							
Aug.	20	(cont.)					
		Ud	iP		17 40 50.6		
		De	iP		17 40 49.7		
		Tadzhik-Sinkiang (h = N).					
"	20	Ki	iP		18 44 17.9		
		Um	iP		18 44 27.6		
		Ud	iP		18 44 48.2		
		Caroline Islands (h = 6 km).					
"	20	Ki	iP		20 14 24.0		
		Um	iP		20 14 37.6		
"	20	Up	iP		20 55 47.4 C		
			ipP		20 55 59.5		
					micr	sec	
			P	Z'	0.9	0.9	
			Mx	E	0.8	20	
			Mx	N	2.1	23	
			Mx	Z	2.7	22	
		Ki	iP		20 54 53.6		
			ipP		20 55 08.7		
					micr	sec	
			P	Z'	0.5	0.9	
			Mx	E	1.8	20	
			Mx	N	1.5	18	
			Mx	Z	1.9	20	
		Sk	iP		20 55 27.6 C		
		Um	iP		20 55 19.3		
			iS		21 03 43		
		Ud	iP		20 55 48.5		
		De	iP		20 56 10.7 C		
		Aleutian Islands.					
		h = 50 km (Up,Ki).					
		m = 6.7, M = 5.4 (Up,Ki).					
"	20	Ud	iPP		21 56 33.0		
		Chile-Argentina (h = 90 km).					
"	20	Up	iP		23 57 27.7		
		Ki	iP		23 58 46.1		
		Sk	iP		23 58 07.8		
		Um	iP		23 58 08.5		
			i		23 58 30.7		
		Ud	iP		23 57 34.5		
			i		23 57 41.5		
		De	iP		23 57 02.0		
		Greece (h = 50 km).					
"	20	Ki	iP		23 59 17.4		
		Um	iP		23 59 10.5		
		Ud	iP		23 59 31.5		
		De	iP		23 59 30.7		
		Tadzhik-Sinkiang.					
		Origin time = 23 51 40.					
1974							
Aug.	21	Um	iP		01 08 23.0		
		Ud	iP		01 08 52.5		
"	21	Um	iP		03 53 58.7 C		
		Ud	iP		03 54 27.9		
		De	iP		03 54 43.4		
		Japan (h = 390 km).					
"	21	Ki	i(P)		07 59 56.8		
		Ud	i(P)		08 00 17.7		
"	21	Up	iP		08 44 41.8		
		Ud	iP		08 44 46.8		
		Greece.					
"	21	Ud	iP		08 58 46.0		
		Greece.					
"	21	Up	iP		09 58 44.5		
		Ud	iP		09 58 48.0		
		Greece.					
"	21	Sk	iP		12 45 31.4		
		Ud	iP		12 44 55.0		
		Greece.					
"	21	Up	iP		13 07 43.1		
		Sk	iP		13 08 23.7		
			i		13 08 27.1		
		Ud	iP		13 07 51.2		
			i		13 07 55.4		
		De	i(P)		13 07 22.2		
		Ionian Sea (h = N).					
"	21	Ud	iP		14 31 20.3		
"	21	Ud	iP		15 11 38.9 C		
		De	iP		15 11 08.1		
"	21	Ud	i(P)		16 17 03.0		
"	21	Up	iP		18 16 05.4		
		Ki	iP		18 16 06.7 C		
		Sk	iP		18 16 27.9		
		Um	iP		18 15 59.6		
		Ud	iP		18 16 21.3		
			i		18 16 23.4		
		De	iP		18 16 20.3		
			i		18 16 22.7		
		Tadzhik-Sinkiang (h = N).					
"	21	Up	iP		18 52 51.8		
			i		18 52 54.1		
		Ki	iP		18 52 54.8		
			i		18 52 57.1		
		(cont.)					

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

1974 Aug.	21	(cont.)				
		Ki			micr	sec
			P	Z'	0.1	0.6
		Sk	eP		18 53 15	
			i		18 53 18.4	
		Um	iP		18 52 45.5	
			i		18 52 49.0	
			iPP		18 54 20.0	
		Ud	iP		18 53 08.7	
			i		18 53 10.8	
		De	iP		18 53 07.9	
			i		18 53 09.7	
			iPP		18 54 49.4	
		Tadzhik-Sinkiang (h = N).				
		Double P.				
"	21	Up	iP		21 26 01.4	
		Ud	iP		21 26 12.5	
		De	iP		21 26 17.9	
		Molucca Passage (h = 45 km).				
"	21	Um	iP		21 45 17.5	
"	22	Ud	iP		01 30 33.6	
		Greece.				
"	22	Ud	iP		06 18 28.6	
		De	iP		06 18 25.9	
		Sumatra (h = N).				
"	22	Ki	iP		07 13 21.3	
		Ud	iP		07 13 30.3	
		Tadzhik-Sinkiang.				
"	22	Ki	iP		09 24 25.4	C
		Ud	iP		09 24 39.6	
		De	iP		09 24 38.6	
		Tadzhik-Sinkiang (h = N).				
"	22	Ki	iPKP		12 07 10.2	
		Sk	iPKP		12 07 30.6	
		Ud	iPKP1		12 07 29.7	
			i		12 07 39.4	
		De	iPKP1		12 07 41.1	D
		Fiji Islands (h = 580 km).				
"	22	Ud	iP		15 31 01.5	
		De	i(P)		15 31 51.8	
"	22	Up	iP		15 34 13.1	
		Ki	iP		15 34 20.9	
		Sk	iP		15 34 39.0	
		Um	iP		15 34 11.0	
		Ud	iP		15 34 29.8	
		De	iP		15 34 25.0	
		Afghanistan-USSR (h = 110 km).				

1974 Aug.	22	Sk	iSg1		15 48 21.1	
		Ud	iSg1		15 48 02.1	
		West coast of Norway, near Bergen.				
"	22	De	iP		18 04 48.2	
"	22	Up	iP		21 16 32.6	
		Ud	iP		21 16 17.8	
"	22	De	iP		21 35 06.1	
"	22	De	iP		21 50 33.1	
"	23	Up	iP		04 10 39.8	
					micr	sec
			Mx	E	0.7	14
			Mx	N	0.7	19
			Mx	Z	1.1	17
		Ki	iP		04 10 13.3	
					micr	sec
			Mx	E	0.6	11
			Mx	N	0.5	13
			Mx	Z	0.8	12
		Ud	iP		04 10 49.0	
		De	eP		04 11 00	
		Formosa (h = N).				
		M = 5.3 (Up,Ki).				
"	23	Up	i(PP)		05 08 02.2	
			iPKP		05 08 45.3	
			iPP		05 09 03.8	
					micr	sec
			PP	Z'	0.1	1.1
			Mx	E	1.0	17
			Mx	N	0.9	17
			Mx	Z	1.7	18
		Ki	iP		05 04 18.5	
			i(PP)		05 07 41.2	
			iPP		05 08 37.4	
			iSKS		05 14 41	
					micr	sec
			P	Z'	0.1	1.2
			Mx	E	1.8	18
			Mx	N	2.5	20
			Mx	Z	1.4	17
		Sk	iP		05 04 38.7	
			i(PP)		05 08 22.5	
			iPKP		05 08 48.5	
			iPP		05 09 15.5	
		Um	iP		05 04 24.8	
			i(PP)		05 07 41.1	
			iPP		05 08 41.8	
		Ud	iP		05 04 40.8	
			e(PP)		05 07 58	
			iPKP		05 08 47.9	

(cont.)

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

1974
Aug. 23 (cont.)

	Ud	iPP	05 09 18.9
	De	iP	05 04 47.0
		iPKP	05 08 50.8
		iPP	05 09 23.0

Banda Sea (h = 140 km).
m = 6.3, M = 5.8 (Up,Ki).
M uncorrected for focal depth.

" 23	Ki	iP	06 00 00.6	
	Ud	iP	06 00 14.8	
	De	iP	06 00 13.2	

Tadzhik-Sinkiang.
Origin time = 05 52 23.

" 23	Sk	iSgl	06 04 49.1	
	Ud	iSgl	06 04 29.8	
	De	iSgl	06 05 06.6	

West coast of Norway,
near 60.0°N, 5.0°E.
Origin time = 06 02 14.
By combination with Bergen readings.

" 23	Up	iP	06 47 12.5	
	Um	iP	06 46 52.4	
	Ud	iP	06 47 19.7	

Japan (h = 320 km).

" 23	Ki	iP	08 25 54.5	
	Sk	iP	08 26 29.8	
	Um	iP	08 26 13.0	
	Ud	iP	08 26 44.0	C
	De	iP	08 27 00.0	

Japan (h = 170 km).

" 23	Ud	iP	08 46 48.2	

Japan.

" 23	Up	iP	09 00 38.4	
	Ki	iP	09 00 40.0	
	Sk	iP	09 00 28.7	
	Ud	iP	09 00 27.8	
	De	iP	09 00 29.1	

Colombia (h = 160 km).

" 23	Up	iP	09 06 50.9	
	Sk	iP	09 06 26.7	
	Um	iP	09 06 43.6	
	Ud	iP	09 06 47.0	

" 23	Ud	iP	12 30 15.2	

" 23	Up	iP	13 09 43.9	
	Ki	iP	13 08 54.1	
	Ud	iP	13 09 48.9	

Kurile Islands.

1974
Aug. 23

	Up	iSgl	13 52 21.3	
	Sk	eSgl	13 52 15	
	Ud	iPgl	13 50 54.9	
		i	13 51 15.4	
		iSgl	13 51 18.7	
	De	i(Sn)	13 52 15.4	
		iSgl	13 52 42.4	

South Norway,
near 60.2°N, 10.2°E.
Origin time = 13 50 24.

" 23	De	e	15 46 56	
		i(Rg)	15 47 01.0	

" 23	Up	iP	16 34 07.4	
		i(PP)	16 35 45.7	
	Ki	iP	16 34 07.8	
	Sk	eP	16 34 28	
	Um	iP	16 34 00.8	
	Ud	iP	16 34 21.7	C
		iPP	16 36 01.5	
	De	iP	16 34 20.8	

Tadzhik-Sinkiang (h = N).

" 23	Up	ePKP1	17 54 24	
	Sk	ePKP1	17 54 16	
	Um	iPKP1	17 54 08.0	C
	Ud	iPKP1	17 54 26.4	
	De	iPKP1	17 54 38.6	

" 23	Up	i(P)	18 55 55.1	
	Um	i(P)	18 56 43.0	

" 24	Um	iP	00 07 01.6	
	Ud	iP	00 06 46.7	

Haiti-Puerto Rico (h = N)

" 24	Up	iP	03 00 14.2	C
			micr sec	
	P	Z'	0.1 1.0	
	Ki	iP	03 00 15.5	C
		ipP	03 00 37.5	
			micr sec	
	P	Z'	0.2 1.3	
	Sk	iP	03 00 01.6	C
		ipP	03 00 26.0	
	Um	iP	03 00 17.7	C
		ipP	03 00 41.2	
	Ud	iP	03 00 04.6	C
		ipP	03 00 28.7	
	De	iP	03 00 06.7	C
		ipP	03 00 31.1	

Colombia.
h = 90 km (Ki,Sk,Um,Ud,De).
m = 6.0 (Up,Ki).

" 24	Up	iP	03 22 05.2	

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

1974
Aug. 24 Up iP 03 34 24.9

" 24 De iPKP1 03 41 15.9
Tonga Islands (h = N).

" 24 Ki iP 06 08 19.1
Um iP 06 08 11.3
i 06 08 21.5
Ud iP 06 08 33.1
De iP 06 08 31.6
i 06 08 40.3
Tadzhik-Sinkiang.
Origin time = 06 00 41.

" 24 Ud iP 07 04 00.9
De iP 07 03 59.8
Tadzhik-Sinkiang.
Origin time = 06 56 09.

" 24 Ud iPKP1 09 19 51.6 C
De iPKP1 09 20 02.1

" 24 Up iPKP1 09 26 30.7
Ud ePKP1 09 26 27

" 24 Up eP 10 25 15
i 10 25 16.0
i 10 25 32.6
Sk eP 10 25 55
Um iP 10 25 54.4
Ud iP 10 25 21.4
i 10 25 25.7
De iP 10 24 45.2
Greece (h = N).

" 24 Up iP 10 52 06.4 C
ipP 10 52 18.7
eP'P' 11 20 23
i 11 20 29.6

		micr	sec
P	Z'	0.2	1.0
Mx	E	1.4	19
Mx	N	2.9	20
Mx	Z	3.5	20

Ki iP 10 51 12.8 C
ipP 10 51 25.5

		micr	sec
P	Z'	0.3	0.9
Mx	E	2.7	19
Mx	N	2.6	19
Mx	Z	3.1	21

Sk iP 10 51 43.2 C
ipP 10 51 55.5
Um iP 10 51 40.0 C
ipP 10 51 52.0
iPcP 10 52 16.5
(cont.)

1974
Aug. 24 (cont.)
Um iP'P' 11 20 33.5
Ud iP 10 52 05.6 C
ipP 10 52 17.5
iP'P' 11 20 23.0
De iP 10 52 28.3 C
ipP 10 52 40.4
Aleutian Islands.
h = 45 km (Up,Ki,Sk,Um,Ud,De).
m = 6.2, M = 5.6 (Up,Ki).

" 24 Up i(P) 10 58 26.5
Ud iP 10 58 14.3

" 24 Up iP 11 29 20.3
Ki iP 11 29 23.9
Sk iP 11 29 44.8 C
Um iP 11 29 16.1 C
Ud iP 11 29 37.7 C
i 11 29 41.9
De iP 11 29 36.6 C
i 11 29 40.8
Tadzhik-Sinkiang (h = N).

" 24 Um iP 11 34 34.8
Ud iP 11 35 08.1

" 24 Up iP 12 22 12.1
iX 12 22 38.8
iPP 12 23 47.0
Ki iP 12 22 14.4
i 12 22 16.7
iX 12 22 29.5

		micr	sec
Mx	N	0.8	14

Sk iP 12 22 36.6
iX 12 22 56.1
Um iP 12 22 07.1
iPP 12 23 37.8
Ud iP 12 22 28.8
De iP 12 22 27.8
iX 12 22 43.2
Tadzhik-Sinkiang (h = N).
X is probably P of another earthquake.

" 24 Ki eP 12 44 12
Ud iP 12 44 25.2
Tadzhik-Sinkiang.
Origin time = 12 36 33.

" 24 Up iPKP 14 19 53.7
iSKP1 14 22 21.4
Ki iPKP 14 19 38.8
Sk iPKP 14 19 50.4
(cont.)

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

1974 Aug.	24	(cont.)			
		Um	iPKP	14 19 45.9	
			iSKP1	14 22 07.9	
		Ud	iPKP	14 19 56.1	
			iSKP1	14 22 24.3	
		De	iPKP	14 20 02.3	
			iSKP1	14 22 34.2	
		New Hebrides Islands (h = 630 km).			
"	24	Ki	iP	14 34 28.5	
		Um	iP	14 34 53.9	
		Ud	iP	14 35 21.1	
		Aleutian Islands (h = 40 km).			
"	24	Ud	iP	16 00 39.9	
"	24	Up	iP	16 52 10.7	
		Um	iP	16 52 24.8	
		Ud	iP	16 51 53.6	
		De	iP	16 51 53.9	
		North Atlantic Ocean (h = N).			
"	24	Ud	iP	17 51 29.3	
		De	eP	17 51 28	
		Tadzhik-Sinkiang.			
		Origin time = 17 43 37.			
"	24	Ud	iP	18 27 48.4	
		Aleutian Islands (h = 70 km).			
"	24	Up	iP	18 29 07.5	
		Ki	iP	18 28 58.5	
			i	18 29 03.7	
		Sk	iP	18 29 21.8	
			i	18 29 27.1	
		Um	iP	18 28 58.3 C	
			i	18 29 03.7	
		Ud	iP	18 29 20.1 C	
			i	18 29 30.9	
		De	iP	18 29 26.0	
		Burma (h = N).			
"	24	De	ePKP1	18 51 52	
			i	18 52 03.6	
		Tonga Islands (h = N).			
"	24	Um	iPKP	19 07 17.5	
		Chile-Argentina (h = 110 km).			
"	24	Up	iPKKP1	19 27 44	
		Um	iPKP	19 17 03.9	
			ePKKP1	19 27 33	
		Ud	iPKP	19 16 55.5	
			iPKKP1	19 27 45.3	
		De	i(PP)	19 16 44.4	
		Argentina (h = 30 km).			

1974 Aug.	24	Up	iP	22 13 37.3	
		Ki			
				micr	sec
			Mx E	0.9	15
			Mx N	0.6	14
			Mx Z	0.7	15
		Sk	eP	22 14 13	
		Um	iP	22 14 16.1	
		Ud	iP	22 13 39.9	
			iPP	22 14 05.4	
		Ionian Sea (h = 10 km).			
"	24	Ki	iP	22 15 39.2	
		Um	iP	22 15 44.5	
"	24	Up	iP	22 29 51.6 C	
			iPcP	22 30 18.1	
				micr	sec
			P Z'	0.1	1.0
		Ki	iP	22 28 58.2 C	
				micr	sec
			P Z'	0.2	0.9
		Sk	iP	22 29 28.3 C	
		Um	iP	22 29 25.2 C	
			iPcP	22 29 57.0	
		Ud	iP	22 29 50.7 C	
			ipP	22 30 02.0	
		De	iP	22 30 13.3 C	
			i	22 30 37.8	
		Aleutian Islands. h = 40 km (Ud). m = 6.0 (Up,Ki).			
"	24	Up	iP	22 32 15.9	
		Sk	iP	22 32 53.0	
		Ud	iP	22 32 19.7	
		Greece.			
"	25	Up	iSg1	00 14 42.5	
		Sk	iSg1	00 13 27.9	
		Um	iSg1	00 15 16.5	
		Ud	iSg1	00 13 40.0	
		De	iSg1	00 14 47.7	
		Off west coast of Norway, 61.3°N, 4.4°E. Origin time = 00 11 14. By combination with Bergen readings.			
"	25	Ud	iPKP1	00 36 57.7	
"	25	Ki	iP	01 23 10.6	
		Um	iP	01 23 37.2	
		Ud	iP	01 24 02.0	
		Aleutian Islands (h = 60 km).			
"	25	Up	iP	01 30 34.6 D	
		(cont.)			

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

1974
Aug. 25 (cont.)

	Up	iPP		01 33 27.8
		iS		01 40 23
			micr	sec
		P	Z' 0.5	0.9
		PP	Z' 0.1	1.3
		Mx	E 1.8	19
		Mx	N 3.4	16
		Mx	Z 4.6	18
	Ki	iP		01 29 58.7 D
		iPP		01 32 35.2
		iS		01 39 16
			micr	sec
		P	Z' 0.3	1.0
		PP	Z' 0.2	1.5
		Mx	E 6.2	16
		Mx	N 4.3	15
		Mx	Z 6.1	16
	Sk	iP		01 30 29.6 D
		iPP		01 33 19.0
	Um	iP		01 30 14.4 D
		ipP		01 30 27.6
		iS		01 39 43
	Ud	iP		01 30 41.7 D
		ipP		01 30 55.0
	De	iP		01 30 54.3 D
		i		01 31 13.2
		iPP		01 34 08.8

South of Japan.
h = 50 km (Um,Ud).
m = 6.3, M = 5.9 (Up,Ki).

"	25	Um	iP	02 00 18.6
		Ud	eP	02 00 47

South of Japan.
Origin time = 01 48 45.

"	25	Up	eP	02 23 46
			ipP	02 23 57.8
		Ki	iP	02 23 10.3
			ipP	02 23 21.6
		Um	iP	02 23 25.9
			ipP	02 23 37.4
		Ud	iP	02 23 53.1

South of Japan.
h = 40 km (Up,Ki,Um).

"	25	Um	iP	02 37 48.1 C
		Ud	iP	02 38 14.9

South of Japan (h = N).

"	25	Ki	iP	03 05 03.4
		Um	iP	03 05 18.9 C
		Ud	iP	03 05 46.5

South of Japan (h = N).

1974
Aug. 25 Ud iPKP 03 47 03.3

Fiji Islands (h = N).

"	25	Up	iP	04 26 34.4
		Ki	iP	04 25 41.2
		Sk	iP	04 26 13.6
		Um	iP	04 26 06.9
		Ud	iP	04 26 36.0

Aleutian Islands (h = 25 km).

"	25	Up	iP	04 32 10.8
			ipP	04 32 23.1
			micr	sec
		P	Z' 0.1	1.0
		pP	Z' 0.1	0.8
		Mx	Z 0.7	18
		Ki	iP	04 31 34.8
			ipP	04 31 46.8
			iPP	04 34 12.1
			micr	sec
		P	Z' 0.1	1.0
		Mx	E 0.5	16
		Mx	N 0.5	15
		Mx	Z 0.6	16
		Sk	iP	04 32 07.8
			ePP	04 34 57
		Um	iP	04 31 50.8
			ipP	04 32 02.8
		Ud	iP	04 32 17.9
			ipP	04 32 30.1
		De	iP	04 32 31.2
			ipP	04 32 43.3

South of Japan.
h = 45 km (Up,Ki,Um,Ud,De).
m = 5.7 (Up,Ki).

"	25	Up	iPKP1	05 10 19.9
		Um	iSKP1	05 13 04.9
		Ud	iPKP1	05 10 24.3
		De	iPKP1	05 10 35.1

Tonga-Kermadec Islands
(h = 580 km).

"	25	Ud	iP	05 33 43.7

Greece.

"	25	Up	iP	06 01 31.7
		Sk	eP	06 02 13
		Um	iP	06 02 10.5
		Ud	iP	06 01 38.8

Ionian Sea (h = 9 km).

"	25	Um	iP	07 54 48.9
"	25	Sk	iP	08 20 08.5

(cont.)

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

1974							
Aug.	25	(cont.)					
		Ud	iP			08 19 36.0	
		De	eP			08 19 01	
"	25	Ud	iP			08 24 36.9	
		De	eP			08 24 07	
"	25	Up	iP			09 33 29.1	
		Um	iP			09 33 01.8	
		Ud	iP			09 33 26.8	
		De	iP			09 33 49.4	
		Aleutian Islands (h = N).					
"	25	Up	iP			10 07 01.2	
			ipP			10 07 12.6	
						micr sec	
			P	Z'		0.1 1.1	
		Ki	iP			10 06 25.6	
			ipP			10 06 37.3	
						micr sec	
			Mx	E		0.5 16	
			Mx	N		0.4 15	
			Mx	Z		0.5 15	
		Um	iP			10 06 41.0	
			ipP			10 06 53.3	
		Ud	iP			10 07 08.3	
			ipP			10 07 20.8	
		De	epP			10 07 34	
		South of Japan.					
		h = 45 km (Up,Ki,Um,Ud).					
"	25	Up	eP			10 25 13	
		Ki	iP			10 24 36.8	
		Sk	epP			10 25 21	
		Um	iP			10 24 51.6	
			ipP			10 25 02.9	
		Ud	iP			10 25 18.8	
			ipP			10 25 30.0	
		South of Japan.					
		h = 40 km (Um,Ud).					
"	25	Up	ipP			10 39 48.2	
		Ki	ipP			10 39 13.0	
		Um	iP			10 39 17.7	
			ipP			10 39 28.7	
			i			10 39 40.4	
		Ud	iP			10 39 45.0	
		South of Japan.					
		h = 40 km (Um).					
"	25	Um	iP			10 52 49.2	
		Ud	iP			10 53 16.9	
		South of Japan.					
		Origin time = 10 41 15.					
"	25	Up	iP			11 26 06.9	
		(cont.)					

1974							
Aug.	25	(cont.)					
		Up	ipP			11 26 17.0	
		Um	iP			11 25 45.7	
			ipP			11 25 57.6	
		Ud	iP			11 26 11.8	
		Japan.					
		h = 40 km (Up,Um).					
"	25	Up	iPKP			12 10 23.4	
		Ud	ePKP			12 10 24	
		De	iPKP			12 10 32.9	
		Fiji Islands (h = 400 km).					
"	25	Um	iP			13 27 16.3	
		Panama-Colombia (h = N).					
"	25	Up	iP			13 36 12.8	
		Sk	iP			13 36 52.2	
		Um	iP			13 36 52.5	
			i			13 37 03.6	
		Ud	iP			13 36 19.1	C
		Greece (h = N).					
"	25	Up	iPKP1			14 53 11.7	
			ipPKP1			14 55 18.7	
			iSKP1			14 56 03.7	
		Ki	iPKP			14 53 01.1	
			ipPKP			14 55 07.3	
			iSKP1			14 55 41.8	
						micr sec	
			SKP1	Z'		0.3 1.6	
		Sk	iPKP			14 53 09.6	
			epPKP			14 55 13	
			iSKP1			14 55 57.6	
		Um	i(PKP)			14 53 02.3	
			iPKP			14 53 09.4	
			ipPKP			14 55 11.9	
			iSKP1			14 55 52.8	
		Ud	iPKP1			14 53 13.4	
			ipPKP1			14 55 19.3	
			iSKP1			14 56 05.2	
		De	iPKP1			14 53 23.7	
			i			14 53 41.4	
			i			14 55 26.7	
			ipPKP1			14 55 30.9	
			iSKP1			14 56 13.7	
		Tonga-Kermadec Islands.					
		h = 550 km (Up,Ki,Sk,Um,Ud, De).					
"	25	Up	iPKP1			16 47 39.3	
		Ud	iPKP1			16 47 40.9	
		De	iPKP1			16 47 49.9	
"	25	Ud	iPKP1			16 57 27.8	
"	25	Ki	iP			17 09 36.7	
		(cont.)					

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

1974 Aug.	25	(cont.)			
		Um	iP	17 10 03.4	
		Ud	iP	17 10 28.8	
		De	iP	17 10 51.4	
		Aleutian Islands (h = 50 km).			
"	25	Um	i(P)	17 22 38.4	
		Ud	i(P)	17 22 23.0	
			i	17 22 28.8	
"	25	Ki	iP	17 48 55.7	
		Sk	eP	17 49 17	
		Um	i(P)	17 48 41.8	
		Ud	e(P)	17 49 04	
			iP	17 49 10.2	
		De	iP	17 49 08.6	
		Tadzhik-Sinkiang (h = N).			
"	25	Up	iP	19 47 58.8	
		Ki	eP	19 49 18	
		Sk	iP	19 48 37.7	
		Um	iP	19 48 38.2	
		Ud	iP	19 48 05.3	C
		De	iP	19 47 33.8	C
		Ionian Sea (h = N).			
"	25	Ud	iP	20 52 32.0	
		De	iP	20 52 31.1	
		Tadzhik-Sinkiang.			
		Origin time = 20 44 40.			
"	25	Ud	iP	23 37 25.6	C
		Hindu Kush (h = 330 km).			
"	26	Ki	iP	00 13 13.4	
		Um	iP	00 13 15.0	
"	26	Up	iP	00 30 22.6	
		Ki	iP	00 30 13.0	
		Ud	iP	00 30 38.0	
		Sinkiang, China (h = N).			
"	26	Ud	iP	01 58 49.6	
"	26	Up	iP	06 40 16.2	C
		Ki	iP	06 40 05.7	C
		Sk	iP	06 39 58.0	
		Um	iP	06 40 13.1	C
		Ud	iP	06 40 06.6	
		De	iP	06 40 13.8	C
		Mexico-Guatemala (h = N).			
"	26	Sk	iP	07 21 32.8	
		Ud	iP	07 21 04.0	
		Aegean Sea (h = 40 km).			
"	26	Ud	i(P)	10 36 35.3	

1974 Aug.	26	Up	iP	14 44 20.0	
			i	14 44 56.3	
		Ki	iP	14 43 46.6	
			i	14 44 17.0	
		Sk	iP	14 44 12.6	
		Um	iP	14 44 00.0	C
			ipP	14 44 11.9	
		Ud	iP	14 44 26.7	
		De	eP	14 44 39	
		South of Japan.			
		h = 45 km (Um).			
"	26	De	iP	15 15 34.2	
"	26	Up	iP	15 27 08.0	
		Ki	iP	15 26 51.3	C
		Ud	iP	15 27 15.5	
		Mindanao (h = 90 km).			
"	26	Ud	iPKP1	16 25 47.4	
		De	iPKP1	16 25 58.4	
"	26	Ud	iP	18 03 46.9	
		De	iP	18 04 02.0	
		Japan (h = 45 km).			
"	26	Up	eP	18 15 16	
			i	18 15 34.0	
		Ki	iP	18 16 26.2	
		Sk	eP	18 16 01	
			i	18 16 11.9	
		Um	i	18 16 14.9	
		Ud	iP	18 15 21.1	
			i	18 15 28.6	
		De	iP	18 14 47.2	
			i	18 15 00.6	
		Crete (h = N).			
		Probably multiple event.			
"	27	Up	iP	05 51 09.6	
		Ki	iP	05 51 12.2	
			i	05 51 14.3	
		Sk	iP	05 51 32.3	
			i	05 51 35.0	
		Um	iP	05 51 04.4	
			i	05 51 06.8	
		Ud	iP	05 51 26.2	
			i	05 51 28.5	
		De	iP	05 51 25.0	
		Tadzhik-Sinkiang (h = N).			
		Double P, average separation 2.4 sec.			
"	27	Up	iPKP	06 43 00.3	
		Ki	iPKP	06 43 08.0	C
		Um	iPKP	06 43 05.4	
			i	06 43 12.2	
		(cont.)			

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

1974
Aug. 27 (cont.)
Ud iPKP 06 42 56.9
De ePKP 06 42 51
Chile (h = 25 km).

" 27 Up iP 08 21 03.6
Ki iP 08 21 02.3
Sk iP 08 21 16.6
Um iP 08 21 00.2
ipP 08 21 28.9
Ud eP 08 21 13
Sumatra.
h = 110 km (Um).

" 27 Ud i(SKP1) 11 23 23.7

" 27 Ud iP 11 54 18.0

" 27 Up iP 12 46 42.6
Ud iP 12 46 59.3

" 27 Ud i(P) 12 52 23.6

" 27 Up iP 13 03 34.7 D
iPP 13 05 06.5

		micr	sec
P	Z'	0.7	1.3
PP	Z'	0.2	1.0
Mx	E	8.9	12
Mx	N	12	17
Mx	Z	25	13

Ki iP 13 03 38.3 D
iPP 13 05 13

		micr	sec
P	Z'	0.7	0.9
Mx	E	29	15
Mx	N	18	11
Mx	Z	25	14

Sk iP 13 03 58.9 D
i(PP) 13 05 34.5
iPP 13 05 40.5
Um iP 13 03 30.8 D
iPP 13 05 03.3
iS 13 09 27
Ud iP 13 03 52.9 D
iPP 13 05 34.1
De iP 13 03 51.5 D
iPP 13 05 33.1
Tadzhik-Sinkiang (h = N).
m = 6.2, M = 6.2 (Up,Ki).

" 27 Ki iP 13 23 25.4
Ud iP 13 23 41.5
Tadzhik-Sinkiang.
Origin time = 13 15 48.

" 27 De iP 13 42 06.7

1974
Aug. 27 Ki iP 13 44 45.8
Sk iP 13 45 07.5
Um iP 13 44 39.9
Ud iP 13 45 00.4
i 13 45 07.6
De eP 13 44 59
Tadzhik-Sinkiang (h = N).

" 27 Up iP 14 32 20.8
Ki iP 14 32 21.6
Sk eP 14 32 42
Um iP 14 32 13.5
Ud iP 14 32 36.3
De iP 14 32 34.7
Tadzhik-Sinkiang (h = N).

" 27 Up iP 14 58 42.0 C
Ki eP 14 57 49
Ud iP 14 58 42.8
i 14 58 58.2
Aleutian Islands.

" 27 Ki iPKP 15 14 51.1
Ud iPKP1 15 15 13.8

" 27 Ki iPKP 15 39 12.1
iPP 15 40 11.7
Um iPKP 15 39 10.1
Ud iPKP 15 39 01.9
Argentina (h = 150 km).

" 27 Up iPKP1 15 48 13.6
ipPKP1 15 50 13.9
Ki ePKP1 15 47 49
ipPKP1 15 49 58.7
Sk iPKP1 15 48 00.9
Um iPKP1 15 47 56.4
i 15 47 57.9
ipPKP1 15 50 03.5
Ud iPKP1 15 48 09.5
i 15 48 16.3
ipPKP1 15 50 21.6
De iPKP1 15 48 18.2
i 15 48 29.5
Kermadec Islands region.
h = 570 km (Up,Ki,Um,Ud).
Alternatively, pPKP1 could instead be PKP1 of another shock.

" 27 Sk iP 16 20 20.8
Ud iP 16 20 15.0
De iP 16 20 14.3
Tadzhik-Sinkiang.
Origin time = 16 12 23.

" 27 Up iP 17 41 32.7
(cont.)

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

1974 Aug.	27	(cont.)				
		Up	iPP		17 43 07.0	
					micr	sec
			P	Z'	0.2	1.5
			Mx	E	0.7	12
			Mx	N	1.3	15
			Mx	Z	1.2	15
		Ki	iP		17 41 35.1	C
			i		17 41 38.7	
					micr	sec
			P	Z'	0.1	1.0
			i	Z'	0.2	0.8
			Mx	E	2.4	18
			Mx	N	2.5	12
			Mx	Z	1.2	14
		Sk	iP		17 41 56.1	
			i		17 41 59.4	
			iPP		17 43 29.6	
		Um	iP		17 41 27.4	
			i		17 41 30.8	
			iPP		17 42 59.1	
		Ud	iP		17 41 49.3	
		De	iP		17 41 48.1	
			i		17 41 51.5	
			iPP		17 43 28.3	
		Tadzhik-Sinkiang (h = N).				
		m = 5.7, M = 5.1 (Up,Ki).				
		Double P, average separation 3.4 sec.				
"	27	Ki	iP		18 12 34.1	
			i		18 12 37.1	
		Ud	iP		18 12 48.3	
		De	eP		18 12 48	
		Tadzhik-Sinkiang.				
		Origin time = 18 04 56.				
"	27	Ud	iP		18 48 05.5	
"	27	Ki	iP		23 08 27.9	
		Ud	iP		23 08 41.8	
		Tadzhik-Sinkiang.				
		Origin time = 23 00 50.				
"	28	Up	iP		01 01 31.6	C
		Ki	iP		01 00 52.5	C
		Sk	iP		01 01 25.6	C
		Um	iP		01 01 09.8	
		Ud	iP		01 01 38.3	C
		De	iP		01 01 53.6	
		Japan (h = 50 km).				
"	28	Ud	iP		02 26 59.0	
"	28	Up	iPKP1		05 43 05.3	
			iPKP2		05 43 11.1	
		Ki	iPKP1		05 42 43.8	
		(cont.)				

1974 Aug.	28	(cont.)				
		Sk	iPKP1		05 42 57.0	
		Um	iPKP1		05 42 52.4	
			i		05 43 03.2	
			i		05 43 24.9	
		Ud	iPKP1		05 43 05.0	C
			iPKP2		05 43 12.9	
		De	iPKP1		05 43 14.7	
		South of Kermadec Islands (h = 100 km).				
"	28	Ud	iP		07 54 51.5	
		Vancouver Island (h = N).				
"	28	Ki	iP		09 29 42.9	
		Sk	iP		09 30 03.5	
		Um	iP		09 29 35.3	
		Ud	iP		09 29 56.9	
		De	iP		09 29 55.6	
		Tadzhik-Sinkiang (h = 55 km).				
"	28	Ud	iPKP		10 37 29.6	
		De	iPKP		10 37 36.1	
		Fiji Islands (h = 610 km).				
"	28	Ki	iP		14 51 51.1	
		De	i(P)		14 52 04.3	
			i		14 52 07.5	
"	28	Ud	iP		15 08 48.9	
"	28	Up	iSKP1		15 36 23.7	
		Ud	iSKP1		15 36 27.1	
		New Hebrides Islands (h = 160 km).				
"	28	Ki	iP		17 12 36.4	
		Ud	iP		17 12 51.5	
		Tadzhik-Sinkiang (h = 50 km).				
"	28	Up	iP		18 53 34.3	
		Ki	iP		18 52 41.3	
					micr	sec
			Mx	E	0.6	16
			Mx	N	1.0	19
			Mx	Z	1.1	19
		Sk	iP		18 53 08.6	
		Um	iP		18 53 08.3	
			i		18 53 11.7	
		Ud	iP		18 53 31.2	
		De	iP		18 53 54.4	
		Gulf of Alaska (h = 4 km).				
"	28	Ud	iP		20 46 35.0	
"	28	Ud	iP		21 11 29.2	

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

1974
Aug. 28 Up iP 22 40 34.5
Ki iP 22 40 02.3
Sk iP 22 40 30.6
Um iP 22 40 16.0
Ud iP 22 40 41.1
De iP 22 40 53.0
South of Japan.
Origin time = 22 28 41.

" 28 Up eP 22 44 04
Ki iP 22 43 17.4
Um iP 22 43 50.8

" 29 Ki iP 01 07 47.3

" 29 Up iP 01 09 51.4 C
micr sec
P Z' 0.1 0.8
Ki iP 01 10 00.0 C
micr sec
P Z' 0.1 1.0
Sk iP 01 10 16.9 C
Um iP 01 09 49.6 C
Ud iP 01 10 07.9 C
De iP 01 10 04.2 C
iPP 01 11 50.5
Afghanistan-USSR
(h = 230 km).
m = 5.3 (Up,Ki).

" 29 Ki iP 01 53 47.9
Ud iP 01 54 02.3
Tadzhik-Sinkiang.
Origin time = 01 46 10.

" 29 Up iPKPl 03 09 50.8 C
ipPKPl 03 10 07.1
micr sec
PKPl Z' 0.2 1.0
Mx N 0.9 24
Mx Z 0.8 24
Ki iPKPl 03 09 26.1
Sk iPKPl 03 09 43.0 C
Um iPKPl 03 09 41.4 C
Ud iPKPl 03 09 52.2 C
De iPKPl 03 10 01.5 C
ipPKPl 03 10 18.5
Kermadec Islands.
h = 60 km (Up,De).

" 29 Up iPKPl 03 16 04.4 C
Sk ePKPl 03 15 57
Um iPKPl 03 15 53.2
Ud iPKPl 03 16 06.1
Kermadec Islands.
Origin time = 02 56 28.

1974
Aug. 29 Ki iP 03 34 31.2
Sk eP 03 35 02
Um iP 03 34 58.4 D
Ud iP 03 35 23.6 D
De iP 03 35 46.4 D
Aleutian Islands.
Origin time = 03 24 26.

" 29 Sk iPKP 04 51 52.6
Tonga Islands (h = N).

" 29 Up iP 06 28 26.6
Ud iP 06 28 24.3

" 29 Up iP 06 51 07.4
Ki iP 06 50 15.1
Sk iP 06 50 48.0
Um iP 06 50 40.5
Ud iP 06 51 08.4
De iP 06 51 30.0
Aleutian Islands (h = N).

" 29 Up eP 07 53 17
Ud iP 07 53 45.1
Tadzhik-Sinkiang.

" 29 Ki iP 08 32 57.6
Sk iP 08 33 19.0
Ud iP 08 33 11.3
De iP 08 33 10.4
Tadzhik-Sinkiang (h = N).

" 29 Ki iP 08 43 38.7
Ud iP 08 44 43.1
De iP 08 45 10.3
Northern Siberia, near the
estuary of the River Lena.

" 29 Up iP 10 04 23.9 C
iS 10 08 00
i 10 10 41
micr sec
P Z' 2.2 0.7
Mx E 18 4
Mx N 18 8
Mx Z 25 8
Ki iP 10 02 53.3 C
iS 10 05 07
i(P'P') 10 39 32.9
micr sec
P Z' 2.7 0.7
Mx E 18 6
Mx N 18 6
Mx Z 17 6
Sk iP 10 04 02.2 C
iS 10 07 16.4
(cont.)

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

1974 Aug.	29	(cont.)			
		Sk	e(P'P')	10 39 13	
		Um	iP	10 03 31.0	C
			iS	10 06 16	
			e(P'P')	10 39 11	
		Ud	iP	10 04 34.0	C
		De	iP	10 05 06.4	C
			iS	10 09 22.5	
		Novaya Zemlya.			
		m = 6.5 (Up,Ki).			
		Underground explosion.			
		The (P'P') phases are all early compared to JB tables.			
"	29	Ud	iP	14 02 48.8	
		De	i	14 03 38.3	
"	29	Up	iP	15 04 42.4	C
			iS	15 08 22.0	
				micr sec	
			P Z'	0.1 0.7	
		Ki	iP	15 03 38.7	C
			i	15 03 47.9	
			iS	15 06 28.1	
				micr sec	
			P Z'	0.3 1.0	
		Sk	iP	15 04 40.4	C
		Um	iP	15 04 01.3	
			i	15 04 07.3	
		Ud	iP	15 04 57.3	
		De	iP	15 05 21.1	C
			i	15 05 28.4	
		Ural Mountains.			
		m = 5.4 (Up,Ki).			
		Underground explosion.			
"	29	Ud	iP	22 39 58.5	
		Japan.			
"	30	Sk	iP	00 19 14.3	
		Ud	iP	00 18 36.0	
		Aegean Sea (h = 15 km).			
"	30	Up	iPKPl	01 44 14.5	
			ipPKPl	01 44 30.6	
		Ki	i(PKP)	01 44 04.2	
		Sk	ePKPl	01 44 12	
		Ud	iPKPl	01 44 16.5	
		De	iPKPl	01 44 24.9	
		Kermadec Islands.			
		Origin time = 01 24 40.			
"	30	Ki	i(P)	05 13 43.8	
		Um	i(P)	05 14 33.2	
"	30	Um	iP	05 48 42.6	

1974 Aug.	30	Up	iX	07 58 19.0	
		Ki	iP	07 57 49.1	
			iX	07 58 11.4	
		Sk	iX	07 58 02.1	
		Um	iP	07 57 50.8	
			iX	07 58 18.3	
		Ud	iP	07 57 47.1	
			i	07 58 04.6	
			iX	07 58 09.2	
		De	iX	07 58 14.6	
		Nicaragua (h = 60 km).			
		X, of larger amplitude than P, may be P of another earthquake; alternatively, interpreting X as pP gives h = 90 km.			
"	30	Up	iP	09 34 05.9	
		Ud	iP	09 34 14.3	
		De	eP	09 34 24	
"	30	Up	iPgl	10 44 01.3	
			iSgl	10 44 18.2	
			i	10 44 22.5	
			iRg	10 44 27.2	
		Ki	iSgl	10 47 49.1	
		Sk	ePgl	10 44 44	
			iSgl	10 45 33.0	
		Um	iSgl	10 45 54.0	
		Ud	iPgl	10 43 49.8	
			iSgl	10 43 58.8	
			iRg	10 44 03.0	
		De	iPgl	10 44 43.1	
			iSgl	10 45 33.8	
		Grängesberg, Dalarna-Västmanland, Sweden			
		60.1°N, 15.0°E.			
		Origin time = 10 43 39.			
		Rockburst.			
		Felt.			
		Ref.: M. Båth, Phys. Earth Planet. Inter., 1975, 10: 369-376.			
"	30	Ud	iRg	11 30 56.8	
"	30	Up	iP	13 55 19.9	
		Ud	iP	13 55 25.1	
"	30	Ud	i(P)	13 58 28.9	
"	30	Up	iP	14 34 20.2	C
"	30	Up	iP	15 11 48.5	C
				micr sec	
			P Z'	0.3 1.3	
		(cont.)			

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

1974						
Aug.	30	(cont.)				
		Ki	iP		15 11 14.2	C
					micr	sec
			P	Z'	0.2	1.4
		Sk	iP		15 11 22.6	C
		Um	iP		15 11 34.0	C
		Ud	iP		15 11 40.8	C
		De	iP		15 11 57.0	C
		Nevada.				
		m = 6.2 (Up,Ki).				
		Underground explosion.				
"	30	Sk	iP		17 47 22.3	
		Ud	iP		17 46 55.3	
		De	iP		17 46 18.4	
		Yugoslavia (h = N).				
"	30	Up	iP		18 26 09.8	
			ipP		18 26 23.0	
		Ki	iP		18 25 33.3	
			ipP		18 25 46.1	
		Sk	iP		18 26 04.9	
		Um	iP		18 25 49.8	C
			ipP		18 26 02.8	
		Ud	iP		18 26 16.8	C
			ipP		18 26 30.1	
		South of Japan.				
		h = 50 km (Up,Ki,Um,Ud).				
"	30	De	iPKPl		19 27 03.7	
		Fiji Islands (h = 590 km).				
"	30	Up	iRg		19 39 49.8	
		Ud	iRg		19 39 33.8	
		Central Sweden.				
"	30	Ud	i(P)		19 45 00.4	
"	30	Up	iP		20 13 08.3	
			ipP		20 13 35.8	
		Ki	iP		20 13 03.8	C
		Sk	iP		20 13 24.3	
			ipP		20 13 53.2	
		Um	iP		20 13 01.4	
			ipP		20 13 28.3	
		Ud	iP		20 13 21.8	
			ipP		20 13 48.6	
		De	iP		20 13 23.3	C
		Burma.				
		h = 110 km (Up,Sk,Um,Ud).				
"	30	Up	iP		20 13 30.9	
		Um	iP		20 13 18.3	
		De	iP		20 13 41.9	
		Celebes (h = 50 km).				
"	30	Up	iRg		20 55 21.9	
		(cont.)				
1974						
Aug.	30	(cont.)				
		Ud	iRg		20 54 50.5	
		Central Sweden.				
"	30	Up	iRg		21 16 09.6	
		Ud	eRg		21 15 46	
		Central Sweden, possibly				
		Grängesberg aftershock.				
"	30	Up	iP		23 41 26.6	C
			ipP		23 41 38.4	
			iS		23 51 21	
					micr	sec
			P	Z'	0.1	1.0
			pP	Z'	0.2	1.0
			Mx	E	2.0	18
			Mx	N	2.6	18
			Mx	Z	3.4	15
		Ki	iP		23 40 52.5	C
			ipP		23 41 04.1	
			iS		23 50 18	
					micr	sec
			P	Z'	0.1	1.0
			pP	Z'	0.1	1.4
			Mx	E	5.4	17
			Mx	N	4.3	16
			Mx	Z	5.5	16
		Sk	iP		23 41 21.7	
			ipP		23 41 32.1	
		Um	iP		23 41 06.3	C
			iS		23 50 45	
		Ud	iP		23 41 33.1	C
			ipP		23 41 45.1	
		De	iP		23 41 46.2	C
		South of Japan.				
		h = 40 km (Up,Ki,Sk,Ud).				
		m = 5.9, M = 5.9 (Up,Ki).				
"	31	Um	iP		00 16 50.4	
			i		00 17 08.2	
		Ud	iP		00 17 17.2	
		South of Japan (h = N).				
"	31	Um	iP		00 34 38.9	
		Ud	iP		00 35 05.6	
		South of Japan.				
"	31	Ki	e(PKP)		01 33 09	
		Sk	iPKP		01 33 24.0	
		Um	iPKP		01 33 18.8	C
		Ud	iPKP		01 33 24.4	
		De	iPKP		01 33 28.8	
			i		01 33 34.2	
		Loyalty Islands (h = 15 km).				
"	31	Ud	iP		02 04 46.9	
		De	iP		02 04 46.0	

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

1974 Aug.	31	Ud	iP	02 38 58.9	
		Greece.			
"	31	Up	iRg	04 04 55.6	
		Ud	i	04 05 49.8	
"	31	Ud	iP	04 19 25.3	
"	31	Ki	i(P)	05 24 18.7	
		Um	i(P)	05 23 33.6	
"	31	Ud	iP	05 26 32.1	
			i	05 26 46.8	
"	31	Um	iP	05 37 58.3	
		Ud	iP	05 38 25.4	
		South of Japan.			
"	31	Up	iP	07 06 30.4	
		Ki	iP	07 05 11.0	
		Ud	iP	07 06 16.8	
"	31	Um	i(P)	07 17 11.9	
"	31	Up	iP	09 49 05.2	
		Ud	iP	09 49 10.6	
		De	iP	09 49 28.5	
		Kurile Islands (h = 55 km).			
"	31	Um	i(P)	10 34 28.9	
		Ud	iP	10 33 11.0	
"	31	Up	iP	11 39 15.0	
		Ki	iP	11 38 39.6	
		Sk	iP	11 39 10.9	
		Um	iP	11 38 54.6	
			ipP	11 39 22.1	
		Ud	iP	11 39 22.7	
		De	iP	11 39 36.7	
		South of Japan.			
		h = 110 km (Um).			
"	31	Ki	iP	11 42 17.1	
		Ud	eP	11 42 31	
		Tadzhik-Sinkiang.			
		Origin time = 11 34 39.			
"	31	Ud	iP	12 59 18.7	
"	31	Um	i(P)	13 19 57.3	
"	31	Up	eP	16 17 03	
"	31	Up	iP	17 21 30.2	
			iPP	17 22 58.7	
		Ki	iP	17 21 32.9	
		(cont.)			

1974 Aug.	31	(cont.)			
		Sk	iP	17 21 53.9	
			iPP	17 23 34.2	
		Um	iP	17 21 25.3	
		Ud	iP	17 21 46.9	
		De	iP	17 21 45.9	
		Tadzhik-Sinkiang (h = N).			
"	31	Up	iP	18 17 34.8	C
			ipP	18 17 49.1	
		Ki	iP	18 17 36.3	C
			ipP	18 17 50.5	
		Sk	eP	18 17 50	
		Um	iP	18 17 32.8	
			ipP	18 17 46.8	
		Ud	iP	18 17 45.6	C
			ipP	18 18 03.1	
		De	iP	18 17 43.5	
			ipP	18 17 58.5	
		Sumatra.			
		h = 55 km (Up,Ki,Um,Ud,De).			
"	31	De	iP	18 22 36.6	
"	31	Ud	iP	18 43 23.6	
"	31	Ud	iP	19 00 21.4	
"	31	Ud	eP	19 04 39	
"	31	Up	eP	19 58 16	
		Sk	eP	19 58 26	
		Ud	eP	19 58 29	
		De	iP	19 58 31.7	C
"	31	Up	iP	23 16 00.0	
		Ki	iP	23 16 09.1	
		Sk	iP	23 16 25.0	
		Um	iP	23 15 58.4	
		Ud	iP	23 16 16.2	
			ipP	23 17 00.9	
		Hindu Kush.			
		h = 220 km (Ud).			
		Origin time = 23 08 31.			
"	31	Up	eP	23 53 55	
		Ki	iP	23 52 43.4	
		Sk	iP	23 53 25.4	
			i	23 53 33.4	
		Um	iP	23 53 25.8	
			i	23 53 34.3	

Markus Båth

February 4, 1976

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

S E P T E M B E R 1 - 30, 1974

1974 Sep.				
	1	Up	iP	00 30 16.2 D
		Ki	iP	00 29 44.7 D
		Sk	iP	00 30 13.4
		Um	iP	00 29 58.4 D
		Ud	iP	00 30 23.0 D
		De	iP	00 30 35.4
		Bonin Islands (h = 390 km).		
"	1	Ud	iP	02 14 45.6
"	1	Up	iPKPl	02 56 34.9
		Ud	iPKPl	02 56 36.9
"	1	Up	iP	03 40 24.7
		Ud	iP	03 40 45.9
		De	eP	03 40 45
"	1	Ud	iP	05 09 17.5
"	1	Up	iPKPl	06 29 58.3
		Sk	iPKPl	06 29 49.2
		Um	iPKPl	06 29 43.2
		Ud	iPKPl	06 29 57.5
		Kermadec Islands.		
"	1	Sk	iPKP	09 52 50.6
		Ud	iPKP	09 52 49.0
		Off coast of Chile (h = N).		
"	1	Ki	iP	10 07 20.5
		Ud	iP	10 07 35.0
		Tadzhik-Sinkiang.		
		Origin time = 09 59 43.		
"	1	Up	iP	11 04 20.4
		Ki	iP	11 03 05.9
			i	11 03 08.8
		Sk	iP	11 03 18.1
		(cont.)		

1974 Sep.				
	1	(cont.)		
		Sk	i	11 03 21.9
			iS	11 05 02.6
		Um	iP	11 03 44.1
			i	11 03 47.1
		Ud	iP	11 04 04.6
			i	11 04 16.2
		De	iP	11 04 54.3
		Jan Mayen (h = N).		
		Double P.		
"	1	Ki	eP	11 20 43
		Sk	iP	11 20 53.4
			iS	11 22 32.0
		Probably Jan Mayen.		
		Origin time = 11 18 34.		
"	1	Ki	iP	13 17 18.7
		Sk	iP	13 17 31.2
			i	13 17 35.0
			iS	13 19 21.4
		Um	iP	13 17 56.4
			i	13 18 00.8
		Ud	iP	13 18 17.7
		Jan Mayen (h = N).		
		Double P.		
"	1	Ki	iP	14 02 03.0
		Sk	iP	14 01 54.4
			ipP	14 02 17.0
		Um	iP	14 02 10.3
			ipP	14 02 34.4
		Ud	iP	14 02 00.3
			ipP	14 02 23.4
		El Salvador.		
		h = 90 km (Sk,Um,Ud).		
"	1	Up	iP	16 02 46.8
		Ud	eP	16 02 59

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

1974						
Sep.	2	Up	iPKP1		00 13 03.5	
			i		00 13 10.0	
		Um	iPKP1		00 12 52.7	
		Ud	iPKP1		00 13 05.5	
"	2	Ki	iP		01 10 47.0	
		Ud	iP		01 11 01.1	
		Tadzhik-Sinkiang.				
		Origin time = 01 03 09.				
"	2	Up	iP		01 46 16.2	
		Ud	iP		01 46 29.6	
		Iran.				
"	2	Up	iP		04 46 07.7	D
			isP		04 46 24.4	
			iS		04 56 51	
					micr	sec
			P	Z'	0.2	1.3
		Ki	iP		04 46 07.6	D
			iS		04 56 51	
					micr	sec
			P	Z'	0.3	1.0
			Mx	E	0.6	18
			Mx	N	0.6	18
			Mx	Z	0.8	18
		Sk	iP		04 46 21.3	D
			iPP		04 50 01.3	
		Um	iP		04 46 04.8	D
			ipP		04 46 17.6	
			i		04 46 34.1	
			iPP		04 49 35.3	
			iS		04 56 47	
		Ud	iP		04 46 17.4	D
			ipP		04 46 29.4	
			iPP		04 49 57.8	
		De	iP		04 46 15.7	D
			isP		04 46 32.2	
		Sumatra.				
		h = 45 km (Um,Ud).				
		m = 6.5 (Up,Ki).				
		The phases interpreted as PP are consistently late.				
"	2	Up	ipP		05 28 46.4	
		Ki	iP		05 28 00.8	
		Sk	iP		05 28 32.3	
		Um	iP		05 28 15.8	
			ipP		05 28 26.6	
		Ud	iP		05 28 43.3	
			ipP		05 28 54.1	
		Japan.				
		h = 40 km (Um,Ud).				
"	2	Up	iP		08 54 45.4	
			i(sP)		08 55 02.2	
		(cont.)				

1974						
Sep.	2	(cont.)				
		Up	iSKS		09 05 09	
			iS		09 05 29	
		Ki	iP		08 54 45.5	
			ipP		08 54 59.2	
					micr	sec
			P	Z'	0.1	0.9
		Sk	iP		08 54 59.5	
		Um	iP		08 54 42.1	
			iS		09 05 24	
		Ud	iP		08 54 54.5	
			i(sP)		08 55 11.4	
		De	iP		08 54 54.2	
			ipP		08 55 06.7	
		Sumatra.				
		h = 50 km (Ki,De).				
"	2	Ki	iP		09 14 36.0	
		Um	iP		09 14 40.4	
		Ud	iP		09 14 58.2	
"	2	Ud	iPKP1		12 26 04.6	
		De	iPKP1		12 26 14.2	
		Fiji Islands (h = 440 km).				
"	2	Ki	iPKP		13 09 26.5	
		South Sandwich Islands (h = N).				
"	2	Um	iP		14 06 15.2	
"	2	Ud	iP		16 52 40.3	
"	2	Um	iP		18 05 36.0	
		Ud	iP		18 05 55.0	
"	2	Ki	ePKP		18 36 11	
		Sk	iPKP		18 36 23.3	
		Um	iPKP		18 36 18.1	D
		De	iPKP		18 36 35.0	
		Santa Cruz Islands (h = 120 km).				
"	2	Ki	eP		19 01 59	
		Sk	iP		19 02 25.5	
		Ud	iP		19 02 15.3	
		Sinkiang, China (h = N).				
"	2	Um	iP		23 31 46.1	
		Ud	iP		23 32 17.7	
		Kurile Islands.				
"	3	Up	iP		01 51 41.2	
					micr	sec
			P	Z'	0.1	0.9
		Ki	iP		01 51 04.9	
		(cont.)				

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

1974
Sep. 3 (cont.)

	Sk	iP		01 51 35.8
	Um	iP		01 51 19.9
	Ud	iP		01 51 47.3
	De	iP		01 52 01.5

South of Japan (h = 20 km).

" 3

Up	iP			01 52 11.2
	iS			02 01 59
			micr	sec
	P	Z'	0.1	1.1
	Mx	E	0.8	16
	Mx	N	1.3	18
	Mx	Z	1.2	18
Ki	iP			01 51 35.9
	iS			02 00 56
			micr	sec
	P	Z'	0.1	1.0
	Mx	E	1.2	16
	Mx	N	1.1	15
	Mx	Z	1.5	16
Sk	iP			01 52 06.2
Um	iP			01 51 50.4
	iS			02 01 23
Ud	iP			01 52 17.7

South of Japan.
Origin time = 01 40 15.
m = 5.9, M = 5.4 (Up,Ki).

" 3

Up	iP			01 52 23.5
			micr	sec
	P	Z'	0.1	1.1
Ki	iP			01 51 47.0
			micr	sec
	P	Z'	0.1	1.1
Um	iP			01 52 02.9
Ud	iP			01 52 30.9
De	iP			01 52 44.7

South of Japan.
Origin time = 01 40 28.
m = 5.9 (Up,Ki).

" 3

Up	iP			01 52 46.9
			micr	sec
	P	Z'	0.2	1.2
Ki	iP			01 52 09.7
			micr	sec
	P	Z'	0.1	1.3
Sk	iP			01 52 41.1
Um	iP			01 52 25.2
Ud	iP			01 52 53.4

South of Japan.
Origin time = 01 40 50.
m = 6.0 (Up,Ki).

" 3

Up	iP		01 56 41.9

(cont.)

1974
Sep. 3 (cont.)

Ki	iP		01 55 48.5
Ud	iP		01 56 47.2

Kurile Islands (h = 20 km).

" 3

Up	iP		01 57 47.3
Ki	iP		01 57 11.0
Um	iP		01 57 26.7 D
Ud	iP		01 57 54.4

South of Japan.
Origin time = 01 45 51.

" 3

Um	iP		02 06 03.1
	i		02 06 14.6

South of Japan (h = 15 km).

" 3

Up	iP			06 07 15.7
	i			06 07 30.4
			micr	sec
	P	Z'	0.5	0.8
	Mx	E	3.1	15
	Mx	N	6.0	15
	Mx	Z	7.8	15
Ki	iP			06 06 56.7
	i			06 07 10.3
			micr	sec
	P	Z'	0.5	0.9
	Mx	E	5.4	16
	Mx	N	7.8	21
	Mx	Z	3.8	18
Sk	iP			06 07 21.7
Um	iP			06 07 02.5
	i			06 07 18.2
	iS			06 16 55
Ud	iP			06 07 24.9
	i			06 07 39.6
De	iP			06 07 32.5
	i			06 07 46.0

Luzon (h = 10 km).
m = 6.6, M = 6.2 (Up,Ki).
A clear second phase, 14.4 sec after P; interpreted as pP, it would give h = 55 km.

" 3

Up	iP			06 11 46.8
	i			06 11 48.5
			micr	sec
	P	Z'	0.1	0.7
Ki	iP			06 11 29.5
	i			06 11 40.8
			micr	sec
	P	Z'	0.1	0.9
Sk	iP			06 11 54.9
Um	iP			06 11 34.8
	i			06 11 36.6
Ud	iP			06 11 57.8
	i			06 11 59.6

(cont.)

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

1974
Sep. 3 (cont.)
De iP 06 12 05.2
Luzon (h = N).
m = 5.9 (Up,Ki).
Double P, small and large, 1.8 sec apart.

" 3 Ki iP 09 07 26.2
Um iP 09 07 20.4
Ud iP 09 07 36.7
Tadzhik-Sinkiang (h = N).

" 3 Up iP 14 00 33.4
Ud iP 14 00 51.6
De iP 14 00 41.2
Iran-USSR.

" 3 Up iP 19 27 26.7
Ki iP 19 26 50.8 C
Sk iP 19 27 22.8
Um iP 19 27 07.0
i 19 27 18.7
Ud iP 19 27 33.8
South of Japan (h = 15 km).

" 3 Um iP 19 27 29.3
Ud iP 19 27 45.9
New Guinea (h = 40 km).

" 3 Um iP 19 38 43.2
Ud iP 19 39 10.6
South of Japan (h = N).

" 3 Up iP 19 48 53.4
iPP 19 50 24.9

		micr	sec
P	Z'	0.1	1.0
Mx	E	1.0	11
Mx	N	1.1	13
Mx	Z	2.2	10

Ki iP 19 48 56.0

		micr	sec
P	Z'	0.2	0.8
Mx	E	2.4	13
Mx	N	2.8	12
Mx	Z	1.6	10

Sk iP 19 49 17.3
iPP 19 50 56.3
Um iP 19 48 48.2
iPP 19 50 20.7
Ud iP 19 49 10.6
De iP 19 49 09.3
iPP 19 50 47.6
Tadzhik-Sinkiang (h = N).
m = 5.7, M = 5.3 (Up,Ki).

" 3 Sk iP 20 01 24.7
(cont.)

1974
Sep. 3 (cont.)
Hindu Kush.
Intermediate depth.

" 3 Up iP 20 07 13.7
Um iP 20 06 54.4
Ud iP 20 07 20.7
South of Japan (h = 450 km).

" 4 Um iP 00 32 27.8
Japan (h = 70 km).

" 4 Ki iP 01 48 40.5
Ud iP 01 48 54.4
De iP 01 48 53.2
Tadzhik-Sinkiang.
Origin time = 01 41 03.

" 4 Um iP 02 35 51.6

" 4 Um iP 04 17 21.3

" 4 Up iP 06 18 19.2
Ki iP 06 18 17.3

		micr	sec
P	Z'	0.1	0.9

Sk iP 06 18 31.5
Um iP 06 18 13.2
Ud iP 06 18 28.7
De iP 06 18 27.8
South of Java (h = 70 km).

" 4 Up iP 06 35 02.4
iS 06 39 44

		micr	sec
P	Z'	0.4	1.8
Mx	E	6.5	20
Mx	N	3.9	16
Mx	Z	4.7	16

Ki iP 06 36 08.1
iS 06 41 45

		micr	sec
P	Z'	0.2	1.7
Mx	E	8.5	20
Mx	N	3.9	19
Mx	Z	4.9	12

Sk iP 06 35 34.1
i 06 35 44.4
Um iP 06 35 33.5
iS 06 40 42
Ud iP 06 35 03.5
De iP 06 34 25.5
Libya (h = 15 km).
m = 5.8, M = 5.2 (Up,Ki).

" 4 Ki iP 06 52 09.0
Um iP 06 51 51.6
(cont.)

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

1974
Sep. 4 (cont.)
Ud iP 06 51 59.3
Pakistan.

" 4 Ud iP 07 12 26.9
Kurile Islands.

" 4 Ud iPKP1 08 17 44.7
De iPKP1 08 17 54.9
Tonga Islands (h = 60 km).

" 4 Ud iP 08 40 28.7

" 4 Up iP 09 31 10.8
ipP 09 31 24.9
micr sec
pP Z' 0.1 1.2
Ki iP 09 30 29.3
ipP 09 30 45.0
micr sec
Mx E 1.3 19
Mx N 1.1 22
Mx Z 1.2 20
Sk eP 09 31 06
Um iP 09 30 48.0
ipP 09 31 03.6
Ud iP 09 31 17.6
ipP 09 31 32.0
De iP 09 31 33.1
Japan.
h = 55 km (Up,Ki,Um,Ud).

" 4 Ki iP 15 38 13.5
Ud iP 15 38 23.8
De iP 15 38 21.6
Tadzhik-Sinkiang (h = N).

" 4 Ud iP 18 54 55.8

" 5 Up iP 00 37 51.9
Ki iP 00 38 58.3
Sk iP 00 38 30.1
Ud iP 00 37 59.9
De iP 00 37 27.9
Crete.

" 5 Up iP 01 07 06.1
Ki iP 01 06 23.8
Um iP 01 06 41.4
Ud iP 01 07 12.1 C
Japan (h = 90 km).

" 5 Up iP 04 04 48.4
Ki eP 04 04 21
micr sec
Mx N 0.5 12
(cont.)

1974
Sep. 5 (cont.)
Um iP 04 04 25.1
Ud iP 04 05 03.2
De iP 04 05 14.9
USSR-Mongolia (h = N).

" 5 Up iP 06 34 47.1
Ki iP 06 34 11.0
ipP 06 34 25.3
Um iP 06 34 26.6
ipP 06 34 39.3
Ud iP 06 34 53.9
South of Japan.
h = 50 km (Ki,Um).

" 5 Ki iP 07 29 20.7
Japan (h = N).

" 5 Up iP 07 59 57.8
Ki iP 08 00 00.5
micr sec
P Z' 0.1 1.0
Sk iP 07 59 43.8
Um iP 08 00 02.8
ipP 08 00 41.9
Ud iP 07 59 47.2
ipP 08 00 25.8
De iP 07 59 47.4
Colombia.
h = 160 km (Um,Ud).

" 5 Ki iP 09 16 02.7
Kurile Islands.

" 5 Up iP 10 08 07.2
Ki iP 10 07 57.4
Um iP 10 08 02.9
Mexico-Guatemala (h = N).

" 5 Up iP 11 39 51.4
Ki iP 11 41 00.2
micr sec
Mx E 0.4 14
Mx Z 1.2 22
Sk eP 11 40 31
Ud iP 11 40 01.2
De iP 11 39 28.2
i 11 39 47.5
Crete (h = 55 km).

" 5 Ki iP 12 21 53.1
Sk iP 12 22 13.9
Um iP 12 21 45.6
Ud iP 12 22 07.1
De iP 12 22 05.5
Tadzhik-Sinkiang (h = N).

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

1974
Sep. 5 Ki iP 14 09 42.2
Banda Sea (h = 90 km).

" 5 Up iP 14 40 28.8
Ki iP 14 40 35.4
ipP 14 41 25.1
Um iP 14 40 25.9
ipP 14 41 18.6
Ud iP 14 40 44.5
ipP 14 41 31.6
De iP 14 40 42.0
Afghanistan-USSR.
h = 240 km (Ki,Um,Ud).

" 5 Ud iPKP1 15 55 02.4

" 5 Up iP 17 52 48.9
Ki iP 17 52 13.9
Sk iP 17 52 44.2
Um iP 17 52 29.3
Ud iP 17 52 55.6
South of Japan (h = N).

" 5 Ki iP 18 32 52.4 C
Sk iP 18 33 24.3
Ud iP 18 33 34.8
De iP 18 33 44.5
Ryukyu Islands (h = N).

" 5 Ud iP 18 41 09.6
Hindu Kush (h = 170 km).

" 5 Ki Mx 21 56
micr sec
Mx E 0.8 21
Mx N 0.5 15
Ryukyu Islands (h = N).

" 6 Up iP 15 31 32.8
Ki iP 15 31 35.8
Sk iP 15 31 56.5
iPP 15 33 39.1
Um iP 15 31 27.7
Ud iP 15 31 49.5 C
iPP 15 33 29.9
De iP 15 31 48.5 C
Tadzhik-Sinkiang (h = N).

" 6 Sk iPKP 20 54 59.5
Um iPKP 20 54 54.2
Tonga Islands (h = 120 km).

" 6 Up iPKP 23 45 27.0
Sk iPKP 23 45 26.9
Um iPKP 23 45 21.1
i 23 45 26.2
Ud iPKP 23 45 29.6
(cont.)

1974
Sep. 6 (cont.)
De i(PKP) 23 45 21.3
iPKP 23 45 34.8
Solomon Islands (h = 60 km).

" 7 Um iP 03 39 59.6
Ud iP 03 40 00.8
Iran.

" 7 Ki iP 04 19 41.1
Um iP 04 20 00.0
Ud iP 04 20 31.7
De iP 04 20 49.2
Japan (h = 240 km).

" 7 Ki eP 07 35 27
Sk iP 07 35 15.2
Um i(P) 07 35 24.7
Ud iP 07 35 18.7
Colombia (h = 20 km).

" 7 Um iP 08 38 42.4
Turkey (h = 15 km).

" 7 Ud iP 10 17 57.9

" 7 Up iP 11 50 50.2 C
Ki iP 11 50 39.6
Sk eP 11 51 04
Ud iP 11 51 03.3
Burma (h = N).

" 7 Ud iP 13 44 21.3

" 7 Up iSgl 15 50 36.6
Ud iPgl 15 49 16.2
iSgl 15 49 36.5
De iSgl 15 50 29.6
Southeast Norway,
59.3°N, 11.1°E.
Origin time = 15 48 51.

" 7 Up iP 15 54 05.3
micr sec
Mx E 0.5 14
Mx N 0.9 17
Mx Z 0.5 13
Ki iP 15 54 09.0
micr sec
Mx E 0.8 11
Mx N 0.6 11
Mx Z 0.9 11
Sk iP 15 54 29.9
Um iP 15 54 00.1
Ud iP 15 54 22.9
i 15 54 34.2
De iP 15 54 20.9
(cont.)

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

1974						
Sep.	7	(cont.)				
		Tadzhik-Sinkiang (h = N).				
		M = 4.9 (Up,Ki).				
"	7	Up	iP		16 04 45.8	
		Ud	iP		16 05 03.4	
"	7	Ki	iP		19 09 11.3	
		Sk	iP		19 09 26.6	
		Java (h = 110 km).				
"	7	Up	iP		19 52 05.8	
			ipP		19 52 22.2	
					micr	sec
			P	Z'	0.1	1.1
			pP	Z'	0.1	1.0
		Ki	iP		19 52 16.1	C
			ipP		19 52 33.2	
					micr	sec
			P	Z'	0.1	1.0
			pP	Z'	0.2	1.0
		Sk	iP		19 51 53.8	C
			ipP		19 52 10.2	
		Um	iP		19 52 14.1	
			ipP		19 52 31.3	
		Ud	iP		19 51 53.8	
			ipP		19 52 11.5	
		De	iP		19 51 53.0	
			ipP		19 52 10.0	
		Leeward Islands.				
		h = 60 km (Up,Ki,Sk,Um,Ud, De).				
		m = 5.7 (Up,Ki).				
"	7	Um	iPKP		20 12 31.1	
		Ud	iPKP		20 12 26.6	
		Chile (h = 15 km).				
"	7	Um	iPKP		20 37 35.2	
		Chile-Argentina (h = 80 km).				
"	7	Up	iP		20 56 49.6	
			i		20 56 53.3	
			i(PP)		21 00 05.4	
			iPP		21 00 49.1	
			iS		21 08 19	
					micr	sec
			P	Z'	0.2	1.5
			PP	Z'	0.9	2.0
			Mx	E	13	21
			Mx	N	23	23
			Mx	Z	23	23
		Ki	iP		20 56 45.8	
			i		20 56 49.9	
			i(PP)		20 59 51.1	
			iPP		21 00 45.5	
		(cont.)				

1974						
Sep.	7	(cont.)				
		Ki	iSKS		21 07 21	
					micr	sec
			P	Z'	0.7	1.4
			PP	Z'	0.2	1.4
			Mx	E	28	21
			Mx	N	49	23
			Mx	Z	32	22
		Sk	iP		20 57 00.9	
			i		20 57 04.5	
			iPP		21 01 15.6	
		Um	iP		20 56 45.0	
			i		20 56 48.4	
			iPP		21 00 42.7	
			iS		21 08 10	
		Ud	iP		20 56 58.4	
			i		20 57 01.7	
			i		20 57 14.7	
			i(PP)		21 00 14.5	
			iPP		21 01 10.5	
		De	eP		20 56 58	
			i		20 57 01.6	
			iPP		21 01 02.8	
		South of Java (h = N).				
		m = 6.8, M = 6.7 (Up,Ki).				
		Double P, in average 3.7 sec apart.				
"	7	Up	iP		21 52 11.8	
		Ud	iP		21 52 21.9	
		Formosa (h = 60 km).				
"	8	Ud	iP		05 29 56.9	
"	8	Ki	iPKP		05 32 07.7	
		Sk	iSKP1		05 35 49.0	
		New Hebrides Islands (h = 15 km).				
"	8	Up	iPKP		05 35 15.9	
		Ki	iPKP		05 35 05.1	
			iPP		05 35 39.8	
			iPKKP1		05 46 14.4	
					micr	sec
			PP	Z'	0.3	1.7
		Sk	iPKP		05 35 15.4	
			iPKKP1		05 45 56.8	
		Um	iPKP		05 35 09.6	
			iPP		05 35 56.2	
		Ud	iPKP		05 35 18.6	
			iPP		05 36 32.4	
			iPKKP1		05 45 56.8	
		De	iPKP		05 35 24.4	
		New Ireland (h = 450 km).				
"	8	Ud	eP		08 09 12	
		Greece (h = 45 km).				

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

1974
Sep. 8 Ud iPKP1 08 19 43.4

" 8 Ud iP 09 36 09.8

" 8 Ki iP 11 18 24.0
Samar (h = N).

" 8 Up iP 12 49 53.3
Ki iP 12 49 23.5
Um iP 12 49 36.8
Ud iP 12 49 59.8
Volcano Islands (h = 140 km).

" 8 Ki iPKP 15 13 34.7
i 15 13 58.1
South Sandwich Islands
(h = N).

" 8 Ki iP 16 40 54.0
Ud iP 16 41 47.6
Aleutian Islands (h = 90 km).

" 8 Up iP 19 14 41.8
Ki micr sec
Mx E 0.6 11
Mx N 0.5 13
Mx Z 0.4 11
Sk iP 19 15 21.8
Ud iP 19 14 49.4
Aegean Sea (h = N).

" 9 De iPKP1 04 05 05.3

" 9 Ki iP 18 06 28.9
Sk iP 18 05 51.6
North Atlantic Ocean (h = N).

" 9 Ki iPKP 18 19 13.3
Solomon Islands (h = 55 km).

" 9 Sk iP 23 01 03.0
Yugoslavia (h = 25 km).

" 9 Ki iPKP1 23 54 37.2
Um iPKP1 23 54 47.1

" 10 Up iP 00 30 27.7
Sk eP 00 31 05
Ud iP 00 30 32.4
Ionian Sea (h = N).

" 10 Ud iP 04 08 31.9

" 10 Ud iP 05 40 15.2
Leyte (h = 60 km).

" 10 Up iP 13 57 56.8
(cont.)

1974
Sep. 10 (cont.)
Ki iP 13 57 31.0
Sk iP 13 57 59.0
Ud iP 13 58 06.1
Ryukyu Islands (h = 30 km).

" 10 Sk iPKP 18 24 57.2
Um iPKP 18 24 51.5
Santa Cruz Islands
(h = 240 km).

" 10 Up iPKP1 21 25 52.2 C
iPKP2 21 25 55.9
i 21 27 31.5
micr sec
PKP1 Z' 0.2 1.0
Ki iPKP1 21 25 33.5 C
Sk iPKP1 21 25 45.3 C
Um iPKP1 21 25 40.3 C
Ud iPKP1 21 25 53.7 C
De iPKP1 21 26 02.2 C
i 21 27 50.3
Kermadec Islands (h = 25 km).

" 10 Up iPKP1 21 41 07.7
Sk iPKP1 21 40 58.0
Um iPKP1 21 40 52.7
Ud iPKP1 21 41 06.1
De iPKP1 21 41 15.0
Kermadec Islands.
Origin time = 21 21 21.

" 11 Up iPKP1 01 36 43.0
iPKP2 01 36 48.2
micr sec
PKP1 Z' 0.1 1.2
PKP2 Z' 0.3 1.5
Ki iPKP1 01 36 24.1
Sk iPKP1 01 36 37.4 C
Um iPKP1 01 36 32.5 C
i 01 36 41.2
Ud iPKP1 01 36 45.0
De iPKP1 01 36 54.0 C
Kermadec Islands (h = 45 km).

" 11 Ud iP 03 39 27.9
De iP 03 39 38.4

" 11 Ud iP 04 14 38.4

" 11 Up iP 05 17 26.3
Sk iP 05 18 08.1
Um iP 05 18 06.9
Ud iP 05 17 31.3
i 05 17 35.5
Albania (h = 50 km).

" 11 Ud iP 07 20 05.6

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

1974					
Sep.	11	Up	iPKPl	07 45 56.6	
		Sk	iPKPl	07 45 49.3	
		Ud	iPKPl	07 45 57.0	
		De	iPKPl	07 46 06.8	
		Kermadec Islands.			
		Origin time = 07 26 15.			
"	11	Um	iPKPl	08 11 43.3	
"	11	Ki	iPKP	09 46 48.9	
		Sk	iPKP	09 46 59.0	
		Um	iPKP	09 46 54.5	
		Ud	iPKP	09 47 05.0	
		De	iPKP	09 47 13.5	
		New Hebrides Islands (h = N).			
"	11	Ud	i(P)	11 48 39.7	
"	11	De	iPKP2	12 27 05.9	
		Kermadec Islands (h = 40 km).			
"	11	Up	iPgl	13 02 01.1	
			iSgl	13 02 48.6	
		Ud	iPgl	13 01 25.1	
			iSgl	13 01 44.8	
		De	iPgl	13 02 03.2	
			iSgl	13 02 51.9	
		Southeast Norway,			
		59.7°N, 10.8°E.			
		Origin time = 13 01 00.			
"	11	Ud	i(P)	13 18 25.9	
		De	i(P)	13 18 33.3	
			i	13 18 47.8	
"	12	Up	iSgl	00 34 42.5	
		Ki	iPn	00 31 47.0	
			iS*	00 32 10.5	
			iSgl	00 32 11.2	
				micr	sec
			Sgl Z'	0.1	0.5
		Sk	iSgl	00 33 45.2	
		Um	ePn	00 31 58	
			iPgl	00 32 01.5	
			iS*	00 32 29.1	
			iSgl	00 32 32.8	
		Ud	iSgl	00 34 56.6	
		Norrbotten, Sweden,			
		66.1°N, 21.7°E.			
		Origin time = 00 31 21.			
		By combination with Finnish			
		station readings.			
		Felt.			
"	12	Up	iSgl	00 35 27.7	
		Ki	iPn	00 32 32.3	
			iS*	00 32 55.5	
		(cont.)			

1974					
Sep.	12	(cont.)			
		Ki	iSgl	00 32 56.5	
				micr	sec
			Sgl Z'	0.1	0.5
		Sk	eSgl	00 34 31	
		Um	iS*	00 33 14.4	
			iSgl	00 33 18.3	
		Norrbotten, Sweden,			
		66.1°N, 21.7°E.			
		Origin time = 00 32 06.			
		By combination with Finnish			
		station readings.			
		Felt.			
"	12	Ki	iP	02 45 32.3	
		Ud	iP	02 45 46.3	
		Tadzhik-Sinkiang (h = N).			
"	12	Up	i	03 38 02.1	
			iPgl	03 38 04.0	
			i	03 38 39.9	
			iSgl	03 38 46.6	
		Ki	iSgl	03 41 28.1	
		Sk	iSgl	03 40 37.4	
		Um	iPgl	03 38 27.2	
			iSn	03 39 08.0	
			iSgl	03 39 26.5	
		Ud	eSn	03 39 29	
			iSgl	03 39 53.4	
		De	iSn	03 39 52.1	
			iSgl	03 40 24.0	
		Gulf of Finland,			
		59.7°N, 23.8°E.			
		Origin time = 03 37 09.			
		Explosion?			
"	12	Up	iP	05 31 11.3	
		Ki	iP	05 30 31.1	
		Um	iP	05 30 52.8	
		Ud	iP	05 31 04.5 C	
		California (h = N).			
"	12	Up	iP	06 10 36.7	
		Ki	iP	06 10 39.4	
				micr	sec
			Mx E	1.6	17
			Mx N	1.0	14
			Mx Z	1.7	14
		Sk	iP	06 11 00.6	
		Ud	iP	06 10 54.2	
		De	iP	06 10 53.8	
		Sinkiang, China (h = N).			
"	12	Ki	iP	06 35 28.3	
		Sk	iP	06 35 49.5	
		Ud	iP	06 35 42.0	
		De	eP	06 35 41	
		Tadzhik-Sinkiang (h = N).			

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

1974 Sep.	12	Ud	iP	06 37 21.8	
		Unimak Island (h = 40 km).			
"	12	De	iP	09 26 48.9	
"	12	Up	iSgl	11 36 24.9	
		Ud	iPgl	11 35 09.5	
			iSgl	11 35 38.0	
		De	iPgl	11 35 14.9	
			iSgl	11 35 45.8	
			iRg	11 36 00.1	
		West coast of Sweden, 58.4°N, 11.3°E. Origin time = 11 34 34. Probably explosion.			
"	12	Up	iS*	12 44 38.8	
			iSgl	12 44 44.6	
		Sk	eSgl	12 47 12	
		Um	iSgl	12 46 41.6	
		Ud	iSgl	12 45 26.8	
		De	iPgl	12 43 58.3	
			iSgl	12 44 47.7	
		Off coast of Latvia, 56.5°N, 20.2°E. Origin time = 12 42 53. Explosion?			
"	12	De	iP	13 13 25.8	
"	12	Ud	i(Sgl)	13 24 10.6	
"	12	Up	iSgl	13 37 31.2	
		Sk	iSgl	13 37 34.9	
		Ud	iS*	13 36 28.2	
			iSgl	13 36 32.8	
		De	iSgl	13 36 45.9	
			iSg2	13 36 50.7	
		Southwest Norway, 58.3°N, 6.6°E. Origin time = 13 34 28. By combination with Bergen and Kongsberg readings.			
"	12	Up	eSgl	14 02 03	
		Ud	ePgl	14 00 47	
			iSgl	14 01 16.2	
			i	14 01 26.6	
		De	iPgl	14 00 52.7	
			iSgl	14 01 23.5	
			iRg	14 01 37.1	
		Same location as the 11 34-event. Origin time = 14 00 12. Probably explosion.			
1974 Sep.	12	Ud	iPKP1	16 13 14.4	
		De	iPKP1	16 13 25.0	
"	12	Ud	iP	18 31 49.9	
		De	iP	18 31 47.7	
"	12	Um	iPKP	20 05 52.5	
		Ud	iPKP1	20 06 05.5	
		De	iPKP1	20 06 17.5 D	
		Fiji Islands (h = 610 km).			
"	12	Sk	iP	20 26 56.2	
		Um	iP	20 27 11.5	
		Ud	iP	20 27 03.4	
		De	iP	20 27 10.0	
		El Salvador (h = 90 km).			
"	12	Ud	iP	20 31 17.7	
		De	iP	20 31 17.0	
"	12	Sk	iP	20 55 16.5	
		Ud	iP	20 55 12.1	
"	12	Up	iP	23 11 37.3	
		Ki	i(P)	23 11 46.9	
		Sk	iP	23 11 54.2	
		Um	iP	23 11 35.3	
		Ud	iP	23 11 48.6	
		De	iP	23 11 48.6	
		(Andaman Islands).			
"	12	Up	iPKP	23 15 14.5	
		Ki	iPKP	23 15 30.1	
				micr sec	
			PKP Z'	0.1 1.5	
		Um	iPKP	23 15 21.3	
		Ud	iPKP	23 15 12.8	
			iPKKP1	23 25 09.9	
		De	iPKP	23 15 07.2	
		South Sandwich Islands (h = N).			
"	12	Up	iPKP2	23 52 07.6	
"	13	Up	iP	02 15 33.8	
		Ki	iP	02 15 42.7	
		Sk	iP	02 15 59.3	
		Um	iP	02 15 32.1	
		Ud	iP	02 15 50.3	
			ipP	02 16 31.3	
		De	iP	02 15 46.9	
		Hindu Kush. h = 200 km (Ud).			
"	13	Up	iP	03 09 52.8 C	
			iPn	03 10 58.5	
			iPP	03 11 11.5	
		(cont.)			

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

1974						
Sep.	13	(cont.)				
		Up			micr	sec
			P	Z'	0.1	0.9
		Ki	iP		03 09 37.5	C
					micr	sec
			P	Z'	0.1	0.5
		Sk	iP		03 10 08.4	C
			iPP		03 11 31.0	
		Um	iP		03 09 37.5	C
			i		03 10 52.7	
		Ud	iP		03 10 09.1	C
			iPn		03 11 21.7	
			iPP		03 11 34.5	
		De	iP		03 10 16.0	C
			iPn		03 11 31.3	
			iPP		03 11 43.6	
		Kazakh SSR.				
		m = 5.9 (Up,Ki).				
		Underground explosion.				
"	13	Up	iP		05 00 29.3	
		Ud	eP		05 00 42	
		De	iP		05 00 18.4	
		Turkey (h = N).				
"	13	Ud	iP		05 36 43.8	
		Baja California (h = N).				
"	13	Up	iP		08 03 16.4	C
			iPcP		08 03 56.5	
			iP'P'		08 32 16.9	
					micr	sec
			P	Z'	0.8	1.3
			Mx	E	1.5	20
			Mx	N	2.5	20
			Mx	Z	3.6	22
		Ki	iP		08 02 21.5	C
					micr	sec
			P	Z'	0.6	1.4
			Mx	E	2.3	19
			Mx	N	1.3	17
			Mx	Z	1.7	14
		Sk	iP		08 02 58.6	C
			iPcP		08 03 46.7	
		Um	iP		08 02 47.6	C
			iPcP		08 03 40.2	
			iS		08 10 40	
		Ud	iP		08 03 19.6	C
			iPcP		08 03 58.6	
		De	iP		08 03 41.6	C
			iPcP		08 04 12.5	
			iPP		08 06 05.2	
		Kamchatka (h = 55 km).				
		m = 6.6, M = 5.5 (Up,Ki).				
"	13	De	iP		10 51 47.9	C

1974						
Sep.	13	Up	iSgl		11 33 31.9	
		Ki	iPgl		11 28 56.9	C
			i		11 29 02.2	
			iSgl		11 29 17.2	
					micr	sec
			Pgl	Z'	0.1	0.4
			Sgl	Z'	0.3	0.3
		Sk	iSgl		11 31 53.4	
			i		11 31 56.2	
		Um	iSgl		11 31 21.4	
		Ud	eSgl		11 33 40	
		North Norway,				
		69.3°N, 19.8°E.				
		Origin time = 11 28 31.				
		By combination with Tromsoe				
		readings.				
"	13	Up	eP		18 29 31	
					micr	sec
			Mx	E	0.3	9
			Mx	N	0.4	12
			Mx	Z	0.7	10
		Ki	iP		18 30 46.3	
					micr	sec
			Mx	E	0.3	9
			Mx	N	0.4	9
			Mx	Z	0.3	8
		Sk	iP		18 30 12.3	
		Um	iP		18 30 12.0	
		Ud	i(P)		18 29 36.6	
			iP		18 29 40.8	
		Greece (h = 25 km).				
		M = 4.4 (Up,Ki).				
"	13	Ud	iP		18 47 28.8	
		De	iP		18 47 27.5	
"	13	Up	iPgl		20 49 48.1	
			iSgl		20 49 59.5	
			iRg		20 50 01.7	
		Sk	i		20 51 15.6	
		Um	i		20 51 02.3	
			iSgl		20 51 32.0	
		Ud	iPgl		20 49 58.5	
			iSgl		20 50 16.9	
			i		20 50 20.8	
			iRg		20 50 26.1	
		De	iSgl		20 51 44.3	
		Gästrikland-Dalarna, Sweden,				
		60.4°N, 16.3°E.				
		Origin time = 20 49 35.				
		Near-surface event.				
"	14	Up	iP		02 49 46.3	
		Ki	iP		02 48 56.3	
		Sk	iP		02 49 34.4	
		Um	iP		02 49 19.5	
		(cont.)				

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

1974 Sep.	14	(cont.)			
		Ud	iP	02 49 50.6	
		De	iP	02 50 10.8	
		Kurile Islands (h = 180 km).			
"	14	Ki	iP	04 44 59.3	
		Sk	iP	04 45 19.2	
		Um	iP	04 44 51.6	
		Ud	iP	04 45 13.4	C
		De	iP	04 45 12.3	C
		Tadzhik-Sinkiang (h = N).			
"	14	Ki	iPKP	08 54 31.5	
		New Hebrides Islands (h = N).			
"	14	De	iPKP1	08 56 15.2	
		Fiji Islands (h = 600 km).			
"	14	Ud	iP	11 25 22.7	C
		De	iP	11 24 49.9	
		Crete.			
"	14	Ud	iP	18 56 43.8	
"	14	Um	iPKP1	19 47 28.6	
			i	19 47 50.5	
		Ud	iPKP1	19 47 45.0	
"	14	Ud	iPKP1	21 37 13.7	
"	14	Ud	iPKP1	21 41 01.2	
"	14	Up	iPKP1	22 37 16.8	
		Ud	iPKP1	22 37 18.4	
"	15	Ud	eP	00 42 37	
		De	eP	00 42 05	
		Greece (h = 110 km).			
"	15	Ki	iPKP	02 20 58.4	
		Um	iPKP	02 21 07.9	
"	15	Up	iPKP1	08 36 11.3	
			iPKP2	08 36 25.0	
		Ki	iPKP1	08 35 53.7	
		Sk	iPKP1	08 36 07.0	
		Um	iPKP1	08 36 02.2	
		Ud	iPKP1	08 36 12.6	
		New Zealand (h = 60 km).			
"	15	Ud	iP	11 25 19.2	
"	15	Up	iP	14 55 14.4	
		Um	iP	14 54 50.2	
		Ud	iP	14 55 19.1	
		Japan (h = 30 km).			
1974 Sep.	15	Up	iP	15 00 16.1	
		Ki	iP	15 00 24.7	
		Ud	iP	15 00 32.3	
		Hindu Kush (h = 230 km).			
"	15	Ki	iPKP	15 01 34.4	
		New Hebrides Islands (h = 35 km).			
"	15	Ud	iP	17 57 26.6	
		Hindu Kush. Intermediate depth.			
"	15	Ud	iP	19 47 57.7	
"	15	Up	iSKP1	20 56 16.8	
		Um	iSKP1	20 56 00.2	
		Ud	eSKP1	20 56 21	
			i	20 56 27.2	
		New Hebrides Islands (h = 240 km).			
"	15	Ud	iP	22 01 22.6	
"	16	Sk	eP	00 52 00	
		Ud	eP	00 51 55	
		De	iP	00 51 48.0	
		Argentina (h = 280 km).			
"	16	Ki	iP	00 55 57.3	
		Um	iP	00 56 12.2	
		Ud	iP	00 56 04.4	
"	16	Ki	iP	01 07 14.6	
		Ud	iP	01 07 47.8	
		De	iP	01 07 34.8	
"	16	Ud	iP	03 53 25.4	
		Kurile Islands.			
"	16	Ud	iPKP1	10 49 12.1	
		De	iPKP1	10 49 19.5	
			i	10 49 36.8	
		Tonga-Kermadec Islands (h = N).			
"	16	Um	iPKP1	11 59 19.7	
"	16	Up	i(P)	12 55 20.6	
		De	i(P)	12 55 54.6	
"	16	Up	i(P)	14 36 45.5	
"	16	Up	i(P)	14 46 50.1	
"	16	Up	i(P)	15 16 27.5	

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

1974							
Sep.	16	Ki	iP		16 34 08.2		
		Ud	iP		16 34 34.7		
"	16	Up	iP		16 53 26.1		
					micr	sec	
			P	Z'	0.1	1.1	
			Mx	E	0.5	11	
			Mx	N	0.4	10	
			Mx	Z	0.9	11	
		Ki	iP		16 53 29.1	C	
					micr	sec	
			P	Z'	0.1	1.0	
			Mx	E	1.6	14	
			Mx	N	0.4	9	
			Mx	Z	1.3	13	
		Sk	iP		16 53 50.0	C	
		Um	iP		16 53 21.6		
		Ud	iP		16 53 42.9	C	
			iPP		16 55 23.2		
		De	iP		16 53 41.9	C	
		Tadzhik-Sinkiang (h = 60 km).					
		m = 5.6, M = 5.1 (Up,Ki).					
"	16	Up	iP		21 08 01.1		
					micr	sec	
			Mx	E	0.8	20	
			Mx	N	1.1	20	
			Mx	Z	1.1	20	
		Ki	iP		21 07 15.2		
					micr	sec	
			Mx	E	0.8	17	
			Mx	N	0.7	18	
			Mx	Z	1.0	17	
		Um	iP		21 07 36.4		
		Ud	iP		21 08 06.6	C	
		De	iP		21 08 24.9	C	
		Kurile Islands (h = 55 km).					
		M = 5.1 (Up,Ki).					
"	16	Up	iP		22 06 29.5		
					micr	sec	
			Mx	E	0.9	24	
			Mx	N	1.2	22	
			Mx	Z	2.2	23	
		Ki	iP		22 05 38.5		
					micr	sec	
			Mx	E	0.8	19	
			Mx	N	0.5	17	
			Mx	Z	0.9	17	
		Sk	iP		22 06 16.3		
			iPcP		22 06 52.8		
		Um	iP		22 06 02.2		
		Ud	iP		22 06 35.1		
			i		22 06 37.5		
		De	iP		22 06 55.4		
		Kurile Islands (h = 50 km).					
		M = 5.1 (Up,Ki).					
1974							
Sep.	17	Ud	iPKP1		00 17 20.8		
"	17	Up	iP		02 11 52.7		
			iS		02 20 25		
					micr	sec	
			P	Z'	0.2	1.6	
			Mx	N	0.8	19	
			Mx	Z	1.1	20	
		Ki	iP		02 10 57.6		
					micr	sec	
			P	Z'	0.2	1.5	
			Mx	E	0.6	18	
			Mx	N	0.8	19	
			Mx	Z	1.0	18	
		Sk	iP		02 11 25.6		
		Um	iP		02 11 26.4		
		Ud	iP		02 11 48.8		
		De	iP		02 12 12.4		
		Kodiak Island (h = 15 km).					
		m = 6.0, M = 5.0 (Up,Ki).					
"	17	Up	iP		04 22 38.7		
		Sk	iP		04 23 22.0		
		Ud	iP		04 22 40.5		
		Greece-Albania (h = 45 km).					
"	17	Up	iP		05 14 59.7		
			iPP		05 15 26.7		
			iS		05 18 31		
					micr	sec	
			P	Z'	0.2	0.8	
			Mx	E	1.6	11	
			Mx	N	3.8	11	
			Mx	Z	5.1	11	
		Ki	iP		05 16 18.7	C	
					micr	sec	
			P	Z'	0.1	1.1	
			Mx	E	3.3	11	
			Mx	N	3.2	10	
			Mx	Z	3.0	10	
		Sk	iP		05 15 43.6	C	
		Um	iP		05 15 41.9	C	
			iS		05 19 58		
		Ud	iP		05 15 06.6		
			i		05 15 09.5		
		De	iP		05 14 27.5		
		Greece-Albania (h = 15 km).					
		m = 5.5, M = 5.3 (Up,Ki).					
"	17	Up	iP		05 21 49.9		
		Ud	iP		05 21 57.1		
		Greece-Albania.					
"	17	Up	iP		09 03 06.8	C	
					micr	sec	
			P	Z'	0.1	0.9	

(cont.)

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

1974 Sep.	17	(cont.)			
		Ki	iP	09 02 13.3	
		Sk	eP	09 02 50	
		Um	iP	09 02 39.3	
		Ud	iP	09 03 10.8	
		De	iP	09 03 31.5	
		Kamchatka (h = 10 km).			
"	17	Up	ipP	17 41 38.2	
				micr sec	
			pP Z'	0.1 1.0	
		Ki	iP	17 40 30.3	
			ipP	17 40 44.6	
		Sk	iP	17 41 06.3	
			ipP	17 41 22.2	
		Ud	iP	17 41 27.6	
		De	iP	17 41 47.7	
			ipP	17 42 02.7	
		Kamchatka.			
		h = 55 km (Ki,Sk,De).			
"	17	De	iP	19 33 33.7	
"	18	Up	iP	00 31 13.0 C	
		Ud	iP	00 31 21.3	
		De	iP	00 31 25.3	
		Celebes (h = 230 km).			
"	18	Up	iP	01 49 48.1	
		Ki	iP	01 48 55.4	
		Sk	iP	01 49 32.6	
		De	iP	01 50 13.6	
		Kamchatka (h = N).			
"	18	Ki	iP	04 59 19.3	
		Ud	iP	04 59 48.2	
		Luzon (h = 45 km).			
"	18	Up	iP	05 26 09.1	
		Ki	iP	05 27 18.1	
		Ud	iP	05 26 17.4	
		De	iP	05 25 43.3	
		Crete (h = 20 km).			
"	18	Up	iP	09 11 32.5	
		Sk	iP	09 12 16.4	
			i	09 12 23.8	
		Um	iP	09 12 14.1	
			i	09 12 19.4	
		Ud	iP	09 11 39.1 C	
		De	iP	09 11 00.7	
		Greece-Albania (h = 10 km).			
"	18	Up	iP	18 40 40.1	
		Ki	iP	18 40 37.7 C	
				micr sec	
			P Z'	0.2 0.8	
		(cont.)			

1974 Sep.	18	(cont.)			
		Sk	iP	18 40 52.3	
		Um	iP	18 40 36.1	
		Ud	iP	18 40 49.7	
		De	iP	18 40 48.1	
		Java (h = 90 km).			
"	18	Ki	iP	22 31 20.7	
		Um	iP	22 31 25.4	
		Ud	iP	22 31 43.2	
		Mindanao (h = N).			
"	19	Up	iP	02 00 19.1	
		Ki	iP	01 59 34.1	
		Um	iP	01 59 54.3 C	
		Ud	iP	02 00 25.0 C	
			i	02 00 37.1	
		De	iP	02 00 42.4	
		Kurile Islands (h = N).			
"	19	Ud	iP	03 37 00.8	
"	19	Up	iPKP1	10 32 28.1	
				micr sec	
			PKP1 Z'	0.1 0.9	
		Ki	iPKP	10 32 10.2	
		Ud	iPKP1	10 32 29.5	
		De	iPKP1	10 32 38.8	
			iPKP2	10 32 45.9	
		Kermadec Islands (h = 170 km).			
"	19	Up	iPKP1	17 25 43.9	
		Sk	iPKP1	17 25 37.5	
		Um	iPKP1	17 25 32.1	
		Ud	iPKP1	17 25 45.2	
		De	iPKP1	17 25 53.7	
		Kermadec Islands.			
		Origin time = 17 06 03.			
"	19	Up	iP	20 27 26.5	
		Ki	iP	20 28 08.3	
		Sk	iP	20 27 40.3	
		Um	iP	20 27 50.4 D	
		Ud	iP	20 27 23.2	
		Ascension Island (h = N).			
"	20	Up	iP	00 02 46.5	
		Ki	iP	00 02 22.1 C	
				micr sec	
			P Z'	0.1 0.9	
		Sk	iP	00 02 45.9 C	
		Um	iP	00 02 31.7 C	
		Ud	iP	00 02 53.5	
		Mariana Islands (h = 110 km).			
"	20	Up	iP	01 04 00.8 C	
		(cont.)			

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

1974
Sep. 20 (cont.)

Up			micr	sec
	P	Z'	0.2	1.0
	Mx	E	0.9	22
	Mx	N	1.6	22
	Mx	Z	1.6	20
Ki	iP		01 03 16.7	
			micr	sec
	P	Z'	0.2	1.3
	Mx	E	1.8	20
	Mx	N	2.5	20
Sk	iP		01 03 53.1	
Um	iP		01 03 36.3	
Ud	iP		01 04 07.2	C
De	iP		01 04 24.5	

Japan (h = 50 km).
m = 6.1, M = 5.5 (Up,Ki).

" 20

Ki	i	01 16 59.5
	i	01 17 08.3
	i(Sgl)	01 17 13.8
Sk	i(Sgl)	01 19 00.5

Swedish Lapland.

" 20

Ud	iPKP	11 17 48.1

Chile-Bolivia (h = 110 km).

" 20

Ud	iP	12 02 56.2

" 20

Up	ipPKPl	19 43 59.1
Ud	ipPKPl	19 44 02.2
De	iPKPl	19 44 02.9 C
	ipPKPl	19 44 13.4

Tonga Islands.
h = 35 km (De).

" 20

Up	iPKP2		20 08 59.6	
			micr	sec
	PKP2	Z'	0.1	1.0
Ki	iPKPl		20 08 28.9	
			micr	sec
	PKPl	Z'	0.2	1.1
Sk	iPKP2		20 08 59.5	
	i		20 09 04.3	
Um	iPKPl		20 08 33.1	
	iPKP2		20 08 46.4	
	i		20 08 50.3	
Ud	iPKP2		20 09 06.2	

New Zealand (h = 50 km).
PKP2 followed after 4.4 sec by another clear phase (Sk,Um).

" 20

Ud	iP	21 17 34.1

Mindanao (h = 100 km).

1974
Sep. 20

Up	iPKP		21 38 34.3	
	i		21 39 52.0	
			micr	sec
	Mx	E	1.9	20
	Mx	N	3.6	20
Ki	iP		21 34 23.0	
	ipP		21 34 54.3	
	iPKP		21 38 28.6	
			micr	sec
	Mx	E	3.3	24
	Mx	N	3.1	24
Sk	ePKP		21 38 39	
Um	iPKP		21 38 32.8	
	i		21 39 28.9	
Ud	iPKP		21 38 42.4	
	i		21 40 26.5	
De	iPKP		21 38 45.8	C

New Guinea.
h = 120 km (Ki).
M = 6.0 (Up,Ki).
M uncorrected for focal depth.

" 21

Up	iP	01 14 39.7
	iPP	01 16 13.1
Ki	iP	01 14 46.5
Sk	iP	01 15 04.8
Um	iP	01 14 36.8
Ud	iP	01 14 56.7
	iPP	01 16 35.0
De	iP	01 14 53.9

Afghanistan-USSR (h = 90 km).

" 21

Ud	iPKPl	02 12 25.4

" 21

Up	iPKP2		06 16 14.9	
	i		06 16 19.7	
			micr	sec
	PKP2	Z'	0.2	1.0
Ki	iPKPl		06 15 44.5	
	iPKP2		06 15 52.8	
			micr	sec
	PKPl	Z'	0.2	1.0
	PKP2	Z'	0.4	1.5
Sk	iPKP2		06 16 14.5	
Um	iPKPl		06 15 50.0	
	i		06 15 58.2	
	iPKP2		06 16 02.3	
	i		06 16 06.6	
Ud	iPKP2		06 16 21.8	
	i		06 16 26.9	

New Zealand (h = 50 km).
PKP2 followed after 4.7 sec by another clear phase (Up,Um,Ud).

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

1974
Sep. 21 Up iP 06 37 46.5 C
ipP 06 37 56.3
i 06 38 00.3
Ki iP 06 37 42.0
Sk iP 06 38 03.7
Um iP 06 37 39.4 C
Ud iP 06 38 00.2 C
ipP 06 38 10.3
De iP 06 38 01.6
India-Bangla Desh.
h = 35 km (Up,Ud).
Readings are consistently late by about 10 sec compared to the NEIS solution.

" 21 Ki eP 09 27 30
North Atlantic Ocean
(h = N).

" 21 Ud iPKPl 11 41 41.6
De iPKPl 11 41 52.5
Tonga-Kermadec Islands
(h = 240 km).

" 21 Up iPKPl 12 59 47.7
micr sec
Mx E 2.1 22
Mx N 3.6 20
Mx Z 5.4 20
Ki micr sec
Mx E 3.7 20
Mx N 3.2 19
Mx Z 3.8 18
Um iPKP 12 59 40.0
i 12 59 46.0
Ud iPKPl 12 59 49.6
De iPKPl 12 59 59.7
Tonga-Kermadec Islands
(h = N).
M = 6.2 (Up,Ki).

" 21 Ud iP 15 51 39.5
Japan (h = 35 km).

" 21 Up iP 16 05 18.7 C
i 16 05 31.8
iPcP 16 05 50.0
iS 16 13 41
micr sec
P Z' 0.3 1.5
PcP Z' 1.3 2.2
Ki iP 16 04 26.7 C
micr sec
P Z' 0.5 2.0
(cont.)

1974
Sep. 21 (cont.)
Sk iP 16 05 02.6
Um iP 16 04 51.1 C
i 16 05 04.1
iPcP 16 05 37.2
iS 16 12 49
Ud iP 16 05 23.0
iPcP 16 05 56.7
De iP 16 05 43.9
Kamchatka (h = 120 km).
m = 6.1 (Up,Ki).

" 21 Up iP 16 14 37
Ki iP 16 12 52.5
iTPg 16 20 37.5
iTSg 16 21 11.4
micr sec
P Z' 0.1 0.8
Mx E 2.0 14
Mx N 3.2 17
Mx Z 4.3 19
Sk iP 16 13 34.1
Um iP 16 13 45.6
Ud iP 16 14 30.3
i 16 14 37.5
De iP 16 15 10.1
Svalbard (h = N).

" 21 Up iP 18 03 53.2
Ki iP 18 03 46.8
Um iP 18 03 45.5 C
Ud iP 18 04 06.3 C
ipP 18 04 28.1
Burma-India.
h = 90 km (Ud).

" 21 Up iPKPl 19 45 02.9
Ud iPKPl 19 45 05.3
De iPKPl 19 45 16.4
Tonga-Kermadec Islands
(h = 580 km).

" 21 Ud iPKPl 22 50 49.6
De iPKPl 22 51 00.2

" 22 De iPKPl 04 30 36.7
Tonga-Kermadec Islands
(h = N).

" 22 Up iP 05 51 35.9
Ki iP 05 51 33.9
Ud iP 05 51 47.6
Sinkiang, China.

" 22 Ud iSKPl 08 37 46.2
New Hebrides Islands
(h = 90 km).

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

1974					
Sep.	22	Up	iP	09 01 02.9	
		Tsinghai, China (h = N).			
"	22	Ud	iP	09 07 14.2	
		Kurile Islands.			
"	22	Up	iPKPl	11 51 04.3	
		Sk	iPKPl	11 50 57.6	
		Um	iPKPl	11 50 52.2	
		Ud	iPKPl	11 51 06.1	
		De	iPKPl	11 51 14.7	
		Kermadec Islands (h = 40 km).			
"	22	Ud	iP	12 44 07.8	
"	22	Ki	iP	19 17 44.4	
		Ud	iP	19 18 09.7	
		Mindanao (h = 50 km).			
"	23	Up	iP	15 01 09.0	
				micr	sec
			P Z'	0.1	1.1
			Mx E	0.9	12
			Mx N	1.4	16
		Ki	i(P)	15 00 46.8	
				micr	sec
			Mx E	2.7	15
			Mx N	5.3	17
			Mx Z	1.5	13
		Sk	iP	15 01 19.5	
		Um	iP	15 00 55.0	
		Ud	iP	15 01 22.2	
		Szechwan, China (h = N).			
		M = 5.4 (Up,Ki).			
"	23	Up	iP	16 02 23.0	
		Sk	i	16 03 19.0	
		Ud	iP	16 02 29.2	
			i	16 02 37.8	
			i	16 03 04.0	
		De	iP	16 01 53.5	
		Greece (h = 50 km).			
"	23	Up	iP	19 38 21.5	
			iPcP	19 39 09.6	
			iS	19 46 33	
				micr	sec
			P Z'	0.3	1.2
			Mx E	2.7	18
			Mx N	5.7	13
			Mx Z	8.4	15
		Ki	iP	19 39 14.4	
			iS	19 48 16	
			iP'P'	20 07 34.6	
				micr	sec
			P Z'	0.5	1.3
			Mx E	6.1	14
		(cont.)			

1974					
Sep.	23	(cont.)			
		Ki		micr	sec
			Mx N	5.8	17
			Mx Z	4.6	16
		Sk	iP	19 38 46.4	
		Um	iP	19 38 48.2	
			iS	19 47 23	
		Ud	iP	19 38 21.1	
			i	19 38 23.2	
		De	iP	19 37 57.4	
		Gabon (h = N).			
		m = 6.4, M = 6.0 (Up,Ki).			
		Multiple P.			
"	24	Ki	iP	02 08 45.2	
			ipP	02 08 51.7	
				micr	sec
			pP Z'	0.1	1.4
		Sk	iP	02 08 07.4	
		Ud	iP	02 08 09.2	
			ipP	02 08 15.9	
		North Atlantic Ocean.			
		h = 25 km (Ki,Ud).			
"	24	Up	iP	03 02 10.7	
"	24	Ki	iP	07 41 40.4	
		Kamchatka.			
		Intermediate depth.			
"	24	Up	iS*	10 18 32.9	
			iSg2	10 18 48.1	
		Ud	iSgl	10 17 33.6	
		West coast of Norway,			
		60.6°N, 5.2°E.			
		Origin time = 10 15 24.			
		By combination with Bergen			
		and Kongsberg readings.			
"	24	Up	iSgl	11 23 30.7	
		Ud	iPgl	11 22 36.9	
			iSgl	11 22 56.5	
		De	iSgl	11 23 16.3	
		Västergötland, Sweden,			
		near 58.6°N, 13.2°E.			
		Origin time = 11 22 12.			
"	24	Ki	iP	17 50 11.8	
		Sk	iP	17 49 51.1	
		Ud	iP	17 49 19.9	
		De	eP	17 48 47	
		Crete.			
"	24	Up	iSgl	18 29 03.5	
		Ki	iSgl	18 26 59.0	
		Sk	iPgl	18 26 25.9	
			iSgl	18 27 07.3	
		(cont.)			

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

1974
Sep. 24 (cont.)

	Um	iSn	18 27 13.9
		iSgl	18 27 26.5
	Ud	iSgl	18 28 53.9

Nordland, Norway,
66.5°N, 14.4°E.
Origin time = 18 25 32.
Explosion?

" 25	Um	iPKPl	02 11 42.4	
	Ud	iPKPl	02 11 54.9	
" 25	Up	iP	11 38 00.1	
	Ki	iP	11 37 07.1	
	Um	iP	11 37 32.7	
	Ud	iP	11 38 01.8	C
	De	iP	11 38 23.7	

Aleutian Islands (h = 110 km).

" 25	Um	i(Sgl)	11 48 17.1	
" 25	Up	iRg	13 19 50.4	
	Sk	iSgl	13 21 18.3	
	Ud	iSgl	13 20 23.9	

East-central Sweden.
Near-surface event.

" 25	Up	iRg	14 48 50.0	
	Ud	iSgl	14 49 20.2	

East-central Sweden.
Near-surface event.

" 25	De	iP	16 42 17.9	
" 26	Ud	iP	02 27 08.6	
" 26	Um	i(PcP)	07 41 43.8	
	Ud	iP	07 41 57.8	

Japan (h = 40 km).

" 26	Up	iSg2	09 44 08.5	
	Sk	eSgl	09 43 20	
	Ud	iSgl	09 42 57.9	
		iSg2	09 43 04.4	
	De	iSgl	09 43 47.7	

West coast of Norway,
60.1°N, 5.1°E.
Origin time = 09 40 44.
By combination with Bergen readings.

" 26	Up	iP	10 34 46.0	
	Ud	iP	10 34 56.2	

Japan (h = 60 km).

" 26	Ki	iP	11 39 15.1	

(cont.)

1974
Sep. 26 (cont.)

	Um	iP	11 39 39.7	
	Ud	iP	11 40 07.0	
		i	11 40 14.2	
	De	iP	11 40 31.2	
		i	11 40 36.7	

Unimak Island (h = 30 km).

" 26	Ud	iPKPl	12 19 21.0	
	De	iPKPl	12 19 31.4	
" 26	Ki	iP	13 07 31.6	
	Ud	iP	13 08 10.8	

Volcano Islands (h = 120 km).

" 26	Up	iSgl	13 27 13.7	
	Sk	eSgl	13 27 14	
		iSg2	13 27 26.6	
	Ud	iSgl	13 26 16.2	
	De	eSgl	13 26 05	

North Sea,
near 57 1/2°N, 4 1/2°E.
Origin time = 13 23 26.
By combination with Bergen and Kongsberg readings.

" 26	Ud	iP	14 57 54.0	
" 26	Up	iP	15 16 48.3	C
			micr sec	
		P Z'	0.2 1.4	
	Ki	iP	15 16 14.3	C
			micr sec	
		P Z'	0.1 1.3	
	Sk	iP	15 16 22.6	C
	Um	iP	15 16 34.0	C
	Ud	iP	15 16 40.7	
	De	iP	15 16 57.5	

Nevada.
m = 6.0 (Up,Ki).
Underground explosion.

" 26	Up	iPKPl	15 20 25.3	
	Ud	iPKPl	15 20 24.3	
	De	iPKPl	15 20 37.4	C
		ipPKPl	15 20 48.4	

Tonga Islands.
h = 45 km (De).

" 26	Up	iRg	16 03 14.0	
	Ud	iRg	16 03 26.9	

East-central Sweden.
Near-surface event.

" 26	De	iP	16 11 13.4	
" 26	Ud	iP	16 50 47.5	

Kurile Islands.

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

1974 Sep.	26	Ud	iPKP1	21 22 20.1	
"	26	Up	iP	21 29 24.4	
		Ud	iP	21 29 30.4	
		Kurile Islands.			
"	26	Up	iP	23 02 36.9	
		Ud	iP	23 02 44.6	
		Kurile Islands.			
"	26	Up	iPKP	23 14 10.1	
		Ki	iPKP	23 14 26.7	
		Um	iPKP	23 14 18.4	
		Ud	iPKP	23 14 07.8	
		South Sandwich Islands (h = 70 km).			
"	26	Up	iP	23 27 35.6	
		Ki	iP	23 27 03.6	
		Sk	iP	23 27 32.3	
		Um	iP	23 27 17.2	
		Ud	iP	23 27 42.2	
		De	iP	23 27 53.5	
		Bonin Islands (h = 80 km).			
"	27	Up	iP	00 19 20.3	
		Ki	iP	00 19 29.6	
		Um	iP	00 19 27.5	
		Argentina (h = 220 km).			
"	27	Um	i	00 29 30.7	
			i(Sgl)	00 29 40.9	
"	27	Ud	iP	01 15 36.2	
"	27	Up	iP	03 21 49.8 D	
			il	03 21 57.7	
			i2	03 22 09.4	
			iS	03 31 27	
				micr sec	
			P Z'	0.2 0.8	
			il Z'	0.5 1.0	
			i2 Z'	0.7 0.9	
			Mx E	7.7 20	
			Mx N	9.0 20	
			Mx Z	17 23	
		Ki	iP	03 21 12.9 D	
			il	03 21 20.9	
			i2	03 21 32.0	
			iS	03 30 20	
				micr sec	
			P Z'	0.1 1.0	
			il Z'	0.2 1.0	
			i2 Z'	0.4 1.1	
			Mx E	21 18	
			Mx N	13 16	
			Mx Z	16 19	
		(cont.)			

1974 Sep.	27	(cont.)			
		Sk	iP	03 21 44.7 D	
			il	03 21 53.0	
			i2	03 22 03.9	
		Um	iP	03 21 29.2 D	
			il	03 21 36.8	
			i2	03 21 47.0	
			iS	03 30 47	
		Ud	iP	03 21 57.4 D	
			il	03 22 05.0	
			i2	03 22 13.9	
		De	iP	03 22 11.0	
			il	03 22 18.8	
			i2	03 22 27.3	
		Japan (h = 45 km).			
		m = 5.9(P), 6.2(il), 6.4(i2), M = 6.4 (Up,Ki).			
		Multiple P-phases, in average 7.9 and 18.1 sec after the first onset.			
"	27	Um	iP	03 45 53.3	
		Alaska (h = 70 km).			
"	27	Up	iP	04 21 43.9 C	
			iPP	04 25 16.7	
				micr sec	
			P Z'	0.3 1.5	
			Mx E	2.2 23	
			Mx N	1.9 21	
			Mx Z	6.0 22	
		Ki	iP	04 21 49.3 C	
			iSKS	04 32 14	
				micr sec	
			P Z'	0.3 1.5	
			Mx E	4.9 21	
			Mx N	2.3 21	
			Mx Z	5.2 21	
		Sk	iP	04 21 33.1 C	
		Um	iP	04 21 49.8 C	
			iPP	04 25 19.7	
		De	iP	04 21 34.4 C	
		Colombia (h = 45 km).			
		m = 6.3, M = 5.8 (Up,Ki).			
"	27	Up	iP	05 36 02.3	
			i	05 36 30.0	
				micr sec	
			P Z'	0.5 0.8	
		Ki	iP	05 36 01.2	
				micr sec	
			P Z'	0.2 0.8	
		Sk	iP	05 36 21.9	
		Um	iP	05 35 56.7	
		De	iP	05 36 16.3	
		Nepal (h = 70 km).			
		m = 6.4 (Up,Ki).			

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

1974						
Sep.	27	Up	iP		05 58 31.0	C
			iS		06 07 31	
			iP'P'		06 26 52.2	
					micr sec	
			P	Z'	0.8 0.9	
			Mx	E	38 15	
			Mx	N	83 18	
			Mx	Z	130 17	
		Ki	iP		05 57 46.7	
			i		05 57 47.7	
			eS		06 06 06	
					micr sec	
			P	Z'	0.6 1.0	
			Mx	E	79 16	
			Mx	N	100 17	
			Mx	Z	150 17	
		Sk	iP		05 58 21.6	C
			ipP		05 58 34.5	
		Um	iP		05 58 06.8	C
			iS		06 06 45	
		De	iP		05 58 54.7	C
			ipP		05 59 06.0	
		Kurile Islands.				
		h = 45 km (Sk,De).				
		m = 6.7, M = 7.2 (Up,Ki).				
"	27	Um	iPKP		07 03 58.2	
		De	iPKP		07 04 12.2	
		Solomon Islands (h = 400 km).				
"	27	Up	iP		08 24 01.2	
		Ki	iP		08 23 16.4	
		Sk	eP		08 23 52	
		Um	iP		08 23 36.3	
		Ud	iP		08 24 07.7	
		De	iP		08 24 26.2	
		Kurile Islands (h = 70 km).				
"	27	Up	iP		09 19 44.3	
		Sk	iP		09 19 39.2	
		Um	iP		09 19 22.9	
		Ud	iP		09 19 51.0	
		De	iP		09 20 04.6	
		Japan (h = 60 km).				
"	27	Up	iP		12 19 35.0	
			i		12 19 40.0	
		Ki	iP		12 19 40.7	
			i		12 19 47.0	
		Sk	iP		12 19 24.7	
			i		12 19 29.3	
		Ud	iP		12 19 25.7	
			i		12 19 30.6	
		De	iP		12 19 25.7	
			i		12 19 30.6	
		(cont.)				

1974					
Sep.	27	(cont.)			
		Colombia (h = 70 km).			
		The second, stronger phase			
		follows the first after			
		5.1 sec in average.			
"	27	Up	iP	12 21 00.2	
		Ki	iP	12 20 11.8	
		Um	iP	12 20 35.6	
			ipP	12 20 46.2	
		Ud	iP	12 21 06.6	
		De	iP	12 21 24.9	
		Kurile Islands.			
		h = 40 km (Um).			
"	27	Up	iPKP	12 36 21.7	
			i	12 36 44.8	
		Ki	iPKP	12 36 37.7	
		Um	iPKP	12 36 28.3	
		Ud	iPKP	12 36 19.7	
		South Sandwich Islands			
		(h = 60 km).			
"	27	Um	i	13 53 28.6	
			iRg	13 53 36.0	
"	27	Up	iP	15 38 42.9	
		Ki	iP	15 37 56.9	
		Ud	iP	15 38 49.2	
		Japan (h = 90 km).			
"	27	De	iP	16 10 55.4	
"	27	Up	iS*	17 38 57.5	
			iSgl	17 39 02.1	
		Ki	ePgl	17 37 37	
			iSn	17 38 14.2	
			iSgl	17 38 25.6	
		Sk	iSgl	17 38 33.7	
		Um	iPgl	17 36 48.1	C
			iPn	17 36 50.7	
			iSgl	17 36 55.4	
		Ud	iSgl	17 39 22.9	
		De	eSgl	17 41 02	
		Västerbotten, Sweden,			
		64.3°N, 20.6°E.			
		Origin time = 17 36 36.			
"	27	Up	iP	20 33 31.0	
		Ud	iP	20 33 38.2	
		Greece.			
"	28	Up	iPKPl	00 02 24.4	D
			i	00 02 33.6	
			iSKPl	00 05 11.8	
		(cont.)			

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

1974
Sep. 28 (cont.)

			micr	sec	
Up					
	PKP1	Z'	0.5	1.0	
Ki	iPKP		00 02	14.1	
	iSKP1		00 04	51.3	
			micr	sec	
	SKP1	Z'	0.5	1.8	
Sk	iPKP		00 02	19.2	
	iSKP1		00 05	06.6	
Um	i(PKP)		00 02	10.6	
	iPKP		00 02	13.2	
	i		00 02	21.7	
	iSKP1		00 05	01.6	
Ud	iPKP1		00 02	27.1	D
	i		00 02	35.7	
	ipPKP1		00 04	47.2	
	iSKP1		00 05	13.9	
De	iPKP1		00 02	36.7	D
	i		00 02	46.3	
	ipPKP1		00 04	53.0	

Tonga-Kermadec Islands.
h = 620 km (Ud,De).

" 28	Up	eP	01 40 22	
	Sk	eP	01 41 00	
	Ud	iP	01 40 28.3	
	De	iP	01 39 57.9	
		i	01 40 06.1	

Crete (h = 50 km).

" 28	Sk	iP	06 08 03.9	

Aegean Sea.

" 28	Um	iP	08 20 09.4	
	Ud	iP	08 20 35.6	

Japan (h = 70 km).

" 28	Ud	iP	08 45 55.6	

Mariana Islands (h = 320 km).

" 28	Ud	iP	10 26 30.6	
" 28	Sk	iP	11 47 28.1	

South of Panama (h = N).

" 28	Um	iPKP1	14 10 56.1	
	Ud	iPKP1	14 11 08.1	
" 28	Sk	iP	16 12 28.2	
	Um	iP	16 12 10.2	
	Ud	iP	16 12 39.7	

Japan (h = 70 km).

" 28	Um	iP	21 04 58.9	
	Ud	iP	21 05 27.1	

Japan (h = 60 km).

1974
Sep. 28

Ud	iP		21 35 39.9	
" 28 Ud	iP		23 20 24.1	C

Afghanistan-USSR.
Intermediate depth.

" 29	Up	iP	06 40 58.8	
	Ki	iP	06 42 00.5	
	Sk	iP	06 41 36.8	
	Ud	iP	06 41 03.7	
	De	iP	06 40 33.0	

Crete-Rhodes (h = 55 km).

" 29	Up	iP	14 00 53.4	
	Um	iP	14 00 32.7	
	Ud	iP	14 01 01.0	

Japan (h = 55 km).

" 29	Up	iP	15 59 37.6	C	
		i	15 59 42.8		
		iPP	16 01 15.3		
			micr	sec	
		P	Z'	0.1	1.1
		i	Z'	0.5	1.3
		Mx	E	2.0	9
		Mx	N	6.6	15
		Mx	Z	3.7	8
	Ki	iP	15 59 34.9	C	
		i	15 59 40.1		
			micr	sec	
		P	Z'	0.1	0.6
		i	Z'	0.5	0.9
		Mx	E	7.6	16
		Mx	N	17	16
		Mx	Z	8.3	16
	Sk	iP	15 59 59.1		
		i	16 00 04.3		
	Um	iP	15 59 30.1		
		i	15 59 35.5		
	Ud	iP	15 59 54.3	C	
		i	15 59 59.6		
		iPP	16 01 37.1		
	De	iP	15 59 55.4	C	
		iPP	16 01 41.7		

Sinkiang, China (h = N).
m = 6.2, M = 5.7 (Up,Ki).
Double P, average separation 5.3 sec.

" 29	Up	iP	17 54 53.2	
	Ud	iP	17 55 02.8	

Greece-Albania (h = N).

" 29	Ud	iP	21 51 51.7	
" 29	Ki	iP	23 41 32.7	D

(cont.)

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

1974 Sep.	29	(cont.)			
		Sk	eP	23 40 50	
		Um	iP	23 40 59.3	
		Ud	iP	23 40 19.5	D
		Tunisia (h = N).			
"	29	Up	iP	23 59 35.0	
		Ki	iP	23 58 43.8	C
		Sk	iP	23 59 20.3	
		Um	iP	23 59 07.6	
		Ud	iP	23 59 39.6	
		Okhotsk Sea (h = 470 km).			
"	30	Up	iP	00 25 24.3	
		Ki	iP	00 24 43.2	
		Sk	iP	00 25 16.6	
		Um	iP	00 25 01.4	
		Ud	iP	00 25 31.1	
		Japan (h = 50 km).			
"	30	Ki	iP	06 08 27.8	
		Ud	iP	06 08 13.8	
		Colombia (h = 20 km).			
"	30	Up	iP	07 50 16.4	
			ipP	07 50 28.5	
		Ki	iP	07 50 00.9	
			ipP	07 50 11.7	
		Sk	iP	07 50 30.5	
			ipP	07 50 41.5	
		Um	iP	07 50 02.2	
			ipP	07 50 13.8	
		Ud	iP	07 50 31.4	
		Sinkiang, China.			
		h = 50 km (Up,Ki,Sk,Um).			
"	30	Up	iP	08 27 51.5	
		Sk	eP	08 28 32	
		Ud	iP	08 28 00.5	
		Greece.			
"	30	Ki	iP	08 28 45.4	
		Sumatra.			
"	30	Ki	iPn	09 12 57.5	
			iSn	09 13 54.8	
			iSgl	09 14 15.6	
		Sk	ePn	09 14 01	
			iSn	09 15 45.0	
			iSgl	09 16 43.1	
		Um	iPn	09 13 22.3	
			iPgl	09 13 38.3	
			iSn	09 14 34.1	
			iSgl	09 15 09.6	
		Ud	iPn	09 14 24.1	
			iSn	09 16 29.6	
			iSgl	09 17 36.5	
		(cont.)			

1974 Sep.	30	(cont.)			
		De	iSn	09 17 35.0	
			iSgl	09 19 06.5	
		Northwest USSR.			
		Explosion.			
		Included in this bulletin, as being of unusual size with exceptionally clear phases.			
"	30	Sk	iP	10 03 35.5	
		Ud	iP	10 03 28.0	
		De	iP	10 03 25.9	
		Tadzhik SSR (h = 170 km).			
"	30	Ud	iP	13 56 29.9	
			i	13 57 43.5	
"	30	Up	iP	21 16 17.9	
		Ud	iP	21 16 25.1	
		Japan (h = 140 km).			
"	30	Up	iSgl	23 57 35.4	
		Ki	iSgl	23 55 22.2	
		Sk	iSgl	23 55 37.8	
		Um	iSn	23 55 41.7	
			iSgl	23 55 58.4	
		Nordland, Norway, 66.8°N, 14.0°E.			
		Origin time = 23 53 55.			

Markus Båth
Klaus Meyer
Rutger Wahlström

April 17, 1976

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, 1974

1974 Oct.						
	1	Up	iP		00 39 17.2	
					micr	sec
			Mx	E	0.7	12
		Ki			micr	sec
			Mx	E	1.0	12
		Ud	iP		00 39 20.2	
		Ionian Sea (h = 20 km).				
		M = 4.6 (Up,Ki).				
"	1	Up	ipP		04 21 03.2	
					micr	sec
			pP	Z'	0.1	1.2
			Mx	E	2.4	18
			Mx	N	4.2	23
			Mx	Z	6.1	18
		Ki	ipP		04 20 37.9	
					micr	sec
			Mx	E	5.0	19
			Mx	N	4.8	19
			Mx	Z	3.4	17
		Sk	ipP		04 21 02.2	
		Um	iP		04 20 32.6	
			iSKS		04 31 01	
		Ud	iP		04 20 57.2	
			ipP		04 21 10.3	
		Mariana Islands.				
		h = 50 km (Ud).				
		M = 6.0 (Up,Ki).				
"	1	Up	iP		08 43 19.5	
					micr	sec
			P	Z'	0.1	1.3
			Mx	E	0.7	19
			Mx	N	0.7	19
			Mx	Z	1.1	20
		Ki	iP		08 42 52.7 D	
					micr	sec
			P	Z'	0.1	1.1
			Mx	E	0.7	17
			Mx	N	0.5	15
		(cont.)				

1974 Oct.				
	1	(cont.)		
		Sk	iP	08 43 17.2
		Um	iP	08 43 02.9
		Ud	iP	08 43 25.4 D
		Mariana Islands (h = 50 km).		
		m = 6.1, M = 5.3 (Up,Ki).		
"	1	De	iP	11 03 26.0
"	1	Up	iP	13 18 28.7
		Ki	iP	13 18 30.7 C
		Sk	iP	13 18 56.0
		Um	iP	13 18 24.1
		Ud	iP	13 18 45.3 C
		De	iP	13 18 44.1 C
		Tadzhik-Sinkiang (h = N).		
"	1	Up	iSgl	13 55 27.8
		Ud	iPgl	13 54 27.0
			iSgl	13 54 46.1
			iRg	13 54 56.0
		De	iSgl	13 55 19.3
		Lake Vänern-Dalsland, Sweden,		
		58.8°N, 12.7°E.		
		Origin time = 13 54 03.		
		Near-surface event.		
"	1	Ud	iP	14 41 04.7
"	1	Up	i(P)	21 06 51.8
"	1	Up	iSgl	23 52 39.4
		Sk	iSgl	23 50 59.7
		Um	iSgl	23 52 50.5
		Ud	iSgl	23 51 40.2
		De	iSgl	23 53 04.3
		West coast of Norway,		
		62.5°N, 5.1°E.		
		Origin time = 23 49 13.		
		By combination with Bergen and Kongsberg readings.		

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

1974
Oct. 2 Up iSgl 00 29 48.8
Ki ePgl 00 26 57
iSn 00 27 20.0
iSgl 00 27 35.8
micr sec
Sgl Z' 0.1 0.5
Sk ePgl 00 27 05
iSgl 00 27 51.1
Um iPn 00 27 08.9
iPgl 00 27 19.8
iSn 00 27 54.6
iSgl 00 28 12.4
Ud iSgl 00 29 37.0
Nordland, Norway,
66.7°N, 14.0°E.
Origin time = 00 26 09.
Cf Sep. 30, 1974, at 23 57.

" 2 Up iP 01 07 30.7
Sk iP 01 07 20.3
Ud iP 01 07 39.4
De iP 01 08 02.2
Eastern Siberia.

" 2 Up micr sec
Mx E 0.9 19
Mx N 0.7 19
Mx Z 1.1 20
Ki iP 03 08 45.4
micr sec
Mx E 0.8 19
Mx N 0.7 18
Sk iP 03 08 32.8
Ud iP 03 08 34.9
Peru (h = 5 km).
M = 5.4 (Up,Ki).

" 2 Up iP 03 13 48.3

" 2 Sk iPKPl 03 38 20.6
Um iPKPl 03 38 13.1
Ud iPKPl 03 38 26.1
i 03 38 32.3
Kermadec Islands.
Origin time = 03 18 45.

" 2 Ki i 04 16 23.8
iSgl 04 16 28.7
Um i(Sn) 04 17 16.2
iSgl 04 17 43.8

" 2 Ki iP 11 06 30.7

" 2 Up iP 15 07 01.5
Ki iP 15 06 09.1
(cont.)

1974
Oct. 2 (cont.)
Sk iP 15 06 45.1
Ud iP 15 07 05.2 C
De iP 15 07 26.2
Kamchatka (h = 50 km).

" 2 Ki iP 18 09 51.7
Ud iP 18 10 01.4
Sumatra (h = 90 km).

" 3 Sk iP 04 49 43.4
Panama-Colombia (h = N).

" 3 Ud iP 06 38 33.1

" 3 Up iP 11 19 22.1
micr sec
P Z' 0.1 0.7
Ki iP 11 19 30.7 C
micr sec
P Z' 0.1 0.6
Sk iP 11 19 47.7
Um iP 11 19 20.4 C
Ud iP 11 19 38.5 C
ipP 11 20 24.9
De iP 11 19 35.1
Hindu Kush.
h = 230 km (Ud).
m = 5.4 (Up,Ki).

" 3 Up iP 14 22 20.8
micr sec
P Z' 0.1 1.0

" 3 Up iP 14 35 28
i 14 35 42.2
iPP 14 39 52
iSKS 14 46 07
iS 14 47 16
micr sec
P Z' 0.2 1.5
i Z' 1.1 2.0
Mx E 200 23
Mx N 130 23
Mx Z 510 23
Ki iP 14 35 37.0
i(PP) 14 39 35.9
iPP 14 40 11.2
iPKKP 14 51 34.7
micr sec
P Z' 0.4 2.0
(PP) Z' 2.3 3.0
PP Z' 2.5 2.3
Mx E 240 20
Mx N 110 19
Mx Z 190 18
(cont.)

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

1974
Oct. 3 (cont.)

Sk	iP		14 35 22.1
	i(PP)		14 39 10.1
	iPP		14 39 31.8
	iPKKP		14 51 34.4
Um	iP		14 35 33.7
	i(PP)		14 39 19.5
	iPP		14 40 01
	iPKKP		14 51 36.4
	iP'P'		14 59 47.5
Ud	iP		14 35 20.2
	i		14 35 34.3
	iPKKP		14 51 42.3
De	iP		14 35 16.0

Peru (h = 15 km).
m = 7.2, M = 7.8 (Up,Ki).
Very well developed mantle surface waves; cf M. Båth and A. López Arroyo, J. Geophys. Res., 1962, 67: 1933-1942.

" 3

Up	iPP			14 53 51.2
			micr	sec
	PP	Z'	0.1	1.3

Peru (h = N).

" 3

Ki	eP	15 51 36
Um	iP	15 51 40.4

Mariana Islands (h = 70 km).

" 3

Ki	iP	21 34 28.2
	i	21 34 51.4
Ud	iP	21 34 00.1

" 3

Up	iP	21 37 55.3

Dodecanese Islands.

" 4

Up	iP	00 30 45.4 C
Ki	iP	00 30 13.5
Sk	iP	00 30 41.9 C
Um	iP	00 30 27.0 C
Ud	iP	00 30 52.2 C
	ipP	00 32 39.5
De	iP	00 31 03.9

South of Japan.
h = 490 km (Ud).

" 4

Ki	iPKP	04 06 50.6

South Sandwich Islands (h = N).

" 4

Ki	iP	05 42 37.6
Ud	iP	05 42 56.9

" 4

Ki	iP	06 53 48.8

(cont.)

1974
Oct. 4 (cont.)

Ud	iP	06 54 46.6
De	iP	06 55 07.5

Kamchatka (h = N).

" 4

Ud	iP	07 01 03.6

Hindu Kush.
Intermediate depth.

" 4

Ud	iP	15 47 08.4

" 4

Up	iP			17 46 43.2
	ipP			17 46 53.7
			micr	sec
	pP	Z'	0.1	1.0
Ki	iP			17 45 49.2
	ipP			17 46 01.9
			micr	sec
	P	Z'	0.1	1.2
Sk	iP			17 46 26.7
Um	iP			17 46 14.5
Ud	iP			17 46 45.7
	ipP			17 46 57.6
De	iP			17 47 06.3
	ipP			17 47 18.5

Kamchatka.
h = 45 km (Up,Ki,Ud,De).
m = 5.8 (Up,Ki).

" 4

Up	iP	18 06 12.3
Ki	iP	18 05 18.0
	ipP	18 05 28.5
Sk	iP	18 05 55.2
Ud	iP	18 06 15.7
	ipP	18 06 26.9
De	iP	18 06 36.7

Kamchatka.
h = 40 km (Ki,Ud).

" 4

Up	iP			18 08 43.6
Ki	iP			18 07 49.6
	ipP			18 08 02.2
			micr	sec
	P	Z'	0.1	1.4
Sk	iP			18 08 26.9
Ud	iP			18 08 47.6
De	iP			18 09 07.1

Kamchatka.
h = 45 km (Ki).

" 4 V

Up	iP			22 33 03.8
	i			22 33 24.0
	iX			22 34 13.0
	iPP			22 34 51.5
	iS			22 39 54
			micr	sec
	P	Z'	0.9	1.2

(cont.)

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

1974								
Oct.	4	(cont.)						
		Up			micr	sec		
			PP	Z'	0.3	1.3		
			Mx	E	5.4	19		
			Mx	N	11	21		
			Mx	Z	13	13		
		Ki	iP		22 33 23.7			
			iX		22 34 22.2			
			iPP		22 35 20.2			
					micr	sec		
			P	Z'	0.4	1.1		
			PP	Z'	0.2	1.3		
			Mx	E	9.8	16		
			Mx	N	14	18		
			Mx	Z	11	15		
		Sk	iP		22 33 32.2			
		Um	iP		22 33 08.3			
			iPcP		22 34 40.1			
			iPP		22 34 58.7			
			iS		22 40 04			
		Ud	iP		22 33 19.1			
			iPP		22 35 18.3			
		De	iP		22 33 09.9			
			iX		22 34 13.5			
		Pakistan (h = N).						
		m = 6.3, M = 6.0 (Up,Ki).						
		X could be P of another						
		earthquake with different						
		location.						
"	4	Ud	iP		22 39 37.2			
"	4	Up	iP		22 46 02.3			
					micr	sec		
			P	Z'	0.4	1.5		
		Ki	iP		22 45 08.3			
					micr	sec		
			P	Z'	0.2	1.2		
		Sk	iP		22 45 45.3			
		Um	iP		22 45 34.6			
		Ud	iP		22 46 05.5			
		De	iP		22 46 26.1			
		Kamchatka (h = 15 km).						
		m = 6.2 (Up,Ki).						
"	4	Up	iP		23 24 22.3			
		Ki	iP		23 24 41.9	C		
		Sk	iP		23 24 50.4	C		
		Um	iP		23 24 26.2	C		
		Ud	iP		23 24 37.3	C		
		Pakistan (h = N).						
"	5	Ud	iPKPl		03 38 34.9			
"	5	Up	iP		04 44 34.7			
		Ki	iP		04 43 40.9			
		Kamchatka (h = N).						

1974								
Oct.	5	Ud	iP		16 13 59.3			
		De	iP		16 13 54.7			
"	5	Up	iP		17 52 10.5			
		Sk	iP		17 52 06.8			
		Um	iP		17 51 51.3			
		Ud	iP		17 52 19.2	C		
		Japan (h = 60 km).						
"	5	Ki	iP		21 56 54.6			
		Ud	iP		21 57 44.5			
"	5	Ud	iP		22 44 53.9			
		Kodiak Island (h = 70 km).						
"	6	Ud	iP		00 49 02.3			
"	6	Up	iP		01 30 34.7			
		Ki	iP		01 31 04.6			
		Sk	iP		01 31 12.3			
		Um	iP		01 30 49.8			
		Ud	iP		01 30 54.1			
		De	iP		01 30 39.8			
		Iran.						
"	6	Up	iP		03 07 58.7			
		Ud	iP		03 07 59.0			
		Crete.						
"	6	Ud	iPKPl		05 08 57.0			
		De	iPKPl		05 09 07.5			
"	6	Ud	iP		17 49 57.7			
		Celebes (h = 220 km).						
"	6	Ki	iP		20 04 08.4			
		Um	iP		20 04 23.8			
		Ud	iP		20 04 51.4			
		Japan (h = 70 km).						
"	7	Up	iP		10 03 19.6	C		
			iPcP		10 03 48.1			
		Ki	iP		10 02 34.4	C		
		Sk	iP		10 03 10.2			
		Um	iP		10 02 54.7	C		
		Ud	iP		10 03 26.2			
		De	iP		10 03 44.0			
		Japan (h = 330 km).						
"	7	Up	eP		11 48 12			
			iPP		11 48 33.0			
					micr	sec		
			Mx	E	1.0	11		
			Mx	Z	0.4	6		
		Ki			micr	sec		
			Mx	E	2.2	13		
			Mx	N	0.6	8		
			Mx	Z	0.7	8		
		(cont.)						

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

1974							
Oct.	7	(cont.)					
		Sk	iP		11	48	53.7
			i		11	49	02.8
		Um	i(P)		11	49	01.2
		Ud	iP		11	48	19.2
		De	e(P)		11	47	39
		Ionian Sea (h = 20 km).					
		M = 4.7 (Up,Ki).					
"	7	Up	iP		17	22	54.1
			iPP		17	26	17.2
		Ki	iP		17	22	48.5
		Sk	iP		17	22	37.9
		Um	iP		17	22	54.6
			iPP		17	26	18.3
		Ud	iP		17	22	44.9
		De	iP		17	22	50.1
		Nicaragua (h = 230 km).					
"	7	Up	iPKP		22	11	28.4
			i		22	11	31.8
			i(PP)		22	12	41.7
			iX		22	14	14.0
			iY		22	14	40.3
			iPKKP1		22	21	21.5
			i		22	21	24.4
					micr		sec
			PKP	Z'	0.1		0.7
			Y	Z'	0.4		1.2
		Ki	iPKP		22	11	44.6
			i(PP)		22	12	54.0
			i(X)		22	14	38.6
			iX		22	14	46.3
					micr		sec
			PKP	Z'	0.1		0.9
			(PP)	Z'	0.2		1.3
			X	Z'	2.9		2.1
			Mx	N	0.7		18
		Sk	iPKP		22	11	34.9
			i		22	11	38.9
			iY		22	14	46.2
			iPKKP		22	22	01.4
		Um	iPKP		22	11	37.7
			iX		22	14	32.5
			iY		22	14	47.5
			iPKKP		22	21	54.9
		Ud	iPKP		22	11	28.1
			i		22	11	32.7
			i(PP)		22	12	36.1
			i		22	14	37.8
			iY		22	14	41.3
			iPKKP1		22	21	24.8
		De	iPKP		22	11	23.1
			i		22	11	27.3
			iY		22	14	35.3
			iPKKP1		22	21	42.5
		(cont.)					

1974							
Oct.	7	(cont.)					
		South Sandwich Islands					
		(h = N).					
		X and Y are well marked phases, though unidentified, arriving 30-40 sec ahead of calculated times for SKP1 and SKP, respectively. Greater depth may be suggested. In fact, with h about 290 km and origin time about 21 53 10, with unchanged epicenter, all our readings can be brought into agreement internally, also including the observation that the surface waves are remarkably small.					
"	7	Up	i(P)		23	49	18.2
"	8	De	iP		00	29	10.3
"	8	Up	i(P)		01	58	00.9
"	8	Up	iP		02	22	18.8
		Ki	iP		02	21	55.6
"	8	Up	iP		02	49	58.4
		Um	iP		02	49	33.0
		Okhotsk Sea (h = 300 km).					
"	8	Up	eP		03	15	29
		Ki	iP		03	14	37.6
			iPP		03	15	55.3
					micr		sec
			Mx	N	0.7		10
		Sk	iP		03	15	21.3 C
		Um	iP		03	15	01.5
		Ud	iP		03	15	38.6
		De	iP		03	15	59.4
		Central Siberia (h = N).					
"	8	Up	i(Sgl)		07	28	10.3
"	8	Up	iP		10	02	05.5 D
			iS		10	11	08
			iP'P'		10	30	07.6
					micr		sec
			P	Z'	1.3		1.3
			P'P'	Z'	1.2		2.2
			Mx	E	62		25
			Mx	N	33		21
			Mx	Z	110		22
		Ki	iP		10	02	13.9 D
			iS		10	11	24
			iP'P'		10	30	02.3
		(cont.)					

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

1974 Oct.	8	(cont.)				
		Ki			micr	sec
			P	Z'	3.0	1.7
			P'P'	Z'	0.2	1.4
			Mx	E	54	20
			Mx	N	42	19
			Mx	Z	55	20
		Sk	iP		10 01 52.3 D	
			iP'P'		10 30 14.4	
		Um	iP		10 02 13.2 D	
			iS		10 11 24	
			iP'P'		10 30 02.6	
		Ud	iP		10 01 53.8 D	
			iS		10 10 53.8	
			iP'P'		10 30 08.6	
		De	iP		10 01 53.6 D	
		Leeward Islands (h = 45 km).				
		m = 6.9, M = 6.9 (Up,Ki).				
"	8	Up	iP		11 08 26.7	
		Ud	iP		11 08 30.9	
"	8	Ud	iP		11 36 20.6	
"	8	Up	iP		13 00 29.7	
		Ki	iP		13 00 37.9	
		Sk	iP		13 00 16.2	
		Um	iP		13 00 37.6	
		Ud	iP		13 00 17.0	
		Leeward Islands (h = 55 km).				
"	8	Up	iP		17 12 22.9	
		Ud	iP		17 12 37.9 C	
"	8	Ud	iP		17 24 10.5	
"	8	Up	iP		18 06 16.1	
		Um	iP		18 05 39.0	
"	8	Up	iP		18 17 31.7	
		Ki	iP		18 17 39.4	
		Sk	iP		18 17 17.6	
		Ud	iP		18 17 20.1	
		De	iP		18 17 19.5	
		Leeward Islands (h = 45 km).				
"	8	Up	iP		19 20 42.1	
		Ki	iP		19 20 06.6	
		Sk	iP		19 20 38.3	
		Um	iP		19 20 24.0	
		Ud	iP		19 20 50.9	
		Japan (h = 55 km).				
"	8	Up	iP		19 53 34.5 C	
		Ki	iP		19 52 55.9	
		Sk	iP		19 53 30.1 C	
		(cont.)				

1974 Oct.	8	(cont.)				
		Um	iP		19 53 12.5 C	
		Ud	iP		19 53 41.2	
		Japan (h = 55 km).				
"	8	Ki	iP		22 31 21.3	
		Sk	iP		22 31 46.1	
		Ud	iP		22 31 36.3	
		Tadzhik-Sinkiang (h = N).				
"	8	Ud	iP		22 34 04.0	
"	9	Ud	iP		07 20 46.2	
"	9	Up	iSgl		07 27 00.9	
		Sk	iSgl		07 27 40.2	
		Ud	iPgl		07 25 20.7	
			iSn		07 25 52.9	
			iSgl		07 26 07.8	
		Skagerrak, 57.4°N, 9.2°E.				
		Origin time = 07 24 20.				
"	9	Up	iP		07 43 01.2 C	
			iX		07 43 52.1	
			iS		07 51 56.8	
			iP'P'		08 11 11.5	
					micr	sec
			P	Z'	0.9	0.8
			P'P'	Z'	1.1	2.5
			Mx	E	29	24
			Mx	N	57	25
			Mx	Z	70	19
		Ki	iP		07 42 14.2 C	
			iPcP		07 42 56.8	
			iS		07 50 26.8	
			iP'P'		08 11 33.8	
					micr	sec
			P	Z'	0.6	1.1
			P'P'	Z'	2.5	3.0
			Mx	E	46	18
			Mx	N	69	20
			Mx	Z	50	18
		Sk	iP		07 42 50.1 C	
			iX		07 43 41.2	
			eP'P'		08 11 20	
		Um	iP		07 42 35.9 C	
			iPcP		07 43 11.2	
			iS		07 51 09.9	
			iP'P'		08 11 23.9	
		Ud	iP		07 43 07.0 C	
			iPcP		07 43 32.2	
			iS		07 52 08.4	
			eP'P'		08 11 06	
		De	iP		07 43 24.5 C	
			iPcP		07 43 45.9	
		Kurile Islands (h = 50 km).				
		m = 6.8, M = 6.8 (Up,Ki).				

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

1974						
Oct.	9	Sk	iPKP		11 05 58.9	
		Solomon Islands (h = 35 km).				
"	9	Ud	iP		18 25 44.9	
		Ionian Sea (h = 40 km).				
"	10	Up	iPKPl		02 05 28.7	
		Ki	iPKP		02 05 20.1	
			iSKPl		02 07 53.8	
		Ud	iPKPl		02 05 30.0	
		De	iPKPl		02 05 41.6	
		Tonga-Kermadec Islands				
		(h = 590 km).				
"	10	Up	iPKPl		02 52 37.9 C	
					micr	sec
			PKPl	Z'	0.1	0.8
		Ud	iPKPl		02 52 39.4	
		De	iPKPl		02 52 49.9	
		Tonga-Kermadec Islands				
		(h = 100 km).				
"	10	Ud	iP		06 25 42.3	
"	10	Up	iPl		06 59 22.5	
			iP2		06 59 24.5	
			ipP2		06 59 39.5	
					micr	sec
			P2	Z'	0.8	1.6
		Ki	iPl		06 58 40.5	
			iP2		06 58 42.3	
			iPP		07 00 56.5	
			iS		07 07 08	
					micr	sec
			P2	Z'	0.4	1.3
			PP	Z'	0.2	1.7
		Sk	iP2		06 59 16.3	
			ipP2		06 59 30.6	
			iPP		07 01 42.9	
		Um	iPl		06 58 59.0	
			iP2		06 59 00.8	
		Ud	iPl		06 59 29.3	
			iP2		06 59 31.5	
			ipP2		06 59 46.7	
		De	iP2		06 59 47.6	
		Japan.				
		h = 55 km (Up,Sk,Ud).				
		m = 6.4 (Up,Ki).				
		Double P; P2 - Pl = 1.9 sec.				
"	10	Up	iPl		07 07 56.7	
			iP2		07 08 01.2	
			iS		07 17 00	
					micr	sec
			Pl	Z'	0.2	1.2
			P2	Z'	1.1	1.6
		(cont.)				

1974						
Oct.	10	(cont.)				
		Up			micr	sec
			Mx	E	24	19
			Mx	N	35	18
			Mx	Z	40	19
		Ki	iPl		07 07 14.0	
			iP2		07 07 18.9	
			iPP		07 09 34.0	
			iS		07 15 50	
					micr	sec
			Pl	Z'	0.1	1.2
			P2	Z'	1.0	1.9
			PP	Z'	1.1	2.5
			Mx	E	72	17
			Mx	N	65	17
			Mx	Z	35	17
		Sk	iPl		07 07 48.4	
			iP2		07 07 54.0	
			iPP		07 10 22.0	
		Um	iPl		07 07 32.5	
			iP2		07 07 38.1	
		Ud	iPl		07 08 03.3	
			iP2		07 08 08.8	
		De	iPl		07 08 20.5	
			iP2		07 08 24.4	
			iPP		07 11 05.8	
		Japan (h = 45 km).				
		m = 5.9(Pl), 6.6(P2),				
		M = 7.0 (Up,Ki).				
		Double P; P2 - Pl = 5.0 sec.				
"	10	Sk	iP		14 51 04.8	
		Ud	iP		14 50 55.7	
"	10	De	iP		15 35 15.4	
		Kamchatka (h = 50 km).				
"	10	Up	iSgl		15 41 15.7	
		Um	iSgl		15 43 18.2	
		Ud	iPgl		15 40 30.7	
			iSgl		15 40 54.1	
		De	iPgl		15 40 35.8	
			iSgl		15 41 02.4	
		Västergötland, Sweden,				
		58.4°N, 14.0°E.				
		Origin time = 15 40 01.				
"	10	Up	iP		16 17 05.4 C	
		Ki	iP		16 17 12.0 C	
		Sk	iP		16 17 30.3 C	
		Um	iP		16 17 02.5 C	
		Ud	iP		16 17 22.0 C	
		De	iP		16 17 19.5	
		Afghanistan-USSR (h = 120 km).				
"	10	Ki	iP		21 21 51.5 C	
			ipP		21 22 28.7	
		(cont.)				

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

1974
Oct. 10 (cont.)

	Um	iP		21 21 52.2	
	Ud	iP		21 22 04.4	
		ipP		21 22 42.9	

Tadzhik-Sinkiang.
h = 180 km (Ki,Ud).

" 10	Up	iP		21 45 15.0	C
				micr sec	
		P	Z'	0.2 0.9	
	Ki	iP		21 45 14.2	C
		iPP		21 48 50.6	
		iS		21 56 03	
				micr sec	
		P	Z'	0.3 0.9	
		PP	Z'	0.1 1.2	
		Mx	E	0.8 19	
		Mx	N	1.3 22	
		Mx	Z	1.0 18	
	Sk	iP		21 45 28.3	C
		iPP		21 49 19.0	
	Um	iP		21 45 11.4	C
		iPP		21 48 52.4	
	Ud	iP		21 45 24.7	C
		iPP		21 49 04.1	
	De	iP		21 45 22.9	C
		iPP		21 49 06.3	

Sumatra (h = 20 km).
m = 6.4 (Up,Ki).

" 11	Ki	iPKP2		06 20 46.1	
				micr sec	
		Mx	E	0.8 19	
		Mx	N	0.7 18	
		Mx	Z	0.9 20	

Southwest of Macquarie
Islands (h = N).

" 11	Up	Mx		08 50	
				micr sec	
		Mx	E	0.9 23	
		Mx	N	0.7 19	
		Mx	Z	1.1 20	
	Ki	Mx		08 48	
				micr sec	
		Mx	E	1.6 21	
		Mx	N	1.4 23	
		Mx	Z	1.5 22	

Southeastern Pacific Ocean
(h = N).
M = 5.7 (Up,Ki).

" 11	Up			micr sec	
		Mx	E	1.8 23	
		Mx	N	2.6 21	
		Mx	Z	4.2 25	

(cont.)

1974
Oct. 11 (cont.)

	Ki	iPKP2		08 54 23.8	
				micr sec	
		PKP2	Z'	0.1 1.3	
		Mx	E	2.9 21	
		Mx	N	2.7 21	
		Mx	Z	2.4 20	

Southwest of Macquarie
Islands (h = N).
M = 6.3 (Up,Ki).

" 11	Up	iP		09 16 25.0	
		i		09 16 30.9	
	Ki	iP		09 15 54.0	
		i		09 15 58.3	
				micr sec	
		P	Z'	0.2 0.9	
	Sk	iP		09 15 37.7	
	Um	iP		09 16 11.1	

North of Iceland (h = N).

" 11	Ki	iP		13 46 42.0	

Arctic Ocean (h = N).

" 11	Up	iP		14 23 44.3	C
		i		14 24 08.6	
				micr sec	
		P	Z'	0.1 0.8	
		Mx	E	1.4 18	
		Mx	N	2.6 24	
		Mx	Z	2.4 14	
	Ki	iP		14 23 20.7	C
				micr sec	
		P	Z'	0.1 1.0	
		Mx	E	2.9 13	
		Mx	N	1.7 15	
		Mx	Z	2.5 12	
	Sk	iP		14 23 48.0	
	Um	iP		14 23 28.4	
	Ud	iP		14 23 53.6	C
	De	iP		14 24 01.5	

Formosa (h = 45 km).
m = 5.8, M = 5.8 (Up,Ki).

" 11	Ud	iP		17 53 34.3	

" 11	Sk	iP		18 08 03.6	
	Um	iP		18 08 13.8	
	De	iP		18 07 55.7	

Peru (h = 70 km).

" 11	Up	iP		18 21 57.3	
	Ki	iP		18 21 06.5	
	Sk	iP		18 21 42.5	
	Ud	iP		18 22 02.0	
	De	iP		18 22 21.7	

Okhotsk Sea (h = 420 km).

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

1974						
Oct.	11	Um	iPKP1	22 19 33.6	C	
		Ud	iPKP1	22 19 47.0		
		Kermadec Islands.				
"	12	Ki	iP	01 02 27.7		
		Ud	iP	01 03 07.4		
		Bonin Islands (h = N).				
"	12	Up	iP	04 58 44.6	C	
			i	04 59 32.7		
			iPP	05 01 23.1		
			iS	05 07 56		
				micr	sec	
			P	Z' 0.1	1.0	
			Mx	E 1.2	20	
			Mx	N 2.0	22	
			Mx	Z 1.7	16	
		Ki	iP	04 58 02.3	C	
				micr	sec	
			P	Z' 0.1	1.4	
			Mx	E 4.2	18	
			Mx	N 3.5	18	
			Mx	Z 1.9	18	
		Sk	iP	04 58 36.4	C	
		Um	iP	04 58 21.5	C	
			iS	05 07 12		
		Ud	iP	04 58 51.7	C	
		De	iP	04 59 08.1	C	
		Japan (h = 25 km).				
		m = 5.9, M = 5.7 (Up,Ki).				
"	12	Ud	iPKP1	05 16 19.8		
"	12	Up	iP	06 26 04.9		
			ipP	06 26 14.1		
			iPP	06 28 41.9		
			iS	06 35 16		
				micr	sec	
			P	Z' 0.1	1.2	
			PP	Z' 0.3	1.6	
			Mx	E 5.8	20	
			Mx	N 8.7	22	
			Mx	Z 5.6	19	
		Ki	iP	06 25 22.5	C	
			ipP	06 25 32.6		
			iPP	06 27 41.3		
			iS	06 33 57		
				micr	sec	
			P	Z' 0.1	0.9	
			PP	Z' 1.1	3.0	
			Mx	E 18	17	
			Mx	N 12	19	
			Mx	Z 10	17	
		Sk	iP	06 25 57.4	C	
			ipP	06 26 07.3		
		(cont.)				

1974						
Oct.	12	(cont.)				
		Sk	iPP	06 28 26.8		
		Um	iP	06 25 41.6	C	
			iS	06 34 32		
		Ud	iP	06 26 12.0	C	
			ipP	06 26 21.0		
			i(PP)	06 28 39.2		
		De	iP	06 26 29.0		
			ipP	06 26 38.3		
		Japan.				
		h = 35 km (Up,Ki,Sk,Ud,De).				
		m = 5.9(P), 6.6(PP),				
		M = 6.2 (Up,Ki).				
"	12	Ud	iP	07 45 54.9		
"	12	Ud	iP	10 52 25.8		
"	12	Um	iP	11 45 56.5		
		Ud	iP	11 46 36.3		
		Japan (h = 50 km).				
"	12	Um	i(P)	11 46 32.8		
		Ud	iP	11 47 03.1		
"	12	Up	iP	12 44 00.0		
			iX	12 44 14.5		
				micr	sec	
			P	Z' 0.1	1.4	
		Ki	iP	12 43 05.9		
			iX	12 43 18.1		
				micr	sec	
			P	Z' 0.1	1.6	
		Sk	iP	12 43 33.8		
		Um	iP	12 43 33.8		
			iX	12 43 43.8		
		Ud	iX	12 44 03.0		
		De	iP	12 44 21.1		
		Kodiak Island (h = 10 km).				
		m = 5.8 (Up,Ki).				
"	12	Ki	iP	12 56 00.6		
				micr	sec	
			Mx	E 1.2	18	
			Mx	N 0.9	18	
			Mx	Z 0.8	16	
		Um	iP	12 56 18.8		
		Ud	iP	12 56 49.8		
		Japan (h = 10 km).				
"	12	Up	iP	16 28 39.6		
		Ki	iP	16 27 58.2		
			ipP	16 28 07.8		
				micr	sec	
			Mx	E 1.2	18	
			Mx	N 0.9	18	
			Mx	Z 1.0	18	
		(cont.)				

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

1974 Oct.	12	(cont.)				
		Um	iP		16 28 16.0	
			ipP		16 28 25.2	
		Ud	iP		16 28 46.8	
			ipP		16 28 55.5	
			i		16 29 20.9	
		Japan.				
		h = 35 km (Ki,Um,Ud).				
"	12	Ki	iP		16 48 07.3	
			ipP		16 48 15.5	
		Um	iP		16 48 25.8	
		Ud	iP		16 48 56.3	
		Japan.				
		h = 30 km (Ki).				
"	12	Up	iP		17 53 24.6	
		Ki	iP		17 52 31.3	
		Um	iP		17 52 56.5	
		Ud	iP		17 53 29.7	
		De	iP		17 53 49.3	
		Kamchatka.				
"	12	Ud	iPKP		19 17 58.9	
		De	iPKPl		19 17 58.1	
		Fiji Islands (h = 620 km).				
"	12	Up	iPKP		23 37 30.6	
			i		23 37 54.8	
		Ki	iPKP		23 37 45.4	
		Sk	iPKP		23 37 35.3	
		Um	iPKP		23 37 38.7	C
		Ud	iPKP		23 37 29.2	
		De	iPKP		23 37 24.0	
		South Sandwich Islands (h = N).				
"	13	Up	iP		00 25 57.4	
		Ki	iP		00 27 02.4	
		Ud	iP		00 26 03.4	
		De	iP		00 25 31.3	
		Crete (h = N).				
"	13	Up	iP		02 48 30.1	
					micr	sec
			Mx	E	0.9	23
			Mx	N	0.8	22
			Mx	Z	0.9	23
		Ki	iP		02 48 13.4	
					micr	sec
			P	Z'	0.1	1.1
			Mx	E	0.9	20
			Mx	N	1.1	20
			Mx	Z	1.2	20
		Sk	iP		02 48 33.9	
		(cont.)				

1974 Oct.	13	(cont.)				
		Um	iP		02 48 18.7	
			iSKS		02 58 50	
		Ud	iP		02 48 36.8	
		Molucca Passage (h = 40 km).				
		M = 5.4 (Up,Ki).				
"	13	Um	iP		02 51 33.8	
		Ud	iP		02 51 48.4	
"	13	Ud	iP		02 53 54.4	
"	13	Up	iP		10 01 20.0	
		Sk	eP		10 01 58	
		Ud	iP		10 01 43.3	
		De	iP		10 01 35.0	
		Ural Mountains region.				
"	13	Um	iP		10 57 11.1	
"	13	Ki	iP		11 36 52.3	
		Um	iP		11 36 48.7	
			ipP		11 37 03.4	
		Ud	iP		11 37 02.6	
			ipP		11 37 17.5	
		Nicobar Islands.				
		h = 55 km (Um,Ud).				
"	13	Ki	iSgl		19 29 44.0	
		Sk	iSgl		19 32 00.8	
		Um	iPn		19 30 24.2	
			iPgl		19 30 38.7	
			iSgl		19 32 08.0	
		North Norway.				
		By combination with Tromsoe reading.				
		Poor internal agreement.				
"	13	Up	iP		21 38 49.2	
					micr	sec
			Mx	N	2.9	20
			Mx	Z	0.7	18
		Ki			micr	sec
			Mx	E	1.5	16
			Mx	N	1.8	13
			Mx	Z	1.2	14
		Sk	iP		21 39 08.4	
		Um	iP		21 38 39.1	
		Ud	iP		21 39 03.4	
		De	iP		21 39 07.6	
		Tibet (h = N).				
		M = 5.3 (Up,Ki).				
"	14	Ki	iP		04 16 27.9	
		Leeward Islands (h = N).				
		(cont.)				

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

1974 Oct.	14	(cont.) An earthquake in Yugoslavia (origin time 04 11 16) gives the same arrival time at Ki, whence a fully reliable separation is not possible.				
"	14	Sk	iP		07 58 08.8	
		Um	iP		07 58 23.4	
		Ud	iP		07 58 10.6	
		De	iP		07 58 12.0	
		Peru-Ecuador (h = 160 km).				
"	14	Ud	iP		11 37 32.1	
		Tadzhik-Sinkiang.				
"	14	Up	iP		14 22 55.7	
			iS		14 32 07	
					micr	sec
			P	Z'	0.2	1.5
			Mx	E	3.1	20
			Mx	N	4.5	21
			Mx	Z	4.1	20
		Ki	iP		14 22 14.9	
			iS		14 30 45	
					micr	sec
			Mx	E	11	21
			Mx	N	7.3	22
			Mx	Z	6.4	19
		Sk	iP		14 22 50.1	
		Um	iP		14 22 32.3	
			iS		14 31 23	
		Ud	iP		14 23 02.4	
		De	iP		14 23 19.0	
		Japan (h = 15 km). M = 6.0 (Up,Ki).				
"	14	De	iPKPl		14 55 03.7 C	
		Fiji Islands (h = 550 km).				
"	14	Up	iP		21 13 17.7	
		Um	iP		21 12 54.7	
		Ud	iP		21 13 24.5	
		Japan (h = 20 km).				
"	14	Up	iPKPl		21 19 55.7	
					micr	sec
			PKPl	Z'	0.1	0.7
		Um	iPKPl		21 19 44.6	
			iSKPl		21 22 42.2	
		Ud	iPKPl		21 19 58.0	
		De	iPKPl		21 20 07.9	
		Tonga-Kermadec Islands (h = 460 km).				
"	15	Up	iP		01 28 00.5	
		(cont.)				

1974 Oct.	15	(cont.)				
		Up	ipP		01 28 10.5	
			iS		01 37 11	
					micr	sec
			P	Z'	0.3	1.5
			Mx	E	1.9	20
			Mx	N	2.4	19
			Mx	Z	2.6	19
		Ki	iP		01 27 18.7	
			ipP		01 27 28.6	
					micr	sec
			P	Z'	0.1	1.3
			Mx	E	6.9	21
			Mx	N	4.0	17
			Mx	Z	2.7	18
		Sk	iP		01 27 53.2	
			ipP		01 28 02.2	
		Um	iP		01 27 36.8 C	
			ipP		01 27 46.3	
			iS		01 36 25	
		Ud	iP		01 28 07.3 C	
			ipP		01 28 16.7	
		De	iP		01 28 24.1	
			ipP		01 28 33.2	
		Japan. h = 35 km (Up,Ki,Sk,Um,Ud, De). m = 6.0, M = 5.8 (Up,Ki).				
"	15	Ki	iP		03 10 46.8	
		Ud	iP		03 12 07.9	
		Greenland Sea (h = N).				
"	15	Ki	iP		03 24 42.3	
		Um	iP		03 24 40.6	
"	15	Up	iP		06 15 05.7	
		Ki	iP		06 14 20.2	
		Sk	eP		06 14 55	
		Um	iP		06 14 40.7 C	
		Ud	iP		06 15 11.8 C	
		De	iP		06 15 29.5 C	
		Kurile Islands (h = 80 km).				
"	15	Ki	iP		08 19 01.7	
		Ud	iP		08 19 29.0	
		De	iP		08 19 37.7	
		Mindanao (h = N).				
"	15	Up	iP		09 15 37.3	
		Sk	iP		09 15 59.7	
		Um	iP		09 15 46.6	
		Ud	iP		09 15 42.8 C	
			i		09 15 49.1	
		Iran.				

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

1974						
Oct.	15	Sk	eP	10 02 01		
		Um	iP	10 01 47.8		
		Ud	iP	10 01 27.5		
		Greece (h = N).				
"	15	Sk	i(Sgl)	12 28 09.4		
"	15	Ud	iPgl	13 12 30.6		
			iSgl	13 12 52.7		
"	15	Up	iP	15 26 58.6		
		Ki	iP	15 26 05.7		
		Sk	iP	15 26 42.2		
		Ud	iP	15 27 02.2		
		De	iP	15 27 23.5		
		Kamchatka.				
"	15	Up	iP	16 12 42.1		
			ipP	16 12 51.7		
				micr	sec	
			P	Z' 0.1	1.0	
		Ki	iP	16 11 49.6		
		Ud	iP	16 12 45.2		
		De	iP	16 13 07.4		
		Kamchatka.				
		h = 35 km (Up).				
"	15	Up	iPKPl	21 47 22.7		
			i	21 47 26.8		
			i	21 47 30.7		
				micr	sec	
			PKPl	Z' 0.2	1.1	
		Ki	iPKP	21 47 08.2		
			i(pPKP)	21 47 24.8		
		Sk	iPKPl	21 47 15.7		
			ipPKPl	21 47 29.1		
		Um	i(PKPl)	21 47 10.1 C		
			iPKPl	21 47 11.0		
			i	21 47 14.7		
			ipPKPl	21 47 25.0		
		Ud	i(PKPl)	21 47 22.8		
			iPKPl	21 47 24.6		
			i	21 47 28.6		
			i	21 47 33.6		
		De	iPKPl	21 47 32.9 C		
			ipPKPl	21 47 45.8		
		Kermadec Islands.				
		h = 45 km (Sk,Um,De).				
		Complex beginning (Up,Um,Ud).				
"	15	Sk	iPKPl	22 26 03.1		
		Um	iPKPl	22 25 56.9		
		Ud	iPKPl	22 26 06.0		
		Kermadec Islands.				
"	15	Up	iP	22 36 32.6		
		Ud	iP	22 36 39.7		

1974						
Oct.	15	Ud	iP	23 42 53.3		
"	16	Up	iP	05 08 49.1		
			iPP	05 10 28.7		
		Ki	iP	05 08 51.8		
		Sk	iP	05 09 13.4		
			iPP	05 10 59.4		
		Um	iP	05 08 44.3		
			iPP	05 10 20.2		
		Ud	iP	05 09 05.7		
			iPP	05 10 49.0		
		De	iP	05 09 05.4		
			iPP	05 10 51.2		
		Sinkiang, China (h = N).				
"	16	Up	iP	05 42 16.1		
			i	05 42 20.2		
		Ki	iP	05 42 24.2		
		Sk	iP	05 41 53.0		
			i	05 42 00.9		
		Um	iP	05 42 29.7		
		Ud	iP	05 41 57.9		
		De	iP	05 42 04.2		
		North Atlantic Ocean (h = N).				
"	16	Up	iPl	05 50 57.6 C		
			iP2	05 51 02.1		
			iP3	05 51 09.3		
			iP4	05 51 14.9		
			iS	05 55 52		
				micr	sec	
			Pl	Z' 0.1	1.0	
			P2	Z' 0.4	1.2	
			P3	Z' 0.4	1.0	
			P4	Z' 3.5	1.6	
			Mx	E 83	17	
			Mx	N 120	17	
			Mx	Z 220	18	
		Ki	iPl	05 51 08.0 C		
			iP3	05 51 20.6		
			iP4	05 51 24.5		
				micr	sec	
			Pl	Z' 0.1	1.0	
			P3	Z' 0.5	1.1	
			P4	Z' 2.5	1.8	
			Mx	E 210	22	
			Mx	N 120	16	
			Mx	Z 150	21	
		Sk	iPl	05 50 34.9 C		
			iP3	05 50 46.8		
		Um	iPl	05 51 06.5 C		
			iP2	05 51 12.6		
		Ud	iPl	05 50 39.2 C		
			iP3	05 50 51.8		
			iP4	05 50 57.9		
		De	iPl	05 50 45.7 C		
		(cont.)				

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

1974
Oct. 16 (cont.)

	De	iP3	05 50 57.9	
		iP4	05 51 02.4	

North Atlantic Ocean (h = N).
m = 5.6(P1), 6.0(P2), 6.2(P3), 6.8(P4), M = 6.8 (Up,Ki).
Multiple rupture: P2 - P1 = 5.3 sec, P3 - P1 = 12.2 sec, P4 - P1 = 17.3 sec.

" 16	Up	i(P)	05 59 21.7	
	Um	e(P)	05 59 24	

" 16	Up	iP	06 39 55.3	C
		iPn	06 40 58.4	
		iPP	06 41 13.5	
			micr sec	
		P Z'	0.3 0.5	
	Ki	iP	06 39 38.4	C
			micr sec	
		P Z'	0.4 1.0	
	Sk	iP	06 40 10.2	C
		iPP	06 40 33.0	
	Um	iP	06 39 39.9	C
	Ud	iP	06 40 11.3	C
	De	iP	06 40 18.8	C
		iPn	06 41 42.7	

Kazakh SSR.
m = 6.4 (Up,Ki).
Underground explosion.

" 16	Um	iP	06 45 20.0	

" 16	Up	iPn	08 14 49.4	
		i	08 15 13.5	
		i	08 15 16.4	
		iSgl	08 16 24.8	
	Sk	iSgl	08 16 52.9	
	Um	iSgl	08 18 06.0	
	Ud	iPn	08 14 40.1	
		iSgl	08 15 42.7	
	De	iPn	08 14 21.2	
		iPgl	08 14 27.1	
		iSgl	08 15 15.6	

Skagerrak,
near 57 1/2°N, 7 1/2°E.
Origin time = 08 13 28.
By combination with Bergen and Kongsberg readings.

" 16	Up	iP	09 41 03.8	C
		ipP	09 41 13.2	
		iPP	09 43 39.8	
			micr sec	
		P Z'	0.2 0.9	
		Mx E	1.3 22	

(cont.)

1974
Oct. 16 (cont.)

Up			micr	sec
	Mx	N	1.1	15
	Mx	Z	1.7	21
Ki	iP		09 40 21.6	C
			micr	sec
	P	Z'	0.2	1.1
	Mx	E	3.6	22
	Mx	N	2.6	19
	Mx	Z	2.3	18
Sk	iP		09 40 56.0	C
	iPP		09 43 27.3	
Um	iP		09 40 40.1	C
Ud	iP		09 41 10.4	C
De	iP		09 41 26.6	C

Japan.
h = 35 km (Up).
m = 6.2, M = 5.5 (Up,Ki).

" 16	Up	iP	11 10 29.7	D
			micr sec	
		P Z'	0.1 0.7	
	Ki	iP	11 09 58.2	D
		iPP	11 12 50.3	
			micr sec	
		P Z'	0.1 0.8	
	Sk	iP	11 10 27.0	D
		iPP	11 13 34.8	
	Um	iP	11 10 11.9	D
	Ud	iP	11 10 36.8	D
		iPP	11 13 49.2	
	De	iP	11 10 48.5	D

Bonin Islands (h = 440 km).
m = 5.6 (Up,Ki).

" 16	Up	i(P)	12 53 45.4
	De	iP	12 54 19.6

" 16	Up	i(P)	13 39 04.1
	Um	i(P)	13 38 39.9

" 16	Ud	iPgl	13 51 45.6
		iSgl	13 52 10.1
		iRg	13 52 24.2
	De	iPgl	13 51 49.0
		iSgl	13 52 16.1
		iRg	13 52 29.0

Västergötland, Sweden.
Origin time = 13 51 15.
Near-surface event.

" 16	Ki	iPKP	15 08 02.8
	Um	iPKP1	15 08 14.0
	Ud	iPKP1	15 08 25.5

Kermadec Islands.

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

1974
Oct. 16 Sk iPKP 17 49 07.6
Um i(PP) 17 49 28.1
De iPKP 17 49 15.0
New Britain (h = 70 km).

" 16 Ud iPKP1 18 25 31.0
Tonga-Kermadec Islands
(h = 600 km).

" 17 Up iP 04 17 14.7
Ki eP 04 17 55
Ud iP 04 17 28.6 C
De iP 04 17 12.4
Iran (h = 35 km).

" 17 Ud iP 06 09 25.4

" 17 Ki iP 06 10 36.0
Sk eP 06 10 21

" 17 Ki iP 09 04 20.7
Sk iP 09 03 55.9
Ud iP 09 03 57.0
Leeward Islands (h = 60 km).

" 17 Up iSgl 13 33 36.7
Sk eSgl 13 33 37
Ud iSgl 13 32 39.1
De i 13 32 32.3
iSgl 13 32 59.9
Southwest Norway,
near 58.7°N, 7.1°E.
Origin time = 13 30 45.

" 17 Ki iP 14 07 23.9
ipP 14 08 06.4
Sk iP 14 07 46.8
Um iP 14 07 31.5
Ud iP 14 07 50.1
ipP 14 08 35.0
Mindoro.
h = 170 km (Ki,Ud).

" 17 Ki iP 15 42 43.1
Sk iP 15 42 10.4
Ud iP 15 42 07.8
North Atlantic Ocean (h = N).

" 17 Ud iP 19 04 27.4

" 17 Sk iP 20 06 59.8
Guatemala (h = 160 km).

" 17 Ki iP 22 16 42.6
Sk iP 22 16 59.9
Um iP 22 16 32.6
Ud iP 22 16 50.7
(cont.)

1974
Oct. 17 (cont.)
Afghanistan-USSR
(h = 210 km).

" 18 Ki eP 00 37 59
ipP 00 38 11.4
Um iP 00 37 57.8
ipP 00 38 11.0
Ud iP 00 37 35.0
ipP 00 37 51.2
De iP 00 37 30.5
Leeward Islands.
h = 50 km (Ki,Um,Ud).

" 18 Up micr sec
Mx E 0.8 21
Mx N 0.9 21
Mx Z 1.4 21
Ki iP 09 18 06.8
micr sec
Mx E 1.4 22
Mx N 1.0 21
Mx Z 1.9 23
New Guinea (h = 35 km).
M = 5.6 (Up,Ki).

" 18 Ud iSKP 11 47 51.9
New Hebrides Islands
(h = 50 km).

" 18 Ki iPKP 12 10 52.6
Samoa Islands (h = N).

" 18 Up iP 14 13 22.6
Ki iP 14 12 28.8
Um iP 14 12 56.1
Ud iP 14 13 20.8
De iP 14 13 43.8
Unimak Island (h = 40 km).

" 18 Um iPKP2 17 38 29.5
South Pacific Ocean (h = N).

" 18 Up iSgl 17 50 45.0
Sk eSgl 17 50 34
Ud iSgl 17 49 47.1
Southwest Norway,
59.2°N, 7.0°E.
Origin time = 17 47 56.
By combination with Bergen
and Kongsberg readings.

" 18 Up iP 22 00 30.5
i 22 00 36.2
Ki iP 21 59 55.6
Sk iP 22 00 27.2
Um iP 22 00 10.6
(cont.)

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

1974
Oct. 18 (cont.)
Ud iP 22 00 37.8
South of Japan (h = 15 km).

" 19 Um iP 00 17 21.0
South of Japan (h = 130 km).

" 19 Ud iP 04 01 52.5

" 19 Up iPKP 04 05 25.3
Ki iPKP 04 05 11.1 C
Sk iPKP 04 05 22.4
Um iPKP 04 05 17.4
iSKP1 04 08 20.5
Ud iPKP 04 05 27.4 C
iSKP1 04 08 33.0
De iPKP 04 05 33.1
iSKP1 04 08 49.4
New Hebrides Islands
(h = 170 km).

" 19 Up iP 04 08 20.2

		micr	sec
P	Z'	0.1	1.0

Ki iP 04 07 45.0 C

		micr	sec
Mx	E	1.0	16
Mx	N	1.0	16
Mx	Z	0.8	16

Sk iP 04 08 15.5
Um iP 04 08 00.2 C
Ud iP 04 08 27.0
De iP 04 08 40.1
South of Japan (h = 25 km).

" 19 Up iP 06 58 46.5
i 06 58 50.8

		micr	sec
Mx	N	1.2	22
Mx	Z	1.7	21

Ki iP 06 58 35.9

		micr	sec
P	Z'	0.1	1.1
Mx	E	1.1	17
Mx	N	1.2	18

Sk iP 06 58 57.6
Um iP 06 58 39.1
Ud iP 06 58 57.9
De iP 06 59 02.2
Celebes (h = 70 km).
M = 5.6 (Up,Ki).

" 19 Up iP 09 51 05.7
Ki iP 09 50 17.6
Um iP 09 50 39.8 C
Ud iP 09 51 10.9
Kurile Islands (h = 170 km).

1974
Oct. 19 Ki iP 15 10 00.6
North Atlantic Ocean (h = N).

" 19 Ud iP 23 15 59.5
Iran (h = 60 km).

" 20 Ki iP 01 20 07.6
Ud iP 01 20 33.9

" 20 Sk iP 05 03 04.9
Colombia (h = 50 km).

" 20 Ud iPKP1 05 27 49.7
De iPKP1 05 28 01.3 C
Tonga-Kermadec Islands
(h = 570 km).

" 20 Up iP 11 30 28.7

		micr	sec
P	Z'	0.1	1.0
Mx	E	3.4	18
Mx	N	1.2	14
Mx	Z	2.7	18

Ki iP 11 31 47.9

		micr	sec
Mx	E	5.2	12
Mx	N	1.7	9
Mx	Z	1.7	9

Sk iP 11 31 08.8
i 11 31 19.4
Um iP 11 31 11.2
i 11 31 15.9
Ud iP 11 30 33.3
De iP 11 30 02.1
Ionian Sea (h = N).
M = 5.1 (Up,Ki).

" 20 Up iP 11 54 07.4

		micr	sec
P	Z'	0.1	1.1

Ki iP 11 53 23.4
Sk iP 11 54 00.0
Um iP 11 53 43.3
Ud iP 11 54 14.2
ipP 11 54 24.8
De iP 11 54 33.7
Japan.
h = 40 km (Ud).

" 20 Um iPKP 15 46 14.4
De iPKP 15 46 29.9
Solomon Islands (h = 45 km).

" 20 Ki iP 15 47 45.6

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

1974
Oct. 20 Up micr sec
Mx N 0.9 20
Mx Z 1.4 21
Ki micr sec
Mx E 1.1 20
Mx N 0.8 19
Ud iPKP 19 58 16.2
De iPKP 19 58 20.8
Solomon Islands (h = 45 km).
M = 5.5 (Up,Ki).

" 21 Up Mx 03 42
micr sec
Mx E 1.1 19
Mx N 1.0 22
Mx Z 1.4 20
Ki Mx 03 43
micr sec
Mx E 0.8 18
Mx N 1.3 19
Mx Z 1.0 18
South Pacific Ocean
(h = N).
M = 5.9 (Up,Ki).

" 21 Up iSgl 04 23 24.4
i 04 23 31.7
Sk iSgl 04 23 56.1
Um iPn 04 22 58.0
iSgl 04 23 32.6
Ud iSgl 04 23 46.5
Off coast of Hälsingland,
Sweden, 61.8°N, 17.6°E.
Origin time = 04 22 20.

" 21 Up iPKP 04 30 37.1
iSKP1 04 33 23.3
micr sec
PKP Z' 0.1 1.2
SKP1 Z' 0.1 1.1
Ki i(PKP) 04 30 19.4
iPKP 04 30 29.0
iSKP1 04 32 57.0
micr sec
SKP1 Z' 0.8 1.7
Sk i(PKP) 04 30 30.9
iPKP 04 30 40.9
iSKP1 04 33 15.5
Um i(PKP) 04 30 32.3
iPKP 04 30 36.7
iSKP1 04 33 10.5
Ud i(PKP) 04 30 36.3
iPKP 04 30 40.0
iSKP1 04 33 24.6
De iPKP 04 30 45.1
iSKP1 04 33 34.8
Fiji Islands (h = 600 km).

1974
Oct. 21 Up i(P) 06 10 25.4

" 21 Up iSgl 10 09 33.7
Sk eSgl 10 10 07
Ud i 10 08 20.5
iSgl 10 08 24.2
De iSgl 10 08 55.0
Probably Skagerrak.

" 21 Up iP 12 58 36.5
micr sec
P Z' 0.2 1.0
Ki iP 12 57 42.3
micr sec
P Z' 0.2 0.9
Sk iP 12 58 19.4 C
Um iP 12 58 07.5 C
Ud iP 12 58 39.5
De iP 12 59 01.5 C
Kamchatka (h = N).
m = 6.2 (Up,Ki).

" 21 Up iP 14 53 41.9
Sk iP 14 54 15.9
Um iP 14 54 20.1
Ud iP 14 53 41.9
De iP 14 53 06.3
Tyrrhenian Sea (h = 320 km).

" 21 Ki micr sec
Mx E 0.9 18
Mx N 0.8 17
Ud iP 15 19 10.4
Japan (h = N).

" 21 Ki i(Pg1) 16 39 09.9
i(Sn) 16 39 40.1
Off coast of north Norway.
By combination with Tromsoe
reading.

" 21 Ki i(Pg1) 16 59 10.9
i(Sn) 16 59 40.9
Off coast of north Norway.
By combination with Tromsoe
readings.

" 21 Um iPKP1 17 30 41.6
Ud iPKP1 17 30 53.4

" 21 Um iPKP1 18 48 08.4
Ud iPKP1 18 48 20.4

" 21 Um iPKP1 19 57 18.2

" 22 Ki eP 00 35 26
Timor (h = 90 km).

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

1974 Oct.	22	Ud	iPKPl		04 08 33.3	
		De	iPKPl		04 08 43.6	
"	22	Up	iP		05 10 54.9	
			i		05 10 59.4	
					micr	sec
			P	Z'	0.2	1.5
			Mx	E	1.1	19
			Mx	N	1.1	15
			Mx	Z	2.6	19
		Ki	iP		05 10 51.3	
					micr	sec
			P	Z'	0.2	1.7
			Mx	E	2.9	13
			Mx	N	2.0	11
			Mx	Z	1.8	12
		Sk	iP		05 10 21.8	
		Um	iP		05 10 57.5	C
			iS		05 14 51	
		Ud	iP		05 10 38.3	
		De	iP		05 10 57.0	
		Southwest of Iceland (h = N). m = 5.1, M = 4.7 (Up,Ki).				
"	22	Ud	iP		06 18 17.9	
			i		06 18 24.6	
		North Atlantic Ocean (h = N).				
"	22	Um	i(P)		07 34 26.8	
		Ud	iP		07 33 43.8	
		Ionian Sea (h = N).				
"	22	Um	iP		08 50 55.8	
		Ud	iP		08 51 22.2	
		South of Japan (h = N).				
"	22	Ud	iP		09 17 33.4	
		Sumatra (h = N).				
"	22	Ki	iP		09 29 24.9	
					micr	sec
			P	Z'	0.2	1.9
			Mx	E	0.6	14
			Mx	N	0.7	15
		Um	iP		09 29 23.5	
		Ud	iP		09 29 32.0	
		Sumatra (h = 80 km).				
"	22	Ud	iP		10 18 52.9	
"	22	Ud	iPKPl		11 11 28.6	
"	22	Up	iP		12 10 53.8	
			iS		12 14 48	
		(cont.)				

1974 Oct.	22	(cont.)				
		Up			micr	sec
			P	Z'	0.1	1.2
			Mx	E	1.7	18
			Mx	N	1.2	14
			Mx	Z	3.9	22
		Ki	eP		12 10 46	
			i		12 10 58.9	
					micr	sec
			P	Z'	0.5	2.5
			i	Z'	0.6	2.4
			Mx	E	5.2	13
			Mx	N	3.8	16
			Mx	Z	4.4	14
		Sk	iP		12 10 16.3	
		Um	iP		12 10 53.3	
			iS		12 14 48	
		Ud	iP		12 10 34.9	
		Southwest of Iceland (h = N). m = 5.1, M = 4.9 (Up,Ki).				
"	22	Up	iP		17 56 48.4	
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP		17 56 53.7	
		Sk	iP		17 57 12.5	C
		Um	iP		17 56 42.5	
		Ud	iP		17 57 04.6	C
			ipP		17 57 33.4	
		Tadzhik SSR. h = 140 km (Ud).				
"	22	Ki	iP		22 26 30.2	
		Ud	iP		22 26 44.3	
		Tadzhik-Sinkiang (h = 260 km).				
"	22	Up	iP		22 58 13.3	D
			iS		23 08 30	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	3.2	17
			Mx	N	5.0	23
			Mx	Z	7.0	16
		Ki	iP		22 57 55.1	
					micr	sec
			Mx	E	6.9	18
			Mx	N	5.5	19
			Mx	Z	6.9	18
		Sk	iP		22 58 19.9	
		Um	iP		22 58 02.4	D
			iS		23 08 13	
		Ud	iP		22 58 22.0	D
		Mindoro (h = 40 km). M = 6.1 (Up,Ki).				

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

1974							
Oct.	23	Ud	iP		02 10 08.2		
		Crete.					
"	23	Up	i(PKP)		06 33 40.7		
			iPKP		06 33 47.6		
			iPP		06 35 08.2		
					micr	sec	
			PP	Z'	2.1	2.5	
			Mx	E	41	22	
			Mx	N	110	23	
			Mx	Z	79	20	
		Ki	i(PKP)		06 33 33.5		
			iPKP		06 33 43.4		
			iPP		06 34 23.0		
					micr	sec	
			PKP	Z'	0.1	1.0	
			PP	Z'	0.7	2.2	
			Mx	E	89	23	
			Mx	N	90	22	
			Mx	Z	53	19	
		Sk	i(PKP)		06 33 38.4		
			iPKP		06 33 49.3		
			iPP		06 35 04.6		
		Um	iPKP		06 33 42.5		
			iPP		06 34 35.4		
		Ud	iPKP		06 33 50.6		
			iPP		06 35 18.8		
		De	i(PKP)		06 33 48.1		
			iPKP		06 33 56.4		
			iPP		06 35 34.9		
		D'Entrecasteaux Islands					
		(h = 50 km).					
		m = 7.2, M = 7.4 (Up,Ki).					
"	23	Ki	iPKP1		11 46 24.0		
		West of Macquarie Islands					
		(h = N).					
"	23	Ud	iP		11 57 34.7		
		North of Ascension Island					
		(h = N).					
"	23	Ud	iP		12 11 49.5		
"	23	De	iP		13 45 47.1		
"	23	Ud	ipPKP		15 14 42.5		
		De	iPKP		15 14 24.5		
			ipPKP		15 14 52.0		
		New Hebrides Islands.					
		h = 100 km (De).					
"	24	Up	iP		05 38 28.4	C	
			i		05 38 40.6		
		(cont.)					

1974							
Oct.	24	(cont.)					
		Up			micr	sec	
			P	Z'	0.1	0.8	
		Ki	iP		05 37 51.6	C	
					micr	sec	
			P	Z'	0.1	0.6	
		Sk	iP		05 38 23.5	C	
		Um	iP		05 38 07.6	C	
		Ud	iP		05 38 35.7	C	
		De	iP		05 38 49.1		
		Japan (h = 60 km).					
		m = 5.9 (Up,Ki).					
"	24	Up	iP		07 42 47.6		
			ipP		07 42 53.4		
					micr	sec	
			pP	Z'	0.1	0.8	
			Mx	E	0.8	16	
			Mx	N	0.8	17	
			Mx	Z	1.1	16	
		Ki	iP		07 42 11.9	C	
			ipP		07 42 18.0		
					micr	sec	
			P	Z'	0.1	1.2	
			Mx	E	1.1	15	
			Mx	N	1.2	16	
			Mx	Z	0.9	16	
		Sk	iP		07 42 42.7		
		Um	iP		07 42 27.7	C	
			ipP		07 42 33.3		
			iS		07 52 03		
		Ud	iP		07 42 54.7	C	
			ipP		07 43 00.4		
		De	iP		07 43 08.6		
			ipP		07 43 13.4		
		South of Japan.					
		h = 20 km (Up,Ki,Um,Ud,De).					
		m = 5.9, M = 5.4 (Up,Ki).					
"	24	Up	i(Sg1)		11 08 08.2		
"	24	Up			micr	sec	
			Mx	N	1.4	19	
		Ki	iP		14 33 24.6		
		Ud	iP		14 33 57.1		
		Formosa (h = 55 km).					
"	24	Ki	iP		16 16 58.9		
		Um	iP		16 16 53.7		
		Ud	iP		16 17 12.5		
		De	iP		16 17 12.0		
		Kirghiz SSR (h = N).					
"	25	Up	iP		00 18 05.0		
			i		00 18 45.6		
		(cont.)					

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

1974 Oct.	25	(cont.)				
		Up			micr	sec
			P	Z'	0.1	1.3
		Ki	iP		00 17	52.9
			i		00 18	44.1
					micr	sec
			P	Z'	0.5	1.7
		Sk	iP		00 17	47.1
			i		00 18	32.3
		Um	iP		00 18	01.8
			i		00 18	55.1
		Ud	iP		00 17	55.6
		De	iP		00 18	04.5
		Mexico (h = 120 km).				
		m = 5.9 (Up,Ki).				
"	25	Ud	iP		03 52	54.5
"	25	Ki	iP		07 30	30.8
		Um	iP		07 30	46.6 C
		Ud	iP		07 31	14.6
		Japan (h = 60 km).				
"	25	Up	iP		11 49	00.4
			iS		11 53	20.9
		Ki	iP		11 50	09.1
		Sk	iP		11 49	39.9
		Ud	iP		11 49	06.7
			iS		11 53	38.2
		De	iP		11 48	33.6
			iS		11 52	39.1
		Crete (h = 45 km).				
"	25	Up	iP		15 51	22.8 C
					micr	sec
			P	Z'	0.1	0.8
		Ki	iP		15 50	38.4 C
					micr	sec
			P	Z'	0.1	0.9
		Sk	iP		15 51	12.9
		Um	iP		15 50	58.4 C
		Ud	iP		15 51	29.3
		Japan (h = 45 km).				
		m = 5.9 (Up,Ki).				
"	26	Up	iP		14 20	08.9
		De	eP		14 20	18
"	27	Up	iPKP1		00 01	40.5 C
		Sk	iPKP1		00 01	34.4 C
		Um	iPKP1		00 01	28.3 C
			ipPKP1		00 01	42.9
		Ud	iPKP1		00 01	41.4
		Kermadec Islands.				
		h = 50 km (Um).				

1974 Oct.	27	Um	i(pPKP1)	00 23	10.4
		Ud	iPKP1	00 23	14.0
			i(pPKP1)	00 23	26.1
			i	00 23	42.6
		De	iPKP1	00 23	21.5
"	27	Um	iPKP1	00 49	12.5
			ipPKP1	00 49	28.5
		Ud	ipPKP1	00 49	40.7
"	27	Up	iP	02 39	59.7
		Ki	iP	02 39	12.9
		Um	iP	02 39	37.3
			ipP	02 40	21.4
		Ud	iP	02 39	59.8
		Japan.			
		h = 190 km (Um).			
"	27	Ki	iP	03 30	46.6
		Ud	iP	03 30	57.8
		Pamir.			
"	27	Up	iP	03 51	51.6
		Ud	iP	03 52	08.1
		Tadzhik SSR (h = 35 km).			
"	27	De	iPKP1	05 10	33.0
		Loyalty Islands (h = 100 km).			
"	27	Up	iP	07 43	35.3
		Ud	iP	07 43	51.9
"	27	Up	iP	08 57	48.6
		Ki	iP	08 59	00.9
		Sk	iP	08 58	28.2
		Um	iP	08 58	21.5
		Ud	iP	08 57	56.3
		De	iP	08 57	27.4
		Crete (h = 70 km).			
"	27	Up	iPKP1	13 06	42.8
				micr	sec
			PKP1 Z'	0.1	0.9
		Um	i(PKP1)	13 06	37.2
		Ud	iPKP1	13 06	45.0
"	27	Ud	iP	22 53	29.7
		Hindu Kush.			
		Intermediate depth.			
"	28	Ud	iSg1	15 08	42.9
		De	iSg1	15 06	52.8
"	28	Up	iSg1	21 58	25.7
		Sk	iSg1	21 59	40.8
		(cont.)			

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

1974
Oct. 28 (cont.)

	Um	iSgl		22 00 24.6
	Ud	iSgl		21 57 53.8
	De	iPgl		21 56 51.3
		iSgl		21 57 08.0
		iSn		21 57 10.6

Halland, Sweden,
57.4°N, 12.1°E.
Origin time = 21 56 29.
Felt.

" 29	Up	iP		01 08 48.1
		i		01 14 12.6
			micr	sec
		P	Z'	0.1 1.0
		Mx	N	4.8 11
		Mx	Z	7.3 12
	Ki	iP		01 10 24.2
			micr	sec
		P	Z'	0.1 1.5
		Mx	E	2.1 8
		Mx	N	3.8 11
		Mx	Z	3.2 11
	Sk	iP		01 09 41.6
	Um	iP		01 09 32.6
	Ud	iP		01 08 54.7
		i		01 14 18.0
	De	iP		01 08 09.0
		i		01 12 22.0

Yugoslavia (h = N).
m = 5.0, M = 5.2 (Up,Ki).

" 29	Up	iP	03 22 03.5
	Ki	iP	03 22 12.6
	Sk	iP	03 21 52.1
	Um	iP	03 22 17.3
	Ud	iP	03 21 53.1

Venezuela (h = N).

" 29	Up	iP		03 28 17.1
		i(PP)		03 32 29.2
		iPP		03 32 49.5
		iSKS		03 38 39.8
		i		03 39 27.3
		iSP		03 41 42
		iPKKP1		03 43 47.8
		iPKKP2		03 44 02.7
			micr	sec
		P	Z'	0.1 0.9
		PP	Z'	0.4 1.4
		Mx	E	8.4 20
		Mx	N	19 21
		Mx	Z	11 22
	Ki	iP		03 28 01.5
		i(PP)		03 32 12.8
		iPP		03 32 24.0

(cont.)

1974
Oct. 29 (cont.)

	Ki	iSKS		03 38 25
		iS		03 39 32
		iPKKP1		03 43 57.4
		iPKKP2		03 44 18.5
			micr	sec
		P	Z'	0.5 1.3
		PP	Z'	2.8 2.3
		PKKP1	Z'	0.8 2.3
		Mx	E	11 20
		Mx	N	29 22
		Mx	Z	9.9 18
	Sk	iP		03 28 22.5
		i(PP)		03 32 32.3
		iPP		03 32 57.8
		iPKKP1		03 43 43.1
		iPKKP2		03 43 59.1
	Um	iP		03 28 06.4
		i(PP)		03 31 30.1
		iPP		03 32 33.1
		iSKS		03 38 29.6
		iS		03 39 41
		iPKKP1		03 43 51.5
	Ud	iP		03 28 25.1
		i		03 28 30.5
		i(PP)		03 31 58.0
		iPP		03 33 02.6
		iPKKP1		03 43 40.4
		iPKKP2		03 43 58.1
	De	iP		03 28 30.5
		i(PP)		03 32 03.1
		i		03 32 32.4

Banda Sea (h = 120 km).
m = 7.1, M = 6.4 (Up,Ki).
M uncorrected for focal depth.
Clear cases of (PP), i.e.
early PP, as well as of PKKP1
and PKKP2.

" 29	Um	iP	04 44 31.6

Japan (h = 9 km).

" 29	Ud	iP	05 57 31.6
" 29	Um	iP	06 42 23.0
	Ud	iP	06 42 54.6

" 29	Up	iPKP1		10 10 59.4
			micr	sec
		PKP1	Z'	0.1 1.2
	Ki	iPKP1		10 10 57.7
			micr	sec
		PKP1	Z'	0.1 1.0
	Sk	iPKP2		10 11 11.5
	Um	iPKP1		10 10 57.3
	Ud	iPKP2		10 11 09.5 C

(cont.)

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

1974
Oct. 29 (cont.)

		De	iPKPl	10 11 01.1
			i	10 11 08.2

South of Australia (h = N).

"	29	Ki	iPgl	10 36 12.8
			iSgl	10 36 50.1
		Sk	iSgl	10 36 54.5
		Um	iPgl	10 36 28.8
			iSn	10 37 03.6
			iSgl	10 37 18.1
		Ud	iSgl	10 38 45.3

Nordland, Norway,
66.4°N, 14.2°E.
Origin time = 10 35 22.
Explosion?

"	29	Ki	iP	11 10 54.1
		Um	i(pP)	11 11 20.4
		Ud	i(pP)	11 11 46.6

Japan (h = 45 km).

"	30	Ki	iP	00 15 32.1

Mexico (h = 80 km).

"	30	Sk	iSgl	00 17 46.2
		Ud	iSgl	00 16 23.1
		De	iSgl	00 16 14.6

"	30	Ki	iP	02 41 45.4
		Ud	iP	02 42 00.0
		De	iP	02 41 59.0

Kashmir (h = 100 km).

"	30	Ki	iP	04 43 30.6
		Ud	iP	04 43 50.4

Celebes (h = 110 km).

"	30	Ki		micr	sec
			Mx E	0.8	18
			Mx N	0.3	12
		Ud	iP	10 44 49.8	

Japan (h = 20 km).

"	30	Up	iP	16 19 11.4	
			i	16 19 14.8	
			ipP	16 19 23.5	
				micr	sec
			P Z'	0.1	1.3
			Mx E	6.9	16
			Mx N	4.8	16
			Mx Z	14	16
		Ki	iP	16 18 40.1	
				micr	sec
			P Z'	0.1	1.0
			Mx E	13	19

(cont.)

1974
Oct. 30 (cont.)

		Ki		micr	sec
			Mx N	9.9	18
			Mx Z	10	20
		Sk	iP	16 19 11.5	
		Um	iP	16 18 53.2	
		Ud	iP	16 19 20.1	
			i	16 19 23.7	
			ipP	16 19 32.6	
		De	iP	16 19 32.7	
			ipP	16 19 44.1	

Ryukyu Islands.
h = 45 km (Up,Ud,De).
m = 5.7, M = 6.3 (Up,Ki).

"	30	Up	iP	18 03 23.2 D
		Ki	iP	18 02 52.0
				micr sec
			P Z'	0.1 1.0
		Sk	iP	18 03 20.3
		Um	iP	18 03 05.8 D
		Ud	iP	18 03 30.2 D
		De	iP	18 03 41.1

Bonin Islands (h = 420 km).

"	30	Up	iP	21 57 29.0
		Ki	iP	21 57 15.6
		Sk	iP	21 57 36.0
		Um	iP	21 57 20.0 D
			ipP	21 59 35.0
		Ud	iP	21 57 38.3 D
		De	iP	21 57 43.4

Celebes Sea.
h = 630 km (Um).

"	31	Ki	iP	00 43 30.6
		Um	iP	00 43 47.7 C

Japan (h = 60 km).

"	31	Up	iP	05 15 09.5	
				micr	sec
			P Z'	0.1	0.9
		Ki	iP	05 14 16.2	
		Sk	iP	05 14 50.3	
		Um	iP	05 14 47.3	
		Ud	iP	05 15 09.9	

Aleutian Islands (h = 70 km).

"	31	Up	iP	06 47 57.2
		Um	iP	06 47 31.6

Okhotsk Sea (h = 430 km).

"	31	Ki		micr	sec
			Mx E	0.7	19
			Mx N	0.8	19
			Mx Z	0.9	19

(cont.)

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

1974						
Oct.	31	(cont.)				
		Ud	iPKP1	07	05	58.4
		De	iPKP1	07	06	10.2
		Tonga Islands (h = N).				
"	31	Ki	iP	09	14	22.7
		Um	iP	09	14	22.4
			i	09	14	30.9
		Ud	iP	09	14	33.1
		Sumatra.				
"	31	Up	iP	09	55	46.2
		Ki	iP	09	55	14.1
		Sk	iP	09	55	44.3
		Um	iP	09	55	29.7
		Ud	iP	09	55	53.6
		Bonin Islands (h = 70 km).				
"	31	Ki	iP	18	09	48.9
				micr		sec
			P Z'	0.1		1.3
		Um	iP	18	10	16.0
		Ud	iP	18	10	41.6
		De	iP	18	11	04.3
		Aleutian Islands (h = 35 km).				
"	31	Ud	iP	18	10	10.6
			i	18	10	21.4

Markus Båth
Rutger Wahlström

May 1, 1976

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, 1974

1974 Nov. 1 Ud iPKPl 03 55 46.8
Tonga Islands (h = N).

" 1 Up iP 12 55 43.3
Ud iP 12 55 55.5
Gulf of Aden (h = N).

" 1 Up iP 16 43 55.1
Ud iP 16 44 02.5
Greece.

" 1 Up iP 19 02 24.1
Ki iP 19 01 48.9
Um iP 19 02 04.0
Ud iP 19 02 30.8
South of Japan (h = 100 km).

" 1 Ki iPKPl 21 04 16.5
Um iPKPl 21 04 24.0
New Zealand (h = 25 km).

" 1 Up iPKP 23 39 10.4
Ki iPKP 23 39 25.2
Um iPKP 23 39 18.4
Ud iPKP 23 39 07.8
South Sandwich Islands
(h = N).

" 2 Ki eP 01 14 49
Ud iP 01 14 07.4 C
De iP 01 14 00.9
North Atlantic Ocean
(h = N).

" 2 Ud iPKPl 02 11 28.2

" 2 Ki iP 03 09 17.9
Ud iP 03 10 15.3
Kamchatka (h = 50 km).

1974 Nov. 2 Up iP 05 04 08.9
i(S) 05 07 38

		micr	sec
P	Z'	4.4	0.8
Mx	E	22	6
Mx	N	16	5
Mx	Z	25	5

Ki iP 05 02 47.4 C
iS 05 04 57
i(P'P') 05 39 13.6

		micr	sec
P	Z'	32	1.0
Mx	E	67	6
Mx	N	58	6
Mx	Z	51	6

Sk iP 05 03 54.1
i(P'P') 05 39 00.3
Um iP 05 03 18.9 C
iS 05 05 55
i(P'P') 05 39 32.5
Ud iP 05 04 22.4 C
i(P'P') 05 38 51.2
De iP 05 04 54.3 C
Novaya Zemlya.
m = 7.0, M = 6.2 (Up,Ki).
Underground explosion.
(P'P'), interpreted as early P'P', has a different travel-time slope from the JB tables.

" 2 Ki iS 05 41 46.9
Novaya Zemlya aftershock.

" 2 Ki eP 05 53 26
eS 05 55 32
Novaya Zemlya aftershock.

" 2 Ud iP 07 21 45.1

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

1974 Nov.	2	Up	iP		08 38 29.8	
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP		08 37 46.8	
		Sk	iP		08 38 20.7	
		Um	iP		08 38 05.7	
		Ud	iP		08 38 36.1	
		De	iP		08 38 53.2	
		Japan (h = 70 km).				
"	2	Ud	iP		10 05 38.5	
		Aleutian Islands (h = N).				
"	2	Ud	iP		11 29 38.0	
"	2	Up	iP		12 50 24.8	
		Ki	iP		12 49 43.4	
		Sk	iP		12 50 17.9	
		Um	iP		12 50 02.0	
		Ud	iP		12 50 31.9	
		Japan (h = 30 km).				
"	2	Ud	iPKP1		14 37 49.1	
		De	iPKP1		14 38 01.9	
"	2	Up	iP		19 54 32.2	
					micr	sec
			P	Z'	0.1	0.9
		Ki	iP		19 53 48.2	
		Sk	iP		19 54 25.0	
		Um	iP		19 54 07.9	
		Ud	iP		19 54 38.5	
		De	iP		19 54 55.8	
		Japan (h = 120 km).				
"	2	Up	iP		22 06 50.7	
					micr	sec
			P	Z'	0.1	1.1
		Ki	iP		22 06 11.5 C	
		Sk	iP		22 06 44.6 C	
		Um	iP		22 06 28.3 C	
		Ud	iP		22 06 57.7 C	
		De	iP		22 07 16.1	
		Japan (h = 45 km).				
"	2	Ki	iP		22 22 49.0	
		Um	iP		22 23 06.4	
		Japan (h = 35 km).				
"	2	Up	eP		22 37 36	
					micr	sec
			Mx	E	0.8	17
			Mx	N	0.8	16
			Mx	Z	1.0	15
		Ki	iP		22 35 49.2	
		(cont.)				

1974 Nov.	2	(cont.)				
		Ki	i		22 35 54.0	
			iS		22 36 53.6	
					micr	sec
			Mx	E	1.2	16
			Mx	N	0.7	16
			Mx	Z	0.7	13
		Sk	eP		22 36 40	
			iS		22 38 24.3	
		Um	iP		22 36 42.5	
			i		22 36 48.5	
			iS		22 38 22.5	
		Ud	iP		22 37 27.4	
			i		22 37 34.0	
		De	iP		22 38 12.1	
			i		22 38 16.2	
		Norwegian Sea (h = N).				
"	2	Um	i(PKP)		22 37 57.5	
			iPKP		22 38 05.6	
		Ud	iPKP		22 38 14.8 C	
		De	iPKP		22 38 21.7	
		Tonga Islands (h = 100 km).				
"	2	Ki	iP		22 56 02.3	
		Um	iP		22 56 19.9	
		Ud	iP		22 56 48.3	
		Japan (h = 15 km).				
"	3	Ud	iP		03 51 37.4	
"	3	Up	iP		10 35 13.1 C	
			ipP		10 35 23.3	
					micr	sec
			P	Z'	0.1	0.9
		Ki	iP		10 35 01.9 C	
			ipP		10 35 11.2	
					micr	sec
			P	Z'	0.1	0.9
		Sk	iP		10 35 29.7 C	
			ipP		10 35 39.3	
		Um	iP		10 35 01.2 C	
		Ud	iP		10 35 29.2 C	
			ipP		10 35 38.9	
		De	iP		10 35 33.4	
		Sinkiang, China.				
		h = 45 km (Up,Ki,Sk,Ud).				
		m = 5.5 (Up,Ki).				
"	3	Ki	iP		11 33 29.2	
		Sea of Japan (h = 380 km).				
"	3	Ki	iP		12 10 18.0	
		Um	iP		12 10 37.3	
		Ud	iP		12 11 08.2	
		De	iP		12 11 26.9	
		Japan (h = 130 km).				

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

1974 Nov.	3	Um	iPKPl	14 16 23.0	
"	3	Up	iP	16 41 38.4	
		Ki	iP	16 41 19.9	C
		Um	iP	16 41 25.9	
			ipP	16 41 35.5	
		Ud	iP	16 41 48.0	C
			ipP	16 41 59.1	
		Luzon.			
		h = 40 km (Um,Ud).			
"	3	Ud	iPKP	18 55 14.7	
		Easter Island (h = N).			
"	3	De	iPKPl	23 26 40.9	D
"	4	Ki	iP	03 03 37.7	
		Ud	iP	03 02 38.9	
		Aegean Sea (h = N).			
"	4	Ki	iP	04 50 23.0	
		Sea of Japan (h = 290 km).			
"	4	Ud	iPKPl	09 04 40.6	
		De	iPKPl	09 04 49.5	
"	4	Ud	iP	10 32 37.1	
"	4	Ud	i(Sgl)	13 55 34.7	
"	4	Ud	iPKPl	15 06 23.2	
		De	iPKPl	15 06 35.0	
		Tonga Islands (h = N).			
"	4	Ki	iP	17 06 30.8	
"	4	Ud	iPKPl	17 48 49.0	
		De	iPKPl	17 49 00.7	
		Tonga Islands (h = N).			
"	4	Ud	iPKPl	17 48 58.6	
		De	iPKPl	17 49 10.8	C
			i	17 49 22.2	
		Tonga Islands.			
		Origin time = 17 29 34.			
"	4	Ud	iP	18 10 17.6	
"	4	Ki	iSgl	20 03 09.2	
		Sk	iSgl	20 03 15.7	
		Um	iSgl	20 03 37.9	
		Nordland, Norway.			
		Origin time = 20 01 42.			
		Explosion?			

1974 Nov.	4	Sk	iP	21 35 54.5	
		Ud	iP	21 36 02.4	
		Central America (h = N).			
"	5	Ki	iP	10 34 02.3	
		Sk	iP	10 34 26.5	
		Ud	iP	10 34 51.7	
		Alaska (h = 15 km).			
"	5	Up	iPKP2	10 58 53.1	
			i	10 59 01.5	
				micr sec	
			Mx Z	0.9 22	
		Ki	iPKPl	10 58 21.8	C
				micr sec	
			PKPl Z'	0.2 0.8	
		Sk	iPKPl	10 58 42.9	
			iPKP2	10 58 48.3	
		Ud	iPKP2	10 58 59.0	C
		De	ePKP2	10 59 08	
		New Zealand (h = N).			
"	5	Ki	iPKPl	11 13 05.4	
		New Zealand (h = 45 km).			
"	5	Ki	iP	13 52 46.9	
		Ud	iP	13 52 56.0	
			iPP	13 56 54.5	
		Sunda Strait (h = 100 km).			
		Readings are late compared to the NEIS solution.			
"	5	Up	iPKPl	19 29 24.3	
		Ud	iPKPl	19 29 26.5	
"	5	Ki	iPKPl	19 41 39.8	
		Sk	iPKPl	19 41 52.3	
		Ud	iPKPl	19 41 50.6	
		De	iPKPl	19 41 47.8	
		West of Macquarie Islands (h = N).			
"	5	Ki	iPKPl	20 01 21.3	
		New Zealand (h = N).			
"	5	Up	iP	20 08 56.6	
		Ki	iP	20 09 26.4	
			iPP	20 10 42.9	
		Sk	eP	20 09 34	
		Ud	iP	20 09 06.4	
		De	iP	20 08 58.8	
		Iran (h = 70 km).			

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

1974 Nov.	6	Up	iP	04 46 08.3	
		Ki	iP	04 46 45.8	
		Um	iP	04 46 28.8	
			i	04 47 25.3	
		Ud	iP	04 46 24.7	
			i	04 46 55.6	
		Caucasus.			
"	6	Up	iSgl	05 26 49.8	
		Ki	iSgl	05 24 40.5	
		Um	iSgl	05 24 55.5	
		De	iSgl	05 28 54.2	
		Central Finland.			
"	6	Ki	iP	09 17 48.1	
"	6	Ud	iP	11 24 55.9	
"	6	Up	iSgl	13 31 06.9	
		Sk	iSgl	13 31 08.4	
		Ud	iPgl	13 29 13.6	
			i	13 29 39.6	
			iSgl	13 30 08.6	
		De	iPgl	13 29 22.9	
			iSgl	13 30 17.9	
		Southwest coast of Norway, 58.4°N, 6.6°E.			
		Origin time = 13 28 04.			
"	6	Up	iSgl	14 47 06.9	
		Ud	iSgl	14 46 12.1	
		Southwest Norway.			
		By combination with Bergen readings.			
"	6	Up	iPKP2	14 55 26.1	
		Ki	iPKP1	14 54 53.3	
				micr sec	
			PKP1 Z'	0.1 1.0	
		Sk	iPKP2	14 55 26.9	
		Um	iPKP1	14 55 01.4 C	
			i	14 55 07.1	
		Ud	iPKP2	14 55 31.0 C	
		New Zealand (h = 40 km).			
"	6	Ud	iPKP1	16 51 36.3	
		De	iPKP1	16 51 49.8	
"	6	Ud	iP	17 04 46.7	
		De	iP	17 04 44.1	
1974 Nov.	6	Ud	iP	19 21 09.6	
"	6	Ud	iP	19 27 44.8	
"	7	Up	iP	00 13 15.1	
		Um	iP	00 12 50.4	
		Ud	iP	00 13 21.6	
		De	iP	00 13 39.1	
		Kurile Islands (h = 30 km).			
"	7	Up	e	02 39 03	
			i(S)	02 40 10.0	
		Um	iP	02 37 47.5	
			i	02 41 46.6	
		Ud	e	02 39 08	
			iS	02 40 08.1	
		De	iP	02 36 15.5	
"	7	Up	iP	04 26 35.9	
			i	04 26 47.2	
		Ki	iP	04 26 38.0	
			i	04 26 48.2	
		Um	iP	04 26 33.4	
		Ud	iP	04 26 46.0	
			i	04 26 56.5	
		Sumatra (h = 10 km). Interpreting the second phase as pP would give h = 40 km (Up,Ki,Ud).			
"	7	Up	iP	05 10 10.2	
		Ki	iP	05 09 23.1	
		Ud	iP	05 10 13.6	
		Kurile Islands (h = 55 km).			
"	7	Ud	iP	11 59 38.3	
		Japan (h = 150 km).			
"	7	Ud	iP	13 31 10.1	
		De	iP	13 31 04.5	
		Peru (h = 150 km).			
"	7	Ki	iP	15 11 05.9	
		Ud	iP	15 11 59.1	
		Kurile Islands (h = N).			
"	7	Ud	iPKP1	16 18 48.6	
"	7	Ud	iP	18 51 50.6	
		Greece.			

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

1974						
Nov.	7	Ki	iP		18 55 42.0	
		Ud	iP		18 56 32.6	
		Aleutian Islands (h = 20 km).				
"	7	Ki	iP		20 12 16.4	
		Ud	iP		20 13 15.0	
		Komandorsky Islands (h = 40 km).				
"	7	Ki	iP		20 29 03.3	
		Ud	iP		20 29 59.0	
"	8	Up	iP		02 40 00.4	
		Ki	iP		02 39 55.7	C
		Um	iP		02 39 55.7	C
		Ud	iP		02 40 09.6	C
		De	iP		02 40 09.5	
		Java (h = 110 km).				
"	8	Up	iP		03 01 57.3	
"	8	Ud	i		11 35 54.0	
			i		11 36 13.5	
			iSgl		11 36 15.5	
		De	iSgl		11 36 46.1	
"	8	Up	iPKP		13 57 44.3	
		Ki	iPKP		13 57 28.3	
		Ud	iPKP		13 57 45.4	
		Tonga Islands (h = N). Late arrivals compared to the NEIS solution.				
"	8	Ki	ePn		18 19 23	
			iSgl		18 20 05.0	
		Sk	iSgl		18 22 55.3	
		Um	iSgl		18 21 56.3	
		North Norway.				
"	8	Sk	iP		20 55 27.6	C
		Um	iP		20 55 44.7	C
		Panama-Colombia (h = 10 km).				
"	8	Up	iP		21 34 07.1	
			i		21 34 10.7	
			iS		21 42 48.8	
					micr	sec
			P	Z'	0.2	1.1
			i	Z'	2.1	1.0
			Mx	E	3.7	15
			Mx	N	12	22
			Mx	Z	6.0	22
		(cont.)				

1974						
Nov.	8	(cont.)				
		Ki	iP		21 33 24.7	
			i		21 33 27.8	
			iPP		21 35 42.3	
			iS		21 41 33	
					micr	sec
			P	Z'	0.2	1.0
			i	Z'	3.3	1.0
			PP	Z'	0.8	1.1
			Mx	E	14	18
			Mx	N	9.1	18
			Mx	Z	3.8	18
		Sk	iP		21 34 00.2	
			i		21 34 02.9	
			iPP		21 36 25.3	
		Um	iP		21 33 43.6	C
			i		21 33 47.3	
			iS		21 42 07	
		Ud	iP		21 34 14.6	
			i		21 34 17.9	
			iS		21 42 52.9	
		De	iP		21 34 31.7	
			i		21 34 34.6	
			i(PP)		21 36 54.3	
			iPP		21 37 14.4	
		Japan (h = 130 km). m = 7.0, M = 6.2 (Up,Ki). M uncorrected for focal depth. Multiple P.				
"	9	Ki	iP		04 30 47.2	
		Mindanao (h = 15 km).				
"	9	Sk	iP		05 56 52.0	
		Um	iP		05 56 29.4	
		Ud	iP		05 57 02.0	
		Kurile Islands (h = 150 km).				
"	9	Up	iP		05 57 25.6	
		Ki	iP		05 56 43.7	
"	9	Up	iP		06 05 27.7	C
					micr	sec
			P	Z'	0.1	0.6
		Ki	iP		06 06 42.0	
		Sk	iP		06 06 09.0	
		Um	iP		06 06 06.8	
		Ud	iP		06 05 35.3	
		De	iP		06 04 58.2	
		Greece-Albania (h = 25 km).				
"	9	Up	iPgl		07 17 26.3	
			iSn		07 18 41.1	
		(cont.)				

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

1974
Nov. 9 (cont.)

Up	iS*		07 19 30.1	
Ki	iPn		07 15 29.7	C
	iPgl		07 15 36.7	
	iSn		07 16 18.5	
			micr	sec
	Pn	Z'	0.2	0.5
	Pgl	Z'	0.2	0.5
	Sn	Z'	0.2	0.7
Sk	iPn		07 15 55.2	C
	iSn		07 17 03.8	
Um	iPn		07 16 09.3	C
	iSn		07 17 26.8	
Ud	iPn		07 16 44.1	C
	iSn		07 18 25.9	
De	iPn		07 17 33.3	

Norwegian Sea (h = N).

" 9

Up	iP		10 46 30.1	
			micr	sec
	Mx	E	4.6	20
	Mx	N	3.9	20
	Mx	Z	10	19
Ki	iP		10 45 36.2	
			micr	sec
	Mx	E	6.1	21
	Mx	N	4.7	23
	Mx	Z	5.2	21
Um	iP		10 46 01.7	
Ud	iP		10 46 33.6	
De	iP		10 46 55.2	

Kamchatka (h = N).
M = 5.8 (Up,Ki).

" 9 Sk iPKP 10 59 33.3
South Sandwich Islands
(h = N).

" 9

Up	iP		12 20 26.4	
Um	iP		12 21 05.0	
Ud	iP		12 20 20.1	
De	iP		12 19 47.8	

Algeria (h = N).

" 9

Ki	iP		12 37 17.3	
Sk	iP		12 37 23.0	
Um	iP		12 37 31.2	
	i		12 37 44.3	
Ud	i		12 39 12.7	

" 9 Ud iP 13 11 17.6

" 9 Up iP 13 13 52.4
(cont.)

1974
Nov. 9 (cont.)

Up	i(PP)		13 17 40.5	
	iPP		13 18 04.9	
	iS		13 25 29	
			micr	sec
	P	Z'	0.4	1.9
	PP	Z'	0.3	1.6
	Mx	E	56	23
	Mx	N	40	18
	Mx	Z	120	24
Ki	eP		13 13 49	
	i(PP)		13 17 41.4	
	iPP		13 18 12.0	
			micr	sec
	PP	Z'	0.6	2.1
	Mx	E	49	21
	Mx	N	31	18
	Mx	Z	34	18
Sk	iPP		13 17 49.5	
Um	i(PP)		13 17 43.0	
	iPP		13 18 11.9	
	iS		13 25 46	
	iSP		13 27 34	
Ud	iP		13 13 44.0	
	i(PP)		13 17 14.6	
De	iP		13 13 43.8	
	i(PP)		13 17 38.1	

Peru (h = 6 km).
m = 6.8, M = 7.2 (Up,Ki).

" 9

Up	iP		14 27 52.1	
	i		14 28 41.7	
			micr	sec
	P	Z'	0.3	1.4
Ki	iP		14 27 10.3	
			micr	sec
	P	Z'	0.1	1.3
Sk	iP		14 27 45.6	
Um	iP		14 27 28.9	C
Ud	iP		14 27 59.2	
De	iP		14 28 15.2	
	i		14 28 28.7	

Japan (h = 25 km).
m = 6.1 (Up,Ki).

" 9

Up	iP		19 24 10.3	
	ipP		19 24 23.8	
			micr	sec
	P	Z'	0.1	1.0
	Mx	E	3.8	22
	Mx	N	5.7	19
	Mx	Z	9.5	23
Ki	iP		19 24 08.8	C

(cont.)

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

1974 Nov.	9	(cont.)					
		Ki	ipP		19 24 22.9		
			i		19 24 33.2		
					micr	sec	
			P	Z'	0.4	1.0	
			pP	Z'	0.8	1.6	
			Mx	E	11	22	
			Mx	N	9.0	21	
			Mx	Z	11	23	
		Sk	iP		19 24 24.4		
			ipP		19 24 41.2		
			iPP		19 28 20.5		
		Um	iP		19 24 07.2		C
			iSKS		19 34 46		
		Ud	iP		19 24 19.7		
			i		19 24 21.9		
			ipP		19 24 34.2		
			i(PP)		19 27 19.3		
			i		19 28 02.6		
		De	iP		19 24 21.4		C
			i(PP)		19 27 34.0		
			iPP		19 28 11.6		
		Sunda Strait.					
		h = 55 km (Up,Ki,Sk,Ud).					
		m = 6.5, M = 6.3 (Up,Ki).					
"	10	Up	iPKPl		03 26 12.1		C
					micr	sec	
			PKPl	Z'	0.1	0.8	
		Ud	iPKPl		03 26 14.9		C
		Tonga-Kermadec Islands					
		(h = 620 km).					
"	10	Ki	iP		04 39 22.3		
		Ud	iP		04 39 37.3		
		Tadzhik-Sinkiang (h = N).					
"	10	Up			micr	sec	
			Mx	E	1.4	18	
			Mx	N	1.9	18	
			Mx	Z	2.8	19	
		Ki	iPKP		04 44 35.8		
					micr	sec	
			Mx	E	1.8	20	
			Mx	N	2.8	20	
			Mx	Z	2.8	20	
		Ud	iPKP		04 44 53.8		
		Fiji Islands (h = N).					
		M = 6.0 (Up,Ki).					
"	10	Up	iP		07 05 05.4		
		Ud	iP		07 05 19.5		
		Tibet (h = N).					

1974 Nov.	11	Up	iP		05 28 43.6		C
			ipP		05 28 59.0		
					micr	sec	
			P	Z'	0.2	0.9	
			Mx	N	1.4	20	
		Ki	iP		05 27 50.8		
			ipP		05 28 06.6		
					micr	sec	
			pP	Z'	0.2	1.1	
			Mx	E	2.0	19	
			Mx	N	1.6	19	
		Sk	iP		05 28 23.0		
			ipP		05 28 37.5		
		Um	iP		05 28 19.6		
			iPcP		05 28 52.0		
		Ud	iP		05 28 44.7		C
			ipP		05 29 00.6		
		De	iP		05 29 07.0		
		Aleutian Islands.					
		h = 55 km (Up,Ki,Sk,Ud).					
		m = 6.2, M = 5.4 (Up,Ki).					
"	11	Up	iPKPl		06 48 26.2		
					micr	sec	
			PKPl	Z'	0.1	0.8	
		Ki	iPKP		06 48 16.1		C
					micr	sec	
			PKP	Z'	0.1	1.0	
		Sk	iPKPl		06 48 20.0		
		Um	iPKPl		06 48 16.2		
			i		06 48 25.7		
		Ud	iPKPl		06 48 28.3		C
		De	iPKPl		06 48 38.0		
			i		06 48 45.6		
		Tonga-Kermadec Islands					
		(h = 200 km).					
"	11	Um	iPKPl		06 51 57.1		
		Ud	iPKPl		06 52 09.2		
"	11	Up	iP		09 07 19.3		
		Sk	iP		09 07 19.9		
		Ud	iP		09 07 28.8		C
		De	iP		09 07 40.7		
		Ryukyu Islands (h = 45 km).					
"	11	Ud	iPKP		09 33 59.6		
		Solomon Islands					
		(h = 110 km).					
"	11	Ud	iP		10 04 35.4		
"	11	Ud	iP		11 57 25.1		
		Peru (h = 70 km).					

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

1974 Nov.	11	Ud	iP		13 21 33.3	
"	12	Ki	iP		03 26 45.2	
		Ud	iP		03 27 37.2	
		Kurile Islands (h = N).				
"	12	Ki	iPKP		06 18 33.7	
		Chile-Argentina (h = 90 km).				
"	12	Ud	iP		18 02 11.5	
		Tadzhik-Sinkiang.				
"	12	Um	iP		20 19 36.0	
		Ud	iP		20 20 06.3	
		Japan (h = 70 km).				
"	12	Up			micr	sec
			Mx	N	1.2	22
		Ki	iP		22 26 28.6	
			ipP		22 26 46.3	
					micr	sec
			P	Z'	0.2	1.4
			Mx	E	1.2	18
			Mx	N	1.8	20
		Sk	ipP		22 27 05.5	
		Um	iP		22 26 32.8	
			ipP		22 26 50.5	
		Ud	iP		22 26 50.1	
			ipP		22 27 06.8	
		De	iP		22 26 56.1	
			ipP		22 27 12.8	
		Celebes Sea.				
		h = 60 km (Ki,Um,Ud,De).				
		M = 5.6 (Up,Ki).				
"	13	Up	iP		02 41 41.0	
			i		02 41 48.4	
			iPn		02 42 03.2	
			iSn		02 46 36.9	
					micr	sec
			P	Z'	0.4	1.4
			Mx	E	1.0	13
			Mx	N	2.2	14
			Mx	Z	1.9	14
		Ki	iP		02 42 19.6	
			iPn		02 42 55.9	
			iSn		02 47 49.6	
					micr	sec
			Pn	Z'	0.3	1.2
			Mx	N	1.9	19
		Sk	iP		02 42 19.8	
			iPn		02 42 38.7	
		Um	iP		02 41 53.8	
			iSn		02 47 27.4	
		(cont.)				
1974 Nov.	13	(cont.)				
		Ud	iP		02 41 58.5	
			iSn		02 47 34.6	
		De	iP		02 41 45.3	
			iPn		02 41 59.6	
		Caucasus (h = 40 km).				
		m = 6.0, M = 4.8 (Up,Ki).				
		Clear Pn and Sn phases.				
"	13	Ud	iPKP1		05 42 48.6	
		Tonga-Kermadec Islands				
		(h = N).				
"	13	Ud	iP		10 30 53.3	
		Afghanistan-USSR.				
		Intermediate depth.				
"	13	Up	iSg1		10 40 34.9	
		Ud	iSg1		10 39 32.1	
		Near Bergen, Norway.				
		By combination with Bergen				
		readings.				
"	13	Up	iP		14 02 52.2	
"	13	Ud	i(Sg1)		15 07 45.7	
		De	i(Sg1)		15 05 54.1	
"	13	Ud	iPKP1		17 00 33.1	
"	13	Ki	iPKP1		17 19 20.1	
			iPKP2		17 19 34.8	
		Ud	iPKP2		17 19 48.4	
		Southwest of Macquarie				
		Islands (h = N).				
"	13	Ud	iP		22 44 02.8	
"	14	Ud	iP		02 18 43.6	
		Greece-Albania (h = 45 km).				
"	14	Up	ipP		04 59 12.3	
			i		04 59 28.4	
					micr	sec
			Mx	N	1.0	18
			Mx	Z	1.5	19
		Ki	iP		04 58 12.2	
			ipP		04 58 21.4	
					micr	sec
			pP	Z'	0.1	1.0
			Mx	E	1.5	18
			Mx	N	1.8	18
			Mx	Z	1.9	18
		Sk	iP		04 58 33.6	
			ipP		04 58 42.2	
		Um	iPcP		04 59 22.8	
		(cont.)				

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

1974
Nov. 14 (cont.)

	Ud	ipP		04 59 07.8

Alaska.
h = 35 km (Ki,Sk).
M = 5.2 (Up,Ki).
pP is bigger than P, which explains the absence of P on some records.

" 14	Ud	iP		06 19 07.8

Ryukyu Islands (h = N).

" 14	Ud	iP		12 46 28.5

Greece (h = 10 km).

" 14	Up	iP		13 27 22.8
		i		13 27 27.5
			micr	sec
		P	Z' 0.1	0.9
		Mx	E 7.5	16
		Mx	N 3.1	9
		Mx	Z 4.1	9
	Ki	iP		13 28 36.0
		iPP		13 29 22.7
			micr	sec
		Mx	E 7.5	14
		Mx	N 3.5	14
		Mx	Z 2.6	11
	Sk	iP		13 28 05.1
		i		13 28 09.9
	Um	iP		13 28 01.9
		i		13 28 06.6
		iS		13 32 31
	Ud	iP		13 27 31.1
	De	iP		13 26 55.3

Greece (h = 20 km).
M = 5.4 (Up,Ki).
Double P.

" 14	Up	iP		14 31 38.4
		i		14 31 41.8
		iS		14 35 34
			micr	sec
		P	Z' 0.1	1.0
		i	Z' 0.3	1.0
		Mx	E 4.5	16
		Mx	N 2.3	10
		Mx	Z 4.0	10
	Ki	iP		14 32 51.4
			micr	sec
		Mx	E 5.1	15
		Mx	N 2.3	11
		Mx	Z 1.6	9

(cont.)

1974
Nov. 14 (cont.)

Sk	iP		14 32 20.0
	i		14 32 22.0
Um	iP		14 32 14.5
	i		14 32 21.7
Ud	iP		14 31 45.6
	i		14 31 47.7
	i		14 31 54.6
De	iP		14 31 10.6

Greece (h = 3 km).
M = 5.3 (Up,Ki).
Multiple P.

" 14	Ud	iPKPl	15 25 18.8

" 14	Up	iP		15 34 36.0
		i		15 34 38.4
		iS		15 38 35
			micr	sec
		P	Z' 0.1	0.8
		Mx	E 4.5	16
		Mx	N 2.8	9
		Mx	Z 4.0	10
	Ki	iP		15 35 47.2
			micr	sec
		Mx	E 3.2	14
		Mx	N 2.1	12
		Mx	Z 2.1	8
	Sk	iP		15 35 16.6
		i		15 35 18.9
	Um	iP		15 35 11.1
		iS		15 39 47
	Ud	iP		15 34 43.0
		i		15 34 44.6
	De	iP		15 34 03.1

Greece (h = 25 km).
M = 5.2 (Up,Ki).
Double P.

" 14	Ki	iPKP	17 30 41.3

South Sandwich Islands (h = N).

" 14	Ud	iP	18 26 55.1
" 15	Ki	iP	00 28 01.5

Gulf of Aden (h = N).

" 15	Ud	i	15 01 57.3
		iRg	15 02 00.3
" 15	Up	iP	17 45 49.1
	Ki	iP	17 46 13.9

(cont.)

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

1974 Nov.	15	(cont.)				
		Sk	iP		17 46 19.8	
		Ud	iP		17 46 04.8	
		De	iP		17 45 53.7	
		Iran (h = 80 km).				
"	15	Up	iP		19 13 27.6	
		Aleutian Islands (h = 45 km).				
"	15	Up	iP		22 39 27.8	
		Sk	iP		22 39 51.1	
		Um	iP		22 39 23.5	
		Ud	iP		22 39 45.2	
			iPP		22 41 29.9	
		De	iP		22 39 44.9	
		Sinkiang, China (h = 35 km).				
"	15	Ud	iP		23 30 49.4	
"	15	Up	iP		23 44 14.3	C
			ipP		23 44 26.7	
			iPP		23 46 49.4	
					micr	sec
			P	Z'	0.5	1.0
			PP	Z'	0.1	1.2
			Mx	E	3.0	22
			Mx	N	3.3	23
			Mx	Z	4.1	20
		Ki	iP		23 43 36.1	C
			iPP		23 46 01.2	
					micr	sec
			P	Z'	0.4	1.1
			PP	Z'	0.2	1.2
			Mx	E	9.0	17
			Mx	N	6.3	21
			Mx	Z	6.8	17
		Sk	iP		23 44 09.1	C
			ipP		23 44 21.7	
			iPP		23 46 49.6	
		Um	iP		23 43 53.1	C
			iS		23 52 59	
		Ud	iP		23 44 21.6	C
			ipP		23 44 33.9	
		De	iP		23 44 36.1	C
			ipP		23 44 48.0	
			iPP		23 47 29.6	
		Japan.				
		m = 6.3, M = 5.9 (Up,Ki).				
		h = 45 km (Up,Sk,Ud,De).				
"	16	Ud	iP		00 24 22.5	
		Japan (h = 35 km).				

1974 Nov.	16	Up	iP		05 04 10.4	
		Ki	iP		05 04 16.2	
		Ud	iP		05 04 23.1	
		Burma.				
"	16	Up	eP		10 50 39	
			i		10 50 47.1	
			iPP		10 54 35.0	
					micr	sec
			Mx	N	2.2	29
		Ki	iP		10 50 22.0	
			i		10 50 31.4	
			iPP		10 54 16.3	
					micr	sec
			P	Z'	0.1	1.1
			PP	Z'	0.1	1.5
			Mx	E	1.1	20
			Mx	N	1.4	20
		Sk	eP		10 50 47	
		Um	i(P)		10 50 36.5	
			iPP		10 54 20.0	
		Ud	iP		10 50 47.4	
		De	iPP		10 55 05.9	
		Molucca Passage				
		(h = 35 km).				
		M = 5.5 (Up,Ki).				
"	16	Up	iP		16 26 58.3	
		Ki	iP		16 27 03.9	
		Sk	iP		16 27 22.2	C
		Um	iP		16 26 55.9	
		Ud	iP		16 27 13.8	
		De	iP		16 27 12.4	
		Kashmir-India (h = 60 km).				
"	16	Up	iP		16 35 59.5	
			i		16 36 03.7	
					micr	sec
			P	Z'	0.1	1.0
			Mx	N	3.9	20
			Mx	Z	1.3	14
		Ki	iP		16 35 40.4	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	1.7	11
			Mx	N	3.2	14
			Mx	Z	1.6	11
		Sk	iP		16 36 09.6	
		Um	iP		16 35 45.7	
		Ud	iP		16 36 11.9	
			i		16 36 16.1	
		De	iP		16 36 20.0	
		Kansu, China (h = N).				
		m = 5.8, M = 5.4 (Up,Ki).				

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

1974 Nov.	16	Up	iP		19 30 02.7	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	1.8	19
			Mx	N	1.5	17
			Mx	Z	3.0	22
		Ki	iP		19 30 12.7	
					micr	sec
			P	Z'	0.1	1.3
			Mx	E	1.3	12
			Mx	N	1.4	13
			Mx	Z	1.5	14
		Sk	iP		19 29 40.1	
		Um	iP		19 30 14.2	
		Ud	iP		19 29 45.5	
		De	iP		19 29 51.0	
		North Atlantic Ocean				
		(h = N).				
		m = 5.6, M = 4.9 (Up,Ki).				
"	16	Ud	iP		21 13 48.7	
		Himalaya.				
"	16	Sk	i(Sgl)		22 15 43.6	
"	16	Up	iP		22 17 34.6 C	
					micr	sec
			P	Z'	0.1	0.8
		Ki	iP		22 17 26.4 C	
		Sk	iP		22 17 49.4	
		Um	iP		22 17 26.4 C	
		Ud	iP		22 17 47.9 C	
		De	iP		22 17 49.0	
		Burma (h = 160 km).				
"	16	Ki	iP		23 04 05.7	
		Sk	iP		23 04 41.6	
		Ud	iP		23 04 55.4	
		Japan (h = 70 km).				
"	17	Um	iP		00 07 29.5	
		Greece.				
"	17	Up	iP		00 17 39.4	
		Ki	iP		00 17 41.8	
		Sk	iP		00 17 27.8	
		Um	iP		00 17 45.7	
		Ud	iP		00 17 35.2	
		De	iP		00 17 36.2	
		Panama-Colombia				
		(h = 20 km).				
"	17	Ud	iP		03 32 04.9	
		Iraq (h = 20 km).				
1974 Nov.	17	Ud	iP		07 12 44.1	
"	17	Sk	iP		07 45 17.1	
		Ud	iP		07 45 21.8	
		North Atlantic Ocean				
		(h = N).				
"	17	Ud	iPKP		12 33 03.3	
		Solomon Islands				
		(h = 90 km).				
"	17	Ki	iP		13 30 04.3	
		Ud	iP		13 30 58.9	
			ipP		13 31 11.8	
		Japan.				
		h = 50 km (Ud).				
"	17	Ki	iP		15 13 22.3	
			iPP		15 14 58.5	
					micr	sec
			PP	Z'	0.2	1.5
			Mx	E	0.6	11
			Mx	N	0.4	10
			Mx	Z	0.5	11
		Sk	iP		15 13 29.2	
		Ud	iP		15 13 06.0	
		De	iP		15 12 57.2	
		Iran (h = 45 km).				
"	17	Up	iP		15 39 32.6	
		Ki	iP		15 38 55.4	
		Ud	iP		15 39 26.0	
			i		15 39 29.8	
		Oregon (h = 10 km).				
"	17	Up	iP		17 34 36.5 C	
			ipP		17 34 43.2	
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP		17 33 42.3 C	
					micr	sec
			P	Z'	0.1	0.7
		Sk	iP		17 34 19.0	
		Um	iP		17 34 07.5 C	
		Ud	iP		17 34 40.0 C	
			ipP		17 34 47.6	
			iPcP		17 35 18.4	
		De	iP		17 35 01.7 C	
			iPcP		17 35 29.4	
		Kamchatka.				
		h = 25 km (Up,Ud).				
		m = 6.0 (Up,Ki).				
"	17	Up	iP		18 09 48.4	
		Ud	iP		18 09 51.8	
		De	iP		18 10 13.2	
		Kamchatka.				

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

1974						
Nov.	17	Up	iP		22 40 15.7	
		Hindu Kush.				
		Intermediate depth.				
"	17	Um	iP		23 10 26.1	
		Mexico (h = N).				
"	18	Ud	iP		06 27 59.8	
"	18	Ki	iP		07 25 29.8	
		Kamchatka (h = N).				
"	18	Ki	iP		13 08 01.3	
		Um	iP		13 08 17.1	
		Ud	iP		13 08 44.6	
		De	iP		13 08 57.2	
		South of Japan (h = N).				
"	18	Up	iP		18 15 04.1	C
			il		18 15 11.5	
			i2		18 15 21.4	
					micr	sec
			il	Z'	0.1	1.0
			i2	Z'	0.2	1.0
			Mx	E	1.1	15
			Mx	N	2.1	23
			Mx	Z	2.2	14
		Ki	iP		18 14 46.2	
			il		18 14 56.5	
			i2		18 15 06.6	
					micr	sec
			il	Z'	0.2	1.3
			i2	Z'	0.1	1.0
			Mx	E	1.2	18
			Mx	N	1.1	15
			Mx	Z	0.7	13
		Sk	iP		18 15 10.7	
			il		18 15 15.8	
		Um	iP		18 14 50.0	C
			il		18 14 58.8	
			i2		18 15 07.6	
		Ud	iP		18 15 13.4	
			il		18 15 20.6	
			i2		18 15 29.7	
		De	iP		18 15 25.5	
		Luzon-Formosa (h = 35 km).				
		m = 6.0, M = 5.5 (Up,Ki).				
		P is followed by two,				
		generally larger phases,				
		denoted il and i2.				
"	18	Ki	iP		19 46 21.1	C
		(cont.)				
1974						
Nov.	18	(cont.)				
		Ki	ipP		19 46 36.6	
		Um	iP		19 46 34.3	C
			ipP		19 46 50.3	
		Ud	iP		19 47 00.5	C
		South of Japan.				
		h = 60 km (Ki,Um).				
"	18	Um	iP		22 59 08.1	
		Japan (h = 110 km).				
"	19	Ud	iPKP1		02 39 37.6	
		De	iPKP1		02 39 47.5	
"	19	Up	iP		04 07 26.6	C
			ipP		04 07 37.2	
			iPP		04 10 38.8	
			iS		04 17 14	
			iSKS		04 17 26	
					micr	sec
			P	Z'	0.1	0.9
			pP	Z'	0.2	0.8
			Mx	E	1.6	17
			Mx	N	2.6	18
			Mx	Z	4.4	18
		Ki	iP		04 07 06.2	C
			ipP		04 07 17.0	
			iS		04 16 46	
					micr	sec
			P	Z'	0.3	1.0
			pP	Z'	0.4	0.9
			Mx	E	2.7	19
			Mx	N	2.9	16
			Mx	Z	1.4	12
		Sk	iP		04 07 31.6	C
			ipP		04 07 42.2	
		Um	iP		04 07 13.0	C
			ipP		04 07 22.7	
			iS		04 16 59	
		Ud	iP		04 07 36.1	C
			ipP		04 07 46.4	
		De	iP		04 07 43.3	C
			ipP		04 07 53.9	
		Luzon.				
		h = 40 km (Up,Ki,Sk,Um,				
		Ud,De).				
		m = 6.1, M = 5.7 (Up,Ki).				
"	19	Ki	iSKP1		06 00 54.6	
		Um	iSKP1		06 01 07.4	
		Ud	iSKP1		06 01 22.0	
		De	iPKP1		05 58 42.1	
		Fiji Islands (h = 640 km).				

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

1974						
Nov.	19	Up	Mx		06 04	
					micr	sec
			Mx	E	2.6	22
			Mx	N	5.3	24
			Mx	Z	8.3	18
		Ki	Mx		06 02	
					micr	sec
			Mx	E	3.0	18
			Mx	N	3.5	18
			Mx	Z	1.9	18
		New Ireland (h = 20 km).				
		M = 6.1 (Up,Ki).				
"	19	Up	ipPKP		07 09 45.7	
			iSKPl		07 13 00.1	
		Ki	iPKP		07 09 21.8	
			ipPKP		07 09 33.7	
		Sk	iPKP		07 09 33.9	
			ipPKP		07 09 45.5	
		Um	iPKP		07 09 27.7	
			ipPKP		07 09 39.8	
		Ud	iPKP		07 09 38.6	
			ipPKP		07 09 49.7	
		De	ipPKP		07 09 55.6	
		New Hebrides Islands.				
		h = 40 km (Ki,Sk,Um,Ud).				
"	19	Um	iPKP		07 40 05.4	
		Ud	iPKP		07 40 14.3	
"	19	Up	iPKPl		08 25 05.3	C
		Ki	iPKP		08 24 43.0	
		Sk	iPKPl		08 24 57.7	
		Um	iPKPl		08 24 52.7	
		Ud	iPKPl		08 25 07.0	
		De	iPKPl		08 25 16.1	
		Tonga-Kermadec Islands.				
"	19	Um	iP		10 30 11.1	
"	19	Um	iP		14 25 36.8	
"	19	Up	i(P)		16 48 23.3	
"	19	Ud	iP		21 15 52.5	
"	20	Ki	iP		00 19 08.0	
					micr	sec
			P	Z'	0.1	0.9
		Sk	iP		00 19 38.6	
		Um	iP		00 19 35.3	C
			ipP		00 19 47.7	
		Ud	iP		00 20 00.0	
			ipP		00 20 13.3	
		(cont.)				

1974						
Nov.	20	(cont.)				
		De	iP		00 20 23.3	
			ipP		00 20 36.1	
		Aleutian Islands.				
		h = 45 km (Um,Ud,De).				
"	20	Up	iP		00 51 02.8	
		Ki	iP		00 50 37.5	
		Sk	iP		00 51 05.8	
		Um	iP		00 50 46.9	
		Ud	iP		00 51 11.8	
		Formosa (h = 170 km).				
"	20	Um	iPKP		02 29 28.2	
			i		02 29 38.2	
"	20	Ud	iP		03 40 52.4	
"	20	Up	eP		04 30 40	
			iPKP		04 33 53.5	
			ipPKP		04 34 09.9	
			iPP		04 36 05	
			iSKPl		04 37 12.3	
			iX		04 46 14.5	
					micr	sec
			PKP	Z'	0.2	1.3
			pPKP	Z'	1.3	1.8
			SKPl	Z'	0.2	0.9
			Mx	E	30	22
			Mx	N	49	22
			Mx	Z	81	23
		Ki	iPKP		04 33 38.2	
			i		04 33 47.7	
			ipPKP		04 33 57.8	
			iPP		04 35 17	
			iX		04 46 36.9	
					micr	sec
			PKP	Z'	0.4	1.6
			i	Z'	0.3	1.1
			pPKP	Z'	0.5	1.2
			Mx	E	39	23
			Mx	N	46	22
			Mx	Z	44	22
		Sk	iPKP		04 33 50.4	
			ipPKP		04 34 08.8	
		Um	eP		04 30 23	
			i(PKP)		04 33 37.6	
			iPKP		04 33 46.1	
			ipPKP		04 34 03.5	
			iPP		04 35 42	
			iX		04 46 11.7	
		Ud	i(PKP)		04 33 49.0	
			iPKP		04 33 55.6	
			ipPKP		04 34 12.8	
		(cont.)				

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

1974
Nov. 20 (cont.)

	Ud	iSKP1	04 37 18.3
		iX	04 46 14.8
	De	i(PKP)	04 33 55.9
		iPKP	04 34 03.1
		ipPKP	04 34 19.9

New Hebrides Islands.
h = 60 km (Up,Ki,Sk,Um,Ud,De).
M = 7.3 (Up,Ki).
X parallels SKKP but is about 1 min too early.

" 20

Ki	iP	08 44 39.1
Sk	iP	08 44 15.9
Ud	iP	08 44 16.2

Windward Islands (h = N).

" 20 Ud iP 10 46 14.6

" 20

Up	iSgl	12 31 29.7
Sk	ePgl	12 30 36
	iSgl	12 31 25.1
Ud	iPgl	12 30 03.2
	iSgl	12 30 26.9
De	iSn	12 31 23.6

Southeast Norway,
60.1°N, 10.1°E.
Origin time = 12 29 32.

" 20

Ki	iPKP		13 40 39.6	
			micr	sec
	Mx	E	1.0	21
	Mx	N	1.0	19
	Mx	Z	1.1	18
Um	iPKP		13 40 31.7	
Ud	iPKP		13 40 25.1	

South Atlantic Ocean
(h = N).

" 20 Ki iP 14 29 57.4

" 21

Ki	iP	00 45 33.4
Sk	iP	00 45 26.5
Um	iP	00 45 10.6
Ud	iP	00 45 06.2

Gulf of Aden.

" 21

Ud	i(Sgl)	11 57 06.2
De	i(Sgl)	11 57 34.0

" 21

Sk	iP	12 11 00.2
Um	iP	12 10 41.5
Ud	iP	12 11 09.3

Japan (h = 80 km).

1974
Nov. 21 Ud i(Rg) 13 39 21.9

" 21

Ud	iP	15 14 02.8
De	iP	15 14 01.5

Kirghiz SSR.

" 21 Um iPKP1 17 40 35.8

" 21

Up	iRg	17 59 51.8
Ud	iRg	17 59 34.5

Central Sweden.
Near-surface event.

" 21

Up	iRg	18 00 28.0
Ud	iRg	18 00 11.4

Central Sweden.
Near-surface event.

" 21

Up	iRg	18 23 54.8
Ud	iRg	18 23 37.5

Central Sweden.
Near-surface event.

" 21

Up	iP		19 55 53.7 D	
			micr	sec
	P	Z'	0.1	0.6
Ki	iP		19 55 49.9	
Sk	iP		19 56 10.1 D	
Um	iP		19 55 47.6	
Ud	iP		19 56 06.7 D	
De	iP		19 56 07.8	

Burma (h = N).

" 21

Up	iRg	21 35 30.2
Ud	iRg	21 35 14.4

Central Sweden.
Near-surface event.

" 21

Sk	e(P)	21 48 45
Ud	iP	21 48 49.4

North Atlantic Ocean
(h = N).
Late arrivals.

" 22 Ud iPKP1 00 29 02.2

" 22

Sk	i	02 25 27.2
	i(Sgl)	02 25 32.1

" 22

Up	iP	02 53 54.3
Ki	iP	02 53 19.0
Sk	iP	02 53 50.6
Um	iP	02 53 34.2
Ud	iP	02 54 02.3
De	iP	02 54 16.7

Japan (h = 350 km).

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

1974 Nov.	22	Up	iPKPl	05 05 57.9	
		Ud	iPKPl	05 05 59.9	C
		De	iPKPl	05 06 09.8	
"	22	Sk	eP	07 00 29	
		Ud	iP	07 00 16.9	
		Himalaya.			
"	22	Ud	iP	09 11 43.7	
		Iran (h = 60 km).			
"	22	Sk	iP	09 40 12.7	
		Alaska (h = N).			
"	22	Up	iP	09 51 01.3	
			ipP	09 51 15.4	
		Ki	iP	09 51 39.4	
		Um	iP	09 51 20.9	
		Ud	iP	09 51 16.4	
			ipP	09 51 29.1	
		Iran.			
		h = 60 km (Up,Ud).			
"	22	De	i(Sgl)	10 20 59.9	
"	22	Up	iRg	11 14 33.5	
		Ud	iRg	11 14 17.7	
		Central Sweden.			
		Near-surface event.			
"	22	Up	iRg	11 15 53.5	
		Ud	iRg	11 15 36.0	
		Central Sweden.			
		Near-surface event.			
"	22	Up	iRg	11 33 12.5	
		Ud	iRg	11 32 55.3	
		Central Sweden.			
		Near-surface event.			
"	22	Up	iRg	11 33 19.8	
		Ud	iRg	11 33 03.2	
		Central Sweden.			
		Near-surface event.			
"	22	Up	iRg	11 33 45.8	
		Ud	iRg	11 33 29.3	
		Central Sweden.			
		Near-surface event.			
"	22	Up	iRg	11 34 58.1	
		Ud	iRg	11 34 41.1	
		Central Sweden.			
		Near-surface event.			
1974 Nov.	22	Ud	iP	14 39 08.8	
"	22	Ki	iP	16 37 34.0	
		Ud	iP	16 38 02.1	
		Baja California (h = N).			
"	23	Sk	iPKPl	00 03 41.9	
		Um	iPKPl	00 03 35.1	
		Ud	iPKPl	00 03 48.6	
"	23	Up	iPKPl	00 55 08.9	
			i	00 55 21.4	
		Ki	ePKP	00 54 57	
			iSKPl	00 58 11.1	
				micr sec	
			SKPl Z'	0.1 1.0	
		Sk	iPKPl	00 55 01.1	
			iSKPl	00 58 27.3	
		Um	iPKP	00 54 57.4	
			iSKPl	00 58 22.0	
		Ud	iPKPl	00 55 09.7	
			iSKPl	00 58 35.5	
		De	iPKPl	00 55 21.8	D
			i	00 55 25.5	
			ipPKPl	00 56 18.8	
		Tonga-Kermadec Islands.			
		h = 220 km (De).			
"	23	Um	iP	02 12 27.5	
		Banda Sea (h = 170 km).			
"	23	Ud	iP	03 38 46.4	
"	23	Up	iP	04 34 25.8	
		Ki	iP	04 33 58.1	
		Um	iP	04 34 08.8	
		Ud	iP	04 34 34.9	
		Ryukyu Islands (h = 7 km).			
"	23	Sk	iP	07 57 41.8	
		Ud	iP	07 57 07.2	
		Italy (h = N).			
"	23	Ki	i(pP)	08 56 29.2	
		Um	iP	08 56 33.6	
			i(pP)	08 56 42.5	
		Ud	iP	08 56 58.9	
		Volcano Islands (h = N).			
"	23	Up	iP	09 55 57.2	
			i	09 56 09.2	
				micr sec	
			P Z'	0.2 1.4	

(cont.)

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

1974
Nov. 23 (cont.)

Up			micr	sec
	Mx	N	1.4	26
	Mx	Z	0.9	22
Ki	iP		09 55 32.9	C
Sk	iP		09 56 00.6	
Um	iP		09 55 42.1	
Ud	iP		09 56 06.2	
De	iP		09 56 17.6	

Ryukyu Islands (h = N).

" 23

Up	iPKPl	15 44 19.2
Sk	iPKPl	15 44 14.4
Um	iPKPl	15 44 06.5
Ud	iPKPl	15 44 21.5
De	iPKPl	15 44 30.6

Kermadec Islands.

" 23

Um	iP	16 07 36.8 C
Ud	iP	16 08 01.0 C

Bonin Islands (h = 500 km).

" 23

Up	iP		18 51 06.8	
	i		18 51 15.6	
			micr	sec
	Mx	E	1.1	12
Ki			micr	sec
	Mx	E	1.2	12
Sk	iP		18 51 50.8	
Um	iP		18 51 47.6	
	i		18 51 56.3	
Ud	iP		18 51 13.8	
	i		18 51 21.4	

Greece-Albania (h = N).
M = 4.6 (Up,Ki).
Double onsets.

" 24

Up	iPKPl	02 57 36.5
Um	iPKPl	02 57 20.7
Ud	iPKPl	02 57 36.9

Kermadec Islands.

" 24

Sk	iP	05 06 07.4

Panama-Colombia (h = N).

" 24

Up	i(P)	07 18 28.9
Sk	i(P)	07 18 23.4

South of Panama (h = 35 km).

" 24

Ud	iP	07 19 57.7

Talaud Islands (h = 140 km).

" 24

Up	iPKPl	08 10 06.8
Ud	iPKPl	08 10 07.7
De	iPKPl	08 10 18.2

Kermadec Islands (h = 70 km).

1974
Nov. 24

Ud	iP	10 56 23.4

" 24

Ud	iP	16 27 06.7

Kurile Islands.

" 24

Sk	i(Sgl)	17 00 19.8

" 24

Ud	iP	21 37 04.2

Molucca Passage
(h = 55 km).

" 25

Up	iP	13 39 46.3

Japan.

" 25

Up	iP		16 44 56.6	
	i		16 45 01.6	
			micr	sec
	P	Z'	0.1	1.0
Ki	iP		16 45 34.1	
	i		16 45 39.6	
			micr	sec
	P	Z'	0.1	0.9
Sk	iP		16 45 29.3	
	i		16 45 33.4	
Um	iP		16 45 11.6	
	i		16 45 17.4	
Ud	iP		16 45 07.1	
	i		16 45 12.8	

Gulf of Aden (h = N).
m = 5.8 (Up,Ki).
Double P, smaller and larger, average separation 5.2 sec.

" 25

Ki	iP	20 44 18.9

" 25

Ki	iP	22 11 10.3
Ud	iP	22 11 27.0 C

Sinkiang, China (h = N).

" 25

Up	iPKPl	22 43 29.3
Ud	iPKPl	22 43 31.3
De	iPKPl	22 43 42.0

" 25

Ki	iP	23 50 54.7

" 26

Sk	iP	01 06 36.4
Ud	iP	01 06 18.8

" 26

Ud	iPKPl	09 26 10.0
De	iPKPl	09 26 21.1

Tonga-Kermadec Islands
(h = 600 km).

" 26

Ud	iP	12 15 34.5

Kurile Islands.

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

1974
Nov. 26 Ud iP 12 59 01.9
Sinkiang, China.

" 26 Ki iP 13 30 30.9
Ud iP 13 31 25.7 C
Aleutian Islands (h = 30 km).

" 26 Sk i(Sgl) 14 25 44.0

" 26 Ud iP 14 39 35.0

" 26 Ki iSgl 15 42 38.7
Sk iSgl 15 42 46.9
Um iSgl 15 43 07.3
Ud iSgl 15 44 31.8
Nordland, Norway.
Explosion?

" 26 Sk iPKPl 20 53 38.6
Um iPKPl 20 53 31.1
Ud iPKPl 20 53 41.4
i(pPKPl) 20 53 56.5
Kermadec Islands.

" 26 Up i(pPKPl) 21 14 32.7
Um iPKPl 21 14 05.8
Ud i(pPKPl) 21 14 38.7

" 26 Up iPKPl 23 20 35.4
Um iPKP 23 20 32.8
iSKPl 23 23 17.2
Ud iPKPl 23 20 38.1 C
iSKPl 23 23 29.7
De iPKPl 23 20 48.6 C
Tonga-Kermadec Islands
(h = 520 km).

" 27 Up iP 07 45 47.8
Ki iP 07 46 31.4
micr sec
P Z' 0.1 1.0
Sk iP 07 46 25.1
Um iP 07 46 04.2 C
Ud iP 07 46 02.9 C
De iP 07 45 44.3 C
Iran-Iraq (h = 30 km).

" 27 Sk i(Sgl) 09 43 55.7

" 27 Um iPKPl 11 39 41.3

" 27 Ud iPgl 14 39 52.6 C
iSgl 14 40 13.7
(cont.)

1974
Nov. 27 (cont.)
De iSgl 14 40 45.0
Probably Dalsland, Sweden.
Origin time = 14 39 25.

" 27 Um iP 15 43 00.1

" 27 Up iP 16 58 58.6 C
micr sec
Mx E 0.8 14
Mx N 1.2 14
Mx Z 2.1 16
Ki iP 16 59 43.5 C
micr sec
P Z' 0.2 1.2
Mx E 0.8 11
Mx N 1.2 14
Mx Z 0.8 12
Sk iP 16 59 38.4
Um iP 16 59 16.3
i 16 59 19.6
Ud iP 16 59 14.7 C
De iP 16 58 56.2 C
Iran-Iraq (h = 50 km).
M = 4.8 (Up,Ki).

" 27 Ki i(P) 20 43 53.8
Ud iP 20 45 01.5
De iP 20 45 24.4
Arctic Ocean (h = N).

" 27 Up iP 21 50 32.4
Ki iP 21 50 19.6
Sk iP 21 50 13.3
De iP 21 50 30.7
Mexico (h = 50 km).

" 28 Sk iP 01 22 41.2
Ud iP 01 22 09.2
De iP 01 21 36.8
i 01 21 48.2
Crete.

" 28 Up iP 05 39 43.2 C
micr sec
Mx N 1.4 20
Mx Z 2.5 23
Ki iP 05 38 49.6
micr sec
Mx E 0.7 16
Sk eP 05 39 26
Ud iP 05 39 42.4 C
De iP 05 40 05.8
Aleutian Islands (h = 60 km).
M = 5.2 (Up,Ki).

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

1974
Nov. 28 Ki eP 13 41 18
Sk iP 13 42 09.0
Ud iP 13 42 17.9 C

" 28 De iP 14 01 38.4

" 28 Up iP 15 05 23.4
Ki iP 15 05 24.1
Sk iP 15 05 45.3
Ud iP 15 05 40.3 C
De iP 15 05 39.4
Sinkiang, China (h = 35 km).

" 28 Ki iSKPl 15 35 48.8
Sk iSKPl 15 36 13.1
Ud iPKPl 15 33 27.5 D
De iPKPl 15 33 38.8 D
Fiji Islands (h = 630 km).

" 28 Up iP 16 42 48.3
micr sec
P Z' 0.1 1.2
Ki iP 16 41 54.4
ipP 16 42 03.9
micr sec
P Z' 0.1 1.0
Sk iP 16 42 24.6
ipP 16 42 34.6
Um iP 16 42 21.6
ipP 16 42 30.8
Ud iP 16 42 46.1
ipP 16 42 56.1
De iP 16 43 09.4
ipP 16 43 19.2
Unimak Island.
h = 35 km (Ki,Sk,Um,Ud,De).
m = 5.9 (Up,Ki).

" 28 Um iP 20 31 16.7
Ud iP 20 31 38.6

" 28 Um i 23 30 23.8
Ud i 23 29 20.2

" 29 Ki iP 00 55 50.0
Atlantic Ocean (h = N).

" 29 Um iPKPl 03 25 19.7

" 29 Up
micr sec
Mx N 1.0 18
Ki
micr sec
Mx N 1.3 17
Sk iP 06 54 37.9
(cont.)

1974
Nov. 29 (cont.)
Um iP 06 54 18.9
Sinkiang, China.
M = 4.9 (Up,Ki).

" 29 Um iP 10 04 39.0
Ud iP 10 04 12.3
De iP 10 03 34.9

" 29 Up iPKP 10 08 17.7
Ki iPKP 10 08 03.4
Sk iPKP 10 08 13.4
Um iPKP 10 08 10.6
Ud iPKP 10 08 19.7
De iPKP 10 08 25.1
New Hebrides Islands
(h = 140 km).

" 29 Up iP 12 57 26.4 C

" 29 Sk iSgl 13 47 59.0
Ud i 13 46 51.4
iSgl 13 46 59.1
Southwest Norway,
58.5°N, 6.4°E.
Origin time = 13 44 56.
By combination with Bergen
and Kongsberg readings.

" 29 Ud iPKPl 16 30 48.0
De iPKPl 16 30 59.1
Tonga-Kermadec Islands
(h = 590 km).

" 29 Up iP 21 13 34.6
micr sec
P Z' 0.2 1.5
Ki iP 21 12 58.7
i 21 13 01.0
micr sec
P Z' 0.1 1.2
Sk iP 21 13 39.0
Ud iP 21 13 45.4
De iP 21 14 01.2
USSR-Mongolia (h = N).
m = 5.5 (Up,Ki).

" 29 Up iP 22 16 33.6
i 22 17 58.7
ipP 22 18 13.8
iS 22 25 46.6
micr sec
P Z' 3.1 1.0
(cont.)

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

1974
Nov. 29 (cont.)

Up			micr	sec
	Mx	E	22	20
	Mx	N	37	20
	Mx	Z	40	21
Ki	iP		22 16 00.2	
	i		22 16 00.9	
	ipP		22 17 37.6	
	iS		22 24 45.4	
	iP'P'		22 43 46	
			micr	sec
	P	Z'	2.7	0.9
	Mx	E	45	16
	Mx	N	39	15
	Mx	Z	40	16
Sk	iP		22 16 30.7	
	ipP		22 18 08.6	
	iS		22 25 37.3	
Um	iP		22 16 14.3	
	ipP		22 17 53.5	
	iS		22 25 11.6	
	isS		22 27 50	
Ud	iP		22 16 40.3	
	ipP		22 18 17.9	
	iS		22 25 55.9	
De	iP		22 16 53.6	
	ipP		22 18 31.0	
	iS		22 26 20.2	

South of Japan.
h = 450 km (Up,Ki,Sk,Um,Ud,De).
m = 6.9, M = 6.9 (Up,Ki).
M uncorrected for focal depth! P exhibits a small compression followed by a large dilatation.

"	29	De	iP	22 56 53.1
"	29	Ud	iP	22 57 00.0
"	30	Ud	iPKP1	00 46 53.2
"	30	Ud	iP	03 31 07.3
"	30	Up	iPKP1	05 19 01.3
			iPKP2	05 19 11.5
		Ki	iPKP1	05 18 42.0 D
				micr sec
			PKP1 Z'	0.2 1.0
		Sk	iPKP1	05 18 55.9
		Um	iPKP1	05 18 51.6
		Ud	iPKP1	05 19 03.0

New Zealand (h = 55 km).

1974
Nov. 30

Up	iP		13 08 03.3	C
			micr	sec
	P	Z'	0.1	0.9
Ki	iP		13 07 09.1	C
			micr	sec
	P	Z'	0.1	1.0
Sk	iP		13 07 43.5	
	iPcP		13 08 23.2	
Um	iP		13 07 35.1	C
Ud	iP		13 08 05.0	C
De	iP		13 08 26.4	

Aleutian Islands
(h = 15 km).
m = 5.9 (Up,Ki).

"	30	Up	iPKP1	14 14 57.8
			iPKP2	14 15 05.5
			micr	sec
			PKP2 Z'	0.1 1.0
		Ki	iPKP1	14 14 36.2
			micr	sec
			PKP1 Z'	0.2 1.1
		Sk	iPKP1	14 14 50.8
		Um	iPKP1	14 14 46.0
		Ud	iPKP1	14 14 57.5

New Zealand (h = 30 km).

"	30	Up	iPKP1	15 54 02.0
			iPKP2	15 54 12.1
			micr	sec
			PKP2 Z'	0.1 1.3
		Ki	iPKP1	15 53 42.3
			ipPKP1	15 53 53.9
		Sk	iPKP1	15 53 59.1
		Um	iPKP1	15 53 52.2 C
			ipPKP1	15 54 03.2

New Zealand.
h = 40 km (Ki,Um).

"	30	Up	iPKP1	17 23 31.3
			iPKP2	17 23 41.5
		Ki	iPKP1	17 23 11.8 C
			micr	sec
			PKP1 Z'	0.1 1.0
		Sk	iPKP1	17 23 26.4
		Um	iPKP1	17 23 21.9
		Ud	iPKP1	17 23 32.6

New Zealand (h = 40 km).

"	30	Up	iP	17 42 59.7 C
		Ud	iP	17 43 16.2 C
		De	iP	17 43 12.5

Hindu Kush (h = 200 km).

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

1974				
Nov.	30	Ki	iPKP1	17 52 16.2
"	30	Ud	iRg	21 07 22.1
			Central Sweden.	
			Near-surface event.	
"	30	Up	iRg	21 08 38.7
		Ud	iRg	21 08 22.7
			Central Sweden.	
			Near-surface event.	
"	30	Ud	i(Rg)	21 21 07.3

Markus Båth

July 26, 1976

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

D E C E M B E R 1 - 31, 1974

1974 Dec.	1	Up	iP		00 17 16.0		
		Ki	iP		00 17 24.9		
		Sk	iP		00 17 41.4		
		Um	iP		00 17 14.1		
		Ud	iP		00 17 32.2		
		Hindu Kush (h = 210 km).					
"	1	Ud	iPKPl		02 11 29.4		
"	1	Ud	iP		03 02 55.2		
		Aleutian Islands (h = 55 km).					
"	1	Up	iP		06 26 07.5		
		Sk	eP		06 26 48		
		Ud	iP		06 26 15.3		
		Greece (h = N).					
"	1	Ud	iP		07 03 39.0		
		Formosa (h = 60 km).					
"	1	Ud	iP		11 25 13.7		
		Turkey.					
"	1	Up	iP		12 14 09.4		
			i		12 14 25.9		
					micr	sec	
			Mx	N	1.4	13	
			Mx	Z	1.7	13	
		Ki	iP		12 15 22.9		
					micr	sec	
			Mx	E	0.6	11	
			Mx	N	0.7	12	
		Sk	iP		12 14 58.0		
		Um	iP		12 14 49.3		
			i		12 15 06.7		
		Ud	iP		12 14 21.3		
		(cont.)					
1974 Dec.	1	(cont.)					
		De	iP		12 13 47.2		
		Turkey (h = 35 km).					
		M = 4.6 (Up,Ki).					
"	1	Up	iP		13 21 55.8		
		Ki	iP		13 21 41.1		
					micr	sec	
			P	Z'	0.1	0.9	
		Sk	iP		13 22 02.2		
		Um	iP		13 21 46.1	D	
		Ud	iP		13 22 05.0	D	
		De	iP		13 22 09.9		
		Mindanao (h = 520 km).					
"	1	Up	iP		14 35 29.4		
		Ki	iP		14 35 30.2		
		Sk	iP		14 35 44.6		
		Um	iP		14 35 26.6		
		Ud	iP		14 35 39.1		
		Nicobar Islands.					
"	1	Ud	iP		15 05 56.4		
"	1	Up	iSn		19 39 19.2		
			i		19 39 37.0		
			iSgl		19 40 06.9		
			i		19 40 39.4		
		Ki	iPgl		19 36 01.7	C	
			iSgl		19 36 05.5		
					micr	sec	
			Pgl	Z'	0.4	0.4	
		Sk	eSn		19 38 16		
			iSgl		19 38 44.7		
		Um	iPgl		19 37 09.5		
			iSn		19 37 44.7		
		(cont.)					

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

1974
Dec. 1 (cont.)

	Um	iSg1	19 38 03.7
	Ud	iSg1	19 40 15.5
	De	iSg2	19 42 15.1

Kiruna, Sweden,
67.8°N, 20.1°E.
Origin time = 19 35 58.
Felt.

" 1	Ud	iPKP1	21 57 57.5
	De	iPKP1	21 58 09.3
" 1	Up	iP	23 15 38.8
	Ud	iP	23 15 41.8

Greece.

" 2	Up	iPKP1	00 32 17.2
	Ki	iPKP	00 31 47.4
	Um	iPKP	00 32 00.5
		iPKP1	00 32 10.8
	Ud	iPKP1	00 32 12.8

New Zealand.

" 2	Up	ePKP1		00 37 46	
		iPKP2		00 37 56.2	
		iX		00 38 07.4	
				micr	sec
		PKP2	Z'	0.1	1.1
		X	Z'	0.1	0.8
	Ki	iPKP1		00 37 27.1	C
		iX		00 37 33.3	
		i		00 37 49.6	
				micr	sec
		PKP1	Z'	0.1	0.8
		X	Z'	0.4	1.8
	Sk	iPKP1		00 37 41.3	
		iX		00 37 53.3	
	Um	iPKP1		00 37 36.5	
		iX		00 37 50.6	
	Ud	iPKP1		00 37 49.9	C
		iPKP2		00 38 00.1	
		iX		00 38 09.8	
	De	iPKP1		00 37 58.6	
		iPKP2		00 38 11.2	
		iX		00 38 24.8	

New Zealand (h = 120 km).
The unidentified phase X, arriving later than PKP2, has a greater slope of its travel-time graph than PKP1 and PKP2.

" 2	Ki	iP	00 59 40.5

(cont.)

1974
Dec. 2 (cont.)

	Um	iP	00 59 42.8

Banda Sea (h = N).

" 2	Up	iP	01 19 02.3 C
		i	01 19 07.4
		ipP	01 19 31.5
	Ki	iP	01 18 55.4
		ipP	01 19 28.7
	Sk	iP	01 19 17.7
		ipP	01 19 49.7
	Um	iP	01 18 54.1
		i	01 19 00.0
		ipP	01 19 26.0
	Ud	iP	01 19 15.6
		i	01 19 21.3
	De	iP	01 19 17.4

Burma.
h = 130 km (Up,Ki,Sk,Um).
Double P, average separation 5.6 sec.

" 2	Up	iP	01 29 24.0
	Ki	iP	01 28 53.1
	Um	iP	01 29 13.7
" 2	Up	iPKP1	01 31 13.4
	Um	iPKP1	01 30 56.2
	Ud	iPKP1	01 31 09.5
		i	01 31 16.3
" 2	Up	iP	01 59 25.0
			micr sec
		P	Z' 0.1 1.3
	Sk	iP	02 00 01.4
	Um	iP	02 00 05.1
	Ud	iP	01 59 21.0

(Italy).

" 2	Up	iPKP	02 10 20.2
	Ki	iPKP	02 10 06.7
	Sk	iPKP	02 10 17.5
	Um	iPKP	02 10 13.1
	Ud	iPKP	02 10 23.3
	De	iPKP	02 10 29.5

Santa Cruz Islands
(h = 150 km).

" 2	Ki	iP	04 43 19.5
	Um	iP	04 44 10.6
	Ud	iP	04 44 41.7

Greenland (h = N).

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

1974
Dec. 2 √ Up iP 06 46 13.1
iX 06 46 20.7

		micr	sec
P	Z'	0.2	1.2
Mx	E	2.4	16
Mx	N	2.1	17
Mx	Z	4.3	16

Ki iP 06 45 53.2
iX 06 46 00.8

		micr	sec
P	Z'	0.2	1.0
Mx	E	2.2	15
Mx	N	2.4	17
Mx	Z	2.0	13

Sk iP 06 46 18.3
Um iP 06 45 59.9
iX 06 46 07.6
iS 06 55 45
De iP 06 46 25.1
i 06 46 40.6
Luzon (h = 55 km).
m = 6.0, M = 5.7 (Up,Ki).
Interpreting the clear phase X as pP gives h = 25 km (Up, Ki,Um).

" 2 Up iPKP 07 02 12.7
iPKKP 07 12 40.1
Ki iPKP 07 02 04.0
Um iPKP 07 02 06.3
Ud iPKP 07 02 17.0
iPKKP 07 12 32.5
De iPKP 07 02 20.2
iPKKP 07 12 27.9
New Britain (h = 30 km).

" 2 √ Up iP 09 13 25.2 C
i 09 13 30.4

		micr	sec
P	Z'	0.1	0.9

Ki iP 09 13 58.5 C
i 09 14 03.6

		micr	sec
P	Z'	0.4	0.8
Mx	E	1.5	12
Mx	N	0.8	11
Mx	Z	1.1	13

Sk iP 09 13 58.9 C
i 09 14 04.2
Um iP 09 13 36.8 C
i 09 13 41.9
iPP 09 15 20.0
(cont.)

1974
Dec. 2 (cont.)
Ud iP 09 13 40.6 C
i 09 13 45.9
iPP 09 15 24.1
De iP 09 13 25.7 C
i 09 13 31.1
Iran (h = 35 km).
m = 6.0 (Up,Ki).
Double P, average separation 5.2 sec.

" 2 De iPKP1 12 40 41.1
Fiji Islands (h = 590 km).

" 2 √ Up

		micr	sec
Mx	E	1.8	30
Mx	Z	5.1	35

Ki iP 12 49 08.2
ipP 12 49 34.5

		micr	sec
Mx	E	4.7	30
Mx	N	4.0	25
Mx	Z	6.1	30

Sk ipP 12 49 28.2
Ud iP 12 49 07.3
ipP 12 49 34.5
De iP 12 49 14.1
ipP 12 49 42.4
Guatemala.
h = 100 km (Ki,Ud,De).
M = 5.7 (Up,Ki).

" 2 Ud iP 14 20 14.1
Greece-Bulgaria (h = 45 km).

" 2 Up iP 18 54 17.4
Ki iP 18 53 30.5
Um iP 18 53 51.8
Ud iP 18 54 23.3
Okhotsk Sea (h = 420 km).

" 2 Um iP 20 27 54.3
Ud iP 20 28 21.6 C
South of Japan (h = 35 km).

" 2 Up iP 23 07 06.2

		micr	sec
P	Z'	0.1	0.8

Sk iP 23 07 47.3
i 23 07 52.3
Um iP 23 07 47.1
Ud iP 23 07 15.3
i 23 07 18.9
De iP 23 06 39.4
Greece (h = 15 km).

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

1974						
Dec.	2	Up	iP		23 14 23.1	
		Ud	iP		23 14 29.2	
		Greece (h = N).				
"	3	Up	iX		03 20 49.7	
					micr	sec
			Mx	E	7.3	21
			Mx	N	9.3	20
			Mx	Z	14	22
		Ki	iP		03 20 25.6	
			iX		03 20 34.7	
			i(PP)		03 24 26.9	
			i		03 24 47.3	
					micr	sec
			X	Z'	0.4	1.4
			i	Z'	0.6	1.9
			Mx	E	14	18
			Mx	N	25	23
			Mx	Z	12	20
		Um	iX		03 20 39.7	
		Ud	iP		03 20 51.8	
			iX		03 20 58.3	
		De	iX		03 21 03.5	
		Banda Sea (h = N).				
		M = 6.5 (Up,Ki).				
		X is larger, sharper and more pronounced than P.				
"	3	Up	iSgl		10 28 22.3	
		Ki	iPn		10 25 15.8	
			iPgl		10 25 21.1	
			iS*		10 25 55.7	
			iSgl		10 25 58.4	
					micr	sec
			Sgl	Z'	0.2	0.5
		Sk	iPgl		10 25 35.4	
			i		10 25 54.4	
			iSn		10 26 10.3	
			iSgl		10 26 24.7	
		Um	iPn		10 25 36.4	C
			iSn		10 26 23.9	
			iSgl		10 26 44.3	
		Ud	iSn		10 27 31.2	
			iSgl		10 28 13.0	
		Coast of Nordland, Norway, 67.1°N, 13.6°E.				
		Origin time = 10 24 31.				
"	3	Ud	iP		19 29 43.9	
		Kurile Islands (h = 35 km).				
"	4	Up	iP		02 47 16.0	
			i		02 47 20.1	
		(cont.)				

1974						
Dec.	4	(cont.)				
		Up			micr	sec
			P	Z'	0.2	1.5
		Ki	eP		02 48 02	
		Sk	iP		02 47 36.2	
		Um	iP		02 47 43.4	
			i		02 47 48.9	
		Ud	iP		02 47 14.0	
			i		02 47 19.3	
		Ascension Island (h = N).				
		Double P.				
"	4	Up	iP		03 20 19.7	
			il		03 20 22.8	
			i2		03 20 32.9	
			iS		03 30 43	
					micr	sec
			P	Z'	1.0	2.0
			i2	Z'	0.5	1.4
			Mx	E	15	19
			Mx	N	24	22
			Mx	Z	27	20
		Ki	iP		03 20 21.4	C
			il		03 20 24.9	
			iS		03 30 46	
					micr	sec
			P	Z'	0.2	1.4
			il	Z'	1.2	1.7
			Mx	E	41	18
			Mx	N	27	17
			Mx	Z	34	18
		Sk	iP		03 20 34.7	
			il		03 20 38.4	
		Um	iP		03 20 17.3	C
			il		03 20 20.3	
			i2		03 20 32.7	
			iS		03 30 40	
		Ud	iP		03 20 30.7	C
			il		03 20 33.8	
			i2		03 20 44.0	
		De	iP		03 20 28.4	C
			il		03 20 31.7	
			i2		03 20 42.0	
		Sumatra (h = 20 km).				
		m = 6.6, M = 6.9 (Up,Ki).				
		Complicated series of onsets following P.				
"	4	Um	iP		10 10 47.4	
		Ud	iP		10 11 19.3	C
		Kurile Islands (h = N).				
"	4	Ud	iP		17 41 33.9	
		Molucca Passage (h = 60 km).				

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

1974
Dec. 4 Ki iPKP 20 02 32.5 C
South Sandwich Islands
(h = N).

" 4 Ki iP 20 24 25.1
Ud iP 20 25 16.5
Aleutian Islands (h = 40 km).

" 4 Ud iP 23 26 38.3
Greece.

" 5 Up iP 03 28 49.4
micr sec
P Z' 0.1 0.8
Ki iP 03 28 20.4
Um iP 03 28 30.9
Ud iP 03 28 55.3
Mariana Islands (h = 190 km).

" 5 Ud iP 06 55 39.2

" 5 Up iP 12 10 48.0
i 12 10 51.0
iSKS 12 21 07
iS 12 22 00
iPKKP 12 27 26.9
micr sec
P Z' 0.2 1.5
i Z' 0.9 1.6
Ki iP 12 10 53.9 D
iSKS 12 21 17
iS 12 22 14
iPKKP 12 27 18.3
i 12 27 22.6
micr sec
P Z' 0.3 1.2
Sk iP 12 10 40.1 D
iPKKP 12 27 32.2
Um iP 12 10 56.0 D
iSKS 12 21 17
iS 12 22 11
iPKKP 12 27 20.7
Ud iP 12 10 39.8
i 12 10 42.1
iPKKP 12 27 32.7
De iP 12 10 38.4
iPKKP 12 27 34.4
Peru-Brazil (h = 160 km).
m = 6.8 (Up,Ki).

" 5 Up e(P) 12 34 59
Um iP 12 35 32.7
i 12 35 40.4

1974
Dec. 5 Um iP 12 50 16.0

" 5 Ud i 14 21 13.1
i(Sgl) 14 21 53.1

" 5 Up i(P) 18 10 15.8
Um iP 18 09 59.6
South of Japan (h = N).

" 5 Um iP 20 36 15.2
South of Japan (h = N).

" 5 Up iP 23 09 30.5
Ki iP 23 08 45.2
Um iP 23 09 05.9
Ud iP 23 09 37.2
Kurile Islands (h = 180 km).

" 6 Ud iP 06 42 01.5

" 6 Up iP 14 11 31.3
micr sec
Mx E 1.9 20
Mx Z 2.7 22
Ki iP 14 11 25.9
micr sec
P Z' 0.1 1.5
Mx E 1.6 17
Mx N 1.3 17
Mx Z 1.5 16
Sk iP 14 11 15.5
Um iP 14 11 27.9
Ud iP 14 11 18.7
i 14 11 22.3
Panama-Costa Rica (h = 45 km).
M = 5.6 (Up,Ki).

" 6 Um iP 14 16 31.8
Ud iP 14 16 40.2
i 14 16 46.6

" 6 Up iP 14 29 35.5
Ki iP 14 29 00.9

" 6 Ki eP 17 18 02
Sk iP 17 18 31.0
Um iP 17 18 16.7
Ud eP 17 18 40
Mariana Islands (h = N).

" 6 Up iP 17 21 42.3
Ki iP 17 21 12.6
(cont.)

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

1974 Dec.	6	(cont.)					
		Ki			micr	sec	
			P	Z'	0.1	0.9	
		Sk	iP		17 21 39.2		
		Um	iP		17 21 25.6		
			i		17 21 42.6		
		Ud	iP		17 21 48.7		
		Mariana Islands (h = N).					
"	6	Um	iP		18 36 15.1		
"	6	Up	e(P)		20 17 10		
			i		20 17 33.8		
		Um	i(P)		20 17 35.4		
"	6	De	iPKP		21 54 20.6		
		New Hebrides Islands (h = 20 km).					
"	7	Um	i(P)		00 54 52.8		
"	7	Up	iP		00 58 06.4		
		Um	iP		00 57 38.2		
		Ud	iP		00 58 06.9		
		Aleutian Islands (h = 25 km).					
"	7	Ud	i(Sgl)		01 05 11.8		
"	7	Ud	i(Sgl)		03 48 24.4		
"	7	Ud	iP		03 48 37.8		
		Kurile Islands (h = N).					
"	7	Up	iP		06 06 49.4		
		Ki	iP		06 06 34.6		
		Sk	iP		06 07 05.7	C	
		Um	iP		06 06 35.4	C	
		Ud	iP		06 07 06.0		
		Kazakh SSR.					
		Underground explosion.					
"	7	Up	iP		07 45 09.7	C	
			i		07 45 11.9		
			ipP		07 45 21.8		
			iS		07 54 10		
			iP'P'		08 13 39.7		
					micr	sec	
			P	Z'	0.2	1.0	
			Mx	E	2.0	18	
			Mx	N	3.5	18	
			Mx	Z	4.8	18	
		Ki	iP		07 44 16.7	C	
			i		07 44 18.4		
		(cont.)					

1974 Dec.	7	(cont.)					
		Ki	i(pP)		07 44 25.4		
					micr	sec	
			P	Z'	0.3	0.9	
			(pP)	Z'	0.5	1.6	
			Mx	E	4.6	17	
			Mx	N	4.8	17	
			Mx	Z	4.4	17	
		Sk	iP		07 44 47.1		
			i		07 44 49.1		
		Um	iP		07 44 43.0	C	
			i		07 44 45.2		
			iS		07 53 24		
			iP'P'		08 13 31.4		
		Ud	iP		07 45 09.4	C	
			i		07 45 11.1		
			ipP		07 45 20.6		
		De	iP		07 45 31.8		
			i		07 45 34.2		
		Aleutian Islands.					
		h = 45 km (Up,Ud).					
		m = 6.3, M = 5.7 (Up,Ki).					
		Double P, 2.0 sec apart.					
"	7	Up	iPKP1		09 43 35.6		
		Ki	iPKP1		09 43 18.3		
			ipPKP1		09 43 35.6		
		Sk	iPKP1		09 43 31.6		
			ipPKP1		09 43 49.2		
		Um	iPKP1		09 43 26.6	C	
			ipPKP1		09 43 44.5		
		Ud	iPKP1		09 43 38.0		
			ipPKP1		09 43 55.6		
		De	iPKP1		09 43 50.3		
		New Zealand.					
		h = 60 km (Ki,Sk,Um,Ud).					
"	7	Um	iP		11 15 01.8		
		Ud	iP		11 15 29.1		
		South of Japan (h = N).					
"	7	Up	iRg		11 20 12.1		
		Ud	iRg		11 19 58.3		
		Central Sweden.					
		Near-surface event.					
"	7	Up	iPKP1		12 27 42.3	C	
			ipPKP1		12 27 48.3		
		Sk	iPKP1		12 27 38.8		
		Um	iPKP1		12 27 31.1		
		Ud	iPKP1		12 27 44.1	C	
			ipPKP1		12 27 51.3		
		De	iPKP1		12 27 53.3		
		(cont.)					

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

1974
Dec. 7 (cont.)
New Zealand region.
h = 20 km (Up,Ud).
Origin time = 12 07 49.

" 7 Up iP 14 05 21.2
ipP 14 05 37.0
Ki iP 14 05 10.9
Sk iP 14 05 37.1
ipP 14 05 54.4
Um iP 14 05 13.2
ipP 14 05 30.1
Ud iP 14 05 34.3
ipP 14 05 50.6
De iP 14 05 34.7
Burma-India.
h = 60 km (Up,Sk,Um,Ud).

" 7 Up eP 14 38 31
Um iP 14 38 35.6 C
Ud iP 14 38 25.8 C
De iP 14 38 29.7
Costa Rica (h = 45 km).

" 7 Up iPKP 14 45 27.9
De iPKP 14 45 36.4
Solomon Islands (h = 90 km).

" 7 De ePKPl 15 15 24

" 7 Up iP 18 10 36.5
Ud iP 18 10 42.6
Bonin Islands (h = N).

" 7 Up iP 18 33 59.3
Ud iP 18 34 04.3
Greece.

" 7 Sk iP 20 18 36.5
Ud iP 20 18 47.9

" 7 Up iP 22 13 32.4 C
ipP 22 13 40.3
micr sec
P Z' 0.1 0.9
Ki iP 22 12 39.0 C
micr sec
P Z' 0.1 1.0
Sk iP 22 13 12.8
Um iP 22 13 05.1
ipP 22 13 15.0
Ud iP 22 13 34.3
ipP 22 13 44.0
(cont.)

1974
Dec. 7 (cont.)
De iP 22 13 55.9
ipP 22 14 05.6
Aleutian Islands.
h = 35 km (Up,Um,Ud,De).
m = 5.9 (Up,Ki).

" 8 Ki iP 01 30 45.2
Iceland (h = 30 km).

" 8 Sk iP 03 53 59.5
Iceland (h = 15 km).

" 8 Up iP 04 03 32.6
Ud iP 04 03 49.1
De iP 04 03 46.9
Afghanistan-USSR
(h = 230 km).

" 8 Ud iP 05 46 32.7
De iP 05 45 57.9
Aegean Sea (h = 40 km).

" 8 Sk iP 06 59 36.7
Um ipP 06 59 24.7
Ud iP 06 59 30.9
ipP 06 59 51.8
Afghanistan-USSR.
h = 100 km (Ud).

" 8 Um iP 07 28 43.6

" 8 Up iP 08 47 16.8
Um iP 08 47 04.8
Ud iP 08 47 26.0
Caroline Islands (h = 60 km).

" 8 Ud i(P) 10 43 16.7

" 8 Ud iPKPl 12 49 47.6

" 8 Ud iP 17 34 02.6
Unimak Island (h = N).

" 8 Ud iPKPl 19 45 05.9 C
De iPKPl 19 45 17.3

" 8 Ki iP 22 37 41.5
Leyte (h = 60 km).

" 9 Up iP 15 23 23.8
Um iP 15 23 30.2

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

1974
Dec. 9 Ud iPgl 15 42 21.8
iSgl 15 42 25.8
iRg 15 42 28.2

" 9 Ki iPgl 19 09 03.5 C
iSgl 19 09 27.9
Um iSgl 19 09 47.0
Tornedalen, Sweden,
66.1°N, 23.4°E.
Origin time = 19 08 24.
Solution from Helsinki
regional bulletin.

" 9 Ud iP 23 16 39.3
Greece.

" 10 Ud iPKPl 01 22 48.4
De iPKPl 01 22 58.4
Fiji Islands (h = 630 km).

" 10 Up iP 01 48 28.9 C
ipP 01 49 14.6
isP 01 49 39.0

		micr	sec
P	Z'	1.3	1.3
pP	Z'	0.6	1.2
sP	Z'	0.9	1.3

Ki iP 01 48 37.4
i 01 48 47.0
ipP 01 49 21.9

		micr	sec
P	Z'	0.8	0.9
pP	Z'	0.3	1.1

Sk iP 01 48 54.6 C
ipP 01 49 39.4
isP 01 50 03.2
Um iP 01 48 26.5 C
ipP 01 49 11.1
isP 01 49 36.8
Ud iP 01 48 44.5 C
ipP 01 49 29.3
isP 01 49 55.8
De iP 01 48 41.1
ipP 01 49 26.2
isP 01 49 51.7
Hindu Kush.
h = 220 km (Up,Ki,Sk,Um,Ud,
De).
m = 6.2 (Up,Ki).
sP has larger amplitudes
than pP.

1974
Dec. 10 Ki iP 02 40 46.0
i 02 40 53.0

		micr	sec
P	Z'	0.1	1.0

Sk eP 02 40 12
Um iP 02 40 39.2
i 02 40 46.1
Ud iP 02 40 09.8
North Atlantic Ocean
(h = N).
Double P (Ki,Um).

" 10 Um iP 03 56 17.5
Ud iP 03 56 48.9
Japan (h = N).

" 10 Ud iP 08 31 28.0
Aegean Sea (h = N).

" 10 Ud iP 13 10 13.3
Japan (h = N).

" 10 Up iP 13 13 43.4
ipP 13 13 55.4
Ki iP 13 12 59.6
ipP 13 13 10.9

		micr	sec
pP	Z'	0.1	1.0

Sk iP 13 13 33.9
ipP 13 13 45.1
Um iP 13 13 19.6
ipP 13 13 30.2
Ud iP 13 13 50.1 D
ipP 13 14 01.2
De iP 13 14 05.2
Japan.
h = 40 km (Up,Ki,Sk,Um,Ud).

" 10 Ud iP 15 31 56.9
ipP 15 32 07.2
Japan.
h = 40 km (Ud).

" 10 Ud iP 19 37 34.2

" 10 Up iP 19 58 29.4
Sk iP 19 58 59.3
Um iP 19 58 33.3
Ud iP 19 58 45.1
Pakistan (h = 45 km).

" 11 Ud iP 01 13 12.7
(cont.)

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

1974
Dec. 11 (cont.)
Ud i 01 13 16.8
Japan (h = 70 km).

" 11 Ud i(P) 12 12 15.8

" 11 Up iPKPl 15 23 53.9
Ud iPKPl 15 23 56.1

" 11 Ud iP 20 29 07.2
Venezuela (h = 110 km).

" 12 Up iP 13 02 44.8
Ki iP 13 02 36.9
i 13 02 47.5
micr sec
P Z' 0.1 1.0
Um iP 13 02 41.3
Ud iP 13 02 59.8
Banda Sea (h = 20 km).

" 12 Ud i(P) 13 34 09.6

" 12 Up iP 21 23 26.8
Ki iP 21 22 26.5
iS 21 24 34.2
micr sec
S Z' 0.1 0.9
Sk iP 21 23 37.3 D
Um iS 21 24 52.3
Ud iP 21 24 02.0
i 21 24 50.3
De iP 21 24 36.6

" 13 Up iP 07 43 17.1
ipP 07 43 39.4
Ki iP 07 43 00.2
ipP 07 43 23.3
Um iP 07 43 04.6
Ud iP 07 43 25.5
ipP 07 43 48.6
Talaud Islands.
h = 90 km (Up,Ki,Ud).

" 13 Ki iP 07 56 47.9
Ud iP 07 57 10.8
Talaud Islands (h = 90 km).

" 13 Ud iP 08 13 56.4

" 13 Up i(Rg) 15 54 52.6

" 13 Ud iP 18 19 11.2
Hindu Kush.
Intermediate depth.

1974
Dec. 14 Up iP 02 41 27.2 C
micr sec
P Z' 0.2 0.9
Mx E 1.7 15
Mx N 3.7 14
Mx Z 4.3 13
Ki micr sec
Mx E 4.5 18
Mx N 2.4 16
Mx Z 2.0 14
Sk iP 02 42 07.1 C
i 02 42 08.8
Um iP 02 42 04.8 C
i 02 42 07.4
Ud iP 02 41 33.4 C
i 02 41 37.2
De iP 02 40 56.8
Greece (h = N).
M = 5.1 (Up,Ki).

" 14 Up iP 10 33 22.7
Ud iP 10 33 27.2
Kurile Islands (h = N).

" 14 Up iP 12 42 25.4 C
micr sec
P Z' 0.1 0.9
Ki iP 12 41 36.1
Sk iP 12 42 12.0 C
Um iP 12 42 00.7
Ud iP 12 42 30.6 C
Kurile Islands (h = N).

" 14 Up iP 14 07 13.6
i 14 07 28.0
Ki iP 14 07 14.8
micr sec
P Z' 0.2 1.8
Sk iP 14 07 31.5
Um iP 14 07 14.6
Ud iP 14 07 24.9
Sumatra (h = 60 km).

" 14 Up iP 20 20 21.0
micr sec
P Z' 0.1 1.0
Ki iP 20 20 04.0
micr sec
P Z' 0.1 0.8
Sk iP 20 20 25.5
Um iP 20 20 09.5
Ud iP 20 20 29.0
Halmahera (h = 220 km).
m = 6.1 (Up,Ki).

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

1974 Dec.	14	Up	iP		21 34 08.4	D
					micr	sec
			P	Z'	0.1	0.8
		Sk	iP		21 34 49.6	D
		Um	iP		21 34 49.0	
		Ud	iP		21 34 15.2	D
			i		21 34 16.7	
		De	iP		21 33 40.2	
		Greece (h = 10 km).				
"	15	Up	i(Rg)		14 01 08.9	
"	15	Ki	iP		18 25 55.6	
		Um	iP		18 26 45.7	
		Ud	iP		18 27 36.7	
		Norwegian Sea (h = N).				
"	15	Ud	iP		18 44 35.2	
			i		18 44 40.0	
		Volcano Islands (h = N).				
"	15	Up	iPKPl		22 24 12.0	
			i		22 24 29.6	
		Sk	iPKPl		22 24 08.6	
		Um	iPKPl		22 24 00.7	C
		Ud	iPKPl		22 24 13.4	
		Kermadec Islands (h = N).				
"	16	Ud	iP		04 24 08.2	
"	16	Up	iPKPl		05 22 51.5	C
		Sk	iPKPl		05 22 42.6	C
		Um	iPKPl		05 22 35.4	
		Ud	iPKPl		05 22 48.8	
		De	iPKPl		05 23 01.8	C
		Kermadec Islands (h = 60 km).				
"	16	De	iPKP		05 30 30.3	
		Solomon Islands (h = 150 km).				
"	16	Up	iP		06 29 53.7	C
			iPn		06 30 54.2	
		Ki	iP		06 29 37.5	
					micr	sec
			P	Z'	0.1	0.6
		Sk	iP		06 30 08.3	
		Um	iP		06 29 38.0	C
		Ud	iP		06 30 09.2	C
			iPP		06 31 33.3	
		De	iP		06 30 17.3	
			iPP		06 31 43.6	
		Kazakh SSR.				
		Underground explosion.				

1974 Dec.	16	Up	iP		06 47 53.0	
		Ki	iP		06 47 37.1	
		Sk	iP		06 48 07.8	
		Um	iP		06 47 37.6	
		Ud	iP		06 48 08.9	C
		De	iPP		06 49 43.0	
		Kazakh SSR.				
		Underground explosion.				
"	16	Up	Mx		09 00	
					micr	sec
			Mx	E	1.3	22
			Mx	Z	2.4	22
		Ki	Mx		09 02	
					micr	sec
			Mx	E	1.5	16
			Mx	N	2.3	21
			Mx	Z	2.1	17
		Easter Island (h = N).				
		M = 5.9 (Up,Ki).				
"	16	Up	i(P)		14 11 27.5	
"	16	Up	i		21 12 12.0	
			iSgl		21 12 15.0	
			iRg		21 12 17.3	
		Um	i(Sg2)		21 14 06.4	
		Ud	iPgl		21 12 40.1	
			iSgl		21 13 08.5	
		Dannemora, Sweden, 60.1°N, 17.5°E.				
		Origin time = 21 12 02.				
		Rockburst at the iron ore mines.				
		Probably a double rupture, 2.0 sec apart, as evidenced by Up records.				
		Felt.				
"	16	Up	i(P)		21 38 38.4	
		Ud	i(P)		21 38 43.9	
"	17	Ud	iP		04 37 41.9	C
		Sumatra (h = N).				
"	17	Um	iP		10 37 07.8	
		South of Japan (h = 35 km).				
"	17	Up	iPKPl		15 55 09.6	
					micr	sec
			PKPl	Z'	0.1	1.0
		Ki	iPKPl		15 55 10.1	C
		(cont.)				

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

1974 Dec.	17	(cont.)				
		Ki			micr	sec
			PKP1	Z'	0.2	1.3
		Sk	iPKP1		15 55 24.4	
		Um	iPKP1		15 55 12.4 C	
		Ud	iPKP1		15 55 25.3 C	
		De	iPKP1		15 55 16.6	
		West of Macquarie Islands (h = N).				
"	17	Ud	iPKP		23 21 24.5	
"	18	Up	i(P)		02 03 40.3	
"	18	Up	iP		02 39 22.9	
		Ki	iP		02 39 28.4	
		Um	iP		02 39 19.6	
		Ud	iP		02 39 42.4 C	
		Tadzhik-Sinkiang (h = 40 km).				
"	18	Ki	iP		03 34 01.4	
		Ud	iP		03 34 13.2	
		Tadzhik SSR (h = 50 km).				
"	18	Ki	iP		05 42 14.5	
		Ud	iP		05 43 06.8	
		Aleutian Islands (h = 40 km).				
"	18	Up	iP		08 03 20.5	
					micr	sec
			Mx	E	2.6	14
			Mx	N	1.8	13
			Mx	Z	3.2	12
		Ki	e(P)		08 02 50	
					micr	sec
			Mx	N	1.7	9
		Sk	iP		08 03 22.5 C	
		Ud	iP		08 03 29.7	
		Mongolia (h = N).				
		M = 5.4 (Up,Ki).				
"	18	Up	iP		11 44 01.6	
		Ki	iP		11 43 26.5	
		Um	iP		11 43 40.6	
		Ud	iP		11 44 09.3	
		South of Japan.				
"	18	Sk	i(P)		11 45 47.2	
		Mexico (h = N).				
"	18	Ki	iP		12 33 35.4	
			i		12 33 44.7	
		Banda Sea (h = N).				

1974 Dec.	18	Up	i(P)		14 10 53.5	
"	18	Ud	iPg1		14 24 51.0 C	
			iSg1		14 25 08.1	
"	18	Um	iP		18 11 15.8	
			i		18 11 22.6	
			i		18 11 31.6	
		Japan (h = 30 km).				
"	18	Up	iPKP1		20 11 13.4	
		Sk	iPKP1		20 11 05.3	
		Um	iPKP1		20 11 02.2	
"	18	Up	iPn		20 14 22.6	
			i		20 14 36.7	
			iSn		20 16 03.2	
			i		20 16 24.8	
			iSg1		20 16 49.5	
					micr	sec
			Sg1	Z'	0.2	0.8
		Ki	iPn		20 13 13.5	
			i		20 13 14.7	
			iPg1		20 13 21.7	
			i		20 13 26.4	
			iSn		20 13 56.2	
			iSg1		20 14 13.0	
					micr	sec
			Pn	Z'	0.2	0.4
			Sn	Z'	0.3	0.5
			Sg1	Z'	0.5	0.5
		Sk	iPn		20 13 19.9	
			iPg1		20 13 27.5	
			iSn		20 14 11.4	
			iS*		20 14 22.9	
			iSg1		20 14 26.9	
			iRg		20 14 50.5	
		Um	iPn		20 13 39.6	
			i		20 13 41.1	
			iPg1		20 13 49.7	
			iSn		20 14 44.5	
			iSg1		20 15 08.6	
		Ud	iPn		20 14 09.5	
			i		20 14 16.6	
			iSn		20 15 30.3	
			i		20 15 44.9	
		De	iPn		20 15 04.8	
			i		20 17 43.9	
			iSg1		20 18 16.3	
		Norwegian Sea (h = N).				
		The doubling of Pn and possibly Sn (Ki,Um,Ud, and possibly Up) is quite pronounced, suggesting a				

(cont.)

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

1974							
Dec.	18	(cont.)					
		more complicated structure					
		at the Moho discontinuity.					
		Rg at Sk suggests very shallow					
		focal depth, also supported by					
		the clear appearance of Pgl					
		and Sgl at nearly all stations.					
"	18	Ud	iP		20 42 13.1		
		Hindu Kush.					
		Intermediate depth.					
"	18	Sk	iP		21 36 12.0		
		Um	iP		21 36 06.1		
		Ud	iP		21 35 39.8		
		De	eP		21 35 03		
		Aegean Sea (h = 40 km).					
"	18	Ki	iP		23 13 08.5		
		Ud	iP		23 13 57.5		
"	18	Up	i(P)		23 49 30.4		
"	19	Up	iPKPl		01 38 28.9		
		Sk	iPKPl		01 38 23.3		
		Um	iPKPl		01 38 18.1		
			i		01 38 28.8		
			i		01 38 40.3		
		Ud	iPKPl		01 38 29.5		
		South of Kermadec Islands.					
"	19	Ud	iPKPl		10 09 08.5		
		De	iPKPl		10 09 20.3		
"	19	De	iP		15 23 48.6		
		South of Greece.					
"	19	Up	iPKP		15 52 03.6		
		Ki	iPKP		15 51 49.8		
		Sk	iPKP		15 52 00.8		
		Um	iPKP		15 51 55.8		
		Ud	iPKP		15 52 06.3		
		De	iPKP		15 52 12.2		
		Santa Cruz Islands					
		(h = 130 km).					
"	19	Up	iP		16 13 33.9		
			iS		16 24 10		
					micr	sec	
			P	Z'	0.2	1.5	
			Mx	E	1.4	19	
			Mx	N	1.4	20	
			Mx	Z	3.7	21	
		(cont.)					

1974							
Dec.	19	(cont.)					
		Ki	iP		16 13 34.4		
			iS		16 24 11		
					micr	sec	
			P	Z'	0.6	2.1	
			Mx	E	4.5	22	
			Mx	N	3.0	22	
			Mx	Z	4.9	24	
		Sk	iP		16 13 19.8		
			i		16 13 21.0		
		Um	iP		16 13 36.1		
			i		16 13 37.8		
			iS		16 24 13		
		Ud	iP		16 13 24.7		
			i		16 13 25.9		
		De	eP		16 13 26		
			i		16 13 27.9		
		Panama (h = 15 km).					
		m = 6.2, M = 5.7 (Up,Ki).					
"	19	Up	iP		21 13 49.6		
		Ud	iP		21 13 36.3		
"	19	Ud	iP		21 50 48.4		
"	19	Up	iPKPl		23 48 31.7		
		Um	iPKPl		23 48 20.7		
		Ud	iPKPl		23 48 33.6		
		De	iPKPl		23 48 43.4		
		Tonga-Kermadec Islands					
		(h = 200 km).					
"	20	Up	i(PKP)		02 59 02.7		
			iPKP		02 59 06.1		
		Ki	iPKP		02 58 49.5		
		Sk	iSKPl		03 01 51.7		
		Um	i(PKP)		02 58 48.4		
			iPKP		02 58 57.4		
		Ud	i(PKP)		02 58 56.3		
			iPKP		02 59 05.8		
		De	i(PKP)		02 59 09.2		
			iPKP		02 59 14.9		
		Fiji Islands (h = 370 km).					
"	20	Up	iP		03 12 51.4		
		Ud	iP		03 13 00.4		
"	20	Up	iP		03 37 02.1		
			iX		03 37 13.2		
		Ki	iP		03 37 27.6		
			iX		03 37 41.6		
					micr	sec	
			P	Z'	0.1	0.7	
		Sk	iP		03 37 32.1		
		(cont.)					

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

1974 Dec.	20	(cont.)			
		Um	iP	03 37 09.1	
			iX	03 37 21.5	
		Ud	iP	03 37 16.4	
			iX	03 37 29.2	
		De	iP	03 37 04.5	
			iX	03 37 17.5	
		Iran (h = 7 km).			
		X is probably P of another			
		smaller earthquake in nearly			
		the same area.			
"	20	Ki	iP	05 58 23.0	
		Turkey.			
"	20	Up	eP	06 08 05	
"	20	Ud	i(Sgl)	08 32 12.5	
"	20	Ki	iP	12 26 32.5	
		Ud	iP	12 27 29.6	
		Kurile Islands (h = N).			
"	20	Ki	iP	13 37 40.9	
		Ud	iP	13 38 24.9	
		Japan (h = 70 km).			
"	20	Up	iP	15 14 04.1	C
			i	15 14 05.5	
			i	15 14 19.7	
				micr sec	
			P Z'	0.1 0.8	
		Ki	iP	15 15 21.8	C
			i	15 15 40.0	
		Sk	iP	15 14 47.8	
		Um	i	15 14 54.7	
		Ud	iP	15 14 11.2	C
			i	15 14 25.3	
		Greece-Albania (h = 10 km).			
"	20	Up	eP	16 06 38	
		Sk	eP	16 07 20	
		Um	e(P)	16 07 19	
		Ud	iP	16 06 42.8	
		Greece-Albania (h = N).			
"	20	Up	iP	16 48 47.4	
			iPcP	16 49 17.6	
			ipP	16 50 19.8	
				micr sec	
			P Z'	0.1 1.0	
		Ki	iP	16 47 58.4	
		(cont.)			

1974 Dec.	20	(cont.)			
		Ki	iPcP	16 48 47.9	
			ipP	16 49 31.0	
				micr sec	
			P Z'	0.1 1.0	
		Sk	iP	16 48 35.3	
			iPcP	16 49 09.0	
		Um	iP	16 48 21.1	
			iPcP	16 49 01.2	
			ipP	16 49 51.9	
		Ud	iP	16 48 52.6	
			iPcP	16 49 21.1	
			ipP	16 50 21.9	
		De	iP	16 49 12.3	
			ipP	16 50 45.4	
		Okhotsk Sea.			
		h = 450 km (Up,Ki,Um,Ud,De).			
		m = 5.2 (Up,Ki).			
		Exceptionally pronounced			
		PcP at Up,Ud.			
"	20	Up	iP	16 51 01.5	
		Ki	iP	16 50 29.9	
		Um	iP	16 50 49.3	
		Ud	iP	16 51 07.6	
		Kurile Islands.			
"	20	Up	iP	19 50 48.0	
		Sk	iP	19 50 47.5	
		Ud	iP	19 50 57.1	
		Japan (h = 60 km).			
"	21	Up	iP	00 39 33.9	
		Ki	iP	00 39 38.5	
		Sk	eP	00 39 23	
		Ud	iP	00 39 26.0	
		Panama (h = N).			
"	21	Ud	iP	02 46 02.1	
"	21	Up	i(Sgl)	03 09 10.7	
"	21	Up	iPKP	08 48 16.3	
		Um	iPKP	08 48 02.3	
		Samoa Islands (h = N).			
"	21	Up	iP	18 50 48.0	
		Ud	iP	18 50 58.0	
		Japan (h = 45 km).			
"	21	Up	iP	20 50 31.1	
		Ki	iP	20 50 17.3	
		Um	iP	20 50 18.6	
		Ud	iP	20 50 44.5	
		Burma-China (h = N).			

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

1974 Dec.	22	Up	iPKPl		02 38 11.8	
					micr	sec
			PKPl	Z'	0.1	0.9
		Ud	iPKPl		02 38 13.2	
		De	iPKPl		02 38 23.4	
		Tonga-Kermadec Islands (h = N).				
"	22	Up	iP		04 56 42.5	
					micr	sec
			P	Z'	0.2	1.5
		Um	iP		04 56 20.9	C
		Ud	iP		04 56 51.5	
"	22	Up	iP		05 43 07.9	
		Ud	iP		05 43 09.0	
		Aleutian Islands (h = 55 km).				
"	22	Up	iP		08 30 54.2	
		Ki	iP		08 30 27.7	
		Um	iP		08 30 37.6	
		Ud	iP		08 31 01.4	
		Ryukyu Islands (h = 70 km).				
"	22	Up	iPKPl		13 34 49.7	C
		Ud	iPKPl		13 34 52.1	C
"	22	Up	iPKP		17 02 12.8	
		Ki	iX		17 02 09.5	
		Um	iX		17 02 16.8	
			iSKPl		17 04 54.6	
		Ud	iPKP		17 02 14.0	
			iX		17 02 26.1	
		Fiji Islands (h = 560 km).				
"	22	Up	iPKPl		18 26 10.5	C
					micr	sec
			PKPl	Z'	0.1	1.3
		Ud	iPKPl		18 26 13.0	
		Kermadec Islands (h = N).				
"	23	Up	iP		05 27 26.9	
			i		05 27 36.0	
					micr	sec
			P	Z'	0.1	1.3
		Ki	iP		05 28 02.9	
					micr	sec
			P	Z'	0.1	1.1
		Sk	iP		05 28 08.5	
			iPn		05 28 28.2	
		Um	iP		05 27 36.5	
		Ud	iP		05 27 43.0	
		Caucasus (h = N).				
		m = 5.5 (Up,Ki).				

1974 Dec.	23	Up	iP		06 31 15.3	
"	23	Up	iP		09 54 48.7	C
					micr	sec
			P	Z'	0.1	0.8
		Ki	iP		09 54 50.6	C
					micr	sec
			P	Z'	0.1	0.9
		Sk	iP		09 55 09.8	
		Um	iP		09 54 44.7	C
		Ud	iP		09 55 03.1	C
		De	iP		09 55 03.5	C
		Nepal (h = 45 km).				
		m = 5.8 (Up,Ki).				
"	23	Up	iPKPl		11 50 12.2	
		Ud	iPKPl		11 50 15.7	
			i		11 50 38.8	
		De	iPKPl		11 50 25.8	
		Tonga-Kermadec Islands (h = 200 km).				
"	23	Up	iP		16 36 45.2	
		Ud	iP		16 36 53.3	
		De	iP		16 36 20.9	
		Crete (h = N).				
"	23	Sk	iP		23 55 01.7	
		Um	iP		23 55 17.6	
		South of Panama (h = N).				
"	23	Up	iP		23 57 15.2	
		Hindu Kush.				
		Intermediate depth.				
"	24	Sk	iPKPl		00 17 41.4	
		Ud	iPKPl		00 17 53.1	
"	24	Up	iP		00 49 59.4	
		Sk	iP		00 50 17.8	
		Um	i(P)		00 49 45.3	
		Ud	iP		00 50 11.5	
		Tibet.				
"	24	Um	iPKP		02 04 16.7	
		Ud	ePKP		02 04 31	
		New Britain (h = 55 km).				
"	24	Up	iP		02 22 52.0	
			ipP		02 23 28.1	
					micr	sec
			pP	Z'	0.3	1.1
		Ki	iP		02 22 41.6	
			ipP		02 23 18.0	

(cont.)

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

1974 Dec.	24	(cont.)					
		Ki			micr	sec	
			pP	Z'	0.4	1.7	
		Sk	iP		02 22	33.8	
			ipP		02 23	09.6	
		Um	iP		02 22	49.2	
			ipP		02 23	25.8	
		Ud	iP		02 22	41.0	
			ipP		02 23	19.4	
		De	iP		02 22	47.5	
			ipP		02 23	25.6	
		Guatemala.					
		h = 150 km (Up,Ki,Sk,Um,Ud, De).					
		The pP amplitudes are considerably larger than those of P at all our stations.					
"	24	Up	iP		07 08	33.7	
			iPP		07 12	04.8	
			iS		07 19	10	
					micr	sec	
			P	Z'	1.5	2.0	
			PP	Z'	0.3	1.5	
			Mx	E	9.6	20	
			Mx	N	20	20	
			Mx	Z	23	20	
		Ki	iP		07 08	34.3	
			i(S)		07 19	18	
					micr	sec	
			P	Z'	2.4	2.7	
			Mx	E	23	15	
			Mx	N	27	15	
			Mx	Z	22	14	
		Um	iP		07 08	30.7	
		Ud	iP		07 08	44.5	
			iPP		07 12	12.7	
		De	iP		07 08	42.6	
		Sumatra (h = N).					
		m = 7.0, M = 6.7 (Up,Ki).					
"	24	Up	iP		09 50	40.4	
		Um	iP		09 50	46.9	
		Ud	iP		09 50	55.2	
		Pakistan (h = N).					
"	24	Up	iP		10 32	53.8	
		Ki	iP		10 34	02.0	
		Ud	iP		10 33	03.3	
		Turkey (h = 25 km).					
"	24	Ud	iP		11 30	33.0	
1974 Dec.	24	Up	iP		14 30	41.9	
		Ud	iP		14 30	47.0	
		Italy.					
"	24	Up	iP		19 48	38.9	
		Ki	iP		19 48	51.0	
		Sk	iP		19 48	30.4	
		Ud	iP		19 48	31.3	
		De	iP		19 48	32.6	
		Windward Islands (h = 100 km).					
"	24	Um	iP		20 02	10.3	
		Ud	iP		20 03	10.1	
			ipP		20 03	55.8	
			isP		20 04	20.1	
		Hindu Kush.					
		h = 220 km (Ud).					
"	25	Ki	iPKP		02 35	48.4	
					micr	sec	
			PKP	Z'	0.1	1.0	
		Sk	iPKP		02 35	59.8	
		Um	iPKP		02 35	55.0	
		Ud	iPKP		02 36	04.7	
			iSKP1		02 39	12.2	
		De	iPKP		02 36	11.5	
			iSKP1		02 39	24.4	
		New Hebrides Islands (h = 180 km).					
"	25	Up	iP		03 00	04.4	C
			ipP		03 00	15.4	
					micr	sec	
			P	Z'	0.7	1.0	
			Mx	E	3.5	17	
			Mx	N	3.9	17	
			Mx	Z	4.9	20	
		Ki	iP		02 59	10.9	C
					micr	sec	
			P	Z'	0.5	1.2	
			Mx	E	4.1	17	
			Mx	N	4.5	17	
			Mx	Z	2.7	15	
		Sk	iP		02 59	44.9	C
			ipP		02 59	56.5	
		Um	iP		02 59	36.7	C
			ipP		02 59	48.6	
		Ud	iP		03 00	05.8	C
			ipP		03 00	17.0	
		De	iP		03 00	28.0	C
		Aleutian Islands.					
		h = 40 km (Up,Sk,Um,Ud).					
		m = 6.6, M = 5.8 (Up,Ki).					

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

1974
Dec. 25 Up iP 03 04 06.6
Ki iP 03 03 12.8
Ud iP 03 04 05.0
Aleutian Islands.
Origin time = 02 53 14.

" 25 Um i(P) 03 29 28.5
Ud iP 03 29 53.6
Aleutian Islands.
Origin time = 03 19 03.

" 25 Um i(P) 03 31 04.9
Ud iP 03 31 33.9
Aleutian Islands.
Origin time = 03 20 41.

" 25 Up iP 06 53 43.1
Ki iP 06 52 51.6
Ud iP 06 53 45.3
Aleutian Islands (h = N).

" 25 Ud iPKP1 07 38 53.9
i 07 39 09.0

" 25 Ud iP 07 58 32.5

" 25 Up iP 08 05 36.8
micr sec
P Z' 0.1 1.0
Ki iP 08 04 44.0 C
micr sec
P Z' 0.1 1.1
Sk iP 08 05 16.4
Um iP 08 05 09.3
Ud iP 08 05 38.4
ipP 08 05 48.6
De iP 08 06 00.2
Aleutian Islands.
h = 40 km (Ud).
m = 5.9 (Up,Ki).

" 25 Ud iP 09 28 34.6

" 25 Ud iP 09 30 59.1

" 25 Ki iP 11 24 33.6
Um iP 11 25 01.8
Ud iP 11 25 25.8
Unimak Island (h = 30 km).

" 25 Sk i(P) 11 43 29.6
(cont.)

1974
Dec. 25 (cont.)
Um i(P) 11 40 41.0
i 11 41 07.5
Ud i(P) 11 41 10.2

" 25 Up iPKP1 12 52 18.9
iPKP2 12 52 25.5
ipPKP1 12 53 51.7
micr sec
PKP1 Z' 0.2 1.1
Ki iPKP1 12 52 01.1
Sk iPKP1 12 52 13.5
Um iPKP1 12 52 08.4
ipPKP1 12 53 35.6
Ud iPKP 12 52 16.4
iPKP1 12 52 20.2
De iPKP1 12 52 28.5
iPKP2 12 52 43.1
Kermadec Islands.
h = 380 km (Up,Um).

" 25 Up iP 15 12 47.1 C
Ki iP 15 11 56.5
micr sec
P Z' 0.1 0.5
Sk iP 15 12 32.3
Um iP 15 12 19.9 C
Ud iP 15 12 51.9
De iP 15 13 11.9
Okhotsk Sea (h = 520 km).

" 25 Ud iP 15 14 36.5

" 25 Um iP 17 23 27.3

" 25 Ki iP 17 26 31.5
micr sec
P Z' 0.1 1.1
Um iP 17 26 39.5
Ud iP 17 26 59.7
Caroline Islands (h = 25 km).

" 25 Up iP 23 13 03.4
Ud iP 23 13 21.6
De iP 23 13 06.0
Iran.

" 26 Ud iP 00 10 10.6
Celebes Sea (h = 360 km).

" 26 Ud iP 02 01 49.6

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

1974						
Dec.	26	Ud	iPKPl		09 47 41.2	
"	26	Up	iP		14 07 11.3	
		Ki	iP		14 08 21.3	
		Sk	iP		14 07 49.0	
		Um	iP		14 07 42.3	
		Ud	iP		14 07 17.2	
		De	iP		14 06 45.6	
		Crete (h = N).				
"	26	Um	iP		14 25 09.9	
		Ud	iP		14 24 58.0	
"	26	Up	iP		18 43 40.7	
		Ki	iP		18 44 18.1	
		Sk	iP		18 44 16.6	
		Um	iP		18 44 00.2	
		Ud	iP		18 43 56.7 C	
		De	iP		18 43 40.7	
		Iran (h = N).				
"	26	Up	iP		21 49 12.6	
		Ki	iP		21 48 53.7	
					micr sec	
			P	Z'	0.1 1.3	
		Um	iP		21 48 59.6	
			i		21 49 14.6	
		Ud	iP		21 49 20.2	
		Samar (h = N).				
"	26	Up	iX		22 30 20.0	
		Um	iPKPl		22 30 02.4	
		Ud	iPKPl		22 30 15.9	
			iX		22 30 22.5	
		Kermadec Islands (h = 60 km).				
"	27	Ud	iPKPl		04 16 04.4	
		De	iPKPl		04 16 15.6	
"	27	Up	iP		05 53 55.3 C	
			iPn		05 54 49.6	
					micr sec	
			P	Z'	0.5 0.9	
		Ki	iP		05 53 38.7 C	
					micr sec	
			P	Z'	0.4 1.0	
		Sk	iP		05 54 09.4 C	
		Um	iP		05 53 39.8 C	
		Ud	iP		05 54 11.4 C	
		De	iP		05 54 18.5 C	
		Kazakh SSR.				
		m = 6.4 (Up,Ki).				
		Underground explosion.				

1974						
Dec.	27	Up	iPKPl		11 48 35.0	
			i		11 48 39.8	
					micr sec	
			PKPl	Z'	0.1 1.0	
		Ki	iPKP		11 48 16.9	
		Sk	iPKPl		11 48 27.0	
			i		11 48 40.2	
		Um	iPKPl		11 48 13.5	
		Ud	iPKPl		11 48 36.1 C	
		De	iPKPl		11 48 45.1	
			i		11 49 02.4	
		Kermadec Islands (h = 60 km).				
"	27	Up	iPKPl		12 16 00.2 D	
					micr sec	
			PKPl	Z'	0.1 1.0	
		Ki	iPKP		12 15 45.6	
		Sk	iPKPl		12 15 53.0 D	
		Um	iPKPl		12 15 45.6	
		Ud	iPKPl		12 16 01.2	
		De	iPKPl		12 16 10.7 D	
		Kermadec Islands (h = 20 km).				
"	27	Ki	iP		23 00 17.9	
		Queen Elizabeth Islands (h = N).				
"	27	Up	iP		23 09 58.9	
		Ki	iP		23 10 42.3	
		Ud	iP		23 10 14.0 C	
			i		23 10 26.2	
		De	iP		23 09 55.5	
		Iran-Iraq.				
"	27	Ki	iP		23 28 12.5	
		Ud	iP		23 29 02.3	
		Queen Elizabeth Islands (h = N).				
		These readings exhibit distinct positive residuals vs the NEIS solution.				
"	28	Ud	i		00 02 57.7	
			i(Sgl)		00 03 52.8	
"	28	Up	iP		00 22 38.1 C	
		Ki	iP		00 21 43.4 C	
		Um	iP		00 22 12.0	
		Ud	iP		00 22 36.9 C	
		Alaska (h = 45 km).				
"	28	Um	iP		00 27 49.5	
		Ud	iP		00 28 19.4	

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

1974 Dec.	28	Ud	iP	01 42 08.4		
		Caucasus (h = N).				
"	28	Um	iPKP1	02 14 05.5		
		Ud	iPKP1	02 14 18.1		
			i	02 14 34.8		
"	28	Up	iP	05 31 31.5		
		Ki	iP	05 31 06.5		
		Um	iP	05 31 16.3		
		Ud	iP	05 31 41.1		
		Formosa (h = 120 km).				
"	28	Up	iP	06 56 50.3		
		Ki	iP	06 56 28.1		
		Um	iP	06 56 36.2		
		Ud	iP	06 56 59.9		
		Formosa (h = 45 km).				
"	28	Ud	i(Sgl)	09 16 40.4		
"	28	Up	iP	12 19 42.9 C		
			i	12 19 44.4		
			iPP	12 21 25.5		
			iS	12 26 04		
			i	12 29 15		
				micr	sec	
			P	Z' 0.1	0.8	
			i	Z' 1.1	1.0	
			PP	Z' 0.9	1.3	
			Mx	E 14	14	
			Mx	N 29	16	
			Mx	Z 25	14	
		Ki	iP	12 19 51.0 C		
			i	12 19 52.2		
			iPP	12 21 33.7		
			iS	12 26 17		
				micr	sec	
			P	Z' 0.2	1.0	
			i	Z' 1.6	1.0	
			PP	Z' 1.3	1.8	
			Mx	E 22	10	
			Mx	N 23	10	
			Mx	Z 16	9	
		Sk	iP	12 20 07.8 C		
			i	12 20 09.0		
			iPP	12 21 56.1		
		Um	iP	12 19 41.4 C		
			i	12 19 42.6		
			iPP	12 21 24.4		
			iS	12 26 01		
		Ud	iP	12 19 59.5 C		
			i	12 20 00.8		
		(cont.)				

1974 Dec.	28	(cont.)		
		Ud	iPP	12 21 44.4
		De	iP	12 19 56.1 C
			iPP	12 21 40.2
		Pakistan (h = 20 km).		
		m = 6.5, M = 6.4 (Up,Ki).		
		Double P, smaller and		
		larger, average separation		
		1.3 sec.		
"	28	Up	iP	12 54 06.5
			i	12 54 19.2
		Ki	iP	12 54 14.8
			i	12 54 27.2
		Sk	iP	12 54 31.1
			i	12 54 43.0
		Um	iP	12 54 04.6
			i	12 54 16.8
		Ud	iP	12 54 22.8
			i	12 54 35.5
		De	iP	12 54 18.5
			i	12 54 32.1
		Pakistan (h = N).		
		The second onset is probably		
		P of another earthquake in		
		the same area, 12.6 sec		
		later.		
"	28	Up	i(Sgl)	17 13 20.0
			iRg	17 13 24.7
			i	17 13 46.5
"	28	Ki	iP	17 22 52.8
		Kurile Islands.		
"	28	Um	iP	19 10 28.7
		Ud	iP	19 10 46.4
		Pakistan.		
		Origin time = 19 02 30.		
"	28	Up	iP	22 36 16.3
		Ki	iP	22 36 23.8
		Sk	iP	22 36 40.7
		Um	iP	22 36 13.9 C
			i	22 37 03.5
		Ud	iP	22 36 32.5 C
		De	iP	22 36 29.8
		Pakistan (h = N).		
"	28	Up	iP	22 46 48.0
		Ki	iP	22 46 56.8
		Sk	iP	22 47 14.1
		Um	iP	22 46 47.1
		(cont.)		

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

1974
Dec. 28 (cont.)
Ud iP 22 47 04.7
Pakistan (h = N).

" 28 Ki iP 23 38 43.3
Volcano Islands (h = N).

" 29 Long-period microseisms (period around 16-18 sec), especially well developed on Um LP N.

" 29 Ki iP 00 02 01.8
ipP 00 02 49.6
Sk iP 00 01 55.0
Um iP 00 02 09.3
ipP 00 02 56.2
Mexico-Guatemala.
h = 190 km (Ki,Um).

" 29 Ki iP 02 00 06.3
ipP 02 00 23.5
Um iP 02 00 24.1
ipP 02 00 41.6
Ud iP 02 00 54.8
ipP 02 01 11.9
Japan.
h = 70 km (Ki,Um,Ud).

" 29 Up iP 03 54 04.0
iS 03 57 23

		micr	sec
P	Z'	0.4	1.5
Mx	E	1.3	10
Mx	N	2.7	12
Mx	Z	1.4	13

Ki iP 03 53 42.7
i 03 53 49.4

		micr	sec
P	Z'	0.4	1.9
i	Z'	2.8	3.0
Mx	E	4.8	18
Mx	N	3.3	15
Mx	Z	4.7	15

Sk iP 03 53 13.2
Um iP 03 53 52.7
i 03 53 56.7
Ud iP 03 53 38.0
i 03 53 44.4
De iP 03 54 06.9
Iceland (h = N).
m = 5.6, M = 4.8 (Up,Ki).
Double P onsets with remarkably long period on Z'.

1974
Dec. 29 Ki iP 04 23 50.0
Banda Sea (h = 40 km).

" 29 Up iP 05 06 32.7
iPP 05 08 02.1
Ki iP 05 06 37.6
Sk iPP 05 08 34.4
Um iP 05 06 28.3
Ud iP 05 06 48.1
iPP 05 08 21.4
Tadzhik SSR (h = 70 km).

" 29 Ud iP 06 51 50.5

" 29 Up iP 10 07 20.9
Um iP 10 06 51.5
Sea of Japan (h = 240 km).

" 29 Up iPKP1 10 33 09.5
Ud iPKP1 10 33 11.0

" 29 Ki iP 13 41 35.9
Aleutian Islands (h = 55 km).

" 29 Ud iP 17 49 58.8

" 29 Up iP 18 34 50.2
iY 18 35 28.2

		micr	sec
P	Z'	0.2	1.1

Ki iP 18 33 54.2 D
iX 18 34 16.3
iY 18 34 31.7

		micr	sec
P	Z'	0.2	0.9
X	Z'	0.2	1.0
Y	Z'	0.1	1.0

Sk iP 18 34 20.2 D
iX 18 34 42.6
iY 18 34 57.4
Um iP 18 34 22.9 D
i(X) 18 34 42.4
Ud iP 18 34 46.9 D
iX 18 35 09.4
De iP 18 35 10.7 D
iY 18 35 49.0
Alaska (h = 70 km).
m = 6.1 (Up,Ki).
The phases X and Y follow P after 22.3 sec and 37.8 sec in average, respectively. Interpreted as pP and sP, respectively, they give h = 100 km.

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

1974 Dec.	29	Um	iP		23 22 43.7		
"	30	Up	iP		03 43 03.6		
		Ki	iP		03 42 06.8		
			i		03 42 20.3		
					micr	sec	
			i	Z'	0.1	1.0	
		Sk	iP		03 42 34.4		
		Um	iP		03 42 36.4	C	
			i		03 43 07.6		
		Ud	iP		03 42 59.4	C	
			i		03 43 18.9		
		De	iP		03 43 25.2	C	
			i		03 43 41.3		
		Alaska (h = 60 km).					
"	30	Up	iP		04 55 15.1	C	
			i		04 55 19.8		
			iPP		04 56 41.8		
					micr	sec	
			P	Z'	0.2	0.8	
			PP	Z'	0.2	1.1	
		Ki	iP		04 55 25.7	C	
					micr	sec	
			P	Z'	0.1	0.8	
		Sk	iP		04 55 41.2		
			iPP		04 57 24.7		
		Um	iP		04 55 14.6	C	
			iPP		04 56 45.1		
		Ud	iP		04 55 32.0	C	
			iPP		04 57 10.5		
		De	iP		04 55 24.8		
			i		04 55 29.0		
			iPP		04 57 02.0		
		Hindu Kush (h = 120 km).					
		m = 5.8 (Up,Ki).					
"	30	Ki	iP		07 50 17.5		
		Ud	iP		07 50 48.7		
"	30	Up	iP		15 27 59.3	C	
					micr	sec	
			P	Z'	0.1	0.9	
		Um	iP		15 27 46.1		
		Ud	iP		15 28 11.1	C	
		Szechwan, China (h = N).					
"	30	Up	iP		16 32 27.5		
		Ki	iP		16 32 36.0		
		Ud	iP		16 32 44.1		
		Afghanistan-USSR (h = 40 km).					
1974 Dec.	30	Ki	iP		20 44 40.9		
		Um	iP		20 44 40.3		
		Ud	iP		20 44 21.0		
		Leeward Islands (h = N).					
"	30	Ki	iPKP		21 25 16.8		
		South Sandwich Islands (h = N).					
"	31	Um	iP		00 07 55.1	C	
		Ud	iP		00 08 25.1		
		Japan (h = 50 km).					
"	31	Up	iP		04 48 00.5		
					micr	sec	
			P	Z'	0.1	1.1	
		Ki	iP		04 47 07.9		
					micr	sec	
			P	Z'	0.1	1.0	
		Um	iP		04 47 33.8		
		Ud	iP		04 48 01.8		
			ipP		04 48 46.4		
		Aleutian Islands.					
		h = 180 km (Ud).					
		m = 5.5 (Up,Ki).					
"	31	Up	iPKPl		09 11 24.8		
		Um	iPKPl		09 11 08.0		
		Ud	iPKPl		09 11 22.1	C	
"	31	Um	iP		15 58 10.8		
		Ud	iP		15 58 12.7		
		Caucasus.					
"	31	Sk	iP		20 27 55.2		
		Um	iP		20 28 10.6		
		Ud	iP		20 28 03.8		
		Guatemala (h = 80 km).					
"	31	Up	iP		20 33 55.7		
					micr	sec	
			Mx	E	2.6	17	
			Mx	N	3.3	17	
			Mx	Z	5.4	20	
		Ki	iP		20 33 45.8		
					micr	sec	
			Mx	E	5.6	15	
			Mx	N	5.2	19	
			Mx	Z	6.0	15	
		Sk	iP		20 33 34.8		
		(cont.)					

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

1974
Dec. 31 (cont.)

Um	iP	20 33 51.2
Ud	iP	20 33 43.0
De	iP	20 33 51.7

Guatemala (h = 40 km).
M = 6.1 (Up,Ki).

Markus Båth

August 4, 1976