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BOX 517
751 20 UPPSALA 1
SWEDEN

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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. Beginning with this bulletin, a more specified notation will be used for the PKP group of phases, as follows:

PKP = Jeffreys-Bullen branch DEF = PKIKP, occasionally used for unidentified PKP

PKP1 = Jeffreys-Bullen branch BC, extended to 160° by observations of Klaus Meyer

PKP2 = Jeffreys-Bullen branch AB

(PKP) = precursor to PKP

In analogy to the last-mentioned notation, we use (PP) to denote "early PP". Otherwise, brackets indicate uncertain identification. - Other core phases, especially SKP, will be given a corresponding specified notation.

J A N U A R Y 1 - 31, 1973

1973				
Jan. 1	Up	e(P)	08 51 18	
" 1	Ud	eP	11 56 10	
	South Atlantic Ocean (h = N).			
" 1	Up	iPKP1	21 02 40.8	
	Ud	iPKP1	21 02 42.6	D
	De	iPKP1	21 02 52.8	
" 1	Ud	iP	21 51 39.7	
	North Atlantic Ocean (h = N).			
" 2	Sk	eP	00 20 20	
" 2	Up	i(PP)	01 10 45.1	
	Ud	iP	01 07 24.4	
	Sumbawa Island (h = 70 km).			
" 2	Up	iP	01 55 18.2	
	(cont.)			

1973				
Jan. 2	(cont.)			
	Sk	eP	01 56 00	
	Ud	iP	01 55 23.5	
		i	01 55 25.3	
		i	01 55 27.8	
	Greece (h = N).			
" 2	Ki	iP	02 40 25.3	
			micr	sec
		P Z'	0.1	1.3
	Ud	iP	02 40 52.6	
	Molucca Passage (h = 60 km).			
" 2	Ud	iP	11 55 56.1	
" 2	Ki	iP	13 16 13.0	
	Ud	iP	13 16 37.9	
	Mindanao (h = 60 km).			
" 2	Ki	iP	13 54 17.1	
	Sk	iP	13 54 23.7	
		iS	13 56 13.5	
	(cont.)			

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

1973
Jan. 2 (cont.)
Um eP 13 54 53
iS 13 57 04.5
Ud iP 13 55 09.4
Jan Mayen (h = N).

" 2 Up iP 16 33 10.0
Ki eP 16 33 18 C
Sk eP 16 33 36
Um iP 16 33 07.8 C
Ud iP 16 33 27.1 C
De iP 16 33 23.9 C
Afghanistan-USSR
(h = 140 km).

" 2 Up iP 22 35 17.9
micr sec
P Z' 0.2 1.3
Ki iP 22 35 12.3 D
Sk iP 22 35 35.6 D
Um iP 22 35 10.2 D
Ud iP 22 35 32.4 D
De iP 22 35 36.0
Tibet (h = N).

" 2 Up iP 23 23 50.5
iS 23 26 33.6
Ki iP 23 22 43.3
ipP 23 22 49.2
micr sec
P Z' 0.1 0.9
pP Z' 0.1 0.8
Sk iP 23 22 50.1
iS 23 24 43.8
Um iP 23 23 19.1
ipP 23 23 25.6
iS 23 25 37.2
Ud iP 23 23 32.9
ipP 23 23 38.9
Jan Mayen.
h = 30 km (Ki,Um,Ud).

" 3 Ud iP 00 53 28.7
Greece.

" 3 Ud iPKP 03 15 38.7
Argentina (h = 560 km).

" 3 Ud iP 04 22 33.5
ipP 04 23 07.3
Mindoro.
h = 130 km (Ud).

" 3 Up iP 14 38 32.6 C
(cont.)

1973
Jan. 3 (cont.)
Up ipP 14 38 41.0
iPP 14 40 03.9
micr sec
P Z' 0.1 1.0
PP Z' 0.2 1.1
Mx E 2.4 13
Mx N 2.5 14
Mx Z 3.4 13
Ki iP 14 38 38.0
ipP 14 38 46.7
micr sec
P Z' 0.2 1.1
Mx N 3.1 10
Sk iP 14 38 57.4 C
Um iP 14 38 28.9 C
ipP 14 38 37.6
iPP 14 40 03.4
Ud iP 14 38 48.9 C
ipP 14 38 57.7
De iP 14 38 47.1
ipP 14 38 55.3
iPP 14 40 30.0
Tadzhik SSR.
h = 40 km (Up,Ki,Um,Ud,De).
m = 5.7, M = 5.5 (Up,Ki).

" 3 Up iP 14 42 38.3
micr sec
P Z' 0.1 1.0

" 3 Up eP 15 12 48
Ki eP 15 12 53
Ud iP 15 13 02.0
i 15 13 09.8
Kirghiz SSR (h = N).

" 3 Ud iP 20 43 51.8
Kirghiz SSR (h = N).

" 3 Up iP 21 25 43.4 C
micr sec
P Z' 0.2 1.5
Um iP 21 25 24.4 C
Ud iP 21 25 37.0 C
Off coast of Oregon
(h = 20 km).

" 4 Up iPKP 01 26 34.3
micr sec
PKP Z' 0.1 1.0
Ki iPKP 01 26 20.3
Sk iPKP 01 26 30.8
Um iPKP 01 26 26.7
Ud iPKP 01 26 36.5
iSKP1 01 29 41.8
De iPKP 01 26 43.0
(cont.)

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

1973
Jan. 4 (cont.)

		De	iSKP1		01 29 53.2	
		New Hebrides Islands (h = 190 km).				
"	4	Ud	iP		02 28 04.4	
"	4	Up	i		03 31 02.8	
			iPg1		03 31 09.8	
			i		03 32 07.9	
			iSn		03 32 10.1	
			iSg1		03 32 52.2	
		Ud	ePg1		03 30 41	
			i		03 30 58.3	
			iSn		03 31 31.6	
			iSg1		03 32 02.2	
		De	ePg1		03 30 31	
			i		03 30 47.8	
			iSn		03 31 12.4	
			iSg1		03 31 38.5	
		North Sea, 56.5°N, 4.6°E. Origin time = 03 28 54.				
"	4	Up	iP		03 34 11.2	
		Ki	iP		03 33 05.4	
		Sk	eP		03 33 12	
			iS		03 35 09.1	
		Um	iP		03 33 40.5	
			iS		03 35 58.8	
		Ud	iP		03 33 56.3	
		Jan Mayen (h = N).				
"	4	Ud	iP		03 56 20.0	
"	4	Ud	iP		04 48 46.7	
"	4	Up	iP		08 07 20.0	D
			iS		08 09 58.6	
			i		08 10 46.7	
					micr sec	
			P	Z'	0.1 1.0	
			Mx	E	2.4 18	
			Mx	N	2.4 19	
			Mx	Z	2.3 17	
		Ki	iP		08 06 13.9	D
			iS		08 08 09.6	
					micr sec	
			P	Z'	0.7 0.8	
			Mx	E	4.0 15	
			Mx	N	3.9 15	
			Mx	Z	2.8 13	
		Sk	iP		08 06 19.6	
			iS		08 08 13.3	
		Um	iP		08 06 48.2	D

(cont.)

1973
Jan. 4 (cont.)

		Um	iS		08 09 04.9	
			i		08 09 34.8	
		Ud	iP		08 07 03.5	
			iS		08 09 31.3	
			i		08 09 58.8	
		De	iP		08 07 50.2	
		Jan Mayen (h = N). M = 4.6 (Up,Ki).				
"	4	De	iP		09 06 06.5	
"	4	Up	iPKP		09 29 23.0	
		Um	iPKP		09 29 30.7	
		Ud	iPKP		09 29 21.5	
		South Atlantic Ocean (h = N).				
"	4	Ki	iP		12 05 43.7	
		Sk	eP		12 05 56	
			iS		12 07 53.7	
		Jan Mayen (h = N).				
"	5	Ud	iPKP1		01 25 52.9	
		De	iPKP1		01 26 03.1	
"	5	Up	iP		01 50 14.4	
			i		01 50 18.2	
		Ki	iP		01 50 33.0	
		Sk	iP		01 49 56.9	
		Um	iP		01 50 27.9	
		Ud	iP		01 49 56.8	
			i		01 50 11.0	
		De	iP		01 49 57.7	
		North Atlantic Ocean (h = N).				
"	5	Ud	iP		03 48 08.5	
		De	iP		03 48 03.7	
		North Atlantic Ocean (h = N).				
"	5	Um	iP		05 42 26.9	
		Japan (h = 55 km).				
"	5	Up	iP		05 54 31.7	C
			i		05 54 36.0	
					micr sec	
			P	Z'	0.1 0.9	
			i	Z'	0.2 0.9	
			Mx	E	8.1 16	
			Mx	N	7.4 14	
			Mx	Z	8.7 12	
		Ki	iP		05 55 42.3	C
					micr sec	
			P	Z'	0.2 1.0	
			Mx	E	5.9 12	
			Mx	N	7.6 15	
			Mx	Z	5.5 13	

(cont.)

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

1973					
Jan.	5	(cont.)			
		Sk	iP		05 55 09.5 C
		Um	iP		05 55 06.3 C
		Ud	iP		05 54 36.7 C
			i		05 54 38.4
		De	iP		05 54 03.1 C
		Mediterranean Sea (h = N).			
		m = 5.8, M = 5.6 (Up,Ki).			
"	5	Ud	iP		07 20 56.3
		Mediterranean Sea.			
"	5	Ud	iP		07 33 49.9
		Mediterranean Sea.			
"	5	Ud	iP		07 50 12.9
		Mediterranean Sea.			
"	5	Ud	eP		10 21 11
		Mindanao (h = 90 km).			
"	5	Up	iP		12 41 16.9
		Ki	eP		12 42 46
		Sk	eP		12 42 11
		Um	iP		12 41 57.2
		Ud	eP		12 41 32
			i		12 41 33.9
		De	iP		12 40 52.0 C
		Rumania (h = 130 km).			
"	5	Up	iP		13 49 45.1 C
			i		13 50 34.2
					micr sec
			P	Z'	0.1 0.9
		Sk	eP		13 49 34
		Um	iP		13 49 19.6 C
		Ud	iP		13 49 51.2 C
		De	iP		13 50 09.0 C
		Okhotsk Sea (h = 430 km).			
"	5	Up	iP		13 58 52.1
		Ud	iP		13 58 41.4
		Windward Islands			
		(h = 100 km).			
"	5	Up	iPKP1		14 14 12.0
			iPKP2		14 14 26.5
			ipPKP2		14 15 08.7
			iPP		14 18 01.6
					micr sec
			PKP2	Z'	1.1 1.3
			PP	Z'	0.3 1.1
			Mx	E	5.7 28
			Mx	N	5.7 30
			Mx	Z	9.5 43
		(cont.)			

1973					
Jan.	5	(cont.)			
		Ki	iPKP1		14 13 54.3 C
			ipPKP2		14 14 38.0
					micr sec
			PKP1	Z'	3.7 2.2
		Sk	iPKP1		14 14 06.8
		Um	iPKP		14 13 56.5
			iPKP1		14 14 01.8
			iPP		14 17 40.9
		Ud	ePKP		14 14 07
			iPKP1		14 14 15.7
			iPKP2		14 14 32.1
			ipPKP2		14 15 14.5
			iPP		14 18 06.9
		De	iPKP1		14 14 23.5
			iPKP2		14 14 43.9
			ipPKP2		14 15 26.2
		New Zealand.			
		h = 160 km (Up,Ud,De).			
"	5	Up	iP2		19 17 36.1
		Ud	iP1		19 17 34.3
			iP2		19 17 44.0
		De	iP1		19 17 00.5
		Mediterranean Sea			
		(h = 30 km).			
"	5	Up	ePKP1		21 47 22
		Ki	iSKP1		21 49 44.8
		Sk	iSKP1		21 50 03.0
		Um	iSKP1		21 49 56.4
		Ud	iPKP1		21 47 23.1
			iSKP1		21 50 11.5
		De	iPKP1		21 47 32.8
			iSKP1		21 50 20.1
		Tonga-Kermadec Islands			
		(h = 620 km).			
"	6	Um	iPKP1		03 39 43.9
		Ud	ePKP1		03 39 56
			i		03 40 08.1
"	6	Up	iPKP1		08 17 07.8
			iPKP2		08 17 14.2
					micr sec
			PKP2	Z'	0.1 0.7
		Sk	iPKP1		08 17 05.8
		Um	iPKP1		08 16 56.7
			i		08 17 01.8
		Ud	iPKP1		08 17 09.5
			iPKP2		08 17 17.2
		De	iPKP2		08 17 30.9
		Kermadec Islands			
		(h = 480 km).			

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

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1973
Jan.  6   Um   iP        11 33 16.7
          Ud   iP        11 33 44.8
          Japan (h = 45 km).

 "    6   Up   iP        15 07 34.6
          Um   iP        15 07 13.9
               ipP       15 07 29.3
          Ud   iP        15 07 41.8
               ipP       15 07 57.4
          Japan.
          h = 60 km (Um,Ud).

 "    6   Up   iP        15 15 08.4
          Ki   iP        15 14 12.8
          Um   iP        15 14 37.4
          Ud   iP        15 15 02.1
               i         15 15 06.5
          De   iP        15 15 25.4
          South of Alaska (h = N).

 "    6   Ud   iP        15 16 28.3
          Kurile Islands (h = 35 km).

 "    6   Ud   e(P)      15 18 46

 "    6   Ud   iP        15 45 42.7
          Iran-USSR (h = 25 km).

 "    6   Ki   i(P)      15 48 56.5
          Ud   iP        15 49 56.3
          Japan.

 "    6   Ud   iPKP1     15 51 26.2
          De   ePKP1     15 51 37
          Tonga-Kermadec Islands
          (h = 560 km).

 "    6   Up   i(PKP)    16 11 49.0
               iPKP      16 11 53.5
               iSKP1     16 15 15.1
               i         16 15 25.8
                         micr  sec
               i     Z'  0.1   1.0
               Mx    E   1.8   19
               Mx    N   3.2   22
               Mx    Z   3.0   22
          Ki   e(PKP)    16 11 36
               iPKP      16 11 40.2
                         micr  sec
               PKP   Z'  0.1   0.8
               Mx    E   3.3   19
               Mx    N   2.6   19
          Sk   ePKP      16 11 52
          Um   i(PKP)    16 11 40.7
          (cont.)

1973
Jan.  6   (cont.)
          Um   iPKP      16 11 46.3
          Ud   i(PKP)    16 11 50.9
               iPKP      16 11 54.9
               iSKP1     16 15 14.6
          De   i(PKP)    16 11 57.3
               iPKP      16 12 00.8
               iSKP1     16 15 25.8
          New Hebrides Islands
          (h = 35 km).
          M = 6.2 (Up,Ki).

 "    6   Up   iP        20 08 25.7
          Ud   iP        20 08 40.8 D
          De   iP        20 08 22.7
          Iran (h = 60 km).

 "    6   Ud   iSg1      20 58 10

 "    6   Up   i(PKP)    22 34 36.3
               iPKP      22 34 46.5
               iSKP1     22 37 59.2
                         micr  sec
               SKP1  Z'  0.1   1.0
          Ki   iPKP      22 34 32.9
                         micr  sec
               PKP   Z'  0.2   0.6
          Sk   iPKP      22 34 43.5
          Um   i(PKP)    22 34 30.3
               iPKP      22 34 38.8
          Ud   i(PKP)    22 34 33
               iPKP      22 34 48.3
               iSKP1     22 38 05.5
          De   i(PKP)    22 34 41.1
               iPKP      22 34 54.3
               iSKP1     22 38 14.7
          New Hebrides Islands
          (h = 120 km).

 "    6   Ud   iP        22 51 38.5
          Turkmen SSR.

 "    7   Ud   iP        01 14 48.2

 "    7   Up   iP        01 17 12.9
          Ki   eP        01 17 17
          Ud   iP        01 17 03.0
               ipP       01 17 48.5
          De   iP        01 17 04.0
          Colombia.
          h = 180 km (Ud).

 "    7   Ud   eP        01 29 30
          Mindanao.

 "    7   Up   iPP       09 58 16.0
          Iran.
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Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973						
Jan.	7	Up	iP		12 26 53.0	
			ipP		12 27 08.8	
					micr sec	
			pP	Z'	0.1 1.5	
			Mx	E	1.4 18	
			Mx	N	1.5 17	
			Mx	Z	1.2 18	
		Ki	iP		12 27 45.1	
					micr sec	
			Mx	E	1.6 17	
			Mx	N	1.0 14	
		Ud	iP		12 26 59.5	
			ipP		12 27 15.1	
		De	iP		12 26 36.6	
			ipP		12 26 52.9	
		Ethiopia.				
		h = 60 km (Up,Ud,De).				
		M = 5.3 (Up,Ki).				
"	7	Up	iP		12 54 20.7	
		Ud	iP		12 54 28.8	
		Luzon (h = 80 km).				
"	7	Up	iSn		16 39 08.7	
			iSg1		16 40 00.1	
		Ki	ePn		16 36 21	
			iPg1		16 36 32.9	
			iSn		16 37 10.9	
			iS*		16 37 24.6	
					micr sec	
			S*	Z'	0.1 0.5	
		Sk	e		16 38 58	
			iSg1		16 39 38.7	
		Um	i		16 36 57.2	
			i		16 37 41.7	
			iSg1		16 38 00.2	
		Ud	iSn		16 39 33.7	
			iSg1		16 40 29.9	
		De	iSg1		16 42 02.7	
		Northwest USSR,				
		66.7°N, 30.9°E.				
		Origin time = 16 35 16.				
"	7	Up	iPKP1		19 48 49.0	
		Ud	iPKP1		19 48 51.4	C
		De	iPKP1		19 49 02.1	C
		Tonga-Kermadec Islands				
		(h = 560 km).				
"	8	Ud	iP		00 07 22.4	
		Azores Islands (h = N).				
"	8	Ki	iP		04 46 31.1	
		Arabian Sea (h = N).				
1973						
Jan.	8	Ki	iP		06 12 52.4	
		Mariana Islands				
		(h = 190 km).				
"	8	Ud	iRg		10 27 35.3	
"	8	De	iPKP1		10 42 42.4	
		Fiji Islands (h = 650 km).				
"	8	Ud	iP		13 33 52.6	
"	8	Up	iPKP1		15 22 21.6	
		Sk	iPKP1		15 22 14.1	
		Ud	iPKP1		15 22 23.1	
		De	iPKP1		15 22 31.6	C
		Kermadec Islands				
		(h = 80 km).				
"	8	Up	iPKP1		21 29 23.2	
		Ud	iPKP1		21 29 24.8	
		De	iPKP1		21 29 35.7	
			i		21 29 42.4	
		Tonga-Kermadec Islands				
		(h = 150 km).				
"	8	Ki	iP		22 33 48.1	
		Sk	iP		22 33 53.9	
			iS		22 35 54.9	
		Um	iP		22 34 23.0	
		Jan Mayen.				
		Origin time = 22 31 21.				
"	9	Up	iP		06 06 23.8	
			i(S)		06 09 32.9	
		Ki	eP		06 05 15	
			i		06 05 16.5	
					micr sec	
			P	Z'	0.1 0.9	
		Sk	iP		06 05 21.9	
			iS		06 07 16.1	
		Um	iP		06 05 50.6	
			iS		06 08 08.7	
		Ud	iP		06 06 07.1	
		Jan Mayen (h = N).				
"	9	Up	iP		06 27 36.6	
		Ki	iP		06 27 16.9	
					micr sec	
			P	Z'	0.1 0.8	
		Um	iP		06 27 23.1	
		Ud	iP		06 27 42.4	
		De	eP		06 27 49	
		Mindanao (h = 50 km).				

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

1973						
Jan.	9	Up	eP		07 49 56	
		Ki	iP		07 48 45.7	
					micr sec	
			P	Z'	0.1 1.0	
		Sk	iP		07 48 52.9	
			iS		07 50 44.3	
		Um	iP		07 49 21.2	
			iS		07 51 38.2	
		Ud	eP		07 49 38	
			i		07 49 40.2	
		Jan Mayen (h = N).				
"	9	Up	iP		12 07 23.4	
					micr sec	
			P	Z'	0.1 0.7	
		Ki	iP		12 06 28.3	C
					micr sec	
			P	Z'	0.1 0.9	
		Sk	iP		12 06 55.0	
		Um	iP		12 06 56.9	C
		Ud	iP		12 07 19.5	
		De	iP		12 07 44.1	C
		Alaska (h = 20 km).				
		m = 5.9 (Up,Ki).				
"	9	Up	i(S)		13 15 45.6	
		Ki	iP		13 11 23.5	
		Sk	iP		13 11 28.8	
			iS		13 13 26.8	
		Um	iP		13 11 57.9	C
			iS		13 14 15.1	
		Ud	iP		13 12 11.9	
			i		13 12 17.8	
		Jan Mayen (h = N).				
"	9	Ki	iP		13 27 52.7	
			i		13 29 08.6	
		Sk	iP		13 27 57.0	
			i		13 29 49.5	
			iS		13 30 00.1	
		Um	iP		13 28 26.6	
		Ud	iP		13 28 43.4	
		Jan Mayen.				
		Origin time = 13 25 23.				
"	9	De	ePg1		14 29 23	
			eSg1		14 30 01	
"	9	Ki	iP		14 58 05.2	
			i		14 58 14.1	
		Sk	iP		14 58 12.7	
			iS		15 00 06.1	
		Um	iP		14 58 42.1	
			iS		15 00 56.8	
		(cont.)				

1973						
Jan.	9	(cont.)				
		Ud	eP		14 58 56	
			i		14 59 02.2	
		Jan Mayen (h = N).				
"	9	Ki	iP		16 00 57.9	
			i		16 03 35.5	
		Sk	eP		16 01 02	
			iS		16 02 55.7	
		Um	iP		16 01 35.3	
		Jan Mayen.				
		Origin time = 15 58 31.				
"	9	Up	iP		16 25 28.1	
		Ki	iP		16 25 31.9	
					micr sec	
			P	Z'	0.1 1.1	
		Ud	iP		16 25 45.1	
		De	iP		16 25 43.6	
		Tadzhik-Sinkiang (h = N).				
"	9	Up	iP		17 18 51.9	
		Ki	iP		17 17 59.1	
		Um	iP		17 18 24.9	
		Ud	iP		17 18 53.0	
			ipP		17 19 05.4	
		Aleutian Islands.				
		h = 45 km (Ud).				
"	9	Sk	iP		18 42 22.5	
"	9	Ud	iP		19 12 38.6	
"	9	Up	iP		22 08 19.0	
		Ud	iP		22 08 26.3	
			i		22 08 30.3	
		Greece.				
"	10	Ud	eP		01 09 20	
"	10	Ud	iP		03 10 46.4	
		De	eP		03 10 40	
		Afghanistan (h = 20 km).				
"	10	Sk	iP		03 12 46.3	
"	10	Up	iP		03 29 04.9	C
			iS		03 33 06.4	
					micr sec	
			P	Z'	0.1 1.0	
		Ki	iP		03 30 18.1	
			i		03 30 22.2	
					micr sec	
			P	Z'	0.2 1.4	
			Mx	E	2.1 18	
			Mx	N	1.5 18	
		(cont.)				

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

Date	Day	Station	Phase		Time	
1973 Jan.	10	(cont.)				
		Sk	iP		03 29 45.0	C
			i		03 29 49.5	
		Um	iP		03 29 42.0	
		Ud	iP		03 29 11.2	
			i		03 29 13.0	
			iS		03 33 19.8	
		De	iP		03 28 35.3	C
		Greece (h = 40 km).				
		m = 5.5 (Up,Ki).				
"	10	Up	iP		03 32 34.1	
		Sk	iP		03 33 02.2	
		Ud	iP		03 32 50.5	
		De	iP		03 32 44.3	
"	10	Ki	iP		04 48 23.5	
		Um	iP		04 48 28.1	
		Ud	iP		04 48 49.2	
		Mindanao (h = 80 km).				
"	10	Um	iP		05 26 25.8	
"	10	Up	iPKP		11 51 31.6	
					micr sec	
			Mx	E	1.7 18	
			Mx	N	1.8 20	
			Mx	Z	2.7 20	
		Ki	iPKP		11 51 18.4	
					micr sec	
			Mx	E	1.8 20	
			Mx	N	1.9 19	
		Sk	e(PKP)		11 51 24	
			iPKP		11 51 29.5	
		Um	iPKP		11 51 22.0	
		Ud	iPKP		11 51 33.8	
		De	iPKP		11 51 40.8	
		Solomon Islands (h = 30 km).				
		M = 5.9 (Up,Ki).				
"	10	Ki	iP		14 30 12.4	
		Sk	iP		14 30 16.2	
			iS		14 32 12.9	
		Um	iP		14 30 46.6	
			iS		14 33 05.1	
		Ud	iP		14 31 04.8	
		Jan Mayen (h = N).				
"	10	Ki	e(P)		17 10 47	
		Ud	iP		17 10 14.1	D
		Iran (h = N).				
"	10	Ud	iP		17 23 45.9	
		Alaska (h = 60 km).				

Date	Day	Station	Phase		Time	
1973 Jan.	10	Um	iP		21 15 20.7	
		Ud	iP		21 15 38.2	
		Afghanistan-USSR (h = 110 km).				
"	11	Ud	iP		01 59 07.6	
"	11	Ud	iP		02 19 53.3	
"	11	Up	iP		02 23 26.1	C
					micr sec	
			P	Z'	0.2 1.2	
		Ki	iP		02 22 32.5	C
					micr sec	
			P	Z'	0.3 1.1	
		Sk	iP		02 23 02.5	
		Um	iP		02 22 59.7	C
			ipP		02 23 10.1	
		Ud	iP		02 23 25.0	
			ipP		02 23 35.9	
		De	iP		02 23 47.5	
			ipP		02 23 59.2	
		Aleutian Islands.				
		h = 40 km (Um,Ud,De).				
		m = 6.3 (Up,Ki).				
"	11	Ki	iP		03 00 54.0	
		Um	iP		03 01 21.3	
		Ud	iP		03 01 46.6	
		Aleutian Islands (h = 25 km).				
"	11	Um	iP		03 02 41.7	
		Ud	iP		03 03 07.6	
		De	iP		03 03 35.5	
		Aleutian Islands (h = 55 km).				
"	11	Ud	eP		03 08 17	
		Komandorsky Islands (h = 45 km).				
"	11	Um	iP		04 46 52.0	
"	11	Ki	iP		05 11 17.7	
		Um	iP		05 11 44.2	
		Ud	iP		05 12 10.7	
		Aleutian Islands (h = 20 km).				
"	11	Um	iP		06 13 06.0	
		Ud	i(P)		06 13 33.1	
		Aleutian Islands (h = 50 km).				

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

1973

Jan.	11	Up	iSg1		09	31	19.8
		Ki	ePg1		09	28	38
			iSg1		09	29	13.7
		Sk	iS*		09	29	18.1
			iSg1		09	29	21.4
		Um	ePg1		09	28	54
			iSn		09	29	27.2
			iSg1		09	29	40.5
		Ud	iSg1		09	31	07.4
			i		09	31	13.3

Nordland, Norway,
66.5°N, 14.2°E.
Origin time = 09 27 46.
Explosion.

"	11	Up	iSg1		12	21	29.8
		Um	iPg1		12	19	44.2
			i		12	20	42.8
			iSg1		12	20	51.7
			iRg		12	21	24.6
		Ud	eSg1		12	22	23
		De	eSg1		12	23	10

Lake Ladoga.
Origin time = 12 18 15.
Explosion?

"	11	Sk	i(P)		12	20	18.4

"	11	Um	iSg1		12	36	55.3

Gulf of Bothnia.

"	11	Ud	iP		13	23	57.9

"	11	Up	iSg1		14	08	52.5
		Um	iSg1		14	08	25.9

"	11	Um	iP		20	55	08.1
		Ud	iP		20	55	03.7
		De	iP		20	54	38.4

"	12	Up			micr	sec
			Mx	E	1.7	18
			Mx	N	1.8	20
			Mx	Z	2.6	19
		Ki	iPKP		03 30	23.0
					micr	sec
			Mx	E	1.9	17
			Mx	N	1.8	17
			Mx	Z	2.1	17
		Ud	iPP		03 31	10.8

Bouvet Island (h = N).
M = 5.9 (Up,Ki).

"	12	De	ePg1		12	15	02
			iSg1		12	15	26.4

1973

Jan.	12	Um	iPKP		03	30	16.9
			i		03	31	17.9
		Ud	iPP		03	31	10.7

Bouvet Island (h = N).

"	12	Ud	iP		03	37	28.4

"	12	Up	iSg1		12	48	00.3
		Um	iSg1		12	48	09.2
		Ud	eSg1		12	49	01
		De	iSg1		12	49	19.9

Western USSR.
Explosion.

"	12	Ud	i(P)		13	45	50.8

"	12	Up	iPKP1		20	54	51.8
		Ud	iPKP1		20	54	53.8
		De	ePKP1		20	55	04

"	12	Ud	iP		21	44	14.7

"	12	Ud	iP		22	21	11.3

"	12	Up	iP		23 46	59.8	D
		Ki	iP		23 47	09.3	D
					micr	sec	
			P	Z'	0.1	0.6	
		Sk	iP		23 47	25.5	D
		Um	iP		23 46	58.6	D
		Ud	iP		23 47	16.4	D
		De	iP		23 47	12.2	D

Hindu Kush (h = 130 km).

"	13	Um	iP		00	33	12.1

Japan (h = 40 km).

"	13	Up	iP		01 11	31.4	D
			i		01 11	51.1	
		Ki	iP		01 10	39.8	
			ipP		01 10	56.3	
					micr	sec	
			pP	Z'	0.1	1.1	
		Um	eP		01 11	08	
			ipP		01 11	24.0	
			iPcP		01 11	40.5	
		Ud	iP		01 11	32.0	
			iPcP		01 11	58.1	
		De	iP		01 11	54.5	

Aleutian Islands.
h = 60 km (Ki,Um).

"	13	Um	iP		06	17	53.7
		Ud	iP		06	17	36.6

Zambia (h = N).

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

```
1973
Jan. 13   Ud   iP         07 51 49.7
               i          07 51 53.2
          Greece.

 "   13   Ud   iP         09 05 37.5

 "   13   Ud   iPKP1      09 37 34.1
          De   iPKP1      09 37 44.6
          Tonga-Kermadec Islands
          (h = 540 km).

 "   13   Up   iP         11 23 05.3
          Ki   iP         11 23 05.3
                          micr   sec
               P      Z'  0.1    1.0
          Sk   iP         11 23 19.1
          Um   iP         11 23 02.3
          Ud   iP         11 23 15.1
          De   iP         11 23 13.6
          Sumatra (h = 110 km).

 "   13   Ud   i(Sg1)     12 04 57.1

 "   13   Up   iSn        12 33 52.6
               iSg1       12 34 20.3
          Sk   eSg1       12 36 00
          Um   iSg1       12 34 31.3
          Ud   eSn        12 34 41
               iSg1       12 35 20.3
          De   eSg1       12 35 44
          Western USSR,
          59.4°N, 28.3°E.
          Origin time = 12 31 30.
          Explosion.

 "   13   Ud   iP         13 47 23.3
          Aleutian Islands
          (h = 60 km).

 "   13   Up   i(pP)      14 23 15.7
          Ud   iP         14 23 21.3
               ipP        14 23 32.9
          De   eP         14 23 09
               ipP        14 23 19.1
          Pakistan.
          h = 40 km (Ud,De).

 "   13   Ud   i(P)       17 35 59.9

 "   13   Ud   iP         18 44 10.6

 "   13   Ud   iP         19 35 33.8

 "   13   Sk   iP         20 22 19.5
          (cont.)

1973
Jan. 13   (cont.)
          Sk   eS         20 24 13
          Um   iP         20 22 47.4
          Ud   eP         20 23 05
          Jan Mayen.
          Origin time = 20 19 46.

 "   13   Up   iP         22 09 12.7 C
                          micr   sec
               P      Z'  0.1    0.9
          Ki   iP         22 08 19.3 C
                          micr   sec
               P      Z'  0.1    0.7
          Sk   iP         22 08 53.0 C
          Um   iP         22 08 45.4 C
          Ud   iP         22 09 14.2 C
          De   iP         22 09 35.6 C
          Aleutian Islands
          (h = 50 km).
          m = 6.1 (Up,Ki).

 "   13   Ud   iP         22 13 43.4
          Kamchatka (h = N).

 "   13   Ud   iP         23 17 26.6
          De   iP         23 16 54.0
          Dodecanese Islands (h = N).

 "   14   Um   eP         01 54 15
          Ud   eP         01 54 18

 "   14   Um   iSg1       04 41 31.7

 "   14   Ud   iP         08 51 27.0
          North Atlantic Ocean
          (h = N).

 "   14   Ki   eP         09 06 09
          Ud   eP         09 05 36
               i          09 05 39.4
          North Atlantic Ocean
          (h = N).

 "   14   Ki   iP         09 08 21.1
          Ud   iP         09 07 46.6
          North Atlantic Ocean
          (h = N).

 "   14   Up   iPKP       11 33 30.2
               iSKP1      11 36 35.7
          Ki   iPKP       11 33 16.4
          Sk   iPKP       11 33 28.0
          Um   iPKP       11 33 22.3
          Ud   iPKP       11 33 32.5
               iSKP1      11 36 38.8
          De   iPKP       11 33 38.6
          (cont.)
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Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973						
Jan.	14	(cont.)				
		De	iSKP1		11 36 50.4	
		New Hebrides Islands (h = 200 km).				
"	14	Ki	eP		11 47 50	
		Ud	iP		11 48 01.4	
		Kashmir-India (h = 90 km).				
"	14	Um	iSg1		13 59 33.3	
"	14	Up	iRg		17 18 55.7	
		Ud	iRg		17 19 17.4	
		Central Sweden.				
"	14	Ud	iP		18 11 04.5	
"	14	Up	iP		18 55 47.6	
		Sk	i(P)		18 55 20.0	
		Ud	iP		18 55 24.1	
"	14	Ki	iP		23 11 15.6	
		Um	iP		23 10 51.2	
		Ud	iP		23 10 51.9	
"	15	Up	iP		02 03 19.9	
		Ki	iP		02 02 36.2	
			ipP		02 03 53.4	
					micr sec	
			pP	Z'	0.1 1.0	
		Sk	iP		02 03 10.5	
		Um	iP		02 02 55.6	
		Ud	iP		02 03 26.6	
			ipP		02 04 47.0	
		De	iP		02 03 44.7	
		Sakhalin.				
		h = 370 km (Ki,Ud).				
"	15	Ud	iP		03 50 40.1	
		Venezuela (h = 20 km).				
"	15	De	iP		05 27 23.1	
"	15	Up	iP		09 14 24.3	D
			iPP		09 17 38.7	
			iS		09 23 51.5	
					micr sec	
			P	Z'	1.6 0.7	
			PP	Z'	0.7 1.3	
		Ki	iP		09 13 53.1	D
			iPP		09 16 48.3	
			ipPP		09 18 25.9	
					micr sec	
			P	Z'	2.2 1.0	
			PP	Z'	0.3 1.1	
		(cont.)				

1973						
Jan.	15	(cont.)				
		Sk	iP		09 14 21.3	D
			iPP		09 17 32.2	
		Um	iP		09 14 06.5	D
			iPP		09 17 11.2	
			iS		09 23 16	
		Ud	iP		09 14 31.2	D
			iPP		09 17 48.9	
			iS		09 24 04.4	
		De	iP		09 14 42.8	D
			iPP		09 18 08.9	
		Bonin Islands (h = 480 km).				
		m = 6.5 (Up,Ki).				
"	15	Up	iP		09 25 36.7	D
					micr sec	
			P	Z'	0.1 0.7	
		Ki	iP		09 25 06.1	
					micr sec	
			P	Z'	0.1 0.7	
		Sk	iP		09 25 33.2	
		Um	iP		09 25 19.5	D
		Ud	iP		09 25 43.7	
		De	iP		09 25 55.5	
		Bonin Islands (h = 480 km).				
		m = 5.5 (Up,Ki).				
"	15	Up	iP		11 31 16.4	D
					micr sec	
			P	Z'	0.2 0.8	
		Ki	iP		11 30 45.2	
					micr sec	
			P	Z'	0.1 0.7	
		Sk	iP		11 31 12.4	
		Um	iP		11 30 58.1	D
		Ud	iP		11 31 23.1	
		De	iP		11 31 34.6	
		Bonin Islands (h = 470 km).				
		m = 5.6 (Up,Ki).				
"	15	Ki	i(P)		12 32 51.2	
"	15	Up	iP		13 04 25.4	
			ipP		13 04 29.9	
					micr sec	
			pP	Z'	0.1 0.6	
		Ki	iP		13 04 09.8	
			ipP		13 04 14.2	
					micr sec	
			pP	Z'	0.1 0.7	
		Sk	iP		13 04 38.2	
			ipP		13 04 43.6	
		Um	iP		13 04 11.5	
			ipP		13 04 16.2	
		Ud	iP		13 04 40.5	
		(cont.)				

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

1973

Jan. 15	(cont.)				
	Ud	ipP		13 04 44.7	
	De	iP		13 04 46.1	
		ipP		13 04 50.4	
	Sinkiang.				
	h = 20 km (Up,Ki,Sk,Um,Ud, De).				
" 15	Up	iP		14 50 48.5	
		ipP		14 50 52.8	
	Ki	iP		14 50 32.4	
		ipP		14 50 37.2	
	Sk	iP		14 51 02.0	
		ipP		14 51 06.7	
	Ud	iP		14 51 03.3	
	Sinkiang.				
	h = 20 km (Up,Ki,Sk).				
" 15	Up	iP		17 15 47.5	
	Ki	eP		17 15 11	
	Sk	eP		17 15 42	
	Um	iP		17 15 24.7	
	Ud	iP		17 15 55.2	
	Japan (h = 60 km).				
" 15	Ud	iP		18 56 55.7	
	Kashmir (h = N).				
" 15	Ud	iP		19 38 34.1	
" 15	Ud	iP		23 28 27.0	
	Hindu Kush (h = 150 km).				
" 15	Up	i(P)		23 36 17.7	
				micr sec	
		(P)	Z'	0.1 1.0	
	Ki	iP		23 36 12.1	
	Ud	iP		23 36 22.9	
	Andaman Islands.				
" 16	Ki	iP		05 56 24.2	
	Ud	iP		05 56 45.8	
	Molucca Passage (h = 15 km).				
" 16	Sk	iP		09 42 16.2	
" 16	Up	iP		10 08 19.3	D
				micr sec	
		P	Z'	0.1 0.6	
	Ki	iP		10 07 25.6	D
				micr sec	
		P	Z'	0.1 1.1	
	Sk	iP		10 07 55.4	D
	Um	iP		10 07 52.8	D
	Ud	iP		10 08 18.2	D
	(cont.)				

1973

Jan. 16	(cont.)				
	De	iP		10 08 40.5	
	Aleutian Islands				
	(h = 80 km).				
	m = 5.9 (Up,Ki).				
" 16	Ud	eSg1		11 32 23	
	De	iSg1		11 30 32.1	
" 16	Ud	iP		21 16 35.3	
" 16	Up	iP1		21 39 44.9	
		iP2		21 39 51.0	
				micr sec	
		P1	Z'	0.2 1.3	
	Ki	iP1		21 39 52.2	C
		iP2		21 39 58.5	
				micr sec	
		P1	Z'	0.1 1.0	
	Sk	iP1		21 40 10.1	C
	Um	iP1		21 39 42.7	
	Ud	iP1		21 40 01.9	C
		iP2		21 40 08.4	
	De	eP2		21 40 07	
	Kashmir (h = 40 km).				
	m = 6.0 (Up,Ki).				
	Double P, in average 6.3 sec apart.				
" 16	Um	iPKP1		22 45 37.2	
	Ud	iPKP1		22 45 49.0	
" 16	Up	iP		22 50 37.8	
				micr sec	
		P	Z'	0.1 0.6	
	Ki	iP		22 51 47.6	
				micr sec	
		P	Z'	0.1 0.9	
	Sk	iP		22 51 15.6	
	Um	iP		22 51 17.7	
	Ud	iP		22 50 43.8	
	De	iP		22 50 10.2	
	Mediterranean Sea				
	(h = 30 km).				
	m = 5.6 (Up,Ki).				
" 16	Um	iPKP1		23 00 38.7	
	Ud	iPKP1		23 00 52.1	
" 17	Um	ipPKP		06 16 20.3	
	Ud	ePKP		06 16 03	
		ipPKP		06 16 13.5	
	Chile (h = 40 km).				
" 17	Up	iPKP2		08 28 54.1	
	Ki	ePKP1		08 28 20.0	
		ipPKP1		08 28 32.7	
	(cont.)				

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

1973
Jan. 17 (cont.)
Ki micr sec
PKP1 Z' 0.2 1.5
Sk iPKP1 08 28 36.1
Um iPKP1 08 28 30.5
ipPKP1 08 28 43.0
Ud ePKP1 08 28 41
New Zealand.
h = 45 km (Ki,Um).

" 17 Up iSg1 09 02 20.3
Sk eSg1 09 04 22
Ud iSg1 09 02 23.5
De iPg1 09 00 19.4
iSg1 09 00 36.4
iTPg1 09 00 46.2
iTSg1 09 00 55.2
Baltic Sea, south of Sweden,
55.5°N, 15.0°E.
Origin time = 09 00 00.
Explosion.

" 17 Up iSg1 09 04 35.1
Ud iSg1 09 04 37.6
De iPg1 09 02 34.5
iSg1 09 02 50.6
iTPg1 09 03 00.1
iTSg1 09 03 08.5
Baltic Sea, south of Sweden,
55.5°N, 15.0°E.
Origin time = 09 02 15.
Explosion.

" 17 Up i(PKP) 10 03 17.8
iPKP 10 03 24.9
micr sec
PKP Z' 0.1 0.9
Ki i(PKP) 10 03 02.4
iPKP 10 03 09.5
micr sec
PKP Z' 0.1 1.0
Sk i(PKP) 10 03 08.3
iPKP 10 03 19.1
Um i(PKP) 10 03 04.5
i(PKP) 10 03 09.0
iPKP 10 03 16.8
Ud i(PKP) 10 03 12.0
iPKP 10 03 25.9
De i(PKP) 10 03 22.7
i(PKP) 10 03 27.2
iPKP 10 03 34.8
Tonga Islands (h = 250 km).

" 17 Sk eSg1 13 16 04
Ud iSg1 13 15 50.6
(cont.)

1973
Jan. 17 (cont.)
De eSg1 13 16 33
West coast of Norway.
By combination with Bergen
and Kongsberg readings.

" 17 Ki iP 14 08 28.6
Sk iP 14 08 33.6
iS 14 10 31.9
Jan Mayen (h = N).

" 17 Ki iP 16 17 13.5 D
Um iP 16 17 39.9 D
Ud iP 16 18 05.9

" 17 Ki iX 21 08 11.8
Ud i(P) 21 08 30.5
iX 21 08 46.1
Mindanao (h = N).

" 17 Ud iP 23 18 37.5

" 18 Ud iPKP1 04 02 11.8
De iPKP1 04 02 22.7
Tonga Islands (h = 580 km).

" 18 Um iP 05 54 23.8
Mariana Islands
(h = 80 km).

" 18 Up iP 06 57 10.8
Sk eP 06 57 22
Ud iP 06 57 24.7
China (h = N).

" 18 Up iP 09 43 05
iPKP 09 46 54.2
iX1 09 47 00.0
iPP 09 47 56
iSKS 09 53 36
micr sec
Mx E 9.2 18
Mx N 12 19
Mx Z 28 19
Ki iP 09 42 41.5
i 09 46 25.7
iPKP 09 46 42.2
iX1 09 46 49.3
iX2 09 46 59.8
iPP 09 47 18.6
iSKS 09 53 17
micr sec
X2 Z' 0.1 0.9
PP Z' 2.3 2.7
Mx E 12 21
(cont.)

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

1973						
Jan.	18	(cont.)				
		Ki			micr	sec
			Mx	N	14	20
			Mx	Z	8.9	19
		Sk	iPKP		09 46 52.8	
			iX2		09 47 08.3	
			iPKKP		09 57 30.4	
		Um	iP		09 42 52	
			iPKP		09 46 47.2	
			iX1		09 46 57.0	
			iX2		09 47 04.4	
			iPP		09 47 35	
			iSKS		09 53 20	
			iPKKP		09 57 42.8	
		Ud	iPKP		09 46 58.1	
			iX2		09 47 15.9	
			iPP		09 47 54.2	
			iPKKP		09 57 18.4	
		De	iPKP		09 47 00.4	
			iX1		09 47 08.9	
			iX2		09 47 17.8	
			iPKKP		09 57 11.2	
		New Britain (h = 45 km).				
		M = 6.7 (Up,Ki).				
"	18	Up	iP2		10 31 35.8	
		Ki	iP1		10 31 11.6	
			iP2		10 31 17.6	
		Ud	iP1		10 31 37.0	
		Mindanao (h = 60 km).				
"	18	Up	iP		11 16 07.5	
		Sk	iP		11 16 34.9	
		Ud	iP		11 16 23.4	
			i		11 16 28.8	
		Afghanistan (h = 35 km).				
"	18	Up	ePKP1		12 30 07	
		Sk	iPKP1		12 29 59.5	
		Um	iPKP1		12 29 50.5	
		Ud	iPKP		12 30 01.2	
			iPKP1		12 30 09.3	
		South of Kermadec Islands (h = 40 km).				
"	18	Up	ePKP		13 44 46	
		Um	i(PKP)		13 44 35.5	
			iPKP		13 44 41.6	
		Ud	iPKP		13 44 48.4	
		De	iPKP		13 44 57.1	
		Santa Cruz Islands (h = 140 km).				
"	18	Up	iP		14 14 42.7	
		Ud	iP		14 14 48.1	
		Mindanao.				

1973						
Jan.	18	Up	iP		16 34 23.2	
		Ki	eP		16 34 07	
		Ud	eP		16 34 31	
		Mindanao.				
"	18	Um	iP		19 12 16.9	
		Ud	iP		19 11 42.4	
		Yugoslavia.				
"	18	Um	iP		22 42 11.0	C
		Ud	iP		22 42 10.5	C
		De	iP		22 41 52.2	C
		Iran (h = 55 km).				
"	19	Up	ipP		01 01 32.3	
		Ki	iP		01 00 26.7	
		Sk	ipP		01 01 06.2	
		Um	iP		01 00 56.6	
			ipP		01 01 06.5	
		Ud	iP		01 01 22.9	
		De	iP		01 01 47.2	
		Kodiak Island. h = 35 km (Um).				
"	19	Ud	iP		02 39 07.8	
"	19	Sk	iP		03 24 02.9	
		Ud	iP		03 23 50.8	
		De	eP		03 23 45	
		Afghanistan (h = 35 km).				
"	19	Um	iP		04 00 27.8	
"	19	Up	iSg1		04 36 08.7	
		Ki	iPg1		04 33 10.5	
			iSg1		04 33 53.1	
					micr	sec
			Sg1	Z'	0.1	0.7
		Sk	eS*		04 33 56	
			iSg1		04 33 59.5	
		Um	iPg1		04 33 33.4	
			iSn		04 34 06.5	
			iSg1		04 34 21.2	
		Ud	iSg1		04 35 47.2	
		De	eSg1		04 37 47	
		Nordland, Norway, 66.4°N, 14.7°E. Origin time = 04 32 30. Explosion.				
"	19	Ud	iP		05 56 40.8	
		Iran (h = 5 km).				
"	19	Ki	iP		08 18 05.8	
		Ud	iP		08 18 31.8	
		Mindanao (h = 60 km).				

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

1973
Jan. 19 Ki iP 11 01 09.7
Ud iP 11 01 35.2
Mindanao.
Origin time = 10 48 12.

" 19 Ki iPKP 12 06 02.0
micr sec
PKP Z' 0.2 1.5
South Sandwich Islands
(h = N).

" 19 Ki ePn 12 08 46
iSn 12 09 31.4
iSg1 12 09 46.1
Sk eSg1 12 12 17
Um iSg1 12 10 45.1
Northwest USSR.
Explosion.

" 19 Sk i(P) 12 31 32.1

" 19 Up iSg1 12 40 07.0
Ki eSg1 12 42 04
Sk iSg1 12 41 50.0
Um iSg1 12 40 21.2
Ud iSg1 12 41 06.2
De eSg1 12 41 30
Western USSR,
59.3°N, 28.1°E.
Origin time = 12 37 19.
Explosion.

" 19 Up iSg1 13 04 03.6
Sk iSg1 13 04 03.9
Um iSg1 13 05 25.4
Ud iSg1 13 03 04.2
De iPg1 13 02 18.3
iSg1 13 03 18.1
Near coast of south Norway,
58.5°N, 6.6°E.
Origin time = 13 01 00.

" 19 Up eP 13 44 35
Sk eP 13 45 02
Ud iP 13 44 52.6
Afghanistan (h = 45 km).

" 19 Up iSg1 13 46 17.1
Ki iPn 13 42 02.3
iSn 13 43 01.8
iSg1 13 43 25.5
Sk eSg1 13 45 47
Um iSn 13 43 40.0
iSg1 13 44 16.4
Ud iSg1 13 46 49.6
(cont.)

1973
Jan. 19 (cont.)
De iSg1 13 48 18.0
Northwest USSR,
67.8°N, 34.2°E.
Origin time = 13 40 43.
Explosion.

" 19 Up iP 14 12 57.3
Ki eP 14 12 20
Um iP 14 12 37.0
Ud iP 14 13 04.2
Japan (h = 60 km).

" 19 Up iP 15 17 57.8
Sk iP 15 18 25.7
Um iP 15 17 59.4
Ud iP 15 18 14.1
ipP 15 18 19.5
De iP 15 18 08.3
ipP 15 18 13.8
Afghanistan.
h = 20 km (Ud,De).

" 19 Ud iP 15 57 40.3
Greece.

" 19 Up i(P) 23 05 26.2

" 19 Up i(P) 23 05 51.7

" 19 Ud iPKP1 23 43 41.1
De iPKP1 23 43 52.7
i 23 44 09.4
Tonga Islands (h = N).

" 20 Um iP 01 03 43.3
Ud eP 01 03 53

" 20 Up iP 06 16 27.3
Ki iP 06 15 48.9
Sk iP 06 16 22.6
Um iP 06 16 05.1
ipP 06 16 16.3
Ud iP 06 16 34.3
Japan.
h = 40 km (Um).

" 20 Sk eP 07 36 42

" 20 Up iPKP2 08 52 09.3
micr sec
PKP2 Z' 0.1 1.1
Sk iPKP1 08 51 56.2
Um iPKP1 08 51 50.9 D
Ud iPKP1 08 52 02.1
(cont.)

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

1973
Jan. 20 (cont.)
Ud iPKP2 08 52 12.2
South of Kermadec Islands
(h = N).

" 20 Um iP 10 14 45.1
Japan (h = 55 km).

" 20 Up iP 10 25 27.7
Ki iP 10 24 49.0
Sk iP 10 25 21.7
Um iP 10 25 05.6 C
Ud iP 10 25 34.0
ipP 10 25 45.3
Japan.
h = 40 km (Ud).

" 20 Ud iP 10 31 14.7

" 20 Up iSg1 11 40 40.7
Ki iSg1 11 38 31.3
Sk iS* 11 38 34.7
iSg1 11 38 37.4
Um iSn 11 38 45.0
iSg1 11 38 58.0
Ud iSg1 11 40 25.1
Nordland, Norway,
66.5°N, 14.2°E.
Origin time = 11 37 02.
Explosion.

" 20 Um iP 12 04 37.8

" 20 Up iP 12 42 39.9 C
ipP 12 42 47.3
micr sec
pP Z' 0.1 1.0
Mx E 3.2 17
Mx N 6.0 17
Mx Z 3.6 17
Ki iP 12 42 57.2
micr sec
Mx E 3.7 13
Mx N 4.7 13
Mx Z 2.6 11
Sk iP 12 43 07.4
Um iP 12 42 43.2
ipP 12 42 50.4
Ud iP 12 42 55.7
i 12 42 57.0
ipP 12 43 03.0
De iP 12 42 49.3
Pakistan.
h = 35 km (Up,Um,Ud).
M = 5.7 (Up,Ki).

1973
Jan. 20 Up iP 12 55 04.3
micr sec
P Z' 0.2 1.3
Mx E 3.2 17
Mx N 5.1 17
Mx Z 4.5 17
Ki iP 12 55 21.1
i 12 55 37.2
micr sec
i Z' 0.1 1.4
Mx E 4.0 13
Mx N 4.3 15
Mx Z 2.7 14
Sk iP 12 55 31.4
ipP 12 55 34.7
Um iP 12 55 06.4
ipP 12 55 09.5
Ud iP 12 55 19.4
ipP 12 55 22.6
De iP 12 55 13.1
Pakistan.
h = 15 km (Sk,Um,Ud).
M = 5.7 (Up,Ki).

" 20 Up iP 13 18 23.6
Um iP 13 18 02.4
ipP 13 18 12.3
Ud iP 13 18 30.9
Japan.
h = 35 km (Um).

" 20 Up iP 16 41 35.3
micr sec
P Z' 0.1 1.1
Ki iP 16 41 00.4
Sk eP 16 41 31
epP 16 41 43
Um iP 16 41 16.7
ipP 16 41 26.4
iPcP 16 41 36.4
Ud iP 16 41 45.1
iPcP 16 42 01.5
Japan.
h = 35 km (Um).

" 20 Up iP 17 06 56.8
Ki iP 17 06 18.9
Sk iP 17 06 51.7
Um iP 17 06 35.7
ipP 17 06 45.3
Ud iP 17 07 04.3 D
De iP 17 07 17.8
Japan.
h = 35 km (Um).

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

1973
Jan. 20 Up iP 18 36 59.6 C
Um iP 18 36 41.1
Ud iP 18 37 05.5 C
De iP 18 37 18.3 C
Bonin Islands (h = 450 km).

" 20 De iPKP 18 43 03.5
Solomon Islands (h = 80 km).

" 20 Um iPKP1 21 46 37.7
Ud iPKP1 21 46 53.1

" 20 Um iPKP1 21 50 21.9
Ud iPKP1 21 50 38.5

" 20 Ud iP 22 52 02.2
Kurile Islands.

" 20 Ki ePKP 23 58 21
South Sandwich Islands
(h = 100 km).

" 21 Ud iP 03 31 27.1
Pamir.

" 21 Up iP 04 51 03.9
micr sec
P Z' 0.1 0.9
Ki iP 04 51 20.6
Sk iP 04 51 31.5 C
Um iP 04 51 06.8
Ud iP 04 51 19.5 C
i 04 51 28.3
De iP 04 51 13.2
Pakistan (h = 20 km).

" 21 Ki eP 05 34 07
Sk iP 05 34 13.3
Um eP 05 33 45
Ud iP 05 34 00.3
Pakistan (h = 10 km).

" 21 Up iP 08 27 43.4
micr sec
P Z' 0.1 1.3
Ki iP 08 27 05.5
Sk iP 08 27 41.0
Um iP 08 27 22.4
ipP 08 27 35.9
Ud iP 08 27 50.9
Japan.
h = 50 km (Um).

" 21 Um iP 12 34 08.8

1973
Jan. 21 Up iSn 17 15 05.3
i 17 15 13.9
iSg1 17 15 36.3
Sk iSn 17 15 19.8
iSg1 17 15 54.3
Um iSg1 17 17 13.1
Ud iSn 17 14 23.2
iSg1 17 14 43.4
De iPn 17 13 31.4
iPg1 17 13 45.3
i 17 14 24.0
iSg1 17 14 37.4
Off coast of south Norway,
57.8°N, 7.2°E.
Origin time = 17 12 37.

" 21 Sk iP 18 58 52.2

" 21 Ud iPKP 20 39 55.7
Tonga Islands (h = 130 km).

" 22 Up eP 00 50 52
iSKS 01 01 21
micr sec
Mx E 6.9 20
Mx N 5.7 20
Mx Z 13 23
Ki iSKS 01 01 13
micr sec
Mx E 20 18
Mx N 11 18
Mx Z 9.9 17
Sk iP 00 50 31.3
Um iP 00 50 45.3
i(pP) 00 50 57.5
iSKS 01 01 18
Ud iP 00 50 48.9
Mexico (h = N).
M = 6.4 (Up,Ki).

" 22 Sk iP 00 59 16.3
Um iP 00 58 59.7
Ud iP 00 59 04.3

" 22 Up iP 01 02 23.2
Um iP 01 02 20.8
Mexico (h = N).

" 22 Ud iP 03 05 24.4

" 22 Up e(P) 03 30 21
Ud iP 03 30 37.3
Java (h = 90 km).

" 22 Ud iP 03 50 12.4
Kurile Islands.

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

```
1973
Jan. 22   Um   iPKP1       07 01 21.1
          Ud   iPKP1       07 01 27.3

 "   22   Up   iSg1        09 48 50.5
          Sk   eSg1        09 48 09
          Ud   iSg1        09 47 44.6
          West coast of Norway,
          60.0°N, 5.2°E.
          Origin time = 09 45 32.
          By combination with Bergen
          and Kongsberg readings.

 "   22   Um   i(P)        10 09 57.1

 "   22   Up   iPKP1       13 55 14.9
               i           13 55 30.9
          Sk   ePKP        13 55 08
          Um   iPKP        13 55 04.2
               i           13 55 15.1
          Ud   i(PKP)      13 55 16.0
               iPKP1       13 55 17.5
          De   iPKP1       13 55 27.9
          Fiji Islands (h = 570 km).

 "   22   Um   epP         17 05 58
          Ud   iP          17 06 15.0
          Japan (h = 40 km).

 "   23   Up              micr   sec
               Mx      E  1.5    20
               Mx      N  1.4    20
               Mx      Z  4.1    20
          Ki              micr   sec
               Mx      E  5.0    27
               Mx      N  2.3    21
               Mx      Z  3.7    27
          Ud   ePKP       00 04 10
          New Britain (h = 70 km).
          M = 5.9 (Up,Ki).

 "   23   Up   iPKP       05 08 38.8
               i          05 08 41.8
               ipPKP      05 09 07.7
               iPP        05 10 42.1
                          micr   sec
               PKP     Z' 0.2    1.1
               Mx      E  2.4    21
               Mx      N  5.2    22
               Mx      Z  9.5    23
          Ki   iPKP       05 08 24.9 C
               i          05 08 28.5
               iPP        05 09 52
               iPKKP      05 18 37.2
                          micr   sec
               PKP     Z' 0.2    1.0
          (cont.)

1973
Jan. 23   (cont.)
          Ki              micr   sec
               Mx      E  6.6    26
               Mx      N  8.1    28
               Mx      Z  9.4    26
          Sk   iPKP       05 08 36.0 C
               i          05 08 39.3
               ipPKP      05 08 59.6
               ePKKP      05 18 15
          Um   iPKP       05 08 31.2 C
               i          05 08 35.2
               ipPKP      05 08 55.1
               iPP        05 10 12
               iPKKP      05 18 21.3
          Ud   i(PKP)     05 08 36.0
               iPKP       05 08 40.7 C
               i          05 08 44.6
               iPP        05 10 56.1
               iSKP1      05 11 58.7
               iPKKP      05 17 47.6
          De   i(PKP)     05 08 43.0
               iPKP       05 08 48.0
               ipPKP      05 09 08.0
               iSKP1      05 12 06.8
          Santa Cruz Islands.
          h = 90 km (Up,Sk,Um,De).
          M = 6.4 (Up,Ki).
          Double PKP-phases, in
          average 3.6 sec apart.

 "   23   Ud   iP         05 35 22.0
          Mariana Islands
          (h = 150 km).

 "   23   Ud   iPKP1      05 56 53.7
          De   iPKP1      05 57 03.4

 "   23   Ki   iPn        11 21 07.6
               iPg1       11 21 18.1
               iSn        11 21 56.2
               iS*        11 22 07.3
          Um   iSg1       11 23 43.3
          Northwest USSR-Norway
          border region,
          69.6°N, 30.9°E.
          Origin time = 11 20 03.
          Explosion.

 "   23   Up   iP         11 40 25.8
               ipP        11 40 30.8
                          micr   sec
               pP      Z' 0.1    0.8
          Ki   iP         11 40 10.2
               ipP        11 40 14.9
                          micr   sec
               pP      Z' 0.1    1.0
          (cont.)
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Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973				
Jan. 23	(cont.)			
	Sk	iP		11 40 39.4
	Um	eP		11 40 13
		epP		11 40 17
	Ud	iP		11 40 41.0
		ipP		11 40 45.2
	De	iP		11 40 46.3
	Sinkiang.			
	h = 20 km (Up,Ki,Um,Ud).			
" 23	Up	iP		11 52 13.2
		ipP		11 52 20.0
	Ki	iP		11 53 20.8
				micr sec
		P	Z'	0.1 1.0
	Sk	iP		11 52 51.7
	Um	iP		11 52 46.0
	Ud	iP		11 52 20.0
		ipP		11 52 26.9
	De	iP		11 51 48.3
		i		11 52 07.1
	Crete.			
	h = 35 km (Up,Ud).			
" 23	Up	iSn		12 06 49.1
		iSg1		12 07 03.2
		iSg2		12 07 08.7
	Ki	iSg2		12 09 41.5
	Sk	iSg1		12 08 54.3
	Um	iSg1		12 07 36.5
	Ud	eSg1		12 08 05
		iSg2		12 08 13.6
	De	iSg1		12 08 28.9
	Esthonia, 59.4°N, 25.3°E.			
	Origin time = 12 05 00.			
	Explosion.			
" 23	Up	iSg1		12 28 46.8
	Ki	eSg1		12 30 51
	Um	iSg1		12 29 04.1
	Ud	eSg1		12 29 46
	De	eSg1		12 30 12
	Western USSR.			
	Explosion.			
" 23	Ud	iSg1		15 02 47.7
	De	iSg1		15 00 57.3
" 23	Ud	i(P)		15 11 42.3
" 23	Sk	i(P)		22 20 07.7
" 24	Sk	iSg1		00 14 48.2
" 24	Sk	eP		00 31 34

1973					
Jan. 24	Up	eP		03 28 16	
		i		03 28 21.0	
				micr sec	
		P	Z'	0.1 1.4	
		Mx	N	1.1 4	
	Ki	iP		03 28 10.5	
				micr sec	
		Mx	N	1.6 10	
		Mx	Z	0.6 10	
	Sk	iP		03 28 39.1	
	Ud	iP		03 28 34.7	D
	Sinkiang (h = N).				
" 24	Sk	i(P)		04 11 24.5	
" 24	Sk	i(P)		08 19 30.1	
		i		08 19 35.1	
" 24	Um	iP		10 35 15.8	
	Ud	iP		10 35 44.3	
	De	iP		10 36 00.1	
	Japan (h = 55 km).				
" 24	Ud	eP		17 05 16	
	Mediterranean Sea.				
" 25	Um	eP		05 33 17	
	Ud	iP		05 32 50.0	
	Rumania (h = 160 km).				
" 25	Ud	i(P)		07 22 40.6	
" 25	Ud	iP		07 57 01.7	
" 25	Ud	iSg1		10 02 50.8	
" 25	Up	iSg1		11 26 09.7	
	Ud	i		11 26 56.8	
		iSg1		11 27 08.9	
" 25	Um	eP		11 43 01	
	Ud	iP		11 43 32.1	
	Japan (h = 80 km).				
" 25	Ud	i(P)		12 44 36.6	
" 25	Up	iP		18 42 47.0	
				micr sec	
		P	Z'	0.1 0.7	
	Ki	iP		18 41 52.3	
				micr sec	
		P	Z'	0.1 1.0	
	Um	iP		18 42 17.7	
	Ud	iP		18 42 50.5	C
		i		18 43 20.7	
	Kamchatka (h = 30 km).				
	m = 6.0 (Up,Ki).				

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

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1973
Jan. 25   Ud   iP          22 38 25.0
               El Salvador (h = 100 km).

 "   26   Ud   i           07 35 59.8
               i(Sg1)      07 36 05.7
               i           07 36 15.3

 "   26   Up   iP          07 55 23.6
                           micr  sec
               P       Z'  0.1   1.0
          Ki   iP          07 56 35.3
          Sk   eP          07 56 02
          Um   iP          07 56 00.9
               i           07 56 18.5
          Ud   iP          07 55 30.4
               i(pP)       07 55 40.5
          De   iP          07 54 52.6
          Mediterranean Sea
          (h = 60 km).

 "   26   Ud   i(P)        08 58 47.7

 "   26   Ud   i(P)        11 09 13.8

 "   26   Ki   iSn         11 29 20.6
               iS*         11 29 32.5
          Um   iSg1        11 31 09.1
          Northwest USSR-Norway
          border region.
          Explosion.

 "   26   Ki   iSn         11 39 31.8
               i(Sg1)      11 39 46.1
          Um   iSg1        11 40 41.9
               i           11 40 53.7
          Northwest USSR.
          Explosion.

 "   26   Ud   i(P)        12 04 51.4
               i           12 05 09.8

 "   26   Up   iSg1        12 38 28.5
          Um   iS*         12 38 44.1
               iSg1        12 38 50.8
          Ud   iSg1        12 39 29.9
          De   eSg1        12 40 02
          Western USSR.
          Explosion.

 "   26   Ki   iPn         12 52 42.5
               iSn         12 53 31.0
               iSg1        12 53 48.4
          Um   iSg1        12 55 15.9
          Northwest USSR-Norway
          border region,
          69.5°N, 31.0°E.
          Origin time = 12 51 38.
          Explosion.

1973
Jan. 26   Ki   iP          13 18 57.7
          Indian Ocean (h = N).

 "   26   Ud   iP          22 13 12.0
          Japan.

 "   27   Ki   iP          04 14 27.8
          Kurile Islands (h = 45 km).

 "   27   Um   iP          04 49 58.2
          Japan (h = 45 km).

 "   27   Ud   iP          09 06 03.9

 "   27   Up   iPKP        12 57 51.2
          Um   iPKP        12 57 45.1
          Ud   iPKP        12 57 53.2
          New Hebrides Islands
          (h = 130 km).

 "   27   Up   iP          13 22 15.4
               iPP         13 26 19.5
                           micr  sec
               PP      Z'  0.2   1.8
          Ki   iP          13 22 00.2
               iX          13 22 25.7
                           micr  sec
               P       Z'  0.2   1.3
          Um   iP          13 22 04.9
               iX          13 22 30.5
               iPP         13 25 57.4
          Ud   iP          13 22 22.7
               iX          13 22 44.0
          De   iP          13 22 28.3
          Celebes (h = 55 km).
          m = 6.4 (Up,Ki).
          X-phase interpreted as pP
          gives a focal depth of
          90 km.

 "   28   Ud   iP          05 58 57.5

 "   28   Up   eP          17 12 41
                           micr  sec
               P       Z'  0.1   1.2
          Ki   iP          17 11 57.0
          Ud   iP          17 12 47.1 C
          De   eP          17 13 03
          Japan (h = 90 km).

 "   28   De   iPKP        17 53 42.3
          Tonga Islands (h = 240 km).

 "   28   Up   iPKP        18 02 27.2
               ipPKP       18 02 41.2
          (cont.)
```

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

1973
Jan. 28 (cont.)

Up			micr	sec	
	PKP	Z'	0.1	1.3	
	pPKP	Z'	0.5	2.0	
	Mx	E	1.2	20	
	Mx	N	1.4	20	
	Mx	Z	2.9	21	
Ki	iPKP		18 02	12.6	C
	ipPKP		18 02	26.7	
			micr	sec	
	PKP	Z'	0.3	1.2	
	Mx	E	1.8	22	
	Mx	N	1.8	20	
Um	iSKP1		18 05	43	
Ud	iPKP		18 02	28.0	
	ipPKP		18 02	42.9	
De	i(PKP)		18 02	25.3	
	iPKP		18 02	33.6	
	ipPKP		18 02	46.5	

New Hebrides Islands.
h = 50 km (Up,Ki,Ud,De).
M = 5.9 (Up,Ki).

" 28 Up iP 20 40 48.3
Ud iP 20 40 50.5
i 20 40 53.7
iPP 20 41 11.5
Ionian Sea (h = N).

" 28 Ud iP 23 18 39.7
Molucca Passage
(h = 60 km).

" 29 Up iP 04 40 04.1
Ki i(P) 04 40 14.5
Ud iP 04 40 16.6
De e(P) 04 40 23
Kashmir (h = 55 km).

" 29 Up eP 06 07 23
i 06 07 25.8
micr sec
P Z' 0.1 1.1
Ud iP 06 07 29.0
i 06 07 32.2
Ionian Sea (h = N).

" 29 Ud eP 08 38 39
Japan (h = 25 km).

" 29 Up iSg1 12 38 42.2
Ud iSg1 12 38 28.2
i 12 38 31.7
Central Sweden.

1973
Jan. 29 Um iSg1 12 50 12.1
Western USSR.
Explosion.

" 29 Ud iP 13 31 47.3
Iran.

" 29 Ud iPKP1 14 45 39.3
De iPKP1 14 45 48.8
Tonga Islands (h = N).

" 29 Up iS* 18 31 23.7
iSg1 18 31 28.3
Ud iSg1 18 30 28.5
i 18 30 36.7
De iSg1 18 31 32.9
West coast of Norway,
61.1°N, 4.7°E.
Origin time = 18 28 06.
By combination with Bergen
and Kongsberg readings.

" 29 Up iP 21 35 27.9
micr sec
P Z' 0.1 1.4
Ki eP 21 35 07
Um iP 21 35 15.2
Ud iP 21 35 37.2
De iP 21 35 46.4
Ryukyu Islands (h = 55 km).

" 29 Up iRg 23 46 07.3
Ud iRg 23 45 54.6
Central Sweden.

" 30 Um iP 02 41 35.8
Ud iP 02 40 54.3
Spain (h = 630 km).

" 30 Ud iP 07 58 12.1
Turkey.

" 30 Ud eP 09 03 29

" 30 Up eP 11 18 49
Um iP 11 18 33.7
Ud eP 11 19 06
De iP 11 19 13.4
Sinkiang (h = N).

" 30 Ud eP 12 06 05
Aegean Sea (h = N).

" 30 Ki iP 13 28 15.9

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

```
1973
Jan. 30   Um   iP          15 49 40.7
          Japan (h = N).

 "   30   Up   iRg         15 58 43.3
          Ud   iRg         15 58 29.9
          Central Sweden.

 "   30   Up   iP          21 14 00.1 C
               i1          21 14 03.8
               i2          21 14 07.1
               iPP         21 17 36.5
               iSKS        21 24 27.0
                           micr  sec
               i1     Z'   0.2   1.0
               i2     Z'   0.6   0.9
               PP     Z'   1.5   2.2
               Mx     E    100   15
               Mx     N    160   15
               Mx     Z    200   15
          Ki   iP          21 13 43.8 C
               i1          21 13 47.5
               i2          21 13 51.5
               ipP         21 13 54.7
                           micr  sec
               P      Z'   0.4   1.5
               i1     Z'   1.0   1.6
               i2     Z'   0.9   1.5
               pP     Z'   7.7   2.3
               Mx     E    310   15
               Mx     N    290   15
               Mx     Z    190   15
          Um   iP          21 13 54.0 C
               i1          21 13 57.8
               i2          21 14 00.5
          Ud   iP          21 13 52.0 C
               i1          21 13 55.9
               i2          21 13 58.8
          De   iP          21 14 01.3 C
               i1          21 14 05.0
               i2          21 14 09.1
               ipP         21 14 13.3
          Mexico.
          h = 45 km (Ki,De).
          m = 6.9, M = 7.8 (Up,Ki).
          Multiple P, in average 3.8
          and 7.1 sec after the first
          onset.

 "   30   Ud   eP          21 43 18

 "   30   Up   eP          22 51 35
          Ud   iP          22 51 42.5
          Albania (h = N).

1973
Jan. 31   Up   iRg         02 09 45.2
          Ud   iRg         02 09 32.9
          Central Sweden.

 "   31   Up   iRg         02 12 31.3
          Ud   iRg         02 12 17.6
          Central Sweden.

 "   31   Up   iRg         06 57 09.9
          Ud   iRg         06 56 58.4
          Central Sweden.

 "   31   De   i(P)        07 10 57.9

 "   31   Ki   eP          12 44 53
               ipP         12 45 08.2
          Mexico (h = 50 km).

 "   31   Ki   ePKP        16 35 05
               i           16 35 17.0
          South Sandwich Islands
          (h = N).

 "   31   Up   iP          21 07 09.5
               i           21 07 12.4
               ipP         21 08 59.5
               iPP         21 10 24.9
               iS          21 16 28
               isS         21 19 45
                           micr  sec
               P      Z'   0.1   0.6
               i      Z'   1.8   1.0
               Mx     E    7.7   20
               Mx     N    6.5   16
               Mx     Z    17    18
          Ki   iP          21 06 38.3
               i           21 06 41.2
               ipP         21 08 28.4
               iS          21 15 29.4
               isS         21 18 41
                           micr  sec
               P      Z'   0.7   1.0
               i      Z'   1.7   1.1
               Mx     E    15    17
               Mx     N    11    17
               Mx     Z    12    17
          Um   iP          21 06 49.0
               i           21 06 52.2
               iS          21 15 53
               isS         21 19 13
          Ud   iP          21 07 16.9
               i           21 07 19.9
               ipP         21 09 09.3
               iS          21 16 43.0
          (cont.)
```

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

1973			
Jan. 31	(cont.)		
	De	iP	21 07 28.6
		i	21 07 29.7
		i	21 07 31.5
		ipP	21 09 27.5
		iPP	21 10 54.9
		iS	21 17 01.9
	Bonin Islands. h = 520 km (Up,Ki,Ud,De). m = 6.5, M = 6.3 (Up,Ki). M uncorrected for focal depth. Double P, in average 3.0 sec apart. The second onset is considerably bigger than the first one.		
" 31	Up	iP	21 52 04.7
	Ki	iP	21 51 34.3
	Um	iP	21 51 47.8
	Ud	iP	21 52 12.5
	Bonin Islands (h = 500 km).		
" 31	Ud	iP	22 57 00.2
	Afghanistan-USSR (h = 45 km).		

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November 7, 1974

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BOX 517
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SWEDEN

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BOX 517
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SWEDEN

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

U P P S A L A, K I R U N A, S K A L S T U G A N, U M E Å,

U D D E H O L M and D E L A R Y

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

F E B R U A R Y 1 - 28, 1973

1973
Feb. 1 De iPKP 00 52 20.1
New Hebrides Islands
(h = 45 km).

" 1 Up eP 05 28 12
iPP 05 32 30.3
iSKS 05 38 25
iS 05 39 44
iPKKP 05 43 55.1
micr sec
P Z' 0.1 1.4
PP Z' 0.1 1.3
PKKP Z' 0.1 1.3
Mx E 2.3 20
Mx N 2.4 22
Mx Z 2.7 20
Ki eP 05 28 35
i(PKP) 05 32 35.7
iPP 05 32 55.4
iS 05 40 12
i 05 42 59.5
iPKKP 05 43 42.6
micr sec
PP Z' 0.4 1.9
PKKP Z' 0.1 1.3
Mx E 1.8 20
Mx N 1.5 18
Um iSKS 05 38 37
iS 05 40 05
iPKKP 05 43 47.0
Ud eP 05 27 59
iPKP 05 32 10.2
i 05 43 23.3
iPKKP 05 44 05.4
De iPKP 05 32 08.0
Argentina (h = 230 km).
m = 6.3, M = 5.9 (Up,Ki).
M uncorrected for focal
depth.

" 1 Up iSKPl 07 49 53.9
(cont.)

1973
Feb. 1 (cont.)
Up micr sec
SKPl Z' 0.1 1.4
Ki iSKPl 07 49 26.7
micr sec
SKPl Z' 0.1 1.4
Ud i(PKP) 07 46 29.9
iPKP 07 46 37.3
iPP 07 49 23.5
iSKPl 07 49 55.3
De iPKP 07 46 42.6
i 07 46 52.7
Tonga Islands (h = 230 km).

" 1 De iP 08 24 15.7
Mediterranean Sea (h = N).

" 1 Up iPKPl 08 31 21.5
i 08 31 39.1
Ud iPKPl 08 31 23.1
i 08 31 35.7
De iPKPl 08 31 32.5
i 08 31 48.5
Tonga-Kermadec Islands
(h = 50 km).

" 1 De i(Sgl) 12 10 20.5

" 1 Up iSgl 12 13 17.5
Sk eSgl 12 15 16
Ud iSgl 12 13 22.4
De iPgl 12 11 19.8
iSgl 12 11 34.4
Baltic Sea, south of Sweden,
55.6°N, 15.1°E.
Origin time = 12 11 00.
Explosion

" 1 Sk i(Sgl) 12 52 10.3

" 1 Up iSgl 12 53 18.3
(cont.)

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

1973
Feb. 1 (cont.)
Um iSgl 12 53 33.9
De eSgl 12 54 45
Western USSR,
59.3°N, 28.1°E.
Origin time = 12 50 30.
Explosion.

" 1 Up iSgl 13 29 36.9
Ki iSgl 13 30 22.2
Sk eSgl 13 30 48
Um iSgl 13 29 02.4
Ud iSgl 13 30 34.3
De eSgl 13 31 20
Near Lake Ladoga.
Explosion?

" 1 Ud eP 13 52 49

" 1 Sk i(Sgl) 14 11 02.2

" 1 Up iP 17 34 51.5 C
i 17 35 12.9
iPcP 17 35 21.1
i 17 38 08.1
micr sec
P Z' 0.3 0.9
Mx N 2.1 23
Mx Z 2.2 23
Ki iP 17 33 58.5 C
i 17 34 12.8
micr sec
P Z' 0.2 0.8
Mx E 1.7 19
Mx N 1.9 19
Mx Z 1.7 19
Sk iP 17 34 32.2 C
Um iP 17 34 24.5 C
Ud iP 17 34 53.2 C
De iP 17 35 14.8 C
i 17 35 20.3
i 17 35 32.8
Aleutian Islands (h = 50 km).
m = 6.3, M = 5.3 (Up,Ki).

" 1 Ud iP 18 55 52.1

" 1 Ud iP 20 27 07.4

" 1 Ud iP 22 34 28.0
De iP 22 34 29.4
Colombia (h = 160 km).

" 1 Sk iP 23 03 10.2
Um iP 23 03 04.1
Ud iP 23 02 38.7
De iP 23 02 08.9

1973
Feb. 1 Ud iP 23 04 16.0
De iP 23 03 45.3

" 2 Ud eP 00 06 41

" 2 Ud iP 00 51 48.0 D
De iP 00 51 16.0
Dodecanese Islands (h = N).

" 2 Ud iP 01 38 41.4
Mindanao (h = 50 km).

" 2 Up iPKP 02 12 08.7
Ki iPKP 02 12 24.0
micr sec
PKP Z' 0.1 1.0
Sk ePKP 02 12 14
Um iPKP 02 12 17.1
Ud iPKP 02 12 06.7
De ePKP 02 12 00
South Sandwich Islands
(h = N).

" 2 Ud iP 07 46 15.5

" 2 Ki iPn 10 33 08.3
iSn 10 34 08.3
iSgl 10 34 30.8
Um iSgl 10 35 18.3
Ud i(Sg2) 10 38 00.4
Northwest USSR,
67.4°N, 34.2°E.
Origin time = 10 31 48.
Explosion.

" 2 Ki iPn 10 38 08.0
iPgl 10 38 15.5
iSn 10 38 54.2
iS* 10 39 07.2
Um iSgl 10 40 42.8
Northwest USSR-Norway border
region, 69.6°N, 30.1°E.
Origin time = 10 37 07.
Explosion.

" 2 Up iP 10 38 59.0
Ud iP 10 39 06.4
De i 10 39 30.7
Luzon (h = 55 km).

" 2 Up iSn 12 15 18.2
iSgl 12 15 31.3
Ki iSgl 12 18 06.6
Um iSgl 12 16 03.0
Ud iSgl 12 16 35.2
De iSgl 12 16 59.3
(cont.)

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

1973				
Feb.	2	(cont.)		
		Esthonia, 59.5°N, 25.1°E.		
		Origin time = 12 13 30.		
		Explosion.		
"	2	Um	iP	13 42 52.9
"	2	Ud	iSgl	14 17 06.0
		De	iSgl	14 16 47.0
"	2	Ki	iSgl	14 32 00.2
		Um	iSn	14 32 13.4
			iSgl	14 32 26.1
		Nordland, Norway.		
		Explosion.		
"	3	Up	iP	20 03 53.4
		Ud	iP	20 03 52.9
		Aleutian Islands (h = 60 km).		
"	4	Up	iS*	10 23 03.8
			iSgl	10 23 13.3
		Ki	i	10 20 06.5
			i	10 20 13.6
			iSgl	10 20 23.5
		Sk	eSgl	10 22 48
		Um	iSn	10 20 35.7
			iSgl	10 21 10.4
		Ud	iSn	10 22 32.2
			iSgl	10 23 45.8
		Northwest USSR,		
		67.5°N, 34.1°E.		
		Origin time = 10 17 40.		
		Explosion.		
"	4	Up	iPKP1	10 49 05.9
		Ud	iPKP1	10 49 07.7 C
		De	iPKP1	10 49 17.9
"	4	Um	iP	13 12 34.0
		Ud	iP	13 13 02.1
		Japan (h = N).		
"	4	Up	iP	13 46 59.5
		Ki	iP	13 46 26.7
		Um	iP	13 46 40.8
		Ud	iP	13 47 07.0
		De	iP	13 47 19.4
		South of Japan (h = 450 km).		
"	4	Up	iP	19 33 47.1
		Afghanistan (h = 40 km).		
"	4	Up	iPKP	22 56 34.0
		Um	iPKP	22 56 22.1
		De	iPKP	22 56 41.6
		New Britain (h = 60 km).		

1973				
Feb.	5	Ud	eP	00 17 20
"	5	Up	iP	00 27 25.2
		Um	iP	00 27 25.3
		Ud	iP	00 27 42.4
		Pamir.		
"	5	Up	iP	04 41 32.3 C
				micr sec
			P Z'	0.1 0.8
		Ki	iP	04 40 46.9
		Sk	eP	04 41 25
		Um	iP	04 41 07.2
		Ud	iP	04 41 38.5 C
			iPcP	04 42 06.0
		De	iP	04 41 56.3
			i(PcP)	04 42 21.9
		Kurile Islands (h = 55 km).		
"	5	Ud	i(P)	05 08 35.9 C
"	5	Ud	iP	05 18 20.2
"	5	Um	iP	07 11 05.1
		Ud	iP	07 11 31.9
		Japan (h = 30 km).		
"	5	Ud	iP	11 33 15.0
		Philippine Islands		
		(h = 20 km).		
"	5	Ud	iP	16 31 12.3
		Japan (h = 30 km).		
"	5	Um	iP	20 00 30.7
		Japan (h = 45 km).		
"	5	Ud	iP	20 16 02.0
"	5	Um	iP	20 42 17.7
		Japan (h = 50 km).		
"	5	Um	iP	22 06 15.4
		Japan (h = 35 km).		
"	5	Um	iP	22 41 13.7
"	5	Um	iP	22 43 20.3
"	6	Ud	eP	02 30 22
		Off coast of California		
		(h = N).		
"	6	Ki	eSgl	04 40 45
		Sk	e	04 40 47
			iSgl	04 40 50.4
		Um	iSn	04 40 55.9
		(cont.)		

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

1973
Feb. 6 (cont.)
Um iSgl 04 41 09.7
Nordland, Norway.
Explosion.

" 6 Up iP 05 41 38.3
iPcP 05 41 51.0
Ki iP 05 41 12.8
Sk iP 05 41 44.5
Um iP 05 41 22.2
iPcP 05 41 38.1
Ud iP 05 41 48.5 C
i 05 41 53.9
iPcP 05 40 58.0
i 05 42 13.9
De iP 05 42 00.0
Ryukyu Islands (h = 80 km).

" 6 Ud iP 10 07 31.5

" 6 Up iP1 10 47 14.3
iP2 10 47 15.3
iP3 10 47 17.4
ipP 10 47 25.8
iS 10 55 30
micr sec
P2 Z' 0.1 0.9
P3 Z' 1.0 1.6
pP Z' 1.5 1.3
Mx E 490 18
Mx N 750 20
Mx Z 350 19
Ki iP2 10 47 01.1
iP3 10 47 03.4
ipP 10 47 10.7
iS 10 55 09
micr sec
P2 Z' 0.1 1.2
P3 Z' 0.8 1.6
pP Z' 0.7 1.2
Mx E 460 23
Mx N 420 23
Mx Z 470 26
Sk iP2 10 47 26.5
iP3 10 47 28.8
Um iP2 10 47 00.6
iP3 10 47 02.7
ipP 10 47 11.6
Ud iP1 10 47 26.9
iP2 10 47 28.2
iP3 10 47 31.3
ipP 10 47 39.6
De iP1 10 47 32.6
iP2 10 47 33.7
iP3 10 47 36.3
ipP 10 47 44.8
(cont.)

1973
Feb. 6 (cont.)
Szechwan, China.
h = 40 km (Up,Ki,Um,Ud,De).
m = 6.6 (P3), M = 7.8 (Up,Ki).
Multiple P. The average intervals are P2 - P1 = 1.1 sec, P3 - P1 = 3.7 sec.
The focal depth is calculated from pP - P2 intervals.
Clear G-wave on long-period N-components.

" 6 Ud iP 10 57 07.3

" 6 Up iSgl 12 29 07.6
Um iSgl 12 29 21.2
Ud iSgl 12 30 09.7
Western USSR.
Explosion.

" 6 Up i 13 52 13.5
i 13 52 17.5
i 13 52 24.9
Sonic booms.

" 6 Up iP 14 15 58.3 C
Ud eP 14 16 12

" 6 Up iP 17 21 04.3
Um iP 17 20 51.5
Ud iP 17 21 17.4
Szechwan, China (h = N).

" 6 Ud iP 20 45 34.2
Kirghiz-Sinkiang (h = N).

" 7 Um iP 04 05 16.2
Yugoslavia (h = N).

" 7 Up iP 05 34 07.0 C
i 05 34 11.1
micr sec
P Z' 0.2 0.7
Ki iP 05 34 47.5 C
Sk iP 05 34 43.4 C
i 05 34 47.1
Um iP 05 34 22.0 C
i 05 34 26.1
Ud iP 05 34 22.7 C
i 05 34 26.6
Iran (h = 50 km).
Double P, in average 4.0 sec apart.

" 7 Ud iP 06 23 32.7
Peru-Brazil (h = 140 km).

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

1973							
Feb.	7	Um	iP		07 30 26.1		
		Ud	iP		07 30 56.4		
		Japan (h = 190 km).					
"	7	Up	iPKP		08 20 00.1		C
			iSKP		08 23 24.6		
		Ki	iPKP		08 20 14.5		C
			iSKPl		08 23 22.0		
					micr	sec	
			PKP	Z'	0.2	1.0	
		Um	iPKP		08 20 07.4		
			iPP		08 21 55.5		
		Ud	iPKP		08 19 57.9		C
			iSKP		08 23 23.5		
		South Sandwich Islands (h = N).					
"	7	Up	iP		09 31 01.2		
		Szechwan, China (h = N).					
"	7	Ki	iP		09 49 46.4		
			i		09 51 54.9		
		Sk	iP		09 49 53.9		
			iS		09 51 48.5		
		Um	iP		09 50 22.9		
			i		09 51 17.9		
			eS		09 52 41		
			i		09 53 03.8		
		Jan Mayen (h = N).					
"	7	Ki	iP		10 03 54.5		
					micr	sec	
			P	Z'	0.1	1.1	
		Ud	iP		10 04 19.8		
		Mindanao (h = 210 km).					
"	7	Ki	i(P*)		11 55 37.1		
			iPgl		11 55 38.5		
			i(S*)		11 56 09.4		
			iSgl		11 56 15.9		
					micr	sec	
			Sgl	Z'	0.1	0.5	
		Sk	eSgl		11 57 32		
		Um	iSn		11 57 07.8		
			iSgl		11 57 38.2		
			i		11 57 41.8		
		Near Lofoten, Norway. Origin time = 11 54 50.					
"	7	Ki	i(P)		12 58 50.4		
"	7	Um	iP		13 07 22.3		
"	7	Um	iSgl		13 29 14.3		
		Western USSR. Explosion.					
"	7	Up	iP		16 16 27.8		
		(cont.)					

1973						
Feb.	7	(cont.)				
		Up	i		16 16 31.4	
					micr	sec
			P	Z'	0.4	1.1
			i	Z'	1.3	1.5
			Mx	E	4.3	19
			Mx	N	4.8	17
		Ki	iP		16 16 12.0	
			i		16 16 17.0	
			iPP		16 18 28.6	
					micr	sec
			P	Z'	0.1	1.2
			i	Z'	0.4	1.3
			Mx	E	8.1	16
			Mx	N	12	20
			Mx	Z	6.0	15
		Sk	iP		16 16 39.2	
			i		16 16 42.9	
		Um	iP		16 16 14.9	
			i		16 16 18.9	
		Ud	iP		16 16 40.9	
			i		16 16 44.8	
		De	iP		16 16 47.1	
			i		16 16 49.7	
		Szechwan, China (h = N). m = 6.5, M = 5.9 (Up,Ki). Double P, in average 3.8 sec apart.				
"	7	Ki	i(P)		18 44 33.4	
"	7	Ud	iP		20 21 57.9	
"	8	Up	iP		02 35 32.4	
		Ud	iP		02 35 50.3	
		Hindu Kush (h = N).				
"	8	Up	eP		03 42 11	
		Sk	iP		03 42 52.8	
		Um	iP		03 42 55.2	
		Ud	iP		03 42 19.1	
			i		03 42 24.7	
		De	iP		03 41 40.4	
		Greece (h = 30 km).				
"	8	Up	iP		09 30 34.6	
		Sk	iP		09 31 14.5	
		Um	eP		09 31 15	
		Ud	iP		09 30 41.1	
			i		09 30 45.0	
		Greece (h = 55 km).				
"	8	Up			micr	sec
			Mx	E	3.6	19
			Mx	N	3.9	20
			Mx	Z	4.4	18
		Ki			micr	sec
			Mx	E	3.7	21
		(cont.)				

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

1973
Feb. 8 (cont.)
Ki micr sec
Mx N 3.5 21
Um iPKP 10 28 07.4
Indian Ocean (h = N).
M = 6.3 (Up,Ki).

" 8 Up iP 12 02 08.2
Sk iP 12 02 50.9
Um eP 12 02 49
Ud iP 12 02 14.2
i 12 02 19.7
De iP 12 01 38.3
Greece (h = 15 km).

" 8 Up eP 12 11 36
Ki iP 12 10 42.3
Ud iP 12 11 41.0
Kamchatka (h = 55 km).

" 8 Um iP 12 24 07.6

" 8 Up iSn 12 44 04.8
iSgl 12 44 16.7
Ki iSgl 12 46 49.2
Sk iSgl 12 46 07.4
Um iSgl 12 44 51.1
Ud eSn 12 44 52
iSgl 12 45 19.5
De iSgl 12 45 45.8
Esthonia, 59.5°N, 24.8°E.
Origin time = 12 42 21.
Explosion.

" 8 Ki i(P) 16 37 50.7

" 8 Up iP 16 49 19.3 C
Sk iP 16 49 59.6
Um iP 16 49 59.5 C
Ud iP 16 49 26.1
i 16 49 30.3
i 16 49 33.5
De iP 16 48 49.9 C
Greece (h = N).

" 8 Up iPKP1 19 03 42.9 C
Ud iPKP1 19 03 44.6 C
De iPKP1 19 03 54.4 C

" 8 Up iP 19 16 55.2 C
i 19 16 59.3
micr sec
P Z' 0.2 1.5
Ki iP 19 17 37.9 C
i 19 17 41.8
micr sec
P Z' 0.1 1.3
(cont.)

1973
Feb. 8 (cont.)
Sk iP 19 17 08.1 C
i 19 17 12.2
Um iP 19 17 19.6 C
i 19 17 23.0
Ud iP 19 16 51.0 C
i 19 16 54.9
De iP 19 16 36.2 C
Ascension Island region
(h = N).
m = 5.9 (Up,Ki).
Double P at Up,Ki,Sk,Um,
Ud, in average 3.9 sec apart.

" 8 Up eP 19 23 18
Um iP 19 23 41.5
Ud iP 19 23 13.3
Ascension Island region
(h = N).

" 8 Up iSgl 20 07 01.0
Ki iSgl 20 04 59.6
Sk iSgl 20 05 05.5
Um iSn 20 05 13.0
iSgl 20 05 27.0
Ud iSgl 20 06 54.0
Nordland, Norway,
66.5°N, 14.1°E.
Origin time = 20 03 31.
Explosion.

" 9 Um iP 03 37 28.5

" 9 Up iP 03 54 25.5
Um iP 03 54 01.5
Ud iP 03 54 28.9
South of Japan (h = N).

" 9 Ud iP 05 16 31.2
Celebes (h = N).

" 9 Ki i(P) 07 04 26.2

" 9 Um eP 07 12 25
Sea of Japan (h = 390 km).

" 9 Ki iPn 09 23 46.0
iSn 09 24 45.2
iSgl 09 25 08.3
Um iSn 09 25 23.5
iSgl 09 25 59.2
Northwest USSR,
67.7°N, 34.1°E.
Origin time = 09 22 26.
Explosion.

" 9 Up iP 10 06 03.4
(cont.)

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

1973					
Feb.	9	(cont.)			
		Ki	iP		10 06 03.8
		Um	iP		10 06 04.3
			i		10 06 10.3
		Ud	iP		10 05 50.8
		De	iP		10 05 52.4
		Colombia (h = 80 km).			
"	9	Up	iSgl		12 32 12.9
		Um	iSgl		12 32 20.2
		De	eSgl		12 33 34
		Western USSR.			
		Explosion.			
"	9	Up	iSgl		12 36 38.7
		Um	iSgl		12 36 52.2
		Ud	eSgl		12 37 41
		De	eSgl		12 38 07
		Western USSR.			
		Explosion.			
"	9	Um	iSgl		12 53 52.1
		Western USSR.			
		Explosion.			
"	9	Um	iP		13 32 56.7
		South of Japan (h = 140 km).			
"	9	Ud	iP		15 03 43.7
"	9	Up	iP		15 05 35.2
		Ki	iP		15 05 52.1
			i		15 06 04.2
		Um	iP		15 05 33.2
		Ud	iP		15 05 51.1 D
		De	iP		15 05 47.4
		Pakistan (h = 80 km).			
"	9	Up	iP		19 15 36.6
"	9	Up	iP		19 50 33.2
			i		19 50 40.6
					micr sec
			P	Z'	0.1 1.5
"	9	Um	iP		22 37 09.8
"	10	Ud	iP		00 20 32.2
"	10	Ki	iP		03 43 46.4
		Um	iP		03 43 56.5
		Ud	iP		03 44 19.6
		Formosa (h = 55 km).			
"	10	Up	iP		04 35 46.7
		Um	iP		04 35 40.2
		Ud	iP		04 36 00.9
		Burma-India (h = 70 km).			

1973					
Feb.	10	Up	iP		04 39 57.7
		Ki	iP		04 39 57.2
		Um	iP		04 39 54.4
		Ud	iP		04 40 09.4
"	10	Up	iP		05 23 59.7
			ipP		05 24 14.2
					micr sec
			P	Z'	0.1 0.9
		Ki	iP		05 23 23.1
			i		05 23 29.8
			ipP		05 23 38.3
		Sk	iP		05 23 56.8
		Um	iP		05 23 38.5
			ipP		05 23 54.2
		Ud	iP		05 24 07.1
			ipP		05 24 22.2
		De	iP		05 24 21.0
			ipP		05 24 34.7
		Japan.			
		h = 55 km (Up,Ki,Um,Ud,De).			
"	10	Um	i(Sgl)		06 26 13.6
"	10	Ud	iP		06 39 43.6
"	10	Ud	iP		07 00 38.0
"	10	Ki	i(P)		07 15 01.4
"	10	Um	i(Sgl)		08 04 52.4
"	10	Ud	iP		10 24 54.4
"	10	Ud	ePKP1		11 07 31
		De	iPKP1		11 07 40.3
			i		11 07 44.7
			i		11 07 56.4
		Tonga Islands (h = N).			
"	10	Ki	iP		11 08 01.2
		Um	iP		11 08 17.5
		Japan (h = 60 km).			
"	10	Ud	i(Sgl)		11 35 31.3
"	10	Up	iSgl		11 44 19.7
		Ki	iSgl		11 42 16.7
		Sk	eS*		11 42 20
			iSgl		11 42 23.1
		Um	iSn		11 42 30.7
			iSgl		11 42 43.9
		Ud	iSgl		11 44 10.2
		Nordland, Norway, $66.5^{O}N$, $14.1^{O}E$.			
		Origin time = 11 40 48.			
		Explosion.			

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

1973
Feb. 10 Up iPl 12 06 16.7
iP2 12 06 18.3
iS 12 16 48
micr sec
P2 Z' 0.1 1.3
Mx E 2.9 17
Mx N 5.1 17
Mx Z 7.9 17
Ki iPl 12 05 59.0
iP2 12 06 02.3
micr sec
P2 Z' 0.2 1.3
Mx E 8.2 18
Mx N 6.6 17
Mx Z 5.5 16
Sk iPl 12 05 57.6
iP2 12 06 01.2
Um iPl 12 06 09.3
iP2 12 06 12.1
iS 12 16 43
Ud iP2 12 06 10.5
De iPl 12 06 17.8
iP2 12 06 21.0
Mexico (h = N).
m = 6.1, M = 6.2 (Up,Ki).
Double P at Up,Ki,Sk,Um,De,
the second with the biggest
amplitudes.

" 10 Ki iPn 12 44 04.8
iPgl 12 44 14.3
iSn 12 44 53.5
iSgl 12 45 09.4
Um iSgl 12 46 36.3
Northwest USSR-Norway border
region, 69.4°N, 31.1°E.
Origin time = 12 43 00.
Explosion.

" 10 Ki eSgl 12 59 18
Um iSn 12 59 45.4
iSgl 13 00 11.8
Northwest USSR-Finland
border region.
Explosion.

" 10 De iP 13 01 46.9
i 13 01 55.7

" 10 Up iP 14 48 32.2
ipP 14 48 39.4
micr sec
P Z' 0.2 1.1
pP Z' 0.3 1.5
Ki iP 14 48 57.9
micr sec
P Z' 0.4 1.8
(cont.)

1973
Feb. 10 (cont.)
Ki micr sec
Mx E 1.2 18
Sk iP 14 48 59.1
Um iP 14 48 41.6
i 14 48 44.1
ipP 14 48 48.6
Ud iP 14 48 42.1
i 14 48 46.5
i 14 48 50.8
i 14 48 55.7
De iP 14 48 31.0
i 14 48 33.5
i 14 48 43.1
Indian Ocean.
h = 25 km (Up,Um).
m = 6.3 (Up,Ki).

" 10 Um i(Sgl) 16 10 29.7

" 10 Up iP 17 06 14.2
i 17 06 17.7
iPcP 17 06 46.0
micr sec
Mx E 1.0 18
Mx N 2.0 22
Mx Z 2.9 21
Ki iP 17 05 23.4
ipP 17 05 36.8
iPcP 17 06 16.2
micr sec
P Z' 0.1 0.8
Mx E 1.3 19
Mx N 1.7 22
Mx Z 1.0 18
Sk iP 17 06 01.2
i 17 06 04.4
Um iP 17 05 47.0
Ud iP 17 06 19.7
i 17 06 23.2
ipP 17 06 32.6
iPcP 17 06 49.3
De iP 17 06 39.8
Kurile Islands.
h = 50 km (Ki,Ud).
M = 5.3 (Up,Ki).

" 10 Up iP 17 15 01.4
Um iP 17 15 13.2
Ud iP 17 15 17.7 C
i 17 15 22.4
De iP 17 15 04.4
Iran (h = 40 km).

" 10 Up iP 18 16 21.1
ipP 18 16 27.9
(cont.)

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

1973						
Feb.	10	(cont.)				
		Up			micr sec	
			P	Z'	0.1 1.0	
		Ki	iP		18 16 47.6	
					micr sec	
			Mx	E	1.1 20	
			Mx	N	0.5 15	
		Sk	iP		18 16 48.7	
		Um	iP		18 16 31.0	
			ipP		18 16 36.9	
		Ud	iP		18 16 32.0	
			i		18 16 34.3	
			ipP		18 16 38.9	
		De	iP		18 16 21.6	
		Indian Ocean.				
		h = 25 km (Up,Um,Ud).				
"	10	Up	iP		18 48 30.5	
		Um	iP		18 48 37.8	
			i		18 48 46.3	
		Ud	iP		18 48 41.9	
"	10	Ud	iP		19 38 17.4	
"	10	Um	iP		22 02 12.6	
		Ud	iP		22 02 15.2	
"	10	Ud	iP		22 09 07.0	C
"	10	Up	i		22 09 56.4	
		Sk	e		22 09 58	
		Um	iP		22 09 59.7	C
			ipP		22 10 06.1	
		Ud	iP		22 09 29.4	C
		Ascension Island region.				
		h = 25 km (Um).				
"	10	Up	iP		22 19 52.1	C
			ipP		22 19 57.7	
					micr sec	
			P	Z'	0.1 1.0	
		Ki	eP		22 20 15	
		Sk	iP		22 20 10.7	
			ipP		22 20 17.5	
		Um	iP		22 20 00.3	
			ipP		22 20 06.9	
			i		22 20 17.2	
		Ud	iP		22 20 02.4	
			ipP		22 20 09.1	
		De	iP		22 19 50.8	
		Indian Ocean.				
		h = 25 km (Up,Sk,Um,Ud).				
"	10	Ud	iPKP1		22 52 06.0	D
		De	iPKP1		22 52 16.2	
		Tonga-Kermadec Islands				
		(h = 570 km).				

1973					
Feb.	11	Ud	eP		02 18 16
"	11	Ki	eSgl		07 00 08
		Um	iSgl		07 01 03.1
		Northwest USSR.			
		Explosion.			
"	11	Up	iP		09 08 36.2
					micr sec
			P	Z'	0.1 1.4
		Ud	i(P)		09 08 51.2
		De	iP		09 08 13.7
			i		09 08 18.9
		Crete (h = 30 km).			
"	11	Um	iPKP		10 51 07.4
		De	iPKP		10 51 20.5
		New Guinea (h = 80 km).			
"	11	Ki	iP		11 30 56.1
			ipP		11 31 12.5
		Um	iP		11 30 59.8
			i		11 31 08.8
			ipP		11 31 16.8
		Ud	iP		11 31 16.0
		De	iP		11 31 23.4
		Mindanao.			
		h = 60 km (Ki,Um).			
"	11	Um	i(P)		13 03 05.9
		(Turkey).			
"	11	Ud	iP		14 46 53.0
		De	iP		14 46 49.7
		Afghanistan-USSR (h = 100 km).			
"	11	Up	iPKP1		15 04 09.4
			i		15 04 21.3
			ipPKP1		15 04 29.5
		Sk	iPKP1		15 04 06.9
			ipPKP1		15 04 25.7
		Um	iPKP1		15 04 00.5
			ipPKP1		15 04 20.4
		Ud	iPKP1		15 04 09.3
			iPKP2		15 04 14.6
			ipPKP1		15 04 31.5
		De	iPKP1		15 04 21.9
			iPKP2		15 04 29.1
			i		15 04 41.0
			ipPKP1		15 04 42.7
		Kermadec Islands.			
		h = 70 km (Up,Sk,Um,Ud,De).			
"	11	Ud	iPKP		15 09 49.3
		De	iPKP		15 09 57.4
		Fiji Islands (h = 570 km).			

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

1973						
Feb.	12	Ud	iP		03 19 13.7 C	
"	12	Up	iP		04 47 13.0	
"	12	Ud	i(P)		06 56 20.3	
"	12	Ki	eP		12 22 38	
		Ud	iP		12 23 34.4	
		Aleutian Islands (h = 25 km).				
"	12	Up	iSgl		12 32 40.2	
		Um	iSgl		12 32 53.2	
		Ud	iSgl		12 33 44.4	
		Western USSR.				
		Explosion.				
"	12	Ud	i(P)		21 27 13.1	
"	13	Up	iSgl		00 08 22.0	
		Ki	iPn		00 05 47.9	
			iPgl		00 05 51.2	
			iSn		00 06 14.7	
			iSgl		00 06 17.7	
					micr	sec
			Pgl	Z'	0.1	0.5
			Sn	Z'	0.2	0.4
			Sgl	Z'	0.1	0.4
		Sk	eSn		00 06 50	
			iSgl		00 07 00.9	
		Um	iP*		00 05 53.0	
			iPgl		00 05 54.6	
			iSgl		00 06 23.5	
		Ud	iSn		00 07 52.6	
			iSgl		00 08 28.8	
		Near Arjeplog, Swedish Lapland, 66.0°N, 18.3°E.				
		Origin time = 00 05 17.				
		Felt.				
"	13	Ud	i(P)		04 34 33.5	
"	13	Ki	eP		06 32 50	
		Ud	iP		06 32 50.8	
"	13	Sk	i(P)		09 06 50.7	
"	13	Ud	i(Sgl)		10 14 11.8	
"	13	Ki	i(Sgl)		11 03 04.7	
"	13	Ud	i(Sgl)		12 50 05.1	
"	13	Ki	e(Sgl)		13 10 58	
"	13	Up	eP		14 12 49	
		Ki	iP		14 12 34.0	
		(cont.)				

1973						
Feb.	13	(cont.)				
		Ki			micr	sec
			P	Z'	0.1	0.8
		Sk	iP		14 12 54.9	
		Um	iP		14 12 39.1	
		Ud	iP		14 12 58.5	
		Talaud Islands (h = 180 km).				
"	13	Up	iPKP		15 41 15.5	
					micr	sec
			PKP	Z'	0.1	1.0
		Ki	iPKP		15 40 59.3 C	
					micr	sec
			PKP	Z'	0.1	1.1
		Sk	iPKP		15 41 09.6 C	
		Um	i(PKP)		15 41 01.6	
			iPKP		15 41 06.5	
			iSKPl		15 43 45.7	
		Ud	i(PKP)		15 41 04.6	
			iPKP		15 41 16.7	
			iSKPl		15 43 58.9	
		De	i(PKP)		15 41 16.1	
			iPKP		15 41 24.4	
		Fiji Islands (h = 540 km).				
"	13	Ki	eP		15 53 37	
"	13	Ud	eP		18 19 02	
"	13	Um	i(P)		18 24 54.6	
"	13	Ud	i(P)		20 03 31.7	
"	13	Up	iP		20 04 51.2 C	
			i		20 04 53.2	
					micr	sec
			P	Z'	0.2	1.0
		Ki	iP		20 03 58.0 C	
			i		20 03 59.4	
					micr	sec
			P	Z'	0.1	0.6
		Sk	iP		20 04 31.0 C	
		Um	iP		20 04 24.9 C	
			ipP		20 04 39.6	
		Ud	iP		20 04 52.3 C	
			ipP		20 05 06.2	
		De	iP		20 05 13.7 C	
		Aleutian Islands.				
		h = 55 km (Um,Ud).				
		m = 6.1 (Up,Ki).				
"	14	Up	iP		01 01 09.6 C	
					micr	sec
			P	Z'	0.4	0.9
			Mx	E	3.3	19
			Mx	N	4.9	21
			Mx	Z	5.7	17
		(cont.)				

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

1973						
Feb.	14	(cont.)				
		Ki	iP		01 00 46.9 C	
			iPP		01 03 38.1	
					micr	sec
			P	Z'	0.4	0.9
			Mx	E	3.3	15
			Mx	N	3.1	16
			Mx	Z	4.6	16
		Sk	iP		01 01 13.2 C	
		Um	iP		01 00 54.6 C	
			ipP		01 01 07.5	
		Ud	iP		01 01 18.9 C	
		De	iP		01 01 27.0 C	
		Formosa.				
		h = 50 km (Um).				
		m = 6.3, M = 5.9 (Up,Ki).				
"	14	Ki	iPKP		05 09 04.5	
		Fiji Islands (h = 650 km).				
"	14	Ki	iP		07 21 28.3	
			ipP		07 21 37.8	
					micr	sec
			pP	Z'	0.1	1.2
		Sk	iP		07 21 56.8	
		Um	iP		07 21 55.6	
		Ud	iP		07 22 18.6	
		De	iP		07 22 45.5	
		South of Alaska.				
		h = 35 km (Ki).				
"	14	Ud	iP		08 39 50.2	
		Mindoro (h = 230 km).				
"	14	Ud	iPKP1		09 46 19.0	
		De	iPKP1		09 46 29.1	
		Fiji Islands (h = 600 km).				
"	14	Ki	iPKP		09 51 34.4	
		Ud	iPKP		09 51 50.3	
		Solomon Islands (h = 60 km).				
"	14	Ki	iPn		11 33 59.4	
			iPgl		11 34 07.4	
			iSn		11 34 45.7	
			iS*		11 34 58.0	
		Um	iSgl		11 36 33.3	
		Northwest USSR-Norway border region, 69.6°N, 30.1°E.				
		Origin time = 11 32 58.				
		Explosion.				
"	14	Ud	iP		12 07 09.4	
"	14	Ud	eP		12 36 14	
			ipP		12 36 56.9	
		De	iP		12 36 11.2	
		(cont.)				

1973						
Feb.	14	(cont.)				
		Hindu Kush.				
		h = 210 km (Ud).				
"	14	Ud	ePP		15 40 45	
		Banda Sea (h = 15 km).				
"	14	Up	iPKP1		16 30 58.5	
			iPKP2		16 31 03.9	
			ipPKP1		16 31 09.7	
					micr	sec
			PKP1	Z'	0.2	1.3
			PKP2	Z'	0.2	1.1
			pPKP1	Z'	0.3	0.9
			Mx	E	2.4	18
			Mx	N	3.2	18
			Mx	Z	6.5	20
		Ki	iPKP1		16 30 36.7	
			ipPKP1		16 30 48.0	
					micr	sec
			pPKP1	Z'	0.1	0.8
			Mx	E	4.4	17
			Mx	N	5.3	20
			Mx	Z	7.9	21
		Sk	iPKP1		16 30 51.3	
			ipPKP1		16 31 05.6	
		Um	iPKP1		16 30 46.5	
			i		16 30 48.1	
			ipPKP1		16 31 00.0	
		Ud	iPKP1		16 30 59.9	
			i		16 31 01.5	
			ipPKP1		16 31 11.6	
		De	iPKP1		16 31 09.4	
			ipPKP1		16 31 22.6	
		Kermadec Islands.				
		h = 45 km (Up,Ki,Sk,Um,Ud, De).				
		M = 6.3 (Up,Ki).				
"	14	Ki	iP		16 34 11.4	
			i		16 34 19.9	
		Sk	iP		16 34 54.1	
"	14	Up	iPKP1		16 46 53.9	
		Sk	epPKP1		16 47 01.6	
		Um	iPKP1		16 46 40.3	
		Ud	iPKP1		16 46 55.2	
		De	iPKP1		16 47 04.3	
		Kermadec Islands.				
		Origin time = 16 27 10.				
"	14	Um	iP		17 00 57.1	
"	14	Ki	i(P)		20 46 09.7	
"	14	Up	iP		21 57 11.4	
		(cont.)				

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

1973					
Feb.	14	(cont.)			
		Up			micr sec
			P	Z'	0.1 1.1
		Ki	iP		21 56 30.0
			ipP		21 56 47.6
		Sk	iP		21 57 06.3
			ipP		21 57 21.9
		Um	iP		21 56 49.4
			ipP		21 57 05.4
		Ud	iP		21 57 23.6
			ipP		21 57 36.4
		De	iP		21 57 40.8
		Japan.			
		h = 55 km (Ki,Sk,Um,Ud).			
"	14	Up	iP		22 47 39.0
		Ki	iP		22 46 59.4
		Sk	iP		22 47 33.0
		Um	iP		22 47 16.9 C
		Ud	iP		22 47 45.7 C
		De	iP		22 48 00.6 C
		Japan (h = 55 km).			
"	14	Ud	iP		22 55 13.7
"	14	Ud	i(P)		23 16 30.5
"	15	Ud	iP		00 28 27.2
		Nicaragua (h = N).			
"	15	Ud	ePKP2		01 00 13
		Kermadec Islands (h = N).			
"	15	Up	ipPKP1		04 19 57.2
		Um	iPKP1		04 19 29.7
		Ud	iPKP1		04 19 43.5
			iPKP2		04 19 48.1
			ipPKP1		04 19 56.0
		De	iPKP2		04 20 04.7
		Kermadec Islands.			
		h = 45 km (Ud).			
"	15	Up	iP		05 44 14.5 C
			ipP		05 44 33.1
					micr sec
			P	Z'	0.1 1.0
		Ki	iP		05 44 13.7 C
					micr sec
			P	Z'	0.3 1.5
		Sk	iP		05 44 27.7 C
		Um	iP		05 44 11.4 C
			ipP		05 44 29.4
		Ud	iP		05 44 24.2
		De	iP		05 44 26.1
		Sumatra.			
		h = 70 km (Up,Um).			
		m = 6.3 (Up,Ki).			

1973					
Feb.	15	Ud	i(P)		05 48 15.5
"	15	Up	eP		07 38 59
		Ki	iP		07 38 00.8
		Ud	iP		07 38 59.0
		De	eP		07 39 22
		Kamchatka (h = 45 km).			
"	15	Up	iP		07 56 25.0
		Sk	iP		07 56 10.1
		Um	iP		07 56 26.4
		South of Panama (h = N).			
"	15	Ud	iPKP		08 13 37.7
		Southeast Pacific Ocean			
		(h = N).			
"	15	Ki	i(P)		10 32 45.5
"	15	Um	iP		10 59 14.9
"	15	Up	ePKP1		11 26 42
		Um	iPKP1		11 26 31.7
			i		11 26 52.7
		Ud	iPKP1		11 26 45.2
		Kermadec Islands (h = 25 km).			
"	15	Ud	iP		11 39 03.2
"	15	Up	iSg1		12 08 13.6
		De	iPg1		12 06 13.5
			iSg1		12 06 32.3
			iTSg1		12 06 54.3
		Baltic Sea, south of Sweden.			
		Origin time = 12 05 50.			
		Explosion.			
"	15	Ud	eSg1		12 08 26
		De	iPg1		12 06 25.5
			iSg1		12 06 41.8
		Baltic Sea, south of Sweden.			
		Origin time = 12 06 00.			
		Explosion.			
"	15	Ki	iP		12 52 59.0
"	15	Um	iP		13 21 38.4
		De	iP		13 21 03.3
"	15	Up	iPKP2		13 34 59.4
					micr sec
			PKP2	Z'	0.1 1.0
		Sk	iPKP2		13 34 50.9
		Um	iPKP1		13 34 39.9
		Ud	iPKP1		13 34 52.9
			ipPKP1		13 35 04.6
		De	iPKP2		13 35 14.2
		(cont.)			

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

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1973
Feb.  15   (cont.)
           De   ipPKPl       13 35 20.0
           Kermadec Islands.
           h = 40 km (Ud).

 "    15   Ki   iP           15 20 24.4
           Ud   iP           15 19 56.0

 "    15   Sk   iP           16 02 08.4

 "    15   Ki   eP           17 27 07
           Hindu Kush.
           Intermediate depth.

 "    15   Up   iP           21 29 51.3
                i            21 29 56.0
                             micr  sec
                P         Z' 0.1   1.0
           Sk   iP           21 30 33.8
           Um   iP           21 30 31.6
           Ud   iP           21 29 57.9
                i            21 30 02.3
           De   iP           21 29 21.3
           Greece (h = N).

 "    15   Up   iP           22 28 31.7 C
           Ki   iP           22 27 42.6 C
           Sk   iP           22 28 18.8
           Um   iP           22 28 05.5 C
           Ud   iP           22 28 36.9 C
           De   iP           22 28 56.1 C
           Kurile Islands (h = N).

 "    16   Ud   iPKPl        00 09 07.5
           De   ePKPl        00 09 17

 "    16   Sk   iP           01 44 34.1
           Ud   eP           01 44 25

 "    16   Ud   iP           05 00 22.7

 "    16   Up   iP           05 09 52.5 C
                iPP          05 11 11.3
                             micr  sec
                P         Z' 0.1   0.8
                PP        Z' 0.1   1.1
           Ki   iP           05 09 37.1 C
                iPn          05 10 30.5
                             micr  sec
                P         Z' 0.2   0.8
           Sk   iP           05 10 08.3 C
                iPP          05 11 30.0
           Um   iP           05 09 37.4 C
           Ud   iP           05 10 09.1 C
                iPn          05 11 21.7
           De   iP           05 10 17.3 C
           (cont.)

1973
Feb.  16   (cont.)
           De   iPn          05 11 30.9
                iPP          05 11 43.1
           Kazakh SSR.
           m = 6.0 (Up,Ki).
           Underground explosion.

 "    16   Up   iPKP         05 10 16.4
                             micr  sec
                PKP       Z' 0.1   1.2
           Ki   ePKP         05 10 02
           Um   iPKP         05 10 05.3
           Ud   iPKP         05 10 17.2
           De   i(PKP)       05 10 15.4
           Tonga Islands (h = 50 km).

 "    16   Up   iP           07 39 51.2
           Sk   iP           07 40 03.3
           Um   iP           07 39 38.1
           Ud   iP           07 40 04.1
           Szechwan, China (h = N).

 "    16   Up   eSgl         08 32 25
           Ki   iPn          08 28 08.4
                iPgl         08 28 21.7
                iSn          08 29 06.6
                iS*          08 29 24.9
                iSgl         08 29 30.9
           Sk   iSgl         08 31 54.2
           Um   iSn          08 29 46.2
                i            08 30 01.3
                iSgl         08 30 21.4
           Ud   iSgl         08 32 55.3
           Northwest USSR,
           67.9°N, 34.0°E.
           Origin time = 08 26 51.
           Explosion.

 "    16   Up   iRg          08 31 35.0
           Ud   iRg          08 31 39.4
           Central Sweden.

 "    16   Ki   iSn          08 32 43.2
                iS*          08 33 02.6
           Sk   eSgl         08 35 32
           Um   iSn          08 33 23.4
                i            08 33 38.4
                iSgl         08 33 59.4
           Northwest USSR.
           Explosion.

 "    16   Ki   iSgl         10 18 43.6
           Um   iSgl         10 17 55.7

 "    16   Up   iSn          11 13 02.7
                iSgl         11 13 14.6
           (cont.)
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Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973

Feb. 16 (cont.)

		Um	iSgl	11 13 48.8
		Ud	iSgl	11 14 16.8
		De	iSgl	11 14 45.0

Esthonia, 59.6°N, 24.6°E.
Origin time = 11 11 23.
Explosion.

"	16	Up	iPKP2	12 14 07.7
				micr sec
			PKP2 Z'	0.1 1.2
		Ki	ePKP	12 13 47
		Sk	iPKP2	12 14 01.8
		Um	iPKP1	12 13 49.8
			i	12 13 56.3
		Ud	iPKP1	12 14 03.4
			iPKP2	12 14 09.0
		De	iPKP2	12 14 23.1
			ipPKP1	12 14 30.5

Kermadec Islands (h = 40 km).

"	16	Up	iSgl	12 37 55.0
		Sk	eSgl	12 37 53
		Um	eSgl	12 39 15
		Ud	iSgl	12 36 55.7
		De	eSgl	12 37 08

South Norway,
58.7°N, 6.6°E.
Origin time = 12 34 54.
Solution obtained by combination with Bergen readings.

"	16	Up	iSgl	13 49 43.4
		Ki	eSgl	13 51 36
		Sk	eSgl	13 51 21
		Um	iSgl	13 49 55.4
		Ud	iSgl	13 50 42.4
		De	eSgl	13 51 07

Western USSR,
59.4°N, 28.2°E.
Origin time = 13 46 53.
Explosion.

"	16	Up	iP	13 59 01.7
		Ki	iP	13 59 03.6
		Sk	eP	13 59 18
		Um	iP	13 58 59.2
			ipP	13 59 05.5
			i	13 59 15.5
		Ud	iP	13 59 13.3
			ipP	13 59 19.8
		De	iP	13 59 10.3

Nicobar Islands.
h = 25 km (Um,Ud).

"	16	Ud	i(P)	15 18 52.4

1973

Feb.	16	Up	iSgl	15 21 46.0
		Ki	iSgl	15 22 34.2
		Sk	iSgl	15 22 58.3
		Um	iSgl	15 21 10.8
		Ud	iSgl	15 22 48.2

Lake Ladoga region.
Explosion?

"	16	Ud	iP	21 13 46.7
"	16	Ud	iP	21 16 58.5
"	16	De	ePKP	23 57 13

New Britain (h = 80 km).

"	17	Up	iS*	00 22 02.4
			iSgl	00 22 09.8
		Ki	e(S*)	00 21 25
		Sk	iPgl	00 19 11.7
			iSn	00 19 40.5
			iSgl	00 19 55.9
		Um	i(Sn)	00 20 51.9
			iS*	00 21 27.7
			iSgl	00 21 35.4
		Ud	iSgl	00 21 24.7

Off coast of west Norway,
65.1°N, 5.6°E.
Origin time = 00 18 14.

"	17	Sk	i(P)	01 11 35.5
"	17	Sk	i(P)	02 52 00.5
"	17	Ki	i(P)	07 37 31.6
"	17	Up	ipP	16 14 05.9
		Ki	iP	16 14 04.0
				micr sec
			P Z'	0.1 1.5
		Sk	iP	16 13 40.4
			ipP	16 13 50.9
		Um	iP	16 14 03.3
			ipP	16 14 13.3
			iS	16 23 16
		Ud	iP	16 13 42.4 C
		De	iP	16 13 42.7 C
			i	16 13 56.4

Leeward Islands.
h = 35 km (Sk,Um).

"	17	Up	iP	19 25 57.1
				micr sec
			P Z'	0.1 0.6
		Ki	iP	19 25 09.9
				micr sec
			P Z'	0.1 0.9
		Sk	iP	19 25 45.9

(cont.)

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

1973
Feb. 17 (cont.)
Um iP 19 25 31.6 C
Ud iP 19 26 02.8 C
De iP 19 26 20.6
Kurile Islands (h = 110 km).
m = 5.8 (Up,Ki).

" 17 Ki eP 19 45 04
iS 19 46 12.2
iTSg 19 50 46.8
Sk eP 19 45 33
iS 19 47 15.0
Um iP 19 45 51.5
Ud iP 19 46 20.7
Norwegian Sea, near
72^{o}N, 4^{o}E.
Origin time = 19 43 18.

" 17 De iP 22 18 11.7

" 18 Um iP 03 59 07.6
Banda Sea (h = 80 km).

" 18 Um iPP 04 07 19.9
South Atlantic Ocean (h = N).

" 18 Ud iP 04 16 03.9

" 18 Up iSgl 05 22 20.0
Ki iSn 05 19 03.0
iSgl 05 19 30.2
Sk eSgl 05 21 51
Um iSgl 05 20 17.9
Northwest USSR.
Explosion.

" 18 Ki eP 05 26 01
Um iP 05 26 31.1
South of Alaska (h = N).

" 18 Ud iPKP1 06 42 03.6 C
De iPKP1 06 42 14.9

" 18 Up ipPKP1 07 51 45.3
Sk ipPKP1 07 51 36.2
Um iPKP1 07 51 23.8
ipPKP1 07 51 33.4
Ud iPKP1 07 51 37.3
ipPKP1 07 51 46.4
De ipPKP1 07 51 55.3
Kermadec Islands.
h = 30 km (Um,Ud).

" 18 Up iSgl 08 09 27.3
Ki ePn 08 05 13
iSn 08 06 10.1
(cont.)

1973
Feb. 18 (cont.)
Ki iSgl 08 06 32.4
Sk iS* 08 08 55.7
iSgl 08 09 02.8
Um iSn 08 06 50.8
i 08 07 04.7
i(S*) 08 07 22.5
iSgl 08 07 26.7
Ud iSgl 08 09 56.7
Northwest USSR,
67.9^{o}N, 33.7^{o}E.
Origin time = 08 03 56.
Explosion.

" 18 Ki eP 12 18 39

" 18 Up iPKP1 12 20 02.5
Sk ipPKP1 12 20 07.6
Um ePKP1 12 19 51
Ud iPKP1 12 20 04.1
De iPKP1 12 20 15.2
Kermadec Islands.
Origin time = 12 00 19.

" 18 Up iPKP2 13 59 28.2
Sk ePKP1 13 59 15
Um iPKP1 13 59 12.3
Ud iPKP 13 59 21.2
iPKP1 13 59 25.4
De iPKP1 13 59 35.0
Kermadec Islands (h = N).

" 18 Ki i 18 04 18.9
Ud iP 18 04 32.1
Mindanao (h = 70 km).

" 18 Up iPKP1 18 29 08.2
i 18 29 15.4
micr sec
PKP1 Z' 0.1 1.2
i Z' 0.1 0.8
Ki i(PKP) 18 28 44.3
iPKP 18 28 52.0
i 18 29 05.3
micr sec
PKP Z' 0.1 1.1
Mx E 1.8 20
Mx N 1.6 19
Mx Z 1.7 19
Sk iPKP1 18 29 02.2
i 18 29 10.2
Um iPKP1 18 28 56.3
Ud iPKP1 18 29 09.7
i 18 29 16.7
De iPKP1 18 29 17.9
i 18 29 25.3
(cont.)

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

1973
Feb. 18 (cont.)
De iPKP2 18 29 30.8
i 18 29 38.3
Kermadec Islands (h = 50 km).
Double PKP1, in average
7.4 sec apart.

" 18 Up ePKP1 20 32 53
ipPKP1 20 33 02.7
micr sec
pPKP1 Z' 0.1 1.0
Sk e(PKP1) 20 32 50
Um iPKP1 20 32 40.3 D
Ud iPKP1 20 32 53.2
ipPKP1 20 33 03.9
De iPKP2 20 33 12.7
Kermadec Islands.
h = 35 km (Up,Ud).

" 18 Up eP 21 06 12
Um iP 21 05 58.4
Ud iP 21 06 09.3
De iP 21 06 24.3

" 18 Up eP 21 46 30
Ki iP 21 46 29.3
i 21 46 31.7
Sk iP 21 46 55.7
Um iP 21 46 22.9
Ud iP 21 46 46.1 C
i 21 46 48.9
Kirghiz-Sinkiang (h = N).

" 18 De iP 22 00 02.0

" 18 Um i(PKP) 22 20 37.7
iPKP1 22 20 50.8
Ud ePKP1 22 21 03
De ePKP1 22 21 11

" 19 Um iP 01 57 57.1

" 19 Sk eP 05 39 32

" 19 Up Mx 09 45
micr sec
Mx E 2.4 18
Mx N 2.2 18
Mx Z 4.4 23
Ki Mx 09 51
micr sec
Mx E 3.6 18
Mx N 2.4 17
Mx Z 4.3 20
Prince Edward Island
(h = N).
M = 6.1 (Up,Ki).

1973
Feb. 19 Ud iP 10 03 20.7

" 19 Up iRg 11 16 27.1
Ud iRg 11 16 02.1
Central Sweden, probably
in the Bergslagen mining
area.

" 19 Ki eP 16 36 02
Okhotsk Sea.
Deep.

" 19 Ud iP 17 44 15.7
Tibet.

" 19 Up iP 18 14 55.1
micr sec
P Z' 0.1 1.2
Ki iP 18 15 56.3
Sk iP 18 15 41.1
Um iP 18 15 22.6
Ud iP 18 15 11.0
De iP 18 14 41.0
Turkey (h = 20 km).

" 19 Ud iPKP2 20 28 21.2
South Pacific Ocean (h = N).

" 19 Up iP 23 10 36.2
Ud iP 23 10 52.8
Afghanistan-USSR (h = 110 km).

" 19 Ud iP 23 59 06.4

" 20 Up iPg1 00 05 15.0
iSg1 00 05 20.1
iRg 00 05 24.2
Ud iSg1 00 06 13.6
Probably ore mine explosion
at Dannemora, Uppland,
Sweden, 60.1°N, 17.5°E.
Origin time = 00 05 08.

" 20 Up eP 01 17 33

" 20 Up i 06 00 59.5
iPP 06 01 12.9
Sk eP 06 01 22
Ud iP 06 00 49.7
De iP 06 00 17.3
Crete (h = 20 km).

" 20 Up iP 07 50 54.6
ipP 07 51 00.2
micr sec
pP Z' 0.1 1.2
(cont.)

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

1973						
Feb.	20	(cont.)				
		Ki	iP		07 49 59.9	
			ipP		07 50 05.7	
					micr	sec
			pP	Z'	0.2	1.1
		Sk	eP		07 50 26	
			ipP		07 50 31.9	
		Um	iP		07 50 28.9	
			ipP		07 50 34.7	
		Ud	eP		07 50 52	
			ipP		07 50 56.8	
		De	iP		07 51 14.7	
			ipP		07 51 20.1	
			i		07 51 39.6	
		Gulf of Alaska.				
		h = 20 km (Up,Ki,Sk,Um,Ud, De).				
"	20	Up	iP		11 43 03.8	
			iPP		11 43 14.5	
		Ki	iP		11 44 08.2	
		Um	iP		11 43 35.4	
		Ud	iP		11 43 23.9	
			iPP		11 43 37.2	
		De	iP		11 42 56.9	
			iPP		11 43 16.0	
		Crimea (h = 15 km).				
"	20	Ki	eP		12 39 26	
		Ud	eP		12 39 09	
"	20	Up	iP		14 23 40.1	
		Um	iP		14 23 20.1	
		Ud	iP		14 23 47.3	
		Japan (h = 400 km).				
"	20	Up	i(P)		15 21 11.4	
"	20	Up	ePKP1		21 26 50	
		Um	iPKP1		21 26 38.5	
		Ud	iPKP1		21 26 52.4	
		Kermadec Islands (h = N).				
"	21	Sk	iP		01 20 30.1	
		Ud	iP		01 19 55.4	
		Greece (h = N).				
"	21	Up	iP		08 33 14.5	
			i		08 33 16.0	
					micr	sec
			P	Z'	0.1	0.7
		Ki	eP		08 33 00	
		Um	iP		08 33 02.7	
		Ud	iP		08 33 29.0	
		Szechwan, China (h = N).				
"	21	Um	iP		09 24 55.6	

1973						
Feb.	21	Up	iP		09 48 03.3	
		Ki	iP		09 47 34.3	
		Um	iP		09 47 47.1	
			ipP		09 48 13.6	
		Ud	iP		09 48 10.4	
		Volcano Islands.				
		h = 100 km (Um).				
"	21	Um	i(PKP)		12 32 59.4	
			iPKP		12 33 11.9	
		Ud	iPKP		12 33 22.1	
		De	iPKP		12 33 26.0	
		New Britain (h = 90 km).				
"	21	Um	iSgl		13 04 15.3	
		Western USSR.				
		Explosion.				
"	21	Um	i(Sgl)		13 20 31.7	
"	21	Ki	i(Sn)		14 45 28.4	
		Um	e(Sgl)		14 47 50	
"	21	Up	iP		14 58 05.2 C	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	2.7	18
			Mx	N	5.4	17
			Mx	Z	8.2	18
		Ki	iP		14 57 32.8 C	
			i		14 57 53.0	
					micr	sec
			Mx	E	7.8	15
			Mx	N	6.0	16
			Mx	Z	6.9	15
		Sk	iP		14 57 40.1 C	
		Um	iP		14 57 51.2 C	
			i		14 58 11.3	
		Ud	iP		14 57 57.6 C	
		De	iP		14 58 13.9 C	
		California (h = 10 km).				
		M = 6.1 (Up,Ki).				
"	21	Up	iPKP2		15 02 35.4	
			ipPKP2		15 02 48.8	
		Ki	iPKP1		15 02 05.2	
					micr	sec
			PKP1	Z'	0.1	1.0
		Sk	ePKP		15 02 08	
		Um	iPKP1		15 02 12.5	
			ipPKP1		15 02 25.4	
		Ud	iPKP2		15 02 40.7	
			ipPKP2		15 02 53.1	
		De	ePKP2		15 02 54	
		New Zealand.				
		h = 45 km (Up,Um,Ud).				

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

1973					
Feb.	21	Ki	i(Sgl)	15 47 15.1	
"	21	Um	i(P)	15 48 57.8	
			i	15 49 04.8	
"	21	Um	iP	16 53 28.7	
		Ud	iP	16 53 36.0	
		Caucasus.			
"	21	Up	iP	18 54 47.3	
		Um	iP	18 54 27.3	
		Ud	iP	18 54 54.3	
		South of Japan (h = N).			
"	21	Ki	iP	21 43 59.3	
"	22	Ki	eP	00 42 45	
				micr sec	
			P Z'	0.1 1.2	
		Sk	iP	00 42 36.6	D
		Um	iP	00 42 52.0	D
		Ud	iP	00 42 44.3	
		Guatemala (h = 110 km).			
"	22	Ud	iPn	09 18 42.2	
			iSn	09 19 32.3	
			iSgl	09 19 54.7	
"	22	Um	iP	11 36 31.9	
"	22	Up	eSn	11 38 25	
			iSgl	11 38 37.3	
		Ki	iSgl	11 41 14.4	
		Sk	iSg2	11 40 37.1	
		Um	iSgl	11 39 12.3	
		Ud	eSgl	11 39 43	
		De	iSgl	11 40 08.9	
		Esthonia, 59.7°N, 24.4°E.			
		Origin time = 11 36 49.			
		Explosion.			
"	22	Up	iSgl	12 34 55.6	
		Ki	eSgl	12 36 52	
		Um	iSgl	12 35 15.2	
		De	eSgl	12 36 29	
		Western USSR.			
		Explosion.			
"	22	Ki	i(P)	12 35 30.8	
"	22	Um	iPKP1	14 35 54.3	
			i	14 36 05.4	
		Ud	iPKP1	14 36 08.6	
"	22	Up	iSgl	14 55 24.4	
		Ki	iPgl	14 52 44.0	
		(cont.)			
1973					
Feb.	22	(cont.)			
		Ki	iSgl	14 53 19.7	
		Sk	iS*	14 53 23.5	
			iSgl	14 53 26.9	
		Um	iPgl	14 52 59.5	
			iSn	14 53 33.6	
			iSgl	14 53 46.4	
		Ud	iSgl	14 55 13.1	
		Nordland, Norway, 66.4°N, 14.8°E.			
		Origin time = 14 51 58.			
		Explosion.			
"	22	Um	iP	15 37 35.0	
		Ud	eP	15 37 44	
"	22	Um	iPKP	16 40 50.5	
			ipPKP	16 41 27.2	
		Ud	ePKP	16 40 56	
		New Britain.			
		h = 140 km (Um).			
"	22	Um	eP	18 27 09	
		Tsinghai, China (h = N).			
"	22	Up	iPKP1	20 23 36.1	
				micr sec	
			PKP1 Z'	0.1 1.4	
		Sk	iPKP1	20 23 29.2	
		Um	iPKP1	20 23 24.6	
			i	20 23 36.4	
		Ud	iPKP1	20 23 38.0	
			i	20 23 49.0	
		Kermadec Islands (h = 80 km).			
"	22	Ki	eP	20 29 51	
		Um	iP	20 30 11.6	
		Sea of Japan (h = 230 km).			
"	22	Ud	iP	22 51 00.2	
"	22	Ud	eP	23 28 20	
"	23	Um	iPKP	00 09 50.0	
		Santa Cruz Islands (h = 50 km).			
"	23	Ki	eP	03 20 21	
			iS	03 21 29.5	
		Sk	iP	03 20 45.2	
			iS	03 22 27.5	
		Um	iP	03 20 59.8	
		Norwegian Sea.			
		Solution checked with Tromsö readings.			

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

1973						
Feb.	23	Up			micr	sec
			Mx	E	1.5	20
			Mx	N	2.0	22
			Mx	Z	2.0	21
		Ki			micr	sec
			Mx	E	2.2	20
			Mx	N	1.8	20
			Mx	Z	2.1	21
		Um	iP		04 39 42.6	
			iS		04 50 59	
		Ud	i(pP)		04 39 41.4	
		Ecuador (h = 70 km).				
		M = 5.8 (Up,Ki).				
"	23	Ud	i(P)		06 27 50.3	
"	23	Um	iP		07 12 53.4	
		Ud	iP		07 13 24.0	
		Kurile Islands.				
"	23	Um	i(Sgl)		08 31 24.8	
"	23	Up	iSgl		08 40 29.0	
		Ki	iPn		08 36 17.5	
			iSn		08 37 15.5	
			iSgl		08 37 38.6	
		Sk	iSgl		08 40 03.6	
		Um	iSn		08 37 56.6	
			i		08 38 10.5	
			iSgl		08 38 32.3	
		Northwest USSR, 67.8°N, 33.9°E.				
		Origin time = 08 35 00.				
		Explosion.				
"	23	Ki	iPgl		08 39 19.7	
			iSn		08 40 02.8	
			i		08 40 10.8	
			iSgl		08 40 25.1	
		Sk	iSgl		08 42 54.1	
			i		08 43 01.1	
		Um	iSn		08 40 46.0	
			iSgl		08 41 19.6	
		Northwest USSR, from the same area as the preceding event.				
		Origin time = 08 37 47.				
		Explosion.				
"	23	Ud	iP		09 50 48.2	
"	23	Up	iP		10 53 44.7	
			i		10 53 49.3	
		Ki	eP		10 53 39	
		Sk	iP		10 54 01.3	
		Um	iP		10 53 33.6	
			i		10 53 38.4	
		(cont.)				

1973				
Feb.	23	(cont.)		
		Ud	iP	10 53 59.6
		De	iP	10 54 07.0
		Sinkiang, China (h = N).		
"	23	Um	iPKP	11 27 01.4
			i	11 27 11.9
		New Britain (h = 20 km).		
"	23	Up	iSgl	12 38 11.3
		Um	iS*	12 38 24.5
			iSgl	12 38 29.5
		Ud	iSgl	12 39 15.5
		De	i	12 38 23.0
			i	12 38 35.3
			iSgl	12 39 39.5
		Western USSR.		
		Explosion.		
"	23	Up	iSgl	12 45 37.6
			i	12 45 46.8
		Um	iSgl	12 47 52.8
		Ud	iSgl	12 45 42.6
		De	iPgl	12 43 37.9
			iSgl	12 43 54.2
		Baltic Sea, south of Sweden, 55.5°N, 15.0°E.		
		Origin time = 12 43 18.		
		Explosion.		
"	23	Sk	eP	12 49 57
"	23	Ud	iPKP	13 31 49.1
		Santa Cruz Islands (h = N).		
"	23	Ud	iP	16 33 23.7
		Talaud Islands (h = 140 km).		
"	23	Up	iP	19 49 32.1
			i	19 49 37.4
		Um	iP	19 49 33.0
			i	19 49 40.1
		Ud	iP	19 49 22.3
		De	iP	19 49 26.8
			i	19 49 31.9
		Costa Rica (h = N).		
"	23	Up	eP	20 15 28
		Um	eP	20 15 28
		(Costa Rica).		
"	23	Um	iP	20 58 24.0
		Japan (h = 420 km).		
"	23	Up	eP	21 12 44
		Ud	iP	21 12 32.3

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

1973						
Feb.	23	Up	iPKPl		21 15 59.2	
			i		21 16 18.6	
		Ki	iSKPl		21 18 31.5	
		Um	iPKPl		21 15 46.8	
			e		21 15 57	
			iSKPl		21 18 42.4	
		Ud	iPKPl		21 16 01.1	
			i		21 16 17.7	
			iSKPl		21 18 54.1	
		De	iPKPl		21 16 12.0	
			i		21 16 27.8	
		Tonga-Kermadec Islands (h = 520 km).				
"	24	Up	iP		00 10 07.0	
					micr sec	
			P	Z'	0.1 0.9	
		Ki	iP		00 10 44.1	C
					micr sec	
			P	Z'	0.1 0.7	
		Sk	iP		00 10 41.7	
		Um	iP		00 10 20.6	C
		Ud	iP		00 10 21.6	C
		De	iP		00 10 04.0	
		Iran (h = 25 km). m = 5.6 (Up,Ki).				
"	24	Um	iP		02 09 49.3	
		Hindu Kush (h = 230 km).				
"	24	Um	iP		02 18 15.6	
		Japan.				
"	24	Up	i(PKP)		07 57 31.1	
			iPKP		07 57 39.7	
			iSKPl		08 01 08.2	
		Ki	iPKP		07 57 24.8	
					micr sec	
			PKP	Z'	0.2 1.0	
		Sk	i(PKP)		07 57 26.9	
			iPKP		07 57 36.6	
		Um	i(PKP)		07 57 22.9	
			iPKP		07 57 31.4	
		Ud	i(PKP)		07 57 33.1	
			iPKP		07 57 41.9	
		De	i(PKP)		07 57 36.4	
			i(PKP)		07 57 39.5	
			iPKP		07 57 47.6	
		New Hebrides Islands (h = 60 km).				
"	24	Ud	iP		08 46 09.5	C
"	24	Um	iP		09 23 50.0	
		Tadzhik SSR (h = 230 km).				
"	24	Ki	iP		14 45 45.6	
		(cont.)				

1973						
Feb.	24	(cont.)				
		Ud	iP		14 46 15.1	C
		Luzon (h = 40 km).				
"	24	Um	iP		16 24 29.3	
		Ud	iP		16 23 42.3	
"	24	Um	iSKPl		17 55 39.6	
		Fiji Islands (h = 640 km).				
"	24	Sk	iSgl		18 23 45.1	
		Ud	eSgl		18 23 48	
		South Norway, 61.2°N, 7.4°E. Origin time = 18 22 06. By combination with Bergen readings.				
"	24	Ki	iP		20 05 35.3	
"	24	Ki	ePKP		20 38 33	
		Um	iPKP		20 38 40.7	
		New Hebrides Islands (h = 45 km).				
"	24	Up	iP		22 04 18.3	
		Ki	iP		22 03 41.5	
		Um	iP		22 03 57.4	
			iPcP		22 04 13.9	
		Ud	iP		22 04 25.9	C
		Japan (h = 35 km).				
"	24	Up	iP		22 05 33.0	
		Ki	eP		22 05 50	
		Um	iP		22 05 34.6	
		Ud	iP		22 05 45.7	
		Pakistan (h = 55 km).				
"	24	Ki	eP		00 00 35	
	-25	Ud	iP		23 59 31.3	
		De	eP		23 59 00	
		Crete (h = 50 km).				
"	25	Up	eP		02 02 45	
		Sk	eP		02 03 45	
		Um	eP		02 03 48	
		Ud	iP		02 02 55.9	
		De	iP		02 02 10.7	
"	25	Up	iP		02 07 16.4	
					micr sec	
			P	Z'	0.1 1.0	
		Um	iP		02 08 57.4	
		Ud	iP		02 07 56.3	
		These phases belong probably to the preceding event.				

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

1973						
Feb.	25	Um	i(P)		03 54 22.3	
"	25	Ud	i(P)		04 15 22.6	
"	25	Um	i(P)		04 55 49.6	
"	25	Up	iPKP		05 54 56.6	
			iPP		05 57 00.2	
			iSKP1		05 58 15.6	
					micr	sec
			PKP	Z'	0.5	1.5
			PP	Z'	0.6	1.9
			SKP1	Z'	0.3	2.0
			Mx	E	2.7	18
			Mx	N	2.6	18
			Mx	Z	4.1	17
		Ki	i(PKP)		05 54 59.1	
			iPKP		05 55 11.0	
			e(PP)		05 57 28	
			iPP		05 57 47.8	
			iSKP1		05 58 36	
					micr	sec
			PKP	Z'	0.2	1.7
			PP	Z'	0.5	1.9
			Mx	E	3.7	20
			Mx	N	2.3	19
			Mx	Z	6.4	19
		Sk	iPKP		05 55 02.0	
		Um	i(PKP)		05 54 52.1	
			iPKP		05 55 04.0	
			i(PP)		05 57 18.4	
			iPP		05 57 26.3	
			iSKP1		05 58 28	
		Ud	iPKP		05 54 55.2	
			i(PP)		05 56 43.4	
			iPP		05 56 53.5	
		De	iPKP		05 54 50.5	
			i		05 55 09.9	
			iPP		05 56 34.6	
		Scotia Sea (h = N).				
		m = 6.5, M = 6.2 (Up,Ki).				
"	25	Um	i(P)		08 17 43.4	
"	25	Ki	iP		08 54 06.1	
		Ud	iP		08 54 31.7	
		Mindanao (h = 90 km).				
"	25	Um	iP		10 20 50.6	
		Japan (h = 20 km).				
"	25	Up	iP		10 44 25.0 C	
			ipP		10 44 36.6	
			isP		10 44 42.8	
			iS		10 55 03	
					micr	sec
			P	Z'	0.1	1.2
		(cont.)				

1973						
Feb.	25	(cont.)				
		Up			micr	sec
			sP	Z'	0.1	1.0
			Mx	E	2.7	23
			Mx	N	4.0	22
			Mx	Z	6.3	23
		Ki	iP		10 44 25.8 C	
			isP		10 44 42.9	
			iS		10 55 06	
					micr	sec
			P	Z'	0.1	1.1
			sP	Z'	0.1	1.0
			Mx	E	5.7	21
			Mx	N	4.4	18
			Mx	Z	5.8	21
		Sk	iP		10 44 39.7	
			ipP		10 44 50.1	
		Um	iP		10 44 22.2 C	
			ipP		10 44 33.6	
			iS		10 55 00	
		Ud	iP		10 44 34.3 C	
			ipP		10 44 45.9	
		De	iP		10 44 33.2	
			ipP		10 44 44.4	
		Sumatra.				
		h = 40 km (Up,Sk,Um,Ud,De).				
		m = 5.9, M = 5.9 (Up,Ki).				
"	25	Ud	iP		13 00 19.8	
		Greece (h = 45 km).				
"	25	Sk	eP		15 01 05	
		Um	iP		15 00 52.1	
		Ud	iP		15 00 32.1	
		Turkey (h = 20 km).				
"	25	Up	iP		21 41 12.5	
		Ki	iP		21 41 12.9	
			ipP		21 41 22.0	
		Um	iP		21 41 09.3	
			ipP		21 41 18.2	
		Ud	iP		21 41 21.9	
		De	ipP		21 41 29.4	
		Sumatra.				
		h = 35 km (Ki,Um).				
"	25	Um	iP		22 10 09.0	
		De	iP		22 10 20.1	
"	26	Up	iP		00 56 27.0	
		Um	iP		00 56 26.3	
			ipP		00 56 37.2	
		Costa Rica.				
		h = 40 km (Um).				
"	26	Up	iRg		05 07 42.8	
		Um	iSgl		05 09 25.3	
		(cont.)				

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

1973						
Feb.	26	(cont.)				
		Ud	iRg		05 07 27.8	
		Central Sweden.				
"	26	Up	iRg		05 07 57.1	
		Ud	iRg		05 07 40.5	
		Central Sweden.				
"	26	Up	iRg		05 08 03.8	
		Ud	iRg		05 07 47.1	
		Central Sweden.				
"	26	Ud	iRg		05 10 14.3	
		Central Sweden.				
"	26	Ud	iRg		05 15 06.4	
		Central Sweden.				
"	26	Ud	iP		06 54 39.8	
"	26	Ki	iP		07 49 57.7	
"	26	Ki	iP		08 26 49.3 C	
		Ud	iP		08 27 45.5 C	
		Kurile Islands (h = 45 km).				
"	26	Ki	eP		10 09 23	
		Ud	iP		10 09 49.2	
		Talaud Islands (h = 80 km).				
"	26	Up	iP		11 06 39.7	
			i		11 06 51.3	
					micr	sec
			i	Z'	0.1	1.0
		Ki	iP		11 06 23.7	
			i		11 06 34.4	
					micr	sec
			i	Z'	0.2	1.0
			Mx	E	1.6	21
			Mx	N	1.4	23
			Mx	Z	1.6	21
		Sk	iP		11 06 46.7	
		Um	iP		11 06 29.0	
			i		11 06 40.1	
		Ud	iP		11 06 48.6	
			i		11 06 59.7	
		De	eP		11 06 56	
		Mindanao (h = 70 km).				
		m = 6.3 (Up,Ki).				
		Double P, in average				
		11.1 sec apart.				
"	26	Ud	iP		11 37 05.8	
"	26	Ki	iP		12 47 40.0	
		Um	iP		12 47 54.2	
		Ud	iP		12 48 22.4	
		Japan (h = 60 km).				

1973						
Feb.	26	Up	iSn		12 57 19.2	
			iSgl		12 57 32.3	
		Sk	iSgl		12 59 24.0	
		Um	iSgl		12 58 07.5	
			i		12 58 11.9	
		Ud	iSn		12 58 08.5	
			iSgl		12 58 35.0	
		De	iSgl		12 59 01.9	
		Esthonia, 59.6°N, 24.7°E.				
		Origin time = 12 55 39.				
		Explosion.				
"	26	Um	iP		14 27 59.2	
"	26	Ud	iP		16 07 56.7	
		Japan.				
"	26	Ud	eP		18 42 28	
"	26	Up	iP		20 20 23.4	
		Sk	iP		20 20 39.6	
		Um	iP		20 20 17.4	
		Ud	iP		20 20 38.4	
"	26	Um	iP		20 30 16.7	
		Kashmir.				
"	26	Up	iP		22 10 15.1	
			ipP		22 10 24.3	
			isP		22 10 32.5	
			iS		22 20 50	
					micr	sec
			P	Z'	0.1	1.0
			sP	Z'	0.1	1.0
			Mx	E	0.8	20
			Mx	N	1.4	20
			Mx	Z	1.8	22
		Ki	iP		22 10 16.3	
			ipP		22 10 24.7	
			iS		22 20 59	
					micr	sec
			P	Z'	0.1	0.9
			Mx	E	1.8	20
			Mx	N	1.5	18
			Mx	Z	1.7	19
		Sk	eP		22 10 30	
		Um	iP		22 10 13.0	
			ipP		22 10 22.1	
			iS		22 20 47	
		Ud	iP		22 10 25.3	
			ipP		22 10 33.9	
		De	iP		22 10 23.7	
			ipP		22 10 32.8	
		Sumatra.				
		h = 35 km (Up,Ki,Um,Ud,De).				
		m = 6.0, M = 5.6 (Up,Ki).				

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

1973
Feb. 26 Up iP 22 27 42.1
Ki eP 22 29 03
Sk iP 22 28 25.1
i 22 28 32.2
Um iP 22 28 23.9
i 22 28 29.9
Ud iP 22 27 49.3
De iP 22 27 10.7
Greece-Albania (h = N).

" 26 Um iP 22 55 15.2
Eastern USSR (h = 420 km).

" 26 Ki eP 23 23 20
eTPg 23 28 20
eTSg 23 28 45
Sk iP 23 24 01.8
eS 23 25 47
Um iP 23 24 08.4
Ud iP 23 24 49.9
Norwegian Sea, near
72°1/2N, 8°E.
Origin time = 23 21 48.

" 27 Ud eP 00 44 39
Greece-Albania.

" 27 Um iP 02 40 59.4

" 27 Um iP 04 36 18.1
Japan (h = 60 km).

" 27 Um iP 06 07 51.5
Japan (h = 50 km).

" 27 Up iP 07 42 49.2
Um iP 07 42 19.8
Ud iP 07 42 55.4
Japan.

" 27 Up eP 09 22 11
Ki iP 09 21 51.0
ipP 09 22 11.9
micr sec
pP Z' 0.1 1.0
Sk eP 09 22 15
Um eP 09 21 58
Ud iP 09 22 16.5
ipP 09 22 37.4
Mindanao.
h = 80 km (Ki,Ud).

" 27 Up iSgl 12 25 59.1
Um iSgl 12 26 16.2
Western USSR.
Explosion.

1973
Feb. 27 Ud i(P) 12 26 20.9

" 27 Ud i(P) 12 38 57.0

" 27 Sk iP 14 17 53.2
Um iP 14 18 19.4
Colombia (h = 160 km).

" 27 Up iP 15 02 22.7
ipP 15 02 31.7
Um iP 15 02 19.9
ipP 15 02 30.6
Ud iP 15 02 32.3
ipP 15 02 42.2
Sumatra.
h = 35 km (Up,Um,Ud).

" 27 Up iP 17 15 07.5
iS 17 19 14
micr sec
P Z' 0.1 1.4
Ki micr sec
Mx N 0.6 16
Mx Z 0.9 17
Sk eP 17 15 46
Um iP 17 15 39.0
Ud eP 17 15 17
Turkey (h = N).

" 27 Up iP 18 16 47.9 C
Um iP 18 16 20.6 C
Ud iP 18 16 46.0
Aleutian Islands (h = 45 km).

" 27 Um iP 18 27 35.6
Aleutian Islands (h = 45 km).

" 27 Um iP 20 09 28.9

" 27 Um ePKP 22 02 38
New Hebrides Islands
(h = 640 km).

" 28 Um iP 01 45 47.2
Mariana Islands (h = 250 km).

" 28 Up iP 06 48 30.8
ipP 06 48 37.8
i(P'P') 07 17 06.4
iP'P' 07 17 19.8
micr sec
pP Z' 0.7 1.2
Mx E 400 20
Mx N 510 23
Mx Z 370 20
Ki iP 06 47 36
(cont.)

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

1973
Feb. 28 (cont.)

		Ki			micr	sec
			Mx	E	570	23
			Mx	N	540	23
			Mx	Z	360	25
		Sk	iP		06 48 13.8	
			ipP		06 48 21.8	
		Um	iP		06 48 04.7	
			ipP		06 48 12.5	
			i(P'P')		07 17 17.9	
		Ud	iP		06 48 32.5	
			i		06 48 37.7	
			iP'P'		07 17 10.5	

Kurile Islands.
h = 30 km (Up,Sk,Um).
M = 7.8 (Up,Ki).
(P'P') at Up and Um denotes a phase preceding P'P' by about 15 sec according to the Gutenberg-Richter tables.

"	28	Ud	iP		07 00 13.9	

Kurile Islands (h = N).

"	28	Up	iP		07 01 21.3	
		Sk	iP		07 01 05.7	
		Ud	iP		07 01 24.3	
			ipP		07 01 35.6	

Kurile Islands.
h = 40 km (Ud).

"	28	Up	iP		07 06 17.0	
		Um	iP		07 05 51.6	
		Ud	iP		07 06 22.1	

Kurile Islands (h = 50 km).

"	28	Up	iP		08 20 29.4	
			ipP		08 20 40.3	
		Ki	iP		08 20 11.0	
			ipP		08 20 21.6	
					micr	sec
			pP	Z'	0.1	1.5
		Sk	eP		08 20 33	
		Um	iP		08 20 17.5	
			ipP		08 20 28.0	
		Ud	iP		08 20 37.5 C	
			ipP		08 20 47.5	
		De	epP		08 20 55	

Mindanao.
h = 40 km (Up,Ki,Um,Ud).

"	28	Ud	iP		08 50 45.3 C	
"	28	Ud	iP		10 06 16.2	
"	28	Ki	iP		11 42 33.6	

(cont.)

1973
Feb. 28 (cont.)

		Ki			micr	sec
			Mx	E	1.0	19
			Mx	N	1.3	19
		Ud	iP		11 43 27.4	

Kurile Islands (h = 50 km).

"	28	Ud	eP		11 45 26	
"	28	Up	iSgl		12 46 32.1	
		Um	iSgl		12 46 48.7	
		Ud	iSgl		12 47 27.2	

Western USSR.
Explosion.

"	28	Ud	eP		12 55 09	
"	28	Ki	i(P)		13 11 19.5	
			i		13 11 24.3	
"	28	Um	i(P)		13 57 58.2	
"	28	Um	iSgl		14 12 52.4	

Lake Ladoga region.
Explosion?

"	28	Ud	iPKP1		14 13 15.9	
		De	iPKP1		14 13 27.4	
"	28	Ud	i(P)		14 35 03.2	
"	28	Ud	iP		14 56 20.0	
			ipP		14 57 17.2	

Hindu Kush.
h = 280 km (Ud).

"	28	Up	iPP		17 25 27.5	
		Um	i(Pn)		17 25 37.8	
		Ud	iPn		17 25 38.6	
			iPP		17 25 46.0	
		De	iPP		17 25 27.8	

Turkey (h = 35 km).

"	28	Up	iP		21 53 16.4	
		Ki	iP		21 52 25.1	
					micr	sec
			P	Z'	0.1	0.9
		Um	iP		21 52 52.5 D	
		Ud	iP		21 53 16.9	
		De	iP		21 53 40.0	

Unimak Island (h = N).

"	28	Um	iP		23 06 14.8	
"	28	Ki	iP		23 21 13.7	
		Um	iP		23 21 14.4	

(cont.)

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

1973
Feb. 28 (cont.)
Ud iP 23 21 35.5
Molucca Sea (h = 90 km).

Markus Båth
Klaus Meyer
Rutger Wahlström
Ota Kulhánek

November 29, 1974

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BOX 517
751 20 UPPSALA 1
SWEDEN

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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

M A R C H 1 - 31, 1973

1973
Mar. 1 Up iP 02 29 46.6 D
micr sec
P Z' 0.1 1.2
Ki iP 02 28 54.0
micr sec
P Z' 0.1 1.0
Sk iP 02 29 30.9 D
Um iP 02 29 21.4 D
Ud iP 02 29 50.2 D
De iP 02 30 11.1 D
Kurile Islands (h = 30 km).
m = 5.9 (Up,Ki).

" 1 Ki iP 04 40 25.7

" 1 Ki iPKP 10 17 40.1
Um iPKP 10 17 47.2 C
New Hebrides Islands
(h = 130 km).

" 1 Ud iP 11 28 40.7

" 1 Ud iP 11 49 11.2
Aleutian Islands (h = 45 km).

" 1 Ud iSgl 11 52 45.4
West coast of Norway, near
Bergen.
Origin time = 11 50 18.
By combination with Bergen
readings.

" 1 Ud eP 12 22 19

" 1 Up iSgl 13 03 47.4
Ki iSgl 13 05 40.9
Um iSgl 13 04 02.3
Ud iSgl 13 04 44.9
De iSgl 13 05 10.4
(cont.)

1973
Mar. 1 (cont.)
Western USSR,
59.3°N, 28.2°E.
Origin time = 13 01 00.
Explosion.

" 1 Ud iP 13 37 29.4
Kurile Islands.

" 1 Up eP 15 21 50
Um iP 15 21 29.4
Ud iP 15 21 57.5
Japan (h = 60 km).

" 1 Um iPKP 16 45 03.3
Ud iPKP 16 45 15.6 C

" 1 Ud eP 18 02 11
Ecuador (h = 90 km).

" 1 Up eSgl 18 10 39
Ki iPn 18 05 53.3
iPgl 18 06 01.9
iSn 18 06 40.1
iS* 18 06 52.7
Sk eSgl 18 09 39
Um iSn 18 07 53.3
iSgl 18 08 28.9
Ud iSgl 18 10 57.4
Northwest USSR-Norway border
region, 69.7°N, 30.1°E.
Origin time = 18 04 52.
Explosion.

" 1 Up iPgl 18 21 27.0
i(Sgl) 18 21 42.3
iRg 18 21 48.3
Ud iRg 18 21 35.7
De iSgl 18 22 53.1
Central Sweden.

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

1973						
Mar.	2	Ud	eP		02 33 56	
		Crete.				
"	2	Up	iP		03 00 48.9	
		Ki	i(Pn)		02 59 16.7	
			iP		02 59 21.4	
			iS		03 00 44.9	
			iTPgl		03 04 36.0	
		Sk	iS		03 01 37.6	
		Um	eP		03 00 03	
		Ud	e		03 00 53	
		De	iP		03 01 32.2	
		Norwegian Sea, near 72°N, 4°E. Origin time = 02 57 35.				
"	2	Sk	iP		08 14 39.5	
"	2	Ud	i(Sgl)		11 05 30.5	
"	2	Up	i(Sgl)		11 06 42.6	
"	2	Up	iSgl		11 22 07.7	
		Ki	eSgl		11 22 48	
			iSg2		11 22 59.6	
		Sk	iPn		11 20 58.5	
			eSgl		11 23 25	
		Um	i(S*)		11 21 28.2	
			iSgl		11 21 31.5	
		Ud	iPn		11 20 51.4	
			iSgl		11 23 10.6	
		De	iSgl		11 23 48.6	
		Lake Ladoga. Origin time = 11 18 46. Explosion.				
"	2	Ud	iP		11 22 17.1	
		Kurile Islands.				
"	2	Um	iSgl		11 26 32.8	
		Lake Ladoga. Explosion.				
"	2	Ud	eP		11 39 56	
		Nevada (h = 5 km).				
"	2	Ud	iP		12 08 07.8	
		De	eP		12 08 04	
"	2	Up	iSn		12 18 46.8	
			iSgl		12 18 59.9	
		Ki	iSgl		12 21 28.7	
		Um	iSgl		12 19 29.0	
		Ud	iSg2		12 20 09.9	
		De	eSgl		12 20 25	
		Esthonia, 59.5°N, 25.0°E. Origin time = 12 17 00. Explosion.				

1973						
Mar.	2	Um	eSgl		12 58 59	
		Western USSR. Explosion.				
"	2	Um	iP		19 43 35.1	
		Japan (h = 55 km).				
"	3	Um	iP		00 57 41.9	
			ipP		00 58 08.4	
		Talaud Islands. h = 100 km (Um).				
"	3	Up	iP		01 55 39.8	C
			ipP		01 55 51.4	
					micr	sec
			P	Z'	0.1	1.1
			pP	Z'	0.1	1.1
		Ki	iP		01 55 12.0	
			ipP		01 55 23.3	
		Sk	iP		01 55 39.8	
			ipP		01 55 51.8	
		Um	iP		01 55 22.9	
			ipP		01 55 34.5	
		Ud	iP		01 55 48.3	
			ipP		01 56 00.0	
		De	eP		01 56 01	
		Ryukyu Islands. h = 45 km (Up,Ki,Sk,Um,Ud).				
"	3	Um	eP		02 28 39	
"	3	Up	iP		02 52 43.6	
		Ki	iP		02 51 52.4	
			i		02 51 54.5	
					micr	sec
			P	Z'	0.1	0.9
		Um	iP		02 52 22.2	
			iPcP		02 53 00.1	
		Ud	iP		02 52 47.6	
			i		02 52 49.6	
			iPcP		02 53 18.2	
		De	iP		02 53 09.6	
		Kurile Islands (h = 60 km).				
"	3	Up	iP		02 53 38.1	
			ipP		02 53 49.1	
		Ki	iP		02 54 18.2	
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP		02 54 15.0	
		Um	iP		02 53 53.1	
		Ud	iP		02 53 53.3	
		De	iP		02 53 37.1	
			ipP		02 53 47.2	
		Iran. h = 40 km (Up,De).				

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

1973						
Mar.	3	Up	iP		03 11 31.3	
		Um	iP		03 11 14.6	
		Ud	iP		03 11 22.4	
		Nevada (h = 5 km).				
"	3	Ud	iP		03 46 10.9	
		Nevada (h = 5 km).				
"	3	Ud	iP		06 05 12.5	
		Hindu Kush.				
		Intermediate depth.				
"	3	Ki	eP		10 30 33	
		Um	iP		10 30 27.1	
		Ud	iP		10 30 53.3	
		De	eP		10 30 57	
		Sinkiang, China (h = N).				
"	3	De	eSn		10 56 22	
			iSgl		10 57 04.7	
		Germany (h = 5 km).				
"	3	Up	iPKPl		13 41 13.5	
		Sk	iPKPl		13 41 06.8	
			ipPKPl		13 41 19.8	
		Um	iPKP		13 41 06.6	
		Ud	iPKPl		13 41 15.3	
			ipPKPl		13 41 32.0	
		De	iPKPl		13 41 24.2	
		Kermadec Islands.				
		h = 50 km (Sk,Ud).				
"	3	Um	iP		15 07 30.4	
		Ud	eP		15 07 02	
"	3	Ud	iP		19 03 23.8	
		Nevada (h = 5 km).				
"	3	Um	iP		19 46 36.1 C	
		Japan (h = 210 km).				
"	4	Um	iP		09 40 38.4	
		Ud	iP		09 40 25.8	
"	4	Um	iP		11 35 15.5	
		Kurile Islands.				
"	4	Um	iP		11 56 28.5	
"	4	Up	eP		14 23 34	
		Um	iP		14 23 56.8	
		Ud	iP		14 23 27.3	
		Ascension Island (h = N).				
"	4	Ud	iP		14 26 47.2	
"	4	Ud	iPKPl		14 30 54.1	
		De	ePKPl		14 31 06	

1973						
Mar.	4	Up	iP		18 08 02.5	
					micr	sec
			P	Z'	2.4	1.3
			Mx	E	4.9	23
			Mx	N	7.5	22
			Mx	Z	11	21
		Ki	iP		18 07 07.7	
					micr	sec
			P	Z'	1.5	1.6
			Mx	E	10	20
			Mx	N	8.7	19
			Mx	Z	9.6	15
		Sk	iP		18 07 44.9	
		Um	iP		18 07 33.7	
			i		18 07 45.1	
			iPcP		18 08 27.0	
		Ud	iP		18 08 05.7	
		De	iP		18 08 28.1	
			i		18 08 42.6	
			iPP		18 10 52.9	
		Kamchatka (h = 30 km).				
		m = 7.1, M = 6.0 (Up,Ki).				
"	5	Um	iP		06 31 19.5	
		Japan.				
"	5	Ud	iP		08 45 27.4	
"	5	Up	eP		09 40 50	
		Ud	iP		09 41 06.3	
"	5	Ki	iSgl		12 34 22.6	
		Um	iSgl		12 32 57.7	
		Ud	iSgl		12 33 41.5	
		De	eSgl		12 34 10	
		Western USSR.				
		Explosion.				
"	5	Up	iP		14 13 02.1	
					micr	sec
			P	Z'	0.1	0.9
		Ud	eP		14 13 15	
"	5	Up	iP		15 45 16.4	
					micr	sec
			P	Z'	0.1	1.0
		Um	i		15 46 05.4	
		Ud	iP		15 45 21.3	
		Greece (h = 30 km).				
"	5	Up	iRg		17 30 38.7	
		Ud	iRg		17 30 21.9	
		Central Sweden.				
"	5	Ud	iP		19 59 32.4	
"	5	Ud	i(Rg)		21 16 31.6	

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

1973
Mar. 5 Up iRg 21 43 43.2
Ud iRg 21 43 25.5
Central Sweden.

" 5 Um iP 21 50 26.5
Kurile Islands (h = 90 km).

" 5 Up iP 23 33 38.3
Ki iP 23 33 21.9 C
ipP 23 33 37.9
micr sec
P Z' 0.1 0.9
Sk iP 23 33 42.7
Um iP 23 33 27.5 C
Ud iP 23 33 46.9 C
ipP 23 34 02.9
De iP 23 33 52.9 C
Mindanao.
h = 60 km (Ki,Ud).

" 6 Ki iP 00 07 28.5
Sk eP 00 07 08
Um iP 00 06 56.0
Ud iP 00 06 40.1
Red Sea (h = 25 km).

" 6 Up iP 04 10 43.6 D
micr sec
P Z' 0.1 0.8
Ki iP 04 10 23.7 D
micr sec
P Z' 0.1 1.0
Sk iP 04 10 49.2 D
Um iP 04 10 30.7 D
Ud iP 04 10 53.0 D
De iP 04 11 00.0 D
Luzon (h = 100 km).
m = 5.7 (Up,Ki).

" 6 Ki eP 07 51 40
Ud iP 07 52 02.5
Talaud Islands (h = 70 km).

" 6 Sk iP 10 26 59.8
Greece.

" 6 Up iP 12 26 22.5
Sk iP 12 27 02.5
Um iP 12 26 58.5
Ud iP 12 26 29.5
De eP 12 25 57
Greece (h = N).

" 6 Um iSgl 12 42 59.4
Western USSR.
Explosion.

1973
Mar. 6 De i(P) 12 45 10.7

" 6 Ki ePn 12 47 11
iSn 12 48 39.4
i 12 48 57.3
Sk ePn 12 46 32
iSn 12 47 36.4
Um iSn 12 48 49.0
Ud iSn 12 48 49.3
De iSn 12 49 48.3
Norwegian Sea,
near 66°N, 1°E.
Origin time = 12 45 09.

" 6 Up iPKP 16 10 35.1
New Britain (h = 30 km).

" 6 Ki i(P) 18 21 04.7

" 6 Um iP 18 42 19.5
Kurile Islands (h = N).

" 6 Um iP 21 36 15.2
i 21 36 25.6

" 6 Up iP 22 32 00.6 C
micr sec
Mx E 1.5 20
Mx N 1.8 20
Mx Z 2.6 19
Ki eP 22 31 34
micr sec
Mx E 2.4 18
Mx N 1.6 14
Mx Z 1.7 17
Um iP 22 31 49.9
Ud iP 22 31 53.7
Gulf of California (h = N).
M = 5.7 (Up,Ki).

" 6 Um iP 23 17 44.5
Japan (h = 60 km).

" 7 Um iP 00 15 54.7

" 7 Up eP 01 11 14
Um iP 01 11 11.8
Ud iP 01 11 26.4
Andaman Islands (h = N).

" 7 Up iP 03 22 32.0
Ki iP 03 22 11.4
i 03 22 13.9
Um iP 03 22 16.8
i 03 22 18.9
Ud iP 03 22 36.5
Mindanao (h = 80 km).

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

1973
Mar. 7 Up iP 03 29 37.0 D
micr sec
P Z' 0.1 0.8
Ki iP 03 29 06.2 D
micr sec
P Z' 0.1 0.9
Sk iP 03 29 34.2 D
Um iP 03 29 19.6 D
Ud iP 03 29 44.1 D
De iP 03 29 56.0
Bonin Islands (h = 470 km).
m = 5.4 (Up,Ki).

" 7 Um iP 03 45 17.4

" 7 Um iP 06 40 08.9
Ud iP 06 39 33.5
Albania (h = 50 km).

" 7 Um iP 07 15 12.6
Ud iP 07 15 33.5
Afghanistan-USSR (h = 80 km).

" 7 Up iPKP1 08 44 36.1 C
iPKP2 08 44 41.0
Ki iPKP 08 44 19.7 C
Sk iPKP1 08 44 30.3
Um iPKP 08 44 23.4
iPKP1 08 44 25.0 C
Ud iPKP1 08 44 37.7 C
iPKP2 08 44 43.2
De iPKP1 08 44 46.1 C
iPKP2 08 44 56.9
Kermadec Islands (h = 110 km).

" 7 Up i(P) 10 00 47.9

" 7 De i 11 48 54.0
iSgl 11 49 01.3

" 7 Um iSgl 12 19 33.6
Western USSR.
Explosion.

" 7 Up iSn 12 36 32.4
iSgl 12 36 47.2
Ki eSgl 12 39 22
Um iSgl 12 37 21.0
Ud iSgl 12 37 47.9
De iSgl 12 38 19.6
Esthonia, 59.7°N, 24.3°E.
Origin time = 12 35 00.
Explosion.

" 7 Up iPKP1 13 14 47.2
iPKP2 13 14 59.5
(cont.)

1973
Mar. 7 (cont.)
Up micr sec
PKP2 Z' 0.1 0.7
Ki ePKP1 13 14 30
Sk iPKP1 13 14 41.6
iPKP2 13 14 46.3
Um iPKP1 13 14 37.5
iPKP2 13 14 43.6
Ud iPKP1 13 14 49.0
De iPKP1 13 14 57.9
South of Kermadec Islands
(h = 5 km).

" 7 Um i 14 18 04.6
iSgl 14 18 10.3
De iSgl 14 19 23.9
Western USSR.
Explosion.

" 7 Um iSgl 14 47 05.3
Lake Ladoga.
Explosion.

" 7 Um eP 15 56 11
Japan (h = 70 km).

" 7 Ki iPgl 19 39 54.8
iSn 19 40 32.4
iSgl 19 40 49.8
Um eSgl 19 42 17
Northwest USSR-Norway border
region, 69.4°N, 30.7°E.
Origin time = 19 38 42.
Explosion.

" 7 Um iP 22 15 57.2
Jan Mayen (h = N).

" 8 Up iP 01 21 12.5
Ki iP 01 20 19.4
Um iP 01 20 46.0
Ud iP 01 21 13.8
Aleutian Islands (h = 100 km).

" 8 Ud iP 08 56 18.5

" 8 Ki i 09 52 06.3
iSgl 09 52 22.2
Sk ePgl 09 51 48
iS* 09 52 25.6
iSgl 09 52 30.0
Um iPgl 09 52 01.5
iSn 09 52 35.6
iSgl 09 52 50.0
Ud iSgl 09 54 15.7
Nordland, Norway,
66.4°N, 14.5°E.
(cont.)

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

1973						
Mar.	8	(cont.)				
		Origin time = 09 50 58.				
		Explosion.				
"	8	Ki	iPKP		10 42 36.1	
		South Sandwich Islands (h = N).				
"	8	Ki	iPKP		13 21 14.5	
		Um	iPKP		13 21 21.9	
		Ud	iPKP		13 21 27.8	
		De	i(PKP)		13 21 30.4	
			iPKP		13 21 37.2	
		Fiji Islands (h = 580 km).				
"	8	Ud	iP		13 34 02.1	
		Molucca Passage (h = 100 km).				
"	8	Up	i(P)		14 27 41.2	
			i		14 27 45.4	
		Ud	i(P)		14 28 01.1	
"	8	Ud	iP		14 43 59.7	
"	8	Ki	ePKP		14 54 34	
					micr sec	
			Mx	E	0.9 20	
			Mx	N	1.1 20	
			Mx	Z	1.2 20	
		Ud	iPKP1		14 54 47.9	
			ipPKP1		14 55 01.8	
		De	iPKP1		14 54 56.7	
			ipPKP1		14 55 10.6	
		Tonga Islands.				
		h = 45 km (Ud,De).				
"	8	De	i(P)		15 29 02.3	
"	8	Ud	iPKP1		15 58 03.2	
		De	iPKP1		15 58 12.1	
			i(pPKP1)		15 58 23.7	
"	8	Up	iP		16 21 48.8	C
					micr sec	
			P	Z'	0.1 0.9	
		Ki	iP		16 21 14.7	C
		Sk	iP		16 21 22.7	C
		Um	iP		16 21 34.2	C
		Ud	iP		16 21 40.7	C
		De	iP		16 21 57.2	C
		Nevada.				
		Underground explosion.				
"	8	Um	iP		16 53 21.9	
		Ud	iP		16 53 37.0	
"	8	De	eP		18 11 23	
			i		18 11 27.8	

1973						
Mar.	8	Ud	iP		18 27 35.4	
"	8	Ki	iP		18 48 27.7	
		Um	iP		18 48 13.8	
		Afghanistan-USSR (h = N).				
"	8	Sk	i		19 50 18.7	
		Um	iPKP1		19 50 05.4	D
			i		19 50 10.6	
			i		19 50 16.8	
		Ud	ePKP1		19 50 19	
		De	ePKP2		19 50 36	
"	8	Ud	i(P)		21 15 41.5	
"	8	Ud	iP		22 09 51.5	
		Pakistan.				
"	8	De	iP		22 29 36.5	
"	9	Ud	iP		00 21 18.8	
"	9	Ud	iP		01 36 41.3	
		Okhotsk Sea (h = 450 km).				
"	9	Ki	i(P)		01 57 24.9	
"	9	Ki	i(P)		02 11 26.6	
"	9	Sk	iP		10 10 30.6	
		Um	iP		10 10 42.7	
		Ud	iP		10 10 35.6	
		Guatemala (h = 110 km).				
"	9	Up	iP		10 19 50.7	D
			i		10 19 56.7	
			i(PP)		10 22 52.3	
			iSKS		10 30 20	
			iS		10 30 53	
					micr sec	
			P	Z'	0.1 0.9	
			i	Z'	0.3 0.9	
			Mx	E	8.1 20	
			Mx	N	7.1 19	
			Mx	Z	12 18	
		Ki	iP		10 19 33.2	D
			i		10 19 38.7	
			iPP		10 23 01.1	
			iS		10 30 22	
					micr sec	
			P	Z'	0.4 1.0	
			i	Z'	0.5 1.0	
			Mx	E	15 17	
			Mx	N	9.9 20	
			Mx	Z	11 18	
		Sk	iP		10 19 55.3	D
			i		10 20 00.4	
		(cont.)				

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

1973				
Mar.	9	(cont.)		
		Um	iP	10 19 39.6 D
			i	10 19 44.7
			iPP	10 23 15.8
			iSKS	10 30 05
			iS	10 30 32
		Ud	iP	10 19 59.1 D
			i	10 20 04.4
			iSKS	10 30 33.3
		De	iP	10 20 05.5 D
			i	10 20 10.6
			iPP	10 24 05.2
		Mindanao (h = 55 km). m = 6.8, M = 6.5 (Up,Ki). Double P, in average 5.4 sec apart.		
"	9	Ud	iP	10 35 36.5
"	9	Um	eP	10 42 15
		Ud	iP	10 42 38.0
		Japan.		
"	9	Ki	iP	11 53 18.5
		Ud	iP	11 53 34.3
		De	iP	11 53 42.0
"	9	Ki	i(P)	12 05 33.1
"	9	Um	eP	13 34 19
"	9	Up	eP	14 09 23
		Ki	iP	14 08 38.0
		Ud	i(pP)	14 09 38.4
		Kurile Islands (h = N).		
"	9	Ki	ePKP	19 28 34
		Um	iPKP	19 28 36.9
		Ud	iPKP	19 28 39.5
			i	19 28 46.5
		De	iPKP	19 28 42.6
			i	19 28 49.8
		Australia (h = 15 km).		
"	9	Ud	iP	20 43 40.6
"	9	Ud	eP	21 45 50
"	10	Up	eP	04 44 18
		Um	iP	04 44 15.6
		Ud	iP	04 44 29.0
		Sumatra (h = 35 km).		
"	10	Ud	iP	05 46 25.9
"	10	Ud	iPKP1	08 23 10.7
		De	iPKP1	08 23 21.5

1973				
Mar.	10	Up	iP	09 40 26.5
		Greece (h = N).		
"	10	Up	iSn	10 07 50.2
			iSgl	10 08 04.4
		Um	iSgl	10 09 45.7
		Ud	iPn	10 06 40.7
			i	10 07 00.6
			iSgl	10 07 13.7
			i	10 07 33.6
		De	iPgl	10 06 46.2
			iSgl	10 07 20.2
			i	10 07 47.7
		Off coast of Bohuslän, Sweden, 58.4°N, 10.9°E. Origin time = 10 06 04. Explosion.		
"	10	Um	i	10 09 36.3
		Tonga Islands (h = 10 km).		
"	10	Up	iPgl	10 12 08.0
			iSgl	10 12 59.2
			i	10 13 11.2
		Um	iSgl	10 14 40.8
		Ud	iPn	10 11 36.5
			i	10 11 57.0
			iSgl	10 12 09.5
		De	i	10 11 57.9
			iSgl	10 12 16.2
			i	10 12 39.3
			i	10 12 52.5
		Off coast of Bohuslän, Sweden, 58.4°N, 10.9°E. Origin time = 10 11 00. Explosion.		
"	10	Up	iSgl	10 16 43.3
		Ud	eSgl	10 15 52
		De	iSgl	10 16 06.2
		Origin time = 10 14 46. This event like the six following ones, are explosions off coast of Bohuslän, Sweden, at the approximate coordinates 58.5°N, 10.9°E. Several additional explosions from the same area, indistinguishable on the records, were carried out between 12 27 and 12 33 on the same day.		
"	10	Up	iSgl	10 19 18.8
		Ud	iSgl	10 18 29.9
		De	iSgl	10 18 42.0
		Origin time = 10 17 24.		

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

1973				
Mar.	10	Up	iSn	10 56 09.1
			iSgl	10 56 23.6
		Ud	iPgl	10 55 03.1
			iSgl	10 55 32.2
			iTSgl	10 55 38.9
		Origin time = 10 54 26.		
"	10	Up	iSgl	11 00 44.5
		Um	iSgl	11 02 28.4
		Ud	iPgl	10 59 25.9
			iSgl	10 59 54.4
			iTSgl	11 00 03.4
		De	iSgl	11 00 09.5
		Origin time = 10 58 48.		
"	10	Up	iSgl	11 04 51.2
		Ud	iPgl	11 03 30.9
			iSgl	11 03 59.2
			iTSgl	11 04 07.5
		De	iSgl	11 04 11.1
		Origin time = 11 02 53.		
"	10	Up	iSn	11 12 58.7
			iSgl	11 13 14.1
		Um	iSgl	11 14 53.0
		Ud	iPgl	11 11 52.1
			iSgl	11 12 21.9
			iTSgl	11 12 30.0
		De	iSgl	11 12 35.0
		Origin time = 11 11 16.		
"	10	Up	iSgl	11 29 40.0
		Ud	iPn	11 28 13.6
			iPgl	11 28 17.1
			iSgl	11 28 46.2
			iTSgl	11 28 55.6
		De	iSgl	11 28 57.8
			i	11 29 05.8
		Origin time = 11 27 40.		
"	10	Ud	ePKP	14 38 30
		Samoa Islands (h = N).		
"	10	Ud	iP	17 37 01.1
"	10	Ud	iPKPl	18 27 29.8
		De	iPKPl	18 27 35.5 C
			ipPKPl	18 27 47.2
		Tonga Islands.		
		h = 40 km (De).		
"	10	Ud	eP	19 04 51
"	10	Ud	iPKP	19 48 46.0
		Solomon Islands (h = 90 km).		
"	10	Ki	eP	19 50 20
		(cont.)		

1973				
Mar.	10	(cont.)		
		Um	iP	19 50 24.8
		Ud	iP	19 50 41.8
		Celebes (h = 170 km).		
"	10	Ud	ePKPl	21 22 48
		De	ePKPl	21 22 59
"	11	Ud	iP	06 55 08.7
"	11	Up	iSgl	07 29 19.5
		Ki	iSn	07 25 57.3
			i	07 26 08.7
			iSgl	07 26 23.8
		Um	iSn	07 26 41.5
			iS*	07 27 13.5
			iSgl	07 27 18.2
		Ud	iSgl	07 29 54.5
		Northwest USSR,		
		67.9°N, 33.9°E.		
		Origin time = 07 23 45.		
		Explosion.		
"	11	Ud	iP	08 43 47.1
"	11	Up	eSgl	09 45 39
		Ki	iSn	09 42 24.5
			iS*	09 42 44.8
		Sk	eSgl	09 45 14
		Um	iSn	09 43 05.3
			iSgl	09 43 36.2
		Northwest USSR.		
		Explosion.		
"	11	Ud	iSgl	12 22 35.5
		De	ePn	12 18 59
			eSn	12 20 06
			iSgl	12 20 44.2
		Germany (h = N).		
"	11	Up	iP	13 48 46.2
			ipP	13 49 05.4
				micr sec
			pP Z'	0.1 0.9
		Ki	iP	13 48 03.3
			ipP	13 48 22.4
		Sk	iP	13 48 37.7
			ipP	13 48 58.2
		Um	iP	13 48 22.1
			i	13 48 34.2
			ipP	13 48 41.7
			isP	13 48 50.1
		Ud	iP	13 48 53.2
			ipP	13 49 12.9
		De	iP	13 49 09.7
			ipP	13 49 29.3
		Japan.		
		h = 80 km (Up,Ki,Sk,Um,Ud, De).		

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

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1973
Mar.  11   Um   i(P)          14 34 35.7

 "    11   Um   eP            15 04 50
           Ud   iP            15 05 14.1
                ipP           15 05 24.4
           Formosa-Luzon.
           h = 40 km (Ud).

 "    11   Ud   ePKP1         15 44 15
           De   ePKP1         15 44 25
           Fiji Islands (h = 620 km).

 "    11   Um   iP            20 14 35.6
           Ud   eP            20 14 57

 "    12   Up   iP            03 31 13.8
           Ki   iP            03 30 21.4
           Um   iP            03 30 47.9
           Ud   iP            03 31 13.0
           De   iP            03 31 36.3
           Aleutian Islands (h = 15 km).

 "    12   Up   iP            06 10 43.3
                iPP           06 14 52.5
           Ki   eP            06 10 39
           Um   iP            06 10 39.4
                iPP           06 14 38.9
           Ud   iP            06 10 52.6
                iPP           06 15 06.5
           South of Java (h = 40 km).

 "    12   Up   iP            08 36 24.9
           Turkey (h = 30 km).

 "    12   Ud   i(P)          09 44 54.9

 "    12   Up   eP            09 59 17
           Ud   iP            09 59 35.8
           Rumania (h = 140 km).

 "    12   Up   iP            10 15 35.9
           Ud   iP            10 15 41.6
           Kurile Islands (h = 55 km).

 "    12   Up   iP            11 25 02.2
                              micr  sec
                P        Z'   0.1   1.2
                Mx       E    2.3   20
                Mx       N    3.4   21
                Mx       Z    4.9   21
           Ki   iP            11 24 11.2
                              micr  sec
                P        Z'   0.2   1.4
                Mx       E    3.0   20
                Mx       N    2.3   19
                Mx       Z    3.3   20
           (cont.)

1973
Mar.  12   (cont.)
           Sk   eP            11 24 48
           Um   iP            11 24 34.6
                ipP           11 24 48.4
           Ud   iP            11 25 06.7
                ipP           11 25 20.5
           De   eP            11 25 27
           Kurile Islands.
           h = 50 km (Um,Ud).
           m = 6.0, M = 5.6 (Up,Ki).

 "    12   Up   iP            12 52 25.5
                              micr  sec
                P        Z'   0.2   1.5
                Mx       E    2.4   21
                Mx       N    2.3   21
                Mx       Z    2.2   20
           Ki   iP            12 52 09.7
                              micr  sec
                P        Z'   0.1   1.2
                Mx       E    3.3   20
                Mx       N    2.8   20
                Mx       Z    4.3   19
           Um   iP            12 52 15.5
                iSKS          13 02 43
                iS            13 03 18
           Ud   iP            12 52 34.0
           De   iP            12 52 39.6
           Talaud Islands (h = 35 km).
           m = 6.2, M = 6.0 (Up,Ki).

 "    12   Ud   iP            13 01 44.7
           California (h = N).

 "    12   Up   iP            13 28 35.3
                              micr  sec
                P        Z'   0.1   0.6
           Ki   iP            13 29 15.4
           Sk   iP            13 29 11.5
           Um   iP            13 28 50.6
           Ud   iP            13 28 50.6
           De   iP            13 28 32.8
           Iran (h = 60 km).

 "    12   Up   iP            14 30 28.0
                i             14 30 32.6
           Sk   iP            14 30 40.2
                i             14 30 44.9
           Um   iP            14 30 08.5
           Ud   iP            14 30 42.2
           De   eP            14 30 49
           Tsinghai, China (h = N).

 "    12   Ud   iP            14 36 47.1

 "    12   Ud   iP            15 11 00.3
                ipP           15 11 15.8
           (cont.)
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Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973
Mar. 12 (cont.)
Talaud Islands.
h = 55 km (Ud).

" 12 Up iP 15 46 47.9
i 15 46 51.5
Sk eP 15 47 24
Um iP 15 47 03.0
Ud iP 15 47 02.9 C
i 15 47 06.8
De iP 15 46 45.2 C
i 15 46 49.0
Iran (h = N).
Double P, in average
3.8 sec apart.

" 12 Up eP 16 30 47
iTSg 16 38 40.8
micr sec
Mx N 1.3 18
Mx Z 1.5 18
Ki iP 16 29 06.2
iS 16 30 17.0
iTPg 16 34 03.9
iTSg 16 34 36.8
micr sec
TSg Z' 0.2 1.1
Mx E 0.8 14
Sk eP 16 29 51
iS 16 31 34.0
iTSg 16 36 44.7
Um iP 16 29 54.9
iS 16 31 47.6
iTPg 16 35 26.2
iTSg 16 36 31.3
Ud iP 16 30 34.0
iTPg 16 37 36.1
iTSg 16 38 40.7
De iP 16 31 21.5
Norwegian Sea (h = N).

" 12 Ki iP 17 46 04.1
iS 17 47 15.0
iTPg 17 51 01.3
Um iP 17 46 45.6
iTSg 17 53 22.0
Ud iP 17 47 29.9
Norwegian Sea (h = N).

" 12 Up iPKP2 19 23 32.1
ipPKP2 19 23 45.7
Um iPKP1 19 23 13.8
Ud iPKP1 19 23 21.9
De iPKP2 19 23 43.2
ipPKP2 19 23 56.4
Kermadec Islands.
h = 45 km (Up,De).

1973
Mar. 12 Up iP 19 49 54.4 C
iPa 19 54 14
iS 19 58 28
eP'P' 20 18 24
micr sec
P Z' 0.2 1.0
Mx E 9.3 21
Mx N 18 23
Mx Z 27 23
Ki iP 19 49 02.8 C
micr sec
P Z' 0.1 0.8
Mx E 17 20
Mx N 16 21
Sk iP 19 49 39.9
iPcP 19 50 19.9
Um iP 19 49 27.1 C
iPcP 19 50 10.5
iS 19 57 35
Ud iP 19 49 58.9 C
iPcP 19 50 29.4
De iP 19 50 19.5 C
iPcP 19 50 44.0
Kurile Islands (h = 55 km).
m = 6.1, M = 6.3 (Up,Ki).

" 12 Up iP 20 35 55.9
micr sec
P Z' 0.1 1.4
Ki iP 20 37 07.9
micr sec
P Z' 0.1 1.0
Sk eP 20 36 34
ipP 20 36 44.2
Um iP 20 36 32.1
ipP 20 36 42.1
Ud iP 20 36 02.8 D
De iP 20 35 27.8 D
Mediterranean Sea.
h = 40 km (Sk,Um).
m = 5.5 (Up,Ki).

" 12 Ud iP 22 15 22.6

" 13 Um iP 00 04 30.0
Mariana Islands (h = 190 km).

" 13 De iPKP 02 01 15.7
Solomon Islands (h = 170 km).

" 13 Um iP 04 35 52.0
Ud iP 04 35 31.5
De iP 04 35 30.2
Windward Islands (h = 80 km).

" 13 Up iP 06 10 38.3
i 06 10 42.0
(cont.)

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

1973
Mar. 13 (cont.)
Up micr sec
P Z' 0.1 0.7
Ki iP 06 11 18.4
Sk iP 06 11 14.5
Um iP 06 10 53.6
Ud iP 06 10 53.6 C
i 06 10 57.3
De iP 06 10 36.3
i 06 10 40.0
Iran (h = N).
Double P, in average
3.7 sec apart.

" 13 Up iP 07 34 35.4
Ud iP 07 34 50.4
De iP 07 34 33.1
Iran.
Origin time = 07 27 46.

" 13 Up iSgl 12 19 42.2
Sk eSgl 12 21 27
Um iSgl 12 19 54.7
Ud iSgl 12 20 38.8
De eSgl 12 21 10
Western USSR.
Explosion.

" 13 Ud iP 14 12 15.8

" 13 De ePKP 20 19 58
ipPKP 20 20 09.8
New Britain.
h = 40 km (De).

" 13 Ud iP 22 15 51.6
De eP 22 15 21

" 14 Um iP 01 24 14.8
Ud iP 01 24 13.8
De iP 01 23 56.3
Iran.
Origin time = 01 17 09.

" 14 Up iP 02 09 59.4

" 14 Up iP 03 52 31.0
i 03 52 35.0
i 03 52 38.3
Ki iP 03 53 11.3
Sk iP 03 53 07.4 C
Um eP 03 52 46
Ud iP 03 52 46.4 C
i 03 52 50.6
i 03 52 53.8
De eP 03 52 29 C
(cont.)

1973
Mar. 14 (cont.)
Iran (h = N).
Multiple P, in average
4.1 and 7.4 sec after
the first onset.

" 14 Up iP 04 26 32.3
Ud iP 04 26 47.7 C
De eP 04 26 30
Iran.
Origin time = 04 19 43.

" 14 Um iP 08 38 53.7
Ud iP 08 39 17.4
Mariana Islands (h = 270 km).

" 14 Ud iPKP1 08 53 32.6
De iPKP1 08 53 43.4

" 14 Um iP 10 55 43.9

" 14 Um iPKP 11 44 13.4
Ud iPKP 11 44 24.6
De iPKP 11 44 29.8 C
New Britain (h = 60 km).

" 14 De iP 12 41 19.1

" 14 Up iPKP1 14 35 16.7
Ud iPKP1 14 35 18.0
De iPKP1 14 35 28.6

" 14 Ud eP 22 58 35
Mediterranean Sea.

" 15 Um iP 00 29 49.4
Ud iP 00 30 18.8
Kamchatka-Kurile Islands.

" 15 Ud iP 02 18 36.3
Mindanao (h = 70 km).

" 15 Ki e 07 46 10
Ud iP 07 45 29.0 C
North Atlantic Ocean
(h = N).

" 15 Um iSgl 13 30 05.7
Ud eSgl 13 30 47
De eSgl 13 31 16
Western USSR.
Explosion.

" 15 Up iP 18 10 59.4
Ki iP 18 10 41.8
Um iP 18 10 46.9
(cont.)

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

1973
Mar. 15 (cont.)
Ud iP 18 11 08.1
De iP 18 11 13.6
Mindoro (h = 110 km).

" 15 Up iPgl 21 15 26.9
iSgl 21 15 45.9
iRg 21 15 50.1
Um iSgl 21 17 29.6
Ud iSgl 21 15 31.9
iRg 21 15 37.6
De iSgl 21 16 53.6
Bergslagen, central Sweden, 59.9°N, 15.1°E.
Origin time = 21 15 04.
Rockburst?

" 15 Up iRg 21 16 09.5
Ud iRg 21 15 56.1
Bergslagen, central Sweden.
Origin time = 21 15 22.

" 15 Um iP 21 54 08.9
Hindu Kush (h = 230 km).

" 15 Up iP 23 32 27.6
Ud iP 23 32 43.4
De iP 23 32 43.2
China.

" 16 Up iP 01 05 20.3
ipP 01 05 25.5
i(PP) 01 08 44.9
iPP 01 09 22.4
iSKS 01 15 56

		micr	sec
pP	Z'	0.1	1.0
Mx	E	11	23
Mx	N	14	23
Mx	Z	17	23

Ki iP 01 05 04.3
ipP 01 05 10.3
iSKS 01 15 39

		micr	sec
P	Z'	0.3	1.5
pP	Z'	0.4	1.0
Mx	E	10	17
Mx	N	12	20
Mx	Z	13	22

Sk eP 01 05 26
ipP 01 05 31.3
Um iP 01 05 09.6
ipP 01 05 15.7
iSKS 01 15 44
Ud iP 01 05 28.8
ipP 01 05 33.9
(cont.)

1973
Mar. 16 (cont.)
De eP 01 05 34
ipP 01 05 39.5
Molucca Passage.
h = 20 km (Up,Ki,Sk,Um,Ud, De).
m = 6.4, M = 6.5 (Up,Ki).

" 16 Um iP 01 14 10.4
Ud iP 01 14 29.7
Molucca Passage (h = N).

" 16 Up eP 01 22 43
Um iP 01 22 29.0
Molucca Passage (h = N).

" 16 Up iP 02 25 55.4
Ki iP 02 25 40.5
Um iP 02 25 45.4
Ud iP 02 26 04.2
De iP 02 26 10.9
Molucca Passage (h = 45 km).

" 16 Um iP 03 54 02.7
Ud iP 03 54 22.2
Molucca Passage (h = N).

" 16 Up iP 05 58 11.1 C

" 16 Um iPKPl 08 27 19.2
Ud iPKPl 08 27 33.0
De iPKPl 08 27 41.5

" 16 Um iSgl 12 15 21.8
Ud iSgl 12 15 59.6
De eSgl 12 16 35
Western USSR.
Explosion.

" 16 Ud iSgl 15 03 06.6
South Norway, 58.4°N, 6.4°E.
Origin time = 15 00 58.
By combination with Kongsberg and Bergen readings.

" 16 Ud eP 16 10 43

" 16 Ud iRg 16 32 10.0

" 16 Ud i(P) 19 51 25.4

" 16 Ki iP 19 51 32.0

" 16 Ud iRg 20 16 25.9

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

1973							
Mar.	16	Up	e(P)		20 17 58		
"	16	Up	iP		22 01 27.7		
					micr	sec	
			P	Z'	0.1	1.1	
		Ki	iP		22 00 48.7		
		Sk	iP		22 01 23.3		
		Um	iP		22 01 05.1		
			i		22 01 06.6		
			ipP		22 01 18.2		
		Ud	iP		22 01 34.9		
		Japan.					
		h = 50 km (Um).					
"	16	Sk	eP		22 04 26		
		Um	iP		22 04 09.0		C
		Ud	iP		22 04 38.2		
		Japan.					
		Origin time = 21 53 04.					
"	16	Um	i(P)		22 11 30.8		
"	17	Up	iP		00 21 16.6		
		Um	eP		00 20 51		C
		Ud	iP		00 21 23.0		C
		Kurile Islands (h = N).					
"	17	Ki	eP		00 21 02		
"	17	Up	i(P)		01 04 19.9		
"	17	Up	iPKP		05 16 08.6		
			iSKP1		05 19 20.8		
			iSKP		05 19 24.7		
					micr	sec	
			SKP1	Z'	0.3	1.2	
		Ki	iPKP		05 15 53.5		C
			iSKP1		05 18 57.9		
					micr	sec	
			PKP	Z'	0.3	1.4	
		Sk	iPKP		05 16 04.9		
			iSKP1		05 19 16.5		
		Um	i(PKP)		05 15 52.3		
			iPKP		05 16 01.6		
			iSKP1		05 19 07.3		
			iSKP		05 19 18.6		
		Ud	i(PKP)		05 16 00.7		
			iPKP		05 16 10.4		
			iSKP1		05 19 24.2		
			iSKP		05 19 29.1		
		De	i(PKP)		05 16 08.5		
			iPKP		05 16 16.1		
			iSKP1		05 19 32.6		
		New Hebrides Islands					
		(h = 190 km).					
"	17	Up	iP		08 43 29.3		
		(cont.)					
1973							
Mar.	17	(cont.)					
		Up	ipP		08 43 43.4		
			iS		08 53 55		
					micr	sec	
			P	Z'	0.5	1.5	
			pP	Z'	3.8	1.7	
			Mx	E	170	20	
			Mx	N	430	21	
			Mx	Z	320	20	
		Ki	iP		08 43 11.6		
			ipP		08 43 24.4		
			isP		08 43 33.2		
			iS		08 53 25		
					micr	sec	
			P	Z'	1.2	1.6	
			pP	Z'	2.9	1.8	
			Mx	E	390	25	
			Mx	N	350	21	
			Mx	Z	200	21	
		Sk	iP		08 43 35.6		
			epP		08 43 49		
			isP		08 43 54.0		
		Um	iP		08 43 17.3		
			iS		08 53 40		
		Ud	iP		08 43 38.0		
			ipP		08 43 51.1		
		De	iP		08 43 45.4		
			ipP		08 43 57.8		
			isP		08 44 06.8		
		Luzon.					
		h = 50 km (Up,Ki,Sk,Ud,De).					
		m = 6.8, M = 7.8 (Up,Ki).					
"	17	Up	eP		08 56 40		
		Ki	eP		08 56 22		
		Um	iP		08 56 30.7		
		Ud	i(pP)		08 57 02.8		
		Luzon.					
		Origin time = 08 44 04.					
"	17	Ki	iP		12 26 41.2		
			i		12 27 35.2		
		Um	i(P)		12 26 47.0		
		Ud	iP		12 26 54.3		
		De	iP		12 26 53.2		
		Pamir.					
"	17	Up	iP		15 53 53.0		
			ipP		15 54 12.3		
			i		15 57 49.6		
			iS		16 04 46		
					micr	sec	
			P	Z'	0.1	1.3	
			pP	Z'	0.1	0.9	
			Mx	N	1.2	22	
		Ki	iP		15 53 50.5		
			ipP		15 54 12.2		
		(cont.)					

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

1973
Mar. 17 (cont.)
Ki micr sec
P Z' 0.1 1.3
pP Z' 0.1 1.2
Mx E 1.6 21
Mx N 2.4 23
Mx Z 1.7 22
Sk iP 15 54 06.6
ipP 15 54 25.4
Um iP 15 53 50.2
ipP 15 54 10.1
iS 16 04 40
Ud iP 15 54 01.6
ipP 15 54 21.7
iPP 15 57 48.1
De ipP 15 54 21.3
Sumatra.
h = 80 km (Up,Ki,Sk,Um,Ud).
m = 6.1, M = 5.6 (Up,Ki).

" 17 Ud iP 16 52 06.8
Sumatra (h = 60 km).

" 17 Ud iP 19 19 56.2

" 17 Up iP 20 34 20.9
Sk eP 20 34 17
Um iP 20 34 05.3
Ud iP 20 34 27.8
Mariana Islands (h = 530 km).

" 17 Ud iPKPl 21 30 28.4
De iPKPl 21 30 39.8

" 18 Um iPKPl 02 42 16.9
South of Kermadec Islands
(h = N).

" 18 Up iSgl 06 02 58.5
Ki ePn 05 58 43
iSn 05 59 43.7
iS* 06 00 02.3
Sk iSgl 06 02 29.4
Um iSn 06 00 23.1
i 06 00 36.5
iSgl 06 00 56.7
Ud iSgl 06 03 33.5
De iSgl 06 04 54.0
Northwest USSR,
67.5°N, 34.3°E.
Origin time = 05 57 23.
Explosion.

" 18 Ud iP 09 23 05.1

" 18 Up iP 11 19 45.5
ipP 11 19 49.6
(cont.)

1973
Mar. 18 (cont.)
Up iPP 11 23 48.5
iSKS 11 30 18
iS 11 31 02
micr sec
pP Z' 1.1 1.0
Mx E 24 26
Mx N 18 25
Mx Z 44 26
Ki iP 11 19 29.5
ipP 11 19 34.4
iSKS 11 30 01
iS 11 30 34
micr sec
P Z' 0.2 1.5
pP Z' 0.3 0.9
Mx E 36 26
Mx N 13 19
Mx Z 28 26
Sk eP 11 19 55
ipP 11 20 01.0
Um iP 11 19 34.7
ipP 11 19 39.4
iSKS 11 30 07
iS 11 30 43
Ud iP 11 19 53.7
ipP 11 19 58.4
i(PP) 11 23 03.3
iPP 11 24 07.8
De iP 11 20 03.7
Molucca Passage.
h = 20 km (Up,Ki,Sk,Um,Ud).
m = 6.8, M = 6.8 (Up,Ki).

" 18 Up iP 11 37 17.1
Ki iP 11 37 03.6
Um iP 11 37 07.1
Ud iP 11 37 23.7
Molucca Passage (h = 30 km).

" 18 Ki iP 12 17 21.7
Um iP 12 17 26.1
Molucca Passage (h = 40 km).

" 18 Um iP 13 24 41.1
Ud iP 13 25 01.8
Molucca Passage.
Origin time = 13 11 22.

" 18 Ud iP 18 13 57.6
Turkey (h = 5 km).

" 18 Um iP 18 33 26.5

" 18 Ud iPKPl 20 04 28.9
De iPKPl 20 04 40.1 C
Tonga-Kermadec Islands
(h = 570 km).

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

1973
Mar. 19 Ud iPKP2 07 03 07.2
Macquarie Islands (h = N).

" 19 Ud iP 08 24 32.5

" 19 Ki iP 09 18 43.3
Ud iP 09 19 10.7
Talaud Islands.

" 19 Um i(P) 10 26 46.6

" 19 Up iP 11 51 46.3
i 11 51 47.4
ipP 11 52 11.4
iS 12 00 25
micr sec
P Z' 0.6 1.0
Mx E 1.6 27
Mx N 2.8 30
Mx Z 3.6 31
Ki iP 11 50 52.5
i 11 50 53.5
ipP 11 51 18.4
iS 11 58 35
micr sec
P Z' 0.4 0.9
Mx E 1.1 20
Mx N 1.8 20
Mx Z 1.7 22
Sk iP 11 51 26.7
i 11 51 27.7
iPcP 11 52 01.1
Um iP 11 51 18.6
i 11 51 19.7
ipP 11 51 44.3
iS 11 59 32
Ud iP 11 51 47.4
i 11 51 48.8
ipP 11 52 13.4
i 11 54 18.8
De iP 11 52 09.3
i 11 52 10.8
ipP 11 52 35.9
iPP 11 54 39.2
Aleutian Islands.
h = 100 km (Up,Ki,Um,Ud,De).
m = 6.4, M = 5.3 (Up,Ki).
Double P, the second bigger onset in average 1.2 sec after the first one.

" 19 Ki iP 12 26 20.9
Um iP 12 26 02.4
Ud iP 12 25 48.2
i 12 26 02.1
De iP 12 25 21.8

1973
Mar. 19 Um eSgl 13 02 55
Ud eSgl 13 03 40
Western USSR.
Explosion.

" 19 Um i(Sgl) 13 47 57.5

" 19 Up iP 13 50 46.6
micr sec
P Z' 0.1 1.0
Ud iP 13 51 00.1

" 19 Um iP 17 14 11.4 D
Ud iP 17 14 40.6 D
Japan (h = 60 km).

" 19 Ki iP 22 21 28.7
Um iP 22 21 07.4
Ud iP 22 21 06.1
De eP 22 20 52
Iran (h = N).

" 20 Up iPKP 01 24 55.5
Ki iPKP 01 25 11.1 C
micr sec
PKP Z' 0.1 1.0
Um iPKP 01 25 04.0
Ud iPKP 01 24 54.5
South Sandwich Islands (h = N).

" 20 Um iP 01 35 18.7
Ud iP 01 35 02.3

" 20 Up ePKP1 01 55 24
Ud ePKP1 01 55 25
De iPKP1 01 55 35.1

" 20 Um ePKP 05 31 41
Ud iPKP 05 31 33.4
Chile (h = 25 km).

" 20 Up eP 07 10 29
Ki iP 07 09 35.5
Sk eP 07 10 06
Um iP 07 10 02.5
Ud iP 07 10 27.4
De iP 07 10 50.4
Aleutian Islands (h = 15 km).

" 20 Ud iP 09 01 52.7

" 20 Up iPKP1 10 02 29.6
Ud iPKP1 10 02 31.6 C
De iPKP1 10 02 42.5 C
Tonga-Kermadec Islands (h = 420 km).

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

```
1973
Mar.  20   Um   i(Sgl)      12 27 39.5

 "    20   Ud   eP          14 39 00
           Kurile Islands.

 "    20   Up   i(P)        14 44 45.7
           De   i(P)        14 44 41.1

 "    20   Up   iSgl        15 37 32.7
           Ki   iSgl        15 34 50.6
           Sk   eSgl        15 35 37.2
           Ud   iSgl        15 37 26.8
           Off coast of Nordland,
           Norway.
           Origin time = 15 33 35.
           Foreshock to the
           following event.

 "    20   Up   iSn         15 37 18.4
                iSgl        15 38 00.0
           Ki   iPgl        15 34 45.9
                iSgl        15 35 19.5
                            micr  sec
                Sgl     Z'  0.1   0.5
           Sk   iPgl        15 35 11.8
                iSgl        15 36 04.0
           Um   i           15 35 14.0
                i           15 35 15.7
                iPgl        15 35 21.9
                iSn         15 35 59.2
                iSgl        15 36 18.4
           Ud   iSn         15 37 15.4
                iSgl        15 37 57.4
           De   eSgl        15 39 44
           Off coast of Nordland,
           Norway, 67.4°N, 14.1°E.
           Origin time = 15 34 03.

 "    20   Ki   iP          16 47 05.1

 "    20   Um   iPKP        18 32 32.0
           South Indian Ocean (h = N).

 "    20   Up   iP1         19 22 41.9
                iP2         19 22 46.7
                ipPP        19 27 40.2
                i           19 27 44.6
                iSKS        19 32 59
                            micr  sec
                Mx      E   1.9   24
                Mx      N   2.3   21
                Mx      Z   3.0   24
           Ki   iP1         19 22 33.8
                iP2         19 22 37.8
                ipP         19 23 19.5
                ipPP        19 27 26.6
           (cont.)

1973
Mar.  20   (cont.)
           Ki                   micr  sec
                P1          Z'  0.1   1.2
                pP          Z'  0.1   1.3
                Mx          E   1.5   20
                Mx          N   4.5   19
           Sk   iP2             19 22 55.3
                ipPP            19 27 56.2
           Um   iP2             19 22 39.0
                ipPP            19 27 29.7
                iSKS            19 32 53
           Ud   iP1             19 22 50.6
                iP2             19 22 55.0
                ipP             19 23 36.6
                iPP             19 27 09.7
           De   iP1             19 22 52.8
                iP2             19 22 57.7
                iPP             19 27 09.6
           Sumbawa Island.
           h = 180 km (Ki,Ud).
           M = 5.9 (Up,Ki).
           In average: P2 - P1 = 4.6
           sec.

 "    20   Um   iP              20 32 17.4
           Ud   eP              20 32 18

 "    21   Up   iP              02 34 55.5
           Ki   iP              02 34 04.2
           Ud   iP              02 35 01.6
           De   iP              02 35 20.4
           Kurile Islands (h = 55 km).

 "    21   Ud   iP              09 15 12.7

 "    21   Sk   eP              11 31 31
           Ud   iP              11 30 58.4
                i               11 30 59.6
           De   iP              11 30 23.1
           Greece (h = 30 km).

 "    21   Um   iP              11 35 26.0

 "    21   Um   i               12 19 24.0
                iSgl            12 19 27.1

 "    21   Um   iSgl            12 25 37.1
           Ud   eSgl            12 26 21
           De   eSgl            12 26 56
           Western USSR.
           Explosion.

 "    21   Sk   eP              12 35 53
           Ud   iP              12 35 19.7
           De   eP              12 34 47
           Crete.
```

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

1973					
Mar.	21	Up	iSn		12 43 30.8
			iSg1		12 43 43.2
		Ki	iSg1		12 46 21.3
		Sk	eSg1		12 45 30
		Um	iSg1		12 44 18.6
			iSg2		12 44 22.9
		Ud	iSn		12 44 21.1
			iSg1		12 44 45.9
		De	iSg1		12 45 16.6
		Esthonia, 59.7°N, 24.0°E.			
		Origin time = 12 42 00.			
		Explosion.			
"	21	Um	iP		15 07 55.8
		Ud	iP		15 08 15.2
"	21	Um	iP		18 59 03.0
		Ud	iP		18 59 04.8
"	21	Up	iP		20 45 55.0
					micr sec
			P	Z'	0.1 1.0
		Ki	iP		20 45 38.7
		Um	iP		20 45 41.9
		Ud	iP		20 46 08.9
		Szechwan, China.			
"	21	Up	eP		21 56 49
		Um	iP		21 56 21.8
		Ud	iP		21 56 53.2
		Kurile Islands (h = 110 km).			
"	22	Up	iP1		01 16 32.7
			iP2		01 16 36.9
					micr sec
			P2	Z'	0.1 1.0
		Ki	eP2		01 16 35
		Sk	iP2		01 16 55.5
		Um	eP1		01 16 27
			iP2		01 16 31.1
		Ud	iP1		01 16 47.0
			iP2		01 16 51.5
		De	iP2		01 16 51.4
		Tibet (h = N).			
		In average: P2 - P1 = 4.3 sec.			
"	22	Up	iP		06 21 24.1
		Ki	iP		06 21 14.2
		Um	iP		06 21 15.3
			i		06 21 18.4
		Ud	iP		06 21 37.0
		Burma-China (h = N).			
"	22	Up	iP		10 20 43.6
"	22	Up	iSn		11 54 27.0
		(cont.)			
1973					
Mar.	22	(cont.)			
		Up	iSg1		11 54 41.1
		Um	iSg1		11 55 10.4
		Ud	iSg1		11 55 45.0
		De	iSg1		11 56 07.5
		Esthonia, 59.5°N, 25.4°E.			
		Origin time = 11 52 37.			
		Explosion.			
"	22	Up	iP		14 11 47.2 D
		Ki	iP		14 11 56.7 D
					micr sec
			P	Z'	0.1 0.9
		Sk	eP		14 11 34
		Um	iP		14 11 55.5 D
		Ud	iP		14 11 35.7 D
		De	iP		14 11 34.8 D
		Leeward Islands (h = 160 km).			
"	22	Up	iPKP1		14 42 12.0
		Ud	iPKP1		14 42 13.5
		De	iPKP1		14 42 23.2
"	22	Up	iRg		18 08 48.7
		Ud	iRg		18 08 35.5
		De	eSg1		18 09 53
		Central Sweden.			
"	22	Up	iP		21 09 34.9
			ipP		21 09 45.6
					micr sec
			P	Z'	0.2 1.1
		Ki	iP		21 08 42.3
					micr sec
			P	Z'	0.1 1.0
		Sk	iP		21 09 15.9
		Um	iP		21 09 07.8
			ipP		21 09 18.2
		Ud	iP		21 09 34.9
			ipP		21 09 45.0
		De	eP		21 09 57
		Aleutian Islands.			
		h = 40 km (Up,Um,Ud).			
		m = 6.1 (Up,Ki).			
"	22	Up	iP		21 35 21.5
		Ki	eP		21 34 29
		Um	iP		21 34 54.1
		Ud	iP		21 35 21.3
		Aleutian Islands (h = 50 km).			
"	22	Up	iRg		21 42 50.5
		Ud	iRg		21 42 37.6
		Central Sweden.			
"	22	Up	iP		22 52 22.5
		(cont.)			

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

1973
Mar. 22 (cont.)
Up micr sec
P Z' 0.1 1.2
Ki iP 22 52 06.4
ipP 22 52 26.4
micr sec
P Z' 0.1 1.0
Um iP 22 52 12.0
i 22 52 14.6
Ud iP 22 52 30.5
ipP 22 52 51.1
Mindanao.
h = 80 km (Ki,Ud).
m = 6.1 (Up,Ki).

" 22 Ud iP 23 55 11.5
Komandorsky Islands (h = N).

" 23 Ud iP 00 22 16.0
i 00 22 31.4
Komandorsky Islands (h = N).

" 23 Up iP 02 13 44.7
Ki eP 02 14 55
Um iP 02 14 20.2
Ud iP 02 13 50.1 D
De eP 02 13 16
Mediterranean Sea (h = N).

" 23 Um iP 03 58 55.2

" 23 Up iP 07 06 27.8
ipP 07 06 43.2
iS 07 15 27
i(P'P') 07 34 42.1
iP'P' 07 34 50.3
micr sec
P Z' 2.0 2.3
pP Z' 0.3 1.0
Mx E 4.3 22
Mx N 4.6 23
Mx Z 6.1 18
Ki iP 07 05 35.0
ipP 07 05 52.3
iS 07 13 45
iP'P' 07 35 13.2
micr sec
P Z' 0.4 1.4
pP Z' 0.6 1.1
Mx E 2.7 16
Mx N 6.4 19
Mx Z 6.4 19
Sk iP 07 06 08.7
Um iP 07 06 00.5
ipP 07 06 17.8
iS 07 14 33
(cont.)

1973
Mar. 23 (cont.)
Um iP'P' 07 35 00.9
Ud iP 07 06 30.4
iP'P' 07 34 48.1
De iP 07 06 51.4
Aleutian Islands.
h = 60 km (Up,Ki,Um).
m = 6.4, M = 5.9 (Up,Ki).

" 23 Um iP 10 12 17.3 C
Ud iP 10 12 36.9
Hindu Kush.
Intermediate depth.

" 23 Up iSgl 11 04 31.9
Ki ePn 11 00 16
ePgl 11 00 29
iSn 11 01 13.8
iS* 11 01 33.2
Um iSn 11 01 53.9
iS* 11 02 21.7
iSgl 11 02 26.8
Northwest USSR,
67.6°N, 33.8°E.
Origin time = 10 58 58.
Explosion.

" 23 Um iSgl 12 22 35.9
Ud iSgl 12 23 23.0
Western USSR.
Explosion.

" 23 Um eSgl 12 43 11
Western USSR.
Explosion.

" 23 Ud iP 14 07 07.7
Aleutian Islands (h = N).

" 23 De e(Sgl) 14 08 52

" 23 Up iSgl 14 12 16.6
Ud eSgl 14 12 21
e(Sg2) 14 12 30
De iPgl 14 10 17.6
iSgl 14 10 35.1
Baltic Sea, south of
Sweden, 55.5°N, 15.2°E.
Origin time = 14 09 56.
Explosion.

" 23 De e(Sgl) 14 30 31

" 23 De e(Sgl) 15 05 43

" 23 De e 15 09 58
iSgl 15 10 08.4

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

1973						
Mar.	23	Up	iP		15 24 41.7	
		Ki	iP		15 23 44.6	
					micr	sec
			P	Z'	0.1	0.9
		Sk	eP		15 24 08	
		Um	iP		15 24 14.3	
		Ud	iP		15 24 34.7	
		Canada (h = N).				
"	23	Up	iP		19 24 52.9	
					micr	sec
			P	Z'	0.3	1.3
		Ki	iP		19 24 37.1	
					micr	sec
			P	Z'	0.2	0.9
		Sk	iP		19 25 04.3	
		Um	iP		19 24 39.8	
		Ud	iP		19 25 05.7	
		Szechwan, China (h = N).				
		m = 6.2 (Up,Ki).				
"	23	Up	iP		19 54 20.1 C	
			ipP		19 54 29.7	
					micr	sec
			P	Z'	0.4	1.2
			Mx	E	7.3	14
			Mx	N	6.1	14
			Mx	Z	18	14
		Ki	iP		19 53 48.9 C	
			ipP		19 53 58.5	
					micr	sec
			P	Z'	0.3	1.2
			Mx	E	9.2	20
			Mx	N	6.4	19
			Mx	Z	7.9	21
		Sk	iP		19 54 19.4 C	
			ipP		19 54 29.7	
		Um	iP		19 54 01.2 C	
			ipP		19 54 11.3	
		Ud	iP		19 54 28.6 C	
			ipP		19 54 38.4	
		De	iP		19 54 40.3 C	
		Ryukyu Islands.				
		h = 35 km (Up,Ki,Sk,Um,Ud).				
		m = 6.3, M = 6.3 (Up,Ki).				
"	23	Ud	iP		20 13 04.0	
		Ryukyu Islands (h = 45 km).				
"	23	Up	iP		21 53 09.8	
		Ki	ipP		21 53 04.2	
					micr	sec
			pP	Z'	0.1	1.0
		Um	eP		21 52 59	
		Ud	iP		21 53 18.1	
			ipP		21 53 30.4	
		Talaud Islands.				
		h = 45 km (Ud).				

1973						
Mar.	24	Up	iP		00 38 23.2	
			i		00 38 31.2	
		Ki	iP		00 38 18.2	
		Sk	eP		00 38 42	
		Um	iP		00 38 15.3 C	
		Ud	iP		00 38 35.9	
			i		00 38 40.5	
		De	iP		00 38 42.6	
		Burma (h = N).				
"	24	Up	iP		00 46 29.9	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	2.9	17
			Mx	N	4.2	16
			Mx	Z	6.1	18
		Ki	eP		00 45 54	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	7.4	20
			Mx	N	4.5	14
			Mx	Z	7.3	16
		Sk	ipP		00 46 29.2	
		Um	iP		00 46 08.3	
			ipP		00 46 14.4	
		Ud	iP		00 46 35.5	
			ipP		00 46 41.5	
			i		00 46 57.4	
		De	ipP		00 46 54.8	
		South of Japan.				
		h = 20 km (Um,Ud).				
		m = 5.9, M = 6.1 (Up,Ki).				
"	24	Up	iP		07 25 05.2	
			i		07 25 11.0	
					micr	sec
			P	Z'	0.1	1.3
		Um	eP		07 24 41	
			i		07 24 45.4	
		Ud	eP		07 25 09	
			i		07 25 13.3	
		De	iP		07 25 29.6	
		Kamchatka (h = N).				
"	24	Ki	i(P)		07 59 55.3	
		Alaska (h = 120 km).				
"	24	Up	iSn		11 44 20.3	
			iSgl		11 44 32.7	
		Um	iSgl		11 45 04.7	
		Ud	eSgl		11 45 38	
		De	iSgl		11 45 59.5	
		Esthonia, 59.5°N, 25.2°E.				
		Origin time = 11 42 30.				
		Explosion.				
"	24	Up	iP		13 05 09.5	
		(cont.)				

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

1973
Mar. 24 (cont.)
Um iP 13 05 04.5
Ud iP 13 05 18.6
Java (h = N).

" 24 Ki iPn 16 33 13.5
iPgl 16 33 22.5
iSn 16 33 59.5
iSgl 16 34 18.9
Um iSn 16 35 12.5
i 16 35 25.0
iSgl 16 35 45.1
Northwest USSR-Norway border
region, 69.5°N, 30.2°E.
Origin time = 16 32 13.
Explosion.

" 25 Up iP 01 10 28.1
Um iP 01 10 08.4

" 25 Ud iP 03 13 37.5
North Atlantic Ocean (h = N).

" 25 Up iPKP1 04 51 16.6
Ud iPKP1 04 51 17.3
De ePKP1 04 51 27

" 25 Up iS* 05 33 58.0
iSgl 05 34 09.3
Ki ePgl 05 30 04
iSn 05 30 51.7
iS* 05 31 11.4
iSgl 05 31 17.7
Sk iSgl 05 33 37.4
Um iSn 05 31 30.2
i 05 31 45.2
iSgl 05 32 03.7
iSg2 05 32 14.8
Ud iSgl 05 34 37.9
De iSgl 05 36 11.8
Northwest USSR,
67.7°N, 34.1°E.
Origin time = 05 28 31.
Explosion.

" 25 Ki eSn 06 16 30
iS* 06 16 48.8
Um iSgl 06 17 42.9
Northwest USSR.
Explosion.

" 25 Up iX 07 41 53.9
Ud iP 07 41 19.1
iX 07 42 00.3
Aleutian Islands (h = N).

" 25 Up iP 09 06 54.2 C
(cont.)

1973
Mar. 25 (cont.)
Up micr sec
Mx E 1.0 20
Mx N 1.8 20
Mx Z 2.9 21
Ki eP 09 06 02
micr sec
Mx E 1.2 16
Mx N 1.2 16
Mx Z 1.5 16
Sk iP 09 06 38.7 C
Um iP 09 06 26.0 C
iPcP 09 07 07.5
Ud iP 09 06 58.5 C
iPcP 09 07 30.5
De eP 09 07 20
Kurile Islands (h = 40 km).
M = 5.3 (Up,Ki).

" 25 Up eSn 09 34 47
iSgl 09 35 45.0
Ki e(Pgl) 09 31 43
iSn 09 32 25.5
iS* 09 32 45.8
Sk iSgl 09 35 12.8
iSg2 09 35 30.2
Um iSn 09 33 04.1
i 09 33 09.9
i 09 33 26.0
iSgl 09 33 36.8
Ud eSn 09 35 02
iSgl 09 36 12.6
De iSgl 09 37 46.5
Northwest USSR,
67.7°N, 34.1°E.
Origin time = 09 30 05.
Explosion.

" 25 Up iPgl 10 39 47.4
iSgl 10 40 05.2
iRg 10 40 10.1
Ud iSgl 10 39 52.4
iRg 10 39 55.1
De iSgl 10 41 13.6
Bergslagen, central Sweden,
59.9°N, 15.1°E.
Origin time = 10 39 24.
Rockburst?

" 25 Ud eP 11 36 36
Aleutian Islands (h = N).

" 25 Up iP 13 45 48.8
Um iP 13 45 22.4
Ud iP 13 45 54.1
ipP 13 46 11.1
De eP 13 46 13
(cont.)

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

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1973
Mar.  25   (cont.)
           Kurile Islands.
           h = 60 km (Ud).

 "    25   Ud   iP          16 04 12.8 C
           Vancouver Island (h = N).

 "    25   Up   iP          16 46 58.5
           Ud   iP          16 46 41.4

 "    25   Up   iP          19 03 19.8
           Ud   iP          19 03 36.2
           Hindu Kush (h = 90 km).

 "    25   Ki   iPKP1       21 36 46.8
                i           21 37 12.7
           Um   iPKP1       21 36 53.9
           New Zealand (h = 70 km).

 "    25   Um   iP          21 44 16.1
           Ud   iP          21 44 46.5
           South of Japan (h = 80 km).

 "    25   Up   iP          22 04 40.2
           East China Sea (h = N).

 "    25   Up   iPKP2       22 24 43.2
           Ki   iPKP1       22 24 06.8 C
                iPKP2       22 24 14.0
                            micr  sec
                PKP1    Z'  0.1   1.4
           Sk   iPKP2       22 24 34.8
           Um   iPKP1       22 24 14.5
                i           22 24 42.3
           Ud   iPKP2       22 24 46.6
           De   iPKP2       22 24 57.8
           New Zealand (h = 70 km).

 "    25   Up   iP          22 54 33.2
                i           22 54 36.5
                iPP         22 57 43.9
                            micr  sec
                Mx      E   4.1   21
                Mx      N   2.1   20
                Mx      Z   6.9   22
           Ki   iP          22 54 08.1
                i           22 54 12.6
                            micr  sec
                P       Z'  0.1   1.0
                Mx      E   4.0   15
                Mx      N   3.6   16
                Mx      Z   6.1   16
           Sk   iP          22 54 07.8
                i           22 54 13.8
           Um   iP          22 54 22.7 C
                i           22 54 28.0
           (cont.)

1973
Mar.  25   (cont.)
           Ud   iP          22 54 24.8
                i           22 54 29.3
           De   iP          22 54 36.8
                i           22 54 41.8
           Gulf of California (h = N).
           M = 6.0 (Up,Ki).
           Double P, the second
           bigger in average 4.8 sec
           delayed.

 "    25   Up   iP          22 57 26.2
           Ud   iP          22 57 18.5
           De   iP          22 57 31.2
           Gulf of California.
           Origin time = 22 44 57.

 "    25   Up   iP          23 00 41.2 C
           Sk   iP          23 01 23.1
           Um   iP          23 01 17.9 C
           Ud   iP          23 00 44.8
           Greece (h = N).

 "    26   Ud   iP          00 31 55.6
           Molucca Passage (h = N).

 "    26   Ud   e(pP)       02 21 23
           Aleutian Islands (h = 45 km).

 "    26   Up   iP          02 41 02.4
                i           02 41 19.9
           Ud   iP          02 41 11.3
                i           02 41 36.1
           Philippine Sea (h = N).

 "    26   Up   iP1         02 49 17.3
                iP2         02 49 19.5
                            micr  sec
                P2      Z'  0.1   1.0
                Mx      E   8.5   22
                Mx      N   24    22
                Mx      Z   8.6   21
           Ki   iP2         02 48 58.5
                ipP         02 49 09.4
                            micr  sec
                P2      Z'  0.1   0.8
                pP      Z'  0.1   0.8
                Mx      E   9.1   16
                Mx      N   12    18
           Sk   iP2         02 49 25.6
                ipP         02 49 35.9
                i           02 49 49.1
           Um   iP2         02 49 05.1
                iS          02 58 41
           Ud   iP1         02 49 25.8
                iP2         02 49 28.5
                ipP         02 49 39.4
           (cont.)
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Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973 Mar.	26	(cont.)				
		De	iP2		02 49 38.7	
		Ryukyu Islands.				
		h = 40 km (Ki,Sk,Ud).				
		m = 5.9, M = 6.4 (Up,Ki).				
		The pP phases refer to P2, the biggest of the P onsets.				
"	26	Up	iP		03 30 41.2	
			i		03 30 43.7	
		Ud	eP		03 31 01	
"	26	Ud	iPKP1		05 28 02.0	
		De	iPKP1		05 28 13.8	
			iSKP1		05 30 57.8	
		Fiji Islands (h = 630 km).				
"	26	Um	iP		07 53 19.5	
		Japan (h = 60 km).				
"	26	Up	iP		08 06 14.2	
			i		08 06 35.4	
			ipP		08 06 42.7	
			isP		08 06 55.3	
			iPP		08 07 53.6	
					micr sec	
			P	Z'	0.3 1.4	
			sP	Z'	0.1 1.1	
			PP	Z'	0.6 1.5	
		Ki	i(P)		08 06 02.7	
			iP		08 06 17.9	D
			ipP		08 06 44.4	
			isP		08 06 54.9	
					micr sec	
			P	Z'	0.1 0.7	
		Sk	eP		08 06 37	
			isP		08 07 19.7	
			iPP		08 08 26.7	
		Um	iP		08 06 10.0	D
			ipP		08 06 39.1	
			isP		08 06 51.1	
		Ud	iP		08 06 31.3	D
			ipP		08 06 59.8	
		De	iP		08 06 30.0	D
			ipP		08 06 58.0	
			isP		08 07 10.8	
			iPP		08 08 17.0	
		Tadzhik-Sinkiang.				
		h = 130 km (Up,Ki,Sk,Um,Ud, De).				
		m = 5.8 (Up,Ki).				
		The sP phases are very well developed.				
"	26	Up	iP		08 41 03.3	D
			esP		08 41 47	
			iPP		08 42 43.2	
		(cont.)				
1973 Mar.	26	(cont.)				
		Ki	e(P)		08 40 53	
			iP		08 41 06.7	D
			ipP		08 41 34.6	
					micr sec	
			P	Z'	0.1 0.6	
		Sk	iP		08 41 27.1	D
			isP		08 42 07.6	
			iPP		08 43 12.2	
		Um	iP		08 40 58.8	D
			isP		08 41 39.1	
		Ud	iP		08 41 19.9	D
			ipP		08 41 47.5	
			isP		08 42 00.1	
		De	iP		08 41 18.6	D
			ipP		08 41 46.5	
			iPP		08 43 06.7	
		Tadzhik-Sinkiang.				
		h = 150 km (Up,Ki,Sk,Um,Ud, De).				
"	26	Ud	i(P)		11 08 55.5	
"	26	Um	iPKP		11 22 45.3	
			i		11 23 05.0	
		Ud	i(pPP)		11 23 42.8	
			iPKKP		11 33 47.8	
		De	i(PKKP)		11 33 42.0	
		Argentina (h = 120 km).				
"	26	Ki	e(Sgl)		12 21 20	
"	26	Up	iSgl		12 24 12.0	
		Um	iSgl		12 24 30.7	
		De	iSgl		12 25 43.0	
		Western USSR.				
		Explosion.				
"	26	Ki	iP		12 57 45.2	
			ipP		12 58 26.8	
		Mariana Islands.				
		h = 170 km (Ki).				
"	26	Up	iP		15 07 41.0	
		Um	iP		15 07 19.0	
			ipP		15 07 31.5	
		Ud	iP		15 07 48.3	
		De	iP		15 08 03.5	
		Japan.				
		h = 45 km (Um).				
"	26	Up	iP		17 46 46.1	
		Um	iP		17 46 24.4	
			ipP		17 46 35.2	
		Ud	iP		17 46 53.2	C
		De	iP		17 47 07.7	
		Japan.				
		h = 40 km (Um).				

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

1973					
Mar.	26	Up	eP		21 58 30
			ipP		21 58 47.4
		Ki	iP		21 57 36.4
		Um	iP		21 58 02.2
			ipP		21 58 21.6
		Ud	iP		21 58 31.5
		De	iP		21 58 53.8
		Aleutian Islands.			
		h = 70 km (Up,Um).			
"	26	Up	iP		23 05 17.2 C
		Um	iP		23 05 04.0
			i		23 05 16.0
		De	eP		23 05 37
		Formosa (h = 30 km).			
"	27	Ki	iP		00 09 06.9
		Um	iP		00 08 57.1
		Azores Islands (h = N).			
"	27	Up	iP		02 20 00.2
		Ki	iP		02 19 21.6
		Sk	iP		02 19 55.1
		Um	iP		02 19 37.6
			i		02 19 42.7
		Ud	iP		02 20 07.6
		De	iP		02 20 22.6
		Japan (h = 60 km).			
"	27	Up	eP		03 16 58
		Ki	eP		03 18 10
		Sk	eP		03 17 36
		Um	iP		03 17 29.8
		Ud	iP		03 17 06.0
		De	eP		03 16 37
		Crete.			
"	27	Up	iP		03 49 29.0 C
		Ki	iP		03 49 04.0
		Sk	iP		03 49 31.7
		Um	iP		03 49 11.7
		Ud	iP		03 49 37.6 C
		De	iP		03 49 47.8 C
		Ryukyu Islands (h = 80 km).			
"	27	Ud	iP		06 57 16.3
		Kurile Islands.			
"	27	Um	iP		10 24 26.5
"	27	Ud	i(Sgl)		10 49 50.1
"	27	Ud	i(Sgl)		11 22 30.6
"	27	Um	iP		11 56 05.1 C
"	27	Um	i(Sgl)		12 19 01.7

1973						
Mar.	27	Up	iSgl		12 21 57.7	
		Um	iSgl		12 22 17.3	
		Ud	iSgl		12 22 57.8	
		Western USSR.				
		Explosion.				
"	27	Up	iP		12 42 48.9 C	
			ipP		12 42 57.8	
					micr	sec
			P	Z'	0.5	1.0
			Mx	E	0.9	18
			Mx	N	0.8	18
			Mx	Z	1.2	18
		Ki	iP		12 41 55.4 C	
					micr	sec
			P	Z'	0.3	1.0
			Mx	E	1.2	18
			Mx	N	2.3	21
			Mx	Z	2.3	18
		Sk	iP		12 42 29.6 C	
			i		12 42 35.4	
			iPcP		12 43 06.8	
		Um	iP		12 42 21.3 C	
		Ud	iP		12 42 50.6 C	
			ipP		12 42 58.5	
		De	iP		12 43 12.5 C	
			ipP		12 43 21.2	
		Aleutian Islands.				
		h = 30 km (Up,Ud,De).				
		m = 6.5, M = 5.3 (Up,Ki).				
"	27	Up	iP		15 43 12.6 D	
		Um	iP		15 43 54.4	
		Ud	iP		15 43 19.6	
		De	eP		15 42 44	
		Greece (h = N).				
"	27	Up	iPKP1		16 55 42.1 C	
		Ud	iPKP1		16 55 43.0	
		De	iPKP1		16 55 52.6	
"	27	Ud	iSKP1		20 17 40.0	
		New Hebrides Islands				
		(h = 140 km).				
"	28	Ki	iP		03 20 47.3	
		Sk	iP		03 21 00.5	
			iS		03 22 44.9	
		Um	iP		03 21 23.6	
			iS		03 23 29.2	
			i		03 24 01.3	
		Ud	iP		03 21 48.4	
			i(S)		03 24 21.8	
		Norwegian Sea, near				
		$71^{\circ}1/2$ N, 2°W.				
		Origin time = 03 18 45.				

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

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1973
Mar.  28   Up   iP          03 41 48.3
           Ud   iP          03 41 54.2
           Japan (h = 70 km).

 "    28   Up   iP          03 44 03.7 C
                            micr  sec
                P       Z'  0.1   0.8
           Ki   iP          03 44 41.3 C
                            micr  sec
                P       Z'  0.1   0.8
                Mx      E   1.1   15
           Sk   iP          03 44 38.5 C
           Um   iP          03 44 17.6 C
                iPP         03 46 09.6
           Ud   iP          03 44 18.8 C
           De   iP          03 44 02.4 C
           Iran (h = 35 km).
           m = 5.6 (Up,Ki).

 "    28   Ud   iPKP1       04 13 05.5
           De   iPKP1       04 13 15.4

 "    28   Up   iSgl        10 53 35.4
           Um   iSgl        10 54 11.3
           Ud   eSgl        10 54 36
           Esthonia.
           Explosion.

 "    28   Um   iSgl        12 17 10.8
           Ud   iSgl        12 18 03.4
           Western USSR.
           Explosion.

 "    28   Sk   iP          13 44 46.6
           Um   iP          13 44 33.9
           Ethiopia (h = N).

 "    28   Up   iP          13 51 11.8
                            micr  sec
                Mx      E   2.7   16
                Mx      N   2.6   18
                Mx      Z   3.3   20
           Ki   iP          13 51 56.8
                            micr  sec
                P       Z'  0.1   1.0
                Mx      E   4.1   17
                Mx      N   2.2   15
                Mx      Z   2.2   13
           Sk   iP          13 51 43.3
           Um   iP          13 51 31.2
                iPcP        13 52 38.4
                iS          13 59 10
           Ud   iP          13 51 21.2
           De   iP          13 50 58.7
           Ethiopia (h = N).
           M = 5.6 (Up,Ki).

1973
Mar.  28   Up   iP          14 27 56.7
                            micr  sec
                P       Z'  0.1   0.9
                Mx      E   1.0   14
                Mx      N   1.8   20
                Mx      Z   2.8   14
           Ki   iP          14 28 46.3
                            micr  sec
                P       Z'  0.2   1.5
                Mx      E   1.4   14
                Mx      N   1.8   13
                Mx      Z   1.4   15
           Sk   iP          14 28 30.1 C
           Um   iP          14 28 17.5 C
                iPcP        14 29 20.7
           Ud   iP          14 28 06.8 C
           De   eP          14 27 46
           Ethiopia (h = N).
           m = 5.9, M = 5.3 (Up,Ki).

 "    28   Up   ipP         14 52 12.1
                            micr  sec
                pP      Z'  0.1   1.1
           Ki   eP          14 51 46
                ipP         14 51 54.2
           Um   iP          14 51 50.8
                ipP         14 51 59.1
           Ud   iP          14 52 12.4
                ipP         14 52 19.8
           Luzon.
           h = 30 km (Ki,Um,Ud).

 "    28   Up   iP          15 08 12.8
                            micr  sec
                P       Z'  0.2   1.5
                Mx      E   1.7   15
                Mx      N   2.0   16
                Mx      Z   2.6   19
           Ki   iP          15 09 04.3
                            micr  sec
                Mx      E   2.2   15
                Mx      N   1.8   13
                Mx      Z   2.5   14
           Sk   eP          15 08 43
           Um   iP          15 08 33.4
           Ud   iP          15 08 23.3
           Ethiopia (h = N).
           M = 5.4 (Up,Ki).

 "    28   Ud   eP          15 13 43

 "    28   Um   i(P)        15 15 07.8

 "    28   Um   iPKP        17 03 44.3
           Ud   iPKP        17 03 52.3
           De   iPKP        17 03 56.7
           New Guinea (h = 80 km).
```

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

1973						
Mar.	28	Ki	iSgl		20 27 18.6	
		Sk	eSgl		20 27 24	
		Um	iSn		20 27 32.0	
			iSgl		20 27 45.0	
		Ud	iSgl		20 29 15.2	
		Nordland, Norway, 66.5°N, 14.5°E. Origin time = 20 25 50. Explosion.				
"	28	Ud	iPKPl		22 45 58.8	
		De	iPKPl		22 46 09.9	
		Fiji Islands (h = 610 km).				
"	29	Up	iP		00 07 42.3	
			ipP		00 07 51.8	
					micr	sec
			P	Z'	0.2	1.2
			Mx	E	6.4	22
			Mx	N	17	22
			Mx	Z	4.6	20
		Ki	iP		00 07 18.9	
			ipP		00 07 28.5	
					micr	sec
			pP	Z'	0.2	1.0
			Mx	E	4.5	15
			Mx	N	5.4	13
			Mx	Z	6.6	13
		Sk	ipP		00 07 56.5	
			i		00 08 05.0	
		Um	iP		00 07 26.5 C	
			ipP		00 07 37.0	
		Ud	iP		00 07 50.5	
			ipP		00 08 01.4	
		De	e(P)		00 08 06	
		Ryukyu Islands. h = 35 km (Up,Ki,Um,Ud). m = 6.1, M = 6.2 (Up,Ki).				
"	29	Up	eSgl		05 25 28	
		Ki	eSgl		05 26 19	
		Um	iSgl		05 24 52.9	
		Ud	eSgl		05 26 31	
		Lake Ladoga region. Explosion.				
"	29	Ud	iP		05 54 17.3	
"	29	Ud	i(P)		06 25 57.0	
"	29	Ki	iP		06 33 22.7	
			i		06 33 42.6	
		Sumatra (h = 50 km).				
"	29	Up	iSgl		08 01 13.5	
		Ud	eSgl		08 01 16	
		(cont.)				

1973				
Mar.	29	(cont.)		
		De	iPgl	07 59 21.2
			iPn	07 59 23.1
			iSgl	07 59 33.7
			iSn	07 59 37.5
			iRg	07 59 39.2
		Baltic Sea, south of Sweden, 56.0°N, 15.2°E. Origin time = 07 59 05. Explosion. A series of similar events from the same location was recorded on Mar. 29 with the following origin times: 08 24 05, 08 40 59, 09 39 21, 09 52 08, 10 03 07, 10 29 21, 10 42 43, 10 51 43, 10 58 48, 11 05 13, 11 12 05, 11 50 50, 11 55 45, 12 00 20. The Pn- and Sn-phases at De have relatively large amplitudes compared to Pgl and Sgl, which may be due to Moho-reflected P- and S-waves arriving almost simultaneously with Pn and Sn at the distance of De.		
"	29	Up	iPKPl	11 42 29.2
		Um	i(PKP)	11 42 18.4
			iPKP	11 42 25.9
		Ud	iPKPl	11 42 31.2
		De	iPKPl	11 42 42.0
		Tonga-Kermadec Islands (h = 540 km).		
"	29	Um	iSgl	13 17 41.6
		Western USSR. Explosion.		
"	29	Um	i(Sgl)	14 59 46.1
"	29	Ud	i(P)	16 31 52.4
"	29	Um	iP	16 56 41.0
		Japan (h = 40 km).		
"	29	Um	iSgl	17 12 23.8
		Lake Ladoga. Explosion.		
"	29	Um	iP	18 08 38.5
		Ud	iP	18 09 08.9
		Japan (h = 40 km).		
"	29	Um	iP	18 14 29.1
		Ud	iP	18 15 01.5
		De	eP	18 15 13

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

1973					
Mar.	29	Up	iP		22 43 10.3
		Ud	iP		22 43 16.2
"	29	Ud	iPKP1		23 53 07.3
		De	iPKP1		23 53 17.7
"	30	Up	eP1		00 10 44
			i		00 10 50.4
			iP2		00 10 54.0 C
					micr sec
			P2	Z'	0.1 1.3
			Mx	E	1.9 20
			Mx	N	2.2 24
			Mx	Z	2.8 25
		Ki	iP1		00 09 07.7
					micr sec
			P1	Z'	0.8 2.0
			Mx	E	2.2 15
			Mx	N	4.7 18
			Mx	Z	3.4 17
		Sk	iP1		00 09 59.1
		Um	iP1		00 09 58.8 C
		Ud	iP1		00 10 41.2 D
			iP2		00 10 50.3 C
		De	iP1		00 11 23.1
			iP2		00 11 30.9
		Norwegian Sea (h = N).			
		m = 5.2, M = 4.5 (Up,Ki).			
"	30	Up	iP		03 12 53.2
		Ki	eP		03 12 12
		Um	iP		03 12 29.2
		Ud	iP		03 13 00.3
		De	iP		03 13 16.9
		Japan (h = 55 km).			
"	30	Up	iP		03 29 12.3 C
		Ki	iP		03 29 11.8 C
					micr sec
			P	Z'	0.1 0.8
		Sk	iP		03 29 26.4
		Um	iP		03 29 09.2 C
		Ud	iP		03 29 21.9
		De	eP		03 29 21
		Sumatra (h = 90 km).			
"	30	Up	iPKP		04 06 20.2
		Ki	ePKP		04 06 41
		Um	iPKP		04 06 28.0
		Ud	iPKP		04 06 19.3
		De	ePKP		04 06 14
		Scotia Sea (h = N).			
"	30	Up	i		07 06 18.1
		Ud	iP		07 06 10.2
		South of Japan (h = 15 km).			

1973				
Mar.	30	Ki	iP	08 00 41.6
"	30	Up	iSgl	10 38 25.4
		Ki	iPn	10 34 12.1
			iSn	10 35 11.3
			iS*	10 35 30.0
			iSgl	10 35 34.8
		Sk	iSgl	10 38 06.1
		Um	iSn	10 35 52.2
			iSgl	10 36 25.6
		Ud	iSgl	10 38 58.4
		De	eSgl	10 40 31
		Northwest USSR,		
		67.9°N, 33.6°E.		
		Origin time = 10 32 56.		
		Explosion.		
"	30	Up	i(P)	13 42 32.2
"	30	Ud	i(P)	13 43 54.2
"	30	Up	e(P)	17 20 22
"	31	Ud	iP	01 51 17.6
		Mindanao (h = 90 km).		
"	31	Ud	ePKP	12 08 23
		New Guinea (h = 120 km).		
"	31	Ki	i(Sgl)	12 59 15.0
		Um	i(Sgl)	13 00 21.8
		Northwest USSR.		
		Explosion.		
"	31	Up	eP	14 11 52
		Ki	eP	14 11 05
		Um	iP	14 11 27.2
		Ud	iP	14 11 58.1
		Kurile Islands.		
"	31	Um	iP	19 22 29.5
"	31	Sk	eP	19 24 29
"	31	Up	iP	19 25 40.0
		Ud	iP	19 25 49.2
"	31	Up	iP	20 56 09.0
		Ki	iP	20 55 17.9
		Um	eP	20 55 46
		Kurile Islands (h = 45 km).		
"	31	Up	eP	23 37 32
		Ki	iP	23 39 01.1
		Sk	eP	23 38 26
		Um	iP	23 38 13.8
		(cont.)		

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

1973
Mar. 31 (cont.)

		Ud	iP	23 37 48.6
		De	iP	23 37 09.0

Rumania (h = 160 km).

Markus Båth
Klaus Meyer
Rutger Wahlström
Ota Kulhánek

December 15, 1974

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BOX 517
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SWEDEN

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SWEDEN

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

U P P S A L A, K I R U N A, S K A L S T U G A N, U M E Å,

U D D E H O L M and D E L A R Y

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

A P R I L 1 - 30, 1973

1973

Apr.	1	Up	iP		06 38 33.7	
		Um	iP		06 38 57.2	
		Ethiopia (h = N).				
"	1	Up	eP		07 21 39	
			ipP		07 21 46.0	
					micr	sec
			Mx	E	3.8	20
			Mx	N	3.4	16
			Mx	Z	3.5	20
		Ki	ipP		07 22 31.5	
					micr	sec
			pP	Z'	0.1	1.0
			Mx	E	7.7	22
			Mx	N	4.6	20
			Mx	Z	3.7	21
		Sk	iP		07 22 15.1	
			i		07 23 23.0	
		Um	iP		07 22 02.5	
			ipP		07 22 08.8	
			iPcP		07 23 10.8	
			iPP		07 24 13.6	
			iS		07 29 38	
		Ud	iP		07 21 55.9	
		Ethiopia.				
		h = 25 km (Up,Um).				
		M = 5.7 (Up,Ki).				
"	1	Um	i(Sgl)		08 20 13.4	
"	1	Ud	iP		08 52 37.2	
		Iceland (h = N).				
"	1	Ki	iP		08 54 44.0	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	2.0	19
			Mx	N	1.3	15
		Um	iP		08 55 01.3	
		(cont.)				

1973

Apr.	1	(cont.)		
		Ud	iP	08 54 58.7
		Iceland (h = N).		
"	1	Up	i	09 04 38.4
			iS*	09 05 21.8
			iSgl	09 05 31.9
		Ki	ePgl	09 01 25
			iSn	09 02 13.7
			iS*	09 02 31.6
			iSgl	09 02 35.5
		Sk	iSgl	09 05 04.3
		Um	iSn	09 02 54.1
			i	09 03 09.8
			iSgl	09 03 29.2
		Ud	iSgl	09 05 56.2
		Northwest USSR,		
		67.9°N, 33.6°E.		
		Origin time = 09 00 00.		
		Explosion.		
"	1	Ki	eP	09 54 03
		Um	i	09 54 27.8
		Ud	iP	09 54 14.7
			i	09 54 43.6
"	1	Ki	iPgl	11 02 48.7
			iSn	11 03 24.5
			iSgl	11 03 41.4
"	1	Um	iP	11 11 42.4
"	1	Ki	iPn	12 14 17.9
			iPgl	12 14 27.3
			iSn	12 15 06.4
			iSgl	12 15 23.5
		Um	eSgl	12 16 46
		Northwest USSR-Norway border region.		
		Origin time = 12 13 14.		
		Explosion.		

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

1973					
Apr.	1	Ud	iP		14 38 22.4
		Pamir.			
"	1	Um	iP		14 45 16.8
		Ud	iP		14 45 44.2
		South of Japan (h = N).			
"	1	Ud	iP		21 25 15.8
"	1	Um	iP		22 00 05.8
"	2	Ki	iP		01 35 42.4
		Um	iP		01 35 23.6 C
		Ud	iP		01 35 32.0 C
		Iran (h = N).			
"	2	Up			micr sec
			Mx	N	3.0 19
		Ki	eP		02 51 02
					micr sec
			Mx	E	2.7 10
			Mx	N	1.2 12
			Mx	Z	1.7 10
		Sk	i(P)		02 51 25.7
		Um	iP		02 50 50.7
			ipP		02 51 03.1
		Ud	iP		02 51 08.5
		Afghanistan-USSR.			
		h = 55 km (Um).			
		M = 5.3 (Up,Ki).			
"	2	Ud	iP		09 59 15.7
"	2	Ki	ePn		12 09 41
			iSn		12 10 27.5
			iS*		12 10 39.4
		Um	iSgl		12 12 14.4
		Northwest USSR-Norway border region, 69.5°N, 30.1°E.			
		Origin time = 12 08 40.			
		Explosion.			
"	2	Up	iP		19 35 41.9
					micr sec
			P	Z'	0.1 1.5
		Ki	iP		19 36 15.2
			i		19 36 29.0
					micr sec
			P	Z'	0.1 1.2
		Um	i(PcP)		19 36 22.6
		Ud	iP		19 35 30.3
			i		19 35 47.2
		De	iP		19 35 21.8
		Atlantic Ocean (h = N).			
		m = 5.8 (Up,Ki).			
"	2	Ki	i(P)		21 39 13.7

1973				
Apr.	2	Ud	iPKPl	23 17 08.3
		De	iPKPl	23 17 18.7
		Tonga-Kermadec Islands (h = 600 km).		
"	2	Ki	eP	23 28 44
		Ud	iP	23 28 54.0
		Sumatra (h = 100 km).		
"	3	Ki	iP	02 14 30.3
		Ud	iP	02 14 55.7
		Mindanao (h = 80 km).		
"	3	Ki	eP	04 15 49
		Mariana Islands (h = N).		
"	3	Ud	i(P)	05 01 41.0
"	3	Up	iRg	08 29 02.8
		Ud	iRg	08 28 48.9
		Central Sweden.		
"	3	Up	iP	11 01 22.9 D
		Ki	iP	11 00 35.9 D
		Um	iP	11 00 57.6 D
		Ud	iP	11 01 28.7 D
		De	eP	11 01 48
		Kurile Islands (h = N).		
"	3	Up	i	12 00 42.5
			i	12 00 44.4
			iRg	12 00 46.8
		Ud	i	12 00 56.4
			iRg	12 01 00.7
		Central Sweden.		
"	3	Up	iSn	12 21 55.8
			iSgl	12 22 09.7
		Ki	eSgl	12 24 37
		Sk	eSgl	12 23 59
		Um	iSgl	12 22 38.2
		Ud	eSgl	12 23 12
		De	eSgl	12 23 44
		Esthonia.		
		Explosion.		
"	3	Up	eSgl	12 29 34
		Um	eSgl	12 29 46
		Western USSR.		
		Explosion.		
"	3	Ki	iP	12 55 22.6
		Molucca Passage (h = 150 km).		
"	3	Up	i	13 03 21.4
			iSgl	13 03 25.9
		(cont.)		

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

1973					
Apr.	3	(cont.)			
		Ki	iSgl		13 06 21.8
		Sk	eSgl		13 05 26
		Um	iSgl		13 04 15.9
		Ud	iSgl		13 04 28.6
		Esthonia.			
		Explosion.			
"	3	Up	iP		14 06 33.2 D
			ipP		14 07 12.4
			iS		14 17 00
			isS		14 18 05
					micr sec
			P	Z'	1.0 1.1
		Ki	iP		14 06 35.6 D
			ipP		14 07 13.0
					micr sec
			P	Z'	1.3 1.2
		Sk	iP		14 06 20.8 D
			ipP		14 06 58.5
		Um	iP		14 06 37.3 D
			ipP		14 07 16.5
			isP		14 07 31.8
			iS		14 17 09
			isS		14 18 12
		Ud	iP		14 06 23.7 D
			ipP		14 07 02.4
			isP		14 07 20.3
		De	iP		14 06 25.9 D
			ipP		14 07 03.8
		Colombia.			
		h = 150 km (Up,Ki,Sk,Um,Ud, De).			
		m = 6.7 (Up,Ki).			
"	3	Up	iP		17 09 00.0
		Ki	iP		17 08 41.8
		Um	iP		17 08 47.6
		Luzon (h = 45 km).			
"	3	Up	iP		17 35 44.0
					micr sec
			P	Z'	0.1 0.9
		Ki	iP		17 35 43.1 C
					micr sec
			P	Z'	0.2 0.9
		Sk	iP		17 35 57.0 C
		Um	iP		17 35 40.9 C
		Ud	iP		17 35 53.0 C
		De	eP		17 35 52
		Sumatra (h = 100 km).			
		m = 6.3 (Up,Ki).			
"	3	Up	iP		20 15 34.8 D
					micr sec
			P	Z'	0.1 1.0
		(cont.)			

1973					
Apr.	3	(cont.)			
		Ki	iP		20 16 04.0 D
					micr sec
			P	Z'	0.1 1.0
		Um	iP		20 15 51.7 D
		Ud	iP		20 15 24.4
		Atlantic Ocean (h = N).			
		m = 6.0 (Up,Ki).			
"	3	Um	iP		21 14 49.3
"	3	Um	iP		21 41 31.9
		Ud	iP		21 42 00.7
		Japan (h = 60 km).			
"	3	Ud	iP		22 27 21.0
		Afghanistan-USSR.			
"	4	Um	iP		01 43 37.8
			i		01 43 41.8
		Ud	iP		01 43 09.7
		Ascension Island (h = N).			
"	4	Ud	iP		07 45 51.2
		De	eP		07 45 50
		Hindu Kush (h = 110 km).			
"	4	Ki	iP		10 02 09.3
		Um	iP		10 02 21.1
		Ud	iP		10 02 42.0
		De	iP		10 02 54.8
		Mariana Islands (h = 300 km).			
"	4	De	i(P)		15 03 58.6
"	4	Um	iP		18 02 15.4
		Tibet (h = 50 km).			
"	4	Um	iP		19 08 24.4
"	4	Ki	iP		21 41 46.7
		Kurile Islands (h = N).			
"	4	Up	iP		22 01 58.0
					micr sec
			P	Z'	0.1 1.1
		Ki	iP		22 01 12.6
					micr sec
			P	Z'	0.1 1.1
		Um	iP		22 01 34.2
		Ud	iP		22 02 04.7
		De	iP		22 02 22.2
		Kurile Islands (h = N).			
		m = 6.0 (Up,Ki).			
"	5	Up	iP		00 07 48.8
		(cont.)			

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

1973
Apr. 5 (cont.)
Ki iP 00 07 03.0
micr sec
P Z' 0.1 1.0
Um iP 00 07 24.1
Ud iP 00 07 54.4
De iP 00 08 12.7
Kurile Islands (h = N).

" 5 Up iRg 02 55 22.3
Ud iRg 02 55 17.0
Central Sweden.

" 5 Up micr sec
Mx N 2.1 20
Ki iP 04 44 37.6
i 04 44 39.7
i 04 44 45.9
iS 04 54 59
micr sec
P Z' 0.2 1.0
Mx E 4.5 18
Mx N 3.8 18
Mx Z 4.2 18
Um iP 04 44 43.8
i 04 44 45.7
i 04 44 52.5
iS 04 55 08
Ud iP 04 45 02.7
i 04 45 04.8
Panay (h = 5 km).
M = 5.9 (Up,Ki).

" 5 Ki iP 05 36 53.5
Panay (h = N).

" 5 Up iSgl 09 03 13.6
Um iSgl 09 04 02.4
Ud iSgl 09 02 08.3
Near Bergen, Norway,
60.3°N, 5.2°E.
Origin time = 08 59 56.
Explosion.
By combination with
Bergen and Kongsberg
readings.

" 5 Ki eP 19 31 46
Ud iP 19 31 17.9
i 19 31 23.5
De iP 19 31 06.6
Iran (h = N).

" 5 Up iP 22 28 02.8 C
micr sec
P Z' 0.3 1.0
(cont.)

1973
Apr. 5 (cont.)
Up micr sec
Mx E 2.7 16
Mx N 3.4 19
Mx Z 4.9 19
Ki iP 22 27 17.4 C
micr sec
P Z' 0.4 1.0
Mx E 8.4 19
Mx Z 7.3 18
Sk eP 22 27 59
iPcP 22 28 21.7
Um iP 22 27 38.2 C
Ud iP 22 28 08.7 C
De iP 22 28 27.6 C
ipP 22 28 38.3
Kurile Islands.
h = 40 km (De).
m = 6.6, M = 5.8 (Up,Ki).

" 5 Ki iP 22 45 46.8 C
Um iP 22 46 07.3
Ud iP 22 46 38.4
Kurile Islands (h = N).

" 5 Up eP 22 53 01
Ki eP 22 52 14
Um eP 22 52 37
Ud iP 22 53 06.3
Kurile Islands (h = N).

" 5 Ki iP 23 17 09.0
Um iP 23 17 31.0
Ud iP 23 18 01.2
Kurile Islands (h = N).

" 5 Ud iP 23 43 32.0
Kurile Islands (h = 50 km).

" 5 Ki iP 23 44 17.2
Ud iP 23 45 08.8
Kurile Islands (h = N).

" 6 Up iP 00 11 47.0
Ki iP 00 11 01.5
Um iP 00 11 22.7
Ud iP 00 11 53.7
Kurile Islands (h = N).

" 6 Up iP 00 13 00.1
micr sec
P Z' 0.1 1.0
Ki iP 00 12 14.7
micr sec
P Z' 0.2 1.0
Mx E 1.4 17
Mx Z 1.2 16
(cont.)

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

1973
Apr. 6 (cont.)
Sk eP 00 12 58
Um iP 00 12 33.7
Ud iP 00 13 05.5
De iP 00 13 24.1
Kurile Islands (h = N).
m = 6.2 (Up,Ki).

" 6 Up iP 01 57 14.1
micr sec
P Z' 0.1 1.0
Ki eP 01 56 21
Ud iP 01 57 14.9
Aleutian Islands (h = 50 km).

" 6 Up iP 01 59 03.3 D
micr sec
P Z' 0.3 1.2
Mx E 2.1 16
Mx N 2.1 20
Mx Z 2.6 16
Ki iP 01 58 17.4 D
i 01 58 42.3
micr sec
P Z' 0.3 1.0
Mx E 4.8 18
Mx Z 3.0 15
Sk eP 01 58 58 D
Um iP 01 58 38.2 D
Ud iP 01 59 09.8 D
De iP 01 59 27.1
Kurile Islands (h = N).
m = 6.5, M = 5.7 (Up,Ki).

" 6 Ud iP 02 08 19.4
Kurile Islands (h = N).

" 6 Um iP 02 34 08.9
Japan (h = 150 km).

" 6 Ki eP 05 51 11
Ud iP 05 52 03.3
Kurile Islands (h = N).

" 6 Up iP 07 20 23.5
Ki iP 07 19 37.7
Ud iP 07 20 29.0 C
Kurile Islands (h = N).

" 6 Ki iP 07 22 26.0
Ud iP 07 23 17.4
Kurile Islands (h = N).

" 6 Ud iP 07 43 14.4
Kurile Islands (h = 35 km).

1973
Apr. 6 Ki iPKP 08 48 23.3
Sk iPKP 08 48 34.5
Um iPKP 08 48 29.7
Santa Cruz Islands
(h = 210 km).

" 6 Ki iPn 10 51 49.0
iPgl 10 51 59.1
iSn 10 52 37.6
iS* 10 52 50.7
Um iSgl 10 54 19.6
Northwest USSR-Norway border region, 69.3°N, 31.1°E.
Origin time = 10 50 45.
Explosion.

" 6 Ud iP 10 55 13.9
Kurile Islands (h = N).

" 6 Up iSgl 12 46 58.2
Ki i 12 43 02.8
iSn 12 43 43.1
iS* 12 44 02.1
Sk iSgl 12 46 30.7
Um iSn 12 44 22.7
iSgl 12 44 57.3
Northwest USSR.
Origin time = 12 41 27.
Explosion.

" 6 Up iP 14 19 26.0
i 14 19 35.4
micr sec
P Z' 0.1 1.3
i Z' 0.1 1.0
Ki iP 14 20 33.6
i 14 20 42.5
micr sec
P Z' 0.1 0.9
Sk iP 14 20 04.7
i 14 20 14.9
Um iP 14 19 57.5
Ud iP 14 19 33.3
i 14 19 42.7
De iP 14 19 00.7
i 14 19 09.7
Crete (h = 15 km).
m = 5.5 (Up,Ki).
Double P, in average 9.4 sec apart. The second phase could be interpreted as pP for a focal depth of 35 km.

" 6 Ki iPn 14 24 08.4
iSn 14 25 04.5
iS* 14 25 23.1
(cont.)

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

1973
Apr. 6 (cont.)
Um iSgl 14 26 25.5
i 14 26 44.9
Northwest USSR.
Origin time = 14 22 54.
Explosion.

" 6 Ud iP 14 57 01.6
Kurile Islands (h = N).

" 6 Ud iP 15 07 48.9

" 6 Up iP 15 09 05.7
Ki iP 15 08 19.8
micr sec
P Z' 0.1 1.2
Um iP 15 08 41.1
Ud iP 15 09 11.8
De iP 15 09 30.5
Kurile Islands (h = N).

" 6 Up iP 15 20 08.2
Ki iP 15 19 22.8 C
micr sec
P Z' 0.1 1.0
Um iP 15 19 43.7
Ud iP 15 20 14.1 C
Kurile Islands (h = N).

" 6 Ud iP 16 12 23.6

" 6 Ki iP 17 05 06.5
Ud iP 17 05 19.5
Tadzhik-Sinkiang (h = 150 km).

" 6 Ud iP 18 39 56.7
Aleutian Islands (h = 20 km).

" 6 Ud iP 18 57 12.4
Aleutian Islands (h = 40 km).

" 6 Ud iPKP1 19 01 01.2
De iPKP1 19 01 12.0
Tonga Islands (h = 240 km).

" 6 Up iSgl 19 17 13.3
Ki iSgl 19 15 09.2
Sk iS* 19 15 12.5
iSgl 19 15 17.5
Um iSn 19 15 23.7
iSgl 19 15 37.3
Nordland, Norway,
66.5°N, 14.3°E.
Origin time = 19 13 42.
Explosion.

" 6 Ud iP 23 38 54.0
Greenland Sea (h = N).

1973
Apr. 7 Up iP 03 12 42.0
i 03 12 47.9
i 03 12 55.6
iS 03 22 20
micr sec
P Z' 0.7 1.0
Mx E 21 19
Mx N 57 27
Mx Z 46 20
Ki iP 03 12 46.1
i 03 12 51.7
i 03 12 59.4
micr sec
P Z' 0.5 1.0
Mx E 37 20
Mx N 46 18
Mx Z 23 19
Sk iP 03 12 59.9
i 03 13 05.4
i 03 13 13.2
Um iP 03 12 40.3 C
i 03 12 46.1
i 03 12 53.8
iS 03 22 23
Ud iP 03 12 53.8 C
i 03 12 59.4
i 03 13 07.3
De iP 03 12 50.8
i 03 12 56.4
i 03 13 04.3
Nicobar Islands (h = N).
m = 6.7, M = 6.9 (Up,Ki).
Multiple P, in average 5.6
and 13.4 sec after the
first onset. Interpreting
either the second or the
third onset as pP, the
focal depth would be 20 km
or 50 km, respectively.

" 7 Up iP1 03 26 30.9
iP2 03 26 50.9
micr sec
P1 Z' 0.1 1.3
Ki eP1 03 26 35
iP2 03 26 54.4
micr sec
P2 Z' 0.1 1.0
Um iP1 03 26 29.5
iP2 03 26 49.0
Ud iP1 03 26 41.9
iP2 03 27 02.2
De iP2 03 26 59.5
Nicobar Islands (h = N).
m = 5.9 (Up,Ki).
Double P, in average
19.8 sec apart.

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

1973
Apr. 7 Um iP 05 44 37.6
Molucca Passage (h = 45 km).

" 7 Up iP 09 46 37.5
Mindoro (h = N).

" 7 Up iP 10 56 59.4
Um iP 10 57 12.4
Ud iP 10 57 14.5
Iran (h = N).

" 7 Up iSgl 12 08 14.4
Ki iSgl 12 09 16.2
Um iSgl 12 07 37.6
Ud iSgl 12 09 12.0
De eSgl 12 09 54
Lake Ladoga region.
Explosion.

" 7 Ki iPn 12 22 46.2
iSn 12 23 34.8
iSgl 12 23 51.8
Um iSgl 12 25 18.4
i 12 25 29.6
Northwest USSR-Norway border region, 69.4°N, 31.1°E.
Origin time = 12 21 42.
Explosion.

" 7 Up iPKP 12 41 33.9
iY 12 41 59.6
micr sec
Y Z' 0.1 1.3
Mx E 2.3 20
Mx N 4.7 20
Mx Z 5.7 21
Ki iPKP 12 41 49.7
iY 12 42 13.7
micr sec
Y Z' 0.2 1.3
Mx E 5.5 20
Mx N 5.0 17
Mx Z 4.8 17
Sk iPKP 12 41 40.2
Um iPKP 12 41 42.2
iX 12 41 48.7
iY 12 42 06.6
Ud iX 12 41 38.9
iY 12 41 57.3
De i 12 41 45.2
South Atlantic Ocean (h = N).
M = 6.3 (Up,Ki).
The phase Y arrives in average 24.7 sec after PKP.

1973
Apr. 7 Up iPKP 15 07 56.7
Um iPKP 15 08 04.0
De i(pPKP) 15 08 00.3
South Sandwich Islands (h = N).

" 7 Um iP 15 44 40.3

" 7 Um iP 16 14 54.2
Ud iP 16 15 24.8
Kurile Islands (h = N).

" 7 Up iP 17 45 52.8
Ki micr sec
Mx E 0.9 15
Mx N 0.9 13
Um iP 17 46 12.0
Ud iP 17 46 01.7
Ethiopia (h = N).

" 7 Ud eP 18 30 19
Mindanao (h = 180 km).

" 7 Up iP 19 34 22.6 C
ipP 19 34 26.8
Ki iP 19 35 46.6
Sk iP 19 35 11.5
Um iP 19 35 06.1 C
ipP 19 35 10.5
Ud iP 19 34 29.8 C
ipP 19 34 34.8
De iP 19 33 51.8 C
Albania.
h = 15 km (Up,Um,Ud).

" 7 Up iRg 20 04 42.3
Ud iRg 20 04 30.5
Central Sweden.

" 7 Ki iP 23 36 53.8
Um iP 23 37 08.0
Ud iP 23 37 32.0
Bonin Islands (h = 450 km).

" 7 Ud iP 23 45 16.9

" 8 Up iP 01 29 49.2
Ki iP 01 29 57.6
Um iP 01 29 47.6
Ud iP 01 30 05.8
Afghanistan-USSR (h = 230 km).

" 8 Up iP 04 17 24.2 D
Sk eP 04 18 07
Um iP 04 18 06.9
Ud iP 04 17 30.0
Greece-Albania (h = 45 km).

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

1973
Apr. 8 Ki iSn 06 45 28.7
iS* 06 45 47.4
iSgl 06 45 52.0
Um iSn 06 46 10.6
iSgl 06 46 41.0
Northwest USSR.
Explosion.

" 8 Um iP 09 58 18.2 C
Turkey.

" 8 Um iP 10 09 20.6

" 8 Up iPKP 13 00 10.3 C
iPP 13 02 25
iSKPl 13 03 34.7
micr sec
PKP Z' 0.2 1.3
SKPl Z' 0.8 1.6
Mx E 6.5 21
Mx N 9.9 22
Mx Z 17 22
Ki iPKP 12 59 57.2 C
iPP 13 01 40
micr sec
PKP Z' 0.2 1.1
Mx E 9.9 23
Mx N 8.6 22
Mx Z 7.0 22
Sk iPKP 13 00 08.0 C
iSKPl 13 03 32.5
Um iPKP 13 00 03.4 C
iPP 13 02 01
Ud iPKP 13 00 11.9
i 13 00 14.2
iSKPl 13 03 39.0
De i(PKP) 13 00 08.3
iPKP 13 00 18.3
i 13 00 20.9
iSKPl 13 03 48.4
New Hebrides Islands
(h = 35 km).
M = 6.6 (Up,Ki).

" 8 Um iPKP 13 30 32.3
Ud ePKP 13 30 39

" 8 Um iP 16 41 38.1
Mariana Islands (h = 50 km).

" 8 Ud iP 20 37 30.4
Black Sea.

" 8 Up iPKPl 21 08 01.3
ipPKPl 21 08 35.0
micr sec
pPKPl Z' 0.1 1.2
(cont.)

1973
Apr. 8 (cont.)
Ki iPKP 21 07 51.2
Sk ePKP 21 08 01
Um i(PKP) 21 07 49.4
iPKP 21 07 57.1
iSKPl 21 11 22.9
Ud iPKPl 21 08 02.1
De iPKP 21 08 12.7
iPKPl 21 08 13.6
ipPKPl 21 08 43.0
Tonga-Kermadec Islands.
h = 120 km (Up,De).

" 8 Um iP 21 41 01.7
Ud iP 21 41 27.5

" 8 Up iP 22 05 42.1 C
i 22 05 52.1
micr sec
P Z' 0.4 0.9
Ki iP 22 04 53.9 C
micr sec
P Z' 0.2 0.7
Sk iP 22 05 30.5
Um iP 22 05 16.5 C
Ud iP 22 05 47.8 C
De iP 22 06 06.6 C
Kurile Islands (h = 100 km).
m = 6.3 (Up,Ki).

" 8 Um iP 23 06 16.2
New Guinea (h = 70 km).

" 9 Um iP 03 30 13.0
ipP 03 30 50.0
Ud ipP 03 30 40.4
Nicaragua.
h = 150 km (Um).

" 9 Up iP 08 44 05.8 D
i 08 44 15.6
ipP 08 44 57.1
micr sec
P Z' 0.2 1.0
Ki iP 08 43 39.4 D
micr sec
P Z' 0.1 1.1
Sk iP 08 44 07.7 D
ipP 08 44 58.8
Um iP 08 43 49.4 D
ipP 08 44 40.6
Ud iP 08 44 15.5 D
ipP 08 45 06.6
De iP 08 44 25.2 D
ipP 08 45 16.7
East China Sea.
h = 210 km (Up,Sk,Um,Ud,De).
m = 5.7 (Up,Ki).

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

Date	Day	Sta	Phase	Time
1973 Apr.	9	Um	iP	08 47 29.1
		Ud	iP	08 46 50.9
		North Atlantic Ocean (h = N).		
"	9	Ud	i(P)	09 53 17.7
"	9	Up	eSgl	12 22 37
		Ki	eSgl	12 24 35
		Sk	eSgl	12 24 24
		Um	iSgl	12 22 54.3
		Ud	iSgl	12 23 38.6
		De	eSgl	12 24 00
			iSg2	12 24 11.9
		Western USSR. Explosion.		
"	9	Um	iP	15 25 25.1
		Ud	iP	15 25 51.1
		South of Japan (h = 55 km).		
"	9	Up	iSgl	15 41 39.9
		Sk	iPgl	15 39 31.1
			iSn	15 39 50.2
			iSgl	15 39 57.6
		Um	iSgl	15 41 49.4
		Ud	iSgl	15 40 48.2
			iSg2	15 40 55.2
		Near west coast of Norway, 62.7°N, 8.6°E. Origin time = 15 38 57.		
"	9	Ud	iP	21 17 31.1
"	9	Up	iP	23 01 56.6 D
				micr sec
			P Z'	0.1 0.8
		Ki	iP	23 01 23.3 D
				micr sec
			P Z'	0.1 0.8
		Sk	iP	23 01 53.1
		Um	iP	23 01 37.7 D
		Ud	iP	23 02 03.8 D
		De	iP	23 02 16.4 D
		Bonin Islands (h = 90 km). m = 5.7 (Up,Ki).		
"	10	Ki	iP	00 18 27.9
		Sk	iP	00 18 46.2
		Um	iP	00 18 18.7
		Ud	iP	00 18 37.2
		De	iP	00 18 35.1
		Kashmir (h = 60 km).		
"	10	Ud	iPKP1	00 37 16.3
		De	iPKP1	00 37 27.9 D
"	10	Ud	iPKP1	01 28 08.9
		(cont.)		

Date	Day	Sta	Phase	Time
1973 Apr.	10	(cont.)		
		De	ePKP1	01 28 17
		Tonga Islands (h = 270 km).		
"	10	De	i(P)	01 42 28.4
"	10	Ud	iP	02 21 57.5
		De	iP	02 21 25.8
		Crete (h = N).		
"	10	Ud	iPKP1	07 54 04.4
		De	iPKP1	07 54 15.5 D
		Fiji Islands (h = 550 km).		
"	10	De	e(Pn)	08 32 31
			e(Pgl)	08 32 39
			e(Sgl)	08 33 31
		From the same focal area as the following event. Explosion.		
"	10	Up	iPn	09 03 22.2
			iSn	09 04 09.3
			iSgl	09 04 24.8
		Sk	e(Sgl)	09 06 52
		Um	iSgl	09 06 14.3
		Ud	iPn	09 03 40.6
			iSn	09 04 44.8
			iSgl	09 05 04.6
		De	iPn	09 03 17.6
			iPgl	09 03 26.6
			iSgl	09 04 19.0
			iRg	09 04 36.5
		Off coast of Latvia. Origin time = 09 02 18. Explosion.		
"	10	Up	iSn	10 25 32.2
			iSgl	10 25 44.9
		Ki	iSn	10 27 32.9
			eSgl	10 28 25
		Um	iSgl	10 26 19.8
		Ud	iSgl	10 26 51.0
		De	eSgl	10 27 16
		Esthonia, 59.7°N, 24.2°E. Origin time = 10 24 00. Explosion.		
"	10	Up	eSgl	10 45 12
		Sk	iSgl	10 44 32.7
		Ud	iSgl	10 44 05.2
		De	eSgl	10 44 51
		Near west coast of Norway, 59.9°N, 5.9°E. Origin time = 10 42 02. By combination with Bergen and Kongsberg readings.		

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

1973						
Apr.	10	Ud	i(Sgl)		13 21 06.8	
"	10	De	i(Rg)		13 22 28.5	
"	10	De	i(Sgl)		13 36 01.5	
"	10	Ud	iP		13 37 37.1	
"	10	De	i(Sgl)		15 05 43.6	
"	10	Ud	i(P)		15 07 34.1	
"	10	Ud	i(P)		15 16 20.5	
"	10	Ud	i(P)		15 23 34.9	
"	10	Ud	iP		15 52 42.5	
"	10	Ud	iP		16 08 26.0	
			i		16 08 37.4	
"	10	Up	iP		18 15 21.2	C
		Ki	iP		18 15 28.9	
		Um	iP		18 15 19.9	
		Ud	iP		18 15 37.8	C
		De	iP		18 15 34.7	
		Afghanistan-USSR (h = 130 km).				
"	10	Up	iP		19 11 31.0	
		Ud	iP		19 11 31.5	
		Aleutian Islands (h = 220 km).				
"	10	Up	iP		19 16 51.7	
		Ki	iP		19 16 52.2	
		Um	iP		19 16 48.0	
		Ud	iP		19 17 03.9	
		Andaman Islands (h = N).				
"	10	Up	iP		20 09 58.1	
		Ki	iP		20 09 48.4	C
					micr sec	
			P	Z'	0.1 0.8	
		Um	iPP		20 14 05.3	
		Ud	iP		20 10 06.6	C
			i(PP)		20 14 06.1	
			iPP		20 14 25.5	
		Sumba Island (h = N).				
"	10	Ud	iP		21 16 37.1	C
"	11	Up	iP		04 38 25.6	
		Ki	iP		04 38 08.0	
			ipP		04 38 14.3	
					micr sec	
			pP	Z'	0.2 1.5	
		Um	iP		04 38 14.0	
		(cont.)				

1973						
Apr.	11	(cont.)				
		Um	ipP		04 38 19.7	
		Ud	iP		04 38 33.6	
			ipP		04 38 39.7	
		Panay.				
		h = 20 km (Ki,Um,Ud).				
"	11	Up	i(Pn)		05 02 14.1	
			iPn		05 02 16.2	
			iPgl		05 02 19.5	
			iSn		05 02 45.6	
			i		05 02 50.0	
			iSgl		05 02 51.7	
					micr sec	
			Pgl	Z'	0.1 0.5	
			Sgl	Z'	0.3 0.6	
		Ki	ePn		05 03 55	
			iSn		05 05 41.4	
			i		05 06 30.8	
			iSgl		05 06 35.0	
					micr sec	
			Sgl	Z'	0.1 0.8	
		Sk	ePn		05 02 47	
			i		05 02 57.2	
			iPgl		05 03 02.3	
			iSn		05 03 40.5	
			i		05 03 49.5	
			iSgl		05 04 04.8	
			i		05 04 07.3	
			i		05 04 09.1	
		Um	iPgl		05 03 21.6	
			i		05 04 16.7	
			i		05 04 31.9	
			i		05 04 37.5	
			iSgl		05 04 39.3	
		Ud	iPgl		05 01 58.7	D
			iSgl		05 02 15.8	
		De	iPn		05 02 15.5	
			iPgl		05 02 18.9	
			i		05 02 22.9	
			iSn		05 02 44.6	
			iSgl		05 02 51.4	
		Lake Vener region, Sweden, 58.8°N, 13.4°E.				
		Origin time = 05 01 37.				
		Felt.				
"	11	Ki	eP		05 21 01	
		Alaska (h = 15 km).				
"	11	Up			micr sec	
			Mx	N	1.3 24	
		Ki	iP		09 36 35.2	
					micr sec	
			Mx	E	1.2 18	
			Mx	N	1.0 19	
			Mx	Z	1.3 19	
		(cont.)				

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

1973
Apr. 11 (cont.)
Ud i 09 37 22.9
Halmahera (h = N).
M = 5.5 (Up,Ki).

" 11 Up iP 10 51 52.2
Ud eP 10 51 54
Aleutian Islands (h = 45 km).

" 11 Ud iP 13 03 54.2
Mexico (h = N).

" 11 Up eP 14 48 36
Ud iP 14 48 36.6
i 14 48 44.5
Greece.

" 11 Up iPKP 19 53 01.3
i 19 53 11.4
Sk ePKP 19 52 56
Um iPKP 19 52 50.3
Ud iPKP 19 53 02.8

" 11 Um iP 20 04 43.7
Ud iP 20 05 11.8
Japan (h = 60 km).

" 12 Ki iPKP 02 20 05.4
New Hebrides Islands
(h = 55 km).

" 12 Ki eP 02 42 01
Ud iP 02 42 53.2
Kurile Islands (h = 60 km).

" 12 Ki iP 04 52 02.8
micr sec
Mx E 0.9 18
Mx N 0.7 17
Ud iP 04 52 46.3
Ryukyu Islands (h = 35 km).

" 12 Up iP 05 14 17.1
iPcP 05 14 40.7
micr sec
P Z' 0.1 1.0
Ki iP 05 13 35.0
micr sec
P Z' 0.1 0.9
Sk iP 05 14 09.9
Um iP 05 13 53.0
Ud iP 05 14 24.8
De iP 05 14 41.1
Japan (h = 70 km).
m = 5.8 (Up,Ki).

" 12 Ud iP 07 57 23.3

1973
Apr. 12 Up iP 08 38 32.8
micr sec
P Z' 0.1 0.9
Ki iP 08 38 42.1 C
Sk iP 08 38 59.2
Um iP 08 38 31.6 C
Ud iP 08 38 49.6 C
De iP 08 38 45.9 C
Hindu Kush (h = 190 km).

" 12 Up iP 12 15 28.5
Ki iP 12 15 29.9
Sk eP 12 15 45
Um iP 12 15 25.1
Ud iP 12 15 40.2
De iP 12 15 37.8
Nicobar Islands (h = 230 km).

" 12 Up eP 12 27 53
Ki iP 12 27 00.7
Ud iP 12 27 56.7
Kurile Islands (h = 55 km).

" 12 Up iSgl 12 51 32.6
Sk eSgl 12 51 33
Ud iSgl 12 50 32.0
De iSn 12 50 24.7
i 12 50 54.1
South Norway,
58.5°N, 6.9°E.
Origin time = 12 48 30.
By combination with Bergen
and Kongsberg readings.

" 12 Ki iPKP 12 55 52.5
i 12 56 06.9
Sk iPKP 12 56 06.3
Um iPKP 12 56 02.9
i 12 56 16.6
Ud iPKP 12 56 13.7
i 12 56 27.5
The second phase (Ki,Um,Ud)
arrives in average 13.9 sec
after PKP.

" 12 Up iP 13 59 49.6
iS 14 08 21
micr sec
P Z' 0.3 1.0
Mx E 11 23
Mx N 22 21
Mx Z 36 22
Ki iP 13 58 59.5
iS 14 06 47
micr sec
P Z' 0.2 1.4
(cont.)

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

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1973
Apr.  12    (cont.)
            Ki            micr  sec
                 Mx    E  15    20
                 Mx    N  18    22
                 Mx    Z  17    22
            Sk   iP       13 59 35.3
            Um   iP       13 59 22.2
            Ud   iP       13 59 54.0
            De   iP       14 00 15.1
            Kurile Islands (h = 50 km).
            m = 6.2, M = 6.4 (Up,Ki).

 "    12    Ud   iPKP1    15 19 40.3
            De   iPKP1    15 19 51.5

 "    12    Ud   iP       18 03 17.1
            Greece.

 "    12    Up   iSg1     19 00 27.1
            Sk   iSg1     18 59 03.1
                 iSg2     18 59 08.2
            Um   i        18 59 01.5
                 iSg1     19 00 46.3
                 iSg2     19 00 53.7
            Ud   iSg1     18 59 29.9
            De   iSg2     19 00 50.5
            Near west coast of Norway,
            61.7°N, 5.1°E.
            Origin time = 18 57 05.
            By combination with Bergen
            and Kongsberg readings.

 "    13    Ki   eP       00 23 38
            Mindanao (h = N).

 "    13    Um   iP       01 15 44.9
            Ud   iP       01 16 09.7

 "    13    Ki   iP       04 16 58.8
            Ud   iP       04 17 24.7
            Mindanao (h = 30 km).

 "    13    Up   iP       08 16 54.1
                          micr  sec
                 P     Z' 0.1   0.8
                 Mx    E  0.6   12
                 Mx    N  0.5   10
                 Mx    Z  0.9   10
            Ki   iP       08 18 11.8
                          micr  sec
                 P     Z' 0.1   1.2
            Sk   iP       08 17 33.1
            Um   iP       08 17 36.5
            Ud   iP       08 17 00.0
            De   eP       08 16 22
            Italy (h = 45 km).
            m = 5.4 (Up,Ki).

1973
Apr.  13    Ud   iP       11 28 11.5

 "    13    Um   iP       12 34 40.0
            Ud   iP       12 34 54.3

 "    13    Ki   iPn      14 19 43.5
                 iSn      14 20 42.0
                 i        14 20 55.7
                 iS*      14 21 03.4
            Northwest USSR.
            Origin time = 14 18 26.
            Explosion.

 "    13    Up   iP       14 23 03.5
            Ki   iP       14 23 48.9
                          micr  sec
                 P     Z' 0.1   1.1
            Sk   iP       14 23 36.1
            Um   iP       14 23 22.9
            Ud   iP       14 23 12.7
            Ethiopia (h = N).

 "    13    Um   i(P)     14 55 41.5

 "    13    Ud   iP       15 29 16.4

 "    13    Ud   iP       15 52 53.7

 "    13    Um   iSg1     16 10 20.4
            Western USSR.
            Explosion.

 "    13    Ud   iP       18 39 48.2

 "    13    Up   iP       19 26 45.7
            Ki   iP       19 25 52.1 C
            Um   iP       19 26 17.8
            Ud   iP       19 26 49.3 C
                 i        19 27 37.9
            Kamchatka (h = 50 km).

 "    13    Up   iPKP     20 12 16.0 C
            Ki   iX       20 12 11.5
            Um   iPKP     20 12 10.3
                 iX       20 12 17.4
            Ud   iPKP     20 12 20.2 C
                 iPP      20 15 44.6
            De   iPKP1    20 12 29.5 C
            Fiji Islands (h = 670 km).

 "    13    Up   iPg1     20 40 16.5
                 iSg2     20 40 28.0
                 iRg      20 40 31.2
            Sk   eSg1     20 41 45
            Um   iSg1     20 41 57.7
            Ud   iPg1     20 40 26.8
                 iSg1     20 40 45.6
            (cont.)
```

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

1973						
Apr.	13	(cont.)				
		De	eSgl		20 42 13	
		Central Sweden, near $60^o 1/2$ N, 16^oE. Origin time = 20 40 03.				
"	13	Ud	iP		21 15 13.8	
"	13	Up	iPKP		22 55 53.6 C	
		Um	iPKP		22 56 00.4	
		Ud	iPKP		22 55 50.7	
		Chile (h = 10 km).				
"	14	Sk	iP		03 16 36.7	
		Ud	iP		03 16 04.4	
		Crete (h = 35 km).				
"	14	Ud	iP		07 11 39.5 C	
"	14	Up	iP1		08 46 44.9	
			iP2		08 46 47.7	
			ipP		08 46 52.5	
			iS		08 57 15	
					micr	sec
			P2	Z'	0.1	0.9
			pP	Z'	0.2	1.0
			Mx	E	15	26
			Mx	N	14	25
			Mx	Z	29	25
		Ki	iP1		08 46 41.0	
			iP2		08 46 44.3	
			iS		08 57 09	
					micr	sec
			P1	Z'	0.1	1.0
			P2	Z'	0.2	1.4
			Mx	E	26	18
			Mx	N	20	18
			Mx	Z	22	18
		Sk	iP2		08 46 33.4	
		Um	iP1		08 46 46.5	
			iP2		08 46 49.5	
			iS		08 57 19	
		Ud	iP1		08 46 34.8	
			iP2		08 46 37.8	
			ipP		08 46 41.7	
		De	iP1		08 46 39.7	
			iP2		08 46 43.0	
			ipP		08 46 47.0	
		Costa Rica. h = 25 km (Up,Ud,De). m = 6.1, M = 6.6 (Up,Ki). In average, P2 - P1 = 3.1 sec.				
"	14	Up	iP		09 07 12.9	
		Um	iP		09 07 14.9	
		Ud	iP		09 07 02.2	
		Costa Rica (h = N).				

1973						
Apr.	14	Ud	iP		11 00 32.5	
			i		11 00 42.1	
"	14	Up	ePKP1		15 26 50	
		Um	iPKP1		15 26 38.6	
		Ud	iPKP1		15 26 51.8	
		De	ePKP2		15 27 15	
		Kermadec Islands (h = 280 km).				
"	14	Ki	eP		16 30 35	
					micr	sec
			Mx	E	0.8	17
			Mx	Z	0.9	17
		Um	iP		16 30 42.3	
		Ud	eP		16 31 01	
			i		16 31 39.4	
		Mindanao (h = 25 km).				
"	14	Ki	iP		19 57 15.2	
		(Kirghiz-Sinkiang).				
"	14	Up	iP		19 57 25.5	
		Ki	iP		19 57 21.2	
		Sk	iP		19 57 46.0	
		Ud	iP		19 57 41.6	
		Kirghiz-Sinkiang (h = 45 km).				
"	14	Um	iP		23 48 31.0	
		Japan (h = 100 km).				
"	15	Um	iP		00 22 34.7	
"	15	Um	ePKP		03 54 12	
			i		03 54 23.0	
		New Guinea (h = 110 km).				
"	15	Up	iPKP		06 29 00.6	
			i		06 29 10.7	
			iSKP1		06 31 49.2	
					micr	sec
			PKP	Z'	0.1	0.9
			SKP1	Z'	0.1	1.0
		Ki	iX		06 28 53.3	
					micr	sec
			X	Z'	0.1	1.1
		Sk	i(PKP)		06 28 54.2	
			iSKP1		06 31 42.1	
		Um	i(PKP)		06 28 48.4	
			iPKP		06 28 55.9	
			iX		06 29 02.5	
			iSKP1		06 31 37.8	
		Ud	iPKP		06 29 02.0	
			iSKP1		06 31 50.8	
		De	iSKP1		06 31 59.8	
		Fiji Islands (h = 610 km).				
"	15	Um	iP		08 12 21.7 C	
		Ud	iP		08 12 42.3 C	
		Mindanao (h = 610 km).				

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

1973					
Apr.	15	Up	i		11 01 17.5
			iSgl		11 01 59.4
		Ki	iSn		10 58 48.6
			iS*		10 59 10.2
		Sk	iSgl		11 01 36.1
		Um	iSn		10 59 27.1
			i		10 59 43.3
			iSgl		11 00 00.6
		Ud	eSgl		11 02 29
		De	iSgl		11 04 03.4
		Northwest USSR, $67.5^{o}N$, $33.7^{o}E$. Origin time = 10 56 36. Explosion.			
"	15	Up	iP		13 24 27.0
					micr sec
			P	Z'	0.1 1.3
		Um	iP		13 24 49.4
		Ud	iP		13 24 31.7
		Lake Tanganyika (h = 35 km).			
"	15	Up	iP		19 29 35.2
		Aleutian Islands (h = 80 km).			
"	15	Um	iP		20 42 15.1
		Mariana Islands (h = 210 km).			
"	15	Ud	iP		23 12 08.9
		Greece.			
"	16	Up	iP		00 11 06.5
			i(PP)		00 11 51.7
		Ki	iP		00 12 14.7
		Sk	eP		00 11 46
		Um	iP		00 11 44.8
			ipP		00 11 54.3
		Ud	iP		00 11 15.2
		De	iP		00 10 42.1
			iPP		00 11 04.9
		Crete. h = 40 km (Um).			
"	16	Um	iP		03 59 45.3 C
		Japan (h = 50 km).			
"	16	Um	iP		04 12 57.2
		Japan (h = 55 km).			
"	16	Um	iP		04 47 38.0
"	16	Ud	iP		08 38 10.7
		Japan (h = 55 km).			
"	16	Ud	iP		14 33 29.8
		Greece (h = N).			

1973					
Apr.	16	Up	iP		14 59 00.2 C
			iPcP		14 59 23.6
					micr sec
			P	Z'	0.4 1.0
		Ki	iP		14 58 07.0 C
					micr sec
			P	Z'	0.1 0.8
		Sk	iP		14 58 40.2
		Um	iP		14 58 33.4 C
		Ud	eP		14 59 01 C
		De	iP		14 59 22.9 C
		Aleutian Islands (h = 55 km). m = 6.2 (Up,Ki).			
"	16	Um	iP		16 51 26.3
"	16	Um	iP		20 34 48.3
		Japan (h = 50 km).			
"	17	Up	iP		03 45 37.8
		Um	iP		03 45 39.2
		Ud	iP		03 45 53.9
		Afghanistan (h = 40 km).			
"	17	Up	iSgl		06 22 13.3
		Ki	iPgl		06 18 01.4
			iSg2		06 18 05.4
					micr sec
			Pgl	Z'	1.2 0.3
			Sg2	Z'	1.3 0.3
		Sk	i		06 20 28.8
			iSgl		06 20 47.1
		Um	iPgl		06 19 11.6
			iSn		06 19 50.3
			i		06 19 54.6
			iSgl		06 20 07.1
			iSg2		06 20 10.8
		Ud	iS*		06 22 16.2
			iSgl		06 22 23.5
		De	eSgl		06 24 07
		Lapland, Sweden, $67.9^{o}N$, $20.0^{o}E$. Origin time = 06 17 59. Felt at Kiruna, especially 20 km NW of the densely populated area.			
"	17	Up	iSgl		12 08 50.5
		Ki	eSgl		12 10 43
		Um	iSgl		12 09 06.6
		Ud	iSgl		12 09 50.8
		De	eSgl		12 10 18
		Western USSR. Explosion.			
"	17	Up	iP		12 15 21.8
		Ud	iP		12 15 23.0

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

1973					
Apr.	17	Up	iSgl		12 24 51.8
		Um	iSgl		12 25 22.5
		Ud	iSn		12 25 25.0
			iSgl		12 25 54.0
		De	eSgl		12 26 16
		Esthonia.			
		Explosion.			
"	17	Up	iP2		12 48 49.3 C
			iPP		12 53 16.5
					micr sec
			P2	Z'	0.1 1.0
			Mx	E	14 25
			Mx	N	39 25
			Mx	Z	15 21
		Ki	iP1		12 48 24.3
			iP2		12 48 29.8
					micr sec
			P1	Z'	0.1 1.3
			P2	Z'	0.4 1.6
			Mx	E	13 20
			Mx	N	16 20
			Mx	Z	13 20
		Um	iP1		12 48 29.2
			iP2		12 48 36.6
			iPP		12 52 56.0
		Ud	iP1		12 48 48.8
			iP2		12 48 56.1
			iPP		12 53 27.6
		De	iPP		12 53 37.6
		New Guinea (h = N).			
		m = 6.6, M = 6.8 (Up,Ki).			
		If P2 is interpreted as pP, the focal depth would be 25 km.			
"	17	Up	iSgl		13 07 41.9
		Ki	iSgl		13 10 32.8
		Sk	iSgl		13 09 40.7
		Um	iSgl		13 08 32.3
		De	iSgl		13 09 11.9
		Esthonia, 59.2°N, 23.8°E.			
		Origin time = 13 06 00.			
		Explosion.			
"	17	Ki	iP		14 34 56.7
		Ud	iP		14 35 22.2
		Mindanao (h = 70 km).			
"	17	Up	iP		22 20 25.5 D
					micr sec
			P	Z'	0.1 1.0
			Mx	E	2.4 18
			Mx	N	3.8 21
			Mx	Z	4.3 21
		Ki	iP		22 19 33.6
		(cont.)			

1973					
Apr.	17	(cont.)			
		Ki			micr sec
			Mx	E	2.6 20
			Mx	N	3.0 22
			Mx	Z	2.4 20
		Sk	iPcP		22 20 57.7
		Um	iP		22 19 58.3 D
		Ud	iP		22 20 29.8 D
			iPcP		22 21 00.7
		De	iP		22 20 50.5 D
		Kurile Islands (h = 40 km).			
		M = 5.6 (Up,Ki).			
"	18	Ki	iP		03 20 53.2
		Um	iP		03 20 39.2
		Ud	iP		03 20 09.2
		Atlantic Ocean (h = N).			
"	18	Ki	iPgl		06 23 59.0
			i		06 24 22.8
			iSgl		06 24 37.1
		Sk	iS*		06 24 40.1
			iSgl		06 24 44.0
		Um	iPgl		06 24 15.8
			iSn		06 24 50.5
			iSgl		06 25 04.5
		Nordland, Norway, 66.4°N, 14.3°E.			
		Origin time = 06 23 10.			
		Explosion.			
"	18	De	iP		07 42 02.2
"	18	De	iP		14 43 15.3
"	18	Um	iSgl		14 44 37.8
		Western USSR.			
		Explosion.			
"	18	Um	iP		17 02 31.7
"	18	De	ePKP1		18 30 33
		Fiji Islands (h = 620 km).			
"	18	Up	iP		23 08 23.3
					micr sec
			P	Z'	0.1 1.2
		Ki	iP		23 08 04.4
		Um	iP		23 08 11.0
		Ud	iP		23 08 31.4
		Samar (h = 55 km).			
"	19	Ki	iPKP		01 51 27.0
					micr sec
			PKP	Z'	0.1 1.3
		Um	iPKP		01 51 35.1
		Ud	iPKP		01 51 44.5
		Loyalty Islands (h = 35 km).			

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

1973				
Apr. 19	Ud	iPKPl	03 35 36.0	
	De	iPKPl	03 35 46.8	D
	Fiji Islands (h = 560 km).			
" 19	Up	iP	04 39 49.4	C
		iPn	04 40 54.3	
	Ki	iP	04 39 34.2	C
			micr sec	
		P Z'	0.2 0.6	
	Sk	iP	04 40 05.3	C
	Um	iP	04 39 34.1	
		iPn	04 40 16.9	
	Ud	iP	04 40 05.9	C
	De	eP	04 40 13	
	Kazakh SSR. Underground explosion.			
" 19	Ud	iP	06 05 44.0	
	Dodecanese Islands (h = 45 km).			
" 19	Ud	iPKP	06 40 29.5	
	Loyalty Islands (h = 40 km).			
" 19	Up	iRg	07 11 20.5	
	Ud	iSgl	07 11 16.3	
		iRg	07 11 20.2	
	Central Sweden.			
" 19	Ud	eP	10 58 25	
	De	iP	10 58 09.1	
" 19	Up	iP	11 31 38.2	
	Ud	iP	11 31 45.9	
	De	iP	11 31 13.6	
	Dodecanese Islands.			
" 19	Up	iS*	12 29 48.2	
		iSgl	12 29 51.8	
	Um	iSgl	12 30 14.6	
	Ud	iSgl	12 30 54.2	
	De	eSgl	12 31 24	
	Western USSR. Explosion.			
" 19	Up	iSgl	12 52 25.3	
	Um	eSgl	12 52 41	
	Ud	iSgl	12 53 27.5	
	De	eSgl	12 53 58	
	Western USSR. Explosion.			
" 19	Up	eP	17 45 38	
	Ki	eP	17 47 02	
			micr sec	
		P Z'	0.1 1.0	
	(cont.)			

1973				
Apr. 19	(cont.)			
	Sk	eP	17 46 18	
	Ud	eP	17 45 34	
	Italy (h = 5 km).			
" 19	Ud	iP	21 44 52.3	
	Japan (h = 20 km).			
" 19	Up	eP	22 18 52	
	Ud	iP	22 19 01.3	
	De	eP	22 18 30	
	Aegean Sea (h = 15 km).			
" 19	Up	iP	23 12 06.2	
	Ki	eP	23 12 43	
	Um	iP	23 12 20.2	
	Ud	iP	23 12 21.0	
	De	eP	23 12 07	
	Iran (h = N).			
" 20	Ud	iPKP	00 52 24.7	
	De	ePKP	00 52 30	
	Samoa Islands (h = 50 km).			
" 20	Ki	iP	02 31 32.2	
	Ud	iP	02 31 40.0	D
	De	eP	02 31 38	
" 20	Ud	iP	06 26 00.4	
	Crete.			
" 20	Ud	iP	07 28 36.1	
" 20	Up	iPKPl	08 44 04.4	
	Ud	iPKPl	08 44 06.8	
	De	ePKPl	08 44 17	
" 20	Up	eP	09 32 02	
	Ud	iP	09 31 50.3	
	Guatemala (h = 90 km).			
" 20	Ki	i(Sgl)	10 33 37.4	
" 20	Up	iSgl	10 49 26.9	
	Ki	ePn	10 45 11	
		iSn	10 46 08.4	
		iSgl	10 46 29.0	
	Sk	eSgl	10 48 55	
	Um	iSn	10 46 49.8	
		i	10 47 04.8	
		iSgl	10 47 24.2	
	Ud	iSgl	10 49 57.6	
	De	eSgl	10 51 26	
	Northwest USSR, 67.8°N, 33.7°E. Origin time = 10 43 54. Explosion.			

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

1973				
Apr.	20	Up	iSn	12 04 20.8
			iS*	12 04 30.6
			iSgl	12 04 34.3
		Ki	eSgl	12 07 07
		Sk	eSg2	12 06 37
		Um	iSgl	12 05 08.2
		Ud	iSn	12 05 08.4
			eSgl	12 05 35
		De	eSg2	12 06 06

Esthonia, 59.4°N, 25.3°E.
Origin time = 12 02 30.
Explosion.

"	20	Ki	eSg2	12 14 14
		Um	iSgl	12 12 22.1
		Ud	iSgl	12 13 05.2
		De	iSgl	12 13 33.8

Western USSR, probably from the same focal area as the following event.
Origin time = 12 09 21.
Explosion.

"	20	Up	iSgl	12 15 44.9
		Ki	eSgl	12 17 42
		Sk	iSg2	12 17 36.2
		Um	iSn	12 15 32.6
			iSgl	12 16 01.9
		Ud	iSgl	12 16 45.3
		De	eSgl	12 17 11

Western USSR,
59.3°N, 27.9°E.
Origin time = 12 13 00.
Explosion.

"	20	Up	iSn	13 02 50.3
			iSgl	13 03 03.9
		Ki	eS*	13 05 28
			iSgl	13 05 34.9
		Sk	iSgl	13 04 53.1
		Um	iSgl	13 03 38.0
		Ud	iSn	13 03 38.6
			iSgl	13 04 05.5
		De	iSgl	13 04 29.9

Esthonia, 59.4°N, 25.3°E.
Origin time = 13 01 00.
Explosion.

"	20	Up	iPn	14 57 31.9
			iSn	14 58 11.9
			iSgl	14 58 22.1
			iSg2	14 58 27.2
		Ki	eSgl	15 02 22
		Sk	iSgl	15 00 41.1
		Um	iSg2	15 00 21.7
		Ud	iPn	14 57 49.2
			iPgl	14 58 02.9

(cont.)

1973				
Apr.	20	(cont.)		
		Ud	iSgl	14 59 09.8
		De	iPn	14 57 31.9
			iPgl	14 57 40.2
			iSgl	14 58 31.9

Off coast of Latvia,
56.7°N, 20.7°E.
Origin time = 14 56 33.
Explosion.

"	20	Um	iP	15 32 03.5

"	20	Up	iSgl	16 03 03.1
		Ki	iSgl	16 05 47.0
		Sk	iSgl	16 04 58.7
		Um	iSgl	16 03 45.3
		Ud	iSn	16 03 45.4
			iSgl	16 04 06.5
		De	iSgl	16 04 35.9
			i	16 04 48.1

Esthonia, 59.7°N, 23.4°E.
Origin time = 16 01 30.
Explosion.

"	20	Up	iSgl	16 37 56.4
		Ud	iSgl	16 38 44.3
		De	iSgl	16 38 04.2

Off coast of Latvia,
56.7°N, 20.7°E.
Origin time = 16 36 06.
Explosion.

"	20	Up	iSgl	16 46 38.5
		Ud	iSgl	16 47 26.4
		De	iSgl	16 46 47.6

Off coast of Latvia,
56.7°N, 20.7°E.
Origin time = 16 44 49.
Explosion.

"	20	Up	iSgl	17 00 10.7
		Ud	iSgl	17 00 58.9

Off coast of Latvia,
56.7°N, 20.7°E.
Origin time = 16 58 22.
Explosion.

"	20	Ud	iP	19 14 17.1

"	20	Ud	iP	21 20 41.5

"	21	Up	iP	04 36 49.6
		Sk	eP	04 37 15
		Um	iP	04 36 46.4
		Ud	iP	04 37 04.9
			i	04 37 06.2
		De	iP	04 37 03.8

Afghanistan-USSR (h = 90 km).

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

1973						
Apr.	21	Up	iPKPl		05 29 36.3	C
			ipPKPl		05 29 47.5	
					micr sec	
			PKPl	Z'	0.1 0.8	
		Ki	iPKP		05 29 18.6	
		Sk	iPKP		05 29 27.8	
			iPKPl		05 29 31.3	C
		Um	iPKP		05 29 24.0	
			iPKPl		05 29 26.2	C
			ipPKPl		05 29 37.8	
		Ud	iPKP		05 29 31.5	
			iPKPl		05 29 38.1	C
		De	iPKPl		05 29 45.7	C
		South of Kermadec Islands.				
		h = 40 km (Up,Um).				
"	21	Ki	ePgl		10 11 28	
			iSn		10 12 12.3	
			iS*		10 12 31.1	
		Um	eSn		10 13 02	
			eSgl		10 13 36	
		Northwest USSR.				
		Explosion.				
"	21	Ki	iPn		12 45 49.3	
			iSn		12 46 38.1	
			iSgl		12 46 55.9	
		Um	iSgl		12 48 21.8	
		Northwest USSR-Norway border region, 69.3°N, 31.0°E.				
		Origin time = 12 44 46.				
		Explosion.				
"	21	Ki	iP		13 32 23.0	
		Um	iP		13 32 16.6	
		Ud	iP		13 32 39.0	
		Tien-Shan.				
"	21	Up	iPKPl		14 30 06.5	D
			ipPKPl		14 30 22.6	
					micr sec	
			PKPl	Z'	0.1 0.7	
			pPKPl	Z'	0.1 0.9	
			Mx	N	0.8 23	
			Mx	Z	0.8 22	
		Ki	iPKP		14 29 46.7	
		Sk	iPKPl		14 30 01.6	D
			ipPKPl		14 30 16.5	
		Um	iPKP		14 29 55.3	
			iPKPl		14 29 56.6	D
			ipPKPl		14 30 11.9	
			iPP		14 33 33.5	
		Ud	iPKPl		14 30 08.5	D
			ipPKPl		14 30 23.4	
		De	ePKPl		14 30 18	
			ipPKPl		14 30 32.8	
		South of Kermadec Islands.				
		h = 50 km (Up,Sk,Um,Ud,De).				

1973						
Apr.	21	Um	iPKPl		15 02 07.4	
		Ud	iPKPl		15 02 19.6	
"	21	Um	iP		15 16 13.2	
		Ud	iP		15 16 44.5	
		Japan (h = N).				
"	21	Um	iPKPl		15 23 15.0	
		Ud	ePKPl		15 23 27	
"	21	Up	iPKPl		17 25 02.9	
			i(pPKPl)		17 25 16.6	
		Ki	ePKP		17 24 45	
		Sk	iPKPl		17 24 52.9	
		Um	iPKPl		17 24 47.7	
		Ud	iPKPl		17 25 00.8	
			i		17 25 05.6	
		De	ePKPl		17 25 14	
		South of Kermadec Islands.				
		Origin time = 17 05 13.				
"	21	Ki	iPKP		20 49 30.2	
		Sk	iPKP		20 49 41.7	
		Um	iPKP		20 49 36.5	D
		Ud	ePKP		20 49 46	
		De	ePKP		20 49 55	
		New Hebrides Islands (h = N).				
"	21	Ud	iP		22 22 33.5	
		Kamchatka (h = N).				
"	22	Ki	epP		01 13 40	
		Um	ipP		01 13 42.4	
		Ud	ipP		01 13 25.9	
		Colombia (h = 90 km).				
"	22	Ud	iPKP		02 06 25.8	
		South Sandwich Islands (h = 100 km).				
"	22	Ki	eP		03 49 39	
		Um	iP		03 50 07.9	
		Alaska (h = 15 km).				
"	22	Up	iP		05 56 56.5	
					micr sec	
			P	Z'	0.1 0.8	
		Ki	iP		05 56 40.4	
					micr sec	
			Mx	E	0.5 13	
			Mx	N	1.0 19	
			Mx	Z	0.4 13	
		Sk	iP		05 57 06.9	
		Um	iP		05 56 44.3	
		Ud	iP		05 57 08.8	
		De	iP		05 57 14.8	
		Yunnan, China (h = N).				

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

1973				
Apr.	22	Up	iP	07 35 55.2
		Ki	eP	07 35 38
		Sk	eP	07 36 06
		Um	iP	07 35 44.0
		Ud	iP	07 36 08.5
		Yunnan, China.		
		Origin time = 07 25 20.		
"	22	Ki	eP	08 20 41
		Um	iP	08 20 58.0
		Ud	iP	08 21 27.9
		De	eP	08 21 46
		Japan (h = N).		
"	22	Up	iPKP1	10 42 01.9
		Sk	iPKP1	10 41 57.9
		Um	iPKP1	10 41 52.0
		Ud	iPKP1	10 42 03.9
		South of Kermadec Islands.		
		Origin time = 10 22 14.		
"	22	Up	iP	12 00 47.3
		Ki	iP	12 00 15.4
		Sk	eP	12 00 47
		Um	iP	12 00 28.7
		Ud	iP	12 00 55.6
		Ryukyu Islands (h = 50 km).		
"	22	Up	iP	13 45 04.5
		Ki	iP	13 46 13.9
		Sk	iP	13 45 43.4
		Um	iP	13 45 38.4
		Ud	iP	13 45 11.6
		De	iP	13 44 39.7
		Crete (h = 55 km).		
"	22	Up	iPKP2	20 50 34.1
		Ki	ePKP1	20 50 02
		Um	iPKP1	20 50 07.3
		Ud	iPKP2	20 50 39.0
		New Zealand (h = 15 km).		
"	22	Um	iP	21 06 37.7
		Ud	iP	21 06 41.0
"	22	Um	iP	21 31 41.1
		Ud	eP	21 32 06
"	22	Up	iP	21 36 54.7
		Ki	iP	21 37 37.1
		Sk	iP	21 37 30.7
		Um	iP	21 37 09.3
		Ud	iP	21 37 09.8
			i	21 37 18.2
		De	iP	21 36 51.6
		Iran (h = 55 km).		

1973					
Apr.	22	Up	iP		21 53 12.5
					micr sec
			P	Z'	0.1 1.1
		Ki	iP		21 52 19.6
		Um	iP		21 52 46.2
		Ud	iP		21 53 13.8
		Aleutian Islands (h = 55 km).			
"	22	Up	eP		21 55 54
		Ud	eP		21 55 55
		Aleutian Islands (h = 45 km).			
"	22	Up	iRg		22 07 25.3
		Ud	iSgl		22 07 06.4
			iRg		22 07 09.8
		Central Sweden.			
"	22	Ki	iP		22 14 17.9
		Um	iP		22 13 52.1
		Uganda (h = N).			
"	22	Up	iP		22 26 10.9
		Turkey (h = 40 km).			
"	22	Um	iP		22 53 42.4
		Ud	iP		22 54 00.6
"	22	Up	iP		22 56 10.9
		Ud	iP		22 56 11.6
		Aleutian Islands (h = 40 km).			
"	23	Um	iP		00 06 13.7
		Ud	iP		00 06 21.5
"	23	Ki	iP		00 15 57.5
		Sk	eP		00 16 18
		Um	iP		00 15 49.5
		Ud	iP		00 16 10.2
		Pamir.			
"	23	Ki	eP		03 00 45
		Um	iP		03 00 53.8
		Ud	iP		03 00 42.3
		Iceland (h = 5 km).			
"	23	Ud	iP		08 34 11.5
"	23	Up	iSgl		13 10 50.4
		Um	iSgl		13 11 07.4
		Ud	eSgl		13 11 53
		Western USSR.			
		Explosion.			
"	23	Up	iP		13 41 00.8
		Ki	eP		13 40 37
		Sk	eP		13 41 05
		Um	iP		13 40 46.1
		(cont.)			

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

1973							
Apr.	23	(cont.)					
		Ud	iP		13 41 11.2		
		Formosa (h = 40 km).					
"	23	Ud	iP		13 42 23.2		
		De	iP		13 41 34.2		
		Italy (h = N).					
"	23	Up	iPKP1		14 31 09.9		C
			iPKP2		14 31 19.9		
					micr	sec	
			PKP1	Z'	0.1	0.7	
			PKP2	Z'	0.1	0.6	
		Ki	iPKP1		14 30 49.7		
		Sk	iPKP		14 31 00.8		
			iPKP1		14 31 05.6		C
		Um	iPKP		14 30 57.6		
			iPKP1		14 31 00.4		C
		Ud	iPKP		14 31 04.2		
			iPKP1		14 31 11.9		C
			iPKP2		14 31 23.4		
		De	iPKP1		14 31 19.6		
			iPKP2		14 31 37.1		
		South of Kermadec Islands (h = N).					
"	23	Up	ePKP1		14 40 50		
		Sk	iPKP1		14 40 43.4		
		Um	iPKP2		14 40 48.2		
		Ud	iPKP1		14 40 52.4		
			iPKP2		14 41 04.8		
		De	iPKP1		14 41 01.7		
		South of Kermadec Islands. Origin time = 14 21 00.					
"	23	Ud	iP		16 28 58.6		
"	23	Ki	iP		16 38 29.9		
			ipP		16 39 11.8		
		Sk	iP		16 38 12.4		
			ipP		16 38 54.3		
		Um	iP		16 38 29.5		
			ipP		16 39 12.2		
		Ud	iP		16 38 14.4		
			ipP		16 38 57.1		
		De	iP		16 38 16.0		
		Colombia. h = 170 km (Ki,Sk,Um,Ud).					
"	23	Um	iP		17 56 30.7		
		Japan (h = 40 km).					
"	23	Um	ePKP		18 47 47		
		Ud	iPKP1		18 47 54.2		D
		De	iPKP1		18 48 05.4		D
		Fiji Islands (h = 650 km).					

1973							
Apr.	23	Um	iP		20 09 38.9		
		Ud	iP		20 10 10.0		
		Kurile Islands (h = 60 km).					
"	23	Um	iP		22 07 36.4		
"	23	Ud	iP		22 16 11.7		
"	24	Ki	iP		04 05 28.3		
					micr	sec	
			Mx	E	0.8	18	
			Mx	N	0.5	17	
			Mx	Z	0.7	17	
		Um	eP		04 05 33		
		Ud	iP		04 05 54.2		
		De	iP		04 05 58.7		
		Mindanao (h = N).					
"	24	Ud	iP		07 33 12.9		C
"	24	Up	iP		10 01 05.0		
					micr	sec	
			Mx	E	0.7	18	
			Mx	N	0.8	19	
			Mx	Z	0.6	19	
		Ki	eP		10 00 23		
					micr	sec	
			Mx	E	1.4	17	
			Mx	N	1.3	17	
			Mx	Z	0.9	17	
		Sk	iPcP		10 01 25.9		
		Um	iP		10 00 41.2		C
			ipP		10 00 50.1		
		Ud	iP		10 01 11.7		C
			ipP		10 01 21.7		
		Japan. h = 35 km (Um,Ud). M = 5.3 (Up,Ki).					
"	24	Sk	eSgl		12 15 01		
		Um	iSgl		12 13 38.2		
		Ud	iSgl		12 14 21.8		
		De	eSgl		12 14 43		
		Western USSR. Explosion.					
"	24	Up	iSn		12 21 34.0		
			iSgl		12 21 47.3		
		Sk	eSgl		12 23 34		
		Um	iSgl		12 22 18.3		
		Ud	iSgl		12 22 50.4		
		De	iSgl		12 23 13.5		
		Esthonia, 59.5°N, 25.4°E. Origin time = 12 19 42. Explosion.					
"	24	Up	eSgl		14 15 18		
		(cont.)					

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

1973							
Apr.	24	(cont.)					
		Sk	iSgl		14 17 03.6		
		Um	iSgl		14 15 42.6		
		Ud	iSgl		14 16 20.3		
		De	iSgl		14 16 45.7		
		Western USSR.					
		Explosion.					
"	24	Up	iSgl		14 44 31.0		
		Sk	eSgl		14 46 04		
		Um	iSgl		14 44 41.3		
		Western USSR.					
		Explosion.					
"	24	Ki	i(Sn)		14 45 41.3		
			i(Sgl)		14 46 02.4		
"	24	Up	iP		18 55 06.3		D
			ipP		18 55 36.5		
					micr	sec	
			P	Z'	0.1	1.0	
		Ki	iP		18 55 08.5		D
			ipP		18 55 40.0		
					micr	sec	
			P	Z'	0.1	1.3	
			pP	Z'	0.3	1.5	
		Sk	iP		18 54 54.1		D
			ipP		18 55 24.0		
		Um	iP		18 55 10.3		D
			ipP		18 55 40.4		
			iS		19 05 43		
		Ud	iP		18 54 56.8		D
			ipP		18 55 26.2		
		De	iP		18 54 59.0		D
			i		18 55 01.7		
			ipP		18 55 27.0		
			isP		18 55 44.4		
		Colombia.					
		h = 120 km (Up,Ki,Sk,Um,Ud, De).					
		m = 5.7 (Up,Ki).					
"	24	Ud	iP		19 54 01.9		
		Kurile Islands (h = 70 km).					
"	24	Ki	epP		21 29 46		
		Sk	eP		21 29 24		
		Um	iP		21 29 37.7		
			ipP		21 29 50.2		
		Ud	ipP		21 29 37.0		
		Colombia.					
		h = 45 km (Um).					
"	24	Up	iP		21 42 55.4		D
			iSKS		21 53 24		
			iS		21 53 44		
		(cont.)					

1973							
Apr.	24	(cont.)					
		Up			micr	sec	
			P	Z'	0.5	1.0	
			Mx	E	6.4	25	
			Mx	N	6.3	23	
			Mx	Z	10	20	
		Ki	iP		21 42 59.0		D
			iSKS		21 53 26		
			iS		21 53 45		
					micr	sec	
			P	Z'	2.2	1.5	
			Mx	E	9.2	20	
			Mx	N	4.6	20	
			Mx	Z	5.0	18	
		Sk	iP		21 42 45.3		D
			iP'P'		22 08 41.4		
			i		22 09 00.6		
		Um	iP		21 43 01.7		D
			iS		21 53 51		
		Ud	iP		21 42 48.6		D
		De	iP		21 42 51.1		D
		Colombia (h = 50 km).					
		m = 7.0, M = 6.2 (Up,Ki).					
"	24	Up	iP2		21 45 58.7		
					micr	sec	
			P2	Z'	0.4	1.5	
		Ki	iP1		21 45 59.0		
					micr	sec	
			P1	Z'	0.4	1.6	
		Sk	iP1		21 45 45.6		
		Um	iP1		21 46 01.7		
			iP2		21 46 04.7		
		Ud	iP1		21 45 48.8		
			iP2		21 45 51.9		
		De	iP1		21 45 51.5		
			i		21 45 59.9		
		Colombia.					
		Origin time = 21 33 10.					
		m = 6.5 (Up,Ki).					
		Double P, in average 3.1 sec apart.					
"	24	Um	iP		21 54 30.4		
"	24	Up	iP		22 59 53.3		
					micr	sec	
			Mx	E	2.3	20	
			Mx	N	3.2	20	
			Mx	Z	2.8	19	
		Ki	iP		22 59 53.3		
					micr	sec	
			P	Z'	0.2	1.5	
			Mx	E	2.1	18	
			Mx	N	2.6	18	
			Mx	Z	1.9	18	
		Sk	iP		22 59 39.5		
		(cont.)					

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

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1973
Apr.  24   (cont.)
           Um   iP          22 59 56.2
           Ud   iP          22 59 43.8
           De   iP          22 59 45.8
           Colombia (h = N).
           M = 5.8 (Up,Ki).

 "    25   Up   iP          00 17 52.9
           Um   eP          00 18 32
           Ud   iP          00 18 00.1
           Greece.

 "    25   Sk   eP          02 02 30
           Um   eP          02 02 46
           Colombia (h = N).

 "    25   Up   iSgl        02 18 04.6
           Ki   i           02 19 29.4
                iSn         02 19 46.0
           Sk   iSgl        02 18 43.9
           Um   iPgl        02 17 52.2
                i           02 17 55.3
                iSn         02 18 17.3
                iSgl        02 18 25.1
           Ud   eSgl        02 18 32
           Off coast of Hälsingland,
           Sweden, 61.7°N, 17.8°E.
           Origin time = 02 17 10.

 "    25   Ud   iP          02 47 28.4
                i           02 47 37.4
           Colombia (h = N).

 "    25   Up   iP          03 24 20.3 D
                            micr  sec
                P       Z'  0.2   0.9
           Ki   iP          03 24 27.4 D
                iPP         03 26 04.2
                            micr  sec
                P       Z'  0.1   0.9
                PP      Z'  0.3   1.7
           Sk   iP          03 24 44.8 D
                iPP         03 26 27.4
           Um   iP          03 24 17.0 D
           Ud   iP          03 24 37.0 D
                iPP         03 26 14.6
           De   iP          03 24 34.6 D
           Tadzhik SSR (h = 140 km).
           m = 5.6 (Up,Ki).

 "    25   Ud   iPKP        06 59 07.6
           Tonga Islands (h = 350 km).

 "    25   Um   iP          07 50 23.6
           Japan (h = N).

 "    25   Ud   iP          07 58 20.3
           Colombia (h = N).

1973
Apr.  25   Up   iP          08 43 25.3
           Ud   iP          08 43 38.6
           Iran (h = 45 km).

 "    25   Up   i(Sgl)      10 54 35.0

 "    25   Um   iSgl        14 02 43.7
           Western USSR.
           Explosion.

 "    25   Up   iSn         14 30 55.4
                iSgl        14 31 08.9
           Ki   eSgl        14 33 41
           Um   iSgl        14 31 42.9
           Ud   iSn         14 31 43.0
                iSgl        14 32 11.5
           De   eSn         14 32 04
                iSgl        14 32 40.5
           Esthonia, 59.6°N, 24.5°E.
           Origin time = 14 29 19.
           Explosion.

 "    25   Up   iP1         14 32 53.5 C
                iP2         14 32 54.5
                iP3         14 32 58.5
                ipP2        14 33 12.5
                            micr  sec
                P2      Z'  0.2   1.0
                pP2     Z'  0.2   0.8
                Mx      N   1.1   21
                Mx      Z   1.4   20
           Ki   iP1         14 32 16.8
                iP2         14 32 17.8
                iP3         14 32 21.8
                ipP2        14 32 35.8
                            micr  sec
                P2      Z'  0.2   1.0
                pP2     Z'  0.2   1.0
                Mx      E   1.6   17
                Mx      N   1.4   16
                Mx      Z   1.1   15
           Sk   iP2         14 32 50.1
           Um   iP1         14 32 32.9 C
                iP2         14 32 34.0
                iP3         14 32 37.9
                iPcP        14 32 50.2
                ipP2        14 32 52.1
           Ud   iP1         14 33 00.8
                iP2         14 33 01.8
                iP3         14 33 06.1
                ipP1        14 33 18.8
                ipP2        14 33 19.9
           De   iP2         14 33 15.5
                iP3         14 33 19.4
                ipP2        14 33 33.6
           Japan.
           h = 70 km (Up,Ki,Um,Ud,De).
           (cont.)
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Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973

Apr. 25 (cont.)

m = 6.0, M = 5.5 (Up,Ki).
Multiple P phases, the second and third onsets considerably bigger than the first one. In average: P2 - P1 = 1.0 sec, P3 - P1 = 5.1 sec.

"	25	Up	iSgl		15 28 57.3
		Ud	iSgl		15 29 04.1
		De	i		15 26 57.7
			iPgl		15 26 59.4
			iSgl		15 27 17.3

Baltic Sea, south of Sweden, 55.6°N, 15.2°E.
Origin time = 15 26 41.
Explosion.

"	25	Up	iSgl		15 29 12.2
		Ud	iSgl		15 29 17.0
		De	iPgl		15 27 13.8
			iSgl		15 27 29.9

Baltic Sea, south of Sweden, 55.6°N, 15.2°E.
Origin time = 15 26 54.
Explosion.

"	25	Up	iSgl		15 29 43.7
		Ud	iSgl		15 29 48.7
		De	iPgl		15 27 45.8
			iSgl		15 28 01.9

Baltic Sea, south of Sweden, 55.6°N, 15.2°E.
Origin time = 15 27 26.
Explosion.

"	25	Ud	iP		16 47 33.5	

"	25	Up	eP		17 34 16	
		Ki	iP		17 33 45.5	
					micr	sec
			P	Z'	0.1	0.9
		Um	iP		17 33 58.5	
		Ud	iP		17 34 21.9	

Volcano Islands (h = N).

"	25	Ud	iP		19 12 31.0

Colombia (h = N).

"	25	Up	iSgl		19 34 00.8
		Ud	iPgl		19 33 00.6
			iSn		19 33 18.1
			iSgl		19 33 20.3
		De	iSgl		19 33 51.5
1973 Apr.	25	Um	i(Sgl)		19 33 21.3

Lake Vener region, Sweden, 58.7°N, 12.7°E.
Origin time = 19 32 36.

"	25	Up	iPKP1		20 32 43.5	D
			iPKP2		20 32 49.7	
					micr	sec
			PKP1	Z'	0.1	0.9
			PKP2	Z'	0.2	0.8
		Ki	iPKP1		20 32 22.2	D
		Sk	iPKP		20 32 38.1	
			iPKP1		20 32 38.6	
		Um	iPKP1		20 32 33.1	D
			i		20 34 19.8	
		Ud	iPKP1		20 32 45.6	D
			iPKP2		20 32 52.8	
		De	iPKP1		20 32 53.6	
			iPKP2		20 33 07.0	

Kermadec Islands (h = 390 km).

"	25	Up	iPKP		21 53 26.3	
			ipPKP		21 53 45.4	
			iY		21 53 49.5	
					micr	sec
			PKP	Z'	0.1	0.9
			Y	Z'	0.1	0.8
			Mx	E	3.1	23
			Mx	N	2.7	19
			Mx	Z	3.5	20
		Ki	iPKP		21 53 41.1	
			iX		21 53 45.0	
			ipPKP		21 54 01.1	
			iY		21 54 05.1	
			iSKP1		21 57 03.1	
					micr	sec
			PKP	Z'	0.1	1.1
			X	Z'	0.3	1.3
			Y	Z'	0.4	1.5
			SKP1	Z'	0.3	1.5
			Mx	E	2.0	21
			Mx	N	3.2	20
			Mx	Z	1.9	20
		Sk	iPKP		21 53 32.1	
			iY		21 53 55.0	
		Um	i(PKP)		21 53 27.6	
			iPKP		21 53 34.1	
			ipPKP		21 53 53.4	
		Ud	iPKP		21 53 24.9	
			ipPKP		21 53 43.3	
			iY		21 53 47.2	
		De	e(PKP)		21 53 13	
			iPKP		21 53 19.8	
			iY		21 53 41.8	

South Sandwich Islands.
h = 70 km (Up,Ki,Um,Ud).
M = 6.2 (Up,Ki).
Probably two events, about 4.0 sec apart, X being PKP and Y pPKP of the second event.

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

1973							
Apr.	25	Up	Mx		22 16		
					micr	sec	
			Mx	E	0.9	22	
			Mx	N	1.4	19	
		Prince Edward Island (h = N).					
"	25	Ud	iP		22 36 42.5		
		Nevada.					
		Underground explosion.					
"	25	Um	iP		22 57 54.3		
"	26	Ud	iP		00 49 42.9		
"	26	Up	iPKP1		02 38 55.4		
		Um	iPKP1		02 38 45.6		D
		Ud	iPKP1		02 38 57.1		
"	26	Ud	iP		06 04 09.7		
"	26	Um	eP		06 06 19		
		Japan (h = N).					
"	26	Sk	iP		07 55 36.9		
		Um	iP		07 55 53.5		
		Ud	iP		07 55 40.2		
		De	iP		07 55 43.0		
		Colombia (h = N).					
"	26	Up	iP		14 38 09.4		C
			i		14 38 12.4		
					micr	sec	
			P	Z'	0.1	0.9	
		Ki	iP		14 38 36.3		C
			i		14 38 39.5		
					micr	sec	
			P	Z'	0.1	0.8	
		Sk	iP		14 38 40.6		C
			i		14 38 44.1		
		Um	iP		14 38 17.7		C
			i		14 38 20.4		
		Ud	iP		14 38 24.8		C
			i		14 38 27.6		
			iPP		14 40 11.1		
		De	iP		14 38 13.2		
		Iran (h = 45 km).					
		m = 5.8 (Up,Ki).					
		Double P, in average 3.0 sec apart.					
"	26	Up	iSgl		16 21 46.2		
		Ki	iSgl		16 19 41.3		
		Sk	iSgl		16 19 45.8		
		Um	iSn		16 19 56.6		
			iSgl		16 20 08.6		
		Ud	iSgl		16 21 34.1		
		(cont.)					

1973							
Apr.	26	(cont.)					
		Nordland, Norway,					
		66.5°N, 14.0°E.					
		Origin time = 16 18 12.					
		Explosion.					
"	26	Up	iP		17 26 48.8		C
					micr	sec	
			P	Z'	0.1	1.0	
		Ki	iP		17 26 14.6		
					micr	sec	
			P	Z'	0.1	0.9	
		Sk	iP		17 26 22.8		
		Um	iP		17 26 34.0		C
		Ud	iP		17 26 40.7		C
		De	iP		17 26 57.3		
		Nevada.					
		m = 5.9 (Up,Ki).					
		Underground explosion.					
"	26	Um	i(P)		19 35 59.7		
"	26	Up	iP		20 40 12.7		C
			iPP		20 44 29.9		
			iSKS		20 50 55		
			iS		20 51 44		
					micr	sec	
			P	Z'	0.1	1.1	
			Mx	E	1.5	20	
			Mx	N	3.4	21	
			Mx	Z	4.2	22	
		Ki	iP		20 39 37.2		C
			iPP		20 43 25.1		
			eSKS		20 50 13		
			eS		20 50 34		
					micr	sec	
			P	Z'	0.1	1.2	
			Mx	E	1.8	20	
			Mx	N	3.4	22	
			Mx	Z	2.6	21	
		Sk	iP		20 39 54.3		C
		Um	iP		20 39 55.1		C
			iPP		20 43 51.6		
			iSKS		20 50 37		
			iS		20 51 10		
		Ud	iP		20 40 09.8		
			iPP		20 44 20.0		
		Hawaii (h = 50 km).					
		m = 6.2, M = 5.9 (Up,Ki).					
"	27	Ki	i(P)		00 32 35.5		
"	27	Up	iP		00 36 14.7		
					micr	sec	
			P	Z'	0.1	1.1	
			Mx	E	0.7	14	
		(cont.)					

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

1973
Apr. 27 (cont.)
Up micr sec
Mx N 0.6 14
Mx Z 0.7 13
Ki iP 00 37 14.5
micr sec
Mx E 0.7 15
Mx N 0.4 12
Um iP 00 36 39.4
Ud iP 00 36 26.3
De eP 00 35 53
Turkey (h = N).
M = 4.6 (Up,Ki).

" 27 Ud iP 07 52 03.1
Luzon.

" 27 Ud iP 15 11 09.8
De eP 15 11 04
Afghanistan-USSR (h = 140 km).

" 27 Ud iP 16 17 28.9

" 27 Up Mx 19 24
micr sec
Mx N 1.0 23
Mx Z 0.9 21
Ki Mx 19 23
micr sec
Mx E 1.7 19
Mx N 0.7 18
Mx Z 0.9 17
Celebes (h = N).
M = 5.5 (Up,Ki).

" 27 Ud iP 20 57 54.2

" 28 Um iP 02 44 44.1
Japan (h = 50 km).

" 28 Ki iP 03 05 07.0
Sk iP 03 04 38.9
Ud iP 03 04 07.8
De iP 03 03 36.0
Crete (h = N).

" 28 Up micr sec
Mx E 0.6 12
Mx N 0.8 15
Mx Z 1.0 13
Ki eP 04 54 24
micr sec
Mx E 1.1 15
Mx N 0.6 16
Mx Z 0.5 12
Ud iP 04 54 59.4
Ryukyu Islands (h = 100 km).
M = 5.3 (Up,Ki).

1973
Apr. 28 Up iP 05 20 00.5

" 28 Up iP 07 30 58.8 D
Um i 07 34 32.6
Ud iP 07 31 01.0 D

" 28 Up iP 11 02 24.1 C
Ki iP 11 02 23.4
micr sec
P Z' 0.1 0.9
Sk iP 11 02 37.2
Um iP 11 02 21.2 C
Ud iP 11 02 33.5 C
De iP 11 02 32.2
Sumatra (h = 80 km).

" 28 Ud i(P) 11 54 54.3

" 28 Ki i(Sgl) 12 05 19.7
Northwest USSR.
Explosion.

" 28 Up iSgl 12 18 29.0
Um iSgl 12 18 45.9
Ud iSgl 12 19 28.4
Western USSR.
Explosion.

" 28 Ud iP 12 34 13.3
Ecuador (h = 110 km).

" 28 Up iSgl 12 46 15.7
Um i(Sn) 12 46 19.4
iSgl 12 46 36.6
De iSgl 12 47 48.6
Western USSR.
Explosion.

" 28 De iPKPl 21 32 37.5
Fiji Islands (h = 400 km).

" 29 Up eP 00 49 03
Um iP 00 48 39.3
Ud iP 00 49 08.7
Japan (h = N).

" 29 Up iP 02 16 02.2
Ud eP 02 16 12
Luzon-Formosa (h = N).

" 29 Um i(P) 08 02 44.8

" 29 Up iSgl 10 58 32.3
Ki eSgl 11 00 39
Um iSgl 10 58 55.5
Ud iSgl 10 59 33.3
De iSgl 11 00 07.9
Western USSR.
Explosion.

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

1973

Apr.	29	Ki	iPn		14 29 05.4	
			iPgl		14 29 16.7	
			iSn		14 29 54.8	
			iS*		14 30 10.6	
		Um	iSgl		14 31 39.8	

Northwest USSR-Norway border region, 69.5°N, 31.2°E.
Origin time = 14 28 00.
Explosion.

"	29	Ud	iP		14 32 54.0	

Tadzhik SSR.

"	29	Um	iP		14 44 26.8	

Morocco (h = 20 km).

"	29	Up	iPKP1		15 47 57.3	C
					micr	sec
			PKP1	Z'	0.1	0.8
		Sk	iPKP1		15 47 49.7	
		Um	iPKP1		15 47 45.3	C
		Ud	iPKP1		15 47 59.0	
		De	iPKP1		15 48 07.9	C
			iPKP2		15 48 16.9	

Kermadec Islands (h = 60 km).

"	29	De	iPKP1		18 56 12.0	

Fiji Islands (h = 360 km).

"	29	Up	eP		20 04 35	
					micr	sec
			Mx	N	1.4	16
			Mx	Z	0.7	13
		Ki	iP		20 04 57.9	
					micr	sec
			Mx	E	1.0	10
			Mx	N	1.1	13
		Sk	iP		20 05 03.9	
		Um	iP		20 04 40.0	
		Ud	iP		20 04 50.4	
			i		20 04 55.5	
		De	eP		20 04 43	

Pakistan (h = 25 km).
M = 5.2 (Up,Ki).

"	29	Ud	iP		21 46 29.2	

Kamchatka (h = N).

"	29	Ud	iPKP1		23 49 59.1	
		De	iPKP1		23 50 09.5	

"	30	Up	iPKP1		02 12 33.5	
					micr	sec
			PKP1	Z'	0.1	0.7
		Ud	iPKP1		02 12 35.8	
		De	iPKP1		02 12 46.2	

Tonga-Kermadec Islands (h = 480 km).

1973

Apr.	30	Ki	iSn		05 09 41.6	
			i(Sgl)		05 10 02.4	
		Um	iSgl		05 11 05.1	

Northwest USSR.
Explosion.

"	30	Up	iP		07 37 24.3	
		Ki	iP		07 37 02.6	
		Um	eP		07 37 05	
		Ud	iP		07 37 35.8	
		De	iP		07 37 46.4	

USSR-Mongolia (h = N).

"	30	Up	iPKP		08 57 19.4	
			iSKP1		08 59 56.9	
		Ki	iPKP		08 57 04.6	
			iSKP1		08 59 30.6	
					micr	sec
			SKP1	Z'	0.1	1.1
		Sk	iSKP1		08 59 49.7	
		Um	i(PKP)		08 57 07.1	
			iPKP		08 57 12.6	
			iSKP1		08 59 43.7	
		Ud	i(PKP)		08 57 11.6	
			iPKP		08 57 21.5	
			iSKP1		08 59 59.6	
		De	i(PKP)		08 57 20.1	
			iPKP		08 57 23.9	

Fiji Islands (h = 610 km).

"	30	Up	iSgl		09 31 27.1	
		Ki	ePn		09 27 21	
			iPgl		09 27 30.0	
			iSn		09 28 10.6	
			iSgl		09 28 26.5	
		Sk	iSgl		09 30 56.9	
		Um	i(Sn)		09 28 48.9	
			iSgl		09 29 25.2	
		Ud	eSgl		09 32 01	

Northwest USSR.
Explosion.

"	30	Ud	iP		12 00 43.4	

"	30	Ki	iP		15 54 07.9	
			iPn		15 54 41.8	
		Um	iP		15 53 40.6	
		Ud	iP		15 53 42.8	

Caucasus (h = 45 km).

"	30	Ud	iP		16 51 44.0	

Ryukyu Islands (h = 60 km).

"	30	Um	iP		21 13 37.2	

Colombia (h = 25 km).

"	30	Up	iP		22 49 17.2	C

(cont.)

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

1973

Apr.	30	(cont.)				
		Up	ipP		22 49 28.1	
					micr sec	
			P	Z'	0.1 1.0	
		Ki	iP		22 48 38.7	
			ipP		22 48 49.4	
					micr sec	
			P	Z'	0.1 1.0	
		Sk	iP		22 49 11.5	
			ipP		22 49 23.9	
		Um	iP		22 48 55.7	C
			ipP		22 49 06.7	
		Ud	iP		22 49 24.4	C
			ipP		22 49 35.7	
		De	iP		22 49 39.3	
		Japan.				
		h = 40 km (Up,Ki,Sk,Um,Ud).				
		m = 6.0 (Up,Ki).				
"	30	Up	eP		23 43 29	
		Ki	iP		23 42 35.9	
		Ud	iP		23 43 28.9	
		Aleutian Islands (h = 60 km).				

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December 26, 1974

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SWEDEN

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SWEDEN

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

U P P S A L A, K I R U N A, S K A L S T U G A N, U M E Å,

U D D E H O L M and D E L A R Y

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

M A Y 1 - 31, 1973

1973				
May	1	Ki	eP	00 21 02
		Um	iP	00 21 12.9
		Mariana Islands (h = 25 km).		
"	1	Up	iP	01 03 38.9
		Sk	eP	01 03 25
		Um	iP	01 03 14.1
		Ud	iP	01 03 44.9
		De	iP	01 04 03.0
		Kurile Islands (h = 55 km).		
"	1	Um	iP	05 49 05.3 D
		Adriatic Sea (h = N).		
"	1	Um	iP	07 26 43.5
		Colombia (h = N).		
"	1	Up	ePKP1	08 01 14
		Ki	iPKP	08 01 10.3
		Um	i(PKP)	08 01 13.6
			iPKP	08 01 17.1
			iSKP1	08 03 54.8
		Ud	iPKP1	08 01 16.3
		De	iPKP1	08 01 26.1
		Fiji Islands (h = 600 km).		
"	1	Um	ePKP	10 59 29
		New Guinea (h = 25 km).		
"	1	Up	iPKP1	15 33 44.5 D
				micr sec
			PKP1 Z'	0.1 0.8
		Um	iSKP1	15 36 27.0
		Ud	iPKP1	15 33 46.5 D
		De	iPKP1	15 33 56.8
		Tonga-Kermadec Islands (h = 540 km).		

1973				
May	1	Up	iP	20 27 46.4 C
		Ki	iP	20 26 53.8
		Ud	iP	20 27 46.4 C
		Aleutian Islands (h = N).		
"	1	Ki	iP	20 54 51.9
		Ud	iP	20 55 46.7
"	2	Sk	e	01 45 15
		Ud	iPKP	01 45 09.3
		De	iPKP	01 45 13.8
		New Guinea (h = 30 km).		
"	2	Ud	iP	05 30 09.2
		Kurile Islands (h = 50 km).		
"	2	Ud	iP	06 10 08.7
"	2	Up	iP	20 45 38.4
		Ud	iP	20 45 48.2
		De	iP	20 45 20.4
"	2	Up	iP	23 23 21.4 C
		Ki	iP	23 24 15.0 C
		Um	iP	23 23 52.0 C
		Ud	iP	23 23 09.8
		De	iP	23 22 50.0 C
		North Atlantic Ocean (h = N).		
"	3	Up	eP	01 27 24
		Sk	eP	01 28 03
		Um	iP	01 28 03.3
		Ud	iP	01 27 30.1
		Ionian Sea (h = 30 km).		
"	3	Up	iPKP1	02 41 55.5

(cont.)

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

1973
May 3 (cont.)
Ud iPKP1 02 41 58.5
De ePKP1 02 42 07
Tonga-Kermadec Islands
(h = 400 km).

" 3 Um iP 05 49 31.1
i 05 49 44.8
Ud i 05 50 06.7
Queen Elizabeth Islands
(h = N).

" 3 Up iP 07 51 50.8 C
Ki iP 07 52 28.6
Sk eP 07 52 27
Um iP 07 52 05.8
Ud iP 07 52 06.1 C
De iP 07 51 48.8 C
Iran (h = 40 km).

" 3 Ki i(P) 11 28 34.5
Um i(P) 11 28 48.6

" 3 Up i(P) 12 52 50.2
De i(P) 12 53 25.3

" 3 Up iSg1 13 09 35.5
Um eSg1 13 10 09
De eSg1 13 11 03
iSg2 13 11 12.2
Esthonia.
Explosion.

" 3 De ePKP1 13 44 47
Fiji Islands (h = 600 km).

" 3 Up iSg1 14 49 58.9
Um iSg1 14 50 37.5
Ud eSg1 14 51 04
De eSg1 14 51 35
Esthonia.
Explosion.

" 3 Up iPKP 23 29 42.8
iPS 23 40 25
Ki iPKP 23 29 53.3
micr sec
Mx E 1.0 16
Um iPKP 23 29 47.1
iPS 23 40 44
Ud iPKP 23 29 45.3
De iPKP 23 29 40.7
Kerguelen Islands (h = N).

" 3 Up ePKP 23 33 25
(cont.)

1973
May 3 (cont.)
Um iPKP 23 33 16.1
Ud iPKP 23 33 27.6

" 4 Up i 00 01 59.2
iRg 00 02 02.6
Ud iRg 00 01 48.2
De eSg1 00 03 03
Bergslagen, central Sweden.

" 4 Ud iP 00 12 49.6

" 4 Up eP 00 28 51
Um iP 00 28 36.1

" 4 De ePKP1 01 39 39
Fiji Islands (h = 590 km).

" 4 Up iSg1 09 27 12.5
Sk eS* 09 27 04
iSg1 09 27 07.8
Um eSg1 09 28 17
Ud iPg1 09 25 52.6
iSg1 09 26 10.2
Southeast Norway,
60.5°N, 11.3°E.
Origin time = 09 25 30.

" 4 Up iP1 11 40 45.1
i 11 40 47.2
iSKS 11 51 17
micr sec
P1 Z' 0.2 1.4
Mx E 3.0 22
Mx N 2.0 22
Mx Z 5.7 27
Ki iP1 11 40 29.3
micr sec
P1 Z' 0.3 1.4
Mx E 2.5 23
Mx N 1.4 20
Mx Z 3.5 22
Sk iP2 11 40 56.3
Um iP1 11 40 33.0
i 11 40 35.0
iP2 11 40 40.5
iPP 11 44 24.2
iSKS 11 51 06
Ud iP1 11 40 52.4
i 11 40 53.6
De iP1 11 41 00.0
Molucca Passage (h = N).
m = 6.6, M = 5.9 (Up,Ki).
Double P: P2 - P1 = 7.5 sec.

" 4 Up eP 12 03 37
(cont.)

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

1973							
May	4	(cont.)					
		Ki	eP		12 03 23		
		Molucca Passage (h = N).					
"	4	Sk	iP		22 31 43.2		
		Um	iP		22 31 58.9		
		Ud	iP		22 31 46.7		
		Colombia (h = N).					
"	5	Up	iP		00 08 49.3		D
			ipP		00 09 05.9		
			iSKS		00 19 10		
			iS		00 19 23		
					micr	sec	
			P	Z'	0.1	0.7	
			pP	Z'	0.2	1.0	
			Mx	E	1.1	22	
			Mx	N	1.8	20	
			Mx	Z	1.9	23	
		Ki	iP		00 08 49.6		D
			ipP		00 09 05.6		
			iS		00 19 25		
					micr	sec	
			P	Z'	0.5	1.2	
			pP	Z'	0.4	0.9	
			Mx	E	1.4	17	
			Mx	N	1.6	19	
			Mx	Z	1.3	19	
		Sk	iP		00 09 03.1		D
		Um	iP		00 08 46.3		D
			ipP		00 09 03.8		
			iS		00 19 18		
		Ud	iP		00 08 59.0		D
			ipP		00 09 16.3		
			iPP		00 12 29.5		
		De	iP		00 08 57.2		D
			ipP		00 09 13.9		
		Sumatra.					
		h = 60 km (Up,Ki,Um,Ud,De).					
		m = 6.4, M = 5.6 (Up,Ki).					
"	5	Um	iPKP		01 54 02.4		
		Solomon Islands (h = 15 km).					
"	5	Um	iP		03 48 01.0		
		Japan (h = 55 km).					
"	5	Up	iP		04 03 51.3		C
			ipP		04 04 03.7		
					micr	sec	
			P	Z'	0.1	1.0	
			pP	Z'	0.2	1.2	
		Ki	iP		04 03 11.6		C
			ipP		04 03 24.1		
					micr	sec	
			P	Z'	0.1	1.0	
		(cont.)					
1973							
May	5	(cont.)					
		Ki			micr	sec	
			pP	Z'	0.1	1.1	
		Sk	iP		04 03 45.4		C
			ipP		04 03 57.9		
		Um	iP		04 03 29.5		C
			ipP		04 03 41.6		
		Ud	iP		04 03 58.9		C
			ipP		04 04 11.3		
		De	iP		04 04 14.0		C
			ipP		04 04 26.5		
		Japan.					
		h = 45 km (Up,Ki,Sk,Um,Ud,De).					
		m = 5.8 (Up,Ki).					
"	5	Up	iP		05 23 46.5		
		Sk	iP		05 23 40.9		
		Um	iP		05 23 24.9		
		Ud	iP		05 23 53.8		
		Japan (h = 80 km).					
"	5	Up	eP		06 19 45		
		Ki	iP		06 20 16.6		
					micr	sec	
			Mx	E	0.6	13	
			Mx	N	0.7	15	
		Sk	eP		06 20 18		
		Um	iP		06 19 57.8		
		Ud	iP		06 19 59.6		
		Iran (h = N).					
"	5	Um	iP		07 51 41.0		
		Ud	iP		07 52 12.0		
		Japan (h = 15 km).					
"	5	Up	iP		08 14 27.5		
		Sk	iP		08 15 09.5		
		Um	iP		08 15 05.7		
		Ud	iP		08 14 37.8		
		Aegean Sea (h = N).					
"	5	Ud	iP		08 25 56.8		
		Aegean Sea (h = 25 km).					
"	5	Ud	iP		08 57 32.8		
		Japan (h = 110 km).					
"	5	Up	iPKP1		10 27 29.1		
		Ud	iPKP1		10 27 31.7		
		De	iPKP1		10 27 42.2		
		Tonga-Kermadec Islands (h = 590 km).					
"	5	Um	iP		11 00 28.9		
		Ud	iP		11 00 02.8		

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

```
1973
May   5   Up   iSg1        11 28 18.7
          Um   iSg1        11 28 36.4
          De   eSg1        11 29 56
          Western USSR.
          Explosion.

 "    5   Up   iSg1        11 40 19.4
               iSg2        11 40 32.6
          Ki   iPg1        11 36 19.6
               iSn         11 37 03.6
               iS*         11 37 23.0
          Sk   iSg1        11 39 56.4
          Um   iSn         11 37 44.8
               i(S*)       11 38 13.8
               iSg1        11 38 17.3
          Ud   iSg1        11 40 53.1
          De   eSg1        11 42 14
          Northwest USSR,
          67.8°N, 33.7°E.
          Origin time = 11 34 50.
          Explosion.

 "    5   Up   Mx          20 07
                           micr  sec
               Mx     N    1.0   22
               Mx     Z    0.9   22
          Ki   Mx          20 04
                           micr  sec
               Mx     E    0.9   20
               Mx     N    1.2   21
               Mx     Z    1.2   20
          Fiji Islands (h = N).
          M = 5.6 (Up,Ki).

 "    6   Up   iP          04 07 05.7 C
                           micr  sec
               P      Z'   0.1   1.1
          Ki   iP          04 07 39.6 C
                           micr  sec
               P      Z'   0.1   0.9
          Sk   iP          04 07 39.4
          Um   iP          04 07 17.8 C
               iPP         04 09 00.9
          Ud   iP          04 07 21.2
          De   iP          04 07 07.8
          Iran (h = 30 km).
          m = 5.7 (Up,Ki).

 "    6   Ud   eP          07 12 44
          Kodiak Island (h = 55 km).

 "    6   Ki   iP          10 48 57.4
          Mariana Islands (h = N).

 "    6   Ki   iPn         12 02 17.6
          (cont.)
```

```
1973
May   6   (cont.)
          Ki   iSn         12 03 04.2
               iSg1        12 03 18.2
          Um   iSg1        12 04 48.8
          Northwest USSR-Norway
          border region,
          69.4°N, 30.4°E.
          Origin time = 12 01 16.
          Explosion.

 "    6   Ki   iP          13 30 16.0
          Sk   eP          13 30 29
          Um   iP          13 30 05.0
          Ud   iP          13 30 23.3
          Hindu Kush (h = 230 km).

 "    6   Up   iP          14 49 11.8 D
               iPcP        14 49 41.4
               ipP         14 50 55.2
               iS          14 57 05
                           micr  sec
               P      Z'   0.1   0.5
               pP     Z'   0.1   1.0
          Ki   iP          14 48 32.4 D
               ipP         14 50 13.0
               iS          14 55 52
                           micr  sec
               P      Z'   0.1   0.5
               pP     Z'   0.2   1.3
          Sk   iP          14 49 07.1 D
               ipP         14 50 50.7
               iS          14 56 59.2
          Um   iP          14 48 49.1 D
               iPcP        14 49 26.8
               ipP         14 50 31.3
               iS          14 56 21
          Ud   iP          14 49 20.3 D
               iS          14 57 32.4
          De   iP          14 49 35.5 D
          Eastern USSR.
          h = 510 km (Up,Ki,Sk,Um).
          m = 5.5 (Up,Ki).

 "    6   Up   iP          15 21 57.9
          Ki   iP          15 21 03.9
          Sk   iP          15 21 40.7
          Um   iP          15 21 29.3
          Ud   iP          15 22 01.3
          De   iP          15 22 23.1
          Kamchatka (h = 55 km).

 "    6   Ki   iP          16 12 45.1
          New Guinea (h = 60 km).

 "    7   Sk   iP          04 42 17.8
          Um   iP          04 42 33.9
          Colombia (h = 60 km).
```

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

1973					
May	7	Ud	iP	06 04 54.2	
"	7	Up	iP	07 53 58.6	
		Ud	iP	07 54 18.8	
"	7	Up	iP	11 05 12.0	D
			ipP	11 05 23.3	
		Ki	iP	11 05 15.7	D
			ipP	11 05 26.6	
		Sk	iP	11 05 29.9	
		Um	iP	11 05 10.1	D
			ipP	11 05 21.7	
		Ud	iP	11 05 23.2	D
		De	iP	11 05 20.7	
		Nicobar Islands.			
		h = 40 km (Up,Ki,Um).			
"	7	Up	iSg1	12 17 22.3	
		Ki	iSg1	12 19 21.1	
		Sk	eSg1	12 19 00	
		Um	iSg1	12 17 35.4	
			iSg2	12 17 43.6	
		Ud	iSg1	12 18 22.9	
		De	eSg1	12 18 48	
		Western USSR,			
		59.5°N, 27.8°E.			
		Origin time = 12 14 40.			
		Explosion.			
"	7	Ki	iP	15 01 48.5	C
		Sk	iP	15 01 34.7	C
		Um	iP	15 01 51.0	
		Ud	iP	15 01 38.1	C
		De	eP	15 01 41	
		Colombia (h = N).			
"	7	Ud	iP	15 54 18.8	
"	7	Up	eP	16 40 33	
		Sk	iP	16 40 12.1	
		Ud	iP	16 40 25.0	
		Revilla Gigedo Islands			
		region (h = N).			
"	7	Ud	eP	22 43 01	
		Aegean Sea.			
"	8	Um	iP	00 34 10.6	
		Azores Islands (h = N).			
"	8	Up	e(PKP)	01 02 30	
			ePKP	01 02 41	
			iSKP1	01 05 54.1	
		Ki	iPKP	01 02 27.6	
		Sk	ePKP	01 02 39	
		(cont.)			

1973					
May	8	(cont.)			
		Um	iPKP	01 02 33.6	
			iSKP1	01 05 39.6	
		Ud	ePKP	01 02 44	
		De	iPKP	01 02 50.7	
		New Hebrides Islands			
		(h = 150 km).			
"	8	Um	eP	04 58 40	
		Ud	iP	04 58 40.3	
"	8	Up	iSKP1	05 06 00.1	
				micr sec	
			SKP1 Z'	0.1 1.0	
		Ki	iPKP	05 03 01.3	
			iSKP1	05 05 34.8	
				micr sec	
			SKP1 Z'	0.1 1.2	
		Sk	ePKP	05 03 11	
			iSKP1	05 05 52.7	
		Um	iPKP	05 03 09.5	C
			iSKP1	05 05 46.9	
		Ud	iPKP	05 03 19.3	C
			iSKP1	05 06 01.8	
			iSKP2	05 06 09.5	
		De	iPKP1	05 03 16.6	
			iPKP	05 03 23.9	
		Fiji Islands (h = 540 km).			
"	8	Up	iP	07 59 46.0	
			i	07 59 59.7	
			ipP	08 00 11.5	
		Ki	iP	07 58 59.8	
			iPcP	07 59 44.7	
		Sk	eP	07 59 37	
			iPcP	08 00 06.7	
		Um	iP	07 59 20.5	
			ipP	07 59 45.3	
		Ud	iP	07 59 51.7	
			ipP	08 00 17.8	
		De	iP	08 00 11.2	
		Kurile Islands.			
		h = 100 km (Up,Um,Ud).			
"	8	Up	iSg1	08 12 39.4	
		Ud	iPn	08 11 14.8	
			iPg1	08 11 16.9	
			iSg1	08 11 45.6	
		De	iPn	08 11 23.4	
			iSg1	08 11 58.5	
		Off coast of Bohuslän,			
		59.4°N, 11.0°E.			
		Origin time = 08 10 40.			
		Explosion.			

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

```
1973
May   8   Up   iSg1      08 13 30.1
          Ud   iPn       08 12 06.2
               iPg1      08 12 07.9
               iSg1      08 12 36.6
          De   iPn       08 12 13.3
               iSg1      08 12 49.7
          Off coast of Bohuslän,
          59.4°N, 11.0°E.
          Origin time = 08 11 31.
          Explosion.

 "    8   Up   iSg1      08 44 22.0
          Sk   eSg2      08 45 05
          Um   iSg1      08 46 03.2
          Ud   iPg1      08 42 56.7
               iSg1      08 43 29.9
               i         08 43 36.5
          De   iSg1      08 43 39.8
          Skagerrak, 58.4°N, 10.1°E.
          Origin time = 08 42 12.
          Explosion.

 "    8   Up   iSg1      08 45 21.3
          Sk   eSg2      08 46 05
          Ud   iPg1      08 43 55.3
               iSg1      08 44 30.1
               i         08 44 37.4
          De   ePg1      08 44 03
               iSg1      08 44 39.1
               i         08 44 46.7
          Skagerrak, 58.4°N, 10.1°E.
          Origin time = 08 43 12.
          Explosion.

 "    8   De   iP        09 14 33.0

 "    8   Up   iP        10 11 46.3
          Ki   eP        10 11 27
                         micr  sec
               Mx    E   0.6   16
               Mx    N   0.6   14
               Mx    Z   0.4   11
          Sk   eP        10 11 56
          Um   iP        10 11 32.1
          Ud   iP        10 11 59.1
          Kansu, China (h = N).

 "    8   De   i(Sg1)    10 45 13.8

 "    8   Um   iP        11 11 22.9
          Ud   iP        11 11 43.1
          De   iP        11 11 40.7
          Tadzhik SSR (h = N).

 "    8   Ki   e(P)      11 29 56
          Sk   e(P)      11 30 01

1973
May   8   Ki   iP        11 30 12.8
               iS        11 31 33.9
               iTPg1     11 35 39.7
          Sk   iP        11 30 42.9
               e         11 32 23
               iS        11 32 29.4
          Um   iP        11 30 52.7
          Ud   eP        11 31 30
          Norwegian Sea, 72°N, 2°E.
          Origin time = 11 28 27.

 "    8   Ki   iSg1      12 08 03.5
          Sk   eS*       12 08 06
               iSg1      12 08 10.1
          Um   iSg1      12 08 28.6
          Nordland, Norway,
          66.4°N, 14.3°E.
          Origin time = 12 06 36.
          Explosion.

 "    8   Up   iSg1      12 14 04.5
          Um   eSg1      12 14 21
          De   eSg1      12 15 32
          Western USSR.
          Explosion.

 "    8   Up   iSn       12 18 56.3
               iSg1      12 19 09.0
          Ki   eSg1      12 21 40
          Sk   eSg1      12 21 01
          Um   iSg1      12 19 42.3
          Ud   eSg1      12 20 12
          De   iSg1      12 20 37.9
          Esthonia, 59.5°N, 24.9°E.
          Origin time = 12 17 12.
          Explosion.

 "    8   Ud   iP        13 04 55.4
          De   iP        13 05 11.1

 "    8   Um   i(P)      15 18 49.8

 "    8   Um   eP        16 22 41
          Ud   iP        16 23 01.5

 "    8   Um   iP        17 39 52.0

 "    8   Sk   eP        19 12 34
          Ud   iP        19 11 55.8
          Italy (h = N).

 "    9   De   i(Sg1)    10 45 50.5

 "    9   Up   iSg1      10 57 27.7
          Um   iSg1      10 57 41.6
          (cont.)
```

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

1973					
May	9	(cont.)			
		Ud	iSg1	10 58 27.0	
		De	eSg1	10 58 56	
		Western USSR.			
		Explosion.			
"	9	De	i(Sg1)	11 20 20.3	
"	9	Ud	i(Pg1)	12 49 22.9	
			i(Sg1)	12 49 43.6	
"	9	De	i(Sg1)	13 06 19.0	
"	9	Up	iSg1	14 05 03.6	
		De	iSg1	14 05 47.7	
"	9	Up	iPg1	14 25 08.1	
			iSg1	14 25 22.5	
			iRg	14 25 30.0	
		Sk	e	14 27 26	
			iSg1	14 27 41.1	
		Um	iSg1	14 27 23.3	
		Ud	iPn	14 25 33.4	
			iSg1	14 26 11.3	
			i	14 26 14.3	
		De	iPn	14 25 41.0	
			iSg1	14 26 36.5	
		Off coast of Södermanland, Sweden, 58.8°N, 18.2°E.			
		Origin time = 14 24 49.			
		Explosion.			
		The following four events are from the same area.			
"	9	Up	iPg1	14 25 20.4	
			iSg1	14 25 36.4	
			iRg	14 25 42.3	
		Um	iSg1	14 27 36.1	
		Ud	iPn	14 25 46.6	
			iSg1	14 26 23.7	
			i	14 26 27.1	
		De	iPn	14 25 53.6	
		Origin time = 14 25 01.			
		Explosion.			
"	9	Up	iPg1	14 28 15.4	
			iSg1	14 28 29.8	
			iRg	14 28 37.4	
		Um	iSg1	14 30 30.9	
		Ud	ePg1	14 28 43	
			iSg1	14 29 18.5	
		De	ePg1	14 28 59	
			iSg1	14 29 42.4	
		Origin time = 14 27 56.			
		Explosion.			
1973					
May	9	Up	iPg1	14 28 25.8	
			iSg1	14 28 40.8	
			iRg	14 28 48.0	
		Sk	eSg1	14 31 00	
		Um	iSg1	14 30 41.4	
		Ud	ePg1	14 28 54	
			iSg1	14 29 28.7	
		De	ePg1	14 29 08	
			iSg1	14 29 52.9	
		Origin time = 14 28 07.			
		Explosion.			
"	9	Up	iPg1	14 28 34.8	
			iSg1	14 28 49.8	
			iRg	14 28 57.2	
		Ud	ePg1	14 29 03	
			i	14 29 35.5	
			iSg1	14 29 37.5	
		De	ePg1	14 29 18	
			iSg1	14 30 02.3	
		Origin time = 14 28 16.			
		Explosion.			
"	9	Ki	iP	14 30 37.1	
		Halmahera (h = 55 km).			
"	9	De	i(Sg1)	14 35 15.7	
"	9	De	i(Pg1)	15 49 45.5	
			iSg1	15 50 02.0	
"	9	De	i(Pg1)	15 59 01.2	
			iSg1	15 59 21.4	
"	9	Up	iRg	21 14 42.8	
		Ud	iRg	21 14 27.9	
		De	eSg1	21 15 42	
		Central Sweden.			
"	10	Um	iP	01 41 20.0	
"	10	Up	iP	11 50 26.5	C
			i	11 50 39.3	
			ipP	11 50 45.2	
				micr sec	
			P Z'	0.3 1.0	
		Sk	iP	11 50 05.8	C
		Um	iP	11 49 59.5	C
			ipP	11 50 17.5	
			iPcP	11 50 34.0	
		Ud	iP	11 50 27.4	C
			ipP	11 50 45.1	
			iPcP	11 50 51.8	
		De	iP	11 50 49.3	C
		Aleutian Islands.			
		h = 70 km (Up,Um,Ud).			

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

1973					
May	10	Up	i		13 34 35.2
			iSg1		13 34 45.1
		Sk	iSg1		13 36 24.3
		Um	iSg1		13 34 54.7
		Ud	i		13 35 34.0
		De	iSg1		13 36 09.7

Western USSR,
59.5°N, 28.5°E.
Origin time = 13 31 55.
Explosion.

"	10	Up	iP		13 58 55.6

Luzon (h = 45 km).

"	10	Sk	iSg1		14 49 59.9
		Um	iSg1		14 48 30.8
		Ud	iSg1		14 49 23.5
		De	eSg1		14 49 45

Western USSR,
59.5°N, 28.5°E.
Origin time = 14 45 30.
Explosion.

"	10	Up	iP		18 03 42.3
		Sk	iP		18 03 24.7
		Um	iP		18 03 35.9

Mexico (h = N).

"	10	Up	iRg		20 03 50.4
		Ud	iRg		20 03 39.0

Central Sweden.

"	10	Ud	iRg		20 07 18.8

"	10	Sk	eP		23 59 02
		Ud	iP		23 58 48.5

Indian Ocean (h = N).

"	11	Sk	iP		00 12 08.1
			i		00 12 11.1
		Um	iP		00 12 10.9
			i		00 12 13.6
		Ud	iP		00 12 49.0
		De	iP		00 13 26.6

Greenland Sea (h = N).

"	11	Up	eSg1		04 27 47
		Sk	iS*		04 25 46.6
			iSg1		04 25 50.5
		Um	iSn		04 25 57.5

(cont.)

1973
May 11 (cont.)

		Um	iSg1		04 26 11.4
		Ud	iSg1		04 27 38.1

Nordland, Norway,
66.5°N, 14.4°E.
Origin time = 04 24 17.
Explosion.

"	11	Up	e(P)		10 59 10	
					micr	sec
			Mx	E	1.0	21
			Mx	N	0.9	21
			Mx	Z	0.9	21
		Ki	iP		10 58 48.6	
			iPP		11 02 39.2	
					micr	sec
			Mx	E	1.1	20
			Mx	N	1.2	21
		Um	iP		10 58 58.2	
		Ud	iP		10 59 14.0	

Molucca Passage
(h = 25 km).
M = 5.4 (Up,Ki).

"	11	Ud	iPKP1		10 58 55.5
		De	iPKP1		10 59 04.5

"	11	Up	iP		12 16 48.8
		Ud	iP		12 16 54.1 C

"	11	Up	iP		13 59 38.6	
			i(sP)		14 00 03.8	
			iPP		14 00 54.1	
			iS		14 05 27	
					micr	sec
			P	Z'	0.1	1.1
			Mx	E	1.5	20
			Mx	N	2.4	17
			Mx	Z	2.8	12
		Ki	iP		14 00 06.9	
					micr	sec
			P	Z'	0.1	1.2
			Mx	E	4.6	14
			Mx	N	5.4	15
			Mx	Z	3.7	14
		Sk	iP		14 00 13.3	
		Um	iP		13 59 45.9	
			iS		14 05 37	
		Ud	iP		13 59 54.1	
			ipP		14 00 09.6	
		De	iP		13 59 42.6	

Iran.
h = 60 km (Ud).
m = 5.6, M = 5.4 (Up,Ki).

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

```
1973
May  11   Up   iPKP1       16 15 33.1
               i           16 15 38.1
          Um   iPKP1       16 15 21.9 D
          Ud   iPKP1       16 15 35.9
          De   iPKP1       16 15 44.2

 "   11   Ud   iP          17 05 02.6

 "   11   Ud   iP          19 12 38.3

 "   11   Ud   iP          20 46 08.7
          Sinkiang, China.

 "   11   Ud   iP          22 01 45.6

 "   11   Um   iP          23 04 10.5 C
          Ud   iP          23 04 24.4

 "   12   Up   iP          05 59 41.9 C
               ipP         05 59 56.6
          Ki   iP          05 59 42.2 C
                           micr  sec
               P      Z'   0.2   0.8
          Sk   iP          05 59 55.4 C
          Um   iP          05 59 39.0 C
          Ud   iP          05 59 51.1 C
               ipP         06 00 04.9
          De   iP          05 59 49.5 C
          Sumatra.
          h = 50 km (Up,Ud).

 "   12   Up   eP          06 48 39
               i           06 48 45.4
          Ki   ipP         06 48 28.0
                           micr  sec
               pP     Z'   0.1   1.3
          Um   ipP         06 48 33.3
          Ud   iP          06 48 47.4
               ipP         06 48 54.2
          Luzon.
          h = 25 km (Up,Ud).

 "   12   Um   iP          07 15 39.8
          Ud   iP          07 16 04.3
          De   iP          07 16 27.8
          Unimak Island (h = N).

 "   12   Up   iP          07 24 49.6
          Um   iP          07 24 24.3
          Ud   iP          07 24 48.5
          Unimak Island (h = N).

 "   12   Up   eP          07 34 41
          Um   iP          07 34 15.2
          Ud   iP          07 34 38.3
          Unimak Island (h = N).

1973
May  12   Ud   iPKP1       07 42 46.4
          De   iPKP1       07 42 57.1

 "   12   Um   iP          08 20 11.2

 "   12   Um   iP          09 37 03.5
          Turkey (h = 20 km).

 "   12   Ud   iP          15 48 16.2

 "   12   Up   iPP         16 39 44.7
                           micr  sec
               PP     Z'   0.3   2.0
               Mx     E    2.3   20
               Mx     N    2.1   20
               Mx     Z    4.1   20
          Ki               micr  sec
               Mx     E    2.4   21
               Mx     N    2.1   20
          Um   iPP         16 39 24.7
          New Ireland (h = 15 km).
          M = 5.9 (Up,Ki).

 "   12   Ki   iP          22 10 04.4
          Kashmir-Sinkiang
          (h = 90 km).

 "   12   Up   iP          22 32 38.6 C
               iPP         22 34 25.2
          Ki   eP          22 32 52
          Sk   iP          22 33 05.5
          Um   iP          22 32 38.5 C
          Ud   iP          22 32 55.6 C
          De   iP          22 32 50.8 C
          Hindu Kush (h = 100 km).

 "   13   Up   iP          01 43 15.0
                           micr  sec
               Mx     E    0.8   20
               Mx     N    0.7   20
               Mx     Z    1.3   19
          Ki   iP          01 44 00.7 C
                           micr  sec
               P      Z'   0.1   1.0
          Sk   iP          01 43 27.9
          Um   iP          01 43 40.6 C
               ipP         01 43 50.8
          Ud   iP          01 43 09.3 C
               ipP         01 43 19.8
          North of Ascension Island.
          h = 40 km (Um,Ud).

 "   13   Up   iP          04 37 52.4
          Um   iP          04 37 45.1
          Ud   iP          04 38 05.7
```

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

1973

May 13	Up	iP		04 58 51.5
	Ki	iP		04 58 19.4 D
	Sk	iP		04 58 48.5
	Um	iP		04 58 33.1 D
	Ud	iP		04 58 58.5 D
	De	iP		04 59 10.2
	Bonin Islands (h = 450 km).			
" 13	Ud	iP		06 23 30.9
	California (h = N).			
" 13	Ud	iP		10 30 33.5
" 13	Up	iP		11 28 55.3
		ipP		11 28 59.0
	Ki	iP		11 29 31.2
		ipP		11 29 34.0
	Um	iP		11 29 08.8
		ipP		11 29 12.6
	Ud	iP		11 29 07.7
		ipP		11 29 11.2
	Arabian Sea.			
	h = 15 km (Up,Ki,Um,Ud).			
" 13	Up	iP		13 08 18.1
	Ki	iP		13 08 00.9
				micr sec
		Mx	E	0.5 16
		Mx	N	0.7 20
	Um	iP		13 08 07.7
	Ud	iP		13 08 27.3
	Mindoro (h = 1 km).			
" 13	Ki	ePKP		13 31 12
	Easter Island (h = N).			
" 13	Ki	iPKP		16 50 55.1
	Easter Island (h = N).			
" 13	Ud	iP		18 18 54.2
" 14	Up	iP		02 29 58.9
	Ki	iP		02 29 13.5
	Sk	iP		02 29 48.5 C
	Um	iP		02 29 33.6 C
	Ud	iP		02 30 05.0 C
	De	iP		02 30 22.9 C
	Kurile Islands (h = 60 km).			
" 14	Ud	iP		06 15 22.3
	Talaud Islands (h = 100 km).			
" 14	Up	iSn		12 03 35.0
		iSg1		12 03 46.5
	Ki	eSg1		12 06 18
	(cont.)			

1973

May 14	(cont.)		
	Sk	iSg1	12 05 37.6
	Um	iSg1	12 04 20.6
	Ud	iSg1	12 04 47.6
		iSg2	12 04 55.7
	De	iSg1	12 05 16.4
	Esthonia, 59.6°N, 24.7°E.		
	Origin time = 12 01 54.		
	Explosion.		
" 14	Up	i(PKP)	17 30 21.5
	Ki	iPKP	17 30 10.9
	Um	iPKP	17 30 17.9
	Ud	iPKP	17 30 26.8
	De	iPKP	17 30 35.8
	Fiji Islands (h = 55 km).		
" 14	Ud	iP	18 41 46.9 D
	Windward Islands (h = N).		
" 14	Up	iPKP1	21 25 24.6
	Ud	iPKP1	21 25 26.6 D
	De	iPKP1	21 25 37.3
	Tonga-Kermadec Islands (h = 660 km).		
" 14	Up	iPKP1	21 34 13.4
	Ki	iPKP	21 34 04.5
	Sk	iPKP	21 34 15.5
	Um	iPKP	21 34 10.1 C
		i	21 34 13.1
	Ud	iPKP1	21 34 14.5 C
	De	iPKP1	21 34 25.6 C
	Tonga-Kermadec Islands (h = 500 km).		
" 15	Um	iP	03 29 25.1
	Japan (h = 90 km).		
" 15	Up	iPKP1	04 08 42.1
	Ud	iPKP1	04 08 43.5
		i	04 08 50.5
	De	iPKP1	04 08 53.5
" 15	Ud	iP	04 25 10.7
	Sinkiang, China (h = 45 km).		
" 15	Up	iP	05 11 08.4
	Um	iP	05 10 50.6 D
	Ud	iP	05 11 15.8 D
" 15	Up	iPKP1	06 07 23.7
	Um	iPKP1	06 07 12.5
		i	06 07 25.6
	(cont.)		

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

1973
May 15 (cont.)

		Ud	iPKP	06 07 24.6
			iPKP1	06 07 26.0
		De	iPKP1	06 07 35.9
"	15	Up	iP	06 25 32.3
		Um	iP	06 25 10.0
		Ud	iP	06 25 39.9

Japan (h = 50 km).

"	15	Ud	iP	10 18 37.2
"	15	Up	i	12 30 58.4
			eSg1	12 31 11
		Sk	iSg1	12 32 48.4
		Um	iSn	12 30 53.1
			i	12 31 08.0
			iSg1	12 31 18.0
		Ud	i	12 31 58.7
		De	iSg1	12 32 30.6

Western USSR, 59.4°N, 28.3°E.
Origin time = 12 28 16.
Explosion.

"	15	Up	i	13 00 41.1
			iSg1	13 00 47.1
		Ki	i(Sn)	13 02 56.1
			iSg1	13 03 39.4
		Um	iSg1	13 01 35.1
		Ud	iSg1	13 01 39.6
		De	e	13 01 58
			iSg1	13 02 14.6
			i	13 02 18.6

Esthonia, 59.2°N, 24.2°E.
Origin time = 12 59 00.
Explosion.

"	15	Ki	iP	14 35 43.4
		Ud	iP	14 36 38.1
"	15	Ud	iP	14 47 38.9
"	15	Up	iSg1	15 05 28.3
		Ud	iSn	15 04 08.1
			iSg1	15 04 24.3

Southern Norway.
Origin time = 15 02 30.
Solution obtained by combination with Bergen readings.

"	15	Up	iP	18 48 03.2	C
		Ki	iP	18 48 10.3	C

(cont.)

1973
May 15 (cont.)

		Um	iP	18 48 00.5	C
		Ud	iP	18 48 19.8	C
			ipP	18 48 50.0	
		De	iP	18 48 16.0	C

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

"	15	Um	iP	21 51 00.0	D
"	15	Um	iP	21 51 54.6	D
		Ud	iP	21 52 08.0	
"	16	Ud	iP	01 34 01.7	

Tien-Shan.

"	16	Ud	iPKP1	08 15 16.8

Tonga-Kermadec Islands (h = 610 km).

"	16	Ki	iSg1	09 41 10.5
		Sk	eS*	09 43 20
			iSg1	09 43 23.1

North Norway, 68.9°N, 17.6°E.
Origin time = 09 40 23.
Solution obtained by combination with Tromsoe readings.

"	16	Um	iP	09 45 34.0
"	16	Ki	iPg1	10 30 52.8
			i	10 31 04.8
			iSn	10 31 30.9
			iS*	10 31 43.1
		Sk	eSg1	10 34 34
		Um	iSg1	10 33 17.8
		Ud	eSg1	10 35 47

Northwest USSR-Norway border region, 69.6°N, 30.5°E.
Origin time = 10 29 41.
Explosion.

"	16	Up	i(Sg1)	14 09 27.3
		Um	eSg1	14 09 44
		Ud	eSg1	14 10 22
		De	iSg1	14 10 53.6

Western USSR.
Explosion.

"	16	Up	eSn	14 20 09
			iSg1	14 20 22.5

(cont.)

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

1973							
May	16	(cont.)					
		Ki	iSg1		14 22 55.0		
		Sk	iSg1		14 22 12.5		
		Um	iSg1		14 20 58.3		
		Ud	iSg1		14 21 28.9		
			iSg2		14 21 39.0		
		De	iSg1		14 21 52.4		
		Esthonia, 59.6°N, 24.3°E.					
		Origin time = 14 18 34.					
		Explosion.					
"	16	Sk	iP		17 36 13.8		
		Ud	iP		17 35 40.5		
		Greece.					
"	16	Ud	iPKP1		19 25 46.0		
		De	iPKP1		19 25 57.5		
		Tonga-Kermadec Islands (h = 610 km).					
"	17	Up	iP		06 28 46.0		
		Ki	eP		06 28 01		
		Sk	eP		06 28 36		
		Um	iP		06 28 20.9		
		Ud	iP		06 28 52.6		
		De	iP		06 29 11.1		
		Kurile Islands (h = N).					
"	17	Up	iP		09 46 08.6		D
			i		09 46 10.4		
			i		09 46 26.3		
					micr	sec	
			P	Z'	0.2	1.0	
			Mx	E	0.7	6	
			Mx	N	1.9	6	
			Mx	Z	1.6	6	
		Ki	iP		09 45 59.9		D
			i		09 46 02.1		
			i		09 46 10.4		
					micr	sec	
			P	Z'	0.2	1.0	
			Mx	E	1.1	9	
			Mx	N	1.9	9	
			Mx	Z	1.1	10	
		Sk	iP		09 46 26.6		
			i		09 46 28.7		
		Um	iP		09 45 59.9		
		Ud	iP		09 46 24.4		D
			i		09 46 26.2		
		De	iP		09 46 29.4		
			iPP		09 48 23.1		
		Sinkiang, China (h = N).					
		m = 5.8 (Up,Ki).					
"	17	Ki	iP		11 14 48.0		
		Sinkiang, China.					

1973							
May	17	Ki	iPn		11 20 59.4		
			iSn		11 21 47.4		
			iSg1		11 22 03.6		
		Northwest USSR-Norway border region.					
		Origin time = 11 19 56.					
		Explosion.					
"	17	De	iP		13 29 11.6		
"	17	Up	iSn		14 37 26.1		
			iSg1		14 37 39.3		
		Ki	iSg1		14 40 12.5		
			iSg2		14 40 25.2		
		Sk	eSg1		14 39 29		
		Um	iSg1		14 38 14.5		
			i		14 38 18.3		
		Ud	iSn		14 38 16.2		
			iSg1		14 38 41.8		
		De	iS*		14 39 06.3		
			iSg1		14 39 11.3		
		Esthonia, 59.7°N, 24.2°E.					
		Origin time = 14 35 54.					
		Explosion.					
"	17	Up	iP		15 56 01.7		C
					micr	sec	
			P	Z'	0.2	1.4	
		Ki	iP		15 55 25.2		C
			ipP		15 55 40.4		
		Sk	iP		15 55 57.0		C
		Um	iP		15 55 41.4		C
			ipP		15 55 55.7		
		Ud	iP		15 56 08.9		C
			ipP		15 56 24.1		
		De	iP		15 56 22.4		C
		Japan.					
		h = 55 km (Ki,Um,Ud).					
"	17	Up	iP		16 11 19.7		C
					micr	sec	
			P	Z'	0.1	0.9	
		Ki	iP		16 10 47.3		C
		Sk	iP		16 10 52.5		
		Um	iP		16 11 05.9		
		Ud	iP		16 11 10.2		C
			i		16 11 15.7		
		De	iP		16 11 26.5		C
		Colorado.					
		Underground nuclear explosion.					
"	17	Up	iP		16 18 30.4		
					micr	sec	
			P	Z'	0.1	1.0	
		Ki	iP		16 19 02.5		
		(cont.)					

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

1973						
May	17	(cont.)				
		Ki			micr	sec
			Mx	E	0.5	11
			Mx	N	0.8	14
			Mx	Z	0.5	13
		Sk	iP		16 19 03.1	
			iPP		16 20 33.9	
		Um	iP		16 18 37.4	
		Ud	iP		16 18 46.6 C	
			i		16 18 51.0	
			i		16 19 13.7	
		De	eP		16 18 38	
		Iran (h = 45 km).				
"	17	Ki	iP		19 34 18.0	
		Sk	eP		19 34 34	
		Um	iP		19 34 11.7	
			i		19 34 23.8	
		Ud	iP		19 34 28.5	
			i		19 34 43.3	
		Sumatra (h = 80 km).				
"	18	Ud	iP		01 08 39.6	
		Greece (h = N).				
"	18	Um	iP		08 25 13.3	
		Mexico (h = N).				
"	18	Ud	iP		08 57 51.0	
"	18	Ud	iPKP1		09 33 34.4	
		De	iPKP1		09 33 45.7	
		Fiji Islands (h = 600 km).				
"	18	Up	iP		10 47 49.9	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	0.6	17
			Mx	N	1.1	20
			Mx	Z	1.2	18
		Ki	iP		10 47 03.8	
					micr	sec
			P	Z'	0.1	1.4
			Mx	E	0.9	18
			Mx	N	1.3	19
			Mx	Z	0.9	17
		Sk	iP		10 47 40.0	
		Um	iP		10 47 24.6 D	
		Ud	iP		10 47 55.9 D	
		De	iP		10 48 14.1	
		Kurile Islands (h = N).				
		m = 5.9, M = 5.1 (Up,Ki).				
"	18	Up	eSg1		10 51 40	
		Ud	iPg1		10 50 15.0	
		(cont.)				

1973				
May	18	(cont.)		
		Ud	i	10 50 18.2
			iSg1	10 50 48.2
			i	10 50 56.0
		De	iPg1	10 50 21.6
			i	10 50 23.6
			iSg1	10 50 57.1
			i	10 51 05.8
		Skagerrak, 58.3°N, 10.2°E.		
		Origin time = 10 49 30.		
		Explosion.		
		The following seven events are from the same area.		
"	18	Ud	iPg1	11 12 14.9
			iSg1	11 12 45.5
			i	11 12 53.1
		De	i(Pg1)	11 12 21.7
			iSg1	11 12 52.0
		Origin time = 11 11 28.		
		Explosion.		
"	18	Up	iSg1	11 13 47.7
		Ud	iPg1	11 12 25.6
			eSg1	11 12 56
			i	11 13 04.8
		Origin time = 11 11 38.		
		Explosion.		
"	18	Up	iSg1	11 14 01.8
		Ud	iPg1	11 12 37.3
			iSg1	11 13 09.1
			i	11 13 17.1
		De	iSg1	11 13 13.5
		Origin time = 11 11 51.		
		Explosion.		
"	18	Up	iSg1	11 46 54.2
		Ud	iPg1	11 45 29.1
			iSg1	11 46 02.7
			i	11 46 10.1
		De	iPg1	11 45 35.6
			i	11 45 37.7
			iSg1	11 46 12.6
			i	11 46 23.7
		Origin time = 11 44 45.		
		Explosion.		
"	18	Up	iSg1	12 08 15.1
		Ud	iPg1	12 06 51.6
			iSg1	12 07 25.0
			i	12 07 33.2
		De	iPg1	12 06 56.9
			iSg1	12 07 31.7
		Origin time = 12 06 07.		
		Explosion.		

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

1973

May	18	Up	iSg1	12 09 16.5
		Ud	iPg1	12 07 52.5
			iSg1	12 08 25.2
			i	12 08 33.9
		De	iSg1	12 08 34.4

Origin time = 12 07 07.
Explosion.

"	18	Up	iSg1	12 09 42.3
		Ud	iPg1	12 08 18.5
			iSg1	12 08 51.7
			i	12 09 00.1
		De	iPg1	12 08 21.5
			i	12 08 24.8
			iSg1	12 09 00.0

Origin time = 12 07 34.
Explosion.

"	18	Up	iSg1	12 16 58.1
		Ki	iSg1	12 19 52.5
		Sk	eSg1	12 18 56
		Um	iSg1	12 17 48.3
		Ud	iSg1	12 17 58.3
		De	iSg1	12 18 25.9

Esthonia, 59.4°N, 23.4°E.
Origin time = 12 15 23.
Explosion.

"	18	Up	iSg1	12 26 24.7
		Ud	iSg1	12 25 34.5
			i	12 25 42.3
		De	i	12 25 39.8
			iSg1	12 25 42.4

From the same location as the eight Skagerrak explosions earlier this date.
Origin time = 12 24 17.
Explosion.
The two following events are from the same area too.

"	18	Up	iSg1	12 26 56.0
		Ud	iSg1	12 26 05.8
			i	12 26 13.7
		De	iSg1	12 26 13.1
			i	12 26 17.7

Origin time = 12 24 48.
Explosion.

"	18	Up	iSg1	12 27 18.1
		Ud	iSg1	12 26 27.8
			i	12 26 36.7
		De	iSg1	12 26 35.6

Origin time = 12 25 10.
Explosion.

1973

May	18	Up	eSg1	12 31 03
		Um	iSg1	12 31 31.4
		Ud	eSg1	12 32 10
		De	eSg1	12 32 35

Western USSR.
Explosion.

"	18	Sk	e	14 12 52
			i	14 14 09.7
			i	14 16 35.5
		Um	i	14 12 26.7

Probably northwest USSR.
Explosion.

"	18	Up	iSn	17 37 20.4
			iSg1	17 37 54.5
		Ki	ePg1	17 35 16
			e	17 35 37
			iSg1	17 35 51.2
		Sk	iPg1	17 35 17.0
			iSg1	17 35 56.2
		Um	iPg1	17 35 30.4
			iSn	17 36 04.6
			iSg1	17 36 18.0
			iSg2	17 36 23.2
		Ud	i	17 37 30.9
			iSg1	17 37 47.9

Nordland, Norway, 66.4°N, 14.6°E.
Origin time = 17 34 27.
Explosion.

"	18	Ki	iP	18 41 32.2

Alaska (h = 130 km).

"	18	Ud	iP	22 19 59.1

"	19	Up	iP		00 42 51.9	
			iS		00 47 21	
					micr	sec
			P	Z'	0.3	1.8
			Mx	E	1.0	20
			Mx	N	0.8	15
			Mx	Z	1.3	19
		Ki	iP		00 42 50.9	
					micr	sec
			P	Z'	0.2	2.0
			Mx	E	1.3	15
			Mx	N	1.0	12
			Mx	Z	1.2	16
		Sk	iP		00 42 22.0	
		Um	iP		00 42 57.7	
			iS		00 47 28	
		Ud	iP		00 42 34.3	
		De	iP		00 42 45.3	

(cont.)

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

1973
May 19 (cont.)
North Atlantic Ocean
(h = N).
m = 5.6, M = 4.5 (Up,Ki).

" 19 Sk iP 00 49 10.1
Ud iP 00 49 22.0
North Atlantic Ocean
(h = N).

" 19 Ud iP 08 43 27.3

" 19 Up iP 11 14 29.9
Ki iP 11 14 37.6
Sk iP 11 14 54.4
Um iP 11 14 26.8
Ud iP 11 14 45.5
De iP 11 14 41.9
Afghanistan-USSR
(h = 110 km).

" 19 Up iSg1 12 13 21.6
Ki eSg1 12 15 17
Sk iSg1 12 15 10.1
Um eSg1 12 13 41
Ud iSg1 12 14 22.3
De iSg1 12 14 48.3
Western USSR,
59.4°N, 27.4°E.
Origin time = 12 10 45.
Explosion.

" 19 Ki iPg1 12 50 40.5
iSn 12 51 15.0
iSg1 12 51 28.8
Um iSg1 12 51 31.2
Probably northern Finland,
near 65°3/4 N, 27°1/2 E.
Origin time = 12 49 37.
Explosion?
By combination with Tromsoe
readings.

" 19 Up iSg1 15 11 03.6
Ki iSg1 15 13 45.0
Um iSg1 15 11 46.1
Ud iSn 15 11 46.2
iSg1 15 12 07.2
De eSg1 15 12 46
Near coast of southwest
Finland.
Explosion?

" 19 Up iSg1 18 18 28.3
(cont.)

1973
May 19 (cont.)
Ud iPg1 18 17 02.1
i 18 17 05.1
iSg1 18 17 35.5
i 18 17 43.1
De i(Pg1) 18 17 10.6
iSg1 18 17 43.8
i 18 17 54.8
Skagerrak, 58.3°N, 10.2°E.
Origin time = 18 16 18.
Explosion.
During the following 17
min, 17 more explosions
were carried out in the
same area with intervals
of approximately one
minute. They were recorded
at Up, Ud and De. Cf the
series in the same area
on May 18.

" 19 Sk iP 18 32 05.5
Peru (h = 80 km).

" 19 Up iP 21 55 52.9
Ki e(P) 21 56 49
iPn 21 57 07.9
Ud iP 21 56 10.6
iPn 21 56 21.4
Caucasus (h = N).

" 20 Up iP 18 28 07.3 C
Ki iP 18 27 10.8 C
iPcP 18 28 23.5
micr sec
P Z' 0.1 0.9
Sk iP 18 27 39.2 C
iPcP 18 28 38.6
Um iP 18 27 40.2 C
iPcP 18 28 38.8
Ud iP 18 28 04.2 C
iPcP 18 28 52.6
De iP 18 28 28.8 C
Alaska (h = 120 km).

" 21 Um iP 02 30 26.8
Ud iP 02 30 46.3
Afghanistan-USSR
(h = 90 km).

" 21 Ud iP 02 59 23.3

" 21 Up iPKP1 03 41 22.2
Ud iPKP1 03 41 24.7 D
De iPKP1 03 41 35.0 D

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

1973

May	21	Ud	iPKP1	05 17 57.2
		De	iPKP1	05 18 07.0
		Fiji Islands (h = 550 km).		
"	21	Up	iSg1	06 10 11.3
		Ki	iSg1	06 10 59.6
		Sk	iSg1	06 11 26.0
		Um	iSg1	06 09 35.8
		Ud	eSg1	06 11 11
		De	iSg1	06 11 54.1
		Lake Ladoga region. Explosion?		
"	21	Up	iP	09 27 22.2
			iPcP	09 27 49.9
		Ki	iP	09 26 34.3
		Um	iP	09 26 56.6
			iPcP	09 27 33.7
		Ud	iP	09 27 27.7
		De	iP	09 27 46.5
		Kurile Islands (h = 140 km).		
"	21	Um	iP	12 01 55.4
		Ud	eP	12 01 54
		Indian Ocean (h = N).		
"	21	Up	iSg1	12 16 29.1
		Ki	eSg1	12 18 02
		Sk	iSg1	12 17 23.3
		Um	iSg1	12 16 04.9
		Ud	iSg1	12 16 38.4
		De	iSg1	12 17 00.4
		Esthonia, 59.5°N, 24.8°E. Origin time = 12 13 34. Explosion.		
"	21	De	i(Sg1)	12 24 14.8
"	21	Up	iPg1	12 40 26.1
			iSg1	12 40 40.2
			iRg	12 40 45.0
		Sk	eSg2	12 43 04
		Um	iSg1	12 42 41.2
		Ud	iPg1	12 40 53.3
			iSg1	12 41 27.8
		De	iPn	12 40 58.9
			iSg1	12 41 48.2
		Off coast of Södermanland, Sweden, 58.9°N, 17.8°E. Origin time = 12 40 09. Explosion. The five following events have the same location.		

1973

May	21	Up	iPg1	12 52 37.5
			iSg1	12 52 51.5
			iRg	12 52 57.0
		Sk	eSg2	12 55 16
		Um	iSg1	12 54 53.5
		Ud	iSg1	12 53 39.2
		De	ePn	12 53 11
			iSg1	12 53 59.7
			i	12 54 06.1
		Origin time = 12 52 21. Explosion.		
"	21	Up	iPg1	13 04 54.8
			iSg1	13 05 09.2
			iRg	13 05 14.6
		Sk	eSg2	13 07 33
		Um	iSg1	13 07 10.8
		Ud	iS*	13 05 54.6
			iSg1	13 05 56.5
		De	iPn	13 05 28.4
			iSg1	13 06 17.1
			i	13 06 22.9
		Origin time = 13 04 38. Explosion.		
"	21	Up	iPg1	13 20 37.6
			iSg1	13 20 51.3
			iRg	13 20 56.9
		Sk	eSg2	13 23 15
		Um	iSg1	13 22 53.1
		Ud	iSg1	13 21 37.4
			i	13 21 45.9
		De	iPn	13 21 10.6
			iSg1	13 21 59.6
			i	13 22 05.6
		Origin time = 13 20 20. Explosion.		
"	21	Up	iPg1	13 45 26.2
			iSg1	13 45 40.3
			iRg	13 45 45.7
		Sk	eSg2	13 48 04
		Um	iSg1	13 47 41.8
		Ud	iPg1	13 45 53.4
			iS*	13 46 25.9
			iSg1	13 46 27.9
		De	iPn	13 45 59.4
			iSg1	13 46 48.7
			i	13 46 54.4
		Origin time = 13 45 09. Explosion.		
"	21	Up	iPg1	14 07 23.6
			iSg1	14 07 37.4
			iRg	14 07 42.9

(cont.)

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

1973				
May	21	(cont.)		
		Sk	eSg2	14 10 02
		Um	iSg1	14 09 39.7
		Ud	ePg1	14 07 52
			iSg1	14 08 24.8
		De	ePn	14 07 57
			iSg1	14 08 46.1
			i	14 08 50.9
		Origin time = 14 07 06.		
		Explosion.		
"	21	Um	i(Sg1)	15 09 28.5
"	21	Up	iP	15 38 02.1
		Um	iP	15 37 56.6
		Mexico (h = 100 km).		
"	21	Ki	ePn	18 53 24
			iPg1	18 53 32.7
			iSn	18 54 10.4
			iS*	18 54 22.8
		Um	i	18 55 40.3
			iSg1	18 55 59.2
		Northwest USSR-Norway border region, 69.6°N, 30.1°E.		
		Origin time = 18 52 23.		
		Explosion.		
"	21	Up	iP	20 29 39.4
			ipP	20 29 48.8
		Ki	iP	20 29 09.9
			ipP	20 29 19.5
		Sk	iP	20 29 40.5
		Um	iP	20 29 22.4
			ipP	20 29 30.6
		Ud	iP	20 29 48.4
		De	eP	20 30 02
		Ryukyu Islands.		
		h = 35 km (Up,Ki,Um).		
"	21	Up	iPg1	21 19 40.5
			iSg1	21 20 00.0
			iRg	21 20 04.0
		Ud	iSg1	21 19 45.3
			iRg	21 19 50.6
		De	iSg1	21 21 02.3
		Bergslagen, central Sweden.		
		Origin time = 21 19 16.		
"	21	Ki	iX	22 00 30.9
		Um	iP	22 00 14.1
			iX	22 00 27.7
		Ud	eP	22 00 25
		Sunda Strait (h = 90 km).		

1973						
May	22	Ki			micr	sec
			Mx	E	0.7	13
			Mx	N	1.3	17
			Mx	Z	0.5	13
		Ud	iP		00 57 25.9	
		Iran (h = 35 km).				
"	22	Um	iP		03 49 26.1	
		Hindu Kush (h = 180 km).				
"	22	Ud	iP		04 12 30.5	
"	22	Up	iPKP1		10 10 34.1	
		Ud	iPKP1		10 10 36.6	
		De	iPKP1		10 10 46.1	
"	22	Up	iSn		13 24 18.5	
			iSg1		13 24 30.5	
		Ki	eSg1		13 27 08	
		Sk	e		13 26 07	
			iSg1		13 26 22.0	
		Um	iSg1		13 25 07.3	
		Ud	eSg1		13 25 35	
		De	iSg1		13 25 56.2	
		Esthonia, 59.3°N, 25.0°E.				
		Origin time = 13 22 30.				
		Explosion.				
"	22	Up	iSg1		15 04 12.5	
		Sk	iSg1		15 06 03.3	
		Um	iSg1		15 04 37.2	
		Ud	iSg1		15 05 15.8	
		De	iSg1		15 05 42.8	
		Esthonia.				
		Explosion.				
"	22	Up	iP		15 31 14.0	
			i		15 31 19.7	
		Sk	iP		15 31 53.8	
		Um	iP		15 31 58.3	
		Ud	iP		15 31 20.8	
		De	iP		15 30 45.3	
		Greece.				
"	22	Up	ePKP		17 24 47	
		Um	iSKP1		17 28 18.6	
		Ud	iPKP		17 24 48.7	
		De	iPKP		17 24 56.3	
			i		17 25 00.5	
		Tonga Islands (h = N).				
"	22	Ki	iPg1		17 46 19.3	
			iSg1		17 46 36.9	
		Finnish Lapland.				

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

1973
May 22 Um iP 20 23 16.9
Ud iP 20 23 48.0

" 22 Um iPKP 22 23 46.6
De iPKP 22 23 53.0
i 22 23 59.1
New Guinea (h = 15 km).

" 23 De iP 00 06 06.8

" 23 Up iP 02 08 14.1
i 02 08 40.3
Ud iP 02 08 27.0
i 02 08 53.5
Burma-India (h = 60 km).
The second phase at Up and Ud may be interpreted as P for an event from the same focal area occurring 26 sec later or as pP for the present event, giving a focal depth of 110 km.

" 23 Up iP 05 34 56.1
Ud iP 05 34 58.2

" 23 Ud iP 06 41 03.9

" 23 Up iP 10 29 00.7
ipP 10 29 08.9
micr sec
Mx E 0.6 20
Mx N 0.5 18
Mx Z 0.6 18
Ki ipP 10 29 52.9
Sk ipP 10 29 21.8
Um ipP 10 29 33.4
Ud iP 10 28 55.6
ipP 10 29 03.3
De iP 10 28 35.8
Ascension Island.
h = 30 km (Up,Ud).

" 23 Up iSg1 11 09 53.5
iRg 11 10 11.9
Sk iSg1 11 09 49.7
Um iSg1 11 10 37.1
Ud iPg1 11 09 03.4
iSg1 11 09 25.5
iRg 11 09 29.6
De eSg1 11 11 18
Central Sweden,
61.4°N, 13.8°E.
Origin time = 11 08 38.
(cont.)

1973
May 23 (cont.)
An explosion experiment described in detail by E. Abrahamsson (1974): Operation Block, Royal Swedish Fortifications Administration, Rep. No. 119:5, 103 pp.

" 23 Up iPKP 12 21 19.6
Ki iPKP 12 21 34.5
Ud iPKP 12 21 18.3
South Sandwich Islands
(h = 120 km).

" 23 Up eSg1 12 29 34
Sk eSg1 12 31 21
Um iSg1 12 29 43.7
De eSg1 12 30 53
Western USSR.
Explosion.

" 23 Up iSg1 13 20 14.3
Ki iSg1 13 22 18.0
Sk iSg1 13 22 05.7
Um i 13 20 17.4
iSg1 13 20 32.4
Ud iSg1 13 21 14.8
De iSg1 13 21 37.8
Western USSR,
59.2°N, 28.3°E.
Origin time = 13 17 22.
Explosion.

" 23 Um iSg1 13 44 59.8
De eSg1 13 45 59
Esthonia.
Explosion.

" 23 Up iSg1 13 46 56.5
Ki eSg1 13 49 34
Sk eSg1 13 48 43
Um iSg1 13 47 31.7
De eSg1 13 48 22
Esthonia.
Explosion.

" 23 Up iSg1 13 58 27.7
Ud iSg1 13 57 53.0
De ePn 13 57 10
iPg1 13 57 11.4
iSg1 13 57 34.4
iRg 13 57 41.1
Västergötland, Sweden,
57.9°N, 12.4°E.
Origin time = 13 56 42.

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

1973				
May	23	Up	iPg1	17 45 20.7
			iSg1	17 45 53.0
		Um	iSg1	17 46 55.0
		De	iSg1	17 47 28.4
		Baltic Sea, southwest of Finland, 59.6°N, 22.2°E. Origin time = 17 44 37. Explosion.		
"	23	Up	iPg1	18 01 25.9
			iSg1	18 01 59.6
		Um	iSg1	18 03 01.7
		De	iSg1	18 03 34.6
		Baltic Sea, southwest of Finland, 59.6°N, 22.2°E. Origin time = 18 00 44. Explosion.		
"	23	Up	iPg1	18 18 24.5
			iSg1	18 18 56.4
		Um	iSg1	18 19 58.9
		Ud	iSg1	18 20 00.6
		De	ePg1	18 19 22
			eSg1	18 20 30
		Baltic Sea, southwest of Finland, 59.6°N, 22.0°E. Origin time = 18 17 44. Explosion.		
"	23	Up	iPg1	18 18 40.3
			iSg1	18 19 11.8
		Sk	eSg1	18 21 09
		Um	iSg1	18 20 14.9
		Ud	iSg1	18 20 17.7
		Baltic Sea, southwest of Finland, 59.6°N, 22.0°E. Origin time = 18 18 00. Explosion.		
"	23	Ud	iRg	20 00 27.9
"	24	Up	iP	02 04 50.5 C
				micr sec
			P Z'	0.1 1.0
		Ki	iP	02 04 29.2 C
		Sk	iP	02 04 55.4
		Um	iP	02 04 35.8
		Ud	iP	02 05 00.1 C
			i	02 05 08.2
		De	eP	02 05 07
		Luzon-Formosa (h = N).		
"	24	Up	iP	02 35 19.2
		Ki	iP	02 35 43.3
		Ud	iP	02 35 29.2
		(cont.)		

1973				
May	24	(cont.)		
		Ud	i	02 35 38.4
		Indian Ocean (h = N).		
"	24	De	iP	08 35 43.7
"	24	Ud	iPn	11 38 10.2
			iPg1	11 38 12.2
			iSg1	11 38 42.0
		De	iPg1	11 38 12.5
			iSg1	11 38 42.7
		Bohuslän, Sweden, 58.2°N, 11.4°E. Origin time = 11 37 33.		
"	24	Ud	eSg1	12 02 35
		De	ePg1	12 00 47
			iPn	12 00 47.4
			iSg1	12 01 01.0
		Probably explosion off coast of south Sweden. Origin time = 11 59 29.		
"	24	Ki	iPn	12 40 32.9
			iSn	12 41 21.0
			iS*	12 41 34.2
		Um	iSg1	12 43 06.4
		Northwest USSR-Norway border region, 69.5°N, 30.9°E. Origin time = 12 39 30. Explosion.		
"	24	Up	iSg1	12 49 38.6
		Ki	iSg1	12 51 33.7
		Sk	iSg1	12 51 21.9
		Um	iSg1	12 49 56.6
		Ud	iSg1	12 50 38.1
		De	iSg1	12 51 03.4
		Western USSR, 59.3°N, 28.0°E. Origin time = 12 46 51. Explosion.		
"	24	Ud	iP	13 21 09.7
"	24	Up	iRg	13 45 15.4
		Ud	iRg	13 45 28.9
"	24	Up	iSg1	13 46 12.7
		Um	iSg1	13 46 31.9
		De	eSg1	13 47 45
		Western USSR. Explosion.		
"	24	De	iRg	13 48 06.0

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

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1973
May  24   Ki    i(Pn)        14 12 58.0
                i(Sn)        14 13 26.4

 "   24   Ud    iP           14 46 52.7
          De    iP           14 47 00.2

 "   24   Ud    iP           14 48 44.1

 "   24   Ud    i(P)         15 12 08.7

 "   24   Um    eP           15 54 11
          Ud    iP           15 54 43.0
          Japan (h = N).

 "   24   Um    iP           17 23 25.8
          Japan (h = 380 km).

 "   24   Up    iP           18 58 09.9 C
                ipP          18 58 22.7
                             micr  sec
                P       Z'   0.1   1.0
                Mx      E    1.0   17
                Mx      N    1.0   19
                Mx      Z    1.0   19
          Ki    iP           18 57 16.9 C
                iPcP         18 58 02.5
                             micr  sec
                P       Z'   0.1   0.8
                Mx      E    1.6   17
                Mx      N    0.7   15
                Mx      Z    1.0   18
          Sk    iP           18 57 48.4
                iPcP         18 58 21.7
          Um    iP           18 57 43.5
                ipP          18 57 55.3
                iPcP         18 58 18.9
          Ud    iP           18 58 09.6 C
                ipP          18 58 22.4
                iPcP         18 58 36.1
          De    iP           18 58 31.8 C
                i            18 58 45.8
          Aleutian Islands.
          h = 45 km (Up,Um,Ud).
          m = 6.0, M = 5.1 (Up,Ki).

 "   24   Um    ipP          19 03 43.7
                iPcP         19 04 12.4
          Ud    iP           19 03 57.0
                ipP          19 04 10.2
          De    eP           19 04 21
                ipP          19 04 32.4
          Aleutian Islands
          h = 45 km (Ud,De).
          Origin time = 18 53 00.

1973
May  24   Up    ipP          19 47 12.8
                i            19 47 38.2
          Ki    iP           19 46 35.7
                ipP          19 47 02.0
                i            19 47 27.1
                             micr  sec
                pP      Z'   0.1   1.3
          Sk    iP           19 46 28.9
                ipP          19 46 54.3
          Um    iP           19 46 43.6
                ipP          19 47 09.9
                i            19 47 36.0
          Ud    iP           19 46 37.1
                ipP          19 47 02.6
          De    iP           19 46 43.3
                ipP          19 47 09.9
          Guatemala.
          h = 100 km (Ki,Sk,Um,Ud,De).
          The phase, following the
          first onset by about 52 sec,
          could be P of another event
          from the same focal area.

 "   24   Ud    i(P)         20 13 25.5

 "   24   Ud    iP           21 05 19.8
          Kurile Islands (h = N).

 "   24   Up    eRg          21 14 29
          Ud    iRg          21 14 16.5
          De    eSg1         21 15 31
          Bergslagen, central Sweden.

 "   24   Up    iP           22 29 56.6
          Um    iP           22 29 33.2
          Ud    iP           22 30 03.0
                i            22 30 15.5
          Japan (h = N).

 "   24   Sk    eP           23 23 02
          Um    iP           23 22 40.5
          Ud    iP           23 22 41.1
          De    eP           23 22 24
          Iran (h = N).

 "   25   Up    i(pP)        00 13 19.3
          Ud    iP           00 13 04.0
          Aleutian Islands
          (h = 25 km).

 "   25   Ud    iP           03 08 50.6
          Aleutian Islands
          (h = 45 km).

 "   25   Ki    i(Pn)        08 38 14.8
                i(Sn)        08 38 42.1
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Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

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1973
May  25   Um   i(Sg1)     08 41 09.6

 "   25   Ki   i(Pn)      08 41 35.3
               i(Sn)      08 42 03.3

 "   25   Ki   i(Pn)      08 43 23.3
               i(Sn)      08 43 50.3
               i          08 44 05.1

 "   25   Up   iP         08 48 27.0
               ipP        08 48 39.4
                          micr  sec
               Mx     E   0.8   14
               Mx     N   1.4   16
               Mx     Z   1.4   15
          Ki   ipP        08 49 01.6
                          micr  sec
               Mx     E   1.5   13
               Mx     N   2.0   14
               Mx     Z   1.3   13
          Sk   i          08 49 04.0
               ipP        08 49 08.0
          Um   eP         08 48 33
               ipP        08 48 44.7
          Ud   iP         08 48 42.6
               ipP        08 48 54.4
               iPP        08 50 42.7
          De   eP         08 48 33
               ipP        08 48 44.2
          Pakistan.
          h = 45 km (Up,Um,Ud,De).
          M = 5.2 (Up,Ki).

 "   25   Up   i          11 11 20.2
               iSg1       11 11 31.8
          Ki   iSg1       11 14 07.5
          Sk   iSg1       11 13 23.8
          Um   iSg1       11 12 05.3
          Ud   iSg1       11 12 34.4
          De   iSg1       11 13 01.5
          Esthonia, 59.5°N, 25.2°E.
          Origin time = 11 09 30.
          Explosion.

 "   25   Ud   iP         11 47 46.3

 "   25   Up   iSg1       13 10 12.1
          Sk   eSg1       13 10 11
          Um   iSg1       13 11 32.9
          Ud   iS*        13 09 07.7
               iSg1       13 09 12.9
          South Norway,
          58.5°N, 6.4°E.
          Origin time = 13 07 07.
          Solution obtained by
          combination with Bergen
          readings.

1973
May  25   Up   iSg1       13 11 24.0
          Ki   i(Sg2)     13 13 54.5
          Sk   eSg1       13 13 16
          Um   iSg1       13 11 47.4
          De   e          13 12 47
               iSg1       13 13 00.5
          Esthonia.
          Explosion.

 "   25   Up   iP         13 28 17.2
          Ki   iP         13 27 24.4
          Sk   iP         13 27 53.2
          Um   iP         13 27 51.2
          Ud   iP         13 28 15.7
          De   iP         13 28 38.0
          South of Alaska (h = 40 km).

 "   25   Um   iP         17 06 52.6
          Ud   iP         17 07 16.7
          Kurile Islands.

 "   25   De   iPKP1      18 06 17.6
               i          18 06 23.9
               i          18 06 33.9
          Tonga-Kermadec Islands
          (h = N).

 "   26   Up   iP         02 26 59.0 C
               ipP        02 27 12.7
                          micr  sec
               pP     Z'  0.1   1.3
          Ki   eP         02 26 21
          Sk   eP         02 26 58
          Um   iP         02 26 37.0 C
               ipP        02 26 50.0
          Ud   iP         02 27 06.3 C
               ipP        02 27 20.3
          De   eP         02 27 22
               ipP        02 27 34.3
          Japan.
          h = 50 km (Up,Um,Ud,De).

 "   26   Up   iP         03 17 49.1
          Um   iP         03 17 23.0
          Ud   iP         03 17 49.0
          Aleutian Islands
          (h = 60 km).

 "   26   Ud   iPKP1      04 03 34.0
          De   iPKP1      04 03 44.8

 "   26   Ki   ePKP       04 23 05
          Sk   ePKP       04 23 15
          Um   iPKP       04 23 10.7
          Ud   iSKP1      04 26 24.7
          New Hebrides Islands
          (h = 200 km).
```

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

1973						
May	26	Up	iP		07 08 38.7	
		Ki	iP		07 07 22.1	
			i		07 07 30.9	
					micr sec	
			P	Z'	0.1 0.9	
		Sk	iP		07 07 40.1	
		Um	iP		07 08 01.7	C
		Ud	iP		07 08 26.4	
			i		07 08 39.2	

Jan Mayen.

"	26	Up	iP	08 26 54.3
			ipP	08 27 03.2
		Ud	iP	08 26 59.9
			ipP	08 27 09.5

Kurile Islands.
h = 35 km (Up,Ud).

"	26	Up	iSg1	08 40 34.2
		Um	iSg1	08 41 12.4

Gulf of Finland,
59.6°N, 24.0°E.
Origin time = 08 38 52.
Explosion.
See note for following event.

"	26	Up	iPn	08 42 22.3
			iSn	08 43 01.5
			iSg1	08 43 13.2
		Sk	eSg1	08 45 03
		Um	iSg1	08 43 51.3
		Ud	iSn	08 43 53.1
			iSg1	08 44 15.5
		De	iPn	08 43 02.6
			iSg1	08 44 43.3

Gulf of Finland,
59.6°N, 24.0°E.
Origin time = 08 41 31.
Explosion.
The recorded wave trains are similar to those of the events on May 23, 17 44, 18 00, 18 17 and 18 18.

"	26	Up	iPn	08 42 40.1
		Um	iSg1	08 44 09.4
		De	iPn	08 43 20.9

Gulf of Finland,
59.6°N, 24.0°E.
Origin time = 08 41 49.
Explosion.
See note for foregoing event.

"	26	Up	iSg1	11 03 37.2
		Ud	iSg1	11 02 36.0

(cont.)

1973
May 26 (cont.)
Near coast of southwest Norway, 59.5°N, 5.7°E.
Origin time = 11 00 25.
Solution obtained by combination with Bergen and Kongsberg readings.

"	26	Ki	iPn	11 40 34.1
			iPg1	11 40 42.3
			iSn	11 41 20.4
			iSg1	11 41 35.3
		Um	iSg1	11 43 08.2

Northwest USSR-Norway border region,
69.6°N, 30.1°E.
Origin time = 11 39 33.
Explosion.

"	26	Up	iSg1	12 15 04.1
		Ki	eSg1	12 17 03
		Sk	eSg1	12 16 54
		Um	iSg1	12 15 21.5
		Ud	iSg1	12 16 04.7
		De	e(Sg2)	12 16 38

Western USSR.
Explosion.

"	26	Up	iP		12 30 31.6	C
			ipP		12 30 41.6	
			iS		12 39 22	
			iP'P'		12 58 40.1	
					micr sec	
			P	Z'	0.6 0.9	
			Mx	E	4.2 20	
			Mx	N	5.7 20	
			Mx	Z	6.4 19	
		Ki	iP		12 29 38.9	C
			iS		12 37 49	
					micr sec	
			P	Z'	0.2 1.4	
			Mx	Z	6.9 18	
		Sk	iP		12 30 11.2	
		Um	iP		12 30 04.3	C
			ipP		12 30 14.7	
			iS		12 38 35	
			iP'P'		12 58 51.3	
		Ud	iP		12 30 32.4	C
			iP'P'		12 58 47.7	
		De	iP		12 30 54.5	C
			ipP		12 31 04.0	

Aleutian Islands.
h = 35 km (Up,Um,De).
m = 6.4, M = 5.8 (Up,Ki).

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

1973				
May	26	Up	iP	13 23 06.0 C
			ipP	13 23 20.8
				micr sec
			P Z'	0.1 0.9
		Ki	iP	13 22 13.3
		Sk	eP	13 22 45
		Um	iP	13 22 39.0
		Ud	iP	13 23 06.9
		De	iP	13 23 28.6
		Aleutian Islands.		
		h = 55 km (Up).		
"	26	Up	i(PKP2)	16 10 52.2
		Sk	ePKP1	16 10 43
		Um	iPKP1	16 10 35.4
		Ud	ePKP1	16 10 46
			i(PKP2)	16 10 55.8
"	26	Ki	iP	23 13 34.0
		Alaska (h = 170 km).		
"	26	Ud	iP	23 15 44.7
"	26	Ud	eP	23 58 38
		California (h = 10 km).		
"	27	Um	i(PP)	00 48 46.3
		De	ePKP	00 48 32
		New Guinea (h = 25 km).		
"	27	Up	iP	06 33 02.9
		Um	iP	06 32 44.0 D
		Ud	eP	06 33 10
"	27	Up	iPKP1	06 56 44.9
			i	06 56 46.7
		Ki	iPKP	06 56 37.6
			iSKP1	06 59 32.0
		Sk	e(PKP)	06 56 39
			iPKP	06 56 46.8
		Um	i(PKP)	06 56 40.3
			iPKP	06 56 44.3
			iSKP1	06 59 43.8
		Ud	iPKP1	06 56 46.7
			i	06 56 48.1
		De	iPKP1	06 56 57.5 D
			i	06 56 59.5
		Fiji Islands (h = 420 km).		
		Double PKP1 phases, in		
		average 1.7 sec apart.		
"	27	Up	ePKP1	08 07 13
		Ki	i(PKP)	08 06 51.4
			iPKP	08 06 56.0
		Um	iSKP1	08 09 42.1
		(cont.)		

1973				
May	27	(cont.)		
		Ud	iPKP1	08 07 15.3
		De	ePKP1	08 07 28
"	27	Um	iP	09 37 41.6
		Malawi (h = N).		
"	27	De	iPg1	10 26 59.8
			iSg1	10 27 44.6
"	27	Up	iS*	10 41 49.8
			iSg1	10 41 59.2
		Ki	iSn	10 38 41.3
			iSg1	10 39 03.2
		Sk	iSg1	10 41 29.9
		Um	eSn	10 39 21
			iSg1	10 39 54.5
		Ud	iSg1	10 42 25.5
		De	eSg1	10 43 55
		Northwest USSR,		
		67.8°N, 34.0°E.		
		Origin time = 10 36 24.		
		Explosion.		
"	27	Up	iP	13 43 15.3
"	27	Up	iP	14 45 27.9
"	27	Up	iP	16 32 56.5
		Um	iP	16 32 39.3
		Ud	iP	16 33 03.3 C
		Volcano Islands (h = N).		
"	27	Up	eP	19 58 18
		Ki	iP	19 57 41.4
		Sk	eP	19 58 14
		Um	iP	19 57 56.6
		Ud	iP	19 58 26.0
		De	iP	19 58 39.5
		Sea of Japan (h = 370 km).		
"	27	Up	iP	21 28 40.7
		Ki	iP	21 29 06.8
		Ud	iP	21 28 51.5
		De	eP	21 28 38
		Indian Ocean (h = N).		
"	27	Um	iP	22 08 07.6
"	28	Ud	iP	06 08 21.3
"	28	Um	iP	06 44 42.9
		Hindu Kush.		
		Intermediate depth.		
"	28	Up	iSg1	12 11 42.5
		(cont.)		

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

1973						
May	28	(cont.)				
		Ki	e(Sg2)		12 13 55	
		Sk	eSg1		12 13 27	
		Um	i		12 11 48.1	
			iSg1		12 11 57.9	
		Ud	eSg1		12 12 40	
		De	eSg1		12 13 04	
		Western USSR.				
		Explosion.				
"	28	Up	iP		12 59 08.5	
		Hindu Kush.				
		Intermediate depth.				
"	28	Up	iSg1		14 15 52.8	
		Um	iSg1		14 16 14.6	
		De	eSg1		14 17 17	
		Western USSR,				
		59.2°N, 27.5°E.				
		Origin time = 14 13 15.				
		Explosion.				
"	28	Up	iSg1		14 16 01.7	
		Sk	eSg1		14 17 47	
		Um	iSg1		14 16 22.0	
		Ud	iSg1		14 17 01.9	
		De	iSg1		14 17 24.9	
		Western USSR,				
		59.2°N, 27.5°E.				
		Origin time = 14 13 23.				
		Explosion.				
"	28	Ud	iP		16 57 36.9	
		Greece.				
"	28	Up	iP		17 54 14.1	
		Ud	iP		17 54 21.3	
		Greece.				
"	28	Up	eP1		20 39 52	
			iP2		20 39 55.9	
			iP4		20 40 20.0	
			iP4P4		20 43 43.7	
			iS		20 50 20	
					micr	sec
			P4	Z'	0.1	1.3
			Mx	E	1.9	20
			Mx	N	2.0	22
			Mx	Z	4.9	21
		Ki	iP4		20 40 43.0	
			iP4P4		20 44 12.0	
			iS		20 51 03	
					micr	sec
			P4P4	Z'	0.2	1.9
			Mx	E	3.0	20
			Mx	N	4.7	22
		(cont.)				

1973						
May	28	(cont.)				
		Ki			micr	sec
			Mx	Z	2.6	21
		Sk	iP4P4		20 44 11.3	
		Um	iP3		20 40 12.6	
			iP4		20 40 29.1	
			iS		20 50 44	
		Ud	eP2		20 40 04	
			iP3		20 40 11.2	
			iP4		20 40 27.4	
		De	eP1		20 39 50	
			iP4		20 40 15.8	
		Mascarene Islands (h = N).				
		m = 6.1, M = 5.8 (Up,Ki).				
		Multiple event.				
"	29	Um	iP		00 51 27.8	
"	29	Up	iP		01 56 24.3	
		Ud	iP		01 56 25.3	
		Aleutian Islands				
		(h = 45 km).				
"	29	Up	iP		01 57 36.0 C	
			i		01 57 40.3	
			ipP		01 57 51.5	
			iS		02 06 30	
			iP'P'		02 26 01.7	
					micr	sec
			P	Z'	0.1	1.0
			i	Z'	0.2	0.9
			Mx	E	2.0	18
			Mx	N	3.2	22
			Mx	Z	3.9	22
		Ki	iP		01 56 43.2 C	
			i		01 56 46.9	
			ipP		01 56 57.6	
			iS		02 04 54	
					micr	sec
			P	Z'	0.1	1.0
			i	Z'	0.2	1.0
			Mx	E	3.2	16
			Mx	N	4.6	20
			Mx	Z	3.8	19
		Sk	iP		01 57 16.1 C	
			i		01 57 20.3	
			ipP		01 57 31.6	
		Um	iP		01 57 09.0 C	
			i		01 57 13.0	
			ipP		01 57 23.6	
			iS		02 05 42	
		Ud	iP		01 57 37.9 C	
			i		01 57 41.6	
			ipP		01 57 53.1	
		De	iP		01 57 59.4 C	
			i		01 58 03.1	
		(cont.)				

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

1973
May 29 (cont.)
De ipP 01 58 15.1
Aleutian Islands.
h = 55 km (Up,Ki,Sk,Um,Ud,De).
m = 6.2, M = 5.7 (Up,Ki).
Double P phases, in average 3.9 sec apart. If pP belongs to the second, bigger onset, the focal depth is 40 km.

" 29 Up iP 02 01 53.5 C
ipP 02 02 06.1
micr sec
P Z' 0.1 1.0
Ki iP 02 01 00.0
Sk eP 02 01 34
Um iP 02 01 26.3
ipP 02 01 38.8
Ud iP 02 01 54.9 C
ipP 02 02 07.7
De iP 02 02 16.6
ipP 02 02 29.1
Aleutian Islands.
h = 45 km (Up,Um,Ud,De).
Origin time = 01 51 02.

" 29 Up eP 04 55 23
Ki iP 04 53 40.9
iTSg1 04 58 47.9
Sk iP 04 54 19.8
iS 04 56 06.0
Um iP 04 54 28.6
i 04 54 32.4
iTSg1 05 01 09.0
Ud iP 04 55 07.9
De eP 04 55 59
Norwegian Sea (h = N).

" 29 Up iP 05 22 57.9
Aleutian Islands
(h = 40 km).

" 29 Up iP 06 25 08.9 C
iPcP 06 25 39.3
iP'P' 06 53 37.6
micr sec
P Z' 1.4 1.4
Mx E 1.0 18
Mx N 2.5 23
Mx Z 3.5 23
Ki iP 06 24 15.3 C
iPcP 06 25 06.6
micr sec
P Z' 2.2 1.4
(cont.)

1973
May 29 (cont.)
Ki micr sec
Mx E 1.5 18
Mx N 1.3 19
Mx Z 1.5 16
Sk iP 06 24 44.6 C
iPcP 06 25 23.8
Um iP 06 24 42.8 C
ipP 06 24 50.3
iPcP 06 25 21.3
iS 06 33 04
iScS 06 34 31
iP'P' 06 53 49.7
Ud iP 06 25 07.9 C
ipP 06 25 15.3
iPcP 06 25 38.8
De iP 06 25 30.8 C
eP'P' 06 53 28
Unimak Island.
h = 25 km (Um,Ud).
m = 7.0, M = 5.4 (Up,Ki).

" 29 Ud iP 07 32 38.9
Uzbek SSR.

" 29 Ud i(P) 09 30 36.7

" 29 Up ePKP2 11 31 07
Ki iPKP1 11 30 35.0
Um iPKP1 11 30 41.3
iPKP2 11 30 51.2
Ud iPKP2 11 31 12.8
De iPKP2 11 31 23.9
New Zealand (h = 55 km).

" 29 Up iP 11 59 48.4
Mascarene Islands
(h = N).

" 29 Up iPn 12 51 47.1
iSg1 12 52 14.9
iRg 12 52 32.8
Um iSg1 12 54 20.8
Ud iSg1 12 52 58.2
De eSn 12 52 42
iSg1 12 52 51.0
Gotland Island region,
Sweden, 58.0°N, 18.6°E.
Origin time = 12 51 15.

" 29 Up iSg1 13 02 21.6
Sk eSg1 13 04 21
Um iSg1 13 03 12.9
Ud iSg1 13 03 22.9
(cont.)

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

1973
May 29 (cont.)

De	iSg1		13 03 54.7	

Esthonia, 59.5°N, 23.3°E.
Origin time = 13 00 50.
Explosion.

" 29	Up	iSg1	13 10 15.1	
	Um	iSg1	13 10 29.2	
		eRg	13 11 02	
	Ud	eSg1	13 11 16	
	De	eSg1	13 11 44	

Western USSR,
59.6°N, 27.7°E.
Origin time = 13 07 35.
Explosion.
The occurrence of Rg (as here at Um) on our records is rare for Esthonian and western USSR explosions.

" 29	Up	i	14 11 08.2
		iSg1	14 12 16.9
		iSg2	14 12 23.6
	Sk	eSg1	14 14 02
	Um	iSg1	14 12 30.6
	Ud	iSg1	14 13 14.7
	De	e	14 13 35
		iSg1	14 13 47.4

Western USSR.
Explosion.

" 29	Up	iP	17 55 52.1
	Ud	iP	17 56 04.9

Arabian Sea.

" 29	Up	iP	23 17 30.1
	Ki	iP	23 16 35.1
	Ud	iP	23 17 32.9

Komandorsky Islands
(h = N).

" 29	Up	iP	23 19 30.1
	Ud	iP	23 19 31.0

" 30	Up	iP		04 51 12.5		
		ipP		04 51 40.5		
		iSKS		05 01 36		
				micr	sec	
		Mx	E	0.9	22	
		Mx	N	0.8	23	
		Mx	Z	1.2	22	
	Ki	iP		04 51 13.9		
		ipP		04 51 42.7		
		iSKS		05 01 42		

(cont.)

1973
May 30 (cont.)

Ki			micr	sec	
	P	Z'	0.1	1.3	
	Mx	E	2.6	26	
	Mx	N	0.9	20	
	Mx	Z	1.9	25	
Sk	iP		04 51 01.0		
Um	iP		04 51 16.3		D
	ipP		04 51 45.8		
	iSKS		05 01 42		
Ud	iP		04 51 03.6		D
	ipP		04 51 32.5		
De	iP		04 51 04.6		D

Ecuador.
h = 110 km (Up,Ki,Um,Ud).
M = 5.5 (Up,Ki).

" 30	Ki	iPKP	06 48 57.8
	Sk	iPKP	06 49 08.3
	Um	iPKP	06 49 03.9

New Hebrides Islands
(h = 120 km).

" 30	Up	i	10 33 19.1
		iSg1	10 33 30.4
		i(Sg2)	10 33 39.9
	Um	iSg1	10 34 04.5
	Ud	eSg1	10 34 32
		iSg2	10 34 45.8
	De	iSg1	10 34 57.8

Esthonia, 59.3°N, 25.5°E.
Origin time = 10 31 26.
Explosion.

" 30	Up	i(Sg1)	12 15 29.5
		i(Sg2)	12 15 38.7
	Um	iSg1	12 15 41.4
	Ud	iSg1	12 16 26.3
	De	iSg1	12 17 03.0

Western USSR.
Explosion.

" 30	Up	iSg1	12 35 59.6
	Um	iSg1	12 36 20.5
	Ud	eSg1	12 37 04

Western USSR.
Explosion.

" 30	Up	i	12 41 44.5
		iSg1	12 41 52.9
	Ki	eSg1	12 43 57
	Um	iSg1	12 42 07.8
	Ud	eSg1	12 42 51
	De	eSg1	12 43 26

(cont.)

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

1973
May 30 (cont.)
Western USSR.
Explosion.

" 30 De eRg 12 44 39

" 30 Um iSg1 13 52 57.6
Lake Ladoga region.
Explosion?

" 30 Up i(Sn) 14 19 09.4
Um iSg1 14 19 58.8
De iSg1 14 20 56.4
Esthonia.
Explosion.

" 30 Um i(Sg1) 14 53 27.6

" 30 Up iSg1 15 38 06.6
i 15 38 10.1
Sk iSg1 15 39 20.6
Um eSg1 15 39 44
Ud iPg1 15 37 34.3
iSg1 15 37 44.3
De iSg1 15 39 18.7
Bergslagen, Sweden,
60.1°N, 14.9°E.
Origin time = 15 37 22.

" 30 Up eSg1 16 01 47
Ki iSn 15 59 34.2
iSg1 15 59 43.9
Sk iS* 15 59 49.3
iSg1 15 59 52.2
Um iSn 15 59 57.8
iSg1 16 00 12.0
Ud iSg1 16 01 38.8
Nordland, Norway,
66.5°N, 14.2°E.
Origin time = 15 58 17.
Explosion.

" 30 Um iP 17 46 17.9
Gulf of California
(h = N).

" 30 Ud iP 17 49 06.7

" 30 Ud iP 20 47 25.3
Hindu Kush.
Intermediate depth.

" 31 Up iP 04 31 54.1
Um iP 04 31 34.5
Ud iP 04 32 02.8
Japan (h = N).

1973
May 31 Up iP 05 51 54.0 C
iS 06 02 17
micr sec
Mx E 1.2 24
Mx N 1.0 23
Mx Z 2.7 24
Ki iP 05 51 45.3 C
ipP 05 52 11.9
iS 06 02 03
micr sec
P Z' 0.1 1.5
Mx E 1.8 20
Mx N 2.6 24
Mx Z 3.5 24
Sk iP 05 51 36.6 C
Um iP 05 51 51.9 C
ipP 05 52 19.2
iS 06 02 12
Ud iP 05 51 44.5 C
De iP 05 51 51.3 C
Guatemala.
h = 100 km (Ki,Um).
M = 5.5 (Up,Ki).

" 31 Up eP 07 29 18
Ud iP 07 29 24.9

" 31 Up iPKP 09 03 27.2
Ud iPKP 09 03 29.5

" 31 Ud iP 11 19 08.0
Aegean Sea.

" 31 Up iSg1 12 24 57.5
Sk eSg1 12 26 41
Um iSg1 12 25 16.7
Ud iSg1 12 25 55.7
De eSg1 12 26 30
Western USSR.
Explosion.

" 31 Ki iP 12 34 14.1
Um iP 12 34 09.5
Ud e(pP) 12 34 38
Sumatra (h = N).

" 31 Sk eSg1 12 43 37
Um iSg1 12 42 05.4
Ud iSg1 12 42 53.0
De eSg1 12 43 18
Western USSR.
Explosion.

" 31 Up iP 17 47 52.2 C
i 17 48 03.6
(cont.)

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

1973						
May	31	(cont.)				
		Up			micr	sec
			P	Z'	0.1	1.0
		Ki	iP		17 46 58.6 C	
		Sk	iP		17 47 32.6	
		Um	iP		17 47 24.9 C	
			i		17 47 36.9	
		Ud	iP		17 47 53.4 C	
			i		17 48 05.9	

Aleutian Islands
(h = 10 km).
If the second phase at Up, Um and Ud is interpreted as pP, the focal depth is 45 km.

"	31	Up	iP		19 58 17.0	
			ipP		19 58 26.4	
		Ki	iP		19 58 50.0	
			i		19 58 55.2	
		Sk	ipP		19 59 00.5	
		Um	iP		19 58 28.2	
		Ud	iP		19 58 32.6	
		De	iP		19 58 16.9	

Iran.
h = 35 km (Up).

"	31	Ki	iP		20 08 17.8	
		Sk	iP		20 08 54.3	
		Um	iP		20 08 35.4	

"	31	Up	iP		23 50 16.5 C	
			iX		23 50 32.8	
			iS		23 58 35	
			iY		23 59 02	
					micr	sec
			P	Z'	0.3	0.9
			X	Z'	0.5	0.8
			Mx	E	4.4	18
			Mx	N	2.8	16
			Mx	Z	4.4	15
		Ki	iP		23 50 10.9 C	
			iX		23 50 26.9	
			iPP		23 52 30.2	
			iS		23 58 26	
			iY		23 58 50	
					micr	sec
			P	Z'	0.5	1.9
			X	Z'	0.9	1.5
			Mx	E	6.1	14
			Mx	N	9.1	15
		Sk	iP		23 50 33.0 C	
			ipP		23 50 42.6	
			iX		23 50 49.5	
		Um	iP		23 50 09.3 C	
			ipP		23 50 19.4	

(cont.)

1973						
May	31	(cont.)				
		Um	iX		23 50 25.2	
			iS		23 58 22	
		Ud	iP		23 50 30.0 C	
			iX		23 50 45.9	
		De	iP		23 50 30.7 C	
			iX		23 50 46.7	

Burma-India.
h = 35 km (Sk,Um).
m = 6.5, M = 6.0 (Up,Ki).
In average, X - P = 16.1 sec.

Markus Båth
Klaus Meyer
Rutger Wahlström

January 22, 1975

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BOX 517
751 20 UPPSALA 1
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BOX 517
S-751 20 UPPSALA
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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):	$59^{\circ}51.5'$N,	$17^{\circ}37.6'$E;	h = 14 m
Kiruna	(Ki):	$67^{\circ}50.4'$N,	$20^{\circ}25.0'$E;	h = 390 m
Skalstugan	(Sk):	$63^{\circ}34.8'$N,	$12^{\circ}16.8'$E;	h = 580 m
Umeå	(Um):	$63^{\circ}48.9'$N,	$20^{\circ}14.2'$E;	h = 16 m
Uddeholm	(Ud):	$60^{\circ}05.4'$N,	$13^{\circ}36.4'$E;	h = 240 m
Delary	(De):	$56^{\circ}28.2'$N,	$13^{\circ}52.2'$E;	h = 150 m

J U N E 1 - 30, 1973

1973
June 1 Up iP 00 01 26.5
Ionian Sea.

" 1 Up iP 00 25 12.2
Ud iP 00 25 25.8

" 1 Up iP 02 34 23.5

" 1 Ud iP 02 52 34.6

" 1 Up iPKP1 04 13 23.8
Um iPKP1 04 13 13.6
Ud iPKP1 04 13 25.8

" 1 Up micr sec
Mx E 6.1 24
Mx N 4.4 22
Mx Z 10 23
Ki ePKP 07 42 04
micr sec
Mx E 9.0 22
Mx N 7.8 21
Sk iPKP 07 42 07.6
Um iPKP 07 42 01.3
Indian Ocean (h = N).
M = 6.4 (Up,Ki).

" 1 Ud ePKP1 08 12 18

" 1 Ki e(PKP) 08 47 52
iPKP 08 47 57.5
Um iPKP 08 47 54.0
South of Australia (h = N).

" 1 Up eP 10 55 38
Ki eP 10 55 44

" 1 Up iSgl 11 37 08.4
Sk iSgl 11 38 46.8
Ud iSgl 11 37 19.8
(cont.)

1973
June 1 (cont.)
De iPgl 11 35 08.0
iSgl 11 35 25.2
Southern Baltic Sea.
Explosion?

" 1 Up iP 12 54 09.4
iLgl 13 08 58
micr sec
Mx E 0.3 6
Mx N 1.1 6
Mx Z 0.9 7
Ki iP 12 53 58.7 C
micr sec
Mx E 0.7 8
Mx N 1.1 9
Um iP 12 53 50.0
Ud iP 12 54 23.0
Sinkiang, China (h = N).

" 1 Up iP 13 13 34.6
i 13 13 38.7
Ki iP 13 13 23.8
i 13 13 26.6
Sk iP 13 13 51.1
Um iP 13 13 27.4
Ud iP 13 13 47.0
i 13 13 49.9
De iP 13 13 53.2
Burma-China (h = N).

" 1 Up iP 16 50 27.2
i 16 50 31.1
Ki iP 16 50 16.8
i 16 50 21.3
Ud iP 16 50 39.9
Yunnan, China.

" 1 Ki iP 16 52 54.7
Um iP 16 52 50.4

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

1973						
June	1	Ud	iPKP1		20 18 41.5	
		De	iPKP1		20 18 52.4 D	
		Fiji Islands (h = 610 km).				
"	1	Um	iP		21 36 40.4	
		Ud	iP		21 36 42.0	
		De	iP		21 36 24.0	
"	2	Sk	eP		08 39 25	
		Sinkiang, China.				
"	2	Up	iSgl		12 31 11.9	
		Ki	iSgl		12 28 16.8	
		Um	iSgl		12 29 10.3	
			iRg		12 29 46.8	
		Northwest USSR-Finland border region.				
		Explosion.				
"	2	Ki	iP		13 50 30.9	
		Ud	iP		13 50 04.6	
			i		13 50 09.0	
		De	iP		13 49 52.9	
		Iran (h = N).				
"	2	Sk	eP		15 14 04	
		Ud	iP		15 14 19.5	
"	2	Ki	iP		18 30 34.6	
		Sinkiang, China.				
"	2	Up	iP		20 15 21.7	
		Ud	iP		20 15 31.6	
		Greece.				
"	2	Up	iP		20 18 54.4	
			ipP		20 19 01.1	
		Ki	iP		20 18 54.9	
			ipP		20 19 01.4	
					micr	sec
			Mx	E	1.1	17
			Mx	N	0.9	20
		Sk	iP		20 18 38.1	
			ipP		20 18 44.0	
		Um	iP		20 18 58.2	
			ipP		20 19 05.3	
			iS		20 28 24	
		Ud	iP		20 18 42.2	
			ipP		20 18 49.1	
		De	iP		20 18 45.6	
		Dominican Republic.				
		h = 25 km (Up,Ki,Sk,Um,Ud).				
"	3	Up	iP		00 04 51.1 C	
			ipP		00 04 58.8	
			iS		00 11 03	
			iLgl		00 19 00	
		(cont.)				
1973						
June	3	(cont.)				
		Up			micr	sec
			P	Z'	0.3	1.0
			pP	Z'	1.2	1.2
			Mx	E	9.3	15
			Mx	N	7.8	10
			Mx	Z	14	13
		Ki	iP		00 04 38.2 D	
			ipP		00 04 45.3	
			iS		00 10 40	
					micr	sec
			P	Z'	0.2	1.0
			pP	Z'	1.4	2.0
			Mx	E	6.8	13
			Mx	N	5.3	12
		Sk	iP		00 05 07.6 C	
			ipP		00 05 14.8	
		Um	iP		00 04 38.6 D	
			ipP		00 04 45.9	
			iS		00 10 42	
		Ud	iP		00 05 07.4 C	
			ipP		00 05 15.3	
		De	iP		00 05 11.2 C	
			ipP		00 05 18.9	
		Sinkiang, China.				
		h = 30 km (Up,Ki,Sk,Um,Ud,De).				
		m = 6.1, M = 6.0 (Up,Ki).				
"	3	Up	iPKP2		00 10 34.4	
					micr	sec
			PKP2	Z'	0.1	1.0
		Ki	iPKP2		00 10 27.5	
					micr	sec
			PKP2	Z'	0.2	1.0
		Um	iPKP2		00 10 27.9	
		Ud	iPKP2		00 10 42.1	
		De	iPKP2		00 10 46.2	
"	3	Up	iSgl		10 53 52.9	
		Ki	iPn		10 49 43.6	
			iSn		10 50 42.9	
			iS*		10 51 02.8	
		Sk	iSn		10 52 39.2	
			iSgl		10 53 30.0	
		Um	iSn		10 51 21.8	
			iSgl		10 51 55.7	
			iSg2		10 52 08.2	
		Ud	iSgl		10 54 31.7	
		Northwest USSR.				
		Explosion.				
"	3	Ud	iPKP1		14 28 18.8	
		Tonga-Kermadec Islands (h = 540 km).				
"	3	Ki	iP		15 18 19.8	
"	3	Um	iP		16 21 01.7	

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

1973				
June	4	Ki	iP	00 30 36.1
		Sk	iP	00 31 10.3
		Um	iP	00 30 55.4
		Ud	iP	00 31 25.2
		Japan (h = 60 km).		
"	4	Up	iP	02 53 34.7
		Ki	iP	02 52 40.7
		Ud	iP	02 53 35.5
		Aleutian Islands (h = 20 km).		
"	4	Um	iP	02 54 47.0
		Ud	iP	02 55 14.9
		Japan (h = 60 km).		
"	4	Up	ePKP1	09 42 03
		Ki	iPKP	09 41 53.9
		Um	ePKP	09 41 57
			iSKP1	09 44 44.9
		Ud	iPKP1	09 42 05.7
			iSKP1	09 44 57.4
		Tonga-Kermadec Islands (h = 550 km).		
"	4	Ki	i	10 09 35.1
			i(Sgl)	10 10 13.9
		Ud	i	10 11 06.2
"	4	Up	iP	10 10 26.4
		Sk	iP	10 10 32.8
		Ud	eP	10 10 33
		Mindanao (h = 80 km).		
"	4	De	eP	11 06 49
"	4	Up	iSgl	11 45 41.3
		Um	eSgl	11 46 06
		Ud	iSgl	11 46 46.0
		De	iSgl	11 47 04.7
		Esthonia. Explosion.		
"	4	Ki	e	13 22 16
		Sk	i	13 21 34.2
		Um	i(PP)	13 22 14.2
		De	iPKP	13 21 20.2
"	4	Um	iSgl	14 17 50.3
		De	eSgl	14 18 45
		Western USSR. Explosion.		
"	4	Up	iP	15 45 12.5
		Um	iP	15 44 47.0
		Ud	iP	15 45 20.0
		Sea of Japan (h = N).		

1973						
June	4	Ud	iPgl		16 06 08.7	
			iSgl		16 06 29.9	
			iRg		16 06 41.0	
		De	iSgl		16 07 26.7	
		Oslo Fjord region. By combination with Kongsberg reading.				
"	4	Up	iP		16 31 58.9	
		Ki	eP		16 30 53	
		Sk	iP		16 32 01.9	
"	4	Up	iP		16 32 15.2	
			i		16 32 23.8	
		Ki	iP		16 31 09.1	
		Ud	iP		16 32 16.8	
		Aleutian Islands (h = 50 km).				
"	5	Up	iP		00 27 55.2	
		Ud	iP		00 27 48.9	
		North Atlantic Ocean (h = N).				
"	5	Ud	iP		01 28 31.3	
		De	iP		01 28 21.1	
		Pakistan (h = N).				
"	5	Up	iPKP		02 26 26.7	
		Ki	iPKP		02 26 12.7	
		Sk	iPKP		02 26 28.8	
		Um	iPKP		02 26 19.8	
		Ud	iPKP		02 26 29.9	
		De	iPKP		02 26 35.5	C
		New Hebrides Islands (h = 10 km).				
"	5	Up	iP		03 09 03.3	
		Ki	iP		03 08 10.2	
		Sk	e(P)		03 08 38	
		Um	iP		03 08 37.2	
		Ud	iP		03 09 02.2	C
		De	iP		03 09 25.9	
		Unimak Island (h = 15 km).				
"	5	Up	iPKP		03 31 39.3	
			i		03 31 52.6	
			iPP		03 33 56	
			iSKP1		03 35 07.4	
					micr	sec
			i	Z'	0.1	1.5
			Mx	E	2.6	22
			Mx	N	4.4	22
			Mx	Z	4.9	21
		Ki	iPKP		03 31 24.9	
			i		03 31 38.6	
		(cont.)				

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

1973
June 5 (cont.)
Ki micr sec
i Z' 0.1 1.2
Mx E 3.0 18
Mx N 5.1 21
Mx Z 4.6 22
Sk iPKP 03 31 36.6
i 03 31 49.5
iSKPl 03 35 00.8
Um iPKP 03 31 31.6
i 03 31 44.9
iPP 03 33 37
iSKPl 03 34 55.5
Ud iPKP 03 31 40.2
i 03 31 53.5
iSKPl 03 35 10.7
De iPKP 03 31 45.6
i 03 32 00.9
iSKPl 03 35 18.1
New Hebrides Islands
(h = 25 km).
M = 6.3 (Up,Ki).
PKP is followed by another,
larger phase after 13.6 sec
in average.

" 5 Up iP 05 38 15.5
Ud eP 05 38 36

" 5 Um iSgl 06 31 28.6
Ud iSgl 06 33 01.0
De eSgl 06 33 45
iSg2 06 33 56.5
Lake Ladoga.
Explosion.

" 5 Ki ePKP 07 54 42
Um iPKP 07 54 41.9
Ud iPKP 07 54 50.7
De iPKP 07 54 58.2
New Hebrides Islands
(h = 15 km).

" 5 Um iP 08 06 32.5

" 5 Ki iPKP 09 23 32.4
Um iPKP 09 23 39.1
Ud iPKP 09 23 48.6
De iPKP 09 23 55.1
New Hebrides Islands
(h = 20 km).

" 5 Up iP 10 46 48.0
Ki iP 10 46 16.2
Sk iP 10 46 44.4
Um iP 10 46 30.1
Ud iP 10 46 54.4
(cont.)

1973
June 5 (cont.)
De iP 10 47 06.7
Bonin Islands (h = 340 km).

" 5 Up iSgl 11 26 13.1
Sk iSgl 11 28 02.4
Um iSgl 11 26 36.3
Ud iSgl 11 27 22.5
De i 11 27 37.6
iSgl 11 27 50.8
Western USSR.
Explosion.

" 5 Up eSgl 11 56 53
Ud e 11 55 43
iSgl 11 56 00
Southwest Norway.
By combination with
Kongsberg readings.

" 5 Sk iP 12 44 34.4

" 5 Up iSgl 13 14 11.6
Ki iSgl 13 16 58.7
Um i 13 14 21.6
iSgl 13 14 58.0
Ud iSn 13 15 01.6
iSgl 13 15 27.2
De eSn 13 15 21
eSgl 13 15 57
Esthonia.
Explosion.

" 5 Up iP 13 41 33.4
Sk iP 13 41 38.0
Um iP 13 41 21.3
Ud iP 13 41 43.1 C
De eP 13 41 52
Formosa (h = N).

" 5 Up iSgl 13 41 53.5
Um eSgl 13 42 09
Western USSR.
Explosion.

" 5 Up eP 16 10 53

" 5 Up iP 17 11 48.5
Ki iP 17 11 14.7
Sk eP 17 11 23
Um iP 17 11 34.1
Ud iP 17 11 40.8
Nevada.
Underground explosion.

" 5 Ud iPKPl 17 35 13.0
De ePKPl 17 35 26

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

1973						
June	5	Ki	iSgl		18 06 01.9	
		Sk	ePgl		18 05 29	
			iSgl		18 06 07.5	
		Um	iSgl		18 06 30.3	
		Nordland, Norway, 66.3°N, 14.8°E. Origin time = 18 04 38. Explosion.				
"	5	Up	iP		18 08 17.5	
		Sk	e(P)		18 08 08	
		Ud	iP		18 07 59.3	
"	5	Up	iP		21 14 00.5	
		Ud	iP		21 13 47.1	
"	5	Up	iP		23 03 46.8	
		Um	iP		23 03 24.2	
		Ud	iP		23 03 53.9	
		Japan (h = 45 km).				
"	6	Ki	e(P)		02 15 34	
"	6	Ki	iP		02 23 21.1	
		Um	iP		02 23 09.1	
		Ud	iP		02 23 36.8	
		De	iP		02 23 39.8	
		Sinkiang, China (h = 20 km).				
"	6	Up	ePKP		03 20 06	
		New Hebrides Islands (h = 3 km).				
"	6	Ki	iP		07 31 47.5	
		Um	iP		07 32 13.1	
		Ud	iP		07 32 39.4	
		De	eP		07 33 04	
		Aleutian Islands (h = N).				
"	6	Up	iP		12 00 28.1	
		Ki	eP		11 59 46	
		Ud	iP		12 00 34.6	
		Japan (h = 60 km).				
"	6	Um	iSgl		12 31 49.2	
		Western USSR. Explosion.				
"	6	Up	i(P)		12 50 20.5	
		Ki	eP		12 49 51	
		Sk	iP		12 50 01.4	
		De	i(P)		12 50 56.6	
"	6	Up	iP		13 11 48.5	C
			iPP		13 14 30.6	
					micr	sec
			P	Z'	0.3	0.9
			PP	Z'	0.2	1.5
		(cont.)				

1973						
June	6	(cont.)				
		Ki	iP		13 11 13.9	C
			iPP		13 13 48.8	
					micr	sec
			P	Z'	0.3	1.0
			PP	Z'	0.1	1.5
			Mx	E	0.7	16
			Mx	N	0.5	14
			Mx	Z	0.7	14
		Sk	iP		13 11 22.2	C
		Um	iP		13 11 33.7	C
			i		13 11 40.7	
			iPP		13 14 10.1	
		Ud	iP		13 11 40.0	C
			iPP		13 14 15.3	
		De	iP		13 11 56.9	C
			iPP		13 14 37.3	
		Nevada. m = 6.4, M = 5.2 (Up,Ki). Underground explosion. PP is well defined but consistently early compared to P by JB tables.				
"	6	Up	iP		15 23 47.0	
"	6	Up	iP		15 58 39.7	C
			iPP		16 00 20.4	
					micr	sec
			P	Z'	0.1	0.8
		Ki	iP		15 58 48.6	
			ipP		15 59 38.3	
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP		15 59 05.6	
			iPP		16 00 54.1	
		Um	iP		15 58 38.1	
		Ud	iP		15 58 56.1	C
			ipP		15 59 49.1	
			iPP		16 00 38.2	
		De	iP		15 58 52.5	
			iPP		16 00 28.6	
		Hindu Kush. h = 245 km (Ki,Ud). m = 5.2 (Up,Ki).				
"	6	Up	iP		16 38 41.4	
		Ki	iP		16 37 50.4	
		Ud	iP		16 38 46.2	
		Kurile Islands.				
"	6	Ki	ePKP		18 20 16	
		New Hebrides Islands (h = 20 km).				
"	6	Ud	iPKP1		19 34 01.1	
		De	iPKP1		19 34 12.0	
"	6	Ki	iP		20 14 54.0	

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

1973					
June	6	Up	iP		21 15 25.8
					micr sec
			P	Z'	0.1 1.1
			Mx	N	0.7 8
			Mx	Z	0.9 9
		Ki	eP		21 16 51
		Sk	iP		21 16 09.6
			i		21 16 13.3
		Um	iP		21 16 09.1
			i		21 16 12.6
		Ud	iP		21 15 31.4
			i		21 15 32.9
			i		21 15 37.3
		De	iP		21 14 53.1
		Yugoslavia (h = 15 km).			
"	6	Up	ePKP		21 46 42
		Ki	iPKP		21 46 33.6
"	7	De	eP		00 11 13
		Crete (h = 60 km).			
"	7	Up	iPKP2		03 03 58.9
		Ki	iPKP2		03 03 49.7
		Sk	iPKP2		03 04 07.7
		Um	iPKP2		03 03 53.6
		Ud	iPKP2		03 04 09.2
		De	iPKP2		03 04 07.1
		Macquarie Islands (h = N).			
"	7	Up	iP		06 33 56.0
		Sk	eP		06 34 05
		De	iP		06 34 21.7
		Formosa (h = N).			
"	7	Um	iPKP1		08 53 00.9
		Ud	iPKP1		08 53 18.0
"	7	Up	iSgl		11 24 20.4
		Ud	iPgl		11 23 19.3
			iSgl		11 23 37.5
		De	iPgl		11 23 37.8
			iSgl		11 24 11.0
		Lake Vener, Sweden, 58.8°N, 12.7°E.			
		Origin time = 11 22 55.			
"	7	De	i(P)		12 27 06.1
"	7	De	eP		13 09 22
"	7	Up	iP		14 03 40.6
		Ki	iP		14 03 06.2
		Sk	iP		14 03 36.2
		Um	iP		14 03 21.1
		Ud	iP		14 03 47.5
		De	iP		14 03 58.8
		South of Japan (h = 60 km).			

1973					
June	7	De	iPKP		17 17 17.6
		Solomon Islands (h = 45 km).			
"	7	Ki	iPgl		18 18 24.8
			iSgl		18 19 01.9
		Sk	iSgl		18 19 08.0
		Um	iSn		18 19 14.9
			iSgl		18 19 29.0
		Ud	iSgl		18 20 56.1
		De	eSgl		18 22 50
		Nordland, Norway, 66.5°N, 14.4°E.			
		Origin time = 18 17 36.			
		Explosion.			
"	7	Up	iP		18 45 23.5
		Ki	iP		18 45 12.7
		Sk	iP		18 45 05.5
		Um	iP		18 45 20.6
		Ud	iP		18 45 13.7
		De	iP		18 45 19.6 C
		Mexico (h = 80 km).			
"	7	Up	iP		18 47 28.5
					micr sec
			Mx	E	10 19
			Mx	N	7.5 21
			Mx	Z	20 19
		Ki	iP		18 47 17.5
					micr sec
			Mx	E	16 16
			Mx	N	11 19
			Mx	Z	19 16
		Sk	iP		18 47 10.1
		Um	iP		18 47 24.5
		Ud	iP		18 47 18.3
		De	iP		18 47 24.3
		Guatemala (h = 70 km).			
		M = 6.4 (Up,Ki).			
"	7	Up	iPKP1		19 14 40.6
			iPKP		19 14 42.4
					micr sec
			PKP	Z'	0.1 1.0
		Ki	iPKP		19 14 33.4
		Sk	ePKP		19 14 38
		Um	i(PKP)		19 14 29.4
			iPKP		19 14 39.6
		Ud	iPKP1		19 14 42.0
		De	iPKP1		19 14 53.8 D
			ipPKP1		19 15 43.6
		Tonga-Kermadec Islands.			
		h = 200 km (De).			
"	7	Ki	eP		19 58 10
		Sk	eP		19 58 01
		Um	iP		19 58 16.9
		(cont.)			

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

```
1973
June   7   (cont.)
           Ud   iP          19 58 10.7
           De   iP          19 58 18.7
           Mexico (h = 100 km).

 "     7   Up   iPKPl       23 41 01.1
           Ud   iPKPl       23 41 04.2

 "     8   Up   iP          00 02 51.1
                i           00 02 57.3
                i           00 02 59.5
           Ki   e(P)        00 02 28
           Sk   e(P)        00 02 33
           Um   iP          00 02 34.4

 "     8   De   eP          00 34 44

 "     8   Up   iPKP        01 20 27.0
                eSKPl       01 23 52
                            micr  sec
                Mx      E   0.9   23
                Mx      N   1.2   22
                Mx      Z   1.4   21
           Ki   iPKP        01 20 11.4
                            micr  sec
                PKP     Z'  0.1   1.0
                Mx      E   0.9   20
                Mx      N   1.7   22
                Mx      Z   1.5   22
           Sk   ePKP        01 20 22
           Um   iPKP        01 20 17.8
           Ud   iPKP        01 20 26.8
                iSKPl       01 24 03.1
                i           01 24 05.7
           De   e(PKP)      01 20 24
                iPKP        01 20 34.3
                eSKPl       01 24 14
           New Hebrides Islands
           (h = 20 km).
           M = 5.7 (Up,Ki).

 "     8   Up   iP          06 21 50.2
           Ki   iP          06 21 27.5
           Um   iP          06 21 35.4
           Ud   iP          06 22 00.3
           Formosa (h = 40 km).

 "     8   Up   iP          10 36 10.9
           Ki   iP          10 35 32.6 C
           Sk   iP          10 36 05.6
           Um   iP          10 35 49.2 C
           Ud   iP          10 36 18.7
           De   iP          10 36 32.9 C
           Japan (h = 80 km).

 "     8   Ud   eP          11 52 34

1973
June   8   Up   iSgl        12 17 00.0
           Ki   iPn         12 12 52.9
                iSn         12 13 43.4
                iS*         12 14 05.2
           Sk   eSgl        12 16 22
           Um   iSgl        12 15 00.4
           Northwest USSR.
           Explosion.

 "     8   Up   iP          12 27 55.4

 "     8   Um   iSgl        12 45 50.1
           Western USSR.
           Explosion.

 "     8   Ki   iP          18 05 36.0
                            micr  sec
                Mx      E   0.7   13
                Mx      N   1.8   20
                Mx      Z   0.6   12
           Um   iP          18 05 20.3
           Ud   iP          18 05 24.7
           De   iP          18 05 13.3 C
           Iran (h = N).

 "     8   Up   iPKP        19 38 41.0 C
           Ki   iPKP        19 38 26.3
           Um   iPKP        19 38 33.1
           Ud   ePKP        19 38 43
           De   ePKP        19 38 48
           New Hebrides Islands
           (h = 10 km).

 "     8   Sk   iP          19 46 03.7

 "     8   Ki   ePKP        19 49 42
           Sk   ePKP        19 49 51
           New Hebrides Islands
           (h = 25 km).

 "     8   Up   i(Rg)       21 05 42.2
           Ud   i(Rg)       21 05 15.3

 "     8   Up   iP          21 58 07.7
           Ki   iP          21 58 33.9
                            micr  sec
                Mx      E   0.9   20
                Mx      N   2.1   20
                Mx      Z   0.5   13
           Ud   iP          21 58 22.8
           De   iP          21 58 10.2
           Iran (h = N).

 "     9   Up   iP          00 52 56

 "     9   Um   iP          01 10 41.9 C
           Guatemala (h = 80 km).
```

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

1973						
June	9	Up	iP		01 47 44.2 C	
					micr	sec
			P	Z'	0.1	1.2
			Mx	E	0.8	20
			Mx	N	0.9	20
			Mx	Z	1.4	21
		Ki	iP		01 46 50.0 C	
			i		01 48 03.2	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	1.2	18
			Mx	N	0.7	16
			Mx	Z	1.5	18
		Sk	iP		01 47 23.7	
		Um	iP		01 47 15.4	
			i		01 48 20.0	
		Ud	iP		01 47 47.8	
			i		01 48 37.9	
		De	iP		01 48 09.2	
			i		01 48 52.3	

Kamchatka (h = N).
m = 6.0, M = 5.1 (Up,Ki).
The second phase parallels PcP but is about 7-10 sec late.

"	9	Up	iP	03 54 17.0
		Ki	iP	03 53 30.8
		Sk	iP	03 54 05.6
		Um	iP	03 53 51.9
			ipP	03 54 02.1
		Ud	iP	03 54 22.7 D
			ipP	03 54 33.9
		De	eP	03 54 40

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

"	9	Up	iP2		04 27 14.8	
					micr	sec
			P2	Z'	0.1	1.0
			Mx	N	0.9	5
			Mx	Z	1.2	6
		Ki	iP1		04 27 04.3	
			iP2		04 27 06.2	
					micr	sec
			P2	Z'	0.1	1.0
			Mx	E	0.9	13
			Mx	N	0.8	12
			Mx	Z	0.8	12
		Sk	iP2		04 27 33.5	
		Um	iP2		04 27 03.8	
		Ud	iP1		04 27 29.1	
			iP2		04 27 31.1	
		De	eP2		04 27 34	

Sinkiang, China (h = N).
m = 5.5, M = 5.2 (Up,Ki).
A smaller phase (P1) precedes a larger one (P2) by about 2 sec.

1973				
June	9	Up	iSgl	04 55 14.9
		Ki	iPgl	04 52 34.9
			iSgl	04 53 12.0
		Sk	iS*	04 53 16.2
			iSgl	04 53 18.8
		Um	iPn	04 52 43.4
			iPgl	04 52 51.4
			iSn	04 53 25.9
			iSgl	04 53 40.4
		Ud	iSgl	04 55 07.5
		De	iSgl	04 57 01.8

Nordland, Norway,
66.5°N, 14.4°E.
Origin time = 04 51 46.
Explosion.

"	9	Ud	iPKP1	08 08 25.3
		De	iPKP1	08 08 36.8

"	9	Up	iP		08 27 32.4 C	
					micr	sec
			P	Z'	0.1	0.8
		Ki	iP		08 27 14.0 C	
		Sk	iP		08 27 44.3 C	
			i		08 27 48.2	
		Um	iP		08 27 17.9 C	
			i		08 27 21.9	
		Ud	iP		08 27 46.4 C	
		De	iP		08 27 53.7	
			i		08 27 57.9	

Kansu, China (h = N).

"	9	Up	iPKP		08 40 16.5	
			ipPKP		08 40 37.8	
			iPP		08 42 00.6	
			ipPP		08 42 21.5	
					micr	sec
			pPKP	Z'	0.3	1.5
			PP	Z'	0.3	1.5
			pPP	Z'	0.8	2.0
			Mx	E	4.5	23
			Mx	N	6.6	24
			Mx	Z	13	23
		Ki	iPKP		08 40 04.0	
			ipPKP		08 40 24.9	
			iPP		08 41 14.1	
			ipPP		08 41 33.3	
					micr	sec
			PKP	Z'	0.1	1.0
			PP	Z'	0.2	1.5
			Mx	E	7.7	20
			Mx	N	8.6	21
			Mx	Z	15	26
		Sk	iPKP		08 40 14.6	
			ipPKP		08 40 33.7	
		Um	iPKP		08 40 09.3	
			ipPKP		08 40 30.4	
			iPS		08 51 26	

(cont.)

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

1973
June 9 (cont.)
Ud iPKP 08 40 18.8
ipPKP 08 40 37.9
i(PP) 08 41 59.1
De iPKP 08 40 24.2
ipPKP 08 40 44.4
Solomon Islands.
h = 70 km (Up,Ki,Sk,Um,Ud, De).
m = 6.4, M = 6.4 (Up,Ki).
An alternative and perhaps more likely solution would be in terms of two shocks, about 20 sec apart, considering that the amplitudes of the later phases are larger.

" 9 Up iP 08 48 44.2
Ki iP 08 48 06.0
Um iP 08 48 22.8
Ud iP 08 48 52.0
Japan (h = 80 km).

" 9 Up iSgl 09 06 54.2
Um iSgl 09 06 23.9
De iSgl 09 08 40.8
Lake Ladoga.
Explosion.

" 9 Up iP 09 46 01.1

" 9 Up iP 14 27 15.4
Ki iP 14 26 53.7
Sk eP 14 27 20
Um iP 14 27 01.4
Ud iP 14 27 25.4
De iP 14 27 33.2
Luzon-Formosa (h = 190 km).

" 9 Up iPKP1 18 37 32.8
Ud iPKP1 18 37 35.9
De ePKP1 18 37 47

" 9 Ki iP 19 15 54.1 C
Ud iP 19 14 58.6
De iP 19 14 29.1
Dodecanese Islands (h = 60 km).

" 9 Up iP 20 43 42.3
Ki iP 20 44 20.9
Um iP 20 43 56.3
Ud iP 20 43 57.4 C
De iP 20 43 40.4
Iran (h = 30 km).

" 9 Up iP 20 46 10.3
(cont.)

1973
June 9 (cont.)
Ki iP 20 46 48.1
Sk iP 20 46 43.5
Um iP 20 46 24.5
Ud iP 20 46 25.3
De iP 20 46 08.4
Iran (h = N).

" 9 Up iP 22 08 45.6
ipP 22 08 54.5
Ki iP 22 08 45.1
ipP 22 08 54.2
micr sec
pP Z' 0.1 1.5
Mx N 0.9 22
Sk iP 22 09 02.6
ipP 22 09 10.4
Um iP 22 08 41.7
ipP 22 08 50.2
Ud iP 22 08 58.1
ipP 22 09 06.3
De iP 22 08 57.0
ipP 22 09 05.1
Andaman Islands.
h = 30 km (Up,Ki,Sk,Um,Ud, De).

" 9 Up iP 22 56 27.2 C
micr sec
P Z' 0.4 1.1
Ki iP 22 55 33.4 C
micr sec
P Z' 0.2 1.0
Sk iP 22 56 11.0
Um iP 22 55 58.3 C
Ud iP 22 56 30.9
De iP 22 56 52.2
Kamchatka (h = N).
m = 6.3 (Up,Ki).

" 10 Up iP 00 09 14.2
Ki eP 00 08 22
Um iP 00 08 46.7
Ud eP 00 09 18
De iP 00 09 39.6
Kamchatka (h = N).

" 10 Up iP 08 33 20.6

" 10 Ud iP 16 08 19.0
Celebes Sea (h = 330 km).

" 10 Up iP 16 16 20.3
iPP 16 17 57.5
Ki iP 16 16 21.2 C
i 16 16 26.9
micr sec
P Z' 0.1 0.8
(cont.)

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

```
1973
June  10   (cont.)
           Sk   eP          16 16 45
           Um   iP          16 16 14.8
           Ud   iP          16 16 36.8 C
                i           16 16 41.1
                iPP         16 18 20.8
           De   iP          16 16 35.9
           Sinkiang, China (h = N).

 "    10   Ud   iP          17 16 28.4
           Greece.

 "    10   Ki   iP          20 21 07.4
           Ud   iP          20 20 43.4
           De   eP          20 20 28
           Iran (h = N).

 "    11   Up   iPKP        00 00 29.7
           Ki   iPKP        00 00 45.7 C
           Sk   iPKP        00 00 32.6
           Um   iPKP        00 00 37.9
           Ud   ePKP        00 00 26
           South Sandwich Islands
           (h = N).

 "    11   Sk   iP          00 35 03.5
           Turkey (h = 25 km).

 "    11   Ki   i(P)        03 20 46.9
           Yugoslavia (h = 10 km).

 "    11   Up   iSg1        06 25 58.8
                iSg2        06 26 06.6
           Sk   iSg1        06 24 36.0
           Um   iSg1        06 26 27.2
                iSg2        06 26 36.3
           Ud   iSg1        06 25 00.2
           West coast of Norway,
           61.6°N, 4.3°E.
           Origin time = 06 22 28.
           By combination with Bergen
           and Kongsberg readings.

 "    11   Up   iP          08 52 29.3 C
                i           08 52 31.1
                iS          09 00 57
                            micr  sec
                P      Z'   0.8   1.3
                Mx     E    7.6   19
                Mx     N    15    20
                Mx     Z    16    20
           Ki   iP          08 51 35.8 C
                i           08 51 37.9
                            micr  sec
                P      Z'   0.7   1.0
                Mx     E    18    20
           (cont.)

1973
June  11   (cont.)
           Ki               micr  sec
                Mx     N    17    18
                Mx     Z    16    18
           Sk   iP          08 52 13.2 C
                i           08 52 20.1
           Um   iP          08 52 01.3 C
                i           08 52 03.0
                iS          09 00 05
           Ud   iP          08 52 33.1 C
                i           08 52 34.9
           De   iP          08 52 55.0 C
                i           08 52 57.0
           Kamchatka (h = 30 km).
           m = 6.6, M = 6.3 (Up,Ki).
           Double P, small and large,
           in average 1.9 sec apart.

 "    11   Up   iP          09 07 05.4
           Ud   eP          09 07 03

 "    11   Up   iP          10 27 23.1
                i1          10 27 30.9
                i2          10 27 35.8
           Ki   i1          10 27 11.1
                i2          10 27 18.2
           Um   iP          10 27 10.8
                i1          10 27 19.2
                i2          10 27 24.0
           Ud   iP          10 27 32.1
                i1          10 27 37.9
                i2          10 27 45.0
           De   i2          10 27 50.9
           Samar (h = 20 km).
           Besides P, two more phases
           are clearly recorded,
           especially the one marked
           i2.

 "    11   Um   iSg1        14 23 55.6
           Ud   iSg1        14 24 37.1
           De   eSg1        14 25 08.7
           Western USSR.
           Explosion.

 "    11   Ud   iP          19 05 25.3
           Caspian Sea.

 "    11   Up   iP          20 13 41.4
           Ki   iP          20 13 49.6 D
           Sk   iP          20 14 09.8
           Um   iP          20 13 39.4
           Ud   iP          20 13 57.6
           De   iP          20 13 55.1
           Afghanistan-USSR (h = 100 km).

 "    12   Um   iP          01 19 26.5
           (cont.)
```

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

```
1973
June  12   (cont.)
           Ud   iP          01 20 01.5
           Kamchatka (h = N).

 "    12   Ki   iP          03 46 27.5 C
           Sk   iP          03 47 06.2
           Ud   iP          03 47 25.3
           Kamchatka (h = N).

 "    12   Up   iP          06 54 27.4
                            micr  sec
                P        Z' 0.2   1.6
           Ki   iP          06 53 33.7
           Sk   iP          06 54 10.2
           Um   iP          06 53 59.6
           Ud   iP          06 54 31.3
           Kamchatka (h = N).

 "    12   Ud   i(P)        08 51 35.5

 "    12   Up   iP          11 07 23.7
           Ki   iP          11 08 30.9 C
           Sk   iP          11 08 03.0
           Um   iP          11 07 55.6
           Ud   iP          11 07 30.9
           De   iP          11 06 59.2
           Crete (h = 55 km).

 "    12   Up   iP          14 31 49.9 C
                            micr  sec
                P        Z' 0.7   1.4
                Mx       E  1.5   20
                Mx       N  1.8   20
                Mx       Z  1.6   20
           Ki   iP          14 30 55.9 C
                            micr  sec
                P        Z' 0.5   1.3
                Mx       E  2.3   19
                Mx       N  2.9   17
                Mx       Z  2.4   17
           Sk   iP          14 31 32.8 C
           Um   iP          14 31 21.6 C
           Ud   iP          14 31 52.9 C
                i(pP)       14 32 05.7
           De   iP          14 32 15.0 C
           Kamchatka (h = N).
           m = 6.5, M = 5.5 (Up,Ki).

 "    12   Up   i(PP)       15 37 44.6
           Ki   iP          15 34 45.2
           Um   iP          15 34 57.8
                i           15 35 07.6
           Ud   iP          15 35 36.4
                iPP         15 37 56.9
           Japan (h = 200 km).

 "    12   Up   iPKP1       19 23 13.5
           (cont.)

1973
June  12   (cont.)
           Ud   iPKP1       19 23 13.4
                i           19 23 16.3
           De   iPKP1       19 23 24.1
           Tonga-Kermadec Islands
           (h = 45 km).

 "    12   Sk   iP          23 24 36.6
           North Atlantic Ocean
           (h = N).

 "    13   Up   iP          00 31 26.3 C
                iPcP        00 31 54.1
                iPP         00 33 56.9
                            micr  sec
                P        Z' 0.5   1.1
           Ki   iP          00 30 38.8 C
                iPcP        00 31 24.3
                            micr  sec
                P        Z' 0.4   1.0
           Sk   iP          00 31 14.2
                iPP         00 33 37.7
           Um   iP          00 31 00.6 C
                iPP         00 33 17.1
           Ud   iP          00 31 31.9 C
                i           00 31 39.0
           De   iP          00 31 50.5 C
           Kurile Islands (h = 140 km).
           m = 6.3 (Up,Ki).

 "    13   Ud   iPKP1       06 41 07.2

 "    13   Ki   iPKP        07 00 36.7
           Ud   iPKP        07 00 47.0
           New Hebrides Islands
           (h = 40 km).

 "    13   Ki   iP          16 10 25.1
           Sk   iP          16 11 13.2
           Kamchatka.

 "    13   Ki   iP          18 55 51.4
           Pamir.

 "    14   Up   iPKP1       03 49 42.7
           Ki   iPKP        03 49 37.1
           Um   iPKP        03 49 38.4
           Ud   iPKP1       03 49 45.7
           De   iPKP1       03 49 57.6
           Fiji Islands (h = 590 km).

 "    14   Ki   ePg1        07 36 53
                iSn         07 37 31.2
           Northwest USSR-Norway border
           region.
           Explosion.
```

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

1973						
June	14	Ud	iP		09 53 13.3	
			i		09 53 16.4	
"	14	Up	iP		11 15 39.3	
			i		11 15 58.0	
			ipP		11 17 58.8	
					micr	sec
			P	Z'	0.2	1.0
			pP	Z'	0.1	1.2
		Ki	iP		11 15 28.3 C	
			ipP		11 17 49.3	
					micr	sec
			P	Z'	0.2	1.0
			pP	Z'	0.1	1.0
		Um	iP		11 15 31.5	
		Ud	iP		11 15 47.5	
		De	iP		11 15 50.0	
		Flores Sea.				
		h = 660 km (Up,Ki).				
		m = 6.5 (Up,Ki).				
"	14	Ki	iP		12 54 29.7	
		Ud	iP		12 55 45.3	
		Arctic Ocean (h = N).				
"	14	Up	iSgl		16 11 57.6	
		Ki	iPgl		16 09 12.4	
			iSgl		16 09 50.1	
		Sk	iSgl		16 09 53.7	
		Um	iPgl		16 09 26.4	
			iSn		16 10 02.0	
			iSgl		16 10 16.1	
		Ud	iSn		16 11 13.3	
			iSgl		16 11 45.7	
		Nordland, Norway,				
		66.4°N, 14.4°E.				
		Origin time = 16 08 24.				
		Explosion.				
"	14	Ud	iP		17 07 01.9	
		Afghanistan-USSR (h = 130 km).				
"	14	Up	iP		18 27 53.6 C	
					micr	sec
			P	Z'	0.1	0.8
		Ki	iP		18 28 02.4	
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP		18 28 20.0	
		Um	iP		18 27 52.2	
		Ud	iP		18 28 10.2 C	
			ipP		18 28 53.7	
			iPP		18 29 53.7	
		De	iP		18 28 06.8	
		Hindu Kush.				
		h = 210 km (Ud).				
		m = 5.4 (Up,Ki).				
1973						
June	14	Ki	iP		19 54 58.9	
		Arctic Ocean (h = N).				
"	14	Ud	iP		21 22 37.4	
		Luzon (h = 80 km).				
"	15	Up	iP		01 18 13.4 D	
		Ki	iP		01 17 57.6 D	
		Sk	iP		01 17 45.4	
		Um	iP		01 18 08.9	
		Maine, USA.				
"	15	Sk	iP		02 03 21.4	
"	15	De	iP		03 47 51.3	
"	15	Up	i(P)		03 51 59.3	
		Ki	i(P)		03 51 28.8	
		Mariana Islands (h = 15 km).				
"	15	Up	e(P)		08 33 24	
		Ki	e(P)		08 32 50	
		Um	i(P)		08 33 03.4	
"	15	De	i		11 14 51.6	
			i(Sgl)		11 15 11.7	
"	15	Up	iP		11 31 10.9 C	
		Ki	iP		11 30 17.1 C	
					micr	sec
			P	Z'	0.2	1.0
		Sk	iP		11 30 54.5	
		Um	iP		11 30 42.4 C	
		Ud	iP		11 31 14.3	
		De	iP		11 31 36.4	
		Kamchatka (h = N).				
"	15	Up	iP		11 31 17.1	
			iS		11 39 39	
					micr	sec
			P	Z'	1.6	1.3
			Mx	E	7.3	22
			Mx	N	9.4	21
			Mx	Z	11	23
		Ki	iP		11 30 22.8	
					micr	sec
			P	Z'	1.0	1.1
			Mx	E	11	19
			Mx	N	21	18
			Mx	Z	9.6	18
		Sk	iP		11 31 00.3	
		Um	iP		11 30 49.1	
			iS		11 38 51	
		Ud	iP		11 31 20.3	
		De	iP		11 31 43.8	
		Kamchatka (h = N).				
		m = 6.9, M = 6.2 (Up,Ki).				

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

```
1973
June  15   Up   i(P)         11 40 05.3
           Ki   iP           11 39 22.3 C
           Sk   iP           11 40 04.3

 "    15   Ki   iP           11 49 13.5
           Kamchatka (h = N).

 "    15   Ki   iP           11 56 29.2
           Sk   iP           11 57 07.0
           Kamchatka.

 "    15   Up   iP           11 56 38.6

 "    15   Ki   iP           12 05 57.0
           Sk   iP           12 06 33.5
           Kamchatka (h = N).

 "    15   Up   iP           12 21 59.3 C
                             micr  sec
                P         Z' 1.1   0.9
           Ki   iP           12 21 06.3 C
                ipP          12 21 19.8
                             micr  sec
                P         Z' 0.2   0.8
           Sk   iP           12 21 38.6 C
           Um   iP           12 21 32.5 C
           Ud   iP           12 22 00.1 C
           De   iP           12 22 22.1 C
           Aleutian Islands.
           h = 50 km (Ki).
           m = 6.5 (Up,Ki).

 "    15   Ki   iP           12 23 13.0

 "    15   Ki   iP           12 25 48.9

 "    15   Um   iSgl         12 56 42.7
           Western USSR.
           Explosion.

 "    15   Up   iP           13 27 21.7
                ipP          13 27 35.9
           Ki   iP           13 26 27.7 C
                ipP          13 26 38.9
                             micr  sec
                P         Z' 0.1   1.1
           Sk   iP           13 27 04.9
           Um   iP           13 26 53.4
                ipP          13 27 04.4
           Ud   iP           13 27 24.8
                ipP          13 27 40.0
           De   iP           13 27 47.7
                ipP          13 28 01.2
           Kamchatka.
           h = 50 km (Up,Ki,Um,Ud,De).

 "    15   Up   iP           13 49 19.9 C
           (cont.)

1973
June  15   (cont.)
           Up   iPcP         13 49 44.2
                             micr  sec
                P         Z' 0.3   0.8
           Ki   iP           13 48 27.0 C
                             micr  sec
                P         Z' 0.1   0.7
           Sk   iP           13 49 00.2
           Um   iP           13 48 53.4
           Ud   iP           13 49 20.9 C
           De   iP           13 49 42.6 C
           Aleutian Islands (h = 50 km).
           m = 6.1 (Up,Ki).

 "    15   Up   i(P)         17 27 42.6
           Sk   i(P)         17 27 37.2
           Ud   eP           17 27 40
           De   iP           17 27 54.7
           Kamchatka.

 "    15   Up   iP           19 30 28.8
           Ki   iP           19 29 50.0
           Sk   iP           19 30 01.8
           Um   iP           19 30 11.5 D
           Ud   iP           19 30 22.5 D
           California (h = N).

 "    15   Ud   iP           20 19 31.5
           Northeast Siberia.

 "    15   Up   iP           21 06 59.8 C
           Ki   iP           21 06 05.9
           Sk   iP           21 06 42.6
           Um   iP           21 06 31.8
           Ud   iP           21 07 02.9
           Kamchatka (h = 35 km).

 "    15   Up   iP           21 20 06.3 C
                             micr  sec
                P         Z' 0.8   1.3
                Mx        E  1.5   20
                Mx        N  2.0   22
                Mx        Z  1.9   20
           Ki   iP           21 19 12.4 C
                i            21 19 17.4
                             micr  sec
                P         Z' 0.4   0.9
                Mx        E  2.0   19
                Mx        N  2.9   17
                Mx        Z  1.9   18
           Sk   iP           21 19 49.0 C
                ipP          21 19 58.9
           Um   iP           21 19 38.1 C
           Ud   iP           21 20 10.1 C
           De   iP           21 20 31.3 C
                ipP          21 20 41.0
           Kamchatka.
           (cont.)
```

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

1973						
June	15	(cont.)				
		h = 35 km (Sk,De).				
		m = 6.6, M = 5.5 (Up,Ki).				
"	15	Up	Mx		23 17	
					micr	sec
			Mx	E	1.0	21
			Mx	N	1.4	20
			Mx	Z	1.2	18
		Ki	Mx		23 18	
					micr	sec
			Mx	E	1.1	20
			Mx	N	1.2	18
			Mx	Z	0.8	18
		Balleny Islands (h = N).				
		M = 6.0 (Up,Ki).				
"	15	Up	iPKP1		23 24 22.5	
					micr	sec
			PKP1	Z'	1.0	1.0
		Ki	iPKP		23 24 05.6	
			i		23 24 10.6	
		Sk	iPKP		23 24 15.0	
		Um	iPKP		23 24 10.3	
		Ud	iPKP1		23 24 23.8	
			i(SKP1)		23 27 43.3	
		De	iPKP1		23 24 34.4	
			iPKP2		23 24 38.0	
		Tonga-Kermadec Islands				
		(h = 90 km).				
		PKP1 (Up,Ud) exhibit small				
		C + large D.				
"	16	Up	iP		00 14 12.6	
		Um	iP		00 14 23.1	
"	16	Up	iP		01 05 35.1	
		Ki	iP		01 04 50.5	
		Um	iP		01 05 10.1	
		Ud	iP		01 05 41.2 C	
		Japan (h = 55 km).				
"	16	Up	iP		01 47 49.0	
		Ki	iP		01 47 04.9	
		Um	iP		01 47 24.4	
		Ud	iP		01 47 55.4	
		Japan (h = 70 km).				
"	16	Up	iP		03 27 01.5	
		Um	iP		03 26 39.9	
"	16	Ud	iP		04 19 51.3	
"	16	Up	iP		05 18 45.8	
"	16	Up	iP		07 31 59.0 C	
		(cont.)				

1973						
June	16	(cont.)				
		Up			micr	sec
			P	Z'	0.1	0.6
			Mx	E	0.8	16
			Mx	N	0.9	17
			Mx	Z	0.9	13
		Ki	iP		07 31 41.6 C	
					micr	sec
			P	Z'	0.1	1.2
			Mx	E	0.9	13
			Mx	N	0.5	13
			Mx	Z	0.6	12
		Sk	iP		07 32 10.7 C	
		Um	iP		07 31 44.7 C	
		Ud	iP		07 32 13.0 C	
			i		07 32 16.8	
		De	iP		07 32 19.2 C	
		Tsinghai, China (h = N).				
		m = 5.8, M = 5.1 (Up,Ki).				
"	16	Ki	iP		09 05 21.1	
		Caucasus.				
"	16	Ki	iPn		12 19 01.7	
			iSn		12 19 50.0	
			iSgl		12 20 07.3	
		Um	ePn		12 19 39	
			iSgl		12 21 33.7	
		Northwest USSR-Norway border				
		region.				
		Explosion.				
"	16	Up	iP		12 21 00.7	
					micr	sec
			Mx	E	0.8	14
			Mx	N	0.6	13
			Mx	Z	1.5	14
		Ki			micr	sec
			Mx	E	1.0	14
			Mx	N	0.8	14
			Mx	Z	1.4	17
		Sk	iP		12 20 59.1	
			i		12 21 13.6	
		Um	iP		12 20 34.5	
			i		12 20 49.1	
		Ud	iP		12 21 13.4	
			i		12 21 27.3	
		De	iP		12 21 30.9	
			i		12 21 43.1	
		Lake Baikal (h = N).				
		M = 5.0 (Up,Ki).				
		P is followed by another				
		phase after in average				
		13.8 sec.				
"	16	Up	iP		14 55 04.8	
			iS		15 04 23	
		(cont.)				

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

```
1973
June  16   (cont.)
           Up              micr  sec
                P      Z'  0.3   1.1
                Mx     E   0.9   18
                Mx     N   0.7   15
                Mx     Z   1.1   16
           Ki   iP         14 54 23.2
                iS         15 03 04
                           micr  sec
                P      Z'  0.4   1.5
                Mx     E   1.0   16
                Mx     N   1.2   18
                Mx     Z   1.4   17
           Sk   iP         14 54 37.0
           Um   iP         14 54 45.6
                iS         15 03 44
           Ud   iP         14 54 58.2
           De   iP         14 55 17.3
           Oregon (h = N).
           m = 6.4, M = 5.3 (Up,Ki).

 "    16   Ud   iP         15 19 00.1
           Banda Sea (h = 120 km).

 "    16   Up   iP         16 28 15.0
           Ki   iP         16 27 21.1
           Um   iP         16 27 48.1
           Ud   iP         16 28 15.4
           De   eP         16 28 37
           Aleutian Islands (h = 50 km).

 "    16   Up   iPKP       16 35 34.0
           Um   iPKP       16 35 14.5
           Ud   iPKP       16 35 27.9
           De   iPKP       16 35 32.1

 "    16   Um   iP         16 52 22.1
           Kashmir.

 "    16   Ki   iP         18 44 59.7
           Sk   eP         18 45 37
           Um   iP         18 45 25.2
           Ud   iP         18 45 57.1
           De   eP         18 46 19
           Kamchatka (h = 45 km).

 "    16   Up   iP         19 59 56.2
                ipP        20 00 08.3
           Ki   iP         19 59 02.4
                ipP        19 59 15.0
           Sk   iP         19 59 40.3
           Um   iP         19 59 28.0
                ipP        19 59 40.5
           Ud   iP         20 00 01.2
           De   iP         20 00 21.6
           Kamchatka.
           h = 45 km (Up,Ki,Um).

1973
June  16   Ud   iPKPl      20 13 15.7

 "    16   Up   iP         20 38 45.9
           Ki   iP         20 38 07.6
           Sk   iP         20 38 40.6
           Um   iP         20 38 24.3
           Ud   iP         20 38 53.2
           Japan (h = 80 km).

 "    16   Up   iP         20 44 35.0
                ipP        20 44 47.5
           Ki   iP         20 43 41.4
                ipP        20 43 53.5
           Sk   iP         20 44 17.9
                ipP        20 44 30.6
           Um   iP         20 44 06.5
                ipP        20 44 18.9
                isP        20 44 26.7
           Ud   iP         20 44 38.8
                ipP        20 44 50.8
           De   iP         20 45 00.4
           Kamchatka.
           h = 45 km (Up,Ki,Sk,Um,Ud).

 "    16   Up   iP         22 46 43.9 C
           Ki   iP         22 46 33.5
                i          22 46 35.4
           Sk   iP         22 47 02.1
           Um   iP         22 46 33.0
           Ud   iP         22 47 00.1 C
                i          22 47 19.8
           Sinkiang, China (h = N).

 "    16   Up   iPKP       23 25 17.9
                ipPKP      23 25 30.2
           Ki   iPKP       23 25 32.9
                ipPKP      23 25 44.9
                           micr  sec
                PKP    Z'  0.2   1.5
           Sk   iPKP       23 25 23.4
                iPKKP      23 35 07.1
           Um   iPKP       23 25 26.1
                ipPKP      23 25 38.1
           Ud   iPKP       23 25 16.0
                iPKKP      23 35 26.0
           South Sandwich Islands.
           h = 45 km (Up,Ki,Um).

 "    16   Up              micr  sec
                Mx     E   0.9   24
                Mx     N   0.7   16
                Mx     Z   1.2   22
           Ki   iP         23 47 15.0
                           micr  sec
                Mx     E   0.7   13
                Mx     N   1.5   18
                Mx     Z   1.2   14
           (cont.)
```

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

1973					
June	16	(cont.)			
		Revilla Gigedo Islands (h = N).			
		M = 5.5 (Up,Ki).			
"	17	Ki	iP		00 26 09.4
		Sk	eP		00 26 36
		Um	iP		00 26 21.7
"	17	Ki	eP		00 29 44
		Sk	e(P)		00 29 26
		Um	eP		00 29 19
		Ud	iP		00 29 20.9
"	17	Up	iP		04 06 02.2 C
			iS		04 15 00
					micr sec
			P	Z'	4.5 1.0
			Mx	E	690 20
			Mx	N	510 19
			Mx	Z	540 19
		Ki	iP		04 05 16.8 C
			ipP		04 05 32.0
					micr sec
			P	Z'	4.6 2.5
			pP	Z'	4.5 1.0
			Mx	E	560 20
			Mx	N	890 22
			Mx	Z	850 22
		Sk	iP		04 05 52.9 C
			iP'P'		04 34 09.4
			i		04 34 36.5
		Um	iP		04 05 37.7 C
			iP'P'		04 34 24.9
		Ud	iP		04 06 09.0 C
			iP'P'		04 34 07.2
		De	iP		04 06 26.1 C
		Japan.			
		h = 55 km (Ki).			
		m = 7.5, M = 8.0 (Up,Ki).			
"	17	Up	iP		04 20 16.3 C
					micr sec
			P	Z'	0.7 1.0
		Ki	iP		04 19 32.0 C
					micr sec
			P	Z'	0.3 1.0
		Sk	iP		04 20 06.9 C
		Um	iP		04 19 52.0 C
		Ud	iP		04 20 22.9 C
		De	iP		04 20 40.2 C
		Kurile Islands (h = N).			
		m = 6.7 (Up,Ki).			
"	17	Up	iP		04 23 26.2
		Ki	iP		04 22 41.5
		Um	iP		04 23 01.9
		Japan.			
		Origin time = 04 12 22.			

1973					
June	17	Up	iP		04 30 37.4 C
					micr sec
			P	Z'	0.1 0.9
		Ki	iP		04 29 53.7 C
		Sk	iP		04 30 28.9 C
		Um	iP		04 30 13.4 C
		Ud	iP		04 30 44.3 C
		De	iP		04 31 01.2 C
		Japan (h = 35 km).			
"	17	Up	iP		04 59 07.9 C
		Um	iP		04 58 41.9
		Ud	iP		04 59 14.7
		Japan.			
		Origin time = 04 48 03.			
"	17	Up	iP		05 02 04.7
		Um	iP		05 01 41.0 C
		Ud	iP		05 02 11.9
		Japan.			
		Origin time = 04 51 01.			
"	17	Up	iP		05 03 21.6
		Ki	iP		05 02 37.2
		Um	iP		05 02 56.3
		Ud	iP		05 03 27.9
		Japan.			
		Origin time = 04 52 17.			
"	17	Up	iP		05 12 55.5
		Ud	iP		05 13 00.2
		Japan.			
		Origin time = 05 01 50.			
"	17	Up	iSgl		05 16 57.8
		Ki	iPn		05 12 44.1
			iSn		05 13 41.8
			iSgl		05 14 03.8
		Sk	iSgl		05 16 27.0
			i		05 16 35.2
		Um	iSn		05 14 22.0
			iSgl		05 14 57.4
		Ud	iSgl		05 17 30.9
		Northwest USSR.			
		Explosion?			
"	17	Up	iP		05 19 04.8
		Um	iP		05 18 41.4
		Ud	iP		05 19 12.2
		Japan.			
		Origin time = 05 08 01.			
"	17	Up	iP		05 21 00.6
					micr sec
			P	Z'	0.1 0.9
		Ki	iP		05 20 15.7 C
		(cont.)			

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

```
1973
June  17   (cont.)
           Sk   iP          05 20 51.1
           Um   iP          05 20 36.0 C
           Ud   iP          05 21 07.2
                i           05 21 13.4
           De   iP          05 21 24.5
           Kurile Islands (h = 30 km).

 "    17   Up   iP          05 23 13.0
                            micr  sec
                P       Z'  0.1   1.0
           Ki   iP          05 22 29.0
                            micr  sec
                P       Z'  0.1   1.0
           Sk   iP          05 23 03.9 C
           Um   iP          05 22 48.5 C
           Ud   iP          05 23 19.3 C
           De   iP          05 23 40.1
           Japan (h = 45 km).
           m = 5.9 (Up,Ki).

 "    17   Ud   eP          05 32 14

 "    17   Up   iP          05 37 29.7
           Ud   iP          05 37 36.0
           Japan.
           Origin time = 05 26 25.

 "    17   Um   iP          05 49 15.8
           Ud   iP          05 49 09.6

 "    17   Up   iP          05 50 35.9
           Um   iP          05 50 10.4 C
           Ud   iP          05 50 42.0
           Japan.
           Origin time = 05 39 31.

 "    17   Up   iP          06 03 12.8 D
                            micr  sec
                P       Z'  0.1   0.8
           Ki   iP          06 02 28.1
           Sk   iP          06 03 03.3
           Um   iP          06 02 47.2
           Ud   iP          06 03 19.1
           De   iP          06 03 36.2
           Kurile Islands (h = 45 km).

 "    17   Up   iP          06 07 06.5
           Ud   iP          06 07 11.6
           (Japan).

 "    17   Ki   iP          06 18 40.2
           Um   iP          06 19 00.4
           Ud   iP          06 19 31.6
           Japan (h = N).

 "    17   Ud   iP          06 38 10.2

1973
June  17   Up   iP          06 40 30.9
           Ki   iP          06 39 46.6
           Sk   iP          06 40 20.5
           Um   iP          06 40 05.6
           Ud   iP          06 40 36.4
           De   iP          06 40 55.7
           Kurile Islands (h = N).

 "    17   Ud   iP          06 52 52.2

 "    17   Ki   iP          06 53 13.4
           Ud   iP          06 54 13.3

 "    17   Up   iP          06 54 19.0
           Um   iP          06 53 58.3
           Ud   iP          06 54 25.4
           Japan.
           Origin time = 06 43 16.

 "    17   Up   iP          06 58 51.8
           Ki   iP          06 58 07.4
           Sk   iP          06 58 43.1
           Um   iP          06 58 27.4
           Ud   iP          06 58 58.6
           Kurile Islands (h = N).

 "    17   Sk   eP          07 04 10
                i           07 04 53.7

 "    17   Um   iP          07 11 08.1
           Ud   iP          07 11 39.0
           Japan (h = N).

 "    17   Um   iP          07 11 55.3

 "    17   Ki   iP          07 46 13.4
           Ud   eP          07 47 05
           Japan.
           Origin time = 07 35 54.

 "    17   Ud   iP          07 51 02.5

 "    17   Up   iP          07 53 56.9
                ipP         07 54 09.9
                            micr  sec
                P       Z'  0.1   1.2
           Ki   iP          07 53 03.0 C
                ipP         07 53 15.6
                            micr  sec
                P       Z'  0.1   1.0
           Sk   iP          07 53 40.7
                ipP         07 53 52.1
           Ud   iP          07 54 00.2 C
                ipP         07 54 12.7
           De   iP          07 54 22.4
           Kamchatka.
           h = 45 km (Up,Ki,Sk,Ud).
           m = 5.7 (Up,Ki).
```

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

1973
June 17 Up iP 07 57 44.0
Um iP 07 57 19.1
Ud iP 07 57 50.2
Japan (h = N).

" 17 Up iP 08 08 51.8
Ud iP 08 08 58.4
Kurile Islands.
Origin time = 07 57 52.

" 17 Up iP 08 27 47.2

" 17 Up iP 08 28 51.7
micr sec
P Z' 0.1 1.0
Ki iP 08 28 06.7
Sk iP 08 28 41.9
Um iP 08 28 27.0 C
Ud iP 08 28 57.7 C
De iP 08 29 14.4
Kurile Islands (h = 40 km).

" 17 Up iP 08 51 53.5
Um iP 08 51 28.8
Ud iP 08 52 00.1
Japan (h = N).

" 17 Up iP 08 59 24.2
ipP 08 59 33.5
micr sec
P Z' 0.1 1.0
Ki iP 08 58 38.9 C
ipP 08 58 48.5
Sk iP 08 59 13.8
Um iP 08 58 58.9
ipP 08 59 08.9
Ud iP 08 59 29.9 C
De iP 08 59 47.1
ipP 08 59 57.0
Japan.
h = 35 km (Up,Ki,Um,De).

" 17 Up iP 09 01 00.9
Ki iP 09 00 15.5
Um ipP 09 00 47.8
Ud iP 09 01 07.3
ipP 09 01 19.2
Japan.
Origin time = 08 49 57.
h = 45 km (Ud).

" 17 Up iP 09 06 39.3
Ki iP 09 05 52.7
Sk eP 09 06 28
Um iP 09 06 11.5
ipP 09 06 21.3
Ud eP 09 06 41
(cont.)

1973
June 17 (cont.)
Ud ipP 09 06 51.3
Japan.
h = 40 km (Um,Ud).

" 17 Ud iP 09 17 30.1

" 17 Ud iP 09 26 38.4

" 17 Up iP 09 29 23.1
ipP 09 29 33.0
Ki iP 09 28 38.3 C
Sk iP 09 29 13.4
Um iP 09 28 58.2
Ud iP 09 29 29.4
ipP 09 29 39.5
De iP 09 29 47.3
Kurile Islands.
h = 35 km (Up,Ud).

" 17 Ud iP 09 40 00.6
Japan.

" 17 Up iP 10 17 09.4
Ud iP 10 17 14.8
Japan.
Origin time = 10 06 04.

" 17 Up iP 10 35 17.4
ipP 10 35 29.5
Ki iP 10 34 35.0
ipP 10 34 45.4
Um iP 10 34 53.6
Ud iP 10 35 24.2
ipP 10 35 35.5
Japan.
h = 40 km (Up,Ki,Ud).

" 17 Up iP 11 10 24.1
ipP 11 10 35.3
Ki iP 11 09 39.2 C
Um iP 11 09 59.3
Ud iP 11 10 30.3
ipP 11 10 40.7
De iP 11 10 47.4
Kurile Islands.
h = 40 km (Up,Ud).

" 17 Ud iP 11 11 42.1

" 17 Ki iP 11 30 13.0
Um iP 11 30 27.5
Ud iP 11 31 02.4
Japan (h = N).

" 17 Up iP 11 43 15.0
Ki iP 11 42 47.0
(cont.)

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

1973
June 17 (cont.)
Sk iP 11 43 15.9
Um iP 11 43 00.3
Ud iP 11 43 23.8
Ryukyu Islands (h = N).

" 17 Up iP 11 46 35.5
Ki iP 11 45 50.6
Sk iP 11 46 27.5
Um iP 11 46 10.6
Ud iP 11 46 41.6
De iP 11 47 01.5
Kurile Islands (h = N).

" 17 Up iP 11 56 34.7
Ki iP 11 55 43.5
Um iP 11 56 02.9
Ud iP 11 56 34.0
De iP 11 56 45.8
Japan.
Origin time = 11 45 24.

" 17 Ki iP 11 56 44.3
Um iP 11 56 49.0
Banda Sea (h = 150 km).

" 17 Um iP 11 57 32.0
Ud eP 11 58 04
Japan.
Origin time = 11 46 52.

" 17 Ud iP 12 00 14.4

" 17 Ud iP 12 21 53.7

" 17 Up iP 12 25 27.5 C
ipP 12 25 38.8
micr sec
P Z' 0.1 0.7
Ki iP 12 24 42.9
micr sec
P Z' 0.1 1.0
Sk iP 12 25 18.0 C
Um iP 12 25 02.4 C
Ud iP 12 25 33.6 C
ipP 12 25 45.5
De iP 12 25 50.9 C
ipP 12 26 03.7
Japan.
h = 45 km (Up,Ud,De).
m = 6.0 (Up,Ki).

" 17 Ud eP 12 30 25

" 17 Up iP 12 35 40.6 C
ipP 12 35 51.2
(cont.)

1973
June 17 (cont.)
Up micr sec
P Z' 0.1 0.7
Mx E 1.3 17
Mx N 1.8 15
Mx Z 2.0 17
Ki iP 12 34 56.1 C
ipP 12 35 05.8
micr sec
P Z' 0.2 1.1
Mx E 1.7 16
Mx N 2.2 16
Mx Z 3.1 17
Sk iP 12 35 31.2 C
Um iP 12 35 16.0 C
ipP 12 35 26.7
iS 12 44 03
Ud iP 12 35 47.0
ipP 12 35 57.3
De iP 12 36 04.1 C
Japan.
h = 40 km (Up,Ki,Um,Ud).
m = 6.1, M = 5.6 (Up,Ki).

" 17 Ud iP 12 47 11.4

" 17 Up iP 13 33 22.9 C
ipP 13 33 35.6
Ki iP 13 32 37.0
Um iP 13 32 56.8 C
Ud iP 13 33 27.5
Japan.
h = 45 km (Up).

" 17 Ud iP 13 39 11.3

" 17 Up iP 13 44 28.1 C
micr sec
P Z' 0.4 0.8
Mx E 1.7 18
Mx N 1.6 18
Mx Z 2.4 18
Ki iP 13 43 43.9
i 13 43 48.8
micr sec
P Z' 0.2 1.0
Mx E 4.1 20
Mx N 2.8 20
Mx Z 3.7 21
Sk iP 13 44 19.6
i 13 44 24.9
Um iP 13 44 04.1
i 13 44 08.3
iS 13 52 39
Ud iP 13 44 34.4 C
i 13 44 38.9
De iP 13 44 52.1 C
(cont.)

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

```
1973
June  17   (cont.)
           De   i              13 44 57.5
           Japan (h = 45 km).
           m = 6.4, M = 5.6 (Up,Ki).
           Probably two shocks, 4.8 sec
           apart.

 "    17   Up   iP             13 54 12.6 C
                ipP            13 54 23.9
                               micr  sec
                P        Z'    0.6   1.5
                Mx       E     1.3   17
                Mx       N     2.6   15
                Mx       Z     3.0   15
           Ki   iP             13 53 26.6
                ipP            13 53 37.7
                               micr  sec
                P        Z'    0.1   1.0
                Mx       E     3.7   16
                Mx       N     4.3   16
                Mx       Z     6.5   17
           Sk   iP             13 54 02.9 C
           Um   iP             13 53 48.0 C
                ipP            13 53 59.0
                i              13 54 11.6
           Ud   iP             13 54 18.9 C
           De   iP             13 54 36.1 C
           Kurile Islands.
           h = 40 km (Up,Ki,Um).
           m = 6.2, M = 5.8 (Up,Ki).

 "    17   Ud   iP             14 21 36.4

 "    17   Up   iP             14 35 16.5 C
                ipP            14 35 28.4
                               micr  sec
                P        Z'    0.1   1.0
           Ki   iP             14 34 31.9 C
                ipP            14 34 43.1
           Sk   iP             14 35 07.0
           Um   iP             14 34 52.0
           Ud   iP             14 35 23.1 C
                ipP            14 35 34.8
           De   iP             14 35 40.7
           Japan.
           h = 45 km (Up,Ki,Ud).

 "    17   Ki   iP             14 45 05.7
           De   eP             14 46 31

 "    17   Ud   iP             14 50 13.2

 "    17   Ud   eP             16 07 37

 "    17   Up   iP             16 09 14.2

 "    17   Um   iP             16 31 29.8
           (cont.)

1973
June  17   (cont.)
           Ud   iP             16 32 01.6
           Kurile Islands.
           Origin time = 16 20 56.

 "    17   Up   iP             16 40 50.8
           Sk   i(P)           16 40 34.8
           Ud   iP             16 40 57.7
           Japan.
           Origin time = 16 29 47.

 "    17   Up   iP             17 04 15.0 C
                ipP            17 04 30.0
                               micr  sec
                P        Z'    0.1   0.9
           Ki   iP             17 03 21.3 C
                               micr  sec
                P        Z'    0.1   0.8
           Sk   iP             17 03 54.8 C
           Um   iP             17 03 47.3 C
           Ud   iP             17 04 15.9
           De   iP             17 04 38.1 C
           Aleutian Islands.
           h = 55 km (Up).
           m = 5.8 (Up,Ki).

 "    17   Sk   eP             17 19 49

 "    17   Um   iP             17 42 42.0
           Ud   iP             17 43 00.7

 "    17   Ud   iP             17 59 38.4

 "    17   Ki   i(pP)          18 32 34.6
           Ud   i(pP)          18 33 22.5
           Japan (h = N).

 "    17   Up   iP             18 37 50.8

 "    17   Up   iP             19 06 43.0 C
                               micr  sec
                P        Z'    0.5   1.0
                Mx       E     2.4   16
                Mx       N     3.0   17
                Mx       Z     3.2   16
           Ki   iP             19 05 58.1 C
                ipP            19 06 12.4
                               micr  sec
                P        Z'    0.3   1.0
                Mx       E     3.0   19
                Mx       N     6.4   20
                Mx       Z     5.0   18
           Sk   iP             19 06 33.4 C
           Um   iP             19 06 17.8 C
           Ud   iP             19 06 48.5 C
                ipP            19 06 59.6
           De   iP             19 07 05.7 C
           (cont.)
```

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

1973

June	17	(cont.)				
		De	ipP		19 07 19.4	
		Kurile Islands.				
		h = 50 km (Ki,Ud,De).				
		m = 6.5, M = 5.8 (Up,Ki).				
"	17	Up	iP		19 10 24.3	
		Sk	iP		19 10 18.3	
		De	eP		19 10 53	
		Japan.				
		Origin time = 18 59 23.				
"	17	Up	iP		19 14 40.1	
					micr sec	
			P	Z'	0.1 1.0	
		Ki	iP		19 13 56.1	C
			ipP		19 14 06.8	
					micr sec	
			P	Z'	0.3 1.0	
		Sk	iP		19 14 31.7	
		Um	iP		19 14 16.0	
			ipP		19 14 26.4	
		Ud	iP		19 14 46.5	
		De	iP		19 15 03.8	
		Japan.				
		h = 40 km (Ki,Um).				
		m = 6.2 (Up,Ki).				
"	17	Up	eP		19 52 51	
"	17	Up	iP		20 49 00.9	C
			ipP		20 49 12.4	
			iS		20 57 59	
			eP'P'		21 17 04	
					micr sec	
			P	Z'	0.7 0.8	
			Mx	E	13 17	
			Mx	N	24 17	
			Mx	Z	30 17	
		Ki	iP		20 48 16.3	C
			ipP		20 48 29.3	
			iS		20 56 41	
			eP'P'		21 17 20	
					micr sec	
			P	Z'	1.6 1.4	
			Mx	E	25 19	
			Mx	N	24 16	
			Mx	Z	39 19	
		Sk	iP		20 48 51.4	C
			eP'P'		21 17 08	
		Um	iP		20 48 35.8	C
			ipP		20 48 50.8	
			iS		20 57 11	
			i(P'P')		21 17 05.2	
			iP'P'		21 17 16.8	
		Ud	iP		20 49 07.3	C
		(cont.)				

1973

June	17	(cont.)				
		Ud	ipP		20 49 18.3	
			iS		20 58 16.5	
			iP'P'		21 17 01.6	
		De	iP		20 49 24.1	C
			ipP		20 49 36.2	
			iS		20 58 49.2	
		Japan.				
		h = 45 km (Up,Ki,Um,Ud,De).				
		m = 6.9, M = 6.6 (Up,Ki).				
"	17	Up	iP		21 14 40.2	
			ipP		21 14 55.0	
		Ki	e(pP)		21 14 04	
		Sk	ipP		21 14 43.7	
		Um	iP		21 14 13.1	
			ipP		21 14 30.0	
		Ud	iP		21 14 45.2	
			ipP		21 15 01.6	
		De	ipP		21 15 15.5	
		Japan.				
		h = 60 km (Up,Um,Ud).				
"	17	Up	iP		21 34 10.0	
		Ki	eP		21 33 26	
		Um	iP		21 33 44.8	
		Ud	iP		21 34 17.2	
		Japan.				
		Origin time = 21 23 06.				
"	17	Up	iP		21 34 46.2	
		Ki	iP		21 34 02.1	
		Sk	eP		21 34 32	
		Um	iP		21 34 21.4	
		Ud	iP		21 34 52.0	
		Japan (h = N).				
"	17	Up	iP		21 37 14.4	C
					micr sec	
			P	Z'	0.1 0.8	
		Ki	iP		21 36 29.7	C
			ipP		21 36 46.4	
		Sk	iP		21 37 05.0	C
		Um	iP		21 36 49.6	C
			ipP		21 37 05.5	
		Ud	iP		21 37 20.8	C
			ipP		21 37 36.9	
		De	iP		21 37 37.6	C
		Japan.				
		h = 60 km (Ki,Um,Ud).				
"	17	Up	iP		22 26 34.0	
			ipP		22 26 45.7	
		Ki	iP		22 25 49.8	
			i		22 25 54.3	
		Sk	iP		22 26 21.3	
		(cont.)				

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

1973
June 17 (cont.)
Um iP 22 26 06.5
Ud iP 22 26 40.5
ipP 22 26 52.6
De iP 22 26 57.6
Japan.
h = 45 km (Up,Ud).

" 17 Ud iP 22 55 08.4

" 17 Ud iP 23 07 02.5

" 17 Um iP 23 48 26.7
Ud eP 23 49 12

" 18 Ud eP 01 16 55

" 18 Up iP 01 20 03.5
Ki iP 01 19 18.0
Um iP 01 19 39.1
Ud iP 01 20 09.9
ipP 01 20 21.3
Kurile Islands.
h = 40 km (Ud).

" 18 Ki eP 02 06 58
Um iP 02 07 16.4
Ud iP 02 07 47.3
Japan (h = 35 km).

" 18 Up iP 02 23 13.0
ipP 02 23 24.7
Ki iP 02 22 28.2 C
Sk iP 02 23 04.2
Um iP 02 22 48.5
Ud iP 02 23 19.3 C
ipP 02 23 30.9
Japan.
h = 45 km (Up,Ud).

" 18 Up iP 02 30 36.2
ipP 02 30 45.1
micr sec
Mx E 0.5 14
Mx N 0.7 16
Mx Z 0.9 17
Ki iP 02 29 52.2
ipP 02 30 00.7
micr sec
P Z' 0.1 1.3
Mx E 0.8 14
Mx N 0.7 15
Mx Z 1.7 17
Sk eP 02 30 29
ipP 02 30 37.3
Um iP 02 30 12.2
ipP 02 30 20.9
(cont.)

1973
June 18 (cont.)
Ud iP 02 30 42.9
ipP 02 30 51.5
De ipP 02 31 10.0
Japan.
h = 30 km (Up,Ki,Sk,Um,Ud).
M = 5.3 (Up,Ki).

" 18 Ud eP 02 46 13

" 18 Ud iPKP1 03 16 21.3
De iPKP1 03 16 31.0 C
Fiji Islands (h = 650 km).

" 18 Up iP 03 54 55.0

" 18 Ud iP 04 20 28.9

" 18 Up iP 04 34 04.9
Ki iP 04 33 19.5
ipP 04 33 31.9
Um iP 04 33 39.4
Ud iP 04 34 10.7 C
ipP 04 34 21.4
Kurile Islands.
h = 45 km (Ki,Ud).

" 18 Up iP 04 43 40.3
Ki iP 04 42 55.8
Sk eP 04 43 28
Ud iP 04 43 47.0
Japan (h = N).

" 18 Up iP 05 06 19.7
Um iP 05 05 56.8
ipP 05 06 08.8
Ud iP 05 06 27.6
Kurile Islands.
h = 45 km (Um).

" 18 Up iP 05 48 44.2 D
micr sec
P Z' 0.1 0.7
Mx E 1.5 16
Mx N 0.8 16
Mx Z 1.3 16
Ki iP 05 47 59.4
micr sec
P Z' 0.2 1.0
Mx E 1.2 16
Mx N 1.6 14
Mx Z 1.9 15
Sk iP 05 48 34.4
Um iP 05 48 19.0 D
Ud iP 05 48 50.0 D
ipP 05 49 03.2
De iP 05 49 06.6
(cont.)

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

1973
June 18 (cont.)
Japan.
h = 50 km (Ud).
m = 6.2, M = 5.5 (Up,Ki).

" 18 Um iP 06 59 38.5

" 18 Ud iP 08 32 04.2
Oregon (h = N).

" 18 Um iP 08 45 13.2
Ud iP 08 45 44.8
Japan.
Origin time = 08 34 33.

" 18 Um iP 10 09 19.9

" 18 Sk iP 10 10 00.7

" 18 Up iP 10 28 25.4
micr sec
P Z' 0.1 1.0
Ki iP 10 27 34.6
micr sec
P Z' 0.2 1.2
Sk iP 10 28 03.7
Um iP 10 28 01.8 D
i 10 28 08.5
Ud iP 10 28 25.9 D
De iP 10 28 48.7 D
South of Alaska (h = 15 km).
m = 6.1 (Up,Ki).

" 18 Up iP 11 47 42.7
Ki i(P) 11 47 05.1
Ud iP 11 47 49.1
Japan (h = N).

" 18 Ud iP 11 55 16.3

" 18 Sk e(P) 11 56 06
Ud iP 11 57 22.4

" 18 Ud eP 12 12 32
De iP 12 12 20.5

" 18 Ud iP 12 35 08.2

" 18 Ud iP 12 43 12.3

" 18 Up iPgl 12 59 47.8
iSgl 12 59 57.9
Ud iSgl 13 00 54.7
De iSn 13 01 19.1
iSgl 13 01 29.4
Off coast of Södermanland, Sweden.
Explosion?

1973
June 18 Up iP 13 07 11.1

" 18 Up iP 13 24 56.5
ipP 13 25 07.7
Ki iP 13 24 13.0
Um iP 13 24 31.4
ipP 13 24 42.5
Ud iP 13 25 03.1
ipP 13 25 13.7
De eP 13 25 19
Japan.
h = 40 km (Up,Um,Ud).

" 18 Ki iP 13 37 56.8
De eP 13 38 59

" 18 Up eP 13 41 39
Sk eP 13 41 24

" 18 Up iP 14 40 42.2
ipP 14 40 53.1
Ki iP 14 39 57.2
ipP 14 40 08.5
Sk iP 14 40 32.6
Um iP 14 40 17.8
ipP 14 40 29.4
Ud iP 14 40 48.3
ipP 14 40 58.6
Kurile Islands.
h = 40 km (Up,Ki,Um,Ud).

" 18 Up iP 14 42 43.5
ipP 14 42 54.1
Ki iP 14 41 58.3
ipP 14 42 09.6
Um iP 14 42 18.9
ipP 14 42 29.9
Ud iP 14 42 49.5 C
i 14 42 56.7
De iP 14 43 07.2
Kurile Islands.
h = 40 km (Up,Ki,Um).

" 18 Up iP 16 07 46.4
Ki i(P) 16 07 17.0
Um iP 16 07 28.5
i 16 07 37.9
Ud iP 16 07 54.2
De iP 16 08 06.1
Bonin Islands (h = 50 km).

" 18 Um iP 17 15 20.5
Ud iP 17 15 51.8
Japan.
Origin time = 17 04 41.

" 18 Ki iP 17 39 51.8

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

1973						
June 18	Up	iP		17 56 49.8 C		
		ipP		17 56 59.4		
		iS		18 05 53		
				micr	sec	
		P	Z'	0.1	0.9	
		pP	Z'	0.7	1.1	
		Mx	E	3.6	19	
		Mx	N	2.9	18	
		Mx	Z	3.6	18	
	Ki	iP		17 56 05.9 C		
		ipP		17 56 14.1		
		iS		18 04 33		
				micr	sec	
		P	Z'	0.2	1.0	
		pP	Z'	0.4	1.4	
		Mx	E	6.2	16	
		Mx	N	4.8	16	
		Mx	Z	4.4	17	
	Sk	iP		17 56 41.0		
		ipP		17 56 51.6		
	Um	iP		17 56 25.6 C		
		ipP		17 56 33.1		
		iS		18 05 11		
	Ud	iP		17 56 56.4 C		
		ipP		17 57 06.2		
	De	iP		17 57 12.8		
		ipP		17 57 23.5		

Japan.
h = 35 km (Up,Ki,Sk,Um,Ud, De).
m = 6.4, M = 5.9 (Up,Ki).

" 18	Up	iP		18 35 25.3		
		ipP		18 35 35.7		
	Ki	iP		18 34 40.0		
		ipP		18 34 52.0		
				micr	sec	
		pP	Z'	0.1	1.2	
	Sk	i(P)		18 35 19.2		
		ipP		18 35 26.6		
	Um	iP		18 35 00.2		
		ipP		18 35 10.9		
	Ud	iP		18 35 32.9		
		ipP		18 35 42.0		

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

" 18	De	eP	19 18 23
" 18	Ki	iP	19 35 51.5
" 18	Up	iP	20 42 43.0
		ipP	20 42 55.9
	Ki	iP	20 41 59.2
	Sk	iP	20 42 33.7
	Um	iP	20 42 18.8
	Ud	iP	20 42 49.6

(cont.)

1973
June 18 (cont.)

	De	iP	20 43 08.5

Japan.
h = 50 km (Up).

" 18	Um	iP	21 48 54.3
	Ud	iP	21 49 23.9

Japan.
Origin time = 21 38 13.

" 18	Um	iP	23 22 01.7
" 19	Ki	iP	00 05 55.6
	Um	eP	00 06 17
	Ud	eP	00 06 51

Japan (h = N).

" 19	Up	iP	02 11 22.1
	Ki	ipP	02 10 49.2
	Um	iP	02 10 58.2
		ipP	02 11 12.7
	Ud	iP	02 11 30.4
		ipP	02 11 42.9
	De	eP	02 11 47

Japan.
h = 50 km (Um,Ud).

" 19	Ud	iPKP	02 29 11.3
	De	iPKP	02 29 15.5

Solomon Islands (h = 50 km).

" 19	Up	iP		02 33 08.5 C	
				micr	sec
		P	Z'	0.1	0.8
		Mx	E	0.7	15
		Mx	N	0.8	16
		Mx	Z	1.4	17
	Ki	iP		02 32 23.5 C	
				micr	sec
		Mx	E	1.1	17
		Mx	N	1.3	17
		Mx	Z	2.7	18
	Sk	iP		02 32 59.4	
	Um	iP		02 32 43.8 C	
	Ud	iP		02 33 14.8 C	
		i		02 33 22.7	
	De	iP		02 33 32.0	

Japan (h = 50 km).
M = 5.3 (Up,Ki).

" 19	Up	iP		03 05 11.2	
				micr	sec
		P	Z'	0.1	0.9
		Mx	E	0.9	16
		Mx	N	2.0	16
		Mx	Z	2.5	17
	Ki	iP		03 04 29.3	

(cont.)

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

1973						
June	19	(cont.)				
		Ki			micr	sec
			P	Z'	0.2	1.0
			Mx	E	1.3	15
			Mx	N	1.7	15
			Mx	Z	3.1	18
		Sk	iP		03 05 04.0	
		Um	iP		03 04 48.4	
			ipP		03 05 01.2	
		Ud	iP		03 05 19.3	
		De	iP		03 05 36.9	

Japan.
h = 45 km (Um).
m = 6.1, M = 5.5 (Up,Ki).

"	19	Up	iP		03 47 50.8	
			i		03 47 53.3	
			i(PP)		03 51 17.5	
			iSKS		03 58 25	
					micr	sec
			Mx	E	9.1	19
			Mx	N	7.4	19
			Mx	Z	18	18
		Ki	iP		03 47 26.1	
			i		03 47 28.7	
			iSKS		03 57 56	
					micr	sec
			P	Z'	0.2	1.0
			Mx	E	11	18
			Mx	N	12	18
			Mx	Z	8.9	19
		Sk	iP		03 47 52.8	
			i(PP)		03 51 11.0	
		Um	iP		03 47 34.2	
			i		03 47 36.4	
			iSKS		03 58 09	
		Ud	iP		03 47 55.7	
			i		03 47 58.1	
			i(PP)		03 51 21.5	
		De	iP		03 48 06.4	

Caroline Islands (h = N).
M = 6.5 (Up,Ki).
A small P, followed by a larger one, after 2.4 sec.

"	19	Um	iP	04 08 30.0
		Ud	iP	04 09 01.7

Japan.
Origin time = 03 57 50.

"	19	Ud	iP	04 27 03.2

"	19	Up	iP	04 40 32.5
			ipP	04 40 44.2
		Ki	iP	04 39 48.4
			ipP	04 40 00.2
		Sk	eP	04 40 24

(cont.)

1973				
June	19	(cont.)		
		Um	iP	04 40 08.0
		Ud	iP	04 40 38.9
			ipP	04 40 51.0
		De	iP	04 40 55.6

Japan.
h = 45 km (Up,Ki,Ud).

"	19	Ud	iP	04 58 14.8

"	19	Um	iPP	05 04 39.3
		Ud	iPP	05 04 09.3

Chile-Bolivia (h = 120 km).

"	19	Up	iP	05 25 25.6
		Ki	eP	05 24 40
		Um	iP	05 25 00.7
		Ud	iP	05 25 30.4

Japan (h = 35 km).

"	19	Up	iP	06 37 18.7
			ipP	06 37 33.9
		Ki	iP	06 36 33.5
		Sk	iP	06 37 08.8
		Um	iP	06 36 53.2
		Ud	iP	06 37 24.1 C
		De	iP	06 37 44.5

Japan.
h = 55 km (Up).

"	19	Up	iP		06 48 58.5 C	
			ipP		06 49 11.7	
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP		06 48 13.8 C	
			ipP		06 48 26.6	
					micr	sec
			Mx	E	0.7	16
			Mx	N	0.7	17
			Mx	Z	1.0	17
		Sk	iP		06 48 48.7	
			ipP		06 49 02.3	
		Um	iP		06 48 33.9 C	
			ipP		06 48 46.7	
		Ud	iP		06 49 04.8 C	
			i		06 49 13.3	
			ipP		06 49 17.9	
		De	iP		06 49 22.1	
			ipP		06 49 34.3	

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

"	19	Up	ipP	07 47 04.0
		Ki	iP	07 46 04.9
		Sk	epP	07 46 54
		Um	iP	07 46 29.9

(cont.)

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

1973
June 19 (cont.)
Um ipP 07 46 39.8
Ud iP 07 47 01.1
ipP 07 47 10.9
Japan.
h = 35 km (Um,Ud).

" 19 Up iP 08 47 23.2
micr sec
P Z' 0.2 1.2
Ki iP 08 46 38.9
micr sec
P Z' 0.1 1.1
Sk iP 08 47 13.4
Um iP 08 46 58.7
Ud iP 08 47 29.9
De iP 08 47 46.7
Japan (h = 35 km).
m = 6.0 (Up,Ki).

" 19 Up iP 09 48 23.2
Ki iP 09 47 38.7
Sk iP 09 48 13.4
Um iP 09 47 58.4
Ud iP 09 48 29.7
De iP 09 48 47.0
Japan (h = 40 km).

" 19 Ud iP 10 10 36.0

" 19 Up iP 11 09 53.8
Ki iP 11 09 08.9
Um iP 11 09 29.2
Ud iP 11 10 00.1
ipP 11 10 11.1
De iP 11 10 17.5
Japan.
h = 40 km (Ud).

" 19 Up iP 11 52 04.4
ipP 11 52 13.5
Ki iP 11 51 19.4
ipP 11 51 29.2
Sk ipP 11 52 04.3
Um ipP 11 51 48.8
Ud iP 11 52 11.3
ipP 11 52 20.0
Japan.
h = 35 km (Up,Ki,Ud).

" 19 Up iP 12 47 54.9
Ki iP 12 47 11.4
Um iP 12 47 30.3
Ud iP 12 48 01.3
Kurile Islands (h = N).

" 19 Um iPKP 12 59 44.5

1973
June 19 Up eSgl 13 04 21
Ki iSgl 13 06 56.2
Sk iSgl 13 06 09.4
Um iSgl 13 04 53.7
Ud iSgl 13 05 21.9
De iSgl 13 05 50.0
Esthonia.
Explosion.

" 19 Up iSgl 13 22 26.5
Ud iSn 13 21 09.2
iSgl 13 21 28.0
De iSn 13 21 19.7
iSgl 13 21 38.9
Southwest Norway,
58.5°N, 6.6°E.
Origin time = 13 19 23.
By combination with Bergen
and Kongsberg readings.

" 19 Um iSgl 13 46 53.1
Lake Ladoga.
Explosion.

" 19 Ki eP 14 19 57

" 19 Um iP 15 14 41.7
Ud iP 15 14 51.5
Andaman Islands (h = N).

" 19 De iP 15 23 46.6

" 19 Um iPKP 17 04 56.2
De iPKP1 17 05 12.5
Fiji Islands (h = 260 km).

" 19 Up iP 17 21 19.4
ipP 17 21 31.7
micr sec
P Z' 0.1 0.9
Ki iP 17 20 35.5
ipP 17 20 47.0
micr sec
P Z' 0.1 1.0
Sk iP 17 21 09.9
ipP 17 21 22.1
Um iP 17 20 55.2 D
ipP 17 21 07.3
Ud iP 17 21 26.3
ipP 17 21 37.6
De iP 17 21 43.4
Japan.
h = 45 km (Up,Ki,Sk,Um,Ud).
m = 5.9 (Up,Ki).

" 19 Up iP 20 16 56.7 C
ipP 20 17 09.8
(cont.)

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

1973
June 19 (cont.)
Up micr sec
P Z' 0.1 1.0
pP Z' 0.2 1.1
Mx E 0.7 18
Mx N 0.6 16
Mx Z 0.6 16
Ki iP 20 16 11.7 C
ipP 20 16 25.2
micr sec
P Z' 0.1 1.0
Sk iP 20 16 46.6 C
ipP 20 17 00.7
Um iP 20 16 31.9 C
ipP 20 16 45.2
Ud iP 20 17 02.9 C
ipP 20 17 16.3
De iP 20 17 19.8
ipP 20 17 33.3
Japan.
h = 50 km (Up,Ki,Sk,Um,Ud, De).
m = 5.9 (Up,Ki).

" 19 Ki iP 21 10 37.5
Ud iP 21 11 29.7
ipP 21 11 41.2
Kurile Islands.
Origin time = 21 00 24.
h = 45 km (Ud).

" 19 Up iP 22 42 43.0 C
micr sec
P Z' 0.1 1.0
Ki iP 22 42 04.3 C
micr sec
P Z' 0.1 1.0
Sk iP 22 42 37.3
Um iP 22 42 21.2 C
Ud iP 22 42 50.3 C
De iP 22 43 05.1
Japan (h = 70 km).
m = 5.8 (Up,Ki).

" 19 Ud iP 23 28 31.9

" 20 Up iP 05 04 38.4
Ki iP 05 03 53.5
Sk eP 05 04 29
Um iP 05 04 11.9
Ud iP 05 04 44.5
De eP 05 05 02
Japan (h = N).

" 20 Up eP 06 22 38
ipP 06 22 50.6
Ki iP 06 21 55.1
(cont.)

1973
June 20 (cont.)
Ki ipP 06 22 05.9
Sk epP 06 22 41
Um iP 06 22 15.3
ipP 06 22 26.3
Japan.
h = 40 km (Up,Ki,Um).

" 20 Up iP 07 02 38.0
Ud iP 07 02 44.7
Kurile Islands (h = N).

" 20 Up iP 09 31 36.4 C
micr sec
P Z' 0.1 0.9
Ki iP 09 30 52.6
Sk eP 09 31 26
Um iP 09 31 12.3
Ud iP 09 31 42.7 C
De iP 09 32 01.0
Kurile Islands (h = 35 km).

" 20 Up iP 10 23 03.0
ipP 10 23 13.1
Ud iP 10 23 09.9
ipP 10 23 18.9
De i(P) 10 23 25.6
Japan.
h = 35 km (Up,Ud).

" 20 Up iP 10 47 55.2

" 20 Up iPKP1 12 21 33.8
iPP 12 24 57.8
iSS 12 44 03
micr sec
PKP1 Z' 0.2 1.2
PP Z' 0.3 2.0
Mx N 0.8 17
Mx Z 1.1 17
Ki iPKP 12 21 21.9
eSKP1 12 25 02
micr sec
PKP Z' 0.1 1.8
Mx E 0.8 18
Mx N 1.1 17
Sk iPKP1 12 21 27.6
i 12 21 37.2
Um iPKP1 12 21 22.8
i 12 23 38.2
Ud iPKP1 12 21 35.3
i 12 21 36.7
De iPKP1 12 21 44.9
i 12 21 45.9
Kermadec Islands (h = 40 km).
M = 5.7 (Up,Ki).

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

1973				
June	20	Up	iSgl	12 31 15.0
		Um	eSgl	12 31 37
		Ud	iSgl	12 32 16.8
		Western USSR.		
		Explosion.		
"	20	Up	iP	14 41 59.9
		Um	iP	14 41 36.5
		Ud	iP	14 42 07.6
		Japan (h = 35 km).		
"	20	Up	iP	15 54 39.6
"	20	Sk	eSgl	17 25 20
		Um	iPgl	17 25 05.4
			eSgl	17 27 00
		Ud	iSgl	17 25 00.7
			i	17 25 09.5
		De	iSgl	17 25 49.8
		West coast of Norway,		
		59.9°N, 5.1°E.		
		Origin time = 17 22 43.		
		By combination with Bergen		
		and Kongsberg readings.		
"	20	Up	iPKPl	18 49 32.8
			ipPKPl	18 49 44.2
		Sk	iPKPl	18 49 25.2
			ipPKPl	18 49 36.8
		Um	iPKPl	18 49 22.2 C
			ipPKPl	18 49 35.8
		Ud	iPKPl	18 49 34.4
			ipPKPl	18 49 45.2
		De	iPKPl	18 49 43.4
			i	18 50 02.5
		Kermadec Islands.		
		h = 45 km (Up,Sk,Um,Ud).		
"	20	Ki	iP	21 36 55.1
"	20	Up	iP	22 21 24.0
		Um	iP	22 21 01.1
			ipP	22 21 10.3
		Japan.		
		Origin time = 22 10 20.		
		h = 35 km (Um).		
"	20	Ud	iP	23 02 42.3
"	21	Up	iP	00 14 40.4
		Ud	iP	00 14 33.6
"	21	Up	iP	00 58 56.3
"	21	Ki	iP	01 55 18.9
		Um	iP	01 54 55.0
		Ud	iP	01 55 00.6

1973				
June	21	Up	iP	05 32 24.5
		Ki	iP	05 31 39.8
		Um	iP	05 31 59.6
		Ud	iP	05 32 30.8
		Kurile Islands (h = 60 km).		
"	21	Ud	iP	06 09 42.2
		Japan (h = 70 km).		
"	21	Up	iP	06 53 27.3
"	21	Ud	iP	08 17 07.2
"	21	Ud	eP	09 12 46
"	21	Up	iP	09 15 10.4
		Um	iP	09 14 53.1
		Ud	iP	09 15 18.6
		Ryukyu Islands (h = 25 km).		
"	21	De	ePKP	10 33 55
			iSKPl	10 36 39.5
		Fiji Islands (h = 590 km).		
"	21	Up	iP	10 52 18.0
"	21	Up	i	12 28 03.7
			iSgl	12 28 12.1
		Western USSR.		
		Explosion.		
"	21	Up	iSgl	12 36 42.0
		Sk	eSgl	12 38 23
		Um	iSgl	12 36 55.1
		Ud	iSgl	12 37 39.4
		De	iSgl	12 38 05.3
		Western USSR.		
		Explosion.		
"	21	Up	iP	12 49 50.8
		Ki	iP	12 48 58.1
		De	eP	12 50 21
"	21	Up	eP	13 03 19
		Ki	iP	13 02 35.7
		Ud	iP	13 03 26.6
		Japan (h = 40 km).		
"	21	Ud	iP	14 05 38.1
			i	14 06 03.6
"	21	Ud	iP	14 16 12.2
		South of Japan (h = 90 km).		
"	21	Ud	eP	14 26 47
"	21	Up	iP	14 56 48.7 C

(cont.)

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

1973					
June	21	(cont.)			
		Up			micr sec
			P	Z'	0.2 1.2
		Ki	iP		14 56 14.5 C
					micr sec
			P	Z'	0.2 1.4
		Sk	iP		14 56 22.8 C
		Um	iP		14 56 33.9 C
		Ud	iP		14 56 40.7 C
		De	iP		14 56 57.7
		Nevada.			
		m = 6.1 (Up,Ki).			
		Probably underground explosion.			
"	21	Up	eSgl		15 06 12
		Um	iSgl		15 06 47.6
		Ud	iSn		15 06 48.1
			iSgl		15 07 15.7
		De	iPn		15 05 59.1
			iSgl		15 07 45.0
		Esthonia.			
		Explosion.			
"	21	Sk	eP		15 59 01
"	21	Up	iP		16 13 43.6
"	21	Up	iP		16 29 07.7
		Ki	iP		16 28 22.9
		Ud	iP		16 29 13.7
		Japan (h = 25 km).			
"	21	Up	iPKPl		17 08 55.0
		Ud	iPKPl		17 08 56.6
"	21	Ud	iP		18 29 07.4
"	21	Up	iP		18 39 05.5
		Ki	eP		18 38 50
		Sk	iP		18 39 17.0
		Ud	iP		18 39 18.8
		Szechwan, China.			
"	21	Ki	eP		19 17 02
		Um	iP		19 17 30.3
		Ud	iP		19 17 49.7
		Aleutian Islands.			
"	21	Ud	eP		21 29 44
"	21	Up	ePKPl		22 03 51
		Um	iPKPl		22 03 40.4
		Ud	iPKPl		22 03 52.6
"	22	Up	ePKPl		00 07 55
		Sk	iPKPl		00 07 48.1
		Ud	iPKPl		00 07 57.2

1973					
June	22	Up	iPKPl		01 08 35.1
		Sk	iPKPl		01 08 20.5
		Um	iPKPl		01 08 15.7
		Ud	iPKPl		01 08 28.0
"	22	Um	iP		01 54 45.6
		Ud	iP		01 55 16.1
		Japan (h = 70 km).			
"	22	Ud	iP		02 11 03.2
"	22	Up	iPKP		02 18 48.7
			iSKPl		02 21 31.3
		Ki	iPKP		02 18 33.8
			iSKPl		02 21 05.4
		Sk	eSKPl		02 21 23
		Um	iPKP		02 18 40.5
			iSKPl		02 21 18.3
		Ud	e(PKP)		02 18 38
			iPKP		02 18 49.8
			iSKPl		02 21 32.3
		De	iPKPl		02 18 49.1
		Fiji Islands (h = 570 km).			
"	22	Up	iP		03 41 40.4
		Ki	i(pP)		03 41 30.1
		Um	i(pP)		03 41 38.8
		Ud	iP		03 41 49.1
		Formosa (h = 45 km).			
"	22	Up	iP		04 30 46.7
		Ki	iP		04 29 53.4
		Um	iP		04 30 18.1
		Ud	iP		04 30 50.6
		Kamchatka.			
"	22	Up	iP		04 34 50.8
		Um	iP		04 34 24.7
		Ud	eP		04 34 56
		Japan.			
		Origin time = 04 23 46.			
"	22	Ki	iP		05 14 09.8
		Ud	eP		05 14 34
		Molucca Passage (h = N).			
"	22	Up	iP		06 18 39.7 C
			i		06 18 41.7
			iS		06 27 41
					micr sec
			P	Z'	0.3 0.8
			Mx	E	11 16
			Mx	N	11 16
			Mx	Z	16 17
		Ki	iP		06 17 55.0 C
			i		06 17 58.1
		(cont.)			

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

1973
June 22 (cont.)
Ki micr sec
P Z' 0.3 0.9
Mx E 16 17
Mx N 18 17
Mx Z 27 17
Sk iP 06 18 30.5 C
i 06 18 33.6
ipP 06 18 46.8
Um iP 06 18 15.1 C
i 06 18 17.5
iS 06 26 57
Ud iP 06 18 46.0 C
i 06 18 48.0
De iP 06 19 03.4
i 06 19 06.3
ipP 06 19 20.1
Japan.
h = 50 km (Sk,De).
m = 6.5, M = 6.4 (Up,Ki).
A small P followed by a larger phase after 2.6 sec in average.

" 22 Up iP 06 23 19.7
Um ipP 06 23 06.3
Ud iP 06 23 25.6
De ipP 06 23 59.9
Japan.
Origin time = 06 12 15.

" 22 Sk iPKP1 06 28 07.1
Um iPKP1 06 28 03.8

" 22 Sk ePKP1 06 47 50
Um iPKP1 06 47 57.6
Ud iPKP1 06 48 10.2

" 22 Um iP 07 51 14.6
Ud iP 07 51 40.4

" 22 Up iP 09 33 06.6
Ud iP 09 33 12.9
Japan.
Origin time = 09 22 02.

" 22 Up eSg2 11 23 26
Ud iSn 11 23 35.6
iSg2 11 24 19.4
De e 11 23 52
Lithuania.
Explosion?

" 22 Up iP 11 47 14.4
Ki iP 11 46 30.0 C
Sk iP 11 47 05.3
(cont.)

1973
June 22 (cont.)
Um iP 11 46 49.8
Ud iP 11 47 20.8
De eP 11 47 39
Japan (h = 70 km).

" 22 Up iP 12 26 21.7
Sk iP 12 27 01.6
Ud iP 12 26 28.4
Greece.

" 22 Up iSgl 12 33 20.7
Um iSgl 12 33 44.7
Ud iSgl 12 34 19.1
Probably western USSR.
Explosion?

" 22 Up iSgl 12 51 16.2
Ki eSgl 12 53 13
Sk eSgl 12 53 01
Um iSgl 12 51 26.3
iRg 12 52 07.7
Ud eSgl 12 52 16
De e 12 52 32
iSgl 12 52 49.5
Western USSR.
Explosion.

" 22 Um ePKP 17 35 56
Fiji Islands (h = 15 km).

" 22 Up iP 18 59 51.3 C
micr sec
P Z' 0.1 0.8
Ki iP 18 59 22.4 C
micr sec
P Z' 0.2 0.8
Sk iP 18 59 48.9 C
Um iP 18 59 35.0 C
Ud iP 18 59 57.9 C
De iP 19 00 09.0 C
Mariana Islands (h = 270 km).
m = 5.8 (Up,Ki).

" 22 Up iPKP1 20 10 59.4
Sk iPKP 20 10 54.5
Um iPKP 20 10 59.1
Ud iPKP1 20 11 00.3
De iPKP1 20 11 12.0 D
Tonga Islands (h = N).

" 22 Up iPKP1 23 06 34.3
iPKP2 23 06 48.3
Ki iPKP1 23 06 17.3 D
Sk iPKP1 23 06 31.0
Um iPKP1 23 06 25.2
(cont.)

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

1973
June 22 (cont.)
Ud iPKP1 23 06 35.9
iPKP2 23 06 52.8
De iPKP2 23 07 05.5
New Zealand (h = 370 km).

" 23 Up iPP 00 43 59.4
Ud iPP 00 44 01.5
New Guinea (h = N).

" 23 Up iPKP 00 58 09.7
Ki iPKP 00 57 49.9
Sk ePKP 00 58 00
Um iPKP 00 57 55.7
Ud iPKP 00 58 05.2
De iPKP 00 58 18.0
Solomon Islands (h = 40 km).

" 23 Up iP 02 20 44.0 C
ipP 02 20 55.7
micr sec
P Z' 0.5 1.3
Mx E 0.8 16
Mx N 1.0 14
Mx Z 1.5 18
Ki iP 02 19 58.3
ipP 02 20 10.0
micr sec
P Z' 0.2 1.2
Mx E 1.5 16
Mx N 1.6 17
Mx Z 2.7 17
Sk iP 02 20 33.9 C
ipP 02 20 45.4
Um iP 02 20 18.6 C
ipP 02 20 30.6
Ud iP 02 20 49.8 C
ipP 02 21 02.2
De iP 02 21 07.2 C
ipP 02 21 18.7
Kurile Islands.
h = 45 km (Up,Ki,Sk,Um,Ud, De).
m = 6.3, M = 5.4 (Up,Ki).

" 23 Ud iPKP1 03 24 22.9
De iPKP1 03 24 34.0

" 23 Up iP 04 41 59.5
Ki eP 04 41 16
Um eP 04 41 36
Ud iP 04 42 06.2
Japan (h = 40 km).

" 23 Sk eP 05 10 26
Um iP 05 10 10.5
Ud eP 05 10 38
Japan (h = N).

1973
June 23 Up iP 05 31 51.9
Ud iP 05 31 58.5
Japan.
Origin time = 05 20 48.

" 23 Up iP 05 37 42.3
ipP 05 37 57.0
Ki iP 05 36 49.1 C
ipP 05 37 05.2
Sk iP 05 37 22.7
Um iP 05 37 15.6
ipP 05 37 30.8
Ud iP 05 37 42.5
De iP 05 38 06.1
Aleutian Islands.
h = 55 km (Up,Ki,Um).

" 23 Um eP 06 05 55

" 23 Um iP 07 42 10.1
Ud iP 07 41 40.7

" 23 Up iP 08 11 13.4
ipP 08 11 22.2
Ki ipP 08 10 37.9
Sk epP 08 11 13
Um iP 08 10 49.1
ipP 08 10 58.0
Ud iP 08 11 20.3
De ipP 08 11 48.7
Kurile Islands.
h = 35 km (Up,Um).

" 23 Up iP 08 27 57.2
Um iP 08 27 32.2
Ud iP 08 28 03.1
Kurile Islands (h = 70 km).

" 23 Up e(Sgl) 09 05 13
Um i(Sgl) 09 06 06.5
Ud e(Sgl) 09 06 06

" 23 Up eSgl 09 15 04
Um iSgl 09 15 30.1
Ud eSgl 09 16 13
Western USSR.
Explosion.

" 23 Ki iP 10 15 27.1
Ud iP 10 16 25.3
Kamchatka.
Origin time = 10 05 56.

" 23 Up epP 12 15 32
Ud iP 12 15 26.5
Japan (h = 60 km).

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

1973				
June	23	Up	eSgl	12 31 35
		Um	iSgl	12 31 52.8
			iRg	12 32 21.1
		Ud	eSgl	12 32 37
		Western USSR.		
		Explosion.		
"	23	Ud	iP	12 35 35.0
"	23	Ki	iPn	12 55 08.8
			iSn	12 56 07.2
		Sk	iSgl	12 58 36.1
		Um	iSn	12 56 36.0
			iSg2	12 57 06.9
			eRg	12 57 36
		Northwest USSR.		
		Explosion?		
		A remarkable train of		
		Rg-waves at Um at a		
		distance of about 670 km.		
"	23	Ki	iPn	13 13 17.3
			iSn	13 14 04.7
			iS*	13 14 19.4
		Sk	iSgl	13 17 04.9
		Um	i	13 15 28.3
			iSgl	13 15 47.1
		Ud	eS*	13 18 01
		Northwest USSR-Norway border		
		region.		
		Explosion.		
"	23	Ki	iPn	15 26 16.0
			iSn	15 27 04.3
			iS*	15 27 17.0
		Um	iSgl	15 28 45.1
		Northwest USSR-Norway border		
		region.		
		Explosion.		
"	23	Um	iP	16 30 13.0
		Ud	eP	16 30 44
		Japan.		
		Origin time = 16 19 33.		
"	23	Ud	iP	17 27 59.0
"	23	Up	iP	19 51 39.2
		Ud	iP	19 51 45.7
		Japan.		
		Origin time = 19 40 35.		
"	23	Up	iP	22 56 16.2
"	24	Um	iPKP1	01 25 37.1
		Ud	iPKP1	01 25 45.5
		De	iPKP1	01 25 56.2

1973						
June	24	Up	iP		02 54 25.3 C	
			iS		03 03 14	
			iP'P'		03 22 37.4	
					micr	sec
			P	Z'	5.3	1.5
			P'P'	Z'	1.8	2.5
			Mx	E	210	17
			Mx	N	290	17
			Mx	Z	200	17
		Ki	iP		02 53 39.4 C	
			iS		03 01 53	
			iP'P'		03 22 55.8	
					micr	sec
			P	Z'	2.2	1.5
			P'P'	Z'	1.6	3.0
			Mx	E	410	19
			Mx	N	480	18
			Mx	Z	620	20
		Sk	iP		02 54 15.0 C	
		Um	iP		02 54 00.0 C	
			i(P'P')		03 22 35.1	
			iP'P'		03 22 46.2	
		Ud	iP		02 54 31.8 C	
			iP'P'		03 22 40.0	
		De	iP		02 54 49.2 C	
		Kurile Islands (h = 50 km).				
		m = 7.2, M = 7.8 (Up,Ki).				
"	24	Up	iP		03 07 47.9	
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP		03 07 03.3	
		Um	iP		03 07 23.4	
		Ud	iP		03 07 55.2	
		De	iP		03 08 11.7	
		Kurile Islands.				
		Origin time = 02 56 49.				
"	24	Up	iP		03 09 43.8	
		Um	iP		03 09 19.8	
		Ud	iP		03 09 50.2	
		Kurile Islands.				
		Origin time = 02 58 45.				
"	24	Up	iP		03 15 19.4 C	
					micr	sec
			P	Z'	1.2	1.5
		Ki	iP		03 14 34.8 C	
					micr	sec
			P	Z'	0.3	1.1
		Sk	iP		03 15 09.2 C	
		Um	iP		03 14 54.5 C	
		Ud	iP		03 15 25.6 C	
		De	iP		03 15 43.0 C	
		Kurile Islands (h = 55 km).				
		m = 6.6 (Up,Ki).				

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

```
1973
June  24   Sk   iP           03 18 22.5

 "    24   Up   iP           03 20 50.3
           Ki   iP           03 20 05.6
           Sk   e(P)         03 20 35
           Um   iP           03 20 26.1
           Ud   iP           03 20 56.2
           Kurile Islands.
           Origin time = 03 09 51.

 "    24   Up   iP           03 21 43.5
           Ki   iP           03 20 59.3
           Sk   iP           03 21 34.5
           Um   iP           03 21 20.0
           Ud   iP           03 21 50.0
           Kurile Islands.
           Origin time = 03 10 45.

 "    24   Up   iP           03 22 26.0
           Sk   iP           03 22 42.1
           Um   iP           03 22 46.3

 "    24   Ud   iP           03 25 13.9

 "    24   Um   iP           03 29 02.0
           Ud   iP           03 29 21.9

 "    24   Up   iP           03 39 40.0 C
                i            03 39 44.9
                             micr  sec
                i        Z'  0.7   1.5
           Ki   iP           03 38 54.4 C
                i            03 39 01.2
                             micr  sec
                i        Z'  0.1   1.2
           Sk   iP           03 39 30.3
                i            03 39 35.5
           Um   iP           03 39 15.2 C
                i            03 39 21.3
           Ud   iP           03 39 46.2 C
                i            03 39 50.8
           De   iP           03 40 03.8
                i            03 40 07.8
           Kurile Islands (h = 45 km).
           m = 6.2 (Up,Ki).
           Two events, the second one
           larger, with slightly
           different epicenters, as
           evidenced by a systematic
           variation of the time
           difference between the two
           onsets.

 "    24   Up   iP           03 41 40.7
           Ud   i(P)         03 41 12.7

 "    24   Up   iP           03 51 39.1 C
           (cont.)

1973
June  24   (cont.)
           Ki   iP           03 50 54.1
           Sk   iP           03 51 29.7
           Um   iP           03 51 14.6
           Ud   iP           03 51 45.1 C
           Kurile Islands (h = N).

 "    24   Up   iP           03 58 50.3 C
                ipP          03 59 01.2
           Ki   iP           03 58 05.1 C
                ipP          03 58 16.5
           Sk   iP           03 58 40.8
           Um   iP           03 58 25.4
                ipP          03 58 36.6
           Ud   iP           03 58 56.3 C
                ipP          03 59 07.2
           De   ipP          03 59 24.9
           Kurile Islands.
           h = 40 km (Up,Ki,Um,Ud).

 "    24   Ud   iP           04 01 50.3

 "    24   Up   iP           04 05 07.0
           Um   iP           04 04 42.7
           Ud   iP           04 05 13.4
           Kurile Islands (h = 70 km).

 "    24   Up   iP           04 22 30.7
           Ud   iP           04 22 36.9
           Kurile Islands.
           Origin time = 04 11 30.

 "    24   Up   eP           04 33 31
           Sk   ipP          04 33 30.1
           Ud   eP           04 33 38
           Kurile Islands.
           Origin time = 04 22 30.

 "    24   Up   iP           04 37 09.3
           Ud   iP           04 37 15.3
           Kurile Islands.
           Origin time = 04 26 08.

 "    24   Um   iP           04 45 39.4
           Ud   eP           04 46 10
           Kurile Islands.
           Origin time = 04 35 03.

 "    24   Up   iP           04 54 26.5
           Ki   iP           04 53 41.5 C
           Sk   eP           04 54 18
           Um   iP           04 54 02.2
           Ud   iP           04 54 32.6 C
                ipP          04 54 48.8
           Kurile Islands.
           h = 60 km (Ud).
```

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

1973					
June	24	Up	iP		05 18 48.7 C
			eP'P'		05 46 53
					micr sec
			P	Z'	0.3 1.0
		Ki	iP		05 18 03.9 C
					micr sec
			P	Z'	0.2 1.0
		Sk	iP		05 18 39.2 C
		Um	iP		05 18 24.1
		Ud	iP		05 18 55.1 C
			eP'P'		05 46 53
		De	iP		05 19 12.4 C
		Kurile Islands (h = 45 km).			
		m = 6.3 (Up,Ki).			
"	24	Up	eP		05 27 13
		Ud	iP		05 27 19.8
		Kurile Islands.			
		Origin time = 05 16 12.			
"	24	Up	iP		05 29 02.2
		Ki	iP		05 28 53.9
		Ud	iP		05 29 16.6
"	24	Up	iP		06 06 34.9
		Sk	eP		06 06 28
		Ud	iP		06 06 44.0
		Kurile Islands.			
		Origin time = 05 55 36.			
"	24	Ki	i(pP)		06 19 54.2
		Ud	eP		06 20 35
		Kurile Islands.			
"	24	Up	iP		07 19 55.0
		Ki	iP		07 19 10.1
		Um	iP		07 19 30.3
			ipP		07 19 47.8
		Ud	iP		07 20 01.2
		De	epP		07 20 33
		Kurile Islands.			
		h = 60 km (Um).			
"	24	Up	iP		07 50 56.0
		Ud	iP		07 51 02.1
		Kurile Islands.			
		Origin time = 07 39 55.			
"	24	Um	iP		08 03 34.6
"	24	Up	eP		08 26 42
		Ud	iP		08 26 48.0
		Kurile Islands.			
		Origin time = 08 15 41.			
"	24	Up	i(pP)		09 01 27.8
		Ud	iP		09 01 23.9

1973					
June	24	Up	iP		09 23 14.3
		Um	iP		09 22 48.8
		Ud	iP		09 23 20.3
		Kurile Islands (h = N).			
"	24	Up	iP		10 00 24.1
			ipP		10 00 33.1
		Um	iP		10 00 00.1
		Ud	iP		10 00 30.2
			ipP		10 00 39.3
		Japan.			
		h = 35 km (Up,Ud).			
"	24	Up	iP		10 01 25.1
		Um	i(P)		10 00 57.1
"	24	Up	iP		10 39 47.6
			ipP		10 39 55.3
		Um	iP		10 39 22.1
		Ud	iP		10 39 52.1
		Kurile Islands.			
		h = 30 km (Up).			
"	24	Up	iP		10 51 50.2
		Ud	iP		10 51 56.2
		Kurile Islands (h = N).			
"	24	Up	iP		11 04 55.0 C
					micr sec
			P	Z'	0.1 0.7
		Ki	iP		11 04 09.8 C
					micr sec
			P	Z'	0.1 1.0
		Sk	iP		11 04 45.2 C
		Um	iP		11 04 30.3 C
			ipP		11 04 44.9
		Ud	iP		11 05 01.1 C
		De	iP		11 05 18.6 C
		Kurile Islands.			
		h = 55 km (Um).			
		m = 6.0 (Up,Ki).			
"	24	Ud	i		11 15 29.6
			i(Sgl)		11 15 50.0
		De	i		11 13 15.5
"	24	Ki	iP		12 00 41.2
		Ud	iP		12 01 38.8
		Kamchatka.			
		Origin time = 11 51 10.			
"	24	Up	iP		12 10 29.5
			ipP		12 10 42.0
		Um	iP		12 10 06.0
		Ud	iP		12 10 36.5
		Japan.			
		h = 45 km (Up).			

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

1973					
June 24	Up	iP		12 32 08.0 C	
		ipP		12 32 18.5	
	Ki	iP		12 31 23.1 C	
	Sk	iP		12 32 01.6	
	Um	iP		12 31 43.3 C	
		ipP		12 31 54.6	
	Ud	iP		12 32 14.3	
		ipP		12 32 24.8	
	De	iP		12 32 31.7	

Japan.
h = 40 km (Up,Um,Ud).

" 24	Up	iP		13 56 43.2	
	Ud	iP		13 56 49.2	

Japan.
Origin time = 13 45 38.

" 24	Ud	iP		14 05 17.4	

Japan.

" 24	Up	iP		17 24 57.1	
	Um	ipP		17 24 43.2	
	Ud	iP		17 25 03.2	
		ipP		17 25 14.3	

Japan.
Origin time = 17 13 52.
h = 40 km (Ud).

" 24	Up	eP		17 27 57	
	Ki	iP		17 27 28.2 C	
				micr	sec
		P	Z'	0.2	2.0
	Sk	iP		17 27 53.6	
	Um	iP		17 27 40.3	
	Ud	iP		17 28 03.2	
	De	eP		17 28 14	

Mariana Islands (h = N).

" 24	Up	eP		17 32 50	
		ipP		17 33 02.0	
	Um	iP		17 32 25.4	
		ipP		17 32 37.1	
	Ud	eP		17 32 56	
		ipP		17 33 08.3	

Japan.
Origin time = 17 21 45.
h = 45 km (Up,Um,Ud).

" 24	Up	iP		18 00 28.2	
		ipP		18 00 38.5	
	Ki	iP		17 59 44.1	
	Um	iP		18 00 03.4	
	Ud	iP		18 00 34.3 C	
		ipP		18 00 45.1	
	De	iP		18 00 51.6	

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

1973					
June 24	Up	iP		18 52 53.9 C	
		ipP		18 53 04.6	
				micr	sec
		P	Z'	0.2	1.2
		Mx	N	0.5	15
		Mx	Z	0.6	16
	Ki	iP		18 52 09.1 C	
		ipP		18 52 19.8	
				micr	sec
		P	Z'	0.1	1.0
		Mx	E	0.5	16
		Mx	N	0.5	17
		Mx	Z	0.9	17
	Sk	iP		18 52 44.2	
		ipP		18 52 55.2	
	Um	iP		18 52 29.3 C	
		ipP		18 52 40.2	
	Ud	iP		18 53 00.1 C	
		ipP		18 53 11.1	
	De	iP		18 53 17.6 C	
		ipP		18 53 29.1	

Kurile Islands.
h = 40 km (Up,Ki,Sk,Um,Ud, De).
m = 6.0, M = 5.0 (Up,Ki).

" 24	Up	eP		20 05 16	

" 24	Up	iP		20 11 16.9 C	
		ipP		20 11 31.6	
				micr	sec
		P	Z'	0.3	1.7
		Mx	E	0.6	16
		Mx	N	0.8	18
		Mx	Z	1.1	17
	Ki	iP		20 10 32.1 C	
		ipP		20 10 47.4	
				micr	sec
		Mx	E	1.2	16
		Mx	N	1.2	16
		Mx	Z	1.9	18
	Sk	iP		20 11 06.9 C	
		ipP		20 11 21.9	
	Um	iP		20 10 52.6	
		ipP		20 11 07.0	
	Ud	iP		20 11 23.2 C	
		ipP		20 11 38.1	
	De	iP		20 11 40.9 C	

Kurile Islands.
h = 55 km (Up,Ki,Sk,Um,Ud).
M = 5.2 (Up,Ki).

" 24	Ud	iP		20 33 15.6	

" 24	Ud	iP		20 45 45.7	

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

1973						
June	24	Up	eP		20 57 02	
		Ki	iP		20 56 17.2	
		Um	iP		20 56 39.4	
		Ud	iP		20 57 08.2	
			ipP		20 57 19.2	

Japan.
Origin time = 20 45 58.
h = 40 km (Ud).

"	24	Up	iPn		21 08 38.8	
			iSn		21 10 00.3	
			iX		21 10 22.5	
			iSg1		21 10 49.7	
		Ki	iPn		21 09 01.8	
			iSn		21 10 44.4	
			iX		21 11 03.1	
		Sk	ePn		21 08 01	
			iSn		21 08 57.2	
		Um	iPn		21 08 44.2	
			iSn		21 10 15.6	
			iX		21 10 32.6	
		Ud	iPn		21 08 11.7	
			iSn		21 09 18.5	
			iX		21 09 37.3	
			iSg2		21 09 57.8	
		De	iSn		21 10 11.8	
			iX		21 10 31.1	

Norwegian Sea (h = N),
62.2°N, 2.2°E.
Origin time = 21 06 44.
The travel-time curve of X parallels the one for Sn with a delay of about 19 sec.

"	24	Up	i(Pn)		21 36 34.5	
			iSn		21 37 49.5	
			iSg1		21 38 35.3	
		Ki	eX		21 38 56	
		Sk	iPn		21 35 43.5	
			i		21 36 21.0	
			iSn		21 36 40.2	
		Um	iPn		21 36 30.5	
			iSn		21 38 01.2	
			iX		21 38 18.1	
		Ud	iPn		21 35 58.1	
			iSn		21 37 03.1	
			i		21 37 37.3	
			iSg2		21 37 43.3	
		De	eSn		21 38 02	
			iX		21 38 16.8	

Norwegian Sea,
62.2°N, 2.2°E.
Origin time = 21 34 30.

"	24	Ud	iPKP1		21 55 05.4	
		De	iPKP1		21 55 16.6	

Fiji Islands (h = 620 km).

1973						
June	24	Ud	iP		23 23 13.6	
"	24	Up	iP		23 30 21.4	
		Um	iP		23 30 40.1	
"	25	Up	iPKP1		00 29 44.7	
		Ud	iPKP1		00 29 45.4	
		De	iPKP1		00 29 55.1	

"	25	Up	iP		00 34 50.6	
		Ki	eP		00 34 06	
		Sk	iP		00 34 42.0	
		Um	iP		00 34 26.0	
			ipP		00 34 37.0	
		Ud	iP		00 34 57.1	
		De	eP		00 35 16	

Kurile Islands.
h = 40 km (Um).

"	25	Up	iP		00 48 38.7	
		Ki	eP		00 47 54	
		Sk	iP		00 48 30.9	
		Um	iP		00 48 13.9	
		Ud	iP		00 48 45.3	

Kurile Islands (h = 70 km).

"	25	Ud	iP		00 54 04.8	
			ipP		00 54 14.4	
"	25	Up	iP		01 26 03.7	
		Ud	iP		01 26 09.8	

Japan.
Origin time = 01 14 59.

"	25	Sk	iP		06 33 33.0	
		Um	iP		06 33 03.2	
		Ud	iP		06 33 22.9	

Hindu Kush.
Intermediate depth.

"	25	Up	iP		07 21 55.6	C
					micr sec	
			P	Z'	0.1 0.9	
		Ki	iP		07 21 02.1	
			iPcP		07 21 47.8	
					micr sec	
			P	Z'	0.1 1.3	
			Mx	E	1.0 16	
			Mx	N	0.9 20	
		Sk	iP		07 21 33.7	C
		Um	iP		07 21 28.5	
			iPcP		07 22 04.4	
		Ud	iP		07 21 55.5	C
		De	iP		07 22 17.6	C

Aleutian Islands (h = 210 km).
m = 5.5 (Up,Ki).

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

1973						
June	25	Up	iP		07 31 52.3 C	
			ipP		07 32 03.4	
			iS		07 41 49	
					micr	sec
			P	Z'	0.2	1.2
			pP	Z'	0.3	1.2
			Mx	E	1.8	16
			Mx	N	1.7	16
			Mx	Z	3.6	16
		Ki	iP		07 31 31.7 C	
					micr	sec
			P	Z'	0.2	1.2
			Mx	E	1.5	13
			Mx	N	1.7	16
			Mx	Z	2.0	14
		Sk	iP		07 31 57.0	
			ipP		07 32 06.3	
		Um	iP		07 31 38.7 C	
			iS		07 41 21	
		Ud	iP		07 32 01.7 C	
		De	iP		07 32 08.7 C	
			ipP		07 32 19.5	
		Luzon.				
		h = 40 km (Up,Sk,De).				
		m = 6.0, M = 5.7 (Up,Ki).				
"	25	Up	iP		08 16 06.4	
			ipP		08 16 18.4	
		Ki	iP		08 15 48.2	
		Sk	epP		08 16 22	
		Um	ipP		08 16 04.9	
		Ud	iP		08 16 15.4	
			ipP		08 16 27.5	
		Luzon.				
		h = 45 km (Up,Ud).				
"	25	Up	iP		08 30 35.3	
		Ud	iP		08 30 42.9	
		De	iP		08 31 00.3	
		Kurile Islands (h = 40 km).				
"	25	Up	iP		10 36 08.9 C	
					micr	sec
			P	Z'	0.1	0.9
		Ki	iP		10 36 50.8 C	
					micr	sec
			Mx	E	0.6	16
			Mx	N	0.9	20
			Mx	Z	0.8	18
		Sk	iP		10 36 44.4	
		Um	iP		10 36 24.1	
			iPP		10 37 58.2	
		Ud	iP		10 36 24.0 C	
		De	iP		10 36 06.4 C	
		Iran (h = 50 km).				
"	25	Up	iP		10 41 50.2	
		(cont.)				

1973						
June	25	(cont.)				
		Ki	eP		10 42 24	
		Sk	iP		10 42 30.5 C	
		Um	iP		10 41 56.2	
		Ud	iP		10 42 18.4	
		De	eP		10 41 53	
"	25	Ki	iP		10 42 43.4	
		Um	iP		10 42 59.9	
		Ud	iP		10 43 33.8	
		Kurile Islands (h = 60 km).				
"	25	Up	iP		11 51 26.7	
			i(PP)		11 54 32.5	
			iPP		11 55 29.1	
		Ki	iP		11 51 10.2	
			iPP		11 55 01.9	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	0.5	17
			Mx	N	0.6	19
		Sk	eP		11 51 31	
			i(PP)		11 55 10.7	
		Um	iP		11 51 15.9	
			i		11 51 21.8	
			i(PP)		11 55 00.4	
			iPP		11 55 08.4	
		Ud	eP		11 51 34	
			i(PP)		11 54 40.4	
			iPP		11 55 40.0	
		De	iP		11 51 41.5	
			i(PP)		11 54 55.0	
			iPP		11 55 55.8	
		Molucca Passage (h = N).				
		Clear records of early PP, denoted (PP).				
"	25	Ud	iP		12 09 18.4	
"	25	Ud	iP		12 21 16.5	
"	25	Ki	iSgl		12 30 12.5	
		Um	iSgl		12 28 32.2	
		De	iSgl		12 29 42.0	
		Western USSR.				
		Explosion.				
"	25	Up	iSgl		12 59 44.6	
		Um	iSgl		13 00 20.6	
		Ud	iSn		13 00 20.6	
			iSgl		13 00 45.9	
		De	eSgl		13 01 12	
		Esthonia.				
		Explosion.				
"	25	Um	iPKP		15 22 47.2	
		Ud	ePKP		15 22 39	
		(cont.)				

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

1973				
June	25	(cont.)		
		De	iPKP	15 22 41.2
		South Pacific Ocean (h = N).		
"	25	Up	iP	15 25 13.6
		Ki	iP	15 24 54.3
		Ud	iP	15 25 22.8
		Luzon (h = N).		
"	25	Up	iP	15 54 54.8
		Ud	iP	15 55 03.9
		Luzon. Origin time = 15 42 32.		
"	25	Up	iP	16 23 36.8
		Ki	iP	16 22 51.7
		Ud	iP	16 23 42.4
		Kurile Islands (h = 40 km).		
"	25	Ud	iP	16 33 35.0
"	25	Ud	iP	16 38 16.4
"	25	Up	iPKP1	18 27 49.2
			i	18 27 55.7
		Ud	iPKP1	18 27 51.7
			i	18 27 58.2
		De	iPKP1	18 28 01.3
		Tonga-Kermadec Islands (h = 500 km).		
"	25	Ud	iP	19 10 23.4
		Japan (h = N).		
"	25	Up	iP	19 17 06.6
		Ud	iP	19 17 13.1
		Kurile Islands (h = N).		
"	25	Up	e	19 33 19
			iSgl	19 33 37.7
		Ki	iSn	19 31 18.3
			iSgl	19 31 24.3
		Sk	i	19 31 03.2
			iS*	19 31 28.3
			iSgl	19 31 32.8
		Um	iPn	19 30 59.9
			iSn	19 31 38.1
			iSgl	19 31 52.4
		Ud	iSgl	19 33 19.7
		De	eSgl	19 35 13
		Nordland, Norway, 66.4°N, 14.4°E. Origin time = 19 30 01. Explosion.		

1973					
June	25	Up	iP	20 30 45.1	
		Sk	iP	20 31 12.1	
		Um	iP	20 30 50.3	
		Ud	iP	20 30 59.2	
		De	iP	20 30 51.6	
		Pakistan (h = 70 km).			
"	25	Ud	iP	20 32 59.7	
"	25	Up	iP	20 59 53.8	C
			ipP	21 00 10.1	
		Ki	iP	20 59 36.1	C
			i	20 59 46.3	
				micr sec	
			P Z'	0.1 1.2	
			Mx E	0.6 18	
			Mx N	0.6 19	
			Mx Z	0.8 18	
		Sk	eP	20 59 58	
			ipP	21 00 15.7	
		Um	iP	20 59 42.2	C
		Ud	iP	21 00 02.0	C
			ipP	21 00 19.9	
		De	iP	21 00 08.1	
		Mindanao. h = 60 km (Up,Sk,Ud).			
"	25	Up	iP	21 11 16.0	
"	25	Ud	iP	21 27 37.1	
			i	21 27 45.7	
		Japan (h = 70 km).			
"	25	Up	iP	21 35 30.2	
		Ud	iP	21 35 38.7	
"	25	Up	iP	22 24 53.3	
		Ud	iP	22 24 59.5	
		De	iP	22 25 18.0	
		Kurile Islands (h = 50 km).			
"	26	Up	iP	00 51 57.3	
		Ki	iP	00 51 02.7	
		Um	eP	00 51 32	
		Ud	eP	00 51 51	
		De	iP	00 52 17.3	
		Alaska (h = 15 km).			
"	26	Up	iPKP1	03 48 19.1	
		Ud	iPKP1	03 48 21.2	
		De	iPKP1	03 48 30.7	
"	26	Ki	iP	04 14 07.6	
		Um	iP	04 14 04.7	
		Ud	iP	04 14 18.2	
		(cont.)			

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

```
1973
June  26   (cont.)
           De   eP          04 14 18
           Sumatra (h = 80 km).

 "    26   Up   iP          05 46 03.5
                            micr  sec
                P      Z'   0.1   1.0
                Mx     N    0.8   22
                Mx     Z    0.7   21
           Ki   iP          05 45 10.6
                            micr  sec
                Mx     E    0.8   18
                Mx     N    0.8   19
                Mx     Z    0.9   19
           Sk   iP          05 45 44.6
           Um   iP          05 45 36.8
           Ud   iP          05 46 06.3
           De   iP          05 46 27.6
           Aleutian Islands (h = 40 km).
           M = 5.1 (Up,Ki).

 "    26   Ud   iP          05 51 55.3

 "    26   Up   iP          05 54 43.8
           Um   iP          05 54 36.7
           Ud   iP          05 54 56.8
           Burma-India.

 "    26   Ud   iPKP1       06 43 37.8
           De   ePKP1       06 43 47

 "    26   Um   iP          07 13 03.4
           Ud   iP          07 13 32.5
                ipP         07 13 43.1
           Japan.
           h = 40 km (Ud).

 "    26   Up   iP          07 37 14.1
           Sk   iP          07 36 57.8
           Um   iP          07 37 16.5
           Ud   iP          07 37 03.2
           De   eP          07 37 06
           Guatemala (h = 40 km).

 "    26   Ud   iP          09 02 50.7

 "    26   Up   iP          11 50 25.5 C
                            micr  sec
                P      Z'   0.1   1.0
                Mx     E    0.6   16
                Mx     N    0.6   18
                Mx     Z    0.9   16
           Ki   iP          11 49 40.8 C
                            micr  sec
                P      Z'   0.1   1.0
           (cont.)

1973
June  26   (cont.)
           Ki               micr  sec
                Mx     E    0.7   16
                Mx     N    0.7   17
                Mx     Z    0.9   16
           Sk   iP          11 50 15.3 C
           Um   iP          11 50 01.3
           Ud   iP          11 50 31.6 C
           De   iP          11 50 49.5 C
           Kurile Islands (h = 55 km).
           m = 5.9, M = 5.1 (Up,Ki).

 "    26   Up   iP          12 22 03.0
           Ki   eP          12 22 37
           Um   iP          12 22 25.9
           Ud   iP          12 21 51.7
                i           12 21 58.6
           De   iP          12 21 42.4
                i           12 21 49.5
           Atlantic Ocean.

 "    26   Up   iP          12 29 10.6 C
                            micr  sec
                P      Z'   0.2   0.8
           Ki   iP          12 28 25.9 C
           Sk   iP          12 29 01.2 C
           Um   iP          12 28 46.0 C
           Ud   iP          12 29 17.1 C
           De   iP          12 29 34.0 C
           Kurile Islands (h = 45 km).

 "    26   Um   iP          12 39 19.5
           Ud   iP          12 40 04.8

 "    26   Ud   iP          13 11 13.9

 "    26   Um   iP          13 50 15.4

 "    26   Up   iP          14 51 27.9
           Alaska (h = 130 km).

 "    26   Up   iP          15 20 46.0

 "    26   Ki   e           16 08 41
           Um   i(Sgl)      16 08 16.7
                i(Rg)       16 08 25.1

 "    26   Up   iP          16 52 17.3
                i           16 52 33.5

 "    26   Ki   iPn         17 36 36.8
                iPgl        17 36 43.0
                i           17 37 09.4
                iSgl        17 37 29.5
           Sk   ePn         17 36 45
           (cont.)
```

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

1973
June 26 (cont.)

Sk	iPgl		17 36 53.1			
	iSn		17 37 31.1			
Um	iPn		17 37 01.4			
	iSn		17 38 01.0			
	iSgl		17 38 24.5			
Ud	iPn		17 37 32.2			
	iSgl		17 39 30.6			

Off northwest coast of Norway, 67.4°N, 12.0°E.
Origin time = 17 35 46.

" 26

Up	iP		18 13 28.8 C	
	ipP		18 13 40.3	
	iS		18 22 30	
			micr	sec
	P	Z'	1.1	1.7
	Mx	E	4.2	15
	Mx	N	5.8	15
	Mx	Z	8.4	15
Ki	iP		18 12 44.3 C	
	ipP		18 12 54.3	
	eS		18 21 07	
	iScS		18 22 33	
			micr	sec
	P	Z'	0.3	1.0
	Mx	E	9.4	19
	Mx	N	8.6	16
	Mx	Z	13	17
Sk	iP		18 13 18.9 C	
	ipP		18 13 30.1	
Um	iP		18 13 04.2 C	
	ipP		18 13 15.2	
	iS		18 21 44	
Ud	iP		18 13 35.0 C	
	ipP		18 13 46.6	
De	iP		18 13 52.3 C	
	ipP		18 14 03.8	

Kurile Islands.
h = 40 km (Up,Ki,Sk,Um,Ud,De).
m = 6.6, M = 6.1 (Up,Ki).

" 26

Up	iP	18 27 31.1
Ud	iP	18 27 37.5

Japan (h = 45 km).

" 26

Ud	iP	18 32 54.2

" 26

Up	iP		19 10 52.7	
			micr	sec
	P	Z'	0.1	0.9
Ki	iP		19 11 59.5 C	
	i		19 12 05.6	
			micr	sec
	P	Z'	0.1	0.8

(cont.)

1973
June 26 (cont.)

Sk	iP	19 11 31.7
	i	19 11 36.3
Um	iP	19 11 24.5
Ud	iP	19 11 00.2 C
De	iP	19 10 28.4 C

Crete (h = 40 km).
m = 5.7 (Up,Ki).

" 26

Up	e(P)	21 05 39

" 26

Up	iP		22 43 01.8 C	
	ipP		22 43 09.0	
	iS		22 52 03	
	eP'P'		23 11 19	
			micr	sec
	P	Z'	0.4	1.0
	pP	Z'	0.7	1.0
	Mx	E	52	24
	Mx	N	52	20
	Mx	Z	46	20
Ki	iP		22 42 17.0 C	
	ipP		22 42 26.3	
	iP'P'		23 11 22.9	
	i		23 11 41.7	
			micr	sec
	P	Z'	0.2	1.0
	pP	Z'	0.5	1.0
	Mx	E	78	21
	Mx	N	57	20
	Mx	Z	71	19
Sk	iP		22 42 52.4 C	
	ipP		22 42 59.7	
	eP'P'		23 11 21	
Um	iP		22 42 36.5 C	
	i		22 42 37.4	
	ipP		22 42 44.3	
	iS		22 51 16	
	eP'P'		23 11 19	
Ud	iP		22 43 08.2 C	
	ipP		22 43 17.4	
	iP'P'		23 11 15.3	
De	iP		22 43 25.3 C	
	ipP		22 43 32.4	

Kurile Islands.
h = 30 km (Up,Ki,Sk,Um,Ud, De).
m = 6.6, M = 7.0 (Up,Ki).
Alternatively, a double shock, 8 sec apart, might be suggested.

" 26

Up	iP		22 52 39.2 C	
	ipP		22 52 49.8	
			micr	sec
	P	Z'	0.3	1.1

(cont.)

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

```
1973
June  26  (cont.)
          Ki  iP          22 51 54.5 C
              ipP         22 52 05.4
                          micr  sec
              P       Z'  0.3   1.0
          Sk  iP          22 52 29.8 C
              ipP         22 52 40.2
          Um  iP          22 52 14.8 C
              ipP         22 52 25.7
          Ud  iP          22 52 45.2 C
              ipP         22 52 56.3
          De  iP          22 53 02.8 C
          Japan.
          h = 40 km (Up,Ki,Sk,Um,Ud).
          m = 6.4 (Up,Ki).

 "    26  Up  iP          22 56 35.5 C
              ipP         22 56 49.2
                          micr  sec
              P       Z'  0.8   1.6
          Ki  iP          22 55 50.9 C
                          micr  sec
              P       Z'  0.5   2.0
          Sk  iP          22 56 26.5 C
          Um  iP          22 56 11.3 C
              ipP         22 56 24.6
          Ud  iP          22 56 42.0 C
              ipP         22 56 55.4
          De  iP          22 56 58.9 C
          Kurile Islands.
          h = 50 km (Up,Um,Ud).
          m = 6.5 (Up,Ki).

 "    26  Ud  iP          23 02 43.5
              ipP         23 02 56.4

 "    26  Up  iP          23 08 18.6
              i           23 08 22.8
              ipP         23 08 29.0
          Ki  iP          23 07 31.5
              ipP         23 07 44.6
          Sk  iP          23 08 08.5
          Um  iP          23 07 53.2
              ipP         23 08 04.8
          Ud  iP          23 08 23.9
              ipP         23 08 35.1
          De  iP          23 08 42.1
              ipP         23 08 52.5
          Japan.
          h = 40 km (Up,Ki,Um,Ud,De).

 "    26  Up  iP          23 25 26.1
          Um  iP          23 25 00.9
          Ud  iP          23 25 31.8
              ipP         23 25 43.1
          Japan.
          Origin time = 23 14 21.
          h = 40 km (Ud).
```

```
1973
June  26  Um  iP          23 28 44.6
          Ud  iP          23 29 11.7
          Kurile Islands.

 "    26  Up  iP          23 33 52.0
          Um  iP          23 33 27.2
          Ud  iP          23 33 58.2
          Japan.
          Origin time = 23 22 47.

 "    26  Up  iP          23 36 18.9
          Ki  iP          23 35 34.1 C
          Sk  eP          23 36 09
          Um  iP          23 35 54.2
              ipP         23 36 05.2
          Ud  iP          23 36 25.1 C
          Japan.
          Origin time = 23 25 14.
          h = 40 km (Um).

 "    26  Ud  iP          23 44 23.0

 "    27  Up  iP          00 02 20.8
              ipP         00 02 31.6
          Ki  iP          00 01 36.0
              ipP         00 01 47.3
          Um  eP          00 01 56
              ipP         00 02 08.4
          Ud  iP          00 02 27.0
          De  eP          00 02 45
          Kurile Islands.
          h = 45 km (Up,Ki,Um).

 "    27  Up  iPKP1       00 12 20.1
          Sk  iPKP1       00 12 12.5
              i           00 12 24.2
          Um  iPKP1       00 12 07.1
          Ud  iPKP1       00 12 20.5
              i           00 12 36.6
          De  ePKP1       00 12 28

 "    27  Um  iP          00 55 07.1
          Ud  iP          00 54 51.1
          De  eP          00 55 04
              i           00 55 11.4

 "    27  Up  iP          01 14 04.5 C
              ipP         01 14 16.2
                          micr  sec
              P       Z'  0.1   1.0
          Ki  iP          01 13 19.8 C
                          micr  sec
              P       Z'  0.1   1.0
          Sk  iP          01 13 55.1 C
          Um  iP          01 13 40.1 C
              ipP         01 13 50.2
          Ud  iP          01 14 10.8 C
          (cont.)
```

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

1973
June 27 (cont.)
Ud ipP 01 14 22.5
De iP 01 14 27.7 C
ipP 01 14 40.0
Japan.
h = 40 km (Up,Um,Ud,De).
m = 5.9 (Up,Ki).

" 27 Up iP 01 30 32.1
ipP 01 30 40.6
Ki iP 01 29 47.8
Sk iP 01 30 22.8
Um iP 01 30 07.4
ipP 01 30 15.8
Ud iP 01 30 38.5
ipP 01 30 47.3
De eP 01 31 01
Japan.
h = 30 km (Up,Um,Ud).

" 27 Up iP 01 52 18.1 C
i 01 52 22.9
ipP 01 52 31.5
micr sec
P Z' 0.1 0.8
Ki iP 01 51 33.0 C
micr sec
P Z' 0.1 1.0
Sk iP 01 52 08.3 C
Um iP 01 51 53.3 C
ipP 01 52 03.4
Ud iP 01 52 24.5 C
i 01 52 29.1
De iP 01 52 41.8 C
i 01 52 45.0
ipP 01 52 54.6
Kurile Islands.
h = 45 km (Up,Um,De).
m = 6.0 (Up,Ki).

" 27 Ud iP 02 08 51.8

" 27 Um i(pP) 02 48 13.4
Ud iP 02 48 34.6

" 27 Up ipP 03 18 21.2
Ud iP 03 18 17.9
ipP 03 18 27.6
Kurile Islands.
Origin time = 03 07 11.
h = 35 km (Ud).

" 27 Up iP 03 26 23.1 C
micr sec
P Z' 0.1 1.4
Ki iP 03 25 37.9 C
(cont.)

1973
June 27 (cont.)
Sk iP 03 26 13.1
Um iP 03 25 58.5
Ud iP 03 26 29.1 C
De iP 03 26 46.5 C
Kurile Islands (h = 45 km).

" 27 Up iP 03 51 33.1
Ki eP 03 50 48
Um iP 03 51 07.9
Ud iP 03 51 39.0
Japan.
Origin time = 03 40 28.

" 27 Up iP 03 53 42.9 C
ipP 03 53 54.3
Ki iP 03 52 58.5 C
ipP 03 53 11.7
micr sec
P Z' 0.1 1.2
Sk iP 03 53 33.8
Um iP 03 53 18.5 C
Ud iP 03 53 49.3 C
De iP 03 54 06.3
Japan.
h = 45 km (Up,Ki).

" 27 Up iP 04 05 00.6
Ud iP 04 05 06.8
Kurile Islands.
Origin time = 03 54 00.

" 27 Up iP 04 08 22.1 C
micr sec
Mx E 0.8 16
Mx N 1.0 14
Mx Z 1.5 16
Ki iP 04 08 06.2 C
micr sec
Mx E 1.2 14
Mx N 0.9 13
Mx Z 1.2 14
Sk iP 04 08 35.9
Um iP 04 08 06.7
Ud iP 04 08 37.0 C
De iP 04 08 42.6 C
Sinkiang, China.
M = 5.0 (Up,Ki).
Atmospheric nuclear explosion?

" 27 Up i(pP) 05 26 26.5
Ki e(pP) 05 25 47
Sk e(pP) 05 26 21
Ud e(pP) 05 26 31
i 05 26 39.2
Japan (h = N).

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

1973						
June	27	Ud	iP		05 32 42.2	
		Celebes Sea.				
"	27	Ud	iSgl		09 06 01.7	
		De	iPgl		09 04 00.2	
			iSgl		09 04 16.1	
		Southern Baltic Sea.				
		Explosion.				
"	27	De	iPgl		09 06 25.5	
			iSgl		09 06 42.9	
			iRg		09 06 52.4	
		Southern Baltic Sea.				
		Explosion.				
"	27	Up	iP		10 18 42.7	
"	27	Up	iP		12 01 06.1	
		Ki	iP		12 00 12.2	
		Sk	iP		12 00 49.3	
		Um	iP		12 00 37.8	
		Ud	iP		12 01 09.8	
		De	iP		12 01 31.0	
		Kamchatka (h = 40 km).				
"	27	Up	iPKP		12 36 26.7	
			iPKPl		12 36 30.5	
					micr	sec
			PKPl	Z'	0.2	0.9
		Ki	e(PKP)		12 36 07	
			iPKP		12 36 16.8	
			iSKPl		12 39 32.1	
					micr	sec
			PKP	Z'	0.1	1.0
		Sk	iPKPl		12 36 24.1 C	
		Um	iPKPl		12 36 18.9 C	
			i		12 36 22.8	
			iSKPl		12 39 53.6	
		Ud	iPKP		12 36 27.5	
			iPKPl		12 36 32.2	
		De	iPKP		12 36 33.1	
			iPKPl		12 36 40.5	
		Kermadec Islands (h = 40 km).				
"	27	Up	iSgl		13 05 22.5	
		Ki	iSgl		13 07 50.9	
		Sk	e		13 07 02	
			eSgl		13 07 17	
		Um	iSgl		13 05 53.8	
		Ud	iSgl		13 06 18.1	
		De	iSgl		13 06 49.0	
		Esthonia.				
		Explosion.				
"	27	Up	iP		13 19 00.4	
		(cont.)				

1973						
June	27	(cont.)				
		Up			micr	sec
			Mx	E	0.5	9
			Mx	N	0.4	9
			Mx	Z	0.8	9
		Ki	iP		13 18 54.9	
					micr	sec
			Mx	E	1.8	12
			Mx	N	0.7	9
			Mx	Z	1.8	11
		Sk	iP		13 19 26.3	
		Um	iP		13 18 51.6	
		Ud	iP		13 19 10.9	
		De	iP		13 19 18.5	
		Sinkiang, China (h = N).				
"	27	Up	iSgl		13 30 51.6	
		Sk	iSgl		13 32 32.2	
		Um	iSgl		13 31 03.3	
		Ud	iSgl		13 31 48.1	
		De	eSgl		13 32 15	
		Western USSR.				
		Explosion.				
"	27	Ud	iP		14 26 49.8	
"	27	Up	i		16 05 31.1	
		Ud	iPgl		16 04 46.2	
			iSgl		16 05 09.7	
			iRg		16 05 18.9	
"	27	Ud	iP		19 14 06.1	
"	27	Up	iP		20 33 31.8	
		Ki	iP		20 32 47.3	
		Ud	iP		20 33 37.9	
		Japan (h = N).				
"	27	Up	iPKPl		21 13 16.6	
		Um	iPKP		21 13 10.7	
			iSKPl		21 15 58.1	
		Ud	iPKPl		21 13 18.8 C	
			iSKPl		21 16 10.3	
		De	iPKPl		21 13 29.2 C	
			iSKPl		21 16 19.0	
		Tonga-Kermadec Islands (h = 540 km).				
"	28	Ud	iP		00 00 28.5	
"	28	Up	iP		01 33 44.0	
		Ud	iP		01 33 49.6	
		Japan.				
		Origin time = 01 22 39.				
"	28	Up	iP		01 52 01.5	
		(cont.)				

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

1973
June 28 (cont.)
Ki iP 01 51 05.5
Ud iP 01 52 04.7
Kamchatka.
Origin time = 01 41 36.

" 28 Ud iP 08 56 18.9

" 28 Ud iPKP 10 47 00.2
De iPKP 10 47 09.5
Fiji Islands (h = 640 km).

" 28 Up iP 11 01 26.1
ipP 11 01 38.4
micr sec
P Z' 0.1 1.0
pP Z' 0.2 1.0
Mx E 2.1 22
Mx N 5.4 23
Mx Z 3.2 17
Ki iP 11 01 01.1
i 11 01 09.4
ipP 11 01 13.7
micr sec
P Z' 0.1 1.2
pP Z' 0.2 1.1
Mx E 1.4 14
Mx N 2.0 14
Mx Z 1.7 14
Sk iP 11 01 29.4
i 11 01 37.4
ipP 11 01 42.3
Um iP 11 01 11.8
ipP 11 01 23.8
iS 11 10 45
Ud iP 11 01 35.7 C
ipP 11 01 47.8
De iP 11 01 45.7
ipP 11 01 57.9
Ryukyu Islands.
h = 45 km (Up,Ki,Sk,Um,Ud,De).
m = 5.9, M = 5.8 (Up,Ki).

" 28 Um iP 11 25 27.4

" 28 Up iSgl 11 53 28.6
Ki iSgl 11 56 04.6
Sk eSn 11 54 42
iSgl 11 55 15.0
Um iSgl 11 54 03.8
Ud iSgl 11 54 32.5
De iSgl 11 54 59.7
Esthonia.
Explosion.

" 28 Um i(Sgl) 12 34 19.7

1973
June 28 Sk iSgl 12 52 23.1
Um iSgl 12 50 56.0
Ud iSgl 12 51 40.0
De eSgl 12 52 10
Western USSR.
Explosion.

" 28 Up i(Rg) 12 54 30.9
Ud i(Rg) 12 54 15.7

" 28 Sk iPKP 14 29 48.6
ipPKP 14 30 21.5
Um iPKP 14 29 43.7
ipPKP 14 30 16.5
Ud iPKP 14 29 53.2
ipPKP 14 30 25.8
De iPKP 14 30 00.5
ipPKP 14 30 32.9
Santa Cruz Islands.
h = 120 km (Sk,Um,Ud,De).

" 28 Ud iP 14 46 36.0
Molucca Passage (h = N).

" 28 Up iP 15 26 10.7
i 15 26 18.8

" 28 Sk eP 17 28 34
Ud iP 17 28 30.0
New Guinea (h = 60 km).

" 28 Up iP 19 27 01.1
Sk iP 19 26 34.9
Um iP 19 26 46.4
Ud iP 19 26 53.0 C
De iP 19 27 10.5
Nevada.
Underground explosion.

" 28 Ud iP 19 35 30.0

" 28 Ud i(Rg) 21 16 07.9

" 28 Up iP 22 08 30.2 C
micr sec
P Z' 0.1 1.0
Ki iP 22 08 13.6 C
micr sec
P Z' 0.1 1.0
Sk iP 22 08 40.6 C
Um iP 22 08 17.5 C
Ud iP 22 08 42.6 C
Szechwan, China (h = N).
m = 6.0 (Up,Ki).

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

```
1973
June  28  Up  iP         22 09 16.3
          Ki  iP         22 09 00.1
          Sk  iP         22 09 27.5
          Um  iP         22 09 03.8
          Ud  iP         22 09 28.9 C
          Szechwan, China.
          Origin time = 21 58 49.

 "    28  Up  iP         22 09 58.2 C
                         micr sec
              P      Z'  0.3  1.2
          Ki  iP         22 09 42.0
                         micr sec
              P      Z'  0.2  1.4
              Mx     E   0.5  12
              Mx     N   1.8  20
              Mx     Z   0.6  14
          Sk  iP         22 10 08.7 C
          Um  iP         22 09 45.5
          Ud  iP         22 10 10.8 C
          De  eP         22 10 16
          Szechwan, China (h = N).
          m = 6.3 (Up,Ki).

 "    28  Up  iP         22 15 10.3
          Ki  iP         22 14 53.5
          Sk  iP         22 15 23.6
          Um  iP         22 14 56.4
          Ud  iP         22 15 23.4
          Szechwan, China (h = N).

 "    28  Up  iP         23 11 56.2

 "    28  Up  iP         23 29 12.2
          Ud  iP         23 29 17.8
              i          23 29 22.9
          Japan.
          Origin time = 23 18 07.

 "    29  Ud  iP         00 01 40.0

 "    29  Up  iP         00 15 15.7 C
                         micr sec
              P      Z'  0.1  0.8
          Ki  iP         00 14 59.1
          Sk  iP         00 15 26.4
          Um  iP         00 15 02.6
          Ud  iP         00 15 27.9 C
          De  eP         00 15 34
          Szechwan, China (h = N).

 "    29  Up  iP         00 54 31.6

 "    29  Up  iP         01 38 52.3
          Ud  iP         01 38 58.6
          Kurile Islands (h = 60 km).

1973
June  29  Up  iP         02 36 08.6
              ipP        02 36 15.0
                         micr sec
              P      Z'  0.1  1.2
              Mx     E   0.7  18
              Mx     N   0.8  17
              Mx     Z   0.6  18
          Ki  iP         02 35 39.4
              ipP        02 35 46.9
              iSKS       02 45 51
                         micr sec
              P      Z'  0.1  1.0
              Mx     E   0.8  17
              Mx     N   0.5  15
              Mx     Z   0.7  17
          Sk  iP         02 36 05.9
          Um  iP         02 35 51.4
              ipP        02 35 59.6
          Ud  eP         02 36 15
              ipP        02 36 21.5
          De  iP         02 36 26.6
              ipP        02 36 33.2
          Mariana Islands.
          h = 25 km (Up,Ki,Um,Ud,De).
          m = 6.0, M = 5.3 (Up,Ki).

 "    29  Up  iP         03 37 51.7 C
              iS         03 46 46
                         micr sec
              P      Z'  0.5  1.0
              Mx     E   0.9  18
              Mx     N   0.9  17
              Mx     Z   1.8  17
          Ki  iP         03 37 06.7
              ipP        03 37 17.9
              iPcP       03 37 47.4
                         micr sec
              P      Z'  0.1  1.0
              Mx     E   1.7  19
              Mx     N   2.5  20
              Mx     Z   2.8  20
          Sk  iP         03 37 42.3 C
              iPcP       03 38 09.8
          Um  iP         03 37 27.1 C
              iS         03 46 00
          Ud  iP         03 37 58.1 C
          De  iP         03 38 15.4 C
              iPcP       03 38 32.1
          Japan.
          h = 40 km (Ki).
          m = 6.3, M = 5.4 (Up,Ki).

 "    29  Sk  e          08 08 21
          Um  iP         08 08 23.9
          Off Pacific coast of Central
          America (h = N).
```

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

1973

June 29	Ud	iSgl		11 52 47.9	
	De	i		11 52 19.3	
		iRg		11 52 21.5	

" 29	Ud	iP		12 30 13.6	

Kurile Islands (h = N).

" 29	Um	iSgl		13 11 06.7	

Lake Ladoga.
Explosion.

" 29	Up	iP		13 46 32.2	
	Um	iP		13 46 08.2	
	Ud	iP		13 46 37.9	

Japan.
Origin time = 13 35 28.

" 29	Um	iSgl		15 58 02.5	

Western USSR.
Explosion.

" 29	Sk	iPKP		15 59 27.4	

South Indian Ocean (h = N).

" 29	Ud	iP		16 50 08.7	

Kurile Islands (h = N).

" 29	Up	iP		17 12 33.0	
	Sk	iP		17 13 10.4	
	Ud	iP		17 12 38.9	
	De	iP		17 12 06.4	

Crete.

" 29	Ud	iP		17 16 20.7	

Greece.

" 29	Up	iP		18 02 29.4	
				micr	sec
		P	Z'	0.2	1.2
	Ki	iP		18 02 12.6	
				micr	sec
		P	Z'	0.1	1.3
		Mx	E	0.4	12
		Mx	N	0.8	17
		Mx	Z	0.5	12
	Sk	iP		18 02 39.9	
	Um	iP		18 02 16.7 C	
	Ud	iP		18 02 41.7 C	
	De	iP		18 02 47.3	

Szechwan, China (h = N).
m = 6.0 (Up,Ki).

" 29	Sk	eP		18 16 43	
	Um	iP		18 16 19.7	
	Ud	iP		18 16 44.7	

Szechwan, China.
Origin time = 18 06 04.

1973

June 29	Ki	iP		19 31 19.3	
	Um	iP		19 31 32.9	
		i		19 31 47.6	

Kurile Islands.

" 29	Ud	iP		19 33 18.4	

" 29	Sk	iP		23 19 42.3	
	Ud	iP		23 19 55.5	

North Atlantic Ocean
(h = N).

" 30	Um	iP		05 17 24.6	
	Ud	iP		05 17 49.6	

Aleutian Islands.

" 30	Up	iPKP		05 42 24.2	
	Um	iPKP		05 42 15.6	
	Ud	iPKPl		05 42 24.9	
	De	iPKPl		05 42 34.8	

Fiji Islands (h = 580 km).

" 30	Up			micr	sec
		Mx	E	0.6	20
		Mx	Z	0.9	21
	Ki			micr	sec
		Mx	E	0.6	16
		Mx	N	0.6	19
		Mx	Z	0.9	20
	Sk	iP		08 21 19.1	
	Um	iP		08 21 34.4	
	Ud	iP		08 21 29.1	

Guatemala (h = 80 km).
M = 5.1 (Up,Ki).

" 30	Up	iP		09 52 35.8	
	Ud	iP		09 52 46.7	

Szechwan, China.
Origin time = 09 42 07.

" 30	Up	eP		10 43 07	

" 30	Up	i(P)		11 25 27.6	
	Um	i(P)		11 25 20.7	

" 30	Ud	iP		12 24 41.8	

" 30	Up	i(P)		12 36 32.7	
		i		12 36 36.4	
	Ud	i		12 37 28.0	

" 30	Ud	iP		13 42 43.2	

" 30	Ud	iP		15 42 16.9	

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

1973							
June	30	Up	iP		17 55 18.4		
			i		17 55 22.4		
					micr	sec	
			P	Z'	0.1	1.2	
			i	Z'	0.1	0.9	
		Ki	iP		17 54 55.2		
			i		17 54 58.6		
					micr	sec	
			i	Z'	0.1	1.0	
		Sk	iP		17 55 22.5		
			i		17 55 26.8		
		Um	iP		17 55 03.9		
			i		17 55 07.2		
		Ud	iP		17 55 27.7		
			i		17 55 31.5		
		De	iP		17 55 35.6		
			i		17 55 39.0		

Formosa (h = N).
m = 5.9 (Up,Ki).
Two onsets, in average 3.7 sec apart, the first of longer period and lower amplitude than the second one.

"	30	Up	iP		18 06 38.4		
			ipP		18 06 45.2		
					micr	sec	
			P	Z'	0.3	1.3	
			Mx	E	0.8	16	
			Mx	N	0.8	17	
			Mx	Z	1.3	14	
		Ki	iP		18 05 44.2		C
					micr	sec	
			P	Z'	0.2	1.1	
			Mx	E	1.0	12	
			Mx	N	1.0	16	
			Mx	Z	1.4	15	
		Sk	iP		18 06 18.8		C
		Um	iP		18 06 10.4		C
			ipP		18 06 19.6		
		Ud	iP		18 06 40.0		C
		De	iP		18 07 02.0		

Aleutian Islands.
h = 30 km (Up,Um).
m = 6.2, M = 5.2 (Up,Ki).

"	30	Up	iPKP1	19 39 40.5
		Um	iSKP1	19 42 24.3
		Ud	iPKP1	19 39 42.7
		De	iPKP1	19 39 53.0

Tonga-Kermadec Islands (h = 490 km).

Markus Båth

February 15, 1975

SEISMOLOGISKA INSTITUTIONEN
BOX 517
751 20 UPPSALA 1

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BOX 517
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SWEDEN

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

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

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

J U L Y 1 - 31, 1973

1973						
July	1	Up	iP		02 04 59.3	
		Ki	iP		02 04 12.6	
		Um	iP		02 04 33.7	
		Ud	iP		02 05 05.3	
		De	iP		02 05 23.1	
		Okhotsk Sea (h = 440 km).				
"	1	Ud	iP		03 06 32.0	
"	1	Ud	iP		04 58 34.8	
"	1	Up	iP		06 12 35.1	
		Um	eP		06 12 10	
		Ud	iP		06 12 41.0	
		Japan (h = N).				
"	1	Up	iP		06 36 28.0	
		Um	iP		06 36 15.0	
		Ud	iP		06 36 40.4	
		Szechwan, China (h = N).				
"	1	Ud	iP		07 03 49.6	
"	1	Up	iSgl		08 02 19.1	
		Ki	iSn		07 59 03.2	
			iSgl		07 59 24.2	
		Sk	iSgl		08 01 51.7	
		Um	iSn		07 59 41.6	
			iSgl		08 00 18.1	
		Ud	iSgl		08 02 54.7	
		De	eSgl		08 04 22	
		Northwest USSR.				
		Explosion.				
"	1	Up	iPKP1		08 00 34.6	
			i		08 00 48.9	
		Ud	iPKP1		08 00 35.6	
			i		08 00 50.2	
		De	ePKP1		08 00 45	
"	1	Ud	eP		09 21 37	

1973						
July	1	Ud	iP		09 24 03.5	
"	1	Ud	ePKP1		11 11 08	
		De	iPKP1		11 11 18.0	
"	1	Up	iP		13 43 45.0 C	
			iS		13 52 02	
			iP'P'		14 13 11.3	
					micr	sec
			P	Z'	0.7	0.9
			Mx	E	22	23
			Mx	N	28	24
			Mx	Z	33	23
		Ki	iP		13 42 52.1 C	
			iS		13 50 29	
					micr	sec
			P	Z'	2.0	1.6
			Mx	E	50	21
			Mx	N	61	24
			Mx	Z	59	25
		Sk	iP		13 43 14.4 C	
			eP'P'		14 13 19	
		Um	iP		13 43 20.7 C	
			iS		13 51 16	
			iP'P'		14 13 16.5	
		Ud	iP		13 43 39.9 C	
			eP'P'		14 13 15	
		De	iP		13 44 03.5 C	
			iP'P'		14 13 01.0	
		Alaska (h = N).				
		m = 6.9, M = 6.6 (Up,Ki).				
"	1	Up	iP		13 58 27.2	
"	1	Up	iP		15 22 16.4 C	
			ipP		15 22 24.3	
					micr	sec
			P	Z'	0.1	0.9
		Ki	iP		15 21 23.6 C	
		Sk	iP		15 21 46.9 C	
		(cont.)				

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

1973
July 1 (cont.)

		Sk	ipP		15 21 55.2	
		Um	iP		15 21 51.2	C
			ipP		15 21 59.3	
		Ud	iP		15 22 11.0	C
			ipP		15 22 18.7	
		De	iP		15 22 34.5	C
			ipP		15 22 42.2	

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

"	1	Up	iP		16 24 22.7	
		Um	iP		16 24 03.3	
		Ud	iP		16 24 37.0	
		De	iP		16 24 48.3	

"	1	Up	iP		16 30 43.2	
		Ki	iP		16 30 14.5	
		Sk	iP		16 30 40.7	
		Um	iP		16 30 26.8	
		Ud	iP		16 30 49.8	

Mariana Islands (h = 230 km).

"	1	Um	iP		21 28 28.2	
		Ud	iP		21 28 48.7	

"	1	Um	iPKP		21 32 08.2	
		Ud	iPKP		21 32 17.9	

"	2	Up	iP		01 10 48.4	
			i		01 10 55.2	
		Ki	iP		01 11 04.0	
		Sk	iP		01 10 27.6	
		Um	iP		01 10 58.0	
		Ud	i(P)		01 10 31.6	
		De	iP		01 10 27.9	

North Atlantic Ocean (h = N).

"	2	Ud	iP		01 33 11.6	

Mindanao (h = 100 km).

"	2	Sk	eP		01 43 44	

North Atlantic Ocean (h = N).

"	2	Ki	iP		01 45 51.8	
		Um	iP		01 46 39.1	

North of Svalbard (h = N).

"	2	Up	eP		01 51 18	
		Ki	iP		01 49 51.3	C
					micr sec	
			P	Z'	0.3 1.5	
			Mx	E	0.7 15	
			Mx	N	0.8 17	
			Mx	Z	1.0 17	
		Sk	iP		01 50 38.5	

(cont.)

1973
July 2 (cont.)

		Um	iP		01 50 38.1	C
			i		01 50 50.2	
		Ud	iP		01 51 14.2	
		De	iP		01 51 47.3	

North of Svalbard (h = N).

"	2	Up	iSg1		04 09 28.5	
		Ud	iSg1		04 09 09.9	
		De	iPg1		04 07 23.4	
			iSg2		04 07 33.5	

Skåne, Sweden,
56.2°N, 12.8°E.
Origin time = 04 07 11.

"	2	Up	iP		06 02 30.8	C
			ipP		06 02 47.7	
					micr sec	
			P	Z'	0.1 0.8	
		Ki	iP		06 01 46.7	
			ipP		06 02 04.4	
					micr sec	
			P	Z'	0.1 1.0	
		Sk	iP		06 02 21.6	
			ipP		06 02 38.7	
		Um	iP		06 02 06.4	
			ipP		06 02 22.9	
		Ud	iP		06 02 37.1	C
			i		06 02 48.2	
			ipP		06 02 54.5	
		De	iP		06 02 54.3	C

Japan.
h = 60 km (Up,Ki,Sk,Um,Ud).
m = 5.8 (Up,Ki).

"	2	Up	iP		06 06 39.2	D
			ipP		06 06 48.6	
					micr sec	
			P	Z'	0.2 1.0	
		Ki	iP		06 05 45.1	D
			ipP		06 05 54.2	
					micr sec	
			P	Z'	0.2 1.0	
		Sk	iP		06 06 21.3	D
			ipP		06 06 31.1	
		Um	iP		06 06 10.5	D
			ipP		06 06 20.0	
		Ud	iP		06 06 42.2	D
			ipP		06 06 51.2	
			iPcP		06 07 17.3	
		De	iP		06 07 04.0	D
			iPcP		06 07 32.0	

Komandorsky Islands.
h = 35 km (Up,Ki,Sk,Um,Ud).
m = 6.2 (Up,Ki).

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

1973					
July	2	Up	iSgl	12 17 09.4	
			i	12 17 16.9	
		Ki	iSgl	12 19 14.1	
		Sk	iSgl	12 18 57.4	
		Um	iSgl	12 17 26.2	
			iRg	12 17 58.7	
		Ud	iSgl	12 18 10.2	
		De	eSgl	12 18 40	
		Western USSR.			
		Explosion.			
"	2	Up	iP	12 18 48.5	
		Sk	eP	12 19 27	
			i	12 19 32.6	
		Um	iP	12 19 23.6	
		Ud	iP	12 18 54.1	
			i	12 19 01.3	
		Aegean Sea (h = N).			
"	2	Um	iSgl	12 28 14.3	
		Ud	iSgl	12 28 55.6	
		Western USSR.			
		Explosion.			
"	2	Up	iSgl	12 45 15.2	
		Ki	iPn	12 40 32.9	
			iPgl	12 40 41.1	
			i	12 41 07.8	
			iSn	12 41 19.1	
			iS*	12 41 31.3	
			iSgl	12 41 34.5	
		Sk	iSgl	12 44 22.3	
		Um	iSn	12 42 28.9	
			iSgl	12 43 07.3	
		Ud	eSgl	12 45 38	
		Northwest USSR-Norway border region.			
		Explosion.			
		Unusually large for this area.			
"	2	Up	iP	12 56 04.9	
		Ki	eP	12 56 10	
		Ud	iP	12 56 19.5	
		Tadzhik SSR (h = N).			
"	2	Up	iP	14 46 25.7	
		Ud	iP	14 46 29.8	
		De	eP	14 46 51	
		Kamchatka (h = N).			
"	2	Up	iPKP1	14 59 17.3	
		Ud	iPKP1	14 59 18.5	
		De	iPKP1	14 59 29.4	
"	2	Up	iSgl	15 05 33.8	
		Um	iSgl	15 06 13.1	
		(cont.)			
1973					
July	2	(cont.)			
		Ud	eSgl	15 06 35	
		De	eSgl	15 07 13	
		Gulf of Finland, 59.9°N, 23.1°E.			
		Origin time = 15 04 05.			
		Explosion?			
"	2	De	e(Sgl)	15 52 19	
"	2	De	eP	16 03 56	
			i	16 04 10.1	
"	2	De	iP	17 18 46.4	
"	2	Up	iP	18 33 51.2	C
		Ki	iP	18 33 51.7	C
		Sk	iP	18 33 37.2	C
		Um	iP	18 33 55.0	C
		Ud	iP	18 33 39.7	C
		De	iP	18 33 42.7	C
		Dominican Republic (h = 25 km).			
"	2	Ud	iP	20 06 07.7	
"	2	Up	iPKP1	20 15 05.0	C
			iPKP2	20 15 08.5	
			ipPKP1	20 15 19.9	
		Ki	ePKP	20 14 47	
		Sk	iPKP1	20 14 58.5	
			ipPKP1	20 15 11.9	
		Um	iPKP1	20 14 52.8	C
			i	20 15 01.5	
		Ud	iPKP1	20 15 06.4	C
			iPKP2	20 15 10.8	
			ipPKP1	20 15 19.7	
		De	iPKP1	20 15 15.1	C
			iPKP2	20 15 25.0	
			ipPKP1	20 15 29.0	
		Kermadec Islands.			
		h = 50 km (Up,Sk,Ud,De).			
"	2	Up	iP	23 04 56.9	
		Ki	eP	23 04 09	
		Sk	iP	23 04 32.5	
		Um	iP	23 04 37.0	
		Ud	eP	23 04 52	
		De	iP	23 05 15.4	
		Alaska (h = N).			
"	3	Up	iP	03 05 57.4	
		Ud	iP	03 06 03.6	
		Kurile Islands (h = 50 km).			
"	3	Up	iP	04 12 26.6	
		(cont.)			

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

1973						
July	3	(cont.)				
		Up	iPP		04 15 51.7	
			iS		04 22 48	
					micr	sec
			P	Z'	0.1	1.1
			Mx	E	1.3	32
			Mx	N	1.5	32
			Mx	Z	1.7	30
		Ki	iP		04 12 10.4	
			iPP		04 15 22.7	
					micr	sec
			P	Z'	0.4	1.5
			Mx	E	1.4	24
			Mx	N	1.4	23
			Mx	Z	1.6	23
		Sk	iP		04 12 08.5	
			i		04 12 29.5	
		Um	iP		04 12 20.4	
			iPP		04 15 40.1	
			iS		04 22 30	
		Ud	iP		04 12 19.3	
		De	iP		04 12 28.5	
		Mexico (h = 130 km).				
		m = 5.9, M = 5.4 (Up,Ki).				
"	3	Ud	i(P)		04 16 48.8	
"	3	Ud	iP		04 21 08.9	
"	3	Up	iP		06 50 20.5	
			iS		07 00 56	
					micr	sec
			P	Z'	0.1	0.9
			Mx	E	5.1	17
			Mx	N	4.6	23
			Mx	Z	4.6	20
		Ki	iP		06 50 02.6	
			iS		07 00 25	
					micr	sec
			P	Z'	0.2	1.0
			Mx	E	4.3	19
			Mx	N	8.9	20
			Mx	Z	5.1	17
		Sk	iP		06 50 25.0	
		Um	iP		06 50 08.8	
			iS		07 00 33	
		Ud	iP		06 50 29.6 C	
		De	iP		06 50 35.9	
			iPP		06 54 10.1	
		Samar (h = 45 km).				
		m = 6.2, M = 6.1 (Up,Ki).				
"	3	Up	iP		07 16 32.0 C	
			iSKS		07 26 56	
			iS		07 27 10	
		(cont.)				

1973						
July	3	(cont.)				
		Up			micr	sec
			P	Z'	1.7	1.8
			Mx	E	18	17
			Mx	N	26	18
			Mx	Z	39	17
		Ki	iP		07 16 13.0 C	
			iS		07 26 33	
					micr	sec
			P	Z'	1.4	1.8
			Mx	E	21	20
			Mx	N	47	20
			Mx	Z	21	17
		Sk	iP		07 16 34.6 C	
		Um	iP		07 16 19.4 C	
		Ud	iP		07 16 39.9 C	
		De	iP		07 16 46.5 C	
			iPP		07 20 33.0	
		Samar (h = N).				
		m = 7.0, M = 6.8 (Up,Ki).				
"	3	Up	iP		07 19 08.8 C	
			iS		07 29 48	
					micr	sec
			P	Z'	0.2	1.4
		Ki	iP		07 18 49.7 C	
					micr	sec
			P	Z'	0.3	1.5
		Um	iP		07 18 58.4 C	
		Ud	iP		07 19 17.4 C	
		De	iP		07 19 23.7 C	
		Samar.				
		Origin time = 07 06 21.				
		m = 6.3 (Up,Ki).				
"	3	Ud	iP		07 34 12.1	
"	3	Ud	iP		07 49 56.6	
		Tien-Shan.				
"	3	Ud	iP		07 58 05.2	
"	3	Up	iP		08 02 08.2	
		Ki	iP		08 01 50.1	
			i		08 01 59.8	
		Um	iP		08 01 56.6 C	
		Ud	iP		08 02 16.7 C	
		De	iP		08 02 23.7	
		Samar (h = 50 km).				
"	3	Up	iP		08 10 10.3	
			ipP		08 10 20.9	
					micr	sec
			P	Z'	0.1	0.6
		Ki	iP		08 09 51.8	
		(cont.)				

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

1973 July	3	(cont.)				
		Ki	ipP		08 10 02.9	
					micr	sec
			P	Z'	0.2	0.9
		Sk	iP		08 10 13.8	
		Um	iP		08 09 57.9	
			ipP		08 10 09.3	
		Ud	iP		08 10 18.8	
			ipP		08 10 30.2	
		De	iP		08 10 25.1	
			ipP		08 10 35.2	
		Samar.				
		h = 40 km (Up,Ki,Um,Ud,De).				
		m = 6.3 (Up,Ki).				
"	3	Up	iP		08 41 22.9	
		Ud	iP		08 41 31.2	
		Samar (h = 40 km).				
"	3	Ud	iP		08 58 12.0	
"	3	Ud	iP		09 16 27.1	
			ipP		09 16 37.8	
		Samar.				
		h = 40 km (Ud).				
"	3	Ud	iP		10 00 27.2	
			i		10 00 37.9	
"	3	Up	iP		11 08 28.0	
					micr	sec
			P	Z'	0.1	0.8
		Ki	iP		11 07 56.4	
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP		11 08 27.5	
		Um	iP		11 08 09.2	
		Ud	iP		11 08 36.5	
		De	iP		11 08 48.6	
		Japan (h = 140 km).				
		m = 5.6 (Up,Ki).				
"	3	Ud	iP		11 34 09.6	
		Aleutian Islands (h = 35 km).				
"	3	Ud	iP		11 35 28.5	
		De	iP		11 35 38.7	
"	3	Up	iP		11 46 27.3	
		Ki	iP		11 46 08.3	
		Um	iP		11 46 14.5	
		Ud	iP		11 46 35.2 C	
			ipP		11 46 45.2	
		De	eP		11 46 42	
		Samar.				
		h = 35 km (Ud).				

1973 July	3	Up	iSgl	12 07 02.9
		Ki	iSgl	12 10 25.3
		Sk	eSgl	12 09 14
		Um	iSgl	12 08 19.0
		Ud	iSgl	12 08 05.9
		De	iSgl	12 08 25.2
		Baltic Sea near Dagö,		
		59.1°N, 21.9°E.		
		Origin time = 12 05 50.		
		Explosion?		
"	3	Um	iP	12 18 23.1
		Ud	eP	12 18 41
"	3	Up	iSgl	13 01 53.3
		Ki	iSgl	13 04 45.6
		Sk	iSgl	13 03 51.3
		Um	iSgl	13 02 43.0
		Ud	eSgl	13 02 59
		De	iSgl	13 03 22.2
		Esthonia.		
		Explosion.		
"	3	Up	iSgl	15 21 20.6
			iSg2	15 21 29.0
		Um	iSgl	15 23 22.4
		Ud	iSgl	15 21 12.2
		De	iSgl	15 19 20.4
		Probably Baltic Sea, south		
		of Sweden.		
		Explosion?		
"	3	Up	iSgl	15 45 26.8
		Sk	eSgl	15 47 42
		Um	iSgl	15 46 43.7
		Ud	iSgl	15 46 29.3
		De	iS*	15 46 42.7
			iSgl	15 46 49.7
		Baltic Sea near Dagö,		
		59.1°N, 21.9°E.		
		Origin time = 15 44 14.		
		Explosion?		
		Cf. July 3, 12 05.		
"	3	Up	iPKP2	15 52 12.1
		Um	iPKP2	15 51 54.7
		Ud	iPKP	15 52 03.1
			iPKP2	15 52 14.4
		Kermadec Islands (h = 25 km).		
"	3	Ki	i(PP)	16 12 45.1
		Turkey (h = 5 km).		
"	3	Ud	iP	16 14 00.5
		Adriatic Sea (h = 45 km).		

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

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1973
July    3   Up   iP          16 40 48.0
            Ki   iP          16 39 54.8
            Sk   iP          16 40 18.7
            Um   eP          16 40 23
            Ud   iP          16 40 42.6
            De   iP          16 41 06.3
            Alaska (h = N).

 "      3   Up   iP          17 09 45.8 C
                 iS          17 18 04
                 iP'P'       17 39 07.0
                             micr sec
                 P       Z'  1.0  1.4
                 Mx      E   4.0  23
                 Mx      N   8.6  20
                 Mx      Z   13   21
            Ki   iP          17 08 52.7 C
                             micr sec
                 P       Z'  0.9  1.4
                 Mx      E   9.0  25
                 Mx      N   11   26
                 Mx      Z   12   25
            Sk   iP          17 09 15.9 C
            Um   iP          17 09 20.9 C
                 iS          17 17 18
                 iP'P'       17 39 15.0
            Ud   iP          17 09 40.2 C
            De   iP          17 10 04.1 C
                 iP'P'       17 39 01.5
            Alaska (h = N).
            m = 6.8, M = 6.0 (Up,Ki).

 "      3   Up   iP          17 20 50.7
            Sk   eP          17 20 21
            Ud   eP          17 20 46
            De   eP          17 21 09
            Alaska.
            Origin time = 17 10 41.

 "      3   Up   iP          17 48 06.7
            Ud   iP          17 48 13.5

 "      3   Up   iP          17 54 27.1 C
                             micr sec
                 P       Z'  0.1  1.0
            Ki   iP          17 53 34.5 C
                             micr sec
                 P       Z'  0.1  1.0
            Sk   iP          17 53 58.0 C
            Um   iP          17 54 02.3 C
            Ud   iP          17 54 22.1 C
            De   iP          17 54 45.7 C
            Alaska (h = N).
            m = 5.9 (Up,Ki).

 "      3   Up   iP          18 57 07.2
            Ud   iP          18 57 13.7

1973
July    3   Up   iP          20 40 53.8
            Ki   iP          20 40 35.2
            Ud   iP          20 41 02.1
            Samar (h = 60 km).

 "      3   Up   iP          20 50 20.1
            Ud   iP          20 50 26.6
            De   eP          20 50 44

 "      3   Up   iP          23 29 28.0
            Ki   eP          23 29 22
            Sk   eP          23 29 44
            Um   eP          23 29 21
            Ud   iP          23 29 41.4

 "      4   Ki   eP          01 40 34
            Ud   iP          01 41 00.9

 "      4   Up   iP          01 55 43.4
            Ud   iP          01 55 49.1
            Kurile Islands (h = N).

 "      4   Ud   iPP         02 08 09.9
            Chile (h = N).

 "      4   Ud   iP          03 58 20.1

 "      4   Ki   eP          07 26 22
            Alaska (h = N).

 "      4   Ki   iPn         09 12 58.3
                 iPgl        09 13 06.8
                 iSn         09 13 44.9
                 iS*         09 13 55.2
                 iSgl        09 13 58.8
            Sk   eSgl        09 16 45
            Um   iSn         09 14 55.9
                 i           09 15 11.4
                 iSgl        09 15 32.2
                 iSg2        09 15 42.9
            Northwest USSR-Norway
            border region.
            Explosion.

 "      4   Up   iP          10 01 21.0
            Ki   iP          10 00 27.6
            Sk   eP          10 00 59
            Um   iP          10 00 53.9
                 iPcP        10 01 29.2
            Ud   iP          10 01 20.4
            De   iP          10 01 42.9
            Aleutian Islands (h = 40 km).

 "      4   Up   iSgl        12 53 17.9
            Ki   iSgl        12 55 53.9
            Sk   eSgl        12 55 05
            (cont.)
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Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973

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

1973

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

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

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

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

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

```
1973
July    5   Ki   iPgl        20 08 07.8
                 i           20 08 30.0
                 iSgl        20 08 45.2
            Sk   eS*         20 08 45
                 iSgl        20 08 50.3
            Um   iPgl        20 08 23.5
                 iSn         20 08 57.8
                 iSgl        20 09 11.9
            Ud   iSgl        20 10 37.3
            Nordland, Norway,
            66.4°N, 14.4°E.
            Origin time = 20 07 20.
            Explosion.

 "      5   Up   iPKPl       20 59 57.0
            Ud   iPKPl       20 59 59.0
            De   iPKPl       21 00 09.0

 "      5   Um   iP          21 17 40.7
            Ud   eP          21 17 20
            Turkey (h = 40 km).

 "      5   Ud   iP          22 25 34.3
            Albania (h = N).

 "      5   Up   iPl         22 58 58.3 C
                 iP2         22 59 01.5
                 iP3         22 59 10.7
                             micr  sec
                 P2       Z' 0.2   1.0
                 P3       Z' 1.3   1.5
                 Mx       E  7.2   23
                 Mx       N  25    22
                 Mx       Z  21    16
            Ki   iPl         22 58 39.6 C
                 iP2         22 58 42.7
                 iP3         22 58 52.7
                             micr  sec
                 Pl       Z' 0.1   1.0
                 P2       Z' 0.3   1.0
                 P3       Z' 1.5   1.5
            Sk   iPl         22 59 02.8
                 iP2         22 59 06.4
            Um   iPl         22 58 46.0 C
                 iP2         22 58 49.3
                 iP3         22 58 58.7
                 iS          23 09 08
                 ePKKP       23 17 00
            Ud   iPl         22 59 06.7 C
                 iP2         22 59 09.9
                 iP3         22 59 20.0
                 iPKKP       23 16 50.2
            De   iP2         22 59 15.8
                 iP3         22 59 25.3
            Luzon (h = 40 km).
            (cont.)

1973
July    5   (cont.)
            m = 6.0 (Pl), 6.4 (P2),
            7.0 (P3) (Up,Ki).
            Multiple P-phases with
            successively increasing
            amplitudes. In average:
            P3 - Pl = 12.9 sec,
            P2 - Pl = 3.3 sec.

 "      5   Um   eP          23 46 00
            Ud   iP          23 46 20.5

 "      6   Up   iPl         00 00 24.3
                 iP2         00 00 31.1
            Ki   iP2         00 00 12.0
            Um   iP2         00 00 18.4
            Ud   ePl         00 00 32
                 iP2         00 00 38.3
            Luzon (h = 55 km).

 "      6   Up   eP2         01 22 54
            Um   iPl         01 22 33.5
            Ud   ePl         01 22 57
                 iP2         01 23 04.0
            Luzon (h = 55 km).

 "      6   Ud   iP          02 21 39.2
            Hindu Kush.
            Intermediate depth.

 "      6   Um   iPKPl       06 50 27.4
            De   iPKP2       06 50 55.7

 "      6   Ud   i(P)        07 28 40.2

 "      6   Ud   i(P)        08 42 53.2

 "      6   Up   Mx          10 29
                             micr  sec
                 Mx       E  1.0   20
                 Mx       N  0.8   19
                 Mx       Z  1.9   20
            Ki   Mx          10 42
                             micr  sec
                 Mx       E  1.2   18
                 Mx       N  0.9   18
                 Mx       Z  0.9   17
            Chile (h = 35 km).
            M = 5.5 (Up,Ki).

 "      6   Up   iSgl        11 44 32.4
            Ki   iPn         11 40 18.6
                 iSn         11 41 17.8
                 iSgl        11 41 44.6
            Sk   iSgl        11 44 05.9
            Um   iSn         11 41 57.8
            (cont.)
```

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

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

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

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

1973						
July	7	(cont.)				
		Ud	iP		03 08 13.0 C	
		De	iP		03 08 35.6	
			ipP		03 08 48.1	
		Aleutian Islands. h = 45 km (Um,De).				
"	7	Up	eSgl		08 24 20	
		Um	eSgl		08 25 12	
		Ud	eSgl		08 25 22	
"	7	Up	iSgl		08 33 19.9	
			iRg		08 33 27.0	
		Åland Islands, Baltic Sea. Origin time = 08 32 38. Solution from Finnish regional bulletin.				
"	7	Up	iPKP1		08 38 05.5	
		Ud	iPKP1		08 38 07.5	
		De	iPKP1		08 38 17.6	
		Tonga-Kermadec Islands (h = 520 km).				
"	7	Up	iP		10 15 36.7	
		Um	iP		10 15 16.2	
		Ud	iP		10 15 44.1	
		Japan (h = 55 km).				
"	7	Up	iSgl		10 54 14.6	
		Ki	eSgl		10 56 23	
		Sk	iSgl		10 55 59.5	
		Um	iSgl		10 54 31.0	
		Ud	iSgl		10 55 14.0	
		De	iSgl		10 55 44.5	
		Western USSR. Explosion.				
"	7	Up	eP		11 47 43	
		Ud	iP		11 47 52.9	
"	7	Up	iP		11 49 08.4	
		Ki	iP		11 49 05.9	
		Um	iP		11 49 00.7	
		Ud	iP		11 49 24.4	
		De	iP		11 49 25.2	
		Sinkiang, China.				
"	7	Ki	iPn		12 20 42.9	
			iPgl		12 20 51.8	
			iSn		12 21 30.4	
			iSgl		12 21 48.0	
		Um	iSgl		12 23 15.2	
		Northwest USSR-Norway border region. Explosion.				
1973						
July	7	Ki	iP		12 27 05.9	
		Um	iP		12 27 15.6	
		Mariana Islands (h = 130 km).				
"	7	Um	iPP		13 03 43.0	
		Chile (h = 90 km).				
"	7	Up	iPKP1		14 20 34.2	
		Ki	iPKP		14 20 26.6	
		Um	iPKP		14 20 27.5	
		De	iPKP1		14 20 46.5 D	
"	7	Ki	ePKP		15 59 07	
		Um	iPKP		15 59 12.2	
		De	iPKP		15 59 25.7	
		New Britain (h = 55 km).				
"	7	Up			micr	sec
			Mx	E	0.7	19
			Mx	N	0.6	18
			Mx	Z	1.0	18
		Ki	iPP		19 04 27.3	
					micr	sec
			Mx	E	0.7	20
			Mx	N	0.5	17
		Um	iPKP		19 03 11.6	
			iPKKP		19 13 49	
		Chile (h = 30 km). M = 5.4 (Up,Ki).				
"	7	Ki	iPKP2		19 55 21.2	
		Um	iPKP1		19 55 13.5	
		Ud	iPKP1		19 55 07.5	
		South Pacific Ocean (h = N).				
"	7	Up	Mx		21 04	
					micr	sec
			Mx	E	0.7	18
			Mx	N	0.8	18
			Mx	Z	0.9	16
		Ki	Mx		20 59	
					micr	sec
			Mx	E	0.8	18
			Mx	N	0.9	18
			Mx	Z	1.1	18
		Easter Island region (h = N). M = 5.6 (Up,Ki).				
"	7	Up	eP		21 22 27	
		Ki	iP		21 22 08.2	
		Um	iP		21 22 15.4	
		Ud	iP		21 22 36.2	
		Samar (h = 100 km).				
"	7	Ud	iP		22 09 35.3	
		Indian Ocean (h = N).				

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

1973
July 7 Ud iP 23 58 05.1

" 8 Up iP 00 15 33.0 C
micr sec
P Z' 0.1 1.2
Mx E 0.8 15
Mx N 1.8 17
Mx Z 1.2 15
Ki iP 00 15 14.0 C
iS 00 25 38
micr sec
P Z' 0.1 1.4
Mx E 0.9 15
Mx N 1.1 15
Mx Z 0.7 14
Um iP 00 15 21.3
ipP 00 15 32.4
iS 00 25 42
Ud iP 00 15 40.9 C
ipP 00 15 53.0
isP 00 15 58.6
De iP 00 15 47.8 C
Samar.
h = 45 km (Um,Ud).
m = 5.9, M = 5.5 (Up,Ki).

" 8 Up micr sec
Mx E 0.7 18
Mx N 0.8 17
Mx Z 1.5 18
Ki micr sec
Mx E 1.2 18
Mx N 0.7 17
Mx Z 0.9 17
Um iPKP 01 13 28.7
Chile (h = 15 km).
M = 5.5 (Up,Ki).

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

1973
July 8 (cont.)
Ud i 04 15 46.8
i 04 15 51.5
ipP 04 16 21.2
De iP 04 15 42.0 C
i 04 15 42.8
i 04 15 47.7
i 04 15 57.0
Colombia.
h = 160 km (Sk,Um,Ud).
m = 5.8 (Up,Ki).
Multiple P-phases, in average 0.8 sec, 5.8 sec and 14.7 sec after the first onset.

" 8 Up iP 05 05 49.0
Ud iP 05 05 55.6

" 8 Up iP 06 18 44.6
Um iP 06 18 18.3

" 8 Ki iP 06 37 39.0

" 8 Ki iPKP 09 56 36.0
Um iPKP 09 56 42.2
New Hebrides Islands (h = 55 km).

" 8 Up iP 10 10 44.5
ipP 10 10 55.5
Ki iP 10 09 59.4
Sk eP 10 10 33
Um iP 10 10 20.2
Ud iP 10 10 51.1
ipP 10 11 01.5
De iP 10 11 08.4
Kurile Islands.
h = 40 km (Up,Ud).

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

" 8 Ki iP 15 26 11.8
Okhotsk Sea (h = 370 km).

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

1973
July 8 Ki iP 17 10 33.0
ipP 17 10 39.5
Um iP 17 10 31.8
ipP 17 10 38.1
Ud iP 17 10 11.1
ipP 17 10 17.9
De iP 17 10 10.1
ipP 17 10 17.1
Leeward Islands.
h = 25 km (Ki,Um,Ud,De).

" 8 Ki iP 19 03 53.5
Ud eP 19 04 49
Kamchatka (h = N).

" 8 Up iP 23 46 16.8
Ki iP 23 45 31.3
i 23 45 44.6
Um iP 23 45 52.3
i 23 46 05.7
Ud iP 23 46 22.7
i 23 46 36.8
Kurile Islands (h = 120 km).
If the second phase at Ki, Um and Ud is interpreted as pP, the focal depth is 50 km.

" 9 De iSn 00 31 14.0
Switzerland (h = 20 km).

" 9 Um iPgl 00 58 17.2
i 00 58 21.3
iSgl 00 58 23.7

" 9 Ud eP 01 30 16
Greece.

" 9 Up iP 02 14 30.6
i 02 14 34.1
micr sec
P Z' 0.2 1.1
Ki iP 02 13 35.3
i 02 13 39.4
Sk iP 02 14 13.4
i 02 14 18.5
Um iP 02 14 01.7
i 02 14 05.7
Ud iP 02 14 33.6
De iP 02 14 55.7
Kamchatka (h = 100 km).

" 9 Ki iP 08 00 43.2
Ud iP 08 01 08.1

" 9 Up iSgl 09 01 13.5
Ki iSgl 09 03 58.7
Um iSgl 09 01 52.4
(cont.)

1973
July 9 (cont.)
Ud iSgl 09 02 17.3
De iSgl 09 02 44.6
Esthonia.
Explosion.

" 9 Ki iPKP 11 21 27.2
Sk ePKP 11 21 36
Um iPKP 11 21 33.9
Ud e(PKP) 11 21 39
iPKP 11 21 43.0
De i(PKP) 11 21 42.6
Tonga Islands (h = 240 km).

" 9 Ki iP 14 26 38.3
De iP 14 24 48.6

" 9 Up iP 16 31 14.9 C
isP 16 31 29.8
iS 16 40 34
micr sec
P Z' 0.2 0.9
Mx E 1.9 24
Mx N 2.9 23
Mx Z 1.9 23
Ki iP 16 31 16.0 C
ipP 16 31 26.1
isP 16 31 31.0
iS 16 40 41
micr sec
P Z' 0.2 1.0
Mx E 1.0 14
Mx N 1.8 18
Mx Z 1.0 18
Sk iP 16 31 31.5 C
ipP 16 31 42.4
isP 16 31 46.6
Um iP 16 31 11.2 C
ipP 16 31 21.2
isP 16 31 26.8
iS 16 40 24
Ud iP 16 31 26.6 C
isP 16 31 42.5
De iP 16 31 24.1 C
isP 16 31 38.6
Andaman Islands.
h = 40 km (Up,Ki,Sk,Um,Ud,De).
m = 6.2, M = 5.6 (Up,Ki).

" 9 Ki ePKP 21 46 01
Um iPKP 21 46 03.5
Ud iPKP1 21 46 10.2
De iPKP1 21 46 21.1
Fiji Islands (h = 460 km).

" 10 Ud iP 00 40 40.2

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

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

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

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

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

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

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

```
1973
July   12   (cont.)
            Ud   iSgl        06 29 52.2
            De   eSgl        06 30 31
            Lake Ladoga region.
            Explosion.

 "     12   Up   iP          08 01 54.3 C
                             micr   sec
                 P       Z'  0.2    1.0
            Ki   iP          08 01 00.4 C
                             micr   sec
                 P       Z'  0.1    1.0
            Sk   iP          08 01 34.4 C
            Um   iP          08 01 26.6 C
            Ud   iP          08 01 55.7 C
            De   iP          08 02 17.8 C
            Aleutian Islands (h = 45 km).
            m = 6.0 (Up,Ki).

 "     12   Up   iP          08 07 20.8 C
                 ipP         08 07 31.2
                             micr   sec
                 P       Z'  0.1    0.8
            Ki   iP          08 06 36.2 C
                 ipP         08 06 46.4
                             micr   sec
                 P       Z'  0.1    1.0
                 Mx      E   0.6    16
                 Mx      N   0.6    16
                 Mx      Z   1.0    18
            Sk   iP          08 07 11.0 C
            Um   iP          08 06 56.4 C
                 ipP         08 07 06.5
            Ud   iP          08 07 27.2 C
                 i           08 07 34.8
                 ipP         08 07 37.4
            De   iP          08 07 44.6 C
            Japan.
            h = 40 km (Up,Ki,Um,Ud).
            m = 6.1 (Up,Ki).

 "     12   Um   iSgl        12 30 15.2
            Ud   eSgl        12 30 58
            De   eSgl        12 31 34
            Western USSR.
            Explosion.

 "     12   Ud   iP          12 48 02.6

 "     12   Ki   iP          13 09 08.3
            Um   iP          13 09 21.3
            Ud   iP          13 09 44.4
            Volcano Islands (h = 180 km).

 "     12   Up   iSn         14 01 05.7
                 iS*         14 01 17.3
                 iSgl        14 01 19.2
            (cont.)
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1973
July   12   (cont.)
            Ki   iSgl        14 03 52.4
            Sk   eSgl        14 03 20
            Um   iSgl        14 01 52.6
            Ud   iSn         14 01 53.5
                 iS*         14 02 20.7
                 iSgl        14 02 25.7
            Esthonia.
            Explosion.

 "     12   Up   iSP         14 14 26
                             micr   sec
                 Mx      E   0.9    18
                 Mx      N   1.0    18
                 Mx      Z   2.4    18
            Ki               micr   sec
                 Mx      E   0.8    17
                 Mx      N   0.7    16
                 Mx      Z   1.0    18
            Um   iPP         14 04 58
                 iSKS        14 10 56
                 iS          14 12 52
                 iSP         14 14 42
            Chile (h = 20 km).
            M = 5.6 (Up,Ki).

 "     12   Up   iSP         16 10 34
                             micr   sec
                 Mx      E   1.1    19
                 Mx      N   1.0    18
                 Mx      Z   1.7    18
            Ki               micr   sec
                 Mx      E   1.2    18
                 Mx      N   0.7    16
                 Mx      Z   0.9    17
            Um   iSKS        16 07 06
                 iSP         16 10 56
            Chile (h = 15 km).
            M = 5.6 (Up,Ki).

 "     12   Up   iSn         17 17 39.1
                 iS*         17 18 01.7
                 iSgl        17 18 07.3
            Ki   iSgl        17 18 48.1
            Sk   eSgl        17 19 23
            Um   iSgl        17 17 28.6
            Ud   eSn         17 18 17
                 iSgl        17 19 05.1
            De   iSgl        17 19 46.1
            Lake Ladoga region.
            Explosion.

 "     12   Up   eP          17 33 06
            Ud   eP          17 33 17

 "     12   Ud   iP          18 00 26.7
```

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

1973					
July	12	Up	iP		19 23 11.9
		Ki	iP		19 22 53.4
		Um	iP		19 22 59.9
		Ud	iP		19 23 21.0
		Samar (h = N).			
"	12	Up	iP		20 08 48.4
		Ki	iP		20 08 30.0
		Ud	iP		20 08 56.5
		Samar.			
		Origin time = 19 56 01.			
"	12	Up	iP		21 41 18.6
			ipP		21 41 50.3
		Ki	iP		21 41 11.8
			ipP		21 41 43.9
		Sk	eP		21 41 34
			ipP		21 42 04.7
		Um	iP		21 41 10.3
			ipP		21 41 42.4
		Ud	iP		21 41 31.3
			ipP		21 42 03.4
		Burma.			
		h = 130 km (Up,Ki,Sk,Um,Ud).			
"	13	Up	iPKPl		00 38 10.1
					micr sec
			Mx	Z	0.5 20
		Ki	ePKP		00 37 58
		Sk	ePKPl		00 38 03
		Um	iPKPl		00 37 58.5
			i		00 38 05.0
		Ud	iPKPl		00 38 11.4
		De	iPKPl		00 38 21.0
		Tonga-Kermadec Islands			
		(h = 35 km).			
"	13	Up	iP		01 04 03.3
		Ki	iP		01 04 11.3
		Sk	eP		01 04 28
		Um	iP		01 04 01.0
		Ud	iP		01 04 19.7
		De	eP		01 04 17
		Afghanistan-USSR			
		(h = 250 km).			
"	13	Up	iP		03 10 26.2
		Ud	iP		03 10 19.7
		Vancouver Island (h = N).			
"	13	Up	iP		03 10 35.3
			ipP		03 10 42.0
					micr sec
			pP	Z'	0.1 1.1
			Mx	N	0.8 18
			Mx	Z	0.6 18
		Ki	iP		03 09 50.5
		(cont.)			
1973					
July	13	(cont.)			
		Ki			micr sec
			Mx	E	0.8 14
			Mx	N	0.6 14
			Mx	Z	0.7 15
		Sk	iP		03 10 06.5
			ipP		03 10 13.4
		Um	iP		03 10 14.2
			ipP		03 10 21.1
		Ud	iP		03 10 29.0
			ipP		03 10 35.9
		De	eP		03 10 49
			ipP		03 10 55.1
		Vancouver Island.			
		h = 25 km (Up,Sk,Um,Ud,De).			
		M = 5.2 (Up,Ki).			
"	13	Ud	iP		09 12 49.6
"	13	Ki	iP		10 12 02.4
		Um	iP		10 11 38.0
		Ud	iP		10 11 41.8
		Caspian Sea (h = N).			
"	13	Up	iSgl		11 22 56.7
		Um	iSgl		11 23 18.2
		Ud	iSgl		11 23 59.4
		Western USSR.			
		Explosion.			
"	13	Ud	iP		11 49 49.7
"	13	Ud	iP		12 04 41.5
		Kamchatka (h = N).			
"	13	Um	iSgl		12 33 23.3
		Ud	iSgl		12 34 09.1
		De	eSgl		12 34 36
		Western USSR.			
		Explosion.			
"	13	Up	i		13 13 15.2
			iSgl		13 13 33.0
		Ki	iPn		13 09 18.8
			iSn		13 10 18.2
			iS*		13 10 37.4
			iSgl		13 10 45.1
		Sk	iSgl		13 13 05.9
		Um	iSn		13 10 57.9
			i		13 11 13.1
			iSgl		13 11 31.9
		Ud	eSgl		13 14 04
		Northwest USSR.			
		Explosion.			
"	13	Up	iP		13 50 38.6
		Ki	iP		13 49 53.3 C
		(cont.)			

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

1973
July 13 (cont.)
Sk iP 13 50 28.2
Um iP 13 50 13.5 C
Ud iP 13 50 44.4 C
De eP 13 51 02
Kurile Islands (h = 60 km).

" 13 Um iPKP 14 24 41.9
De iPKP 14 24 56.5
Solomon Islands (h = 55 km).

" 13 Ud iP 20 04 58.8
Hindu Kush.
Intermediate depth.

" 13 Up iP 22 11 58.3
Ki iP 22 12 04.3
Sk iP 22 12 22.4
Um iP 22 11 55.5
Ud iP 22 12 14.2
De iP 22 12 11.4
Kashmir (h = 50 km).

" 13 Up iP 23 02 47.7
Ki iP 23 02 53.2
Sk eP 23 03 12
Ud iP 23 03 03.5
Kashmir (h = N).

" 13 Ud iP 23 20 35.2

" 14 Up iP 00 15 22.2
Um iP 00 14 57.0
Ud iP 00 15 27.8 C
Kurile Islands.

" 14 Um iP 00 36 11.5
Japan (h = 40 km).

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

" 14 Ud iP 01 26 46.9
Kurile Islands.

" 14 Ud eP 03 12 34
Greece.

" 14 Ud iP 03 26 45.3
Kurile Islands.

" 14 Up iP 03 45 07.3
Ud iP 03 45 13.6

" 14 Up iP 05 00 12.8 D
i 05 00 18.5
iS 05 07 20
(cont.)

1973
July 14 (cont.)
Up micr sec
P Z' 0.3 1.0
i Z' 2.2 1.3
Mx E 330 17
Mx N 560 26
Mx Z 610 18
Ki iP 05 00 05.2 D
i 05 00 11.4
iS 05 07 08
micr sec
P Z' 0.3 1.1
i Z' 0.5 1.1
Mx E 360 20
Mx N 1130 24
Mx Z 300 20
Sk iP 05 00 30.2 D
i 05 00 36.0
Um iP 05 00 03.3 D
i 05 00 09.4
iPP 05 02 01.0
iS 05 07 01
Ud iP 05 00 27.6 D
i 05 00 33.4
iPP 05 02 30.3
De iP 05 00 30.2 D
i 05 00 36.4
Tibet (h = N).
m = 6.7, M = 7.5 (Up,Ki).
Multiple P; the onset with the largest amplitudes follows the first onset by about 6.0 sec.

" 14 Up iP 05 18 35.3
Ki iP 05 17 40.4
Sk iP 05 18 03.9
Um iP 05 18 09.0
Ud iP 05 18 29.3
Alaska (h = N).

" 14 Up iP 05 33 05.3
Ki iP 05 32 50.0
Um eP 05 32 56
Ud iP 05 33 14.0
Mindanao (h = 110 km).

" 14 Up iP 06 06 36.1
Um eP 06 06 27
Ud iP 06 06 51.4
Tibet.
Origin time = 05 57 44.

" 14 Um iP 07 21 11.6

" 14 Up eP 08 22 46
(cont.)

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

1973						
July	14	(cont.)				
		Up			micr	sec
			Mx	E	0.5	18
			Mx	N	0.8	18
			Mx	Z	0.6	16
		Ki			micr	sec
			Mx	E	0.8	12
			Mx	N	2.4	17
			Mx	Z	0.4	11
		Sk	iP		08 23 03.0	
		Ud	iP		08 23 01.5	
		Tibet.				
		Origin time = 08 13 54.				
		M = 4.9 (Up,Ki).				
"	14	Up	iP		08 30 02.4	
		Sk	eP		08 30 20	
		Ud	iP		08 30 17.5	
		Tibet.				
		Origin time = 08 21 11.				
"	14	Up	iP		09 09 42.3	
		Ud	iP		09 09 48.4	
"	14	Up	iP		09 21 43.3	
					micr	sec
			Mx	E	0.8	16
			Mx	N	2.1	23
			Mx	Z	1.4	15
		Ki			micr	sec
			Mx	E	1.0	12
			Mx	N	4.4	18
			Mx	Z	0.6	12
		Sk	eP		09 22 01	
		Um	eP		09 21 33	
		Ud	iP		09 21 57.6	
		Tibet.				
		Origin time = 09 12 51.				
		M = 5.0 (Up,Ki).				
"	14	Ud	iP		09 31 18.7	
"	14	Up	iP		10 18 12.4	
		Ud	iP		10 18 18.7	
		Kurile Islands (h = N).				
"	14	Up	iSn		10 47 29.3	
			iSgl		10 47 40.6	
		Ki	iSgl		10 50 18.5	
		Sk	iSgl		10 49 32.0	
		Um	iSgl		10 48 17.5	
		Ud	iSn		10 48 17.3	
			iSgl		10 48 43.3	
		De	i		10 48 52.6	
			iSgl		10 49 09.1	
		Esthonia.				
		Explosion.				

1973							
July	14	Up	iP		12 43 10.3		
					micr	sec	
			P	Z'	0.1	0.7	
			Mx	E	0.6	12	
			Mx	N	0.9	9	
			Mx	Z	1.7	12	
		Ki	iP		12 44 23.9		
					micr	sec	
			Mx	E	1.7	16	
			Mx	N	0.8	14	
			Mx	Z	0.5	11	
		Sk	iP		12 43 50.4		C
		Um	iP		12 43 48.8		C
		Ud	iP		12 43 16.2		C
		De	iP		12 42 40.3		
		Greece (h = 35 km).					
		M = 4.7 (Up,Ki).					
"	14	Up	iSg1		12 54 53.0		
			iSg2		12 55 11.5		
		Ki	ePn		12 51 08		
			iSn		12 51 56.5		
			iS*		12 52 09.4		
		Sk	e		12 54 05		
			eSgl		12 54 21		
		Um	iSn		12 52 20.5		
		Ud	iSgl		12 55 21.8		
		Northwest USSR-Finland border region.					
		Explosion.					
"	14	Up	iP		13 48 21.9		D
			iPP		13 50 16.9		
			iS		13 55 34		
					micr	sec	
			P	Z'	1.2	1.5	
			Mx	E	13	17	
			Mx	N	15	21	
			Mx	Z	28	17	
		Ki	iP		13 48 14.4		D
			iPP		13 50 09.2		
			iS		13 55 22		
					micr	sec	
			P	Z'	0.7	1.8	
			Mx	E	11	16	
			Mx	N	20	17	
			Mx	Z	8.3	16	
		Sk	iP		13 48 39.3		D
		Um	iP		13 48 12.5		D
			iPP		13 50 05.2		
			iS		13 55 13		
		Ud	iP		13 48 36.7		D
		De	iP		13 48 39.1		D
		Tibet (h = N).					
		m = 6.5, M = 6.1 (Up,Ki).					
"	14	Ud	iP		15 35 33.7		

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

1973					
July	14	Up	iP		18 39 53.9
		Sk	iP		18 40 11.1
		Um	iP		18 39 44.7
		Ud	iP		18 40 08.6
		Tibet.			
		Origin time = 18 31 02.			
"	14	Up	iP		18 55 47.2
		Sk	iP		18 56 04.4
		Um	eP		18 55 39
		Ud	iP		18 56 01.7
		Tibet.			
		Origin time = 18 46 55.			
"	14	Up	iP		19 37 13.0
		Ki	iP		19 36 18.7
		Ud	iP		19 37 13.4
"	14	Up	iP		20 10 58.6
		Ki	eP		20 10 59
		Um	iP		20 10 55.5
		Ud	iP		20 11 09.8
		De	iP		20 11 13.3
"	14	Up	eP		21 57 43
		Ki	eP		21 57 20
		Um	iP		21 57 31.2
		Ud	eP		21 57 53
		Formosa.			
"	14	Up	iPKP1		23 52 34.7
		Um	iPKP1		23 52 24.3
		Ud	iPKP1		23 52 36.3
"	15	Ud	iPKP1		00 31 20.9
		De	iPKP1		00 31 31.8
"	15	Up	iPKP1		01 31 03.2
		Sk	ePKP		01 31 01
		Um	iPKP		01 30 54.2
		Ud	iPKP1		01 31 04.6
		De	iPKP1		01 31 13.5
		Tonga-Kermadec Islands			
		(h = 230 km).			
"	15	Ud	iP		02 24 57.0
		Alaska (h = 80 km).			
"	15	Ud	iPKP1		03 18 13.6
"	15	Um	iP		03 21 32.0
		Ud	iP		03 22 03.0
"	15	Ki	iSn		06 14 10.1
			iSgl		06 14 34.1
		Um	iSgl		06 15 25.6
		Northwest USSR.			
		Explosion.			

1973					
July	15	Ud	eP		08 14 07
"	15	Up	eS		08 52 13
		Sk	eS		08 52 25
		Ud	iP		08 49 41.7
			i		08 49 48.2
			iS		08 51 37.6
			i		08 51 43.3
"	15	Up	iP		09 46 47.6 C
		Ki	eP		09 46 41
					micr sec
			Mx	N	0.9 18
		Sk	iP		09 47 04.8 C
		Um	iP		09 46 38.6
		Ud	iP		09 47 02.5 C
		Tibet.			
		Origin time = 09 37 56.			
"	15	Um	i(P)		11 56 01.8
"	15	Up	iPKP1		13 06 05.4
		Sk	ePKP1		13 05 58
		Um	iPKP1		13 05 54.6
		Ud	iPKP1		13 06 07.1
		Tonga-Kermadec Islands			
		(h = 70 km).			
"	15	Ud	iP		13 39 48.6
"	15	Up	iP		14 17 50.7
			iPcP		14 18 14.6
					micr sec
			P	Z'	0.1 0.8
		Ki	iP		14 17 05.2 C
					micr sec
			P	Z'	0.1 1.0
		Sk	iP		14 17 40.7
		Um	iP		14 17 25.6 C
			i		14 17 40.5
			iPcP		14 17 57.0
		Ud	iP		14 17 57.0 C
		Kurile Islands (h = 45 km).			
		m = 6.1 (Up,Ki).			
"	15	Ud	iP		14 32 30.1
"	15	Up	iPKP1		18 49 53.8
		Ki	ePKP		18 49 41
		Sk	ePKP1		18 49 47
		Um	iPKP1		18 49 45.1
		Ud	iPKP1		18 49 55.3
		Tonga-Kermadec Islands			
		(h = 60 km).			
"	15	Um	iP		22 02 49.9
		Ud	eP		22 03 18
		Japan (h = 60 km).			

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

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

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

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

1973
July 16 Up iPKPl 23 17 04.7
Ud iPKPl 23 17 07.1

" 17 Ki iP 00 38 57.8
Ud iP 00 39 11.4
De eP 00 39 11

" 17 Ud iP 05 51 10.6

" 17 Up iP 09 35 23.4 C
Sk iP 09 36 02.8
Um iP 09 36 03.0
Ud iP 09 35 29.9 C
De iP 09 34 49.2
Ionian Sea (h = N).

" 17 Ud iP 09 46 19.8

" 17 Um i(P) 11 25 01.4

" 17 Up iSn 12 04 30.8
iSgl 12 04 42.0
Ki eSgl 12 07 19
Sk eSgl 12 06 35
Um iSgl 12 05 16.9
Ud eSn 12 05 20
iSgl 12 05 48.4
De iSgl 12 06 13.1
Esthonia.
Explosion.

" 17 Up i 13 03 43.2
iSgl 13 03 51.1
Ki i(S*) 13 06 36.3
iSgl 13 06 43.0
Sk iSgl 13 05 47.7
Um iSgl 13 04 39.5
Ud eSgl 13 04 54
De iSgl 13 05 16.9
Esthonia.
Explosion.

" 17 Up iP 14 29 44.1
Ki iP 14 29 16.3
Ud iP 14 29 50.5
Mariana Islands (h = 600 km).

" 17 Ud iPKPl 22 03 26.6
De iPKPl 22 03 36.7

" 17 Up iSgl 22 11 57.3
Ki iPgl 22 09 16.5
iSgl 22 09 53.9
micr sec
Sgl Z' 0.1 0.4
Sk ePgl 22 09 21
iS* 22 09 58.2
(cont.)

1973
July 17 (cont.)
Sk iSgl 22 10 02.3
Um iPgl 22 09 33.2
iSn 22 10 08.0
iSgl 22 10 22.3
Ud iSgl 22 11 47.9
Nordland, Norway,
66.4°N, 14.4°E.
Origin time = 22 08 28.
Explosion.

" 18 Ud iP 00 14 07.1
ipP 00 14 15.1
Japan.
h = 30 km (Ud).

" 18 Up iP 04 06 01.6 C
micr sec
P Z' 0.1 1.1
Mx E 0.6 17
Mx N 0.6 16
Mx Z 0.8 15
Ki iP 04 05 44.6
micr sec
P Z' 0.1 1.0
Mx N 0.5 15
Sk iP 04 06 07.6
Um iP 04 05 50.0
Ud iP 04 06 10.9 C
De iP 04 06 16.9
Luzon (h = 55 km).
m = 5.8, M = 5.3 (Up,Ki).

" 18 Um iP 07 07 50.2
Caribbean Sea (h = N).

" 18 Up iPKPl 07 17 47.5
Sk iPKPl 07 17 39.8
Um iPKPl 07 17 35.9
Ud iPKPl 07 17 48.3
Kermadec Islands (h = 55 km).

" 18 Ud iP 08 36 42.3

" 18 Up iSgl 10 58 11.2
Um iSgl 10 58 30.2
Ud iSgl 10 59 12.6
Esthonia.
Explosion.

" 18 Up iSgl 12 44 28.7
Um iSgl 12 45 58.7
Ud iSgl 12 45 23.9
Probably Latvia.
Explosion?

" 18 Up iSgl 13 09 44.9
(cont.)

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

1973
July 18 (cont.)
Ki eSgl 13 11 51
Um iSgl 13 10 02.7
De eSgl 13 11 14
Western USSR.
Explosion.

" 18 Up iPP 15 39 18
iSKS 15 45 34
iS 15 46 40
micr sec
Mx E 0.8 20
Mx N 0.8 22
Mx Z 1.0 19
Ki iS 15 47 07
isS 15 48 19
micr sec
Mx N 0.9 20
Mx Z 1.1 19
Um iPP 15 39 33
iSKS 15 45 43
iS 15 46 53
Ud iP 15 35 01.4
Chile (h = 150 km).
M = 5.5 (Up,Ki).

" 18 Ud iP 15 36 15.8

" 18 De iPKP1 18 00 03.8
Fiji Islands (h = 630 km).

" 18 Ki iP 22 30 30.1
Talaud Islands (h = 150 km).

" 18 Up iP 22 58 32.0
Ud eP 22 58 38
Crete.

" 18 Ud iP 23 03 47.4
Kashmir (h = N).

" 19 Ud iP 02 32 19.5
Kurile Islands (h = 70 km).

" 19 Ud iP 03 35 40.4

" 19 Up i(PKP) 06 02 34.0
iPKP 06 02 44.3
Ki i(PKP) 06 02 17.7
iPKP 06 02 28.2
iSKP1 06 04 58.6
micr sec
PKP Z' 0.1 1.0
SKP1 Z' 0.3 1.5
Sk iPKP 06 02 37.8
iSKP1 06 05 16.3
Um i(PKP) 06 02 27.4
(cont.)

1973
July 19 (cont.)
Um iPKP 06 02 34.9
iSKP1 06 05 11.8
Ud i(PKP) 06 02 35.0
iPKP 06 02 46.0
iSKP1 06 05 26.0
De iPKP1 06 02 43.9
i 06 02 44.6
Fiji Islands (h = 570 km).

" 19 Ki iP 07 24 23.4
Ud iP 07 25 19.3
Aleutian Islands (h = 45 km).

" 19 Ud iPKP1 08 14 44.4

" 19 Up iPKP1 09 25 34.4
Ki iPKP 09 25 04.2
Um iPKP 09 25 13.9
Ud iPKP1 09 25 30.3
i 09 25 37.5

" 19 Sk iP 10 56 15.5
Yugoslavia (h = 10 km).

" 19 Ki eP 13 25 46
Um iP 13 26 04.3
Ud iP 13 26 36.7 C
Kurile Islands (h = 50 km).

" 19 Ki iSn 13 34 22.0
iSgl 13 34 47.5
Um eSgl 13 35 42
Northwest USSR.
Explosion.

" 19 Up iSgl 15 28 13.9
Ki i 15 29 38.1
iSgl 15 30 11.3
Sk iSgl 15 29 58.9
Um eSgl 15 28 30
Ud iSgl 15 29 16.5
De eSgl 15 29 38
i 15 29 46.5
Western USSR.
Explosion.

" 19 Up iPKP1 17 46 38.4
Sk iPKP1 17 46 31.1
Ud iPKP1 17 46 40.0

" 19 Up iP 19 32 00.9
Ki iP 19 30 24.2
i 19 30 32.8
iS 19 31 40.1
i 19 31 51.2
iTPgl 19 35 22.4
(cont.)

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

1973						
July	19	(cont.)				
		Ki	iTSgl		19 35 51.7	
					micr	sec
			Mx	E	0.6	15
			Mx	N	0.4	11
			Mx	Z	0.5	13
		Sk	iP		19 31 04.9	
			iS		19 32 52.2	
			eTSgl		19 37 59	
		Um	iP		19 31 12.5	
			i		19 31 14.3	
			iS		19 33 05.8	
			iTSgl		19 37 43.1	
		Ud	iP		19 31 53.2	
			i		19 31 56.6	
			e(S)		19 34 30	
		De	iP		19 32 43.4	
		Norwegian Sea, near 72.7°N, 8.2°E. Origin time = 19 28 46. Readings from Finnish and Norwegian stations incorporated in the solution.				
"	20	Ud	iP		00 05 35.3	
"	20	Ki	iP		02 55 04.1	
		Celebes (h = 150 km).				
"	20	Ki	eP		06 31 20	
		Ud	eP		06 31 35	
		Banda Sea (h = N).				
"	20	De	iPKP1		06 52 38.8	
		Tonga Islands (h = N).				
"	20	Ki	iPKP		07 13 52.4	
			i		07 14 02.9	
					micr	sec
			PKP	Z'	0.1	1.0
		Sk	iPKP		07 14 06.8	
			i		07 14 18.7	
		Um	iPKP		07 14 02.1	
		Ud	ePKP		07 14 13	
"	20	Up	ePKP2		08 21 24	
			i		08 21 31.0	
		Ki	iPKP1		08 21 11.0	
			iPKP2		08 21 24.6	
		Sk	iPKP2		08 21 40.4	
		Um	iPKP		08 21 00.6	
			iPKP1		08 21 10.1	
		Ud	iPKP2		08 21 32.7	
		De	iPKP2		08 21 28.7	
		West of Macquarie Islands (h = N).				

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

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

1973						
July	20	(cont.)				
		Um	iSn		12 35 29.3	
			i		12 35 44.2	
			iSgl		12 36 05.3	
		Ud	eSn		12 37 26	
			eSgl		12 38 35	
		De	iSgl		12 40 05.1	
		Northwest USSR.				
		Explosion.				
"	20	Up	Mx		14 04	
					micr	sec
			Mx	E	0.5	16
			Mx	N	0.6	16
			Mx	Z	0.9	16
		Ki	Mx		14 02	
					micr	sec
			Mx	E	0.9	15
			Mx	N	0.7	16
			Mx	Z	0.8	15
		Mexico (h = N).				
		M = 5.3 (Up,Ki).				
"	20	Up	Mx		14 43	
					micr	sec
			Mx	E	0.6	17
			Mx	N	0.5	15
			Mx	Z	1.0	18
		Ki	Mx		14 40	
					micr	sec
			Mx	E	0.9	18
			Mx	N	0.6	16
			Mx	Z	0.7	14
		Mexico (h = N).				
		M = 5.3 (Up,Ki).				
"	20	Ki	iP		16 07 26.8	
"	20	Ki	i(Sn)		19 30 23.8	
			i(Sgl)		19 30 50.0	
"	20	Up	iP		20 00 09.4	
					micr	sec
			P	Z'	0.1	1.2
		Ki	eP		19 58 32	
		Sk	eP		19 59 24	
		Um	iP		19 59 25.9	
		Greenland Sea (h = N).				
"	20	Ki	iSgl		20 25 34.6	
		Um	iSgl		20 25 21.5	
"	20	Um	iPKPl		21 40 21.4	
"	20	Up	iP		23 32 28.2	
					micr	sec
			P	Z'	0.1	1.1
		(cont.)				

1973						
July	20	(cont.)				
		Up			micr	sec
			Mx	N	1.0	22
			Mx	Z	1.1	21
		Ki	iP		23 30 56.0	
					micr	sec
			P	Z'	0.1	1.1
			Mx	E	0.7	13
			Mx	N	0.4	10
			Mx	Z	0.5	10
		Sk	iP		23 31 43.6	
			i		23 31 51.6	
		Um	iP		23 31 44.9	
			iS		23 34 57	
		Ud	iP		23 32 24.2	
		De	iP		23 33 01.7	
		Greenland Sea (h = N).				
		m = 5.0, M = 4.2 (Up,Ki).				
"	20	Ki	i(pP)		23 52 32.3	
		Ud	iP		23 53 16.9	
		Kurile Islands (h = N).				
"	21	Ki	iP		01 29 17.1	
		Um	iP		01 29 36.9	
		Ud	iP		01 30 07.3	
		Japan (h = 35 km).				
"	21	Ki	eP		02 48 02	
			eS		02 49 15	
			iTSgl		02 53 38.6	
			i		02 53 56.1	
		Sk	eP		02 48 36	
			iS		02 50 24	
		Um	iS		02 50 39.7	
			e		02 51 14	
		Norwegian Sea, near 73°N, 8°E.				
		Origin time = 02 46 20.				
"	21	Up	iPKPl		04 37 59.4 D	
			iSKPl		04 41 01.8	
			iPP		04 41 14.3	
					micr	sec
			PKPl	Z'	1.8	0.8
			SKPl	Z'	0.8	1.4
			PP	Z'	0.9	1.7
		Ki	i(PKP)		04 37 35.4	
			i(PKP)		04 37 41.8	
			iPKP		04 37 48.4	
			iPP		04 40 19.4	
			i		04 40 35.8	
			iSKPl		04 40 40.7	
			iSKP2		04 40 44.9	
			ipSKPl		04 42 45	
					micr	sec
			PKP	Z'	0.2	0.9
		(cont.)				

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

1973
July 21 (cont.)

Ki			micr	sec		
	SKP1	Z'	1.2	1.7		
	Mx	E	1.0	21		
	Mx	N	0.8	17		
Sk	i(PKP)		04 37 51.4			
	iPKP		04 37 58.2			
	iSKP1		04 40 55.7			
Um	i(PKP)		04 37 45.7			
	i(PKP)		04 37 47.9			
	iPKP		04 37 53.9			
	iSKP1		04 40 51.2			
	ipSKP1		04 43 07			
Ud	iPKP1		04 38 01.5 D			
	iSKP1		04 41 03.2			
	iPP		04 41 17.5			
De	iPKP		04 38 09.5			
	iPKP1		04 38 11.9 D			
	ipPKP1		04 39 51.3			
	iSKP1		04 41 10.9			

Tonga-Kermadec Islands.
h = 420 km (De).

" 21
Up iPKP2 05 14 19.6
Ki iPKP1 05 13 45.0
Sk iPKP1 05 14 07.8
Um iPKP1 05 14 00.6
Ud iPKP2 05 14 21.3

" 21
Up iP 05 34 49.7 C
i 05 34 53.4
micr sec
P Z' 0.1 0.9
Ki iP 05 34 33.5 C
i 05 34 37.4
micr sec
P Z' 0.1 1.1
Sk iP 05 35 01.9 C
i 05 35 05.5
Um iP 05 34 36.5 C
i 05 34 40.0
Ud iP 05 35 03.2 C
i 05 35 06.8
De iP 05 35 09.1
Tsinghai, China (h = N).
m = 5.8 (Up,Ki).
Double P, in average 3.7 sec apart.

" 21
Um iP 06 50 35.8

" 21
Ud iP 08 08 36.4
De eP 08 08 03
Crete (h = 5 km).

" 21
Up iP 11 58 35.0
ipP 11 58 50.6
(cont.)

1973
July 21 (cont.)
Up micr sec
pP Z' 0.1 0.8
Mx E 0.9 18
Mx N 0.8 17
Mx Z 1.4 15
Ki iP 11 58 14.4
i(pP) 11 58 25.9
Sk i(pP) 11 58 51.6
Um iP 11 58 21.1
ipP 11 58 35.2
Ud iP 11 58 45.4
De iP 11 58 54.2
Luzon-Formosa.
h = 55 km (Up,Um).

" 21
Ud iP 12 11 51.5
Greece.

" 21
Ud iP 12 30 22.2

" 21
Up eP 12 57 18
Ki iP 12 58 26.5
Sk eP 12 57 57
Ud iP 12 57 25.1
De iP 12 56 53.6
Crete (h = N).

" 21
Up eP 13 21 12
Ki i(pP) 13 21 00.1
Sk eP 13 21 17
Ud iP 13 21 18.7
ipP 13 21 32.2
Luzon-Formosa.
h = 50 km (Ud).

" 21
Ud iPKP1 19 31 52.8
De iPKP1 19 32 04.1
Tonga-Kermadec Islands
(h = 600 km).

" 21
Up iP 19 58 58.1
Ki iP 19 58 50.7
micr sec
Mx E 0.8 14
Mx N 0.9 18
Mx Z 0.7 13
Sk iP 19 59 15.7
Um iP 19 58 48.5
Ud iP 19 59 13.3
De iP 19 59 15.4
Tibet (h = N).

" 22
Up iP 01 48 57.5
Ki eP 01 48 19
Um iP 01 48 35.8
Ud iP 01 49 04.9
Japan (h = 60 km).

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

1973						
July	22	Up	ePKP		02 55 40	
			ipPKP		02 55 58.4	
					micr sec	
			Mx	E	0.7 25	
			Mx	N	0.7 20	
			Mx	Z	0.8 20	
		Ki	iPKP		02 55 53.2	
			ipPKP		02 56 10.5	
			iSKP		02 59 06.3	
					micr sec	
			pPKP	Z'	0.1 1.2	
			Mx	E	0.6 15	
			Mx	N	0.5 14	
		Um	i		02 55 56.7	
		Ud	iPKP		02 55 38.4	
			ipPKP		02 55 56.6	
		South Sandwich Islands.				
		h = 60 km (Up,Ki,Ud).				
		M = 5.6 (Up,Ki).				
"	22	Up	epP		03 55 51	
		Ki	iP		03 55 22.8	C
			ipP		03 55 29.7	
					micr sec	
			P	Z'	0.1 1.0	
		Sk	iP		03 55 23.7	
		Um	iP		03 55 36.0	C
			ipP		03 55 43.2	
		Ud	ipP		03 55 41.6	
		Mexico.				
		h = 25 km (Ki,Um).				
"	22	Up	i(P*)		04 03 38.4	
			iPgl		04 03 40.3	
			i		04 03 52.8	
			iS*		04 04 12.1	
			iSgl		04 04 14.3	
		Ki	eSgl		04 08 07	
		Sk	iSn		04 05 17.0	
			iSgl		04 05 41.4	
		Um	iSgl		04 06 13.0	
		Ud	iPgl		04 03 26.9	C
			i		04 03 29.2	
			iSgl		04 03 51.3	
		Västergötland, Sweden,				
		58.3°N, 13.8°E.				
		Origin time = 04 02 56.				
		Felt.				
"	22	Ki	iSn		04 32 47.5	
			iSgl		04 33 09.4	
		Um	iSgl		04 34 02.4	
		Northwest USSR.				
		Explosion.				
"	22	Ki	iP		05 41 15.8	
		Um	iP		05 41 30.9	
		Ud	eP		05 42 01	
		Japan (h = 360 km).				
1973						
July	22	Up	i		07 21 32.4	
			iSgl		07 21 59.6	
			i		07 22 03.8	
		Ki	iPn		07 17 44.7	
			iSn		07 18 44.4	
			iSgl		07 19 07.1	
		Sk	eSgl		07 21 30	
		Um	iSn		07 19 24.3	
			i		07 19 38.6	
			iSgl		07 19 56.7	
		Ud	iSgl		07 22 28.1	
		Northwest USSR.				
		Explosion.				
"	22	Up	iP		08 48 15.8	
		Ki	iP		08 48 14.2	
		Sk	eP		08 48 28	
		Um	iP		08 48 12.2	
		Ud	iP		08 48 24.9	
			iPP		08 52 20.3	
		Sunda Strait (h = 80 km).				
"	22	Up	iP		09 17 10.6	
		Ki	eP		09 16 59	
		Um	iP		09 17 00.9	
		Ud	iP		09 17 23.4	
"	22	Up	iSgl		09 34 43.3	
		Ki	iPn		09 30 28.5	
			iSn		09 31 25.9	
			iSgl		09 31 48.1	
		Sk	iSgl		09 34 16.3	
		Um	iSn		09 32 06.3	
			i		09 32 22.1	
			iS*		09 32 38.1	
			iSgl		09 32 41.8	
		Ud	iSgl		09 35 12.6	
		Northwest USSR.				
		Explosion.				
"	22	Ud	iP		09 55 02.9	
		Iran (h = N).				
"	22	Up	ePKP1		09 56 42	
		Ud	iPKP1		09 56 42.6	
"	22	Up	iPKP		14 56 26.9	
		Ki	iPKP		14 56 42.2	
		Um	iPKP		14 56 35.5	
		Ud	iPKP		14 56 25.8	
		South Sandwich Islands				
		(h = N).				
"	22	Up	iPKP1		15 30 40.2	D
			iPKP2		15 30 45.1	
					micr sec	
			PKP1	Z'	0.1 1.0	
			PKP2	Z'	0.1 0.8	
		(cont.)				

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

1973
July 22 (cont.)
Ki ePKP 15 30 19
iSKP1 15 33 35.1
Sk iPKP1 15 30 33.9 D
Um iPKP1 15 30 28.9 D
Ud iPKP1 15 30 41.9 D
iPKP2 15 30 48.4
Kermadec Islands (h = 260 km).

" 22 Ud iP 15 40 19.2
Mindanao (h = N).

" 22 Ud iP 16 07 07.1
Afghanistan-USSR (h = 220 km).

" 22 Ud iP 16 32 13.5

" 22 Up iP 18 30 27.2
Ki eP 18 29 53
Ud eP 18 30 33
South of Japan (h = N).

" 22 Up eP 19 38 41
Ud iP 19 38 47.6

" 22 Ud iPKP1 21 52 02.9
Tonga-Kermadec Islands
(h = 600 km).

" 23 Up eP 00 45 02
Ud iP 00 45 06.1
i 00 45 17.2
Kamchatka (h = 140 km).

" 23 Up iP 01 29 55.2 C
iPn 01 30 57.0
iPP 01 31 13.5
micr sec
P Z' 2.6 1.0
PP Z' 0.5 0.9
Mx E 0.8 9
Mx N 0.8 5
Mx Z 1.9 9
Ki iP 01 29 39.2 C
iPn 01 30 37.7
micr sec
P Z' 2.9 1.0
Sk iP 01 30 09.9 C
iPn 01 31 28.1
Um iP 01 29 39.7 C
Ud iP 01 30 11.6 C
i 01 30 48.4
iLg2 01 42 56.1
Kazakh SSR.
m = 7.1 (Up,Ki).
Underground explosion.

" 23 Up iP 02 09 06.6
(cont.)

1973
July 23 (cont.)
Ki eP 02 09 13
Um iP 02 09 04.1
Ud iP 02 09 23.2
Tadzhik SSR (h = 180 km).

" 23 Up iP 08 43 57.1
New Guinea (h = N).

" 23 Up iP 10 13 51.4 C
micr sec
P Z' 0.2 1.2
Mx E 2.0 18
Mx N 1.8 20
Mx Z 4.1 19
Ki iP 10 13 26.9 C
micr sec
P Z' 0.1 1.1
Mx E 1.4 17
Mx N 1.3 17
Mx Z 1.1 15
Sk iP 10 13 55.1 C
Um iP 10 13 36.3
Ud iP 10 14 01.0 C
Formosa (h = 40 km).
m = 6.0, M = 5.5 (Up,Ki).

" 23 Up iSn 10 41 22.2
iSg1 10 41 34.8
Ki iSg1 10 44 08.8
Sk iSg1 10 43 27.7
Um iSg1 10 42 08.2
iSg2 10 42 14.0
Ud iSn 10 42 09.9
iSg1 10 42 39.0
Esthonia.
Explosion.

" 23 Up iSg1 12 31 42.6
Ki iSg1 12 33 38.1
Sk iSg1 12 33 31.1
Um iSg1 12 32 00.2
Ud iSg1 12 32 43.1
Western USSR.
Explosion.

" 23 Ud iPKP1 14 43 25.4

" 23 Up iP 14 45 56.4 C
ipP 14 46 14.4
micr sec
P Z' 0.2 0.9
Ki iP 14 45 33.8 C
micr sec
P Z' 0.1 1.1
Sk iP 14 46 00.3 C
Um iP 14 45 41.7 C
Ud iP 14 46 05.8 C
(cont.)

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

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1973
July   23   (cont.)
            Formosa.
            h = 70 km (Up).
            m = 5.9 (Up,Ki).

 "     23   Ki   iPKP1      15 13 59.2
            Um   iPKP1      15 14 09.9

 "     23   Up   iP         15 40 07.1
                 ipP        15 40 17.6
            Ki   iP         15 39 14.4
            Um   iP         15 39 40.8
            Ud   iP         15 40 06.5
                 ipP        15 40 17.0
            Aleutian Islands.
            h = 40 km (Up,Ud).

 "     23   Ud   iP         16 36 42.7

 "     23   Up   iP         19 01 51.5
            Ki   iP         19 00 58.4
            Sk   iP         19 01 30.2
            Um   iP         19 01 24.8
            Ud   iP         19 01 51.5
            Aleutian Islands (h = 80 km).

 "     23   Up   iP         19 09 23.1
            Ki   iP         19 09 31.5
            Ud   iP         19 09 39.3
            Hindu Kush (h = 230 km).

 "     23   Ki   iP         20 40 31.5

 "     23   Up   eP         20 49 59
                            micr  sec
                 Mx     E   0.4   15
                 Mx     N   0.6   16
                 Mx     Z   0.8   15
            Ki   iP         20 49 28.6
                            micr  sec
                 Mx     N   0.6   14
                 Mx     Z   1.0   14
            Sk   eP         20 49 35
            Ud   iP         20 49 50.1
            Gulf of California (h = N).
            M = 5.2 (Up,Ki).

 "     23   Up   eP         22 27 00
            Ud   iP         22 27 11.8

 "     23   Ud   eP         23 28 56
            Italy (h = N).

 "     23   Ud   iP         23 40 43.8
            Afghanistan-USSR (h = 250 km).

 "     24   Ud   iP         04 06 26.7

1973
July   24   Ud   iPKP       04 38 02.5
            Solomon Islands (h = 40 km).

 "     24   Ud   iPKP       05 03 55.9
            Fiji Islands (h = 600 km).

 "     24   Up   eP         05 20 28
            Ki   iP         05 20 09.6
            Ud   iP         05 20 35.5
            Mindanao (h = 70 km).

 "     24   Ud   iP         06 27 20.2

 "     24   Up   iP         08 02 51.4
            Ki   iP         08 02 29.4
            Ud   iP         08 03 01.0

 "     24   Up   iPKP2      08 08 31.2
                 i          08 08 43.0
            Ki   iPKP1      08 08 01.5
                 i          08 08 11.9
            Um   iPKP1      08 08 10.5
            Ud   iPKP2      08 08 33.0
                 i          08 08 46.3
            Kermadec Islands.

 "     24   Up   iPKP1      08 14 05.7
                 iPKP2      08 14 12.4
                            micr  sec
                 PKP1   Z'  0.2   1.0
                 PKP2   Z'  0.4   0.8
            Ki   iPKP1      08 13 43.8
            Sk   iPKP1      08 14 00.3
                 iPKP2      08 14 02.9
            Um   iPKP       08 13 54.7
                 iPKP1      08 13 55.2
            Ud   iPKP       08 14 02.4
                 iPKP1      08 14 07.8
                 iPKP2      08 14 15.8
            Kermadec Islands (h = 430 km).

 "     24   Ki   iPn        10 31 42.2
                 iPgl       10 31 50.1
                 iSn        10 32 29.2
                 iS*        10 32 42.0
            Sk   eSgl       10 35 39
            Um   iSgl       10 34 18.6
            Northwest USSR-Norway
            border region.
            Explosion.

 "     24   Up   iSn        12 27 33.0
                 iSgl       12 27 44.0
            Ki   iSgl       12 30 19.6
            Sk   iSgl       12 29 37.7
            Um   iSgl       12 28 20.0
            Ud   eSn        12 28 20
            (cont.)
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Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973					
July	24	(cont.)			
		Ud	iSgl		12 28 48.3
		Esthonia.			
		Explosion.			
"	24	Up	i(Sgl)		12 36 11.1
"	24	Up	ipP		13 11 33.1
			ePP		13 15 29
		Ki	eP		13 11 07
			ipP		13 11 18.7
		Um	iP		13 11 11.5
			ipP		13 11 23.7
		Ud	iP		13 11 29.3
			ipP		13 11 41.2
		Celebes.			
		h = 45 km (Ki,Um,Ud).			
"	24	Sk	iP		13 29 31.9
		Japan (h = 40 km).			
"	24	Up	iSn		13 37 46.0
			eSgl		13 37 59
		Ki	iSgl		13 40 33.8
		Sk	iSgl		13 39 52.2
		Um	iSgl		13 38 33.5
		Ud	iSn		13 38 33.4
			eSgl		13 39 02
		Esthonia.			
		Explosion.			
"	24	Up	iSgl		14 49 45.7
		Um	iSgl		14 51 26.4
		Ud	iSgl		14 50 35.9
		De	iSgl		14 49 59.8
			i		14 50 09.6
		Latvia, 56.6°N, 21.9°E.			
		Origin time = 14 47 41.			
		Explosion?			
"	24	De	i(P)		15 00 40.1
"	24	Up	iP		15 01 22.0
		Ki	iP		15 00 37.7
		Um	iP		15 00 58.1
		Ud	iP		15 01 28.5
		De	iP		15 01 45.8
		Kurile Islands (h = 60 km).			
"	24	Ki	eSgl		15 58 15
		Um	iSgl		15 56 45.6
		Ud	iSgl		15 58 20.2
		De	eSgl		15 58 59
		Lake Ladoga region.			
		Explosion.			
"	24	Ud	iP		19 20 36.9

1973					
July	24	Ud	iP		20 15 10.4
		South Atlantic Ocean.			
"	24	Up	iPKP		20 22 09.6
			i(PP)		20 23 06.1
					micr sec
			Mx	Z	0.6 18
		Ki	iPKP		20 22 16.8
		Sk	iPKP		20 22 07.9
		Um	iPKP		20 22 14.8
		Ud	iPKP		20 22 04.6
			i(PP)		20 22 59.3
		De	iPKP		20 22 05.3
		Chile (h = 60 km).			
"	25	Up	iP		03 54 58.5
		Ud	iP		03 55 04.7
"	25	Up	iPKP		06 27 26.9
			i		06 27 36.5
					micr sec
			Mx	E	1.2 20
			Mx	N	1.8 20
			Mx	Z	3.4 18
		Ki	iPKP		06 27 13.8
					micr sec
			Mx	E	2.5 16
			Mx	N	3.9 20
			Mx	Z	3.1 18
		Sk	iPKP		06 27 24.4
		Um	iPKP		06 27 19.1
		Ud	iPKP		06 27 28.7
			i		06 28 06.2
		De	iPKP		06 27 34.7
		Solomon Islands (h = 70 km).			
		M = 6.1 (Up,Ki).			
"	25	Ki	iPKP		06 58 44.0
		Ud	ePKP		06 58 59
		De	iPKP		06 59 04.9
		Solomon Islands (h = 80 km).			
"	25	Ud	iP		08 57 50.5
"	25	Ki	iPn		11 06 49.3
			iPgl		11 06 59.2
			iSn		11 07 37.4
			iS*		11 07 48.0
		Sk	iSgl		11 10 37.5
		Um	iSgl		11 09 25.0
		Ud	eSgl		11 11 48
		Northwest USSR-Norway border region.			
		Explosion.			
"	25	Um	iP		15 36 27.6
			i		15 36 41.1

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

1973						
July	25	Up	iSgl		15 57 48.3	
		Um	iSgl		15 58 27.7	
		Ud	eSgl		15 58 53	
		Esthonia.				
		Explosion.				
"	25	Up	iSgl		16 02 41.9	
		Um	iSgl		16 03 05.2	
			i		16 03 10.2	
		Ud	iSgl		16 03 47.6	
		De	iSgl		16 03 37.4	
		Western USSR, near 57°N, 32°E.				
		Solution checked with Kongsberg readings.				
"	25	Ki	iP		18 41 21.1	
		Um	eP		18 41 28	
		Ud	iP		18 41 47.2	
		Mindanao (h = 70 km).				
"	25	Ki	eP		19 27 24	
		Ud	iP		19 28 17.8	
"	25	Up	iP		20 11 45.1	
			ipP		20 11 54.7	
					micr	sec
			P	Z'	0.1	1.5
			pP	Z'	0.2	1.5
			Mx	E	0.5	17
			Mx	N	1.1	16
			Mx	Z	0.6	16
		Ki	iP		20 11 26.7	
			ipP		20 11 36.2	
			iS		20 21 49	
					micr	sec
			P	Z'	0.1	1.3
			pP	Z'	0.2	1.3
			Mx	E	0.6	14
			Mx	N	0.5	15
			Mx	Z	0.7	15
		Sk	iP		20 11 49.8	
		Um	iP		20 11 33.8	
			ipP		20 11 42.7	
		Ud	iP		20 11 53.6	
			ipP		20 12 02.6	
		Samar.				
		h = 35 km (Up,Ki,Um,Ud).				
		m = 6.0, M = 5.3 (Up,Ki).				
"	25	Ud	iP		21 02 11.9	
"	25	Up	eP		21 21 18	
		Ki	iP		21 20 58.5	
			ipP		21 21 07.7	
		Um	iP		21 21 05.1	
			ipP		21 21 14.9	
		(cont.)				
1973						
July	25	(cont.)				
		Ud	iP		21 21 25.3	
			ipP		21 21 34.9	
		Samar.				
		h = 35 km (Ki,Um,Ud).				
"	25	Ki	i(Sn)		21 38 31.2	
			i(Sgl)		21 38 45.8	
"	25	Up	iP		22 25 17.9	
		Ki	eP		22 24 31	
		Um	iP		22 24 52.7	
		Ud	iP		22 25 23.8	
"	25	Up	iP		23 22 05.6	
		Ki	iP		23 21 47.8	
		Ud	iP		23 22 14.9	
		Samar (h = 90 km).				
"	26	Ud	eP		02 55 03	
		Greece.				
"	26	Ud	iP		04 28 23.9	
		Tadzhik SSR (h = N).				
"	26	Ki	iP		07 54 21.1	
		Ud	iP		07 54 46.5	
"	26	Up	iP		08 33 20.4	
"	26	Um	i(PKP)		11 13 37.6	
			iPKP		11 13 54.1	
		Ud	i(PKP)		11 13 57.6	
			iPKP		11 14 03.5	
		De	ePKP		11 14 08	
		New Ireland (h = 80 km).				
"	26	Up	iSgl		11 33 37.3	
		Ud	iSn		11 33 25.3	
			iSgl		11 33 42.3	
		De	i(P*)		11 31 37.2	
			iPgl		11 31 39.3	
			iSgl		11 31 56.0	
		Baltic Sea, south of Sweden, 55.5°N, 15.1°E.				
		Origin time = 11 31 19.				
		Explosion.				
"	26	Ud	eP		11 39 43	
		Japan (h = 40 km).				
"	26	Up	iSgl		12 23 11.9	
			iSg2		12 23 20.9	
		Ki	iSgl		12 25 08.5	
		Sk	eSgl		12 25 01	
		Um	iSgl		12 23 30.5	
		Ud	iSgl		12 24 14.0	
		(cont.)				

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

1973						
July	26	(cont.)				
		De	iS*		12 24 28.4	
			iSgl		12 24 37.8	
		Western USSR.				
		Explosion.				
"	26	Ki	ePKP		13 58 57	
			i		13 58 58.4	
			i		13 59 02.2	
		Sk	iPKP		13 59 05.6	
		Um	iPKP		13 58 56.1	
		Ud	iPKP		13 59 05.2	
		De	ePKP		13 59 03	
		West of Macquarie Islands (h = N).				
"	26	Ki	iP		14 25 40.6	
		Andaman Islands (h = N).				
"	26	Up	iSgl		16 15 32.4	
		Ud	iPn		16 14 31.4	
			iPgl		16 14 33.3	
			iSn		16 14 49.9	
			iSgl		16 14 52.8	
		De	iSgl		16 15 23.4	
		Lake Vener, Sweden, 58.8°N, 12.8°E.				
		Origin time = 16 14 09.				
"	26	Ud	iP		16 25 17.5	
		De	eP		16 24 46	
		(Ionian Sea).				
"	26	Ki	iP		19 11 59.3	
		Andaman Islands.				
"	26	Up	iP		19 37 07.1	
		Ki	eP		19 37 07	
		Um	i(pP)		19 37 10.1	
		Ud	eP		19 37 19	
		De	iP		19 37 20.1	
		Andaman Islands (h = N).				
"	26	Up	eP		20 18 08	
			ipP		20 18 13.2	
					micr	sec
			pP	Z'	0.1	1.0
			Mx	E	0.5	18
			Mx	N	0.6	18
			Mx	Z	0.8	19
		Ki	iP		20 18 08.0	
			ipP		20 18 14.1	
					micr	sec
			pP	Z'	0.1	1.1
			Mx	E	1.1	20
			Mx	N	0.8	19
			Mx	Z	1.0	17
		(cont.)				

1973				
July	26	(cont.)		
		Sk	ipP	20 18 30.2
		Um	iP	20 18 03.5
			ipP	20 18 10.0
		Ud	iP	20 18 18.8
			ipP	20 18 25.0
		De	eP	20 18 17
			ipP	20 18 23.6
		Andaman Islands.		
		h = 25 km (Up,Ki,Um,Ud,De).		
		m = 5.9, M = 5.1 (Up,Ki).		
"	27	Up	eSgl	06 17 28
		Ki	eSgl	06 18 17
		Um	iSgl	06 16 49.1
		Ud	iSgl	06 18 28.0
		De	eSgl	06 19 08
		Lake Ladoga region.		
		Explosion.		
"	27	Up	iPKP	07 30 18.5
		Ki	iPKP	07 30 34.0
		Sk	ePKP	07 30 24
		Um	iPKP	07 30 27.2
		Ud	ePKP	07 30 17
		South Atlantic Ocean (h = N).		
"	27	Ud	iP	07 39 46.2
"	27	Um	ePKP	07 53 31
		De	ePKP	07 53 46
		Solomon Islands (h = 40 km).		
"	27	Ud	iP	08 24 47.0
		Mindanao (h = 80 km).		
"	27	Up	iSgl	11 42 33.2
		Ki	iSgl	11 44 51.1
		Sk	eSg2	11 44 30
		Um	iSgl	11 42 56.0
			i	11 43 09.7
		Ud	iSgl	11 43 34.7
		De	eSgl	11 44 05
		Esthonia.		
		Explosion.		
"	27	Up	iSgl	12 11 32.5
		Ki	iPn	12 07 21.9
			iSn	12 08 21.5
			iS*	12 08 43.7
		Sk	iSgl	12 11 01.2
		Um	iSn	12 09 00.4
			i	12 09 17.7
			iSgl	12 09 37.3
		Ud	iSgl	12 12 09.9
		Northwest USSR.		
		Explosion.		

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

1973

July	27	Up	iSgl		13 02 15.0	
		Ki	iPn		12 58 05.1	
			iSn		12 59 03.9	
			iS*		12 59 23.7	
		Sk	iSgl		13 01 47.0	
		Um	iSn		12 59 45.0	
			iSgl		13 00 20.6	
		Ud	i		13 01 55.0	

Northwest USSR.
Explosion.

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

Western USSR.
Explosion.

"	27	Um	iSgl		14 45 14.0	
			iSg2		14 45 21.6	

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

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

Japan (h = 80 km).

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

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

"	27	Ki	iPKP		16 27 32.4	

New Hebrides Islands
(h = 15 km).

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

South of Java (h = 60 km).

1973

July	27	Up	iP		19 31 52.6	
		Ki	iP		19 31 07.0	
		Sk	eP		19 31 42	
		Um	iP		19 31 27.8	
		Ud	iP		19 31 58.6	
		De	iP		19 32 16.0	

Kurile Islands (h = 60 km).

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

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

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

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

"	27	Sk	iP		20 23 13.1	
		Ud	iP		20 22 24.3	

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

(cont.)

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

1973
July 27 (cont.)
Sk iP 20 34 30.1 C
ipP 20 34 57.2
Um iP 20 34 07.1 C
ipP 20 34 34.1
Ud iP 20 34 27.3 C
ipP 20 34 53.9
De iP 20 34 28.3
ipP 20 34 55.8
Burma-India.
h = 110 km (Up,Ki,Sk,Um,
Ud,De).
m = 6.1 (Up,Ki).

" 27 Up ePKP1 23 08 07
Ud iPKP1 23 08 07.3
De iPKP1 23 08 17.4
i 23 08 24.6

" 28 Ud iP 01 31 14.5

" 28 Up eP 03 52 23
micr sec
Mx E 0.9 19
Mx N 1.1 20
Mx Z 1.4 21
Ki iP 03 51 39.2
micr sec
Mx E 2.4 17
Mx N 2.3 18
Mx Z 1.7 17
Sk eP 03 52 15
Um iP 03 51 57.4
Ud iP 03 52 28.4
Japan (h = 40 km).
M = 5.4 (Up,Ki).

" 28 Up iPKP1 04 20 57.0
iPKP2 04 21 04.9
micr sec
PKP2 Z' 0.1 1.0
Ki ePKP1 04 20 38
Sk iPKP1 04 20 52.5
Um iPKP1 04 20 46.9
Ud iPKP1 04 20 59.4
De iPKP1 04 21 09.5
South of Kermadec Islands
(h = N).

" 28 Ud iP 04 31 47.9
Japan (h = 80 km).

" 28 Ki iP 06 00 03.7
Ud iP 06 00 21.6
Sumbawa Island (h = N).

" 28 Ki iPn 12 21 01.4
(cont.)

1973
July 28 (cont.)
Ki iPg1 12 21 11.1
iSn 12 21 49.1
iS* 12 22 04.4
Sk eSg1 12 24 47
Um iSg1 12 23 35.5
Northwest USSR-Norway
border region.
Explosion.

" 28 Ki iPn 12 22 04.9
iSn 12 22 52.3
iS* 12 23 07.3
Um iSg1 12 24 39.5
Northwest USSR-Norway
border region.
Explosion.

" 28 Up iSn 12 24 13.5
iSg1 12 24 24.7
Ki iS* 12 26 56.8
iSg1 12 27 04.1
Sk iSg1 12 26 19.3
Um iSg1 12 25 02.0
Ud e 12 24 55
iSn 12 25 01.6
iSg1 12 25 26.9
iSg2 12 25 34.4
De iSg1 12 25 55.9
Esthonia.
Explosion.

" 28 Ki iSn 12 26 05.0
iSg1 12 26 26.9
Sk iSg1 12 29 00.6
Um iSn 12 26 53.9
iSg1 12 27 30.3
Northwest USSR.
Explosion.

" 28 Up iP 14 39 52.6 C
micr sec
P Z' 0.3 1.6
Mx E 1.2 21
Mx N 1.9 21
Mx Z 1.5 22
Ki iP 14 39 10.1 C
micr sec
P Z' 0.1 1.1
Mx E 3.9 18
Mx N 3.8 18
Mx Z 2.7 17
Sk iP 14 39 44.9 C
Um iP 14 39 29.2 C
Ud iP 14 39 59.4 C
De iP 14 40 15.9 C
Japan (h = 35 km).
m = 6.1, M = 5.7 (Up,Ki).

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

```
1973
July  28  Ud  iP        15 01 57.5
          Afghanistan-USSR (h = 210 km).

 "    28  Up  iP        18 05 25.8
                        micr  sec
              P     Z'  0.1   0.9
              Mx    E   2.0   15
              Mx    N   5.4   23
              Mx    Z   4.5   16
          Ki  iP        18 05 03.5
                        micr  sec
              P     Z'  0.1   1.0
              Mx    E   2.7   15
              Mx    N   2.4   14
              Mx    Z   3.3   15
          Sk  iP        18 05 30.3
          Um  iP        18 05 11.7
          Ud  iP        18 05 35.9
          De  iP        18 05 42.6
          Formosa (h = N).
          m = 5.9, M = 5.8 (Up,Ki).

 "    28  Up  eP        19 00 33
          Ki  iP        19 01 35.0
          Sk  eP        19 01 13
          Um  iP        19 01 00.9
          Ud  iP        19 00 43.0
          De  eP        19 00 15
          Turkey (h = 70 km).

 "    28  Ud  iPKP      19 34 05.3
          De  ePKP      19 34 15
              i         19 34 22.8
          Fiji Islands (h = 520 km).

 "    28  Up  iP        20 09 00.9
          Ki  iP        20 08 07.5
          Sk  iP        20 08 31.4
          Um  iP        20 08 36.0
              ipP       20 08 39.7
          Ud  iP        20 08 55.7
          De  iP        20 09 18.4
          Alaska.
          h = 15 km (Um).

 "    28  Up  iP        20 16 07.3
              iPcP      20 16 37.6
              ipP       20 18 05.4
              iS        20 23 53.3
              iScS      20 24 58.7
                        micr  sec
              P     Z'  0.8   0.9
          Ki  iP        20 15 19.1
              ipP       20 17 12.1
              iS        20 22 24.4
                        micr  sec
              P     Z'  1.2   0.9
          (cont.)

1973
July  28  (cont.)
          Sk  iP        20 15 55.2
          Um  iP        20 15 41.1
              iPcP      20 16 21.3
              ipP       20 17 40.9
              iS        20 23 05.9
          Ud  iP        20 16 12.7
              iPcP      20 16 41.1
              ipP       20 18 11.4
              iS        20 24 03.8
          De  iP        20 16 31.3
              iPcP      20 16 54.8
              ipP       20 18 34.2
          Okhotsk Sea.
          h = 630 km (Up,Ki,Um,Ud,De).
          m = 6.1 (Up,Ki).

 "    28  Ki  iP        21 00 51.9
          Sk  iP        21 00 42.3
          Um  iP        21 00 58.9
          Ud  iP        21 00 49.4
          Nicaragua (h = 80 km).

 "    28  Ki  iP        22 32 10.3
          Um  iPP       22 36 35.7
          Peru (h = 110 km).

 "    28  Um  iP        22 37 38.6

 "    29  Up  iP        01 25 21.7
          Ki  iP        01 26 00.6
          Sk  iP        01 25 28.7
          Um  iP        01 25 40.0
          Ud  iP        01 25 13.8
          Atlantic Ocean (h = N).

 "    29  Up  iP        01 36 26.4
          Ki  iP        01 35 41.0
          Um  iP        01 36 01.4
          Ud  iP        01 36 33.0

 "    29  Up  iPKP1     01 43 57.9
          Sk  iPKP1     01 43 50.8
          Um  iPKP1     01 43 46.6 C
          Ud  iPKP1     01 43 59.3

 "    29  Um  iP        03 39 26.9
          South of Panama (h = N).

 "    29  Up  iP        04 45 04.9
          Ki  iP        04 44 38.8
          Um  iP        04 44 48.5
              ipP       04 44 58.6
          Ud  iP        04 45 14.2
              ipP       04 45 24.1
          Ryukyu Islands.
          h = 35 km (Um,Ud).
```

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

1973
July 29 Up iP 04 51 03.2
Ud iP 04 51 10.2

" 29 Up iP 04 55 43.6
Ki iP 04 54 54.8
Um iP 04 55 17.5
Ud iP 04 55 49.1

" 29 Up iP 09 21 59.6
Ki eP 09 21 14
Um eP 09 21 34
Ud iP 09 22 04.8
ipP 09 22 18.1
Kurile Islands.
h = 50 km (Ud).

" 29 Up iP 11 34 49.8
Ki iP 11 34 52.8
Sk iP 11 35 13.2
Um iP 11 34 45.1
Ud iP 11 35 06.4
Tadzhik-Sinkiang (h = 110 km).

" 29 Ud eP 12 04 44

" 29 Up iP 15 02 05.0 C
micr sec
P Z' 0.2 1.1
Mx E 0.6 15
Mx N 1.0 19
Mx Z 1.1 16
Ki iP 15 01 20.0 C
i 15 01 27.3
micr sec
P Z' 0.1 1.1
Mx E 1.1 17
Mx N 1.6 17
Mx Z 2.4 17
Sk iP 15 01 55.6 C
ipP 15 02 10.1
Um iP 15 01 40.4 C
i 15 01 47.6
ipP 15 01 54.2
Ud iP 15 02 11.2 C
ipP 15 02 25.5
De iP 15 02 28.7 C
Kurile Islands.
h = 50 km (Sk,Um,Ud).
m = 6.0, M = 5.3 (Up,Ki).

" 29 Up iP 15 06 30.1
Ki iP 15 07 38.6
Ud iP 15 06 42.7
De eP 15 06 11
Turkey (h = 25 km).

" 29 Um iP 16 29 43.5
Peru (h = 80 km).

1973
July 29 Up iP 16 29 02.4
ipP 16 29 31.9
Ki iP 16 28 45.4
ipP 16 29 13.2
micr sec
P Z' 0.1 1.4
pP Z' 0.1 1.4
Sk eP 16 28 44
ipP 16 29 11.7
Um iP 16 28 55.9
ipP 16 29 25.2
Ud ipP 16 29 25.0
Mexico.
h = 110 km (Up,Ki,Sk,Um).

" 29 Ud eP 17 41 31

" 29 Ud iP 18 38 08.5

" 29 Up iP 19 05 58.0
Ki eP 19 07 12
Sk eP 19 06 37
Um iP 19 06 33.5
Ud iP 19 06 03.6
De eP 19 05 32
Ionian Sea (h = 50 km).

" 29 Up iPKP1 22 02 17.5
iPKP2 22 02 30.7
micr sec
PKP1 Z' 0.1 1.4
PKP2 Z' 0.1 1.3
Ki ePKP 22 02 12
Sk iPKP2 22 02 44.6
Um ePKP 22 02 10
iPKP1 22 02 17.7
Ud iPKP2 22 02 40.0
De iPKP1 22 02 20.7
iPKP2 22 02 34.5
West of Macquarie Islands
(h = N).

" 29 Ud iP 22 43 25.4
Mindanao (h = 90 km).

" 30 Um iP 01 53 59.1
Ud eP 01 54 25
Japan (h = 40 km).

" 30 Up iSgl 07 29 38.8
Ki iPn 07 24 56.8
iPgl 07 25 05.7
iSn 07 25 43.0
iS* 07 25 55.5
Sk eSgl 07 28 42
Um iSgl 07 27 32.7
Ud i 07 29 11.5
(cont.)

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

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

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

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

1973						
July	31	Up	iP		17 02 42.0	
		Ki	iP		17 02 03.2	
		Um	iP		17 02 19.5	
		Ud	iP		17 02 48.6	
		Japan (h = 60 km).				
"	31	Ud	iP		20 18 13.1	
"	31	Up			micr	sec
			Mx	E	1.8	19
			Mx	N	2.9	20
			Mx	Z	4.1	20
		Ki	iPKP		21 03 37.4	
					micr	sec
			Mx	E	4.7	19
			Mx	N	6.7	20
			Mx	Z	5.1	19
		Um	iPKP		21 03 42.4	
		Ud	iPKP		21 03 51.0	
		De	iPKP		21 03 55.4	
		Solomon Islands (h = 30 km).				
		M = 6.2 (Up,Ki).				
"	31	Up	iP		21 16 30.4	
		Ki	eP		21 16 20	
		Um	iP		21 16 19.9	
		Ud	iP		21 16 43.4	
		De	eP		21 16 48	
		Burma-India (h = N).				

Markus Båth
Klaus Meyer
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March 23, 1975

SEISMOLOGICAL INSTITUTE
BOX 517
S-751 20 UPPSALA
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BOX 517
751 20 UPPSALA 1

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

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1973

Aug.	1	Up	iP		01 47 03		
			i(PKP)		01 49 58.5		
			iPKP		01 50 15.7		C
			iPP		01 52 18.2		
			iSKP1		01 53 21.5		
			iPKS1		01 53 37.0		
					micr	sec	
			PKP	Z'	0.7	0.6	
			PP	Z'	0.2	1.1	
			SKP1	Z'	1.1	1.5	
			Mx	E	5.1	22	
			Mx	N	9.7	20	
			Mx	Z	9.7	18	
		Ki	i(PKP)		01 49 49.4		
			i		01 49 57.6		
			iPKP		01 50 02.6		C
			iPP		01 51 42.6		
			iPKKP1		01 59 57.9		
					micr	sec	
			PKP	Z'	1.6	0.6	
			PP	Z'	2.4	2.1	
			Mx	E	11	20	
			Mx	N	7.8	21	
			Mx	Z	10	22	
		Sk	i(PKP)		01 49 57.9		
			iPKP		01 50 13.1		C
			iSKP1		01 53 17.0		
			i		02 02 34.8		
		Um	iP		01 46 48		
			i(PKP)		01 49 55.8		
			i		01 49 58.2		
			iPKP		01 50 08.6		C
			iPP		01 52 02.4		
			iPKKP		02 00 23.0		
			i		02 02 44.8		
		Ud	i(PKP)		01 50 01.3		
			i		01 50 02.7		
			iPKP		01 50 17.7		C
			iPP		01 52 35.3		
			iSKP1		01 53 24.7		

(cont.)

1973

Date		Sta	Phase	Time	
Aug.	1	(cont.)			
		Ud	iPKKP	02 00 14.8	
		De	i(PKP)	01 50 09.0	
			iPKP	01 50 24.2	C
			iPP	01 52 54.2	
			iSKP1	01 53 35.8	

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

Date		Sta	Phase	Time	
"	1	Up	iPKP2	02 26 05.2	
		Sk	iPKP2	02 25 50.0	
		Ud	iPKP2	02 26 01.6	
"	1	Um	iPKP	03 08 32.4	
		Ud	e(PKP)	03 08 56	
		De	e(PKP)	03 09 06	
"	1	Ud	iP	07 55 11.1	
			i	07 55 25.4	
"	1	Ud	iP	09 19 26.0	
"	1	Ud	iPKP1	11 02 53.3	
			i	11 02 57.0	
		De	iPKP1	11 03 03.4	
"	1	Um	iSgl	11 24 35.4	
		Ud	iSgl	11 25 07.1	
		De	iSgl	11 25 27.8	

Esthonia.
Explosion.

Date		Sta	Phase	Time	
"	1	De	i(Sgl)	14 00 13.4	
"	1	Up	iP	14 14 46.2	D
			i	14 15 11.8	

(cont.)

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

1973						
Aug.	1	(cont.)				
		Up			micr	sec
			i	Z'	0.1	1.0
		Ki	iP		14 14 41.4 D	
			i		14 15 06.4	
		Sk	iP		14 15 03.5	
			i		14 15 29.2	
		Um	iP		14 14 39.2	
			i		14 15 04.2	
		Ud	iP		14 15 00.7 D	
			i		14 15 25.7	
		De	iP		14 15 01.8	
			i		14 15 27.2	

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

"	1	Ud	iP		15 56 13.0	
"	1	Up			micr	sec
			Mx	E	0.9	19
			Mx	N	1.0	18
			Mx	Z	2.6	19
		Ki			micr	sec
			Mx	E	1.5	20
			Mx	N	1.3	17
			Mx	Z	1.2	20
		Um	iSP		16 13 41	

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

"	1	Up	iP		18 07 48.2	
		Ki	eP		18 07 09	
		Sk	eP		18 07 42	
		Um	iP		18 07 26.4	
		Ud	iP		18 07 55.9	

Japan (h = 50 km).

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

Kamchatka.

"	1	Ud	iP		20 01 15.6	
		De	eP		20 00 53	

Turkey (h = 20 km).

1973						
Aug.	1	Up	iP		21 43 21.8 C	
		Ki	iP		21 43 05.4	
		Sk	iP		21 43 41.1	
		Ud	iP		21 43 34.6	

Szechwan, China (h = N).

"	1	Ud	iP		23 13 05.7	
"	2	Up	eP		00 35 15	
		Ud	iP		00 35 22.2	

Sea of Japan (h = 190 km).

"	2	Up	i(P)		00 48 59.2	
			i		00 49 50.5	
"	2	Um	iP		06 26 25.1	
"	2	Ud	eP		07 02 26	

Japan (h = 70 km).

"	2	Up	iP		07 23 12.5	
		Ud	iP		07 23 17.8	
		De	eP		07 23 38	

Kamchatka (h = N).

"	2	Up	iP		09 08 51.9 C	
			i		09 08 53.4	
					micr	sec
			P	Z'	0.3	1.0
			Mx	E	0.8	20
			Mx	N	0.6	17
			Mx	Z	1.1	16
		Ki	iP		09 08 35.3 C	
			i		09 08 36.8	
					micr	sec
			P	Z'	0.2	1.0
			Mx	E	1.8	15
			Mx	N	1.1	15
			Mx	Z	1.7	17
		Sk	eP		09 09 00	
			i		09 09 03.1	
			i		09 09 20.1	
		Um	iP		09 08 39.4	
			i		09 08 40.7	
		Ud	iP		09 09 04.2 C	
			i		09 09 05.5	
		De	eP		09 09 10	
			i		09 09 10.6	

Yunnan, China (h = N).
m = 6.4, M = 5.2 (Up,Ki).
Double P, 1.3 sec apart, the second one larger.

"	2	Ki	iSgl		12 56 33.7	
		Um	i		12 54 03.1	
			iSgl		12 54 57.3	

(cont.)

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

1973						
Aug.	2	(cont.)				
		De	iSgl		12 56 09.1	
		Western USSR.				
		Explosion.				
"	2	Up	iP		20 03 02.5	D
			iPP		20 03 55.5	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	0.4	11
			Mx	N	0.6	11
			Mx	Z	0.5	10
		Ki	iP		20 03 30.2	
			iPP		20 04 41.3	
					micr	sec
			P	Z'	0.2	1.5
			PP	Z'	0.2	1.5
			Mx	E	2.2	13
			Mx	N	1.8	13
			Mx	Z	3.7	16
		Sk	iP		20 03 36.3	
			iPP		20 04 49.9	
			i		20 05 05.1	
		Um	iP		20 03 09.9	D
		Ud	iP		20 03 19.7	D
		De	iP		20 03 08.8	
		Iran (h = 35 km).				
		m = 5.7, M = 5.0 (Up,Ki).				
"	2	Ki	e		20 30 35	
			i(Sgl)		20 30 38.9	
"	2	Ki	i		20 32 34.9	
			i(Sgl)		20 32 39.5	
"	2	Up	iP		20 35 33.5	
			i		20 36 20.2	
		Ki	iP		20 35 58.4	
		Sk	iP		20 36 06.9	
		Um	iP		20 35 39.7	
		Ud	iP		20 35 49.2	
			i		20 35 50.7	
		De	iP		20 35 39.7	
		Iran (h = 35 km).				
"	2	Up	iP		21 51 37.3	
			i		21 51 47.0	
		Ki	iP		21 51 20.6	
		Um	iP		21 51 24.1	
		Ud	iP		21 51 41.1	
			i		21 51 56.4	
		De	iP		21 51 48.6	
		Talaud Islands (h = 50 km).				
"	2	Ki	iP		23 04 43.6	
		Um	iP		23 05 01.5	
		Ud	iP		23 05 33.5	
		(cont.)				

1973						
Aug.	2	(cont.)				
		De	iP		23 05 51.4	
		Sea of Japan (h = 180 km).				
"	3	Ki	e(P)		00 50 10	
"	3	Um	iP		01 50 40.1	
			i		01 51 27.3	
		Ud	iP		01 51 05.6	
		De	iP		01 51 27.9	
		Aleutian Islands.				
"	3	Up	i(P)		02 24 51.3	
		Um	i(P)		02 23 27.1	
"	3	Up	iP		04 07 47.9	C
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP		04 06 54.5	C
			ipP		04 07 28.1	
					micr	sec
			P	Z'	0.1	0.8
		Sk	iP		04 07 25.1	C
		Um	iP		04 07 21.3	C
		Ud	iP		04 07 47.1	C
			ipP		04 08 21.7	
		De	iP		04 08 09.8	C
		Aleutian Islands.				
		h = 140 km (Ki,Ud).				
		m = 5.7 (Up,Ki).				
"	3	Um	i(Sgl)		05 13 06.4	
"	3	Up	iP		06 37 29.9	
		Ki	iP		06 36 45.9	
		Sk	iP		06 37 21.6	
		Um	iP		06 37 05.4	
		Ud	iP		06 37 36.2	
		De	iP		06 37 53.4	
		Japan (h = 45 km).				
"	3	Up	i(P)		07 35 13.2	
"	3	Ki	iPn		09 51 50.3	
			iSn		09 52 38.5	
			iS*		09 52 51.8	
		Um	iSgl		09 54 22.5	
		Northwest USSR-Norway.				
		Explosion.				
"	3	Up	iSgl		11 17 06.7	
		Um	iSgl		11 17 30.0	
		Ud	iSgl		11 18 08.2	
		Western USSR.				
		Explosion.				
"	3	Up	iSn		11 23 39.0	
		(cont.)				

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

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1973
Aug.    3   (cont.)
            Up   iSgl      11 23 51.7
            Ki   iSgl      11 26 28.5
            Sk   eSgl      11 25 43
            Um   iSgl      11 24 25.7
            Ud   iSgl      11 25 01.0
            Esthonia.
            Explosion.

 "      3   Up   iSgl      12 19 02.3
            Ki   iPn       12 14 45.2
                 iSn       12 15 43.2
                 iS*       12 16 03.0
            Sk   iSgl      12 18 30.8
                 i         12 18 38.8
            Um   iSn       12 16 22.7
                 iSgl      12 16 58.2
            Ud   iSn       12 18 23.2
                 iSgl      12 19 33.0
            Northwest USSR.
            Explosion.

 "      3   Up   iSgl      12 23 44.7
            Ki   iPn       12 19 33.1
                 iSn       12 20 32.2
                 iS*       12 20 51.5
            Sk   iSgl      12 23 22.6
            Um   i(Sn)     12 21 20.5
                 iSgl      12 21 45.1
            Ud   iSgl      12 24 12.8
            De   e(Sgl)    12 25 55
            Northwest USSR.
            Explosion.

 "      3   Up   iSgl      12 29 35.9
            Ki   iSgl      12 31 31.7
            Sk   iSgl      12 31 25.8
            Um   iS*       12 29 45.7
                 iSgl      12 29 55.2
            Ud   iSgl      12 30 35.6
            De   iSgl      12 31 02.1
            Western USSR.
            Explosion.

 "      3   Up   iSgl      13 26 02.4
            Sk   iSgl      13 26 04.0
            Ud   i         13 24 45.5
                 iSgl      13 25 04.3
            De   eSgl      13 25 31
            South Norway.
            Origin time = 13 23 32.

 "      3   Ki   iS*       13 59 00.7
            Sk   iSgl      13 59 31.9
            Um   iSgl      13 57 41.1
                 iRg       13 58 16.1
            Ud   iSgl      13 59 17.7
            (cont.)

1973
Aug.    3   (cont.)
            De   iSgl      14 00 00.4
            Lake Ladoga.
            Explosion.

 "      3   Um   iSgl      14 33 19.1

 "      3   Um   iP        15 12 38.9
            Ud   i(P)      15 12 02.3

 "      3   Up   iSgl      15 25 53.7
            Ud   iPgl      15 25 44.0
                 iSgl      15 26 07.8
                 iRg       15 26 13.6

 "      3   Up   iP        15 55 55.7 C
                           micr  sec
                 P     Z'  0.1   1.0
            Ki   iP        15 55 54.5
                           micr  sec
                 P     Z'  0.1   1.0
            Sk   iP        15 55 38.5
            Um   iP        15 55 58.7 C
            Ud   iP        15 55 44.1
            De   iP        15 55 48.3
            Haiti (h = 35 km).
            m = 5.9 (Up,Ki).

 "      3   Ud   iP        17 26 36.7

 "      3   Up   iP        17 34 17.0
                 ipP       17 34 29.0
                 iS        17 42 40
                           micr  sec
                 P     Z'  0.6   2.0
                 Mx    E   1.4   19
                 Mx    N   2.6   18
                 Mx    Z   2.6   19
            Ki   iP        17 33 22.3
                           micr  sec
                 P     Z'  0.1   0.8
                 Mx    E   1.8   18
                 Mx    N   2.2   16
                 Mx    Z   4.1   15
            Sk   iP        17 33 59.8 C
            Um   iP        17 33 48.7 C
                 ipP       17 33 59.7
            Ud   iP        17 34 20.7
                 ipP       17 34 31.3
            De   iP        17 34 42.8 C
            Kamchatka.
            h = 40 km (Up,Um,Ud).
            m = 6.2, M = 5.5 (Up,Ki).

 "      3   Up   eP        17 42 03
            Ki   iP        17 41 08.1
            Sk   iP        17 41 45.7
            (cont.)
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Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

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

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

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

1973
Aug. 4 (cont.)
Ud iP 04 14 36.8
De iP 04 13 59.7
Greece (h = 40 km).

" 4 Up iP 06 18 09.2 C
Ki iP 06 17 25.2
ipP 06 17 36.3
Sk iP 06 18 00.0
Um iP 06 17 45.0
Ud iP 06 18 15.8 C
De iP 06 18 32.9
Japan.
h = 40 km (Ki).

" 4 Ud iP 07 05 07.6

" 4 Up iP 07 06 25.8
Ki eP 07 06 57
Sk eP 07 06 59
Um i(P) 07 06 22.0
Ud iP 07 06 40.1
i 07 06 41.5
De iP 07 06 28.6
Iran.

" 4 Up iP 07 39 43.7
Ki iP 07 40 00.1
Sk eP 07 40 04
e 07 40 36
Um iP 07 39 42.7
i 07 39 53.7
i 07 40 12.7
Ud iP 07 40 02.5
i 07 40 21.0
De e(P) 07 40 05
Nicobar Islands (h = N).
Complicated, probably
multiple, beginning.

" 4 Um iP 08 13 48.8
Kamchatka (h = N).

" 4 Up iP 11 51 52.1
Ki eP 11 51 39
Um iP 11 51 43.4
Ud iP 11 52 00.1
i 11 52 31.1
De iP 11 52 06.8

" 4 Sk eSgl 11 59 54
Um iSn 11 57 51.3
iSgl 11 58 16.8
eRg 11 58 53
De eSg2 12 02 38
Northwest USSR-Finland.
Explosion.

1973
Aug. 4 Up iP 12 44 23.5
Ki iP 12 44 31.3
Um iP 12 44 21.9
Ud iP 12 44 40.4
De eP 12 44 37
Hindu Kush.
Intermediate depth.

" 4 Ki iSn 12 59 57.5
iS* 13 00 15.7
Northwest USSR.
Explosion.

" 4 Um iP 18 18 59.0
Ud iP 18 19 03.0
Iran (h = N).

" 4 Ki iP 20 03 33.8
Um iP 20 03 16.9
Ud iP 20 03 16.9
Indian Ocean (h = N).

" 4 Up iP 22 04 55.2
micr sec
Mx E 0.6 20
Mx N 0.8 22
Mx Z 0.7 20
Ki iP 22 04 40.3
micr sec
Mx E 1.4 27
Mx N 0.9 22
Mx Z 1.9 27
Sk eP 22 05 02
Um iP 22 04 45.7
iSKS 22 15 19
Ud iP 22 05 04.4
De i(P) 22 05 15.2
Molucca Passage (h = 40 km).
M = 5.4 (Up,Ki).

" 4 Up iP 23 52 49.1
Ud iP 23 52 56.1

" 5 Up Mx 01 48
micr sec
Mx Z 0.9 23
Chile (h = 45 km).

" 5 Up iP 09 51 51.0 D
Ki iP 09 52 30.4
Sk eP 09 52 23
Um iP 09 52 06.2
Ud iP 09 52 06.1 D
i 09 52 13.1
De iP 09 51 48.5
Iran (h = N).

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

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

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

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

1973						
Aug.	7	(cont.)				
		Ki	iSKS		04 06 52	
			iSP		04 10 44	
					micr	sec
			Mx	E	4.0	19
			Mx	N	3.2	18
			Mx	Z	3.4	18
		Um	iSP		04 10 34	
		Chile (h = 25 km).				
		M = 6.1 (Up,Ki).				
		Cf note to Aug. 1, 16 13.				
"	7	Up	Mx		08 10	
					micr	sec
			Mx	E	2.2	19
			Mx	N	2.5	20
			Mx	Z	4.5	17
		Ki	Mx		08 06	
					micr	sec
			Mx	E	3.0	19
			Mx	N	2.5	20
			Mx	Z	2.4	20
		South Pacific Ocean (h = N).				
		M = 6.3 (Up,Ki).				
"	7	Up	iSP		10 33 20	
					micr	sec
			Mx	E	1.9	20
			Mx	N	2.0	19
			Mx	Z	3.6	18
		Ki			micr	sec
			Mx	E	2.6	20
			Mx	N	1.5	18
			Mx	Z	1.9	18
		Um	iSP		10 33 42	
		Chile (h = 35 km).				
		M = 5.9 (Up,Ki).				
		Cf note to Aug. 1, 16 13.				
"	7	Ki	Mx		11 34	
					micr	sec
			Mx	N	2.0	18
			Mx	Z	1.9	18
		Chile (h = 15 km).				
"	7	Um	i		12 34 58.6	
			iSgl		12 35 45.7	
		Western USSR.				
		Explosion.				
"	7	Ki	i(Pgl)		12 38 44.3	
			i(Sgl)		12 38 58.3	
"	7	Um	iSgl		13 08 32.1	
"	7	Ki	i(Sgl)		14 41 55.9	
1973						
Aug.	7	Up	iSP		14 51 37	
					micr	sec
			Mx	E	5.8	20
			Mx	N	5.7	20
			Mx	Z	15	18
		Ki	iSKS		14 48 25	
					micr	sec
			Mx	E	7.3	21
			Mx	N	6.1	18
			Mx	Z	5.7	18
		Um	iSP		14 51 58	
		Ud	iPP		14 41 58.7	
			i		14 42 05.1	
		Chile (h = 15 km).				
		M = 6.4 (Up,Ki).				
		Cf note to Aug. 1, 16 13.				
"	7	Ud	iPKP1		19 38 24.0	
"	7	Sk	i(P)		20 38 58.5	
		Ud	i(P)		20 39 02.5	
		De	iP		20 38 57.5	
		North Atlantic Ocean (h = N).				
"	8	Up	iP		03 32 38.6	
		Ki	iP		03 32 10.9	
		Um	iP		03 32 19.7	
		Ud	iP		03 32 45.6	
		Bonin Islands (h = 50 km).				
"	8	Up	iPKP		04 56 05.1	
			i		04 56 17.1	
		Ki			micr	sec
			Mx	N	1.4	20
			Mx	Z	1.2	20
		Sk	ePKP		04 56 12	
		Um	iPKP		04 56 13.4	
		Ud	iPKP		04 56 02.7	
		South Sandwich Islands (h = N).				
"	8	Up	iP		06 09 49.5	
"	8	Up	iP		08 27 59.6	
		Ki	iP		08 29 18.2	
		Sk	iP		08 28 43.4	
		Um	iP		08 28 41.7	
		Ud	iP		08 28 05.3 D	
		De	iP		08 27 27.7	
		Albania (h = 25 km).				
"	8	Up	i(Sgl)		08 41 27.2	
		Ki	i		08 40 52.2	
			i		08 41 42.1	
			i(Sgl)		08 42 02.3	
		Sk	iSgl		08 42 37.8	
		(cont.)				

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

1973
Aug. 8 (cont.)
Um iSgl 08 40 43.0
i 08 40 48.6
Lake Ladoga.
Explosion.

" 8 Ud i(P) 10 00 12.0
De i(P) 10 00 22.5

" 8 Ki iPn 10 51 20.6
iSn 10 52 07.7
iS* 10 52 20.0
Northwest USSR-Norway.
Explosion.

" 8 Up iSn 11 41 01.5
iSgl 11 41 15.6
Ki i 11 43 27.0
iSgl 11 43 56.4
Um iSgl 11 41 49.4
Ud iSgl 11 42 12.4
Esthonia.
Explosion.

" 8 Ki iP 13 50 43.9

" 8 Up iP 14 40 35.6
micr sec
Mx E 0.7 15
Mx N 0.8 12
Mx Z 1.5 11
Ki iP 14 41 55.6
micr sec
Mx E 1.6 14
Sk iP 14 41 14.8
Um iP 14 41 18.3
Ud iP 14 40 38.3
i 14 40 41.5
Italy (h = N).
M = 4.6 (Up,Ki).

" 8 Ud iPKP 18 28 14.1
De iPKP 18 28 24.7

" 8 Ud iP 19 57 41.4
Sinkiang, China.

" 8 Up iP 22 49 02.6
Um iP 22 48 51.5
Ud iP 22 49 13.4
Tibet.

" 9 Um iP 00 58 26.2
Japan (h = 40 km).

" 9 Up eP 02 30 12
(cont.)

1973
Aug. 9 (cont.)
Ki iP 02 29 28.9
i 02 29 34.6
Um iP 02 29 51.1
i 02 29 58.3
Ud iP 02 29 58.1
California (h = 2 km).

" 9 Um iPKP 04 00 20.8

" 9 Up i(P) 07 02 44.6
i 07 03 23.0

" 9 Up iPKP 09 56 57.4
Ki ePKP 09 56 45
Sk iPKP 09 56 56.7
Um iPKP 09 56 51.2 C
Ud iPKP 09 57 00.3
De iPKP 09 57 05.3
Solomon Islands (h = 400 km).

" 9 Ud ePKP 10 00 01

" 9 Up iP 10 50 12.4
ipP 10 50 21.2
Ki iP 10 49 58.7
Um iP 10 50 02.1
ipP 10 50 12.0
Ud iP 10 50 22.1
De iP 10 50 27.4
Molucca Passage.
h = 35 km (Up,Um).

" 9 Up iP 10 55 25.0
i 10 55 27.1
iPcP 10 55 51.4
micr sec
P Z' 0.4 1.0
Mx E 1.9 20
Mx N 3.2 18
Mx Z 5.1 19
Ki iP 10 54 39.8
i 10 54 41.7
ipP 10 54 51.3
micr sec
P Z' 0.3 1.0
Mx E 3.9 18
Mx N 5.5 19
Mx Z 8.5 19
Sk eP 10 55 16
i 10 55 17.4
Um iP 10 55 00.6 C
i 10 55 02.5
iPcP 10 55 35.3
iS 11 03 35
Ud iP 10 55 31.1
(cont.)

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

1973						
Aug.	9	(cont.)				
		Ud	i		10 55 32.9	
			ipP		10 55 43.9	
		De	iP		10 55 48.0	
			i		10 55 50.6	
			ipP		10 56 01.2	
		Kurile Islands.				
		h = 40 km (Ki,Ud,De).				
		m = 6.4, M = 5.8 (Up,Ki).				
		Double P, small and large respectively.				
"	9	Ud	iP		11 05 52.3	
			i		11 06 08.6	
		De	iP		11 06 10.0	
		Kurile Islands (h = N).				
"	9	Up	iPKP1		13 26 34.7	
			iPKP2		13 26 52.1	
					micr	sec
			PKP1	Z'	0.1	1.5
			Mx	E	1.2	21
			Mx	N	2.0	19
			Mx	Z	2.6	19
		Ki	ePKP1		13 26 31	
			e		13 26 35	
			iPKP2		13 26 47.1	
					micr	sec
			Mx	E	2.3	19
			Mx	N	2.1	20
			Mx	Z	2.1	21
		Um	iPKP1		13 26 31.3	
			iPKP2		13 26 38.2	
		Ud	iPKP2		13 26 55.6	
			i		13 27 08.3	
		De	iPKP1		13 26 42.2	
		West of Macquarie Islands (h = N).				
		M = 6.1 (Up,Ki).				
"	9	Up	i(P)		14 48 16.9	
"	9	Up	iPKP		18 05 38.9	
		Ki	iPKP		18 05 54.2	
			ipPKP		18 06 26.4	
		Um	iPKP		18 05 46.7	
		Ud	iPKP		18 05 35.3	
		South Sandwich Islands.				
		h = 120 km (Ki).				
"	9	Up	iSg2		19 36 30.2	
		Ki	iPg1		19 33 38.4	
			iSg1		19 34 15.4	
		Sk	iPg1		19 33 42.8	
			i		19 34 19.6	
			iSg1		19 34 24.7	
		Um	iPg1		19 33 54.6	
		(cont.)				

1973						
Aug.	9	(cont.)				
		Um	iSn		19 34 30.1	
			iSg1		19 34 42.5	
		Ud	iSg1		19 36 10.9	
		De	iSg2		19 38 10.9	
		Nordland, Norway, 66.5°N, 14.6°E.				
		Origin time = 19 32 50.				
		Explosion.				
"	9	De	iPKP		19 52 44.8	
		New Hebrides Islands (h = 45 km).				
"	9	Um	i(P)		21 50 19.4	
"	9	Up	iP		22 33 58.7	
		Sk	iP		22 33 53.4	
		Um	iP		22 33 37.4	
		Ud	iP		22 34 04.6	
		Japan (h = 30 km).				
"	10	Up	iP		00 19 45.4	
			i(S)		00 29 26	
					micr	sec
			P	Z'	0.1	1.3
			Mx	E	2.6	14
			Mx	N	3.7	14
			Mx	Z	3.9	17
		Ki	iP		00 19 10.1	
			iS		00 28 17	
					micr	sec
			Mx	E	3.6	18
			Mx	N	4.1	18
			Mx	Z	3.7	16
		Sk	eP		00 19 43	
		Um	iP		00 19 24.5	
			iS		00 28 42	
		Ud	iP		00 19 54.5	
		De	iP		00 20 08.5	
		Japan (h = 55 km).				
		M = 5.9 (Up,Ki).				
"	10	Um	iP		00 27 07.0	
"	10	Up	iPKP		00 37 36.6	
		Ki	iPKP		00 37 53.0	
		Um	iPKP		00 37 44.8	
		South Sandwich Islands (h = N).				
"	10	Ki	iPKP		03 32 02.0	
		Um	iPKP		03 32 10.5	
			i		03 33 04.4	
"	10	Up	iP		09 52 09.0	
		Ki	iP		09 51 14.7	
		(cont.)				

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

1973						
Aug.	10	(cont.)				
		Sk	i(P)		09 51 45.2	
		Ud	iP		09 52 07.4	
		De	iP		09 52 30.5	
		Alaska (h = 55 km).				
"	10	Ki	iPn		10 43 56.4	
			iSn		10 44 34.7	
		Sk	iSgl		10 47 32.1	
		Northwest USSR-Norway.				
		Explosion.				
"	10	Ki	iPn		11 13 43.3	
			iSn		11 14 41.9	
			iS*		11 14 54.2	
		Sk	e		11 16 58	
			iSgl		11 17 28.1	
		Um	iSgl		11 15 56.1	
		Northwest USSR.				
		Explosion.				
"	10	Up	iSgl		12 56 56.2	
		Um	iSgl		12 57 11.2	
		Western USSR.				
		Explosion.				
"	10	Up	iSgl		13 32 40.2	
		Ud	i		13 31 40.9	
			iSgl		13 31 43.0	
"	10	Up	iP		15 55 50.8	
		Ki	eP		15 55 05	
		Ud	iP		15 55 57.6	
		Kurile Islands (h = 60 km).				
"	10	Up	iPKP1		23 40 41.7	
		Ud	iPKP1		23 40 50.6	
"	11	Up	iP		01 51 09.0	
		Ki	iP		01 51 17.7	
		Ud	iP		01 51 25.2	
		De	iP		01 51 22.6	
		Hindu Kush.				
		Intermediate depth.				
		Origin time = 01 43 34.				
"	11	Up	iP		03 16 19.1	
			i		03 16 22.2	
"	11	Ki	ePKP		04 04 34	
		Ud	iPKP		04 04 44.8	
		De	iPKP		04 04 52.8	
		Fiji Islands (h = 400 km).				
"	11	Up	iPKP1		05 09 05.8	
		Ud	iPKP1		05 09 08.4	
		De	iPKP1		05 09 19.1	

1973						
Aug.	11	Up	ePKP1		05 33 02	
		Ud	iPKP1		05 33 02.9	
"	11	Up	iP		07 25 45.9	
			i1		07 25 48.8	
			i2		07 25 52.0	
			iPP		07 28 02.3	
			iS		07 34 02	
					micr	sec
			i1	Z'	0.5	1.4
			i2	Z'	0.8	1.6
			PP	Z'	0.1	1.2
			Mx	E	7.0	15
			Mx	N	38	20
			Mx	Z	8.7	11
		Ki	iP		07 25 26.3	
			i1		07 25 29.3	
			i2		07 25 32.3	
			iS		07 33 28	
					micr	sec
			i1	Z'	0.2	1.4
			i2	Z'	0.3	1.2
			Mx	E	18	11
			Mx	N	26	14
			Mx	Z	18	11
		Sk	iP		07 25 55.7	
			i1		07 25 57.7	
			i2		07 26 00.4	
		Um	iP		07 25 30.8	
			i1		07 25 34.4	
			i2		07 25 37.5	
			iS		07 33 35	
		Ud	iP		07 25 58.9 C	
			i1		07 26 01.1	
			i2		07 26 04.2	
		De	eP		07 26 06	
			i1		07 26 07.7	
			i2		07 26 11.2	
		Kansu, China (h = N).				
		m = 6.2 (i1), 6.4 (i2),				
		M = 6.7 (Up,Ki).				
		Triple P with successively				
		increasing amplitudes.				
"	11	Ud	iP		07 57 47.5	
"	11	Up	iP		13 18 43.8	
					micr	sec
			Mx	N	0.8	21
			Mx	Z	0.8	22
		Ki	eP		13 18 32	
			i		13 18 38.6	
		Ud	i(P)		13 18 59.6	
		New Guinea (h = 9 km).				
"	11	Up	iP		14 15 27.8	
		(cont.)				

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

1973
Aug. 11 (cont.)
Up i 14 15 39.6
Ki eP 14 14 44
Um iP 14 15 03.3
Ud iP 14 15 34.2
i 14 15 51.5
Japan (h = 55 km).

" 11 Up eP 16 07 18
Ud iP 16 07 18.4

" 11 Up i(P) 18 15 10.5
Ud iP 18 15 07.1
i 18 15 13.5
South Atlantic Ocean
(h = N).

" 11 Ud iPKPl 19 10 08.4
De iPKPl 19 10 19.0

" 11 Up iPKP 23 33 42.9
Ki iPKP 23 34 02.8
Sk iPKP 23 33 54.7
Ud ePKP 23 33 40
South Sandwich Islands
(h = N).

" 11 Up eP 23 57 05
Sk iP 23 57 37.7
Ud iP 23 57 05.1
De iP 23 56 29.2

" 12 Sk eP 00 35 25
Ud eP 00 35 34
Japan (h = 45 km).

" 12 Up e(P) 00 40 53
Ki iP 00 40 34.1
Ud iP 00 40 58.1
Mindanao (h = 80 km).

" 12 Up iSgl 06 31 55.1
Ki ePn 06 27 42
iSn 06 28 40.1
iS* 06 29 03.3
Sk iSgl 06 31 35.6
Um iSgl 06 29 53.5
Ud iSgl 06 32 24.5
De iSgl 06 33 45.1
Northwest USSR.
Explosion.

" 12 Ki iSn 06 42 22.6
iS* 06 42 44.2
Northwest USSR.
Explosion.

1973
Aug. 12 Ki eSn 09 31 50
iS* 09 32 11.6
Um iSgl 09 33 02.5
Northwest USSR.
Explosion.

" 12 Ki iPn 10 18 36.6
i 10 18 46.1
iSn 10 19 23.0
iS* 10 19 37.5
i 10 20 37.7
Um iSgl 10 21 10.4
Northwest USSR-Norway.
Explosion.

" 12 Up iP 10 29 31.5
Ki eP 10 29 17
Sk iP 10 29 08.5
ipP 10 29 22.9
Um iP 10 29 25.9
Mexico.
h = 55 km (Sk).

" 12 Up iSgl 11 09 34.3
i 11 09 38.9
Ki iPn 11 05 23.1
iSn 11 06 20.0
iS* 11 06 45.9
Sk iSn 11 08 24.3
iSgl 11 09 09.9
Um iSn 11 07 01.7
i 11 07 17.9
iSgl 11 07 37.6
Ud i 11 09 18.5
iSgl 11 10 09.6
De iSgl 11 11 32.2
Northwest USSR.
Explosion.

" 12 Up iP 15 40 13.0
micr sec
Mx N 0.9 17
Mx Z 1.1 20
Ki iP 15 38 49.4
iPP 15 38 57.6
iS 15 40 13.7
iSS 15 40 27.7
iTPgl 15 44 20.5
iTSgl 15 45 23.5
micr sec
PP Z' 0.1 0.8
S Z' 0.1 1.0
Mx E 1.7 16
Mx N 1.0 16
Mx Z 1.5 16
Sk iP 15 39 13.0
iS 15 40 57.2
(cont.)

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

1973						
Aug.	12	(cont.)				
		Um	iP		15 39 33.5	
			iS		15 41 26.6	
			iSS		15 41 57.3	
		Ud	iP		15 40 00.7	
		De	iP		15 40 56.1	
		Norwegian Sea (h = N).				
"	12	Up	eP		17 25 03	
		Ud	e(P)		17 25 12	
		De	iP		17 25 17.8	
"	13	Up	iP		02 08 37.4	
					micr	sec
			Mx	E	0.6	13
			Mx	N	0.9	17
			Mx	Z	0.9	13
		Ki	eP		02 08 53	
			i		02 08 58.2	
		Sk	iP		02 09 08.0	
		Um	iP		02 08 42.4	
		Ud	iP		02 08 53.1	
			i		02 08 56.5	
		De	iP		02 08 47.2	
		Pakistan (h = 7 km).				
"	13	Up	eP		04 17 09	
		Ud	iP		04 17 16.6	
		Greece.				
"	13	Up	iP		07 44 45.0	
		Ud	iP		07 44 46.2	
		Ionian Sea.				
"	13	Up	iP		08 42 39.1	
			iPKP		08 46 42.3	
			e(PP)		08 47 12	
			iS		08 54 50	
			iPKKP		08 57 37.0	
			i		08 58 17.4	
					micr	sec
			(PP)	Z'	0.1	1.4
			Mx	E	3.5	20
			Mx	N	6.4	22
			Mx	Z	7.5	22
		Ki	iP		08 42 20.5	
			i(PKP)		08 46 12.8	
			iPP		08 46 49.0	
			iSKS		08 52 52	
			iPS		08 55 54	
			iPKKP		08 57 53.0	
					micr	sec
			Mx	E	5.5	20
			Mx	N	4.7	22
			Mx	Z	3.8	17
		Sk	i(pP)		08 43 16.0	
		(cont.)				

1973				
Aug.	13	(cont.)		
		Sk	iPKP	08 46 41.0
			i(PP)	08 47 11.3
			iPKKP1	08 57 21.5
			i	08 58 07.2
		Um	i(pP)	08 42 51.6
			iPP	08 47 01
			iPKKP1	08 57 31.0
			i	08 58 01.8
		Ud	iP	08 42 53.9
			ipP	08 43 23.1
			iPKP	08 46 40.9
			i(PP)	08 47 14.8
			i	08 48 04.9
			iPKKP	08 57 32.6
			i	08 58 07.3
		De	i(pP)	08 43 33.5
			iPKP	08 46 48.0
			i(PP)	08 47 18.4
			iPP	08 47 52.5
			iPKKP	08 57 27.4
		New Guinea.		
		h = 110 km (Ud).		
		M = 6.3 (Up,Ki).		
		M uncorrected for focal depth.		
"	13	Ki	iPn	10 12 35.5
			iPg1	10 12 44.3
			iSn	10 13 22.0
			iSg1	10 13 35.7
		Um	iSg1	10 15 15.2
		Northwest USSR-Norway.		
		Explosion.		
"	13	Up	i	12 46 10.0
			iSg1	12 46 21.8
			iSg2	12 46 27.6
		Um	i	12 46 33.0
			iSg1	12 46 40.8
		Ud	iSg1	12 47 22.6
		De	e	12 47 30
			iSg1	12 47 46.9
		Western USSR.		
		Explosion.		
"	13	Up	iP	14 02 31.4
		Ud	iP	14 02 36.1
		De	iP	14 02 09.5
		Ionian Sea.		
"	13	Up	iP	19 44 23.1 C
		Ki	iP	19 44 06.7
		Sk	iP	19 44 35.5
		Um	iP	19 44 08.8
		Ud	iP	19 44 37.1
		De	iP	19 44 43.2
		China.		

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

1973							
Aug.	13	Ki	iP		21 16 49.8		
					micr	sec	
			P	Z'	0.1	1.2	
"	14	Up	iPKPl		01 42 12.9		
		Um	iPKPl		01 42 02.6		C
		Ud	iPKPl		01 42 14.2		
"	14	Up			micr	sec	
			Mx	E	1.0	20	
			Mx	N	0.8	18	
			Mx	Z	1.5	19	
		Ki			micr	sec	
			Mx	E	0.8	18	
			Mx	N	0.7	17	
			Mx	Z	0.9	20	
		Um	iSP		02 26 13		
		Ud	iPP		02 16 01.2		
		Chile (h = 30 km).					
		M = 5.5 (Up,Ki).					
		Cf note to Aug. 1, 16 13.					
"	14	Up	iP		02 36 00.8		
		Ki	iP		02 37 10.6		
		Sk	iP		02 37 02.6		
		Ud	iP		02 36 07.9		
		De	iP		02 35 36.1		
		Crete.					
"	14	Ud	iP		03 36 29.7		
		Turkey.					
"	14	Up	iPKPl		04 37 36.8		
			iSKPl		04 40 25.6		
		Ki	iPKP		04 37 27.7		
			iSKPl		04 40 05.4		
		Sk	e(PKP)		04 37 31		
			iPKP		04 37 38.0		
		Um	i(PKP)		04 37 25.2		
			iPKP		04 37 37.0		
			iSKPl		04 40 13.8		
		Ud	iPKPl		04 37 38.4		
			iSKPl		04 40 28.1		
		De	iPKPl		04 37 49.9		C
			ipPKPl		04 40 07.9		
			iSKPl		04 40 36.6		
		Tonga-Kermadec Islands.					
		h = 620 km (De).					
"	14	Up	iPKPl		05 00 14.5		
		Um	iPKPl		05 00 05.6		
			i		05 00 14.9		
		Ud	iPKPl		05 00 16.4		
		De	iPKPl		05 00 27.9		C
"	14	Up	iP		09 42 16.0		
		Ud	iP		09 42 31.2		

1973					
Aug.	14	Up	iP	10 15 38.3	
		Um	iP	10 15 09.0	
		Ud	iP	10 15 44.2	
"	14	Up	iSgl	11 13 26.3	
		De	i	11 12 52.2	
			iSgl	11 12 58.0	
			i	11 13 08.3	
"	14	Up	iSgl	11 13 52.0	
		De	i	11 13 17.0	
			iSgl	11 13 23.1	
			i	11 13 34.0	
"	14	Up	iSgl	11 36 37.2	
		De	iPgl	11 35 55.3	
			iSgl	11 36 50.3	
		Baltic Sea.			
		Origin time = 11 35 00.			
		Explosion.			
"	14	Up	iSgl	11 41 43.1	
		Ud	iSgl	11 42 26.1	
		De	iPgl	11 41 07.3	
			iSgl	11 41 54.4	
		Baltic Sea, 57.0°N, 19.9°E.			
		Origin time = 11 40 05.			
		Explosion.			
"	14	De	iPgl	11 45 22.8	
			iSgl	11 46 10.5	
		Baltic Sea.			
		Origin time = 11 44 22.			
		Explosion.			
"	14	De	iPgl	12 26 12.2	
			i	12 26 22.5	
			iSgl	12 26 59.8	
			iRg	12 27 17.0	
		Baltic Sea.			
		Origin time = 12 25 11.			
		Explosion.			
"	14	Up	iP	13 37 05.8	
"	14	Ud	i	14 03 16.8	
			iSgl	14 03 41.7	
		De	i	14 04 32.2	
			iSgl	14 05 06.3	
"	14	Up	iP	14 51 20.6	
"	14	Up	iP	15 14 08.5	C
			ipP	15 14 18.2	
		Um	iP	15 14 17.7	C
			ipP	15 14 27.0	
		Ud	iP	15 14 18.2	
		(cont.)			

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

1973					
Aug.	14	(cont.)			
		Ud	ipP	15 14 28.9	
		De	eP	15 14 07	
		Indian Ocean.			
		h = 35 km (Up,Um,Ud).			
"	14	Ki	eP	16 40 38	
		Um	iP	16 40 56.1	
		Ud	iP	16 41 24.7	
		Japan (h = 270 km).			
"	14	Ud	i	17 24 06.8	
			iSgl	17 24 09.6	
		De	iSgl	17 24 40.2	
"	14	Up	iP	17 44 48.5	
		Ud	iP	17 45 02.3	
"	14	Sk	iP	17 45 32.2	
		Um	iP	17 45 15.2	
"	14	Ud	iP	18 31 49.7	
		De	iP	18 31 14.1	
"	14	Up	iP	18 32 54.3	C
			ipP	18 33 02.2	
		Ki	eP	18 33 17	
		Sk	iP	18 33 23.7	C
		Um	iP	18 32 59.8	C
			ipP	18 33 07.8	
			i	18 33 29.3	
		Ud	iP	18 33 09.7	C
			ipP	18 33 17.5	
			i	18 33 33.1	
		De	iP	18 32 59.5	C
			ipP	18 33 07.0	
		Pakistan.			
		h = 30 km (Up,Um,Ud,De).			
"	14	Ud	iPKP1	19 01 13.4	
		De	iPKP1	19 01 25.8	D
		Fiji Islands (h = 620 km).			
"	14	Up	eP	20 17 55	
		Ud	iP	20 18 02.8	D
			i	20 18 11.2	
"	14	Ud	i(P)	20 40 34.0	
"	14	Up	i(Sgl)	23 51 17.8	
		Um	i(Sgl)	23 51 45.5	
		Ud	i(Sgl)	23 52 02.9	
"	15	Up	iP	00 38 43.7	
		Um	iP	00 39 06.9	
"	15	Up	iP	02 06 48.5	C
		(cont.)			

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

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

```
1973
Aug.  15   Up   iP        05 49 38.9

 "    15   Um   iP        05 56 31.4
           Ud   iP        05 57 02.6

 "    15   De   i(Rg)     07 59 05.6

 "    15   Ud   iPKP1     08 55 09.3
           De   ePKP1     08 55 14

 "    15   Up   iP        09 11 07.6
                ipP       09 11 19.1
           Ki   iP        09 11 00.6
                ipP       09 11 11.2
           Sk   eP        09 11 23
                ipP       09 11 34.0
           Um   iP        09 10 58.3
                ipP       09 11 10.0
           Ud   iP        09 11 20.5
                ipP       09 11 32.4
           De   eP        09 11 25
                ipP       09 11 35.1
           Burma-India.
           h = 40 km (Up,Ki,Sk,Um,Ud,
           De).

 "    15   Ki   iPKP      09 44 48.0
           Sk   ePKP1     09 44 57
           Ud   iPKP1     09 44 56.5
           De   iPKP1     09 44 58.1
           South Pacific Ocean (h = N).

 "    15   Ki   eP        11 31 29
           Sk   iP        11 31 41.8
           Um   iP        11 31 21.2
           Ud   iP        11 31 36.0
           De   iP        11 31 34.6
                i         11 31 59.5
           Sumatra (h = N).

 "    15   Ki   iSg1      13 20 56.7
           Um   iSg1      13 19 41.1
                iSg2      13 19 50.2
           Ud   iSg2      13 21 26.6
           De   eSg2      13 22 07
           Lake Ladoga.
           Explosion.

 "    15   Ud   iSg1      13 32 41.8
           De   iSg1      13 33 13.4

 "    15   Ud   iSg1      13 46 50.0
           De   iSg1      13 47 30.0

 "    15   Um   iSg1      13 58 38.8
           Ud   iSg1      13 59 18.6
           (cont.)

1973
Aug.  15   (cont.)
           De   iSg1      13 59 50.1
           Western USSR.
           Explosion.

 "    15   Up   iSg1      14 11 24.9
           Ki   i         14 12 34.3
                iSg1      14 13 16.6
           Sk   iSg1      14 13 01.6
                iSg2      14 13 15.0
           Um   i         14 11 31.5
                iSg1      14 11 43.8
           Ud   iSn       14 11 44.7
                iSg1      14 12 22.7
           De   iS*       14 12 46.5
                iSg1      14 12 54.2
           Western USSR.
           Explosion.

 "    15   De   i         15 15 07.0
                i(Sg1)    15 15 13.2

 "    15   Up   iP        15 16 33.2 C
                iPP       15 18 05.3
                          micr  sec
                P     Z'  0.1   1.0
           Ki   iP        15 16 42.3 C
                          micr  sec
                P     Z'  0.1   1.0
           Sk   iP        15 16 58.7 C
           Um   iP        15 16 31.7 C
           Ud   iP        15 16 49.8 C
                iPP       15 18 33.5
           De   iP        15 16 46.0
                iPP       15 18 26.4
           Hindu Kush (h = 200 km).
           m = 5.3 (Up,Ki).

 "    15   Ud   i(Sg1)    15 21 13.0
           De   iSg1      15 21 44.0

 "    15   De   iSg1      15 26 00.4

 "    15   Ud   iSg1      15 28 04.6
           De   i         15 29 11.4
                iSg1      15 29 18.5

 "    15   Ud   iSg1      15 33 34.7
                i         15 33 35.8

 "    15   De   iSg1      15 36 36.6

 "    15   De   e         15 38 09
                iSg1      15 38 16.9

 "    15   De   i(Sg1)    15 44 58.3
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Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

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

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

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

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1973
Aug.  16  (cont.)
          Ki            micr  sec
               P     Z' 0.1   1.2
               Mx    E  5.1   14
               Mx    N  9.0   19
               Nx    Z  4.4   14
          Sk   iP       08 12 16.8 D
          Um   iP       08 11 50.7 D
          Ud   iP       08 12 13.7 D
          De   iP       08 12 15.3 D
          Tibet (h = N).
          m = 5.8, M = 5.7 (Up,Ki).

 "    16  Up   iP       08 26 30.8
          Sk   iP       08 26 47.9
          Ud   iP       08 26 45.1
          Tibet.
          Origin time = 08 17 25.

 "    16  Up   iP       08 29 43.6
          Ud   iP       08 30 00.9
          Tibet.
          Origin time = 08 20 40.

 "    16  Ud   iP       08 33 07.5

 "    16  Up   iP       08 44 04.7
          Sk   iP       08 44 22.3
          Um   iP       08 43 55.3
          Ud   iP       08 44 18.8
          De   eP       08 44 19
          Tibet.
          Origin time = 08 34 59.

 "    16  Up   iP       11 05 09.3
          Sk   iP       11 05 39.1
          Um   iP       11 05 23.1
          Ud   iP       11 05 21.0
               i        11 05 30.7
          De   iP       11 05 07.4
          Indian Ocean (h = N).

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

1973
Aug.  16  (cont.)
          Ki            micr  sec
               P     Z' 0.1   1.1
               Mx    E  3.5   17
               Mx    N  5.3   20
               Mx    Z  4.8   17
          Sk   iP       12 27 38.4
               iPcP     12 28 10.1
               eP'P'    12 56 19
          Um   iP       12 27 32.7
               ipP      12 27 50.3
               iPcP     12 28 06.3
               iP'P'    12 56 18.0
          Ud   iP       12 27 58.2
               iP'P'    12 56 12.2
          De   iP       12 28 21.4
               ipP      12 28 39.6
          Aleutian Islands.
          h = 60 km (Up,Ki,Um,De).
          m = 6.0, M = 5.8 (Up,Ki).

 "    16  Up   iP       12 29 56.3
          Ki   eP       12 29 07
          Um   iP       12 29 29.9
               iPcP     12 30 04.0
          Ud   iP       12 29 57.2
          De   iP       12 30 21.3
          Aleutian Islands.
          Origin time = 12 18 59.

 "    16  Up   iP       12 42 24.1
          Ki   iP       12 41 26.3
          Sk   eP       12 41 57
          Ud   iP       12 42 15.0
          Aleutian Islands.
          Origin time = 12 31 20.

 "    16  Up   iP       12 47 27.3
               ipP      12 47 45.0
          Ki   iP       12 46 35.1
               iPcP     12 47 19.1
          Sk   iP       12 47 08.2
               iPcP     12 47 39.3
          Um   iP       12 46 59.3
               i        12 47 30.8
               iPcP     12 47 34.2
          Ud   iP       12 47 26.8
               ipP      12 47 44.5
          De   iP       12 47 49.8
          Aleutian Islands.
          h = 70 km (Up,Ud).

 "    16  Up   i        13 25 02.2
               iSgl     13 25 11.4
          Um   iSgl     13 25 47.5
          Ud   i        13 26 09.9
          (cont.)
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Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973						
Aug.	16	(cont.)				
		Ud	iSgl		13 26 20.1	
		De	iSgl		13 26 44.5	
		Esthonia.				
		Explosion.				
"	16	Up	iP		14 36 31.2	
			ipP		14 36 47.3	
			iPcP		14 36 57.1	
			eP'P'		15 04 42	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	0.5	19
			Mx	N	0.8	21
			Mx	Z	0.8	22
		Ki	iP		14 35 37.6	
			iPcP		14 36 23.1	
					micr	sec
			PcP	Z'	0.1	1.0
			Mx	E	0.8	18
			Mx	N	0.7	18
			Mx	Z	0.9	17
		Sk	iP		14 36 09.0	
			iPcP		14 36 42.4	
		Um	iP		14 36 03.0	
			iPcP		14 36 39.2	
			iP'P'		15 05 03.1	
		Ud	iP		14 36 31.0	
			ipP		14 36 47.6	
			eP'P'		15 04 51	
		De	iP		14 36 53.4	
			ipP		14 37 09.6	
		Aleutian Islands.				
		h = 60 km (Up,Ud,De).				
		m = 5.8, M = 5.0 (Up,Ki).				
"	16	Um	iPKP		15 13 47.9	
		Ud	iPKPl		15 13 49.2	
		De	iPKPl		15 14 01.0 C	
		Fiji Islands (h = 620 km).				
"	16	Ud	iP		17 51 21.2	
		Afghanistan.				
"	16	Ud	iP		21 47 01.7	
			iPcP		21 47 31.1	
"	16	Up	iPKPl		21 54 51.2	
		Ki	ePKPl		21 54 34	
		Sk	iPKPl		21 54 46.4	
		Um	iPKPl		21 54 40.0 C	
			ipPKPl		21 54 53.9	
		Ud	iPKPl		21 54 52.7	
		De	iPKPl		21 55 01.8	
			ipPKPl		21 55 14.9	
"	16	Ud	iP		23 17 25.1	

1973						
Aug.	17	Up	iP		01 04 04.7	
		Ki	iP		01 03 17.3	
		Sk	iP		01 03 53.1	
		Um	iP		01 03 39.0	
			ipP		01 03 53.6	
		Ud	iP		01 04 09.9	
			ipP		01 04 24.8	
		De	iP		01 04 28.8	
		Kurile Islands.				
		h = 55 km (Um,Ud).				
"	17	Up	iP		01 54 06.3 C	
			iS		02 03 50	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	4.4	25
			Mx	N	9.6	24
			Mx	Z	4.3	17
		Ki	iP		01 53 42.1	
			i		01 53 44.1	
					micr	sec
			P	Z'	0.1	1.2
			Mx	E	2.7	17
			Mx	N	2.9	19
			Mx	Z	2.7	15
		Sk	iP		01 54 10.7	
			i		01 54 30.6	
		Um	iP		01 53 50.7	
			i		01 53 52.0	
			iS		02 03 22	
		Ud	iP		01 54 15.5	
		De	iP		01 54 24.5	
			i		01 54 26.8	
		Ryukyu Islands (h = 30 km).				
		m = 5.9, M = 6.0 (Up,Ki).				
"	17	Up	iSgl		08 10 52.8	
			iRg		08 11 10.8	
		Sk	iSgl		08 10 55.1	
		Um	iSgl		08 10 34.5	
		Ud	iSgl		08 11 12.6	
			iRg		08 11 28.1	
		Medelpad, Sweden,				
		62.4^oN, 17.6^oE.				
		Origin time = 08 09 35.				
		Near-surface phenomenon.				
"	17	Ki	iP		08 58 30.9	
		Um	iP		08 58 09.4	
		North Atlantic Ocean				
		(h = N).				
"	17	Up	iSgl		09 02 36.9	
		Ki	i		09 02 53.9	
		Sk	iS*		09 03 42.4	
			iSgl		09 03 47.2	
		(cont.)				

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

1973						
Aug.	17	(cont.)				
		Um	i		09 01 17.6	
			iSgl		09 01 57.2	
		Ud	iSn		09 02 51.6	
			iSgl		09 03 40.7	
		De	e		09 03 21	
			i		09 03 40.6	
			iSgl		09 04 24.0	
		Lake Ladoga.				
		Explosion.				
"	17	Up	iP		10 19 07.4	
			iPcP		10 19 30.8	
		Ki	eP		10 18 13	
			iPcP		10 18 59.4	
		Um	iP		10 18 40.4	
			iPcP		10 19 15.5	
		Ud	iP		10 19 08.4	
		De	iP		10 19 30.6	
		Aleutian Islands (h = 50 km).				
"	17	Ki	i		11 52 15.9	
			iS*		11 52 57.9	
		Sk	iSgl		11 55 27.2	
		Um	iSn		11 53 19.5	
			iSgl		11 53 57.0	
		Northwest USSR.				
		Explosion.				
"	17	Ki	iSn		12 06 19.5	
			iSgl		12 07 01.5	
		Sk	i		12 05 57.7	
			iSgl		12 06 13.4	
		Um	iSgl		12 04 58.2	
		Ud	iSgl		12 05 28.4	
		De	iSgl		12 05 53.1	
		Esthonia.				
		Explosion.				
"	17	Up	iP		14 06 40.8	
		Ki	iP		14 05 47.4	
		Um	iP		14 06 13.6	
		Ud	iP		14 06 43.1	
		De	iP		14 06 59.4	
		Aleutian Islands (h = 40 km).				
"	17	Sk	eP		14 53 29	
		Um	i(P)		14 53 07.8	
			iP		14 53 28.7	
		Ud	iP		14 53 40.0	
"	17	Up	iP		19 00 57.9	
		Ki	iP		19 00 40.9	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	0.9	15
		(cont.)				

1973						
Aug.	17	(cont.)				
		Ki			micr	sec
			Mx	N	0.5	15
			Mx	Z	0.6	14
		Sk	iP		19 01 03.0	
		Um	iP		19 00 47.0	
		Ud	iP		19 01 06.6	
		De	iP		19 01 12.2	
		Panay (h = 40 km).				
"	17	Um	iPKP		20 50 21.6	
		Ud	iPKP		20 50 33.0	
"	17	Up	iP		21 40 47.8	
"	18	Up	iP		02 19 29.3 C	
			ipP		02 19 53.3	
					micr	sec
			P	Z'	0.1	0.9
		Ki	iP		02 18 46.3 C	
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP		02 19 21.4 C	
		Um	iP		02 19 05.5 C	
			ipP		02 19 27.2	
		Ud	iP		02 19 36.2 C	
		De	iP		02 19 53.0	
		Japan.				
		h = 90 km (Up,Um).				
		m = 5.7 (Up,Ki).				
"	18	Ud	iP		06 27 01.4	
		South Atlantic Ocean (h = N).				
"	18	Up	iP		08 38 28.6	
			iPP		08 41 50.9	
			iS		08 49 04	
					micr	sec
			P	Z'	0.1	1.5
			Mx	E	7.2	23
			Mx	N	17	24
			Mx	Z	15	20
		Ki	iP		08 38 11.3	
			i		08 38 12.8	
			i		08 38 31.1	
			iS		08 48 30	
					micr	sec
			P	Z'	0.2	1.2
			Mx	E	16	19
			Mx	N	19	21
			Mx	Z	10	14
		Sk	iP		08 38 33.5	
			i		08 39 08.3	
		Ud	iP		08 38 36.1	
			i		08 38 38.0	
			i		08 38 53.3	
		De	iP		08 38 42.1	
		(cont.)				

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

1973						
Aug.	18	(cont.)				
		Panay (h = 15 km).				
		m = 6.0, M = 6.5 (Up,Ki).				
"	18	Up	iP		10 06 12.4	
		Ki	iP		10 05 57.1	
		Ud	iP		10 06 21.1	
		Panay (h = 90 km).				
"	18	Up	iP		10 26 22.6	
			i		10 26 25.0	
		Um	iP		10 26 02.3	
		Ud	iP		10 26 36.1	
			i		10 26 40.7	
		De	iP		10 26 48.2	
		USSR-Mongolia (h = N).				
"	18	Ki	iPn		12 49 06.4	
			iSn		12 50 02.0	
			iS*		12 50 25.5	
		Northwest USSR.				
		Explosion.				
"	18	Ki	iPn		13 17 23.3	
			iSn		13 18 11.4	
			iSgl		13 18 29.6	
		Um	i		13 19 36.7	
			iSgl		13 19 55.2	
		Northwest USSR-Norway.				
		Explosion.				
"	18	Ki	iPn		13 17 48.7	
		Northwest USSR.				
		Explosion.				
"	19	Up	iPKP1		00 15 06.8	
		Ud	iPKP1		00 15 08.5	
		De	iPKP1		00 15 18.0	
"	19	Up	i(P)		03 42 43.8	
"	19	Ki	i		11 33 35.5	
			i		11 34 04.2	
			i(Sgl)		11 34 21.4	
"	19	Up	iP		16 38 10.2	
		Um	iP		16 38 55.7	
		Ud	iP		16 38 18.1 C	
		De	iP		16 37 39.3	
		Albania (h = 5 km).				
"	19	Up	iP		19 42 03.1	
			ipP		19 43 16.9	
			iPP		19 45 27.9	
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP		19 41 34.8	
		(cont.)				
1973						
Aug.	19	(cont.)				
		Ki			micr	sec
			P	Z'	0.2	0.8
		Sk	iP		19 42 00.5	
			iPP		19 45 27.6	
		Um	iP		19 41 46.8	
			ipP		19 42 58.6	
		Ud	iP		19 42 09.7	
			ipP		19 43 22.7	
			iPP		19 45 43.0	
		De	iP		19 42 21.4	
		Mariana Islands.				
		h = 310 km (Up,Um,Ud).				
		m = 5.9 (Up,Ki).				
"	19	Ki	iP		21 53 21.7	
			i		21 54 31.5	
			iS		21 54 55.3	
		Um	iP		21 54 13.2	
		Ud	iP		21 55 03.7	
			i		21 55 13.1	
		Norwegian Sea.				
		Origin time = 21 51 26.				
"	19	Ki	iP		23 21 17.1	
			i		23 21 23.4	
		Sk	eP		23 22 02	
		Um	iP		23 22 08.0	
			i		23 22 17.2	
		Ud	iP		23 22 56.8	
		De	iP		23 23 36.0	
		Norwegian Sea (h = N).				
		Ud, at an epicentral distance of about 15°, has unusually large amplitude of P Z'.				
"	20	Um	iP		02 42 26.3	
"	20	Up	e(pP)		04 57 34	
		Ki	e(pP)		04 57 21	
		Um	iP		04 57 15.5	
			ipP		04 57 25.2	
		Molucca Passage.				
		h = 35 km (Um).				
"	20	Up	iP		15 21 54.7	
			i		15 22 06.6	
			iS		15 24 35.5	
			i		15 24 51.3	
					micr	sec
			P	Z'	2.1	0.8
			S	Z'	0.9	0.9
			Mx	E	2.4	5
			Mx	N	1.9	5
			Mx	Z	1.3	5
		Ki	iP		15 23 21.5	
			i		15 23 26.9	
		(cont.)				

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

1973						
Aug.	20	(cont.)				
		Ki	iS		15 27 18.3	
			i		15 27 25.4	
					micr	sec
			P	Z'	0.8	0.9
			Mx	E	2.0	6
		Sk	iP		15 22 51.3	
			i		15 22 54.4	
			iS		15 26 16.1	
		Um	iP		15 22 36.3	
			iS		15 25 52.7	
		Ud	iP		15 22 11.3	
			i		15 22 13.8	
			iS		15 25 05.8	
		De	iP		15 21 30.4	
			i		15 21 32.3	
			iS		15 23 54.3	
		Rumania (h = 70 km).				
		m = 6.3 (Up,Ki).				
		Up, at a distance of about 15°, exhibits unusually large amplitude of P Z'; cf similar remark to Aug. 19, 23 21.				
"	20	De	iP		18 42 01.7	
		Crete.				
"	20	Ud	iP		20 05 14.0	
"	20	Up	iP		22 37 09.2	
		Ki	iP		22 36 15.2	
		Um	iP		22 36 42.6	
		Ud	iP		22 37 07.6	
		De	iP		22 37 31.3	
		Aleutian Islands.				
"	21	Ki	eP		01 59 05	
		Ud	iP		01 59 22.9	
		Molucca Passage (h = 60 km).				
"	21	De	iP		02 01 36.3	
"	21	Ki	eP		03 53 32	
		Um	iP		03 54 01.5	
		Ud	iP		03 54 26.9	
		Aleutian Islands (h = 100 km).				
"	21	Up	iPKP1		07 39 57.4	
		Ud	iPKP1		07 40 01.3	
"	21	Ki	iSn		12 20 10.8	
		Um	iSgl		12 19 25.4	
			iRg		12 19 53.8	
		Ud	iSgl		12 20 05.0	
		De	iSgl		12 20 37.6	
		Western USSR.				
		Explosion.				

1973						
Aug.	21	Um	iS*		12 53 32.6	
			iSgl		12 53 41.4	
		Gulf of Finland.				
		Explosion.				
"	21	Um	iSgl		12 54 58.3	
		Gulf of Finland.				
		Explosion.				
"	21	Um	iSgl		12 58 50.0	
		Ud	iSgl		12 59 15.8	
		De	iSn		12 59 23.9	
			iSg2		13 00 04.0	
		Gulf of Finland.				
		Explosion.				
"	21	Um	iSgl		13 00 12.4	
		Gulf of Finland.				
		Explosion.				
"	21	Um	iSgl		13 00 52.0	
		Gulf of Finland.				
		Explosion.				
"	21	Ki	iSg2		13 05 57.3	
		Sk	iSgl		13 05 02.2	
		Um	iSgl		13 03 54.1	
		Ud	iSgl		13 04 09.3	
		De	i		13 04 32.5	
		Gulf of Finland.				
		Explosion.				
"	21	Ki	i		13 19 50.9	
			iSgl		13 20 10.5	
		Um	iSgl		13 18 52.3	
		Ud	i(S*)		13 20 18.2	
		De	iSg2		13 21 20.9	
		Lake Ladoga.				
		Explosion.				
"	21	Ud	i(P)		13 41 10.2	
			i		13 41 18.9	
		De	i(P)		13 41 09.5	
"	21	Up	iP		14 15 50.9	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	1.0	20
			Mx	N	1.1	20
			Mx	Z	1.3	19
		Ki	iP		14 15 50.7 C	
			ipP		14 16 08.7	
					micr	sec
			P	Z'	0.2	1.0
			Mx	E	3.0	20
			Mx	N	2.3	18
			Mx	Z	2.4	20
		(cont.)				

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

1973
Aug. 21 (cont.)
Sk iP 14 16 04.7
ipP 14 16 22.3
Um iP 14 15 48.0
ipP 14 16 05.9
Ud iP 14 16 00.7
ipP 14 16 19.1
De iP 14 15 59.6
Sumatra.
h = 70 km (Ki,Sk,Um,Ud).
m = 6.3, M = 5.7 (Up,Ki).

" 21 Ki eP 14 18 14
i 14 18 22.9
i 14 18 36.5
Sk eP 14 18 27
Um iP 14 18 11.9
ipP 14 18 29.1
Sumatra.
Origin time = 14 05 08.
h = 60 km (Um).

" 21 Up iP 14 30 12.7
Ki iP 14 30 51.2

" 21 Up iPKP1 16 47 37.6 C
iPKP2 16 47 44.3
Sk iPKP1 16 47 32.3 C
Um iPKP1 16 47 26.7
Ud iPKP1 16 47 39.5 C
iPKP2 16 47 47.1
De iPKP2 16 48 01.1
South of Kermadec Islands
(h = 250 km).

" 21 Ud iP 17 09 29.5
Greece.

" 21 Ud iP 21 22 18.9
Dodecanese Islands.

" 21 Ud iP 22 52 15.5

" 22 Up iP 01 12 03.7
ipP 01 12 13.7
Ki iP 01 11 10.6
Sk iP 01 11 44.6
Ud iP 01 12 05.6
ipP 01 12 13.4
De iP 01 12 28.1
Aleutian Islands.
h = 35 km (Up,Ud).

" 22 Up iP 02 04 54.4
Ki iP 02 04 19.2
Sk iP 02 04 51.9
(cont.)

1973
Aug. 22 (cont.)
Um iP 02 04 34.6
Ud iP 02 05 03.6 D
De iP 02 05 17.3
Sea of Japan (h = 380 km).

" 22 Up iP 03 51 12.2
Ki iP 03 51 20.4
Um iP 03 51 09.8
Ud iP 03 51 28.5 C
De eP 03 51 25
Afghanistan-USSR (h = 240 km).

" 22 Up iPKP1 05 29 43.7
Ud iPKP1 05 29 45.9
De iPKP1 05 29 57.5

" 22 Up iPKP 06 59 01.7
iPKP1 06 59 08.4
i 06 59 29.5
i 07 01 30.9
micr sec
PKP1 Z' 0.2 0.9
Mx E 1.9 20
Mx N 4.5 21
Mx Z 5.7 21
Ki iPKP1 06 58 47.3
micr sec
PKP1 Z' 0.1 0.9
Mx E 3.6 22
Mx N 2.5 20
Mx Z 3.3 20
Sk iPKP 06 59 01.2
iPKP1 06 59 02.9
Um iPKP 06 58 56.3
iPKP1 06 58 58.4
Ud iPKP 06 59 04.2
iPKP1 06 59 10.2
i 06 59 30.9
De iPKP 06 59 08.6
iPKP1 06 59 18.2
i 07 01 00.9
South of Kermadec Islands
(h = N).
M = 6.3 (Up,Ki).

" 22 Up iPKP1 08 18 09.0
i 08 18 14.9
Sk iPKP1 08 18 03.4
Um iPKP1 08 17 58.8
Ud iPKP1 08 18 12.0
De iPKP2 08 18 32.4

" 22 Up iSg1 12 31 16.6
Ud iPg1 12 30 26.1
iSg1 12 30 46.6
(cont.)

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

1973
Aug. 22 (cont.)
De iSgl 12 31 07.5
Västergötland, Sweden,
58.7°N, 13.8°E.
Origin time = 12 30 02.

" 22 Ud i(Sgl) 14 01 56.6

" 22 Up iP 16 41 05.8
Ud iP 16 41 10.1

" 22 Up iP 17 08 10.3
Ki iP 17 07 41.9 C
micr sec
P Z' 0.2 1.0
Sk iP 17 08 07.6
Um iP 17 07 54.2
Ud iP 17 08 17.8
De iP 17 08 28.2
Mariana Islands (h = 80 km).

" 22 Up iPKP1 17 47 19.2
iPKP2 17 47 25.6
micr sec
PKP2 Z' 0.1 0.8
Sk iPKP1 17 47 16.3
Um iPKP1 17 47 08.8 D
Ud iPKP1 17 47 21.2
iPKP2 17 47 28.6
De iPKP1 17 47 28.9
iPKP2 17 47 42.5
Kermadec Islands (h = 460 km).

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

1973
Aug. 22 (cont.)
Ud ipP 18 25 09.7
De iP 18 25 22.6 D
ipP 18 25 32.5
Kodiak Island.
h = 35 km (Up,Ki,Sk,Um,Ud,
De).
m = 6.6, M = 5.4 (Up,Ki).

" 22 Ki eP 18 38 33
Um iP 18 38 33.9
Ud iP 18 38 59.0

" 22 Um iPKP1 19 56 22.9

" 22 Ki i 21 06 23.5
i 21 06 43.1
i(Sgl) 21 06 47.8

" 22 Up iPKP1 21 50 57.5
Ud iPKP1 21 50 59.4
De iPKP1 21 51 09.6

" 22 Ud iP 22 18 10.0

" 22 Um iP 22 18 32.6
Ud iP 22 18 57.1

" 22 Up iP 22 26 14.6
Ki iP 22 26 53.1
Sk eP 22 26 22
Um iP 22 26 36.2
Ud iP 22 26 05.0
Atlantic Ocean (h = N).

" 23 Ki iP 05 36 05.9
Ud iP 05 35 10.0

" 23 Up iP 05 50 05.1
Ki iP 05 49 32.7
Sk iP 05 50 01.3
Um iP 05 49 44.1
i 05 49 46.4
Ud iP 05 50 11.2
De iP 05 50 24.1
Bonin Islands (h = 170 km).

" 23 Um iP 06 01 55.7
Ud iP 06 02 23.8
Japan (h = 340 km).

" 23 Ki iPn 08 03 52.0
iSn 08 04 43.2
Northwest USSR-Norway.
Explosion.

" 23 Um iSgl 12 29 54.7
(cont.)

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

1973
Aug. 23 (cont.)
Ud iSgl 12 30 37.1
De iSgl 12 31 06.5
Western USSR.
Explosion.

" 23 Up iP 12 33 21.2
Ki iP 12 33 57.7
i 12 34 10.0
Sk iP 12 33 58.7
Um iP 12 33 36.3
Ud iP 12 33 36.3
De iP 12 33 20.3
i 12 33 22.1
Iran (h = 40 km).

" 23 Ud iP 12 39 21.2
i 12 39 30.2
i 12 39 41.2
De iP 12 39 24.7

" 23 Up i(P) 12 51 33.5
De i(P) 12 52 08.6

" 23 Ud iSgl 13 31 40.4

" 23 Up iSgl 13 36 02.5
iRg 13 36 08.2
Ud iSgl 13 36 48.0
De iSgl 13 37 10.2
Coast of Södermanland,
Sweden.
Explosion.

" 23 Ki micr sec
Mx E 1.6 14
Ud i(P) 14 56 04.4
iP 14 56 15.4
De iP 14 55 28.3
Rumania (h = 40 km).

" 23 Up iPKP2 16 40 31.3 D
Um iPKP1 16 40 11.5
i 16 40 14.7
Ud iPKP1 16 40 26.9
iPKP2 16 40 33.4
De iPKP2 16 40 47.4

" 23 De iP 16 59 12.6
Rumania (h = 50 km).

" 23 Up iPKP 17 13 58.6
micr sec
Mx E 1.2 25
Mx N 1.1 24
Mx Z 1.5 22
(cont.)

1973
Aug. 23 (cont.)
Ki iPKP 17 13 49.0
micr sec
Mx E 1.5 25
Mx N 0.8 19
Sk iPKP 17 13 59.3
Um iPKP 17 13 52.3
Ud iPKP 17 14 01.3
De iPKP 17 14 06.7
i 17 14 19.5
New Britain (h = 80 km).
M = 5.6 (Up,Ki).

" 23 Up iP 17 16 03.2

" 23 Ki eP 17 37 36
Ud iP 17 38 06.4
De eP 17 38 16
Luzon (h = 60 km).

" 23 Ki eP 18 10 52
Ud iP 18 11 20.6

" 23 De iP 18 26 27.9
Rumania (h = 90 km).

" 23 Ud iP 18 51 07.4
Samar (h = N).

" 23 Up iP 19 27 56.8
ipP 19 28 25.5
Ki iP 19 27 18.6
Sk iP 19 27 52.5
Um iP 19 27 34.9 D
Ud iP 19 28 04.2
ipP 19 28 33.0
De iP 19 28 19.3
Japan.
h = 120 km (Up,Ud).

" 23 Up iP 21 09 13.0
Ud iP 21 09 11.0
Aleutian Islands (h = 40 km).

" 24 Up iP 00 01 59.6 C
ipP 00 02 12.4
iS 00 11 22
micr sec
P Z' 0.4 1.3
Mx E 1.9 17
Mx N 1.9 18
Mx Z 3.4 17
Ki eP 00 01 19 C
micr sec
P Z' 0.1 1.2
Mx E 3.4 16
(cont.)

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

1973
Aug. 24 (cont.)
Ki micr sec
Mx N 3.2 17
Mx Z 3.1 16
Sk iP 00 01 53.5 C
Um iP 00 01 37.7 C
iS 00 10 42
Ud iP 00 02 07.1 C
De iP 00 02 22.1 C
Japan.
h = 45 km (Up).
m = 6.0, M = 5.7 (Up,Ki).

" 24 Up iP 02 13 32.8
i 02 13 36.4
micr sec
P Z' 0.1 0.9
Ki iP 02 14 10.5
i 02 14 13.7
micr sec
P Z' 0.1 0.9
Sk iP 02 14 08.8
i 02 14 12.1
Um iP 02 13 46.8
i 02 13 51.2
Ud iP 02 13 47.0
i 02 13 51.5
De iP 02 13 32.0
i 02 13 35.1
Iran (h = N).
m = 5.6 (Up,Ki).
Double P, small and large,
in average 3.7 sec apart.

" 24 Up iP 02 20 12.1
Ki iP 02 20 49.4
Um iP 02 20 26.0
Ud iP 02 20 25.3
De eP 02 20 10
Iran (h = N).

" 24 Ki iPKP 03 42 43.8
South Sandwich Islands
(h = 70 km).

" 24 Ud iP 08 03 46.2

" 24 Ud i(Sgl) 08 54 22.0
De i 08 52 07.9
i 08 52 24.5
i(Sgl) 08 52 46.8

" 24 Up iP 09 41 42.0 C
Ki iP 09 42 19.3 C
Sk iP 09 42 17.2
Um iP 09 41 55.9
Ud iP 09 41 57.1 C
(cont.)

1973
Aug. 24 (cont.)
De iP 09 41 40.6
Iran (h = N).

" 24 Ki iPn 10 17 54.9
iSn 10 18 43.1
iS* 10 18 56.6
Sk eSgl 10 21 42
Um iSgl 10 20 23.8
Northwest USSR-Norway.
Explosion.

" 24 Ud iP 10 38 42.9
West of Crete.

" 24 Ki i 11 32 28.9
iSgl 11 33 10.0
Um iSgl 11 31 05.0

" 24 Ud iP 14 12 10.4

" 24 Up iP 16 58 56.1
Ud iP 16 59 02.2
Greece.

" 24 Up iPKP 20 37 02.3
iPKKP1 20 47 19.2
i 20 47 33.6
Ki iPKKP1 20 47 40.8
micr sec
Mx E 1.4 22
Mx N 1.1 20
Um iPKP 20 36 55.3
Ud iPKP 20 37 05.4
iPKKP1 20 47 14.1
De iPKP 20 37 10.9 C
Solomon Islands (h = 60 km).

" 24 Up iP 20 42 09.9

" 25 Up iPKP1 03 11 30.2
Ud iPKP1 03 11 29.1
De iPKP1 03 11 40.0

" 25 Up iP 03 57 58.3
micr sec
Mx E 1.7 18
Mx N 4.8 18
Mx Z 3.3 20
Ki iP 03 57 32.9
micr sec
P Z' 0.2 1.5
Mx E 3.3 24
Mx N 5.2 23
Mx Z 2.1 19
Sk iP 03 57 58.7
Um iP 03 57 40.8
(cont.)

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

1973
Aug. 25 (cont.)
Ud iP 03 58 04.1
Caroline Islands (h = N).
M = 6.1 (Up,Ki).

" 25 Up iPKP2 04 45 01.8
Ki iPKP1 04 44 32.2
micr sec
PKP1 Z' 0.1 1.1
Sk iPKP1 04 44 46.2
Um iPKP1 04 44 40.3
i 04 44 51.1
Ud iPKP2 04 45 00.7
New Zealand (h = 60 km).

" 25 Ud iP 07 08 01.6

" 25 Up iP 12 26 04.8
micr sec
P Z' 0.1 1.1
Ki iP 12 25 10.9 C
micr sec
P Z' 0.1 1.4
Mx N 0.4 14
Sk iP 12 25 48.1
Um iP 12 25 37.1
Ud iP 12 26 09.2
De iP 12 26 31.8 C
Kamchatka (h = N).
m = 5.9 (Up,Ki).

" 25 Ki iPgl 12 37 19.9
iSn 12 37 53.9
iSgl 12 38 12.5
Um iSn 12 38 31.5
iS* 12 38 55.3
Northwest USSR-Finland.
Explosion.

" 25 Ki iP 12 54 54.7
Sk eP 12 54 26
Ud iP 12 53 54.4
De iP 12 53 22.0
Crete (h = N).

" 25 Um iSgl 14 40 55.9
Ud iS* 14 42 06.5
Lake Ladoga region.
Explosion.

" 25 Up iP 14 51 11.8
micr sec
P Z' 0.2 1.2
Mx E 1.3 17
Mx N 0.8 16
Mx Z 3.2 16
Ki iP 14 50 44.0
(cont.)

1973
Aug. 25 (cont.)
Ki micr sec
P Z' 0.1 1.3
Mx E 1.1 15
Mx N 1.4 14
Mx Z 1.6 15
Sk eP 14 51 12
Um iP 14 50 54.7
Ud iP 14 51 20.6 D
De iP 14 51 31.3 D
Ryukyu Islands (h = N).
m = 6.0, M = 5.4 (Up,Ki).

" 25 Up iP 15 05 51.9
Ki iP 15 06 24.0
ipP 15 06 33.3
micr sec
P Z' 0.1 1.0
Sk iP 15 06 25.7
Um iP 15 06 03.1
ipP 15 06 12.5
Ud iP 15 06 07.4
ipP 15 06 15.2
iPP 15 07 55.0
De iP 15 05 53.1
ipP 15 06 01.5
Iran.
h = 40 km (Ki,Um,Ud,De).

" 25 Up iP 15 26 41.8
Ki iP 15 25 56.8
Sk iP 15 26 31.8
Um iP 15 26 16.8
Ud iP 15 26 48.2
iPcP 15 27 10.4
De eP 15 27 04
Kurile Islands (h = 40 km).

" 25 Ud i(P) 16 03 57.9

" 25 Ud eP 16 39 54
De iP 16 39 39.6
Iran (h = 60 km).

" 25 Um iPKP1 21 56 38.5

" 25 Ud iP 22 00 38.6
Crete.

" 25 Up iP 22 02 07.3 C
ipP 22 02 22.9
micr sec
P Z' 0.1 0.7
Ki iP 22 01 46.6
micr sec
P Z' 0.9 0.9
Sk iP 22 02 11.7
(cont.)

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

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

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

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

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

1973						
Aug.	27	(cont.)				
		Ki	iP		06 36 50.5	
			iPcP		06 37 33.8	
		Um	iP		06 37 15.6	
		De	iP		06 38 05.9	
		Aleutian Islands (h = 50 km).				
"	27	Up	iP		06 56 40.7	
		Ki	iP		06 55 47.8	
		Um	iP		06 56 14.0	
		Ud	iP		06 56 41.2	
		De	iP		06 57 03.3	
		Aleutian Islands (h = 60 km).				
"	27	Up	i(P)		07 43 26.7	
			i		07 43 38.0	
"	27	Ud	iPKP1		08 58 55.9	
		De	iPKP1		08 59 06.9	
"	27	Ki	eSg1		09 17 31	
		Um	iSg1		09 16 16.6	
		Lake Ladoga.				
		Explosion.				
"	27	Up	eP		11 27 42	
		Ki	eP		11 28 05	
		Um	iP		11 27 50.6	
		Ud	eP		11 27 53	
"	27	Ud	iP		12 55 32.3	
"	27	Up	Mx		13 17	
					micr	sec
			Mx	E	0.6	20
			Mx	Z	0.6	18
		Chile (h = N).				
"	27	Up	iSKP1		14 11 06	
					micr	sec
			Mx	E	0.7	19
			Mx	N	0.8	19
			Mx	Z	1.9	20
		Ki			micr	sec
			Mx	E	0.9	20
			Mx	N	0.9	20
			Mx	Z	0.9	20
		New Hebrides Islands				
		(h = 10 km).				
		M = 5.6 (Up,Ki).				
"	27	Up	iP		14 14 47.3	
		Ki	iP		14 13 54.4	
		Ud	iP		14 14 48.1	
		De	iP		14 15 10.1	
		Aleutian Islands (h = 60 km).				

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

1973					
Aug.	27	Ud	iPKP	14 41 12.9	
		De	iPKP	14 41 21.8	
		Fiji Islands (h = 610 km).			
"	27	Ud	iPKP	14 45 05.7	
		De	iPKP	14 45 16.2	
		Fiji Islands (h = 630 km).			
"	27	Up	e(P)	14 48 27	
"	27	Up	iP	16 50 30.1	
		Ud	iP	16 50 31.6	
		De	iP	16 50 52.4	
		Aleutian Islands (h = 60 km).			
"	27	Up	iPKP	17 19 23.1	
		Ud	iPKP	17 19 22.6	
			i	17 19 34.6	
		De	iPKP	17 19 31.4	
			i	17 19 45.8	
"	27	Ki	i(Sn)	17 33 23.2	
			iSgl	17 33 35.3	
		Sk	i(Sn)	17 33 38.6	
			iSgl	17 33 43.7	
		Um	iSn	17 33 48.5	
			iSgl	17 34 02.1	
		Ud	iSgl	17 35 30.6	
		Nordland, Norway, 66.4°N, 14.7°E. Origin time = 17 32 11. Explosion.			
"	28	Um	iPKP	00 53 03.4	
		Ud	iPKP	00 53 08.8	
"	28	Up	iPKP1	02 35 43.8	
		Um	iPKP1	02 35 27.1	
		Ud	iPKP1	02 35 40.1	
"	28	Up	iP	03 06 06.2	C
			iPn	03 06 30.1	
			iSn	03 11 53.8	
		Ki	iP	03 06 00.0	C
			iPn	03 06 24.7	
		Sk	iP	03 06 27.0	C
		Um	iP	03 05 55.6	
			iPn	03 06 14.9	
		Ud	iP	03 06 23.9	C
			iPn	03 07 01.5	
		De	iP	03 06 27.9	
			iPn	03 07 06.5	
		Kazakh SSR. Underground explosion. The Pn observations of this event line up very well with (cont.)			

1973					
Aug.	28	(cont.) those of Aug. 15, 02 06, together covering the distance range from 28.1° to 37.2° with a velocity in good agreement with M. Båth, Pure Appl. Geophys., 1966, 64:19-32, and 1967, 66:30-36.			
"	28	Ud	ePKP1	05 02 23	
"	28	Sk	eP	06 02 12	
		Ud	iP	06 01 59.1	
"	28	Ki	iP	06 09 54.1	
		Sk	eP	06 09 55	
		Um	iP	06 09 29.3	
		Ud	iP	06 09 32.1	
		De	eP	06 09 18	
"	28	Ki	e	06 46 51	
			iSgl	06 47 11.7	
		Sk	iSgl	06 47 37.1	
		Um	i	06 45 32.1	
			iSgl	06 45 47.2	
		Ud	iSgl	06 47 20.6	
		De	iSgl	06 48 06.5	
		Lake Ladoga. Explosion.			
"	28	Ki	iP	08 52 36.6	
		Um	iP	08 52 26.3	
		Ud	iP	08 52 43.0	
		De	iP	08 52 40.9	
		Hindu Kush (h = 200 km).			
"	28	Sk	iSgl	09 00 33.7	
		Um	iSn	08 58 22.7	
			iS*	08 58 41.4	
			iSgl	08 58 45.6	
		Ud	iPn	08 58 06.1	
		De	iPn	08 58 25.8	
		Lake Ladoga. Explosion.			
"	28	Up	iPKP1	09 19 30.7	
		Sk	iPKP1	09 19 24.0	
		Um	iPKP1	09 19 18.6	
		Ud	iPKP1	09 19 32.4	
		De	iPKP1	09 19 41.2	
		Kermadec Islands. Origin time = 08 59 50.			
"	28	Up	iPKP1	09 38 16.8	C
			ipPKP1	09 38 25.7	
		Ki	ipPKP1	09 38 06.1	
		(cont.)			

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

1973						
Aug.	28	(cont.)				
		Sk	iPKP1		09 38 09.5	C
			ipPKP1		09 38 18.9	
		Um	iPKP1		09 38 04.5	
			ipPKP1		09 38 13.7	
		Ud	iPKP1		09 38 18.5	C
			ipPKP1		09 38 27.3	
		De	iPKP1		09 38 27.4	C
			ipPKP1		09 38 36.3	
		Kermadec Islands.				
		h = 30 km (Up,Sk,Um,Ud,De).				
"	28	Up	iP		10 03 11.6	D
			ipP		10 03 32.6	
			isP		10 03 42.7	
			iSKS		10 13 28	
			iS		10 13 42	
			iPKKP		10 21 10.8	
			iP'P'		10 29 15.9	
					micr sec	
			P	Z'	3.4 1.5	
			sP	Z'	6.6 1.8	
			PKKP	Z'	0.4 2.0	
			P'P'	Z'	0.7 2.3	
			Mx	E	19 28	
			Mx	N	42 30	
			Mx	Z	72 30	
		Ki	iP		10 02 57.3	D
			ipP		10 03 17	
			isP		10 03 24.9	
			iPP		10 06 04.9	
			iS		10 13 12.8	
			isS		10 13 48	
			iPKKP		10 21 18.6	
			iP'P'		10 29 21.9	
					micr sec	
			P	Z'	9.6 1.5	
			sP	Z'	10 2.2	
			PP	Z'	2.0 1.9	
			PKKP	Z'	0.3 1.8	
			P'P'	Z'	0.7 2.2	
			Mx	E	37 22	
			Mx	N	28 23	
			Mx	Z	36 22	
		Sk	iP		10 02 53.1	D
			isP		10 03 21.8	
			iS		10 13 02.5	
			iPKKP		10 21 21.6	
			iP'P'		10 29 22.5	
		Um	iP		10 03 07.0	D
			ipP		10 03 28.0	
			isP		10 03 37.4	
			iPP		10 06 05.0	
			eSKS		10 13 33	
			iPKKP		10 21 13.8	
			iP'P'		10 29 17.0	
		Ud	iP		10 03 02.8	D
		(cont.)				

1973					
Aug.	28	(cont.)			
		Ud	ipP	10 03 23.4	
			iSKS	10 13 24.8	
			iPKKP	10 21 13.4	
			i	10 23 05.1	
			iP'P'	10 29 17.2	
		De	iP	10 03 11.5	D
			ipP	10 03 31.8	
			isP	10 03 41.1	
			iPP	10 06 26.8	
			eSKS	10 13 40	
			iPKKP	10 21 12.5	
			iP'P'	10 29 16.7	
		Mexico.			
		h = 80 km (Up,Ki,Sk,Um,Ud, De).			
		m = 7.3, M = 6.8 (Up,Ki).			
		Relatively long periods, typical for this region.			
"	28	Up	iSg1	11 23 35.1	
		Ki	iSg2	11 26 35.2	
		Sk	iSn	11 25 05.7	
			iSg1	11 25 43.2	
		Um	iPg1	11 23 27.7	
			i	11 23 59.6	
			iSg1	11 24 35.4	
			i	11 24 49.0	
		Ud	iPn	11 23 26.7	
			iS*	11 24 49.9	
			iSg1	11 24 59.7	
		De	ePn	11 23 37	
			iPg1	11 23 56.9	
			iSg1	11 25 19.6	
		Gulf of Finland.			
		Explosion.			
"	28	Up	i(P)	11 36 32.6	
		De	i(P)	11 37 09.8	
			i	11 37 14.7	
"	28	Um	iPKP	11 49 40.9	
		New Hebrides Islands (h = 35 km).			
"	28	Ud	iPKP1	11 59 51.7	
		De	iPKP1	12 00 01.1	
"	28	Um	iSg1	12 34 00.3	
			i	12 34 06.6	
		Esthonia.			
		Explosion.			
"	28	Up	iP	12 34 18.1	
		Ki	iP	12 34 56.3	
		Sk	iP	12 34 54.8	
		Um	iP	12 34 32.2	
		(cont.)			

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

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1973
Aug.  28    (cont.)
            Um    i              12 34 34.0
            Ud    i(P)           12 34 28.6
                  iP             12 34 31.9
            De    iP             12 34 17.9
            Iran (h = 70 km).

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

 "    28    Um    iP             13 39 27.5
            Ud    iP             13 39 56.2
            Japan (h = 25 km).

 "    28    Sk    iSgl           14 08 51.8
            Um    iSgl           14 07 01.6
            De    eSg2           14 09 36
            Lake Ladoga.
            Explosion.

 "    28    Ud    i(P)           14 48 45.1

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

1973
Aug.  28    (cont.)
            Um    iS4            15 22 32
                  iP'P'4         15 41 37.3
            Ud    iP1            15 12 31.1
                  iP2            15 12 36.3
                  iP4            15 12 56.6
                  iS4            15 21 35.3
                  iP'P'4         15 41 54.0
            De    iP2            15 12 18.0 C
                  iP3            15 12 28.6
                  iP4            15 12 38.2
                  iP'P'4         15 41 46.7
            Atlantic Ocean (h = N).
            m = 6.2 (P2), 6.7 (P3),
            7.2 (P4), M = 7.1 (Up,Ki).
            Multiple P: four onsets with
            successively increasing
            amplitudes.
            P2 provides the best fit to
            the NEIS solution, preceding
            the main phase P4 by 20.3
            sec in average.

 "    28    Ud    iP             15 35 54.0

 "    28    Um    i(Sgl)         17 09 55.3

 "    28    Ki    i              17 13 32.6
                  i              17 13 49.8
                  i(Sgl)         17 13 58.7

 "    28    Ki    iSgl           17 39 33.5
            Sk    iSgl           17 39 38.3
            Um    iSgl           17 39 58.5
            Nordland, Norway.
            Explosion.

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

 "    28    Ud    iP             20 53 12.6
            De    eP             20 53 10
            Tadzhik SSR.

 "    28    Ud    iP             23 35 03.8

 "    28    Up    iP             23 40 58.0
            Um    iP             23 41 22.6
            Ud    iP             23 40 51.2
                  i              23 41 08.2

 "    29    Up    iPKP2          01 31 39.9
            (cont.)
```

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

1973
Aug. 29 (cont.)
Ki ePKP1 01 31 04
Um iPKP1 01 31 14.6
iPKP2 01 31 24.3
Ud iPKP2 01 31 45.3

" 29 Up e(P) 02 46 38
Ud i(P) 02 45 56.4

" 29 Up ePKP2 05 02 51
Ki iPKP1 05 02 18.6
iPKP2 05 02 24.8
Ud iPKP2 05 02 56.9
i 05 03 03.6
New Zealand (h = N).

" 29 Ud i 10 11 12.6
De i 10 08 51.7
i(Sgl) 10 09 16.1

" 29 De iPKP1 11 02 43.0
i 11 02 44.2

" 29 Up iP 11 40 51.9
Ki iP 11 40 22.6
Sk epP 11 41 22
Um iP 11 40 33.5
ipP 11 41 04.0
i 11 41 35.4
Ud iP 11 40 58.5
Volcano Islands.
h = 120 km (Um).

" 29 Up iSn 12 09 02.6
iSgl 12 09 25.4
Ki iSgl 12 12 28.1
Sk i 12 09 28.3
iSgl 12 09 43.0
Um iPn 12 08 32.5
i 12 10 42.3
iSgl 12 11 05.2
Ud iPgl 12 07 37.8
iSn 12 08 11.6
iSgl 12 08 26.9
De iPgl 12 07 44.4
i 12 07 45.7
iSn 12 08 15.9
iSgl 12 08 35.7
South coast of Norway,
near 58°N, 7 1/2°E.
Origin time = 12 06 33.

" 29 De i(Sgl) 12 51 07.7

" 29 Sk eSgl 12 57 24
Um iSgl 12 55 53.8
iRg 12 56 25.3
(cont.)

1973
Aug. 29 (cont.)
Ud iSgl 12 56 39.4
De e 12 56 38
iSgl 12 57 08.4
Western USSR.
Explosion.

" 29 Ki iSgl 14 00 38.4
Um iSgl 13 58 59.2
Ud iSgl 13 59 46.1
De iSgl 14 00 12.6
Western USSR.
Explosion.

" 29 Up i(Rg) 14 57 19.6
Ud i 14 57 25.5
i(Rg) 14 57 26.5

" 29 Up i(P) 15 23 02.6

" 29 Up eSgl 16 24 37
Sk iSgl 16 26 55.5
Um i 16 25 33.7
iSgl 16 26 02.4
Ud iSgl 16 25 16.5
De iSgl 16 24 26.3
Probably region of Lithuania.
Explosion?

" 29 Ud iPKP1 17 03 57.5
De iPKP1 17 04 09.3

" 29 Um iP 17 38 14.7
Ud iP 17 37 43.9

" 29 Up iPgl 18 03 49.0
iSgl 18 04 02.1
Sk eSgl 18 05 49
Um iSgl 18 05 56.8
Ud iSgl 18 04 18.0
De iSgl 18 05 26.4
Västmanland, Sweden,
59.7°N, 16.0°E.
Origin time = 18 03 36.

" 29 Up iP 18 25 21.7
Um iP 18 25 02.2
Ud iP 18 25 29.2
South of Japan (h = N).

" 29 Ud i(P) 18 29 10.0

" 29 Ki iP 18 43 40.9
i 18 43 58.6
Um eP 18 43 43

" 29 Up iP 19 26 34.0
(cont.)

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

1973
Aug. 29 (cont.)
Sk iP 19 27 11.1
Um iP 19 27 09.5
Ud iP 19 26 38.8
Greece.

" 29 Ud iP 19 27 10.9

" 29 Ud iP 19 30 20.5

" 29 Up iP 21 33 42.3
Ki iP 21 32 50.4
Um iP 21 33 16.7
Ud iP 21 33 41.4
Aleutian Islands.
Origin time = 21 22 44.

" 30 Ud iP 00 08 08.6

" 30 Um iPKP 00 13 30.3
Ud iPKP 00 13 45.4
Solomon Islands (h = 25 km).

" 30 Up iP 01 25 10.7
Um iP 01 24 46.6
Ud iP 01 25 17.7
i 01 25 31.0
Kurile Islands.
Origin time = 01 14 12.

" 30 Um iP 01 35 19.1

" 30 Up iPKP1 01 37 41.9
ipPKP1 01 37 52.5
Sk ePKP1 01 37 37
ipPKP1 01 37 43.8
Um iPKP1 01 37 30.6
Ud iPKP1 01 37 44.1
ipPKP1 01 37 52.9
De ipPKP1 01 38 01.6
Kermadec Islands.
Origin time = 01 18 02.
h = 30 km (Up,Sk,Ud).

" 30 Up ipPKP1 01 43 32.4
Um iPKP1 01 43 09.7
ipPKP1 01 43 23.3
Ud ePKP1 01 43 23
Kermadec Islands.

" 30 Up iPKP2 02 06 40.9
Um iPKP1 02 06 20.2
iPKP2 02 06 28.2
Ud iPKP2 02 06 45.0

" 30 Up iPKP1 02 10 09.7
(cont.)

1973
Aug. 30 (cont.)
Up ipPKP1 02 10 18.4
Sk iPKP1 02 10 03.2
ipPKP1 02 10 13.8
Um iPKP1 02 09 58.1 C
Ud iPKP1 02 10 11.5
ipPKP1 02 10 20.2
De iPKP1 02 10 20.3
ipPKP1 02 10 31.0
Kermadec Islands.
Origin time = 01 50 29.
h = 30 km (Up,Sk,Ud,De).

" 30 Up iPKP1 02 31 26.8
i 02 31 39.7
Sk iPKP1 02 31 21.0 C
ipPKP1 02 31 28.9
Um iPKP1 02 31 15.9
ipPKP1 02 31 22.8
Ud iPKP1 02 31 29.0 C
ipPKP1 02 31 37.8
De iPKP1 02 31 38.6
ipPKP1 02 31 46.8
i 02 31 56.9
Kermadec Islands.
h = 25 km (Sk,Um,Ud,De).

" 30 Ki i(Sgl) 02 49 29.9
Um i(Sgl) 02 48 36.5

" 30 Up iP 02 57 59.0
Um iP 02 57 39.9
Bonin Islands (h = N).

" 30 Um iP 03 01 02.4

" 30 Up iPKP1 03 52 33.0
ipPKP1 03 52 41.6
Sk iPKP1 03 52 26.1
Um iPKP1 03 52 21.2
Ud iPKP1 03 52 34.4
ipPKP1 03 52 44.4
De ipPKP1 03 52 52.1
Kermadec Islands.
h = 30 km (Up,Ud).

" 30 Up iP 05 00 31.3
Ki iP 05 00 34.5
Sk eP 05 00 19
De iP 05 00 22.3
Colombia (h = 160 km).

" 30 Up iP 07 42 04.7
iPn 07 42 30.0
micr sec
Mx E 1.1 15
(cont.)

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

1973						
Aug.	30	(cont.)				
		Up			micr	sec
			Mx	N	1.5	17
			Mx	Z	1.1	12
		Ki	iP		07 42 50.6 C	
			i		07 42 54.9	
					micr	sec
			P	Z'	0.2	1.0
			Mx	E	1.7	12
			Mx	N	1.3	12
			Mx	Z	1.1	13
		Sk	iP		07 42 47.0	
			i		07 42 55.3	
		Um	iP		07 42 22.8	
			i		07 42 26.2	
			i		07 42 30.3	
		Ud	iP		07 42 19.2	
			i		07 42 23.9	
			iPn		07 42 43.5	
		De	iP		07 42 00.1	
		Turkey (h = N).				
		M = 5.0 (Up,Ki).				
"	30	Ud	iPKP1		09 09 31.3	
		De	iPKP1		09 09 42.2	
"	30	Up	iPKP1		09 14 29.3	
			iPKP2		09 14 45.8	
					micr	sec
			PKP1	Z'	0.3	2.0
			Mx	E	0.9	19
			Mx	N	1.1	21
			Mx	Z	1.4	21
		Ki	iPKP1		09 14 11.6 C	
					micr	sec
			PKP1	Z'	0.3	1.5
			Mx	E	0.9	18
			Mx	N	0.9	18
			Mx	Z	1.3	19
		Sk	iPKP1		09 14 24.0	
		Ud	iPKP1		09 14 28.0	
			iPKP2		09 14 41.1	
		De	iPKP1		09 14 33.0	
		New Zealand (h = 45 km).				
		M = 5.7 (Up,Ki).				
"	30	Sk	eP		10 52 56	
		Um	iP		10 52 38.1	
		Ud	iP		10 53 04.9	
"	30	Ki	iP		10 57 42.1	
		Um	eP		10 57 54	
		Revilla Gigedo Islands				
		(h = N).				
"	30	Up	i		11 51 46.3	
			iRg		11 51 49.4	
		Ud	iRg		11 52 01.7	

1973						
Aug.	30	Up	iPKP1		12 12 25.9	
			ipPKP1		12 12 36.5	
		Sk	ePKP1		12 12 19	
			ipPKP1		12 12 26.1	
		Um	iPKP1		12 12 13.5	
			ipPKP1		12 12 20.2	
		Ud	iPKP1		12 12 26.7	
			ipPKP1		12 12 34.3	
		De	ipPKP1		12 12 43.6	
		Kermadec Islands.				
		Origin time = 11 52 45.				
		h = 25 km (Up,Sk,Um,Ud).				
"	30	Um	iPKP1		13 06 54.3	
		Ud	iPKP1		13 07 08.6	
		De	iPKP1		13 07 19.8	
"	30	Up	iPKP1		13 19 15.4	
		Ud	iPKP1		13 19 17.7 C	
		De	iPKP1		13 19 28.5	
		Tonga-Kermadec Islands				
		(h = 510 km).				
"	30	Sk	iSgl		13 29 24.2	
		Um	iSgl		13 27 57.7	
		Probably western USSR.				
		Explosion.				
"	30	Um	iP		16 23 29.1	
			i		16 23 39.8	
		Ud	iP		16 23 53.5 C	
"	30	Up	iP		18 37 53.3 C	
			ipP		18 38 38.9	
			iS		18 47 56	
			isS		18 49 16	
			iSKPP'		19 07 14.6	
					micr	sec
			P	Z'	0.3	0.7
			Mx	E	0.9	18
			Mx	N	1.1	20
			Mx	Z	1.7	24
		Ki	iP		18 37 56.9 C	
			ipP		18 38 43.0	
			iS		18 48 02	
			ipS		18 49 06	
			eP'P'		19 04 16	
			iSKPP'		19 07 13.8	
					micr	sec
			P	Z'	0.7	1.5
			Mx	E	1.0	19
			Mx	N	2.6	17
			Mx	Z	1.1	18
		Sk	iP		18 37 40.8 C	
			ipP		18 38 27.3	
			iS		18 47 39.2	
			iP'P'		19 04 12.3	
		(cont.)				

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

1973	Day	Sta	Phase	Comp	Time / micr	
Aug.	30	(cont.)				
		Sk	iSKPP'		19 07 25.4	
		Um	iP		18 37 58.2	C
			ipP		18 38 45.1	
			iS		18 48 01	
			ipS		18 49 07	
			isS		18 49 26	
			iP'P'		19 04 03.3	
			iSKPP'		19 07 12.7	
		Ud	iP		18 37 43.4	C
			ipP		18 38 28.8	
			iS		18 47 48.4	
			iSKPP'		19 07 22.2	
		De	iP		18 37 44.3	C
			ipP		18 38 30.3	
			eS		18 47 45	
			iSKPP'		19 07 23.4	

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

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

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

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

1973	Day	Sta	Phase	Comp	Time / micr	
Aug.	30	Up	iP		21 12 41.7	C
		Ki	iP		21 12 58.4	
		Sk	iP		21 13 09.3	C
		Um	iP		21 12 44.4	
		Ud	iP		21 12 57.6	C
		De	iP		21 12 50.2	

Pakistan (h = N).

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

Japan (h = 40 km).

"	30	Up	iPKP1		23 26 50.1	
		Ki	iPKP		23 26 44.9	
			i		23 26 52.0	
		Sk	iPKP		23 26 54.7	
		Um	i(PKP)		23 26 39.8	
			i		23 26 45.5	
			iPKP		23 26 50.7	
		Ud	iPKP1		23 26 53.0	
		De	iPKP1		23 27 04.6	

Fiji Islands (h = 630 km).

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

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

New Hebrides Islands (h = 35 km).

"	31	Up	iPKP1		02 22 16.4	
		Um	iPKP1		02 22 00.4	

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

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

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

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

1973				
Aug.	31	Ki	iP	23 42 21.7
"	31	Ud	ePKP	23 49 08
		Samoa Islands (h = N).		

Markus Båth

April 4, 1975

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SEISMOLOGICAL BULLETIN

UPPSALA, KIRUNA, SKALSTUGAN, UMEÅ, UDDEHOLM and DELARY

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

SEPTEMBER 1 - 30, 1973

1973						
Sept.	1	Ud	i(P)		02 24 03.9	
"	1	Up	iPKP1		05 58 05.1	
		Sk	ePKP1		05 57 57	
		Um	iPKP1		05 57 54.4	
		Ud	iPKP1		05 58 06.9	
		De	iPKP1		05 58 17.2	
			ipPKP1		05 58 34.0	
		Kermadec Islands.				
		h = 60 km (De).				
"	1	Up	iP		11 35 23.7	
		Sk	i(pP)		11 35 55.5	
		Um	iP		11 35 45.8	
		Ud	iP		11 35 26.2	
		Zambia (h = N).				
"	1	Ki	iP		12 39 52.8	
					micr sec	
			Mx	E	0.4 10	
			Mx	N	0.6 10	
		Ud	iP		12 40 12.5	
			ipP		12 40 23.6	
		Alma-Ata.				
		h = 40 km (Ud).				
"	1	Up	iP		13 49 24.4	
		Ud	iP		13 49 31.2	
		Japan (h = 80 km).				
"	1	Up	iPKP1		16 03 28.9	
		Ud	iPKP1		16 03 31.2	
		De	iPKP1		16 03 41.8	
"	1	Ki	eP		16 19 34	
		Ud	iP		16 19 14.0	

1973						
Sept.	1	Up	i(pPKP1)		18 26 43.1	
		Ud	iPKP1		18 26 32.7	
		De	iPKP1		18 26 43.8	
		Tonga-Kermadec Islands (h = N).				
"	1	Ki	iP		20 48 13.9	
		Um	iP		20 48 26.9	
		Ud	iP		20 48 55.9	
		Japan (h = 20 km).				
"	2	Up	iP		00 41 28.3	D
					micr sec	
			P	Z'	0.1 1.4	
		Ki	iP		00 41 12.5	D
					micr sec	
			P	Z'	0.2 1.4	
		Sk	iP		00 41 33.2	D
		Um	iP		00 41 17.5	D
		Ud	iP		00 41 36.7	D
		De	iP		00 41 41.7	D
		Mindanao (h = 620 km).				
		m = 5.7 (Up,Ki).				
"	2	Ki	eSgl		04 11 35	
		Sk	iSgl		04 11 24.2	
		Um	eSgl		04 11 52	
		Nordland, Norway.				
"	2	Ki	iSn		06 43 01.1	
			iSgl		06 43 21.3	
		Northwest USSR.				
		Explosion.				
		Solution checked with Finnish station readings.				

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

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

 "     2  Ud  iP          08 51 00.1

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

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

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

 "     3  Up  iPKP1       03 41 54.9
              iSKP1       03 44 41.5
          Ki  e(PKP)      03 41 37
              iPKP        03 41 48.5
              iSKP1       03 44 18.1
                          micr  sec
              SKP1   Z'   0.1   1.1
          Sk  i(PKP)      03 41 47.6
              iPKP        03 41 56.0
              iSKP1       03 44 34.7
          Um  i(PKP)      03 41 43.7
              iPKP        03 41 49.8
              iSKP1       03 44 30.1
          (cont.)

1973
Sept.  3  (cont.)
          Ud  iPKP1       03 41 56.8
              i           03 42 06.4
              iSKP1       03 44 43.2
          De  iPKP1       03 42 08.5 D
              iSKP1       03 44 52.1
          Fiji Islands (h = 640 km).

 "     3  Up  iPKP1       08 55 10.7
          Ud  iPKP1       08 55 11.9

 "     3  Up  i(P)        11 13 17.9

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

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

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

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

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

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

 "     4  Um  i(P)        02 33 22.2

 "     4  Ud  i(Sgl)      10 04 09.4

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

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

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

1973				
Sept.	4	Ki	eSgl	13 06 55
		Sk	e	13 06 22
		Um	iSgl	13 05 10.8
		Ud	eSgl	13 05 57
		De	eSgl	13 06 21

Western USSR.
Explosion.

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

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

"	4	Ud	i(Sgl)	14 04 20.4

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

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

"	4	Um	i(P)	14 59 21.0

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

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

1973				
Sept.	4	Ki	iPn	15 08 48.5
			iPgl	15 08 55.9
			iSgl	15 09 33.8
		Sk	iSgl	15 09 41.2
		Um	i	15 09 39.0
			iSgl	15 09 59.0

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

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

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

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

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

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

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

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

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

 "      4   Um   iPKP1           17 59 28.3

 "      4   Um   i(P)            18 24 56.3

 "      4   Up   iPKP1           21 01 38.5
                 iPKP2           21 01 42.7
                 ipPKP1          21 01 46.3
                 i               21 01 53.4
                                 micr  sec
                 PKP1     Z'     0.3   1.3
                 PKP2     Z'     0.1   1.0
                 Mx       N      1.3   24
                 Mx       Z      1.6   23
            Ki   iPKP1           21 01 17.5
            Sk   ePKP            21 01 29
                 iPKP1           21 01 31.8
                 ipPKP1          21 01 39.6
            Um   iPKP            21 01 25.4
                 iPKP1           21 01 27.1
            Ud   iPKP            21 01 35.6
                 iPKP1           21 01 40.7
                 iPKP2           21 01 45.6
                 ipPKP1          21 01 48.2
            De   iPKP            21 01 41.1
                 iPKP1           21 01 48.7
                 ipPKP1          21 01 56.7
            Kermadec Islands.
            h = 25 km (Up,Sk,Ud,De).

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

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

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

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

 "      5   Ki   iSKP1           04 05 30.9
                                 micr  sec
                 SKP1     Z'     0.1   1.0
            De   ePKP            04 03 04
            Fiji Islands (h = 400 km).

 "      5   Ud   iP              07 42 19.3

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

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

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

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

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

```
1973
Sept.   5   Up   iSgl          11 36 20.0
            Ud   iSgl          11 36 22.0
            De   iPgl          11 34 20.7
                 iSgl          11 34 47.4
            Origin time = 11 33 46.
            Explosion.

 "      5   Ki   iPn           12 13 50.2
                 iPgl          12 13 58.4
                 iSn           12 14 36.2
                 iS*           12 14 48.1
            Um   iSgl          12 16 23.7
            Northwest USSR-Norway.
            Explosion.

 "      5   Up   iP            13 14 29.6
                 ipP           13 14 44.3
                 iS            13 23 42
                               micr   sec
                 P        Z'   0.1    1.0
                 pP       Z'   0.1    1.0
                 Mx       E    9.2    18
                 Mx       N    13     17
                 Mx       Z    17     19
            Ki   iP            13 13 48.6 C
                 ipP           13 14 02.1
                               micr   sec
                 P        Z'   0.1    0.9
                 Mx       E    18     15
                 Mx       N    14     16
                 Mx       Z    22     15
            Sk   iP            13 14 24.0 C
            Um   iP            13 14 06.9 C
                 ipP           13 14 21.1
                 iS            13 22 59
            Ud   iP            13 14 37.2 C
                 ipP           13 14 49.7
            De   iP            13 14 52.4 C
                 ipP           13 15 07.0
            Japan.
            h = 50 km (Up,Ki,Um,Ud,De).
            m = 5.8, M = 6.5 (Up,Ki).

 "      5   Ki   iP            14 19 36.8
            Ud   iP            14 20 24.2
            Japan (h = N).

 "      5   Up   i(Rg)         15 01 11.8
            De   i(Rg)         15 02 08.2

 "      5   Ki   eP            15 57 54
            Ud   iP            15 58 42.2
            Japan (h = 50 km).

 "      5   Ud   iP            16 06 37.5

1973
Sept.   5   Ki   iP            16 14 14.6
            Ud   iP            16 15 03.2
            Japan (h = 20 km).

 "      5   Ki   iP            20 28 39.8
            Um   iP            20 28 57.9
            Ud   iP            20 29 28.1
            Japan (h = N).

 "      5   Ki   iP            21 16 29.3
            Ud   iP            21 15 48.7

 "      6   Ki   eP            01 18 05
            Ud   iP            01 18 09.8
            Sumatra (h = 40 km).

 "      6   Ki   iP            01 36 12.9
            Ud   iP            01 36 23.1
            Sumatra (h = N).

 "      6   Ud   iP            01 42 51.6

 "      6   Ud   iP            03 19 48.6
            Japan (h = N).

 "      6   Up   iP            11 09 32.8
                 ipP           11 09 41.5
                               micr   sec
                 P        Z'   0.1    1.0
                 pP       Z'   0.1    1.1
            Ki   iP            11 08 37.1
                 ipP           11 08 44.7
                 iS            11 15 53
                               micr   sec
                 P        Z'   0.1    1.0
                 pP       Z'   0.1    1.0
                 Mx       E    0.9    20
                 Mx       N    0.6    18
                 Mx       Z    0.8    18
            Sk   iP            11 09 03.5
                 i(pP)         11 09 13.3
            Um   iP            11 09 06.4
                 i             11 09 20.2
                 iS            11 16 47
            Ud   iP            11 09 29.7
                 ipP           11 09 37.5
            De   iP            11 09 53.2
                 ipP           11 10 01.8
            Alaska.
            h = 30 km (Up,Ki,Ud,De).
            m = 5.8 (Up,Ki).

 "      6   Ki   iP            11 14 14.9
            Ud   iP            11 15 04.9
```

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

1973				
Sept.	6	Up	iSgl	12 40 48.5
		Um	iSgl	12 41 02.3
		Ud	iSgl	12 41 48.6
		Western USSR. Explosion.		
"	6	Up	iSgl	12 59 31.8
		Sk	iSgl	12 58 42.5
		Um	iSgl	13 00 23.1
		Ud	i	12 58 14.3
			iSgl	12 58 24.6
		De	iSgl	12 59 31.8
		Near Bergen, Norway, 60.4°N, 4.7°E. Origin time = 12 56 05. Solution obtained by combination with Bergen readings.		
"	6	Sk	i(P)	14 30 38.6
"	6	Up	iSgl	14 47 45.5
		Ki	eSgl	14 50 27
		Um	iSgl	14 48 19.3
		Ud	iSgl	14 48 47.0
		De	iSgl	14 49 16.4
		Esthonia. Explosion.		
"	6	Ud	iP	15 26 53.7
"	6	Ud	iPKP1	16 38 49.9
		De	iPKP1	16 39 00.5
"	7	Um	i(Rg)	08 16 53.3
"	7	Ki	iPKP	09 49 39.4
		Um	iPKP	09 49 44.6
		De	iPKP	09 49 57.9
		New Britain (h = 60 km).		
"	7	Ud	iP	09 55 23.4
"	7	Sk	iP	10 56 24.9
		New Guinea (h = 30 km).		
"	7	Ki	eP1	11 19 21
			iP2	11 19 28.7
		Um	iP1	11 20 09.8
		Ud	iP2	11 20 50.0
		Greenland Sea (h = N).		
"	7	Ki	iPn	11 55 48.5
			iSn	11 56 47.7
			iS*	11 57 06.3
		(cont.)		

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

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

1973						
Sept.	7	(cont.)				
		Ki			micr	sec
			P	Z'	0.1	0.8
		Sk	iP		19 42 08.6	
			i		19 42 14.0	
		Um	iP		19 41 57.5	
			i		19 42 03.3	
		Ud	eP		19 41 30	
			i		19 41 34.8	
		De	iP		19 40 54.0	
			i		19 41 00.2	
		Rumania (h = 140 km).				
		m = 5.3 (Up,Ki).				
		Double P, in average 5.6 sec apart.				
"	8	Up	iP		01 24 48.4	
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP		01 23 55.6	
		Sk	eP		01 24 27	
		Um	iP		01 24 21.3	
		Ud	iP		01 24 49.4	
		De	eP		01 25 12	
		Aleutian Islands (h = 55 km).				
"	8	Sk	iP		02 07 16.5	
		Ud	iP		02 06 49.6	
		Turkey.				
"	8	Ki			micr	sec
			Mx	E	0.9	20
			Mx	N	0.9	20
		Um	iP		04 34 45.3	
		Japan (h = 10 km).				
"	8	Um	iPKPl		05 28 01.2	
		Ud	ePKPl		05 28 15	
		De	ePKPl		05 28 25	
"	8	Up	i		05 33 25.1	
			iS*		05 33 30.4	
			iSgl		05 33 37.1	
		Ki	iSgl		05 35 05.8	
			i		05 35 14.0	
		Sk	ePgl		05 31 31	
			i		05 31 59.7	
			iS*		05 32 22.7	
			iSgl		05 32 27.4	
		Um	iSn		05 33 26.5	
			i		05 33 41.2	
			i		05 33 53.7	
			iSgl		05 34 12.3	
		Ud	iPn		05 31 19.2	
		(cont.)				

1973						
Sept.	8	(cont.)				
		Ud	iPgl		05 31 32.1	
			iSn		05 32 12.7	
			iSgl		05 32 35.8	
		De	e		05 33 03	
			iS*		05 33 39.0	
			iSgl		05 33 44.5	
		Off coast of west Norway, 61.1°N, 4.6°E.				
		Origin time = 05 30 13.				
		Solution obtained by combination with Bergen and Kongsberg readings.				
"	8	Up	i(P)		06 24 35.5	
		De	i(P)		06 24 53.5	
"	8	Ud	iP		07 04 12.7	
		Caucasus.				
"	8	Up	iP		07 34 47.6	
			iS		07 42 10	
					micr	sec
			P	Z'	0.3	1.0
			Mx	E	6.1	11
			Mx	N	12	14
			Mx	Z	12	12
		Ki	iP		07 34 41.8	
			iS		07 41 54	
					micr	sec
			P	Z'	0.2	1.1
			Mx	E	17	15
			Mx	N	41	19
			Mx	Z	15	14
		Sk	iP		07 35 05.6	
		Um	iP		07 34 39.5	
			iS		07 41 56	
		Ud	iP		07 35 02.6	
		De	iP		07 35 04.3	
		Tibet (h = N).				
		m = 6.1, M = 6.2 (Up,Ki).				
"	8	Up	iP		08 00 11.5	
			ipP		08 00 48.1	
					micr	sec
			P	Z'	0.1	1.3
		Ki	iP		08 00 18.1	
			ipP		08 00 57.1	
		Sk	iP		08 00 06.6	
			ipP		08 00 42.8	
		Um	iP		08 00 20.1	
		Ud	iP		08 00 02.2	
			i		08 00 06.3	
			ipP		08 00 40.9	
		(cont.)				

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

1973						
Sept.	8	(cont.)				
		De	iP		08 00 01.4	
		Peru-Brazil.				
		h = 150 km (Up,Ki,Sk,Ud).				
"	8	Up	iP		08 08 35.8	
					micr sec	
			P	Z'	0.1 1.0	
		Sk	iP		08 08 52.9	
		Um	iP		08 08 27.0	
		Ud	iP		08 08 50.2	
		De	iP		08 08 52.4	
		Tibet (h = N).				
"	8	Um	iSgl		08 15 36.8	
		Esthonia.				
		Explosion.				
		Solution checked with				
		Finnish station readings.				
"	8	Ud	eP		08 52 33	
"	8	Up	iRg		11 27 10.6	
		Ud	iRg		11 27 01.6	
"	8	Ki	iSn		12 13 31.3	
			iSgl		12 13 53.2	
		Sk	eSgl		12 16 28	
		Um	eSgl		12 14 53	
		Northwest USSR.				
		Explosion.				
"	8	Ud	iP		12 33 50.0	
"	8	Ki	iPn		13 05 01.5	
			iSn		13 05 49.5	
		Northwest USSR-Norway.				
		Explosion.				
"	8	Ki	iPn		13 05 19.6	
			iSn		13 06 07.8	
			iSgl		13 06 23.3	
		Northwest USSR-Norway.				
		Explosion.				
"	8	Ki	iPn		13 05 23.8	
			iPgl		13 05 32.7	
			iSn		13 06 12.0	
			iSgl		13 06 27.4	
		Um	iSgl		13 07 55.0	
		Northwest USSR-Norway.				
		Explosion.				
"	8	Um	iP		19 40 46.8	
		Japan (h = 70 km).				
1973						
Sept.	8	Up	iPKPl		20 00 57.1	
					micr sec	
			PKPl	Z'	0.1 1.1	
		Ki	ePKP		20 00 41	
		Sk	iPKPl		20 00 50.6	
		Um	iPKPl		20 00 45.0	
		Ud	iPKP		20 00 55.6	
			iPKPl		20 00 59.1	
		De	iPKP		20 01 00.4	
			iPKPl		20 01 07.5	
		Kermadec Islands (h = 140 km).				
"	8	Um	iP		20 58 15.2	
"	8	Ud	iPKPl		21 37 03.1	
"	9	Up	iP		02 23 40.5	D
					micr sec	
			P	Z'	0.2 1.1	
			Mx	E	0.5 11	
			Mx	N	0.7 13	
			Mx	Z	0.9 13	
		Ki	iP		02 23 24.8	D
					micr sec	
			P	Z'	0.4 1.0	
			Mx	E	1.3 15	
			Mx	N	1.4 16	
			Mx	Z	1.2 14	
		Sk	iP		02 23 52.0	D
		Um	iP		02 23 27.9	D
		Ud	iP		02 23 53.5	D
		De	iP		02 23 58.8	
		Szechwan, China (h = N).				
		m = 6.3, M = 5.2 (Up,Ki).				
"	9	Up	iP		02 52 34.9	
			i		02 52 37.9	
					micr sec	
			P	Z'	0.1 1.1	
		Ki	iP		02 52 19.1	
			i		02 52 22.2	
					micr sec	
			P	Z'	0.1 0.9	
		Sk	iP		02 52 46.7	
			i		02 52 49.3	
		Um	iP		02 52 22.2	
			i		02 52 25.2	
		Ud	iP		02 52 47.4	
			i		02 52 50.6	
		De	iP		02 52 53.1	
			i		02 52 56.3	
		Szechwan, China (h = N).				
		m = 5.8 (Up,Ki).				
		Double P, in average 3.0 sec apart.				

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

1973					
Sept.	9	Ki	ipP		05 09 48.7
		Um	ipP		05 10 06.2
		Ud	iP		05 10 28.5
			ipP		05 10 36.3
		Japan.			
		h = 30 km (Ud).			
"	9	Up	iP		05 27 49.1
		Ki	iP		05 27 07.4
			ipP		05 27 15.6
		Um	iP		05 27 25.6
			ipP		05 27 34.1
		Ud	iP		05 27 55.8
			ipP		05 28 04.2
		Japan.			
		h = 30 km (Ki,Um,Ud).			
"	9	Ud	iPKP1		06 56 57.6
"	9	Up	iSgl		08 45 27.6
		Ki	iSn		08 42 10.4
			iSgl		08 42 31.7
		Sk	iSgl		08 44 58.9
		Um	i		08 43 05.7
			iSgl		08 43 26.1
		Ud	iSgl		08 46 02.6
		Northwest USSR.			
		Explosion.			
"	9	Up	iP2		08 43 32.9
			ipP2		08 43 39.0
					micr sec
			pP2	Z'	0.1 1.0
		Ki	iP2		08 44 16.5
			ipP2		08 44 22.6
			iS		08 54 12
					micr sec
			pP2	Z'	0.1 1.0
			Mx	E	0.6 16
			Mx	N	1.1 20
			Mx	Z	1.0 18
		Sk	iP2		08 43 46.1
		Um	iP1		08 43 55.1
			iP2		08 43 57.1
			ipP2		08 44 03.2
		Ud	iP1		08 43 25.8
			iP2		08 43 28.4
			ipP2		08 43 34.4
		De	iP2		08 43 09.0
		Ascension Island.			
		h = 25 km (Up,Ki,Um,Ud).			
		Double P, in average 2.3 sec apart. The amplitudes of P2 are considerably larger than those of P1.			

1973					
Sept.	9	Up	iP2		18 37 08.2
			iP3		18 37 12.1
			ipP3		18 37 21.2
			iS		18 46 24
					micr sec
			P2	Z'	0.4 1.3
			P3	Z'	0.4 1.0
			pP3	Z'	0.3 1.0
			Mx	E	7.2 18
			Mx	N	9.9 18
			Mx	Z	17 20
		Ki	iP1		18 36 26.2 C
			iP2		18 36 27.6
			iP3		18 36 30.6
			ipP2		18 36 37.0
			ipP3		18 36 39.9
			iS		18 45 05
					micr sec
			P2	Z'	0.3 1.4
			P3	Z'	0.3 1.0
			pP3	Z'	0.3 1.0
			Mx	E	35 20
			Mx	N	22 20
			Mx	Z	19 16
		Sk	iP2		18 37 01.1
		Um	iP1		18 36 44.7 C
			iP2		18 36 46.6
			ipP2		18 36 55.2
			iS		18 45 41
		Ud	iP1		18 37 14.2 C
			iP2		18 37 16.3
			iP3		18 37 19.0
			ipP3		18 37 27.9
		De	iP2		18 37 32.4
			ipP3		18 37 44.2
		Japan.			
		h = 35 km (Up,Ki,Um,Ud).			
		m = 6.4 (P2), 6.5 (P3),			
		M = 6.4 (Up,Ki).			
		Complex multiple event.			
"	9	Ud	iP		19 35 19.0
		Japan (h = 30 km).			
"	9	Ud	iP		19 36 39.2
"	9	Up	iP		20 20 30.4
			ipP		20 20 41.0
					micr sec
			P	Z'	0.1 1.0
			pP	Z'	0.1 1.2
			Mx	E	1.2 16
			Mx	N	0.9 17
			Mx	Z	1.5 19
		(cont.)			

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

1973
Sept. 9 (cont.)
Ki iP 20 19 49.7 D
ipP 20 20 00.4
micr sec
P Z' 0.1 1.2
Mx E 4.1 20
Mx N 3.2 20
Mx Z 3.1 16
Um iP 20 20 07.9 D
ipP 20 20 18.4
Ud iP 20 20 37.9 D
ipP 20 20 48.5
Japan.
h = 40 km (Up,Ki,Um,Ud).
m = 5.9, M = 5.6 (Up,Ki).

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

" 10 Up eP 03 07 32
micr sec
P Z' 0.1 1.0
Ki iP 03 08 21.0
micr sec
Mx E 0.4 15
Mx N 0.5 14
Mx Z 0.4 13
Um iP 03 07 55.1
Ud iP 03 07 47.0
De eP 03 07 24
Turkey (h = N).

" 10 Ki iP 04 52 10.9
Ud iP 04 52 53.7
Japan (h = 55 km).

" 10 Up eP 07 04 02
Ki iP 07 03 05.8
Sk iP 07 03 32.9
Um iP 07 03 33.9
Ud iP 07 03 57.1
De iP 07 04 23.3
Kodiak Island (h = 30 km).

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

1973
Sept. 10 (cont.)
Up micr sec
Mx E 1.9 13
Mx N 3.6 13
Mx Z 3.1 14
Ki iP 07 52 35.4
ipP 07 54 24.9
iPP 07 54 51.1
i 07 55 27.6
iS 07 59 54
micr sec
P Z' 1.7 1.1
pP Z' 0.5 1.5
PP Z' 1.7 1.9
Mx E 5.0 19
Mx N 7.1 19
Mx Z 6.8 19
Sk iP 07 53 09.7
ipP 07 55 02.4
iPP 07 55 38.3
iS 08 00 59.7
i(P'P') 08 21 20.4
Um iP 07 52 51.2
ipP 07 54 44.1
iS 08 00 24.2
Ud iP 07 53 22.0
ipP 07 55 16.3
iS 08 01 23.0
iScS 08 02 18.8
i(P'P') 08 21 15.0
De iP 07 53 36.9
ipP 07 55 29.9
iS 08 01 50.8
Russia-China.
h = 590 km (Up,Ki,Sk,Um,Ud, De).
m = 6.6, M = 5.9 (Up,Ki).
M uncorrected for focal depth.
The phases denoted (P'P') could be interpreted as P'dP' (Whitcomb 1973).

" 10 Up iSg1 09 34 15.1
Ki iSg2 09 35 10.7
Um iSg1 09 33 38.7
Ud iSg1 09 35 15.2
De iSg1 09 35 56.9
Lake Ladoga region.
Explosion.

" 10 Ki iP 10 05 05.3
Ud iP 10 05 33.4
Luzon (h = 45 km).

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

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

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

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

1973						
Sept.	12	(cont.)				
		Ki	iS		07 05 04	
					micr	sec
			P	Z	18	3
			Mx	E	51	6
			Mx	N	66	5
			Mx	Z	51	5
		Sk	iP		07 04 01.0 C	
		Um	iP		07 03 29.5 C	
			iPP		07 03 40	
			iS		07 06 10	
		Ud	iP		07 04 32.5 C	
		De	iP		07 05 05.5 C	

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

"	12	Ud	iP		07 41 07.3	
		De	iP		07 40 59.3	

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

Greece (h = 90 km).

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

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

Western USSR.
Explosion.

"	12	De	i(P)	15 20 06.5

"	12	Ud	iPKPl	15 46 17.5

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

(cont.)

1973						
Sept.	12	(cont.)				
		Ki			micr	sec
			Sgl	Z'	0.1	0.4
		Sk	iPgl		16 09 25.5	
			iSgl		16 10 04.4	
		Um	iPn		16 09 31.5	
			iPgl		16 09 39.1	
			iSn		16 10 13.4	
			iSgl		16 10 26.9	
		Ud	iSgl		16 11 53.5	

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

"	12	Ud	iP	20 23 08.2 C
		De	eP	20 23 29

Kurile Islands (h = 160 km).

"	12	Ud	iPKPl	23 14 44.9
		De	iPKPl	23 14 55.8

"	13	Ud	iP	00 05 13.7

Hindu Kush.
Intermediate depth.

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

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

"	13	Um	iP	06 47 57.9
		Ud	iP	06 48 18.2

Tadzhik SSR (h = 45 km).

"	13	Um	iSgl	10 49 58.3

Esthonia.
Explosion.

"	13	Ki	iSn	11 52 56.3
			iSgl	11 53 13.4

Northwest USSR-Norway.
Explosion.

"	13	Ud	iP	17 30 52.0

Japan (h = 110 km).

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

1973 Sept.	14	Ud	i(P)		10 35 52.9	
"	14	Ki	iPn		11 30 55.8	
			iPgl		11 31 03.8	
			iSn		11 31 42.0	
			iSgl		11 31 57.2	
		Um	iSgl		11 33 29.7	
		Northwest USSR-Norway.				
		Explosion.				
"	14	Ki	eP		11 37 29	
					micr	sec
			Mx	E	0.4	12
			Mx	N	1.1	15
		Um	iP		11 37 19.4	
		Ud	iP		11 37 36.3	
			i		11 37 39.3	
		De	iP		11 37 34.6	
		Afghanistan-USSR (h = 90 km).				
"	14	Ki	eSgl		12 08 44	
		Northwest USSR.				
		Explosion.				
"	14	Ki	iSn		12 14 01.9	
			iSgl		12 14 25.2	
		Sk	eSgl		12 16 50	
		Um	iSgl		12 15 12.1	
		Northwest USSR.				
		Explosion.				
"	14	Up	iSgl		12 52 02.7	
		Um	iSgl		12 52 17.3	
		Ud	eSgl		12 53 01	
		Western USSR.				
		Explosion.				
"	14	Ud	iP		19 33 45.7	
		Greece.				
"	14	Ud	iP		20 20 56.9	
		Pamir.				
"	14	Ud	iRg		21 27 54.9	
"	15	Ki	iP		01 06 34.9 C	
					micr	sec
			P	Z'	0.1	0.9
		Sk	iP		01 06 49.1	
		Um	iP		01 06 32.3 C	
		Ud	iP		01 06 44.8 C	
		Sumatra (h = 90 km).				
"	15	Up	iP		01 50 20.5	
			iS		01 53 58	
		(cont.)				

1973 Sept.	15	(cont.)				
		Up			micr	sec
			P	Z'	0.1	1.5
			Mx	E	2.7	20
			Mx	N	5.8	15
			Mx	Z	6.7	13
		Ki	iP		01 50 06.9	
					micr	sec
			P	Z'	0.3	1.5
			Mx	E	12	14
			Mx	N	6.6	12
			Mx	Z	12	15
		Sk	iP		01 49 38.7	
		Um	iP		01 50 17.0	
			iS		01 53 45	
		Ud	iP		01 50 01.4	
		De	iP		01 50 23.2	
		Iceland (h = 1 km).				
		m = 5.0, M = 5.1 (Up,Ki).				
		Long-period records exhibit a well developed train of Love waves, starting right at the arrival of S (cf. Geofis. Pura Appl., 1958, 39: 35-54).				
"	15	Ki	eP		02 26 22	
		Um	iP		02 26 35.3	
		Ud	iP		02 26 16.8	
		Iceland (h = N).				
"	15	Up	iP		02 56 30.3	
					micr	sec
			Mx	E	0.7	18
			Mx	Z	0.9	16
		Ki	iP		02 56 09.4	
		Um	iP		02 56 16.1	
		Ud	iP		02 56 39.3	
		Luzon (h = 60 km).				
"	15	Up	iP		04 36 49.2 C	
					micr	sec
			P	Z'	0.1	0.8
			Mx	E	0.8	16
			Mx	N	0.7	14
			Mx	Z	2.0	15
		Ki	iP		04 36 18.6 C	
					micr	sec
			Mx	E	1.1	20
			Mx	N	1.0	19
			Mx	Z	1.1	19
		Sk	iP		04 36 48.8 C	
		Um	iP		04 36 30.8 C	
		Ud	iP		04 36 58.0 C	
		De	iP		04 37 09.7 C	
		Ryukyu Islands (h = 35 km).				
		M = 5.3 (Up,Ki).				

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

1973					
Sept.	15	Ud	iP		07 28 29.2
"	15	Up	eSgl		12 27 32
		Um	iSgl		12 28 11.8
		Esthonia.			
		Explosion.			
"	15	Ki	iSn		13 17 56.4
			iS*		13 18 14.2
		Um	iSgl		13 19 26.7
		Northwest USSR.			
		Explosion.			
"	15	Ki	iPn		13 27 32.7
			iSn		13 28 17.5
			iSgl		13 28 31.5
		Sk	eSn		13 30 11
			iSgl		13 30 59.6
		Um	iSgl		13 29 27.3
		Northwest USSR-Finland.			
		Explosion.			
"	15	Up	iPKPl		13 56 42.5
		Ud	iPKPl		13 56 44.5
		De	iPKPl		13 56 54.3
"	15	Ki	iP		14 23 42.3
		Hindu Kush.			
		Intermediate depth.			
"	15	Ud	iP		15 48 10.0
"	15	Up	iP		16 09 59.4
		Ki	iP		16 09 15.1
		Sk	eP		16 09 50
		Um	iP		16 09 34.6
		Ud	iP		16 10 05.5
		Japan (h = 130 km).			
"	15	Ud	iPKP		17 18 56.1
		Tonga Islands (h = N).			
"	15	Ud	iPKPl		17 52 17.6
		De	iPKPl		17 52 29.8
		Tonga Islands (h = 40 km).			
"	15	Ki	eP		18 01 29
		Ud	iP		18 01 55.9
"	15	Ki	eP		19 20 19
		Ud	iP		19 20 45.4
"	15	Ud	iPKPl		20 28 47.2
		De	ePKPl		20 28 58

1973						
Sept.	15	Ud	iPKP		23 27 48.5	
		De	iPKP		23 27 54.6	
		Solomon Islands (h = 60 km).				
"	16	Up	iP		05 05 40.1	D
		Ki	iP		05 05 40.8	D
					micr	sec
			P	Z'	0.1	1.1
			Mx	E	1.1	22
			Mx	N	0.7	20
			Mx	Z	1.2	20
		Sk	iP		05 05 27.0	D
		Um	iP		05 05 43.4	D
		Ud	iP		05 05 30.7	D
		De	iP		05 05 32.8	D
		Colombia (h = N).				
"	16	Up	iP		08 34 27.4	
		Ki	iP		08 34 28.1	
		Sk	iP		08 34 14.5	
		Um	iP		08 34 30.5	
		Ud	iP		08 34 17.3	
		De	iP		08 34 20.1	
		Colombia (h = N).				
"	16	Up	i(S*)		09 47 11.4	
			iSgl		09 47 25.3	
		Ki	iPn		09 43 09.4	
			iSn		09 44 07.2	
			iSgl		09 44 29.1	
		Sk	iSgl		09 46 57.5	
		Um	iSn		09 44 47.9	
			i		09 45 00.4	
			iSgl		09 45 22.0	
		Ud	iSn		09 46 45.8	
			iSgl		09 47 55.7	
		De	iS*		09 49 18.3	
			iSgl		09 49 31.7	
		Northwest USSR.				
		Explosion.				
"	16	Ud	iP		18 16 25.5	
		De	eP		18 16 23	
		Hindu Kush.				
		Intermediate depth.				
"	16	Ki	iP		19 21 08.1	
					micr	sec
			Mx	E	0.6	15
			Mx	N	0.5	14
			Mx	Z	0.6	14
		Um	iP		19 21 20.2	
		Ud	iP		19 21 48.3	
		Japan (h = 30 km).				

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

1973
Sept. 16 Up eP 21 31 20
i 21 31 23.0
iS 21 34 54
micr sec
P Z' 0.1 1.3
Mx E 2.6 14
Mx N 3.3 17
Mx Z 5.9 14
Ki iP 21 31 03.7
iS 21 34 29
micr sec
P Z' 0.3 1.5
Mx E 8.5 14
Mx N 6.6 12
Mx Z 8.9 16
Sk iP 21 30 33.8
i 21 30 37.9
Um iP 21 31 13.6
iS 21 34 40
Ud iP 21 30 58.4
De iP 21 31 22.3
Iceland (h = 2 km).
m = 5.1, M = 5.0 (Up,Ki).
Cf. remark to Sept. 15,
01 50.

" 16 Up micr sec
Mx E 0.4 15
Mx N 0.6 14
Mx Z 0.5 15
Ki micr sec
Mx E 0.8 14
Mx N 0.4 11
Mx Z 0.6 14
Um eP 22 37 55
Ud eP 22 37 38
Iceland (h = 5 km).
M = 4.1 (Up,Ki).

" 16 De i(P) 23 11 08.9 C

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

1973
Sept. 17 (cont.)
De iP 04 12 25.6 C
Iran (h = 45 km).
M = 4.7 (Up,Ki).

" 17 Up iSgl 05 18 04.6
Um eSgl 05 20 07
Ud i(S*) 05 18 33.7
iSgl 05 18 43.4
De iPn 05 16 17.7
iPgl 05 16 27.9
iSgl 05 17 22.5
Near coast of Danziger Bucht,
54.6°N, 20.1°E.
Origin time = 05 15 16.
Explosion?
Solution checked with
Finnish station readings.

" 17 Um iPKP1 05 43 11.1 C

" 17 Ki iPKP1 07 15 32.3
Um iPKP1 07 15 31.3
Ud iPKP2 07 15 42.6
South of Australia (h = N).

" 17 Ud iP 07 32 42.2

" 17 Up i(PKP) 07 40 41.9
Ki i(PKP) 07 40 29.7
iPKP 07 40 38.9
Sk iPKP 07 40 52.3
Um i(PKP) 07 40 40.7
iPKP 07 40 47.0
Ud i(PKP) 07 40 44.9
iPKP 07 40 56.4
De i(PKP) 07 40 54.2
iPKP 07 41 00.3
Tonga Islands (h = 140 km).

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

" 17 Up eSn 12 55 58
iSgl 12 56 12.2
Ki iSgl 12 58 45.2
(cont.)

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

1973

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

1973

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

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

```
1973
Sept. 18  (cont.)
          Sk   eP       08 53 44
               ipP      08 53 49.3
          Um   ipP      08 53 34.1
          Ud   iP       08 53 10.1
               ipP      08 53 14.6
          De   ipP      08 52 42.1
          Turkey.
          h = 25 km (Ki,Sk,Ud).

 "    18  Up   iPKP1    09 24 21.1
          Sk   iPKP1    09 24 14.7
          Um   iPKP1    09 24 08.5
          Ud   iPKP1    09 24 22.6
          De   iPKP1    09 24 31.4

 "    18  Up   iP       10 25 17.0
          Ki   iP       10 24 25.6
          Um   iP       10 24 52.5
          Ud   iP       10 25 18.0
          Aleutian Islands (h = N).

 "    18  Um   iPKP1    11 17 11.6

 "    18  Up   iSg1     11 46 28.7
          Um   iSg1     11 47 00.2
          Ud   iSg1     11 47 32.7
          De   iSg1     11 48 00.5
          Esthonia.
          Explosion.

 "    18  Up   eSg1     13 00 27
          Ki   iSg1     13 03 14.6
          Sk   iSg1     13 02 19.8
          Um   iSg1     13 01 10.9
          De   iSg1     13 01 52.3
          Esthonia.
          Explosion.

 "    18  Up   iP       13 11 47.1
               ipP      13 12 21.4
                        micr  sec
               P     Z' 0.2   1.5
          Ki   iP       13 11 51.6
                        micr  sec
               P     Z' 0.1   1.0
          Sk   iP       13 11 37.0
          Um   iP       13 11 51.5
          Ud   iP       13 11 37.6
               ipP      13 12 11.8
          De   iP       13 11 37.5
          Peru.
          h = 140 km (Up,Ud).
          m = 6.3 (Up,Ki).

1973
Sept. 18  Up   iP         13 45 54.7
          Greece.

 "    18  Up                micr  sec
               Mx       E   2.7   23
               Mx       N   6.3   23
               Mx       Z   8.4   22
          Ki   ePKP2        13 53 38
                            micr  sec
               Mx       E   4.3   19
               Mx       N   7.1   23
               Mx       Z   7.8   25
          South Pacific Ocean (h = N).
          M = 6.5 (Up,Ki).

 "    18  Ud   i(P)         16 23 52.8

 "    18  Um   iPKP1        19 18 25.5

 "    18  Up   iRg          21 11 55.3
          Sk   iSg1         21 13 26.6
          Um   iSg1         21 13 42.0
          Ud   iSg1         21 11 44.4
               iRg          21 11 49.8
          De   iSg1         21 13 05.8
          Bergslagen, Sweden,
          59.8°N, 15.4°E.
          Origin time = 21 11 20.
          Explosion?

 "    18  Up   iRg          21 12 56.3
          Ud   iRg          21 12 49.7
          Bergslagen, Sweden,
          59.8°N, 15.4°E.
          Origin time = 21 12 20.
          Explosion?

 "    18  Ud   iPKP1        22 04 16.3
          De   iPKP1        22 04 26.8

 "    18  Um   iPKP1        23 12 29.1

 "    19  Up   iP           03 06 31.6
               iPn          03 07 02.9
               i            03 07 08.7
               iPP          03 07 50.9
          Ki   iP           03 06 33.8
          Sk   iP           03 06 55.5
               i(Pn)        03 07 37.7
          Um   iP           03 06 25.5
               i            03 07 01.6
               iPn          03 07 14.0
          Ud   iP           03 06 49.2 C
               iPn          03 07 52.8
          De   iP           03 06 49.9
          (cont.)
```

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

1973					
Sept.	19	(cont.)			
		Kazakh SSR.			
		Underground explosion.			
"	19	Um	iP		05 47 33.8
"	19	Ud	iP		07 02 01.3
"	19	Up	iPKPl		10 01 56.8 C
			ipPKPl		10 02 35.0
					micr sec
			PKPl	Z'	0.1 0.9
			pPKPl	Z'	0.1 0.9
		Ki	iPKP		10 01 38.4
		Sk	ePKPl		10 01 50
		Um	iPKPl		10 01 45.0
		Ud	iPKPl		10 01 58.3 C
			ipPKPl		10 02 37.1
		De	iPKPl		10 02 08.4 C
			iPKP2		10 02 13.2
		Tonga-Kermadec Islands.			
		h = 140 km (Up,Ud).			
"	19	Up	eP		10 42 42
		Ki	iP		10 41 48.5
			ipP		10 41 55.6
					micr sec
			P	Z'	0.1 0.9
		Sk	iP		10 42 15.8
			ipP		10 42 23.1
		Um	iP		10 42 16.3
			ipP		10 42 23.1
		Ud	iP		10 42 39.2
		Kodiak Island.			
		h = 25 km (Ki,Sk,Um).			
"	19	Up	iP		11 12 27.1
		Sk	eP		11 12 21
		Um	iP		11 12 06.4
		Ud	iP		11 12 34.1
		Japan (h = 60 km).			
"	19	Up	iSgl		11 47 25.3
		Um	iSgl		11 47 51.5
		Ud	iSgl		11 48 28.0
		De	eSgl		11 48 52
		Esthonia.			
		Explosion.			
"	19	Up	iP		11 55 04.6
		Ki	eP		11 54 47
		Sk	iP		11 55 13.1
		Um	iP		11 54 50.3
		Ud	iP		11 55 15.6
		Szechwan, China (h = N).			

1973					
Sept.	19	Up	iP		12 01 01.4
					micr sec
			P	Z'	0.1 1.0
		Sk	iP		12 01 11.7
		Um	iP		12 00 48.5
		Ud	iP		12 01 13.9
		Szechwan, China.			
		Origin time = 11 50 32.			
"	19	Up	eSgl		13 13 46
		Sk	eSgl		13 15 00
		Um	iSgl		13 13 14.1
		Lake Ladoga region.			
		Explosion.			
"	19	Ud	i(P)		15 26 11.7
"	19	Um	iSgl		15 57 42.3
		Ud	iSgl		15 59 12.4
		Lake Ladoga region.			
		Explosion.			
"	19	Ud	iPKPl		18 40 54.8
"	19	Ud	iP		21 24 16.7
"	19	Um	iPKPl		22 12 37.4
"	19	Up	iP		22 59 47.5
		Sk	iP		23 00 29.2
		Um	iP		23 00 30.5
		Ud	iP		22 59 57.5
		Greece.			
"	19	Ki	eP		23 55 18
		Sk	eP		23 55 09
		Nicaragua (h = 55 km).			
"	20	Up	i		06 50 32.6
			iSgl		06 50 40.7
		Sk	iSgl		06 52 28.5
		Um	i		06 51 13.0
			iSgl		06 51 21.5
		Ud	i		06 51 36.1
			iSgl		06 51 46.5
		Esthonia.			
		Explosion.			
"	20	Up	i		07 27 31.2
			iSgl		07 27 40.3
		Ki	eSgl		07 30 17
		Sk	eSgl		07 29 25
		Um	iSgl		07 28 19.6
		Ud	iSgl		07 28 43.8
		De	eSgl		07 29 12
		Esthonia.			
		Explosion.			

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

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

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

 "     20   Ud   i(P)       12 03 08.2

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

 "     20   Ud   iP         14 08 03.9

 "     20   Ud   iPKPl      14 43 10.3

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

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

 "     20   Up   iP         20 55 39.3 D
                 i          20 55 41.9
                 i(PP)      20 59 13.7
                 iSKS       21 05 14
                 iS         21 05 42
                            micr  sec
                 P      Z'  0.1   1.0
                 i      Z'  0.6   1.0
                 Mx     E   1.8   19
                 Mx     N   3.6   20
                 Mx     Z   3.1   18
            Ki   iP         20 55 22.5 D
                 i          20 55 25.0
                 ipP        20 57 26.8
                 iPP        20 58 57.1
                 iSKS       21 04 55
                 iS         21 05 12
                            micr  sec
                 P      Z'  0.1   1.0
                 i      Z'  1.4   1.0
            (cont.)

1973
Sept.  20   (cont.)
            Ki              micr  sec
                 PP     Z'  4.7   3.3
                 Mx     E   3.3   20
                 Mx     N   4.2   17
                 Mx     Z   4.9   16
            Sk   iP         20 55 44.4
                 i          20 55 46.6
                 iPP        20 59 33.8
            Um   iP         20 55 28.4 D
                 i          20 55 31.0
                 iPP        20 59 08.4
                 iSKS       21 05 00
                 iS         21 05 23
            Ud   iP         20 55 47.7 D
                 i          20 55 50.3
                 ipP        20 57 54.3
            De   iP         20 55 53.5
                 i          20 55 55.9
                 i(PP)      20 59 42.0
                 iPP        20 59 51.6
            Negros.
            h = 570 km (Ki,Ud).
            m = 6.5, M = 5.9 (Up,Ki).
            M uncorrected for focal
            depth.
            Double P, in average 2.5
            sec apart.

 "     20   Ud   iPKPl      21 40 17.0

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

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

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

 "     21   Up   iP         02 32 27.3 C
            Ki   iP         02 31 51.7
                            micr  sec
                 P      Z'  0.1   1.0
            Sk   iP         02 32 25.2 C
            Um   iP         02 32 06.5 C
            Ud   iP         02 32 35.8 C
            Japan (h = 25 km).

 "     21   Up   iP         05 18 09.1
                 ipP        05 19 27.1
                            micr  sec
                 pP     Z'  0.1   1.2
            Ki   iP         05 17 34.3
            (cont.)
```

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

1973
Sept. 21 (cont.)

Sk	iP		05 18 05.3		
Um	iP		05 17 49.2 D		
	ipP		05 19 07.3		
Ud	iP		05 18 16.8 D		
	ipP		05 19 35.6		

Japan.
h = 340 km (Up,Um,Ud).

" 21

Um	iP	05 34 05.3	
Ud	iP	05 34 34.6	

Japan (h = 270 km).

" 21

Up	iPP	07 32 20.3	
	iSP	07 41 46	
Ki	iPP	07 32 05.3	
Sk	iPP	07 31 55.8	

Easter Island Ridge (h = N).

" 21

Up	iPP		07 49 54.1	
			micr	sec
	Mx	E	1.2	21
	Mx	N	1.0	19
	Mx	Z	3.3	22
Ki			micr	sec
	Mx	E	3.0	20
	Mx	N	2.2	22
	Mx	Z	4.1	22
Sk	iPP		07 49 26.4	
De	iPP		07 49 49.6	

Easter Island Ridge (h = N).
M = 5.8 (Up,Ki).

" 21

Up	iP		10 46 19.8	
			micr	sec
	P	Z'	0.1	1.3
Ki	iP		10 45 25.3	
			micr	sec
	P	Z'	0.1	1.0
Sk	iP		10 45 51.9	
Um	iP		10 45 53.4	
Ud	iP		10 46 16.5	
De	iP		10 46 40.4	

Kodiak Island (h = 45 km).
m = 5.8 (Up,Ki).

" 21

Up	iSgl	11 43 37.6
Ki	iPn	11 39 23.6
	iSn	11 40 24.0
	iSgl	11 40 46.8
Sk	eSgl	11 43 08
Um	iSn	11 41 02.3
	i	11 41 18.5
	iSgl	11 41 36.8

(cont.)

1973
Sept. 21 (cont.)

Ud	iSgl	11 44 10.9
De	iSgl	11 45 45.5

Northwest USSR.
Explosion.

" 21

Ki	iPn	12 06 29.0
	iSn	12 07 16.9
	iS*	12 07 30.4
Um	iSgl	12 08 58.9

Northwest USSR-Norway.
Explosion.

" 21

Up	iSgl	12 20 46.6
Um	iSgl	12 21 02.4
Ud	iSgl	12 21 46.2
De	iSgl	12 22 12.0

Western USSR.
Explosion.

" 21

Up	iSgl	13 09 51.0
Ud	iPgl	13 09 19.8
	iSgl	13 09 48.3
De	iPgl	13 09 12.9
	iSn	13 09 35.1
	iSgl	13 09 36.3
	iRg	13 09 46.0

Östergötland-Småland,
Sweden, 58.1°N, 14.7°E.
Origin time = 13 08 43.

" 21

Up	iSn	13 12 56.0
	iSgl	13 13 06.5
Ki	iSgl	13 15 46.0
Sk	iSgl	13 15 07.1
Um	iSgl	13 13 41.5
Ud	iSn	13 13 43.2
	iSgl	13 14 11.4
De	iSgl	13 14 37.0

Esthonia.
Explosion.

" 21

Up	iP		14 00 42.1 D	
			micr	sec
	P	Z'	0.1	1.0
Ki	iP		14 00 22.0 D	
Um	iP		14 00 29.3 D	
Ud	iP		14 00 51.8 D	

Luzon (h = 20 km).

" 21

Up	iPKP1	19 46 51.0 D
	iSKP1	19 49 33.2
	iSKP2	19 49 52.8
	i(PP)	19 50 10.6

(cont.)

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

```
1973
Sept.  21    (cont.)
             Up                micr  sec
                  PKPl    Z'  1.8   1.0
             Ki   i(PKP)      19 46 28.8
                  iPKP        19 46 40.1
                  iSKPl       19 49 12.9
                              micr  sec
                  PKP     Z'  0.1   1.0
                  SKPl    Z'  0.2   1.0
             Sk   iPKP        19 46 43.4
                  iSKPl       19 49 27.9
             Um   i(PKP)      19 46 37.5
                  iPKP        19 46 47.9
                  iSKPl       19 49 23.3
             Ud   iPKPl       19 46 53.7 D
                  iSKPl       19 49 35.1
                  iSKKP       19 57 38.6
             De   iPKP        19 46 58.9
                  iPKPl       19 47 02.9 D
                  ipPKPl      19 49 24.6
             Tonga-Kermadec Islands.
             h = 650 km (De).

 "     21    Up   iPKPl       19 54 27.5 D
             Ud   iPKPl       19 54 30.1 D
             De   iPKPl       19 54 39.5 D
             Tonga-Kermadec Islands.
             Origin time = 19 36 06.

 "     21    Up   iPKPl       20 26 18.7 D
             Ud   iPKPl       20 26 20.9 D
             De   iPKPl       20 26 30.4 D
             Tonga-Kermadec Islands.
             Origin time = 20 07 56.

 "     21    Up   iPKPl       21 35 47.6

 "     22    Ki   iP          01 53 03.2
                              micr  sec
                  P       Z'  0.1   1.0
             Ud   iP          01 53 27.1
             Mindanao (h = 530 km).

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

 "     22    Ki   iP          02 37 21.5
             Ud   iP          02 36 46.9
             North Atlantic Ocean (h = N).

 "     22    Up   iS          03 14 10
                              micr  sec
                  Mx      E   1.6   21
             (cont.)

1973
Sept.  22    (cont.)
             Up                micr  sec
                  Mx      N   1.6   18
                  Mx      Z   3.5   23
             Ki   iP          03 06 56.8
                              micr  sec
                  Mx      E   0.8   17
                  Mx      N   0.8   17
                  Mx      Z   0.7   15
             Sk   iP          03 06 27.1
             Um   iP          03 06 53.0
             Ud   iP          03 06 24.7
             North Atlantic Ocean (h = N).
             M = 5.2 (Up,Ki).

 "     22    Up   iP          03 07 05.4
                              micr  sec
                  P       Z'  0.5   1.8
             Ki   iP          03 07 26.1
                              micr  sec
                  P       Z'  0.1   1.0
             Ud   iP          03 06 51.9
             De   iP          03 06 47.0
             North Atlantic Ocean.
             Origin time = 02 57 47.
             m = 6.0 (Up,Ki).

 "     22    Ki   iP          05 14 25.4
                              micr  sec
                  Mx      E   0.8   17
                  Mx      N   0.5   17
                  Mx      Z   1.0   18
             Sk   iP          05 14 48.0
             Ud   iP          05 14 51.9
             Mindanao (h = 35 km).

 "     22    Ki   iP          05 55 07.8
             Ud   iP          05 55 33.2
             Mindanao (h = 55 km).

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

 "     22    Sk   eP          08 13 10
             Ud   iP          08 12 59.4

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

 "     22    Ki   iP          09 37 46.9
             Um   eP          09 38 00
             Ud   iP          09 38 25.8
             Bonin Islands (h = 410 km).

 "     22    Ki   i(Sgl)      09 58 35.5
```

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

1973					
Sept.	22	Up	eP		10 12 42
		Sk	iP		10 12 53.1
		Ud	iP		10 12 50.0
"	22	Up	iP		11 43 37.0
					micr sec
			P	Z'	0.1 0.9
		Ki	iP		11 43 46.9
			iPP		11 45 18.5
		Sk	iP		11 44 03.0
		Um	iP		11 43 34.4
		Ud	iP		11 43 53.2
		De	iP		11 43 50.3
		Hindu Kush (h = 120 km).			
"	22	Ki	iPn		12 33 42.1
			iPgl		12 33 50.5
			iSn		12 34 30.7
			iSgl		12 34 46.5
		Northwest USSR-Norway. Explosion.			
"	22	Ki	iSn		12 35 58.1
			iS*		12 36 11.8
		Um	iSgl		12 37 23.3
		Northwest USSR. Explosion.			
"	22	Ki	iP		12 52 02.4
		Ud	iP		12 52 22.5
		Talaud Islands (h = N).			
"	22	Ki	iPn		13 09 35.4
			iSn		13 10 24.7
			iS*		13 10 40.0
		Um	iSgl		13 12 05.3
		Northwest USSR-Norway. Explosion.			
"	22	Ud	iPKPl		13 45 31.0
"	22	Ki	iP		13 45 42.6
		Ud	iP		13 46 34.5
		Aleutian Islands (h = N).			
"	22	Ud	iP		16 14 06.3
"	22	Up	iP		18 47 24.1
		Ki	iP		18 46 31.0
			iPcP		18 47 15.5
		Sk	eP		18 47 01
		Um	iP		18 46 57.8
			iPcP		18 47 31.7
		Ud	iP		18 47 24.1
		De	iP		18 47 45.9
		Aleutian Islands (h = 35 km).			

1973					
Sept.	22	Up	iP		19 38 47.7
		Ki	iP		19 37 54.0
			iPcP		19 38 39.1
		Sk	iP		19 38 24.6
		Um	iP		19 38 20.8
			iPcP		19 38 55.4
		Ud	iP		19 38 47.0
			iPcP		19 39 12.3
		De	iP		19 39 09.2
		Aleutian Islands (h = 50 km).			
"	23	Ki	iP		02 28 23.7
		Kamchatka (h = 110 km).			
"	23	Up	iP		03 50 10.4
		Ki	eP		03 50 51
		Sk	eP		03 50 50
		Ud	iP		03 50 25.5
		Iran (h = 40 km).			
"	23	Ki	iP		07 36 25.7
		Ud	iP		07 37 17.0
		Kurile Islands (h = 40 km).			
"	23	Ud	iP		12 21 36.1
		Leyte (h = N).			
"	23	Up	iP		12 38 46.4
					micr sec
			P	Z'	0.1 1.2
			Mx	E	1.0 21
			Mx	N	2.8 22
			Mx	Z	1.6 20
		Ki	iP		12 38 28.8
					micr sec
			Mx	E	0.5 14
			Mx	N	0.7 13
			Mx	Z	0.7 13
		Um	iP		12 38 35.3
		Ud	iP		12 38 54.3
		Leyte (h = 40 km). M = 5.6 (Up,Ki).			
"	23	Ki	iP		13 36 38.8
		Ud	iP		13 37 04.1
		Mindanao (h = 35 km).			
"	23	Ki	iP		14 48 09.2
		Ud	iP		14 48 37.0
		Mindanao (h = 45 km).			
"	23	Up	iP		16 53 32.0
					micr sec
			P	Z'	0.1 1.0
		Ki	eP		16 53 14
		(cont.)			

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

1973						
Sept.	23	(cont.)				
		Ki			micr	sec
			P	Z'	0.1	1.0
		Sk	iP		16 53 36.2	
		Um	iP		16 53 19.9	
		Ud	iP		16 53 40.2	
		De	iP		16 53 47.7	
		Mindanao (h = 45 km).				
		m = 6.0 (Up,Ki).				
"	23	Ki	iP		17 03 32.9	
		Um	iP		17 03 39.8	
		Ud	iP		17 03 59.3	
		Mindanao (h = N).				
"	23	Ud	iPKPl		18 01 20.7	
		De	iPKPl		18 01 32.2	
		Tonga-Kermadec Islands (h = 610 km).				
"	23	Ki	eP		18 19 13	
		Ud	iP		18 19 38.2	
"	23	Ud	iP		21 22 49.7	
"	23	Ud	iP		21 32 56.8	
"	23	Ki	iP		22 14 43.0	
		Um	iP		22 14 49.7	
		Ud	iP		22 15 11.8	
		Luzon (h = 35 km).				
"	23	Ki	eP		22 26 02	
		Um	iP		22 26 06.7	
		Ud	iP		22 26 28.5	
		Mindanao (h = 120 km).				
"	23	Ud	iP		23 00 54.2	
"	24	De	iP		02 00 50.0	
		New Guinea (h = N).				
"	24	De	iPKPl		03 10 57.1 C	
		Fiji Islands (h = 580 km).				
"	24	Ki	iP		06 58 19.5	
			ipP		06 58 30.4	
		Aleutian Islands.				
		h = 40 km (Ki).				
"	24	Up			micr	sec
			Mx	N	0.5	12
			Mx	Z	1.1	16
		Ki	iP		09 12 53.9	
		(cont.)				

1973						
Sept.	24	(cont.)				
		Ki			micr	sec
			P	Z'	0.1	1.2
			Mx	E	1.2	16
			Mx	N	0.5	13
			Mx	Z	0.7	14
		Sk	eP		09 13 42	
		Um	iP		09 13 36.8	
			iS		09 17 42	
		Ud	iP		09 14 14.2	
		Arctic Ocean (h = N).				
		M = 4.4 (Up,Ki).				
"	24	Ki	iP		09 24 56.4 C	
		Um	iP		09 25 14.7 C	
		Ud	iP		09 25 45.3	
		Japan (h = 60 km).				
"	24	Ud	iP		10 24 18.8	
"	24	Up	iP		10 54 09.6 C	
		Ki	iP		10 53 51.6 C	
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP		10 54 13.9 C	
		Um	iP		10 53 57.6 C	
		Ud	iP		10 54 18.3 C	
		De	iP		10 54 24.1	
		Mindanao (h = 45 km).				
"	24	Up	iSgl		11 45 12.6	
		Ki	iSgl		11 47 44.8	
		Sk	iSgl		11 47 01.9	
		Um	iSgl		11 45 46.2	
		Ud	iSgl		11 46 17.4	
		De	iSgl		11 46 45.7	
		Esthonia.				
		Explosion.				
"	24	Um	i(P)		13 29 59.8	
"	24	Up	iP		13 52 22.9	
		Ki	iP		13 51 35.7	
		Ud	iP		13 52 26.5	
		De	iP		13 52 41.9	
		Kurile Islands (h = 45 km).				
"	24	Ud	iP		20 41 20.3	
"	24	Ki	ipP		22 11 49.4	
		Mariana Islands (h = 200 km).				
"	24	Ki	i(P)		22 46 33.2	

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

1973					
Sept.	25	Ki	iP		02 36 17.8
		Sk	iP		02 36 43.8
		Ud	iP		02 36 47.5
		Luzon (h = 90 km).			
"	25	Ud	iP		02 44 37.5
"	25	Ki	ePKP		03 42 24
		South Sandwich Islands (h = N).			
"	25	Up	iSKPl		03 58 35.9
		Sk	iSKPl		03 58 27.5
		Ud	iSKPl		03 58 40.2
		New Hebrides Islands (h = 620 km).			
"	25	Ud	iP		05 35 14.7 C
		East of Crete (h = 80 km).			
"	25	Ki	eSn		09 33 09
			iS*		09 33 28.9
		Um	iSgl		09 34 21.7
		Northwest USSR. Explosion.			
"	25	Up	iSgl		12 24 25.3
		Ki	eSgl		12 26 25
		Sk	iSgl		12 26 12.9
		Um	eSgl		12 24 43
		Ud	iSgl		12 25 29.2
		De	iSgl		12 25 58.5
		Western USSR. Explosion.			
"	25	Um	iSgl		12 46 30.3
		Western USSR. Explosion.			
"	25	Ki	iSgl		13 00 49.6
		Sk	eSgl		13 00 08
		Um	iSgl		12 58 51.2
		Ud	iSgl		12 59 14.1
		Esthonia. Explosion.			
"	25	Up	iP		13 07 42.3 C
					micr sec
			P	Z'	0.1 0.7
		Ki	iP		13 07 51.3 C
					micr sec
			P	Z'	0.1 0.9
		Sk	iP		13 08 07.8 C
		(cont.)			

1973						
Sept.	25	(cont.)				
		Um	iP		13 07 40.5 C	
			ipP		13 08 19.7	
		Ud	iP		13 07 58.6 C	
			ipP		13 08 42.4	
		De	iP		13 07 55.6	
		Hindu Kush. h = 200 km (Um,Ud). m = 5.4 (Up,Ki).				
"	25	Up	iSgl		13 22 36.1	
		Sk	iSgl		13 22 38.0	
		Ud	iSgl		13 21 37.1	
		Near coast of south Norway, 58.3°N, 6.8°E. Origin time = 13 19 32. Solution obtained by combination with Kongsberg readings.				
"	25	Um	iP		15 46 34.4	
		Ud	iP		15 47 04.9	
		Japan (h = N).				
"	25	Up	iPKPl		16 37 21.2	
					micr	sec
			PKPl	Z'	0.1	1.1
			Mx	E	3.8	20
			Mx	N	3.6	20
			Mx	Z	5.7	20
		Ki	iPKP		16 37 17.8	
			iPKPl		16 37 25.7	
					micr	sec
			PKPl	Z'	0.2	1.0
			Mx	N	3.9	20
			Mx	Z	3.8	19
		Sk	ePKP		16 37 22	
			iPKPl		16 37 30.8	
		Um	iPKP		16 37 15.0	
			iPKPl		16 37 21.2	
		Ud	iPKPl		16 37 25.0	
			iPKP2		16 37 40.6	
		De	iPKPl		16 37 24.0	
			i		16 37 29.1	
		West of Macquarie Islands (h = N). M = 6.4 (Up,Ki).				
"	25	Up	iP		18 46 32.7	
		Ki	iP		18 46 40.3	
		Sk	iP		18 46 57.3 C	
		Um	iP		18 46 30.2 C	
		Ud	iP		18 46 49.1 C	
		Afghanistan-USSR (h = 110 km).				

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

1973
Sept. 25 Um i(Pgl) 19 12 07.6
i(Sg2) 19 12 14.3

" 25 Ki iP 20 46 23.0
Ud iP 20 46 49.6
Mindanao (h = 140 km).

" 25 Um iP 21 07 34.8
Ud iP 21 08 05.2
Japan (h = 30 km).

" 25 Ud iP 22 39 44.2
Mindanao (h = 90 km).

" 26 Ud iP 03 30 17.2

" 26 Ki eP 04 47 39
Ud iP 04 48 05.3

" 26 Um i 07 21 24.2
i 07 21 36.2
i(Sgl) 07 21 44.5

" 26 Ki i(P) 07 34 10.0

" 26 Up iS* 09 37 10.3
iSgl 09 37 13.1
Sk iSgl 09 37 26.3
Um iSgl 09 38 34.0
Ud iP* 09 35 49.5
iPgl 09 35 50.2
iS* 09 36 11.0
iSgl 09 36 13.0
De iPgl 09 36 26.1
iSn 09 37 01.0
iS* 09 37 13.1
iSgl 09 37 16.4
Oslo Fjord, Norway,
59.7°N, 10.5°E.
Origin time = 09 35 21.
Solution checked with
Kongsberg readings.

" 26 Up iSgl 09 54 22.3
Um iSgl 09 54 45.2
Ud iSgl 09 55 22.0
Esthonia.
Explosion.

" 26 Up micr sec
Mx E 1.2 20
Mx N 3.6 20
Mx Z 2.7 20
Ki eP 09 59 25
(cont.)

1973
Sept. 26 (cont.)
Ki micr sec
Mx N 3.1 21
Mx Z 2.8 20
Um eP 09 59 34
Ud iP 09 59 51.0
Leyte (h = N).
M = 5.8 (Up,Ki).

" 26 Sk eSgl 10 55 33
Ud iSgl 10 55 17.0
Off coast of southwest
Norway, 60.1°N, 4.5°E.
Origin time = 10 52 51.
Solution obtained by
combination with Bergen
readings.

" 26 Ud iP 14 03 04.3

" 26 Sk iSgl 15 41 04.8
Um iSgl 15 39 18.7
Lake Ladoga region.
Explosion.

" 26 Ki e(P) 15 44 08
Sk e(P) 15 44 31

" 26 Um iP 15 52 11.0 D
Ud iP 15 52 32.9 D
Mariana Islands (h = 100 km).

" 26 Up iPKP2 16 47 57.7
Ki iPKP 16 47 38.7
iPKP1 16 47 45.6
micr sec
PKP1 Z' 0.1 1.2
Sk iPKP2 16 48 09.4
Um iPKP 16 47 38.4
iPKP1 16 47 45.3
Ud iPKP2 16 48 05.4
De iPKP 16 47 43.1
West of Macquarie Islands
(h = N).

" 26 Ud iP 20 14 35.0 C

" 26 Ud iP 21 22 37.2

" 26 Um i(P) 21 38 56.4

" 27 Ud iPKP1 01 19 18.3
De iPKP1 01 19 29.3

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

1973
Sept. 27 Up iP 02 12 25.4
Ki iP 02 12 35.1
Sk iP 02 12 50.5
Um iP 02 12 24.3 C
Ud iP 02 12 41.6 C
De iP 02 12 37.3
Pakistan (h = 35 km).

" 27 Ki iP 02 16 24.4
Ud eP 02 16 55

" 27 Ud iPKP 02 26 02.6
De iPKP 02 26 12.5

" 27 Ki eP 02 34 45
Um iP 02 34 20.6
Ud iP 02 34 18.9
De iP 02 33 59.6
Iran (h = 40 km).

" 27 Um i(Sgl) 03 31 15.1

" 27 Up iP 04 42 07.7
Ki eP 04 41 50
Um iP 04 41 56.8
Ud iP 04 42 16.2
Mindoro (h = N).

" 27 Ki iSgl 06 37 24.1
Um iSgl 06 35 29.1
Ud iSgl 06 36 06.6
De eSgl 06 36 39
Esthonia.
Explosion.

" 27 Up i(P) 07 04 09.0 C
iP 07 04 12.8
iS 07 07 25.0
i 07 07 48.4
micr sec
P Z' 0.6 0.9
Mx E 0.9 2
Mx N 1.4 2
Mx Z 0.8 2
Ki iP 07 02 48.1 C
i 07 04 13.9
iS 07 04 54.7
micr sec
P Z' 2.5 0.8
Mx N 1.0 8
Mx Z 1.1 8
Sk i(P) 07 03 55.3
i 07 03 56.2
i 07 03 57.8
(cont.)

1973
Sept. 27 (cont.)
Sk iP 07 03 59.2
Um iP 07 03 20.3
i(S) 07 05 54.2
Ud i(P) 07 04 22.9 C
iP 07 04 26.1
De iP 07 04 54.9 C
Novaya Zemlya.
m = 6.1 (Up,Ki).
Underground explosion.
Sk,Up,Ud in the distance range about 17°1/2 to 20° exhibit large P onsets, marked P, preceded by considerably smaller P onsets, marked (P), about 3.6 sec earlier. The other stations show no precursors to the large P.

" 27 Um iP 08 20 41.3
Japan (h = 40 km).

" 27 Um iPKPl 09 45 26.9

" 27 Up eSgl 10 06 13
Ud iSgl 10 05 11.7
De iSgl 10 05 55.5
Off coast of southwest Norway, 60.1°N, 4.5°E.
Origin time = 10 02 48.
Solution obtained by combination with Bergen and Kongsberg readings.

" 27 Sk i(Pgl) 10 25 08.3
i(Sg2) 10 25 11.3

" 27 Up iSgl 12 21 17.2
Ki eSgl 12 23 11
Sk iSgl 12 23 05.6
Um iSgl 12 21 33.6
Ud iSgl 12 22 15.9
De iSgl 12 22 41.8
Western USSR.
Explosion.

" 27 Up iSn 12 22 10.1
iSgl 12 22 19.8
Um iSgl 12 22 55.1
Ud iS* 12 23 15.4
iSgl 12 23 21.1
De iSgl 12 23 54.2
Esthonia.
Explosion.

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

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

 "     27   Up    iSg1        13 13 43.3
            Ki    iSg1        13 15 42.0
            Sk    iSg1        13 15 26.2
            Um    iSg1        13 13 58.3
                  iRg         13 14 36.6
            Ud    iSg1        13 14 42.0
            De    eSg1        13 15 03
                  iSg2        13 15 13.8
            Western USSR.
            Explosion.

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

 "     27   Sk    eSg1        14 39 25
            Um    iSg1        14 37 34.9
                  i           14 37 39.5
            Ud    eSg1        14 39 10
            Lake Ladoga region.
            Explosion.

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

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

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

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

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

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

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

 "     28   Ki    iPn         10 27 41.3
                  iPg1        10 27 49.3
                  iSn         10 28 27.4
                  iSg1        10 28 41.4
            Um    iSg1        10 30 14.7
            Northwest USSR-Norway.
            Explosion.

 "     28   Ki    eSg1        11 35 22
            Um    iSg1        11 36 13.7
            Northwest USSR.
            Explosion.

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

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

1973

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

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

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

" 29 Ki iPKP1 00 11 38.5
Um iPKP1 00 11 37.4
Ud iPKP2 00 11 58.9
West of Macquarie Islands
(h = N).

" 29 Up iP 00 53 43.2 D
iS 01 01 30
micr sec
P Z' 4.5 1.0
Mx E 48 20
Mx N 58 22
Mx Z 75 18
Ki iP 00 53 05.3 D
micr sec
P Z' 7.0 0.8
Mx E 90 20
Mx N 74 17
Mx Z 36 15
Sk iP 00 53 39.1 D
Um iP 00 53 21.5 D
ipP 00 55 13
Ud iP 00 53 51.5 D
De iP 00 54 06.1 D
Russia-China.
h = 580 km (Um).
m = 6.9, M = 7.0 (Up,Ki).
M uncorrected for focal
depth; remarkably large
surface waves for this
focal depth.

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

1973

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

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

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

" 29 Ud iP 21 20 59.3

" 30 Up iP 05 01 27.2
Ki iP 05 00 59.9 C
micr sec
P Z' 0.1 1.0
Sk iP 05 01 25.1 C
Um iP 05 01 10.6 C
Ud iP 05 01 32.8
Mariana Islands (h = 80 km).

" 30 Up iP 05 04 54.6 C
iLgl 05 11 22.7
micr sec
P Z' 0.4 0.9
Ki iP 05 05 06.0 C
iLgl 05 11 56.9
micr sec
P Z' 0.2 1.0
Sk iP 05 05 24.5 C
iPn 05 05 34.7
iLgl 05 12 59.2
Um iP 05 04 50.1 C
iPn 05 04 53.7
(cont.)

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

```
1973
Sept.  30   (cont.)
            Ud   iP         05 05 15.6 C
                 iS         05 09 35.7
                 iLgl       05 12 27.2
            De   iP         05 05 14.4 C
                 iPn        05 05 21.2
                 iS         05 09 34.0
            Near the River Ural, south
            of Ural Mountains.
            m = 5.7 (Up,Ki).
            Underground explosion.

 "     30   Ki   iSn        05 40 41.3
                 iSgl       05 41 02.1
            Um   i          05 41 36.7
                 iSgl       05 41 57.1
            Northwest USSR.
            Explosion.

 "     30   Up   iP         06 29 21.8 C
                 iS         06 38 44
                            micr  sec
                 P      Z'  0.6   1.2
                 Mx     E   4.0   25
                 Mx     N   4.1   25
                 Mx     Z   4.2   25
            Ki   iP         06 28 43.5 C
                 iPP        06 31 13.2
                 iS         06 37 36
                            micr  sec
                 P      Z'  0.5   1.3
                 Mx     E   3.5   17
                 Mx     N   2.2   15
                 Mx     Z   2.7   17
            Sk   iP         06 29 16.3
            Um   iP         06 29 00.2 C
                 iS         06 38 06
            Ud   iP         06 29 28.7
            De   iP         06 29 43.5 C
            Japan (h = 60 km).
            m = 6.4, M = 5.8 (Up,Ki).

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

 "     30   Ki   iP         10 22 06.5
            Ud   iP         10 22 32.2
            Mindanao (h = 80 km).

 "     30   Ki   ePKP       10 55 26
            Um   iPKP       10 55 18.3
            South Sandwich Islands
            (h = 30 km).

 "     30   Um   iP         13 29 08.8

1973
Sept.  30   Ki   iSn        14 27 06.4
                 iS*        14 27 25.8
            Um   iSn        14 27 44.5
                 iSgl       14 28 19.9
            Northwest USSR.
            Explosion.

 "     30   Ki   iP         14 35 20.9
            Tibet (h = N).

 "     30   Up   iPgl       15 29 04.2
                 iSgl       15 29 20.3
                 iRg        15 29 26.4
            Um   iSgl       15 31 06.6
            Ud   iSgl       15 29 10.2
                 iRg        15 29 13.7
            De   iSgl       15 30 30.7
            Bergslagen, central Sweden,
            59.9°N, 15.2°E.
            Origin time = 15 28 44.

 "     30   Ki   iP         17 42 43.4
            Um   iP         17 43 15.5
            Ud   iP         17 43 36.9
            Alaska (h = N).

 "     30   Ki   iP         20 38 14.9
            Sk   eP         20 37 48
                 i          20 37 53.6
            Ud   iP         20 37 50.8
            Venezuela (h = 35 km).

 "     30   Ki   eP         21 07 07
            Ud   iP         21 06 49.4
            Venezuela (h = 35 km).

 "     30   Ki   iP         21 07 42.7
            Um   iP         21 07 16.5
            Ud   iP         21 07 16.1
            Iran (h = 50 km).
```

Markus Båth
Klaus Meyer
Rutger Wahlström

April 15, 1975

SEISMOLOGISKA INSTITUTIONEN
BOX 517
751 20 UPPSALA 1

SEISMOLOGICAL INSTITUTE
BOX 517
S-751 20 UPPSALA
SWEDEN

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

U P P S A L A, K I R U N A, S K A L S T U G A N, U M E Å,

U D D E H O L M and D E L A R Y

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

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

1973							
Oct.	1	Ki	iP		05 09 29.9		
					micr	sec	
			Mx	E	1.5	18	
			Mx	N	0.7	18	
			Mx	Z	1.0	18	
		Um	iP		05 09 31.9		
		Ud	iP		05 09 49.7		
		Mindanao (h = 70 km).					
"	1	Um	i		06 26 12.8		
			iSg1		06 26 30.2		
"	1	Ud	i		10 48 10.2		
			i(Sg1)		10 48 19.1		
"	1	Ki	iPg1		11 21 02.6		
			iSn		11 21 40.6		
			iS*		11 21 53.0		
		Um	iSg1		11 23 27.2		
		Northwest USSR-Norway.					
		Explosion.					
"	1	Up	iSg1		11 38 19.7		
		Ki	iSg1		11 40 52.4		
		Um	iSg1		11 38 53.1		
		Ud	iSg1		11 39 26.7		
		De	iSg1		11 39 52.9		
		Esthonia.					
		Explosion.					
"	1	Up	iP		14 27 51.3		
			ipP		14 28 04.9		
			iS		14 37 18		
					micr	sec	
			P	Z'	0.2	1.1	
			pP	Z'	0.7	1.5	
			Mx	E	2.2	17	
			Mx	N	3.2	25	
			Mx	Z	3.5	23	
		(cont.)					
1973							
Oct.	1	(cont.)					
		Ki	iP		14 27 13.8		
			ipP		14 27 28.9		
					micr	sec	
			P	Z'	0.1	1.0	
			pP	Z'	0.2	1.0	
			Mx	E	4.1	21	
			Mx	N	3.0	22	
			Mx	Z	4.3	20	
		Um	iP		14 27 30.6		C
			ipP		14 27 46.6		
		Ud	iP		14 27 59.3		C
			ipP		14 28 13.5		
		De	iP		14 28 14.6		
			ipP		14 28 27.5		
		Japan.					
		h = 55 km (Up,Ki,Um,Ud,De).					
		m = 6.0, M = 5.8 (Up,Ki).					
"	1	Um	iPKP		14 40 53.9		
"	1	Um	iP		14 57 12.6		
		Japan (h = 60 km).					
"	1	Up	iPg1		16 45 09.0		
			iSg1		16 45 48.8		
			iSg2		16 45 52.2		
			i		16 45 58.1		
		Ki	iSg1		16 48 50.0		
		Sk	iSg1		16 46 09.7		
		Um	iSg1		16 47 08.5		
			i		16 47 09.7		
		Ud	iPg1		16 44 34.1		D
			iSg1		16 44 48.7		
		De	ePg1		16 45 20		
			i		16 45 47.7		
			iSg1		16 46 06.6		
			i		16 46 09.6		
		(cont.)					

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

```
1973
Oct.   1    (cont.)
            Norway-Sweden border region,
            60.0°N, 11.9°E.
            Origin time = 16 44 19.
            Felt.

 "     2    De    iPKP         00 02 33.5
            New Britain (h = 230 km).

 "     2    Up    iP           00 20 49.0
            Ud    iP           00 21 07.0
                  i            00 21 11.9
            Mongolia (h = N).

 "     2    Up    iP           03 11 20.7
                  ipP          03 11 38.7
            Ki    iP           03 11 03.0
                               micr  sec
                  Mx      E    0.6   14
                  Mx      N    0.7   15
            Ud    iP           03 11 38.2
                  i            03 11 49.9
                  ipP          03 11 56.4
            Formosa.
            h = 70 km (Up,Ud).

 "     2    Up    iP           08 40 36.6
                               micr  sec
                  P       Z'   0.1   0.9
            Ki    iP           08 39 52.6
            Sk    iP           08 40 27.5
            Ud    iP           08 40 42.7 C
                  iPcP         08 41 07.5
            De    iP           08 40 59.7
            Japan (h = 50 km).

 "     2    Sk    iP           09 48 49.8
            Mariana Islands (h = 45 km).

 "     2    Ud    iP           09 51 35.6 C

 "     2    Up    iSg1         12 24 13.4
                  i            12 24 22.5
            Ki    i            12 26 13.7
                  iSg1         12 26 44.3
            Sk    eSg1         12 26 01
            Um    iSg1         12 24 46.5
            Ud    iSg1         12 25 19.4
            De    iSg1         12 25 45.6
            Esthonia.
            Explosion.

 "     2    De    iP           12 25 00.0
            Hindu Kush.
            Intermediate depth.

1973
Oct.   2    Up    iP           12 37 05.3
            Ki    iP           12 36 49.8
            Sk    iP           12 37 15.6
            Um    iP           12 36 59.5 C
            Ud    iP           12 37 14.3 C
            Bali (h = 90 km).

 "     2    Um    i(Sg1)       13 24 48.8
            Ud    i(Sg1)       13 25 16.0

 "     2    Um    i(P)         14 47 51.8
                  i            14 48 04.4

 "     2    Ud    iP           15 18 13.7
            Leyte (h = 80 km).

 "     2    Up    iP           16 11 29.4
            Um    iP           16 11 26.2
            Ud    iP           16 11 45.7
            De    iP           16 11 44.6
            Kashmir (h = 70 km).

 "     2    Ki    eP           19 38 27
            Ud    iP           19 39 18.5
                  ipP          19 39 30.1
            Kurile Islands.
            h = 45 km (Ud).

 "     2    Ki    iP           21 17 38.1
            Um    iP           21 17 42.9
            Costa Rica (h = 90 km).

 "     2    Up    i(Rg)        21 18 12.7
            Ud    iRg          21 17 59.1
            De    i(Sg1)       21 19 11.0

 "     2    Up    iP           21 31 11.1
            Ki    iP           21 30 55.9
            Sk    iP           21 31 17.0
            Ud    iP           21 31 21.8
            Mindanao (h = 70 km).

 "     2    Up    iP           22 41 56.5
            Ki    iP           22 41 37.0
            Um    iP           22 41 44.0
            Ud    iP           22 42 02.9
            Leyte (h = 45 km).

 "     3    Up    eP           04 40 12
                               micr  sec
                  P       Z'   0.2   1.5
                  Mx      E    0.9   18
                  Mx      N    0.8   19
                  Mx      Z    1.2   18
            (cont.)
```

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

```
1973
Oct.    3    (cont.)
             Ki    iP          04 39 48.9
                               micr  sec
                   Mx     E    0.7   16
                   Mx     N    0.7   17
                   Mx     Z    0.8   16
             Um    iP          04 40 01.2
             Ud    iP          04 40 04.1
             De    iP          04 40 17.3
             Gulf of California
             (h = 9 km).
             M = 5.2 (Up,Ki).

 "      3    Ki    iP          05 40 31.9
             Ud    iP          05 40 59.8
             Mindanao (h = 130 km).

 "      3    Ki    iP          08 17 49.4
             Um    iP          08 17 21.4
             Ud    iP          08 17 20.8
             De    iP          08 17 03.3
             Iran (h = 45 km).

 "      3    Ud    iPKP1       08 57 47.8
             De    iPKP1       08 57 59.8
             Tonga-Kermadec Islands
             (h = 90 km).

 "      3    Up    iP          08 58 53.3
                   i           08 59 02.5
             Ki    iP          08 58 00.2
                               micr  sec
                   P      Z'   0.1   0.7
             Ud    iP          08 58 54.2
             Aleutian Islands
             (h = 35 km).

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

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

 "      3    Up    iP          10 46 49.5
                               micr  sec
                   P      Z'   0.1   0.8
             (cont.)

1973
Oct.    3    (cont.)
             Up                micr  sec
                   Mx     E    1.0   18
                   Mx     N    1.2   22
                   Mx     Z    1.1   21
             Ki    iP          10 46 03.0
                               micr  sec
                   P      Z'   0.1   0.8
                   Mx     E    1.4   17
                   Mx     N    1.8   20
                   Mx     Z    1.1   18
             Sk    iP          10 46 38.4
             Um    iP          10 46 24.7
             Ud    iP          10 46 55.5 C
             De    iP          10 47 14.2 C
             Kurile Islands (h = N).
             m = 6.1, M = 5.3 (Up,Ki).

 "      3    Ud    iPg1        11 14 24.6
                   iSg1        11 15 13.0
             Southwest Norway,
             60.3°N, 6.1°E.
             Origin time = 11 13 17.
             By combination with
             Kongsberg readings.

 "      3    Ud    iP          11 26 50.1

 "      3    Up    iPKP1       11 28 13.5
                   iPKP2       11 28 21.8
                               micr  sec
                   PKP2   Z'   0.1   0.6
                   Mx     E    0.8   21
                   Mx     N    1.3   23
                   Mx     Z    1.2   22
             Ki    iPKP1       11 27 58.8
                               micr  sec
                   Mx     E    0.9   22
                   Mx     N    1.0   21
                   Mx     Z    0.9   20
             Sk    iPKP1       11 28 08.0
                   iPKP2       11 28 19.1
             Um    iPKP1       11 28 02.6
                   iPKP2       11 28 11.9
             Ud    iPKP        11 28 09.0
                   iPKP1       11 28 15.4
             De    iPKP        11 28 15.3
                   iPKP1       11 28 23.3
             South of Kermadec Islands
             (h = 35 km).
             M = 5.8 (Up,Ki).

 "      3    Ki    iPn         12 06 46.7
                   iSn         12 07 35.5
                   iSg1        12 07 53.1
             (cont.)
```

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

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

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

```
1973
Oct.   4   (cont.)
           Um    iPKP      18 17 51.0
                 i         18 17 56.4
           Ud    iPKP1     18 17 59.1
                 i         18 18 08.0
           De    iPKP1     18 18 10.6 C
           Fiji Islands (h = 640 km).

 "     4   Up    iP        19 07 59.6
           Ki    iP        19 07 12.9
           Um    iP        19 07 34.4
           Ud    iP        19 08 05.4
           Kurile Islands (h = N).

 "     4   Up    iPKP1     23 33 44.2 D
           Ud    iPKP1     23 33 49.1
           De    iPKP1     23 33 56.4

 "     5   Ud    iPKP1     04 45 44.0

 "     5   Up    iP        04 57 20.6
           Sk    iP        04 58 01.3
           Ud    iP        04 57 27.0
           De    eP        04 56 53
           Greece (h = 25 km).

 "     5   Up    ePKP      06 04 19
                 iPP       06 05 22.1
                 iPKKP     06 15 01.0
                           micr  sec
                 PP    Z'  0.1   1.5
                 Mx    E   11    19
                 Mx    N   17    20
                 Mx    Z   30    20
           Ki    iPP       06 05 51
                           micr  sec
                 Mx    E   21    18
                 Mx    N   14    17
                 Mx    Z   15    17
           Um    eP        06 00 43
                 iPKP      06 04 20.4
                 iPP       06 05 35
                 iPKKP     06 15 03.8
                 i         06 15 09.1
           Ud    ePKP      06 04 07
                 iPP       06 05 10.8
                 ePKKP1    06 14 50
                 iPKKP     06 15 08.6
           De    iPKP      06 04 07.9
                 iPP       06 05 05.2
                 iPKKP2    06 14 57.1
                 iPKKP     06 15 03.3
                 i         06 15 14.8
           Chile (h = 15 km).
           M = 6.8 (Up,Ki).

1973
Oct.   5   Up    iPKP      06 06 36.9
                 iPP       06 07 47
                 iPKKP     06 17 18.2
           Ki    iPKP      06 06 40.5
           Sk    iPP       06 07 29.5
           Um    iP        06 03 06
                 ePKP      06 06 37
                 iPP       06 07 59
           Ud    iPKP      06 06 29.7
                 iPP       06 07 34.0
                 iPKKP1    06 17 11.6
                 iPKKP     06 17 24.8
           De    iPKP      06 06 29.3
                 iPP       06 07 28.1
                 iPKKP1    06 17 04.9
           Chile (h = N).
           Surface waves mixed with
           those of the preceding
           event.

 "     5   Up    iPP       07 27 29.4
                           micr  sec
                 Mx    E   1.9   20
                 Mx    N   1.9   18
                 Mx    Z   3.1   18
           Ki              micr  sec
                 Mx    E   2.7   17
                 Mx    N   2.9   17
                 Mx    Z   2.7   18
           Ud    iPKP      07 26 13.8
                 iPP       07 27 16.6
                 iPKKP1    07 36 51.4
           Chile (h = 25 km).
           M = 6.1 (Up,Ki).

 "     5   Um    iSg1      07 50 41.3
           Western USSR.
           Explosion.

 "     5   Up    i(P)      08 14 03.4
           Ud    iP        08 13 59.2

 "     5   Ud    iP        08 32 55.9

 "     5   Sk    eSg1      12 20 52
           Um    iSg1      12 19 18.8
           Western USSR.
           Explosion.

 "     5   Up    iP        12 48 17.6
           De    iP        12 48 54.3

 "     5   Up    i(Rg)     13 40 17.1
           Ud    i(Rg)     13 40 36.5
```

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

1973
Oct. 5 Up iPKP1 15 02 42.0
Ud iPKP1 15 02 36.5
De iPKP1 15 02 47.1

" 5 Up iP 19 01 11.7

" 5 Up iP 20 30 38.0
Um iP 20 30 36.2 C
Ud iP 20 30 54.5 C
De iP 20 30 53.2
Hindu Kush (h = 230 km).

" 5 Up iPg1 21 15 01.2
iSg1 21 15 17.6
iRg 21 15 20.6
Sk iSg1 21 16 48.5
Um iSg1 21 17 03.6
Ud iRg 21 15 10.8
De iSg1 21 16 24.3
Central Sweden,
59.8°N, 15.3°E.
Origin time = 21 14 40.
Near-surface phenomenon
(explosion?), as evidenced
by clear Rg waves.

" 5 Up iP 21 31 25.7 C
Ki iP 21 30 41.0
Sk iP 21 31 17.1
Um iP 21 31 00.9 C
Ud iP 21 31 32.0 C
De iP 21 31 49.5 C
Kurile Islands (h = N).

" 6 Up iSg1 00 43 58.3
Sk iSg1 00 43 16.2
Um iPg1 00 41 34.3 C
iSg1 00 41 48.8
iRg 00 41 56.8
Ud iSg1 00 44 17.2
Västerbotten, Sweden,
64.8°N, 20.5°E.
Origin time = 00 41 17.
Explosion (in connection
with power plant construction
at Krångfors).

" 6 Up iSg1 08 38 04.2
Ud iPg1 08 36 49.7
iSg1 08 37 14.3
De iSg1 08 37 30.7
Bohuslän-Dalsland, Sweden,
58.5°N, 11.8°E.
Origin time = 08 36 19.

" 6 Ki iPn 10 28 34.3
(cont.)

1973
Oct. 6 (cont.)
Ki iPg1 10 28 43.0
iSn 10 29 20.8
iSg1 10 29 36.8
Um iSg1 10 31 11.1
Ud iSg1 10 33 39.6
Northwest USSR-Norway.
Explosion.

" 6 Up iP 10 37 05.8
Ki iP 10 37 12.4
Sk iP 10 37 30.2
Um iP 10 37 03.2
Ud iP 10 37 22.3 C
De iP 10 37 21.0
Kashmir (h = 55 km).

" 6 Um iP 11 56 08.4

" 6 Ki iSg1 13 26 41.7
Um iSn 13 27 10.4
iSg1 13 27 41.1
Northwest USSR-Finland.
Explosion.

" 6 Sk iSg1 13 29 46.2
Um iSn 13 27 47.8
iSg1 13 28 17.0
iRg 13 28 46.8
Ud iSg1 13 30 52.7
Northwest USSR-Finland.
Explosion.

" 6 Up iSg1 13 34 57.6
Um i 13 35 01.0
iSg1 13 35 16.8
De eSg1 13 36 30
Western USSR.
Explosion.

" 6 Um iSg1 14 34 46.8
Lake Ladoga region.
Explosion.

" 6 Up i(PKP) 15 26 29.4
iPKP 15 26 35.7
iPP 15 28 20.6
i 15 40 04.3
iSKKP 15 40 24.3
micr sec
PKP Z' 0.1 0.7
Mx E 13 23
Mx N 23 23
Mx Z 35 23
Ki iPKP 15 26 49.5
ipPKP 15 27 04.3
(cont.)

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

1973
Oct. 6 (cont.)
Ki iPP 15 29 21.3
micr sec
PKP Z' 0.2 1.5
pPKP Z' 0.3 1.2
Mx E 20 18
Mx N 19 18
Mx Z 25 18
Sk iPKP 15 26 40.1
ipPKP 15 26 52.2
iSKKP 15 40 12.7
Um i(PKP) 15 26 30.8
iPKP 15 26 43.5
ipPKP 15 26 57.2
iPP 15 28 37
i 15 39 29.4
Ud i(PKP) 15 26 31.5
iPKP 15 26 35.1
ipPKP 15 26 48.1
iPP 15 28 31.6
iPKKP1 15 36 23.8
iSKKP 15 40 18.7
De iPKP 15 26 28.4
ipPKP 15 26 43.1
iPP 15 27 59.2
iPKKP1 15 36 45.0
South Sandwich Islands.
h = 45 km (Ki,Sk,Um,Ud,De).
M = 7.0 (Up,Ki).

" 6 Up iP 16 47 25.9
micr sec
Mx E 5.8 23
Mx N 10 23
Mx Z 13 23
Ki iP 16 47 08.3
micr sec
Mx E 5.5 20
Mx N 9.8 21
Mx Z 4.3 19
Sk iP 16 47 32.3
Um iP 16 47 16.0
Ud iP 16 47 34.3
Mindanao (h = 80 km).
M = 6.2 (Up,Ki).

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

" 6 Up iP 21 25 25.2
micr sec
Mx E 0.6 12
Mx Z 0.5 12
Ki eP 21 26 32
(cont.)

1973
Oct. 6 (cont.)
Ki micr sec
Mx E 1.2 14
Sk iP 21 26 07.8
Um iP 21 25 55.7
Ud iP 21 25 32.4
i 21 25 47.2
De iP 21 25 03.2
Crete (h = N).
M = 4.6 (Up,Ki).

" 6 Up iP 23 00 27.9
Um iP 23 00 10.1
Ud eP 23 00 34
Volcano Islands
(h = 35 km).

" 7 Up iP 05 05 50.3 C
ipP 05 06 01.4
Sk eP 05 05 38
Um iP 05 05 25.7
Ud iP 05 05 55.4
ipP 05 06 06.5
Kurile Islands.
h = 40 km (Up,Ud).

" 7 Ud iPKP1 05 47 19.5
De iPKP1 05 47 30.1

" 7 Ki iSn 08 46 05.8
iS* 08 46 30.4
Sk eSg1 08 48 53
Um iSg1 08 47 19.2
Northwest USSR.
Explosion.

" 7 Up iP 09 38 10.9 C
ipP 09 38 19.2
micr sec
P Z' 0.1 0.9
Mx N 0.6 13
Mx Z 0.5 12
Ki iP 09 37 27.0 C
micr sec
P Z' 0.1 1.0
Mx E 0.6 15
Mx N 0.5 13
Sk iP 09 38 01.3 C
Um iP 09 37 46.3 C
ipP 09 37 54.2
Ud iP 09 38 17.2 C
ipP 09 38 25.9
De iP 09 38 37.2
ipP 09 38 47.0
Japan.
h = 30 km (Up,Um,Ud,De).
m = 6.0, M = 5.2 (Up,Ki).

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

1973				
Oct.	7	Up	iP	11 23 46.3
		Ki	iP	11 23 25.6
		Sk	eP	11 23 51
		Um	iP	11 23 32.6
		Ud	iP	11 23 54.5
		Luzon (h = 80 km).		
"	7	Up	iP	11 54 30.0
		Ki	iP	11 54 09.6
		Ud	iP	11 54 38.3
		Luzon (h = 60 km).		
"	7	Up	iP	11 56 28.6
		Um	iP	11 56 14.7
		Ud	iP	11 56 37.2
		Luzon.		
		Origin time = 11 44 07.		
"	7	Up	iP	12 33 01.2
		Ki	iP	12 32 41.2
		Sk	iP	12 33 05.4
		Um	iP	12 32 47.5
		Ud	iP	12 33 09.7
		Luzon (h = N).		
"	7	Up	iSg1	14 52 24.2
		Um	iSg1	14 52 35.2
		South Finland.		
		Explosion?		
"	7	Ki	ePn	15 10 56
			eSn	15 11 54
			iSg1	15 12 22.1
		Um	iSg1	15 13 05.7
		Ud	iSg1	15 15 39.6
		Northwest USSR.		
		Explosion.		
"	7	Up	iP	17 17 47.3
			i	17 17 54.1
		Ki	iP	17 17 58.9
		Sk	iP	17 17 37.3
		Um	iP	17 17 52.7
		Ud	iP	17 17 35.4
		De	iP	17 17 40.6
		Venezuela (h = 40 km).		
"	7	Ki	iP	21 29 56.8
		Ud	iP	21 30 24.4
		Luzon (h = 45 km).		
"	7	Um	iP	22 15 38.9
		Ud	iP	22 15 39.6
"	8	Ki	iP	01 41 18.5
		Ud	eP	01 41 47

1973				
Oct.	8	Up	iPKP	04 04 28.4
			i	04 04 35.0
			iSKP1	04 07 13.2
		Ki	iSKP1	04 06 48.5
		Sk	iSKP1	04 07 04.7
		Um	iPKP	04 04 21.4
			iSKP1	04 07 00.1
		Ud	iPKP	04 04 29.7
			iSKP1	04 07 14.8
		De	iPKP1	04 04 31.5
		Fiji Islands (h = 540 km).		
"	8	Up	iP	05 37 23.2
		Ki	iP	05 36 36.5
		Um	iP	05 36 57.9 C
		Ud	iP	05 37 29.2
		Kurile Islands (h = 60 km).		
"	8	Up	iPKP1	06 37 24.9
		Sk	iSKP1	06 40 13.5
		Um	iSKP1	06 40 09.2
		Ud	iPKP1	06 37 27.3 C
			i	06 37 51.1
		De	iPKP1	06 37 37.6 C
		Tonga-Kermadec Islands (h = 500 km).		
"	8	Up	iPKP1	06 37 51.9
		Ki	iSKP1	06 40 26.1
		Sk	iSKP1	06 40 41.0
		Um	iSKP1	06 40 36.1
		Ud	iPKP1	06 37 54.1
			i	06 38 18.2
		De	iPKP1	06 38 04.4 C
		Tonga-Kermadec Islands (h = 500 km). In both this and the preceding case, Ud shows a small, clear, unidentified phase, following PKP1 after 24 sec.		
"	8	Up	iP	08 37 15.9
		Ki	iP	08 36 28.8
		Um	iP	08 36 50.4 C
		Ud	iP	08 37 21.4
		Kurile Islands (h = 60 km).		
"	8	Up	i(Sg1)	11 34 25.3
		Ud	i(Sg1)	11 34 46.8
"	8	Um	i(Sg1)	12 06 13.4
"	8	Ki	iPn	12 34 59.9
			iPg1	12 35 08.9
			iSn	12 35 46.6

(cont.)

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

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1973
Oct.   8   (cont.)
           Ki   iS*          12 35 59.8
           Um   iSg1         12 37 36.2
           Northwest USSR-Norway.
           Explosion.

 "     8   Up   iSn          12 47 30.9
                iSg1         12 47 54.6
           Sk   eSg1         12 49 43
           Um   iS*          12 48 08.4
                iSg1         12 48 16.7
           Ud   iSg1         12 48 53.7
           De   iSg1         12 49 27.6
           Western USSR.
           Explosion.

 "     8   Ud   e(P)         12 53 19

 "     8   Um   iP           14 56 52.1

 "     8   Ud   iP           16 39 41.0 C

 "     8   Up   iP           22 12 47.3
                i            22 12 49.5
           Ki   iP           22 12 11.2
           Um   iP           22 12 26.2 C
           Ud   iP           22 12 51.7
                i            22 12 57.1
           De   iP           22 13 08.8
           Bonin Islands (h = 35 km).

 "     8   Up   iP           22 26 09.1
                i            22 26 14.0
           Ki   iP           22 25 35.4
           Um   iP           22 25 50.7
           Ud   iP           22 26 16.3
                i            22 26 21.8
           De   iP           22 26 31.9
           Bonin Islands (h = 20 km).

 "     9   Up   iP           01 57 21.5
                             micr sec
                Mx     E     0.8   15
                Mx     N     1.4   16
                Mx     Z     1.9   14
           Ki   iP           01 57 01.9
                             micr sec
                P      Z'    0.1   1.2
                Mx     E     1.8   13
                Mx     N     1.3   15
                Mx     Z     1.2   12
           Sk   iP           01 57 28.6
           Um   iP           01 57 10.5 C
                iS           02 07 11
           Ud   iP           01 57 30.9
                ipP          01 57 40.5
           (cont.)

1973
Oct.   9   (cont.)
           De   i(P)         01 57 29.8
                i            01 57 40.7
           Luzon.
           h = 35 km (Ud).
           M = 5.6 (Up,Ki).

 "     9   Up   iP           04 11 47.8
           Um   iP           04 11 39.3 C
           Ud   iP           04 12 01.7 C
           De   iP           04 12 04.4
           India (h = N).

 "     9   Um   i(Sg1)       06 36 50.7

 "     9   Up   iP           07 58 18.1
                             micr sec
                P      Z'    0.1   1.0
           Ki   iP           07 57 33.1
           Sk   iP           07 58 08.9
           Um   iP           07 57 53.4
           Ud   iP           07 58 23.8 C
           Kurile Islands (h = N).

 "     9   Up   iPKP         08 16 53.3
                i            08 17 04.4
                             micr sec
                Mx     E     6.0   22
                Mx     N     8.3   23
                Mx     Z     16    23
           Ki   iPKP         08 16 40.1
                             micr sec
                PKP    Z'    0.1   1.2
                Mx     E     7.3   21
                Mx     N     9.8   21
                Mx     Z     7.9   21
           Sk   iPKP         08 16 53.1
           Um   iPKP         08 16 46.1
           Ud   ePKP         08 16 52
                i            08 17 05.9
           New Hebrides Islands
           (h = 9 km).
           M = 6.5 (Up,Ki).

 "     9   Ki   iPn          10 11 42.0
                iPg1         10 11 51.2
                iSn          10 12 28.5
           Origin time = 10 10 38.
           Explosion?

 "     9   Ud   iP           13 14 59.1
           Japan (h = N).

 "     9   Up   iP           13 50 45.8 C
           Ki   iP           13 50 29.8
           Sk   iP           13 50 56.8 C
           Um   iP           13 50 32.6
           (cont.)
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Up=Uppsala, Ki=Kiruna, Sk=Skalstugan, Um=Umeå, Ud=Uddeholm, De=Delary

1973							
Oct.	9	(cont.)					
		Ud	iP		13 50 59.1		
		Szechwan, China (h = N).					
"	9	Up	iP		19 16 49.0		
		Ki	iP		19 17 19.2		
		Ud	iP		19 16 41.2		
		Atlantic Ocean (h = N).					
"	9	Ki	iP		20 41 50.3		C
					micr	sec	
			P	Z'	0.1	1.0	
		Ud	iP		20 42 17.5		
		Samar (h = 55 km).					
"	10	Ud	iP		02 56 51.7		
"	10	Up	iSg1		08 12 37.4		
		Um	iSg1		08 13 35.2		
		Ud	eSg1		08 13 41		
		De	eSg1		08 14 17		
		Gulf of Finland.					
		Explosion.					
"	10	Ud	iP		10 31 51.4		
		Greece.					
"	10	Up	iP		11 11 05.8		
		Ki	iP		11 12 11.5		C
					micr	sec	
			P	Z'	0.1	0.6	
		Sk	iP		11 11 45.6		
		Um	iP		11 11 37.0		
		Ud	iP		11 11 15.1		C
			i		11 11 29.3		
		De	iP		11 10 45.2		
		East of Crete (h = 60 km).					
"	11	Up	iP		02 18 54.5		
			i		02 19 12.2		
			iS		02 27 50		
					micr	sec	
			P	Z'	0.1	1.1	
			Mx	E	9.9	23	
			Mx	N	6.0	22	
			Mx	Z	21	19	
		Ki	iP		02 19 33.9		
			i		02 19 43.6		
					micr	sec	
			P	Z'	0.3	1.5	
			i	Z'	0.5	1.5	
			Mx	E	9.2	20	
			Mx	N	9.5	23	
			Mx	Z	9.9	20	
		Sk	iP		02 19 01.7		
		(cont.)					

1973						
Oct.	11	(cont.)				
		Um	iP		02 19 24.0	
			iS		02 28 44	
		Ud	iP		02 18 49.2	
		Atlantic Ocean (h = N).				
		m = 6.1, M = 6.1 (Up,Ki).				
"	11	Ki	iP		02 19 23.2	
		Um	iS		02 28 26	
		Atlantic Ocean (h = N).				
"	11	Up	iSg1		08 13 24.6	
			i		08 13 41.0	
			i		08 13 52.8	
		Sk	iSn		08 12 17.1	
			iSg1		08 12 40.4	
		Um	iSn		08 13 36.9	
			iS*		08 14 09.4	
			iSg1		08 14 24.5	
		Ud	iPg1		08 11 20.3	
			iSg1		08 12 20.4	
			i		08 12 56.5	
		De	iSg1		08 13 05.6	
		Southwest coast of Norway,				
		59.9°N, 4.7°E.				
		Origin time = 08 10 00.				
"	11	Up	iP		11 15 04.7	
"	11	Up	iSg1		14 55 00.9	
		Um	iSg1		14 56 19.4	
		Ud	i		14 53 53.1	
			iSg1		14 54 00.5	
		De	iSg1		14 54 21.3	
		Southwest Norway,				
		58.8°N, 6.4°E.				
		Origin time = 14 51 56.				
		By combination with Bergen				
		and Kongsberg readings.				
"	11	Up			micr	sec
			Mx	E	0.6	16
			Mx	N	0.7	15
			Mx	Z	0.6	14
		Ki	iP		18 43 33.6	
					micr	sec
			Mx	E	1.0	16
			Mx	N	1.1	15
			Mx	Z	1.1	18
		Um	iP		18 43 50.3	
			ipP		18 44 03.4	
		Japan.				
		h = 50 km (Um).				
		M = 5.2 (Up,Ki).				
"	11	Ud	iPKP		21 37 49.1	
		(cont.)				

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

1973							
Oct.	11	(cont.)					
		De	iPKP		21 37 59.0		
		Fiji Islands (h = 620 km).					
"	12	Up	iP		03 01 48.0		
			i		03 01 51.5		
			iPP		03 03 17.0		
					micr	sec	
			P	Z'	0.2	1.1	
			PP	Z'	0.2	1.2	
			Mx	E	0.8	9	
			Mx	N	2.5	14	
			Mx	Z	0.8	8	
		Ki	iP		03 01 54.2		
			i		03 01 56.8		
					micr	sec	
			P	Z'	0.1	1.3	
			Mx	E	1.6	10	
			Mx	N	2.4	10	
			Mx	Z	1.6	10	
		Sk	iP		03 02 16.0		
			iPP		03 03 57.9		
		Um	iP		03 01 47.9		
			iPP		03 03 21.7		
			iS		03 07 52		
		Ud	iP		03 02 04.5		
			i		03 02 08.4		
			iPP		03 03 48.8		
		De	iP		03 02 02.8		
			i		03 02 06.5		
			iPP		03 03 43.9		
		Tadzhik SSR (h = 10 km).					
		m = 5.6, M = 5.5 (Up,Ki).					
		Double P, small and large, average separation 3.4 sec (Up,Ki,Ud,De).					
"	12	Up	iP		06 06 00.6		
			iS		06 15 25		
					micr	sec	
			Mx	E	0.5	18	
			Mx	N	0.9	21	
			Mx	Z	1.0	15	
		Ki	iP		06 05 20.1		
					micr	sec	
			Mx	E	0.6	14	
			Mx	N	0.5	12	
			Mx	Z	1.2	14	
		Sk	i		06 05 41.3		
		Um	iP		06 05 40.6		
			iS		06 14 40		
		Ud	iP		06 05 53.8		
		Off coast of Oregon (h = 6 km).					
		M = 5.2 (Up,Ki).					

1973							
Oct.	12	Ki	iP		08 38 18.5		
			i		08 38 29.8		
		Um	iP		08 39 10.8		
		Ud	iP		08 39 56.2		
			i		08 40 03.5		
		Svalbard region (h = N).					
"	12	Ud	i(Sg1)		09 54 14.0		
"	12	Ud	i(Sg1)		14 03 06.9		
"	12	Ud	iP		17 11 40.3		
		Nevada.					
		Underground explosion.					
"	12	Up	iRg		21 36 41.6		
		Ud	iSg1		21 36 23.8		
			iRg		21 36 29.2		
		Central Sweden.					
		Explosion?					
"	12	Ud	iP		23 12 49.8		
		North Atlantic Ocean (h = N).					
"	13	Up	iP		01 56 08.0		
		Ki	iP		01 55 42.1		C
		Um	iP		01 55 58.7		
		Ud	eP		01 55 59		
		De	iP		01 56 15.1		C
		Gulf of California (h = 15 km).					
"	13	Up	iP		06 06 00.3		
		Ki	iP		06 07 07.4		
					micr	sec	
			P	Z'	0.1	0.9	
		Sk	iP		06 06 39.6		
		Um	iP		06 06 32.3		C
		Ud	iP		06 06 08.3		
		De	iP		06 05 36.9		
		Crete (h = 40 km).					
"	13	Um	iP		08 58 59.7		
		Ud	iP		08 59 34.2		
"	13	Ud	iP		09 05 14.7		
"	13	Up	iP		10 11 15.7		
			ipP		10 11 26.7		
		Um	iP		10 10 50.7		
		Ud	iP		10 11 21.7		
			ipP		10 11 33.7		
		Japan.					
		h = 45 km (Up,Ud).					

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

1973							
Oct.	13	Up	i		11 30 16.4		
			iRg		11 30 34.9		
		Um	iSg1		11 32 19.7		
		Ud	iSg1		11 30 20.1		
			iRg		11 30 25.6		
		De	iSg1		11 31 38.6		
		Central Sweden.					
		Explosion?					
"	13	Up	iP		16 35 25.2		
		Ki	iP		16 34 42.0		
		Um	iP		16 35 00.8		
		Ud	iP		16 35 31.9		C
		De	iP		16 35 48.2		
		Japan (h = 70 km).					
"	13	Up	iSg1		16 57 03.7		
		Um	iSg1		16 56 31.3		
		Lake Ladoga.					
		Explosion.					
"	13	Ud	iPKP1		17 33 53.8		
"	13	Up	iP		20 36 18.0		
			ipP		20 36 29.3		
		Um	iP		20 35 58.4		C
			ipP		20 36 10.2		
		Ud	iP		20 36 27.2		C
		Japan.					
		h = 45 km (Up,Um).					
"	13	Up	iP		21 21 38.9		
			i		21 21 45.0		
					micr	sec	
			Mx	E	0.6	17	
			Mx	Z	0.6	17	
		Ki	iP		21 22 13.5		
			i		21 22 19.0		
					micr	sec	
			P	Z'	0.2	1.5	
		Ud	iP		21 21 29.2		
			i		21 21 35.7		
		Atlantic Ocean (h = N).					
		Double P, 6.0 sec apart, a typical feature of Atlantic earthquakes on our records.					
"	13	Up	Mx		22 04		
					micr	sec	
			Mx	E	0.7	18	
			Mx	Z	0.8	19	
		Atlantic Ocean (h = N).					
"	13	Up	Mx		23 12		
		(cont.)					

1973							
Oct.	13	(cont.)					
		Up			micr	sec	
			Mx	E	0.5	17	
			Mx	Z	0.7	18	
		Atlantic Ocean (h = N).					
"	13	Um	iP		23 33 13.9		
"	14	Ki	iP		01 07 02.8		
		Atlantic Ocean (h = N).					
"	14	Up	iP		06 32 14.5		
		Ki	iP		06 32 16.1		
		Sk	iP		06 31 45.1		
		Ud	iP		06 31 56.8		
		North Atlantic Ocean (h = N).					
"	14	Ki	iP		10 07 37.5		
		Atlantic Ocean (h = N).					
"	14	Up	iSg1		10 42 44.6		
		Ki	iPn		10 38 36.7		
			iSn		10 39 37.1		
			iSg1		10 40 02.4		
		Sk	iSg1		10 42 26.1		
		Um	iSn		10 40 14.3		
			iSg1		10 40 50.0		
			iSg2		10 41 01.7		
		Ud	iSg1		10 43 19.8		
		Northwest USSR.					
		Explosion.					
"	14	Ki	iP		14 08 14.6		
		Ud	iP		14 08 41.3		
"	14	Ud	iP		14 16 27.3		
		Java (h = 70 km).					
"	14	Up	iP		18 12 31.9		
			i		18 12 48.4		
					micr	sec	
			P	Z'	0.1	0.9	
			Mx	E	1.1	19	
			Mx	N	1.3	15	
			Mx	Z	2.7	20	
		Ki	iP		18 13 38.9		C
					micr	sec	
			P	Z'	0.1	0.8	
			Mx	E	1.4	17	
			Mx	N	1.7	15	
			Mx	Z	1.2	14	
		Sk	iP		18 13 11.0		C
		Um	iP		18 13 03.5		
		Ud	iP		18 12 39.8		C
		(cont.)					

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

1973
Oct. 14 (cont.)
De iP 18 12 08.5
i 18 12 26.8
Crete (h = 45 km).
m = 5.6, M = 4.8 (Up,Ki).

" 14 Up iP 20 57 07.3
Ki iP 20 57 07.5
Um iP 20 57 03.9
Ud iP 20 57 17.9
De iP 20 57 16.2
Sumatra.

" 14 Up iP 22 13 50.9
iS 22 18 49
micr sec
Mx E 1.7 22
Mx N 1.4 16
Mx Z 2.2 18
Ki iP 22 12 36.7
i 22 12 47.0
iS 22 16 42
micr sec
P Z' 0.1 1.0
i Z' 0.2 1.1
Mx E 2.1 18
Mx N 3.0 22
Mx Z 1.5 14
Sk iP 22 13 24.0
Um iP 22 13 17.2
iS 22 17 44
Ud iP 22 13 54.9
De iP 22 14 24.8
i 22 14 31.4
Arctic Ocean (h = N).
M = 4.8 (Up,Ki).

" 14 Sk i(PKP) 22 25 29.9
iPKP 22 25 48.3
Um iPKP 22 25 39.7
Ud iPKP 22 25 48.9
De iPKP 22 25 53.8
Solomon Islands
(h = 60 km).

" 15 Um iPKP1 00 09 23.8
Ud iPKP1 00 09 33.2

" 15 Up iPKP1 00 10 20.1
Ki iPKP1 00 09 48.7
Um iPKP1 00 10 02.1
Ud iPKP1 00 10 26.8

" 15 Up iPKP1 02 22 56.8
Sk iPKP1 02 22 46.3
(cont.)

1973
Oct. 15 (cont.)
Um iPKP1 02 22 40.7 C
Ud iPKP1 02 22 54.6 C
De iPKP1 02 23 03.3
Kermadec Islands
(h = 20 km).

" 15 Ud iP 02 55 47.2

" 15 Um iP 03 25 52.4

" 15 Ki iP 03 32 03.7
Um iP 03 32 25.6
Ud iP 03 32 56.3
Kurile Islands.

" 15 Ki iP 04 14 19.7
Um iP 04 14 47.6
Ud iP 04 15 17.4
Japan (h = 55 km).

" 15 Um iPKP1 06 00 50.1
Ud iPKP1 06 01 02.3
South of Kermadec Islands
(h = 80 km).

" 15 Up iPKP1 06 44 22.7
ipPKP1 06 44 28.6
micr sec
Mx N 1.0 23
Mx Z 0.9 23
Sk ePKP1 06 44 18
Um iPKP1 06 44 12.1
ipPKP1 06 44 19.1
Ud iPKP1 06 44 23.7
De iPKP2 06 44 46.1
South of Kermadec Islands.
h = 20 km (Up,Um).

" 15 Ki iP 07 15 50.0
Ud iP 07 16 42.5
Aleutian Islands
(h = 45 km).

" 15 Up iPKP1 08 16 51.6
Sk iPKP1 08 16 47.7
Um iPKP1 08 16 35.1
ipPKP1 08 16 42.5
Ud iPKP1 08 16 47.4
South of Kermadec Islands.
h = 25 km (Um).

" 15 Up iPKP1 10 12 08.0
i 10 12 12.9
Um iPKP1 10 11 56.2
(cont.)

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

Date	Day	Station	Phase	Time	
1973 Oct.	15	(cont.)			
		Um	ipPKP1	10 12 03.9	
		Ud	iPKP1	10 12 08.7	
		South of Kermadec Islands.			
		h = 25 km (Um).			
"	15	Up	i(P)	12 53 18.9	
		De	iP	12 53 53.9	
"	15	Up	iP	13 23 28.4	
"	15	Up	iPKP1	13 37 57.1	
		Sk	iPKP1	13 37 49.7	
		Ud	iPKP1	13 37 57.3	
		De	iPKP1	13 38 08.8	
		South of Kermadec Islands.			
		Origin time = 13 18 09.			
"	15	Um	iPKP1	16 19 21.8	
		Ud	iPKP1	16 19 34.7	
			i	16 19 41.2	
		South of Kermadec Islands			
		(h = N).			
"	15	Up	iSg1	22 14 12.8	
		Sk	iS*	22 12 39.4	
			iSg1	22 12 47.3	
		Um	iSg1	22 14 37.1	
		Ud	iSg1	22 13 09.3	
		West coast of Norway.			
"	15	Up	iPKP1	23 22 25.0	C
		Um	iPKP1	23 22 08.6	
		Ud	iPKP1	23 22 22.5	
"	16	Up	iP	00 02 13.9	
		Ki	iP	00 02 12.5	
			i	00 02 23.9	
		Um	iP	00 02 02.6	
		Ud	iP	00 02 26.0	
"	16	Up	iPKP1	00 38 27.8	
		Um	iPKP1	00 38 10.9	
			ipPKP1	00 38 18.0	
		Ud	iPKP1	00 38 23.5	
		South of Kermadec Islands.			
		h = 25 km (Um).			
"	16	Up	iP	01 13 54.8	
		Um	iP	01 13 35.5	
		Ud	iP	01 14 01.8	
"	16	Ki	iP	01 53 58.3	
		Sk	iP	01 54 28.8	
		Um	iP	01 54 25.4	
			ipP	01 54 54.5	
		(cont.)			

Date	Day	Station	Phase		Time	
1973 Oct.	16	(cont.)				
		Ud	iP		01 54 50.7	
			ipP		01 55 21.0	
		Aleutian Islands.				
		h = 120 km (Um,Ud).				
"	16	Up	iP		04 53 26.7	
		Ki	iP		04 52 33.2	
		Ud	iP		04 53 27.9	
		Aleutian Islands				
		(h = 60 km).				
"	16	Up	iSg1		09 21 59.7	
		Ud	iSg1		09 20 56.2	
		De	i		09 21 00.9	
			iSg1		09 21 14.9	
		Southwest Norway.				
		By combination with				
		Kongsberg readings.				
"	16	Up	iP		10 00 03.7	
					micr sec	
			P	Z'	0.1 1.0	
		Ki	iP		10 00 04.7	C
					micr sec	
			P	Z'	0.1 1.0	
		Sk	iP		10 00 23.9	
		Um	iP		09 59 58.1	
		Ud	iP		10 00 18.5	
		De	iP		10 00 17.9	
		Nepal (h = N).				
		m = 5.8 (Up,Ki).				
"	16	Ud	iSg1		12 08 08.4	
		De	iPg1		12 07 46.8	
			iSg1		12 08 15.2	
			iRg		12 08 27.3	
		Lake Vener, Sweden.				
		Origin time = 12 07 11.				
"	16	Ki	i		12 26 02.0	
			iSg1		12 26 32.6	
		Um	eSg1		12 24 41	
		De	iSg1		12 25 48.7	
		Western USSR.				
		Explosion.				
"	16	Um	iPKP		12 56 07.2	
		De	iPKP		12 56 24.3	
		Santa Cruz Islands				
		(h = 35 km).				
"	16	Up	iP		17 03 05.7	
		Ki	iP		17 02 12.6	
		Um	iP		17 02 39.2	
		Ud	iP		17 03 04.6	
		Aleutian Islands				
		(h = 30 km).				

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

1973 Oct.	16	Um	iP		17 03 59.2	
"	16	Up	iPKP1		18 03 38.0	
		Um	iPKP1		18 03 27.9	
		Ud	iPKP1		18 03 40.7	
"	16	Up	iPKP2		21 20 04.2	
		Um	iPKP1		21 19 36.6	
		Ud	iPKP2		21 20 01.6	
"	16	Up	iP		22 25 52.9	
		Ud	iP		22 25 57.5	
"	17	Um	iP		02 04 20.4	C
		Ud	iP		02 04 51.8	
"	17	Up	iP		03 10 17.2	
		Ki	iP		03 09 58.3	
		Ud	iP		03 10 26.9	
"	17	Up	iP		03 23 42.1	C
			i		03 24 14.5	
			ipP		03 24 28.5	
			isP		03 24 52.8	
			i		03 26 22	
			iS		03 29 39	
					micr sec	
			P	Z'	1.9 1.5	
			Mx	E	2.6 7	
			Mx	N	3.5 10	
			Mx	Z	4.8 15	
		Ki	iP		03 23 51.3	C
			ipP		03 24 39.0	
			i		03 26 35	
			iS		03 29 56	
					micr sec	
			P	Z'	0.7 1.1	
			Mx	E	3.3 10	
			Mx	N	3.7 10	
			Mx	Z	2.2 10	
		Sk	iP		03 24 07.7	C
			i		03 27 00.4	
		Um	iP		03 23 40.5	C
			ipP		03 24 26.1	
			isP		03 24 49	
			i		03 26 17	
			iS		03 29 30	
		Ud	iP		03 23 58.6	C
			ipP		03 24 45.2	
		De	iP		03 23 55.2	C
			ipP		03 24 42.7	

Afghanistan-USSR.
h = 230 km (Up,Ki,Um,Ud,De).
m = 6.2, M = 5.7 (Up,Ki).
M uncorrected for focal depth.

1973 Oct.	17	Ud	iPKP1		07 04 46.0	
"	17	Ud	iP		14 02 34.2	
"	17	Up	iP		15 34 44.4	
		Ki	iP		15 35 00.6	C
		Sk	iP		15 35 08.6	
		Um	iP		15 34 47.9	
		Ud	iP		15 34 58.2	

India.

"	17	Up	iP		16 08 59.5	
		Um	i(P)		16 08 46.9	

Japan (h = 40 km).

"	17	Ki	iP		20 37 33.4	
		Sk	iP		20 37 18.9	
		Um	iP		20 37 36.4	

Panama-Colombia
(h = 15 km).

"	17	Up	iSg1		21 05 50.9	
		Ki	iPg1		21 03 23.2	
			iSg1		21 04 09.0	
		Sk	ePg1		21 03 10	
			iSg1		21 03 43.1	
		Um	iSn		21 04 07.4	
			iSg1		21 04 23.6	
		Ud	iSg1		21 05 42.1	

Coast of Nordland, Norway, 66.3^{o}N, 12.9^{o}E.
Origin time = 21 02 21.

"	17	Ki	iP		21 14 27.8	
		Um	iP		21 14 36.6	
			ipP		21 15 25.4	
		De	iP		21 14 39.6	

Mexico.
h = 200 km (Um).

"	17	Ki	iP		21 29 35.0	
		Um	iP		21 29 20.5	
"	18	Up	iP		01 21 51.7	
		Ki	iP		01 21 47.6	
					micr sec	
			P	Z'	0.2 1.6	
			Mx	E	1.5 16	
			Mx	N	1.2 16	
			Mx	Z	1.5 16	
		Sk	iP		01 21 33.8	
		Um	iP		01 21 51.4	
		Ud	iP		01 21 41.4	
		De	iP		01 21 46.5	

Costa Rica (h = 40 km).

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

1973						
Oct.	18	Ki	iP		10 21 15.9	
"	18	Up	iP		11 02 24.8	C
			i		11 02 31.3	
			iS		11 12 55	
					micr	sec
			P	Z'	0.2	1.3
			Mx	E	1.9	17
			Mx	N	2.7	17
			Mx	Z	4.3	16
		Ki	iP		11 02 07.8	
			i		11 02 14.2	
			iS		11 12 33	
					micr	sec
			P	Z'	1.8	2.2
			i	Z'	3.0	2.5
			Mx	E	2.5	16
			Mx	N	2.4	16
			Mx	Z	3.0	15
		Sk	iP		11 02 06.5	
			i		11 02 14.1	
		Um	iP		11 02 18.1	C
			i		11 02 23.9	
			iS		11 12 46	
		Ud	iP		11 02 16.7	
			i		11 02 22.8	
		Mexico (h = 45 km). m = 6.5, M = 5.9 (Up,Ki). Double P, average separation 6.5 sec.				
"	18	Ki	iP		11 45 13.4	
		Um	iP		11 45 53.9	C
			i		11 47 37.2	
		De	iP		11 47 01.3	
		Arctic Ocean (h = N).				
"	18	Ki	eSg1		13 09 02	
		Um	iSg1		13 07 23.4	
		Ud	iSg2		13 08 22.9	
		Western USSR. Explosion.				
"	18	Ki	iP		13 59 43.4	
		Um	iP		13 59 43.3	
		Ud	iP		13 59 28.8	
		Lesser Antilles (h = N).				
"	18	Ki	iP		22 55 20.9	
		Greece.				
"	18	Up	iP		23 52 19.6	
		Ki	iP		23 52 27.5	
		Um	iP		23 52 17.0	
		Ud	iP		23 52 35.6	C
		(cont.)				

1973						
Oct.	18	(cont.)				
		De	iP		23 52 32.9	
		Afghanistan-USSR. Intermediate depth.				
"	19	Up	iP		00 21 12.0	
		Ki	iP		00 22 10.0	
		Sk	iP		00 21 44.5	
		Um	iP		00 21 42.3	
		Ud	iP		00 21 11.9	
		De	iP		00 20 45.8	
		Greece (h = N).				
"	19	Up	ePKP2		00 33 29	
					micr	sec
			PKP2	Z'	0.3	1.5
		Ki	iPKP2		00 33 20.7	
					micr	sec
			PKP2	Z'	0.1	1.5
		Sk	ePKP2		00 33 38	
		Um	iPKP2		00 33 23.0	
		Ud	iPKP2		00 33 38.6	
		De	iPKP2		00 33 36.5	
		Macquarie Islands (h = N).				
"	19	Sk	iP		01 02 20.7	
		Um	iP		01 02 32.5	
		Mexico (h = N).				
"	19	Up	iP		01 08 40.5	
"	19	Up	iP		03 22 04.3	
		Ki	iP		03 21 39.3	
		Um	iP		03 21 47.8	
		Ud	iP		03 22 13.3	
"	19	Ki	iPn		11 01 36.4	
			iSn		11 02 23.5	
			iS*		11 02 37.3	
		Um	iSg1		11 04 08.1	
		Northwest USSR-Norway. Explosion.				
"	19	Sk	iSg1		12 21 42.0	
		Um	iS*		12 20 11.8	
			iSg1		12 20 17.2	
		Ud	iSg1		12 20 58.1	
		De	iSg1		12 21 34.5	
		Western USSR. Explosion.				
"	19	Ki	iPn		13 17 42.0	
			iSn		13 18 28.3	
			iS*		13 18 45.6	
		(cont.)				

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

1973				
Oct.	19	(cont.)		
		Um	iSg1	13 20 18.3
		Northwest USSR-Norway. Explosion.		
"	19	Ki	iP	15 47 50.2
			i	15 47 58.7
			iTPg1	15 52 53.5
			iTSg1	15 53 30.9
		Sk	eP	15 48 33
			iTSg1	15 55 54.6
		Um	iP	15 48 41.5
			iTPg1	15 54 32.4
			i	15 55 18.2
			iTSg1	15 55 48.7
		Ud	iP	15 49 27.5
			i	15 49 37.5
		Norwegian Sea.		
"	19	Up	iPKP1	17 35 51.3
		Ud	iPKP1	17 35 53.7
"	19	Up	iP	21 15 07.3
		Um	iP	21 14 43.1
		Ud	iP	21 15 14.1
		Kurile Islands (h = 50 km).		
"	19	Ud	iP	21 32 55.1
		Greece (h = N).		
"	19	Up	iP	23 51 08.7 C
		Ki	iP	23 50 22.8
		Sk	eP	23 50 58.1
		Um	iP	23 50 43.8
		Ud	iP	23 51 14.9 C
		De	iP	23 51 32.9 C
		Kurile Islands (h = 50 km).		
"	20	Up	iP	00 35 36.9
		Um	iP	00 35 11.8
		Ud	iP	00 35 42.7 C
		Kurile Islands (h = 50 km).		
"	20	Ki	iP	03 26 18.6
		De	iP	03 26 06.5
		Colombia (h = 150 km).		
"	20	Ud	iP	05 58 43.5
"	20	Sk	eSg1	07 45 51
		Um	iSg1	07 43 57.3
		Ud	iSg1	07 45 35.9
		De	iSg2	07 46 25.8
		Lake Ladoga. Explosion.		

1973				
Oct.	20	Ud	iP	12 00 35.6
		Sumatra.		
"	20	Ki	iPn	14 22 47.8
			i	14 22 56.0
			iSn	14 23 46.3
			i	14 24 00.2
		Um	iSn	14 24 51.3
			iSg1	14 25 31.6
		Northwest USSR. Explosion.		
"	20	Up	iP	17 56 56.4
		Ud	iP	17 57 08.1
"	20	Ki	iP	18 18 10.5
		Um	iP	18 18 29.0
			i	18 18 38.4
		Ud	iP	18 18 55.6
			i	18 19 09.2
		De	iP	18 19 13.5
		Japan (h = 40 km).		
"	20	Up	iPKP1	20 11 18.5
		Ki	iPKP	20 11 10.3
		Um	i(PKP)	20 11 06.3
			iPKP	20 11 18.4
			iSKP1	20 13 54.8
		Ud	iPKP1	20 11 19.8
			iSKP1	20 14 07.4
		De	iPKP1	20 11 31.4
			iSKP1	20 14 16.7
		Fiji Islands (h = 610 km).		
"	21	Sk	eSg1	10 01 45
		Um	iSg1	09 59 57.2
		Ud	iSg1	10 01 33.8
		De	eSg1	10 02 16
		Lake Ladoga. Explosion.		
"	21	Up	iP	11 10 48.8
		Ki	iP	11 09 47.3
		Sk	iP	11 10 22.7
		Um	iP	11 10 15.3
		Ud	iP	11 10 41.0
		Unimak Island (h = 45 km).		
"	21	Ud	iSKP1	11 42 53.2
		De	iPKP1	11 40 18.4
		Tonga-Kermadec Islands (h = 610 km).		
"	21	De	iPKP1	13 57 49.4
		Fiji Islands (h = 570 km).		

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

1973						
Oct.	21	Up	iPKP1		14 22 06.0	
			i		14 22 30.3	
		Ud	iPKP1		14 22 06.7	
		De	iPKP1		14 22 18.0	
		Tonga-Kermadec Islands (h = 90 km).				
"	21	Ud	iP		15 52 00.2	
"	21	Up	iSg1		17 07 35.3	
			i		17 07 37.4	
		Ki	eSg1		17 08 57	
			iSg2		17 09 08.0	
		Sk	iSg1		17 06 19.1	
			iSg2		17 06 22.3	
		Um	i		17 07 16.3	
			iSg1		17 08 07.8	
		Ud	e(Sn)		17 06 10	
			iSg1		17 06 34.4	
			i		17 06 44.4	
		De	iSg1		17 07 43.1	
		West coast of Norway, 61.5°N, 5.0°E. Origin time = 17 04 14. By combination with Bergen and Kongsberg readings.				
"	21	Ud	iP		19 50 19.2	
"	21	Up	iP		19 51 49.1	
		Ki	iP		19 51 10.7	
		Um	iP		19 51 27.3	D
		Ud	iP		19 51 56.1	
			ipP		19 52 08.7	
		Japan. h = 45 km (Ud).				
"	21	Um	iPKP1		19 54 54.9	
		Ud	iPKP1		19 55 07.4	
"	21	Up	iPKP1		21 26 41.8	
		Ud	iPKP1		21 26 43.7	C
		De	iPKP1		21 26 54.6	
		Tonga-Kermadec Islands (h = 560 km).				
"	21	Ud	iP		22 55 31.9	
		Turkey (h = 5 km).				
"	21	De	iPg1		23 20 19.8	
			iSn		23 20 52.7	
			iSg1		23 21 12.5	
		Near south coast of Norway. By combination with Bergen, Kongsberg, and Hagfors readings.				

1973						
Oct.	22	Ud	iP		07 30 09.8	
		Greece (h = 5 km).				
"	23	Long-period microseisms (periods around 18 sec), especially clear on Um N component.				
"	23	Ud	iPKP1		04 54 37.3	C
		De	iPKP1		04 54 46.7	
"	23	Ki	iP		06 22 44.3	
		Um	iP		06 22 56.5	
		Mariana Islands (h = 110 km).				
"	23	Ud	iP		09 15 42.3	
"	23	Up	iP		10 54 22.4	
			i		10 54 25.2	
			i		10 54 37.0	
					micr sec	
			P	Z'	0.3 1.1	
		Ki	iP		10 55 43.9	
			i		10 55 51.2	
					micr sec	
			P	Z'	0.2 1.0	
			Mx	N	1.3 17	
			Mx	Z	1.0 17	
		Sk	iP		10 55 14.3	
			i		10 55 16.9	
		Um	iP		10 55 02.6	C
			i		10 55 07.2	
		Ud	iP		10 54 37.2	
			i		10 54 39.3	
		De	iP		10 53 58.6	
			i		10 54 05.2	
		Rumania (h = 170 km). m = 5.6 (Up,Ki). Multiple onsets.				
"	23	Um	iSg1		12 07 56.0	
		Western USSR. Explosion.				
"	23	Up	iP		14 19 09.5	
"	23	Sk	iSg1		14 30 59.8	
		Ud	iPg1		14 29 36.3	
			iSg1		14 29 59.5	
		South Norway, 60.1°N, 10.3°E. Origin time = 14 29 06. By combination with Kongsberg reading.				

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

Date	Day	Sta.	Phase	Comp.	Time / Ampl.	Per.	
1973							
Oct.	24	Up	iP		04 37 43.9		
		Um	iP		04 37 17.9		
			ipP		04 38 55.5		
		Ud	iP		04 37 49.4		
		Okhotsk Sea.					
		h = 490 km (Um).					
"	24	Ki	iP		04 59 11.9		
		Ud	iP		04 59 35.1		
		Kirghiz-Sinkiang (h = N).					
"	24	Up	iP		05 32 13.9		C
			i		05 33 01.6		
					micr	sec	
			P	Z'	0.1	1.0	
			Mx	N	1.6	13	
			Mx	Z	1.3	14	
		Ki	iP		05 32 19.8		C
					micr	sec	
			P	Z'	0.2	1.0	
			Mx	N	2.4	15	
			Mx	Z	2.7	15	
		Sk	iP		05 32 37.5		C
		Um	iP		05 32 11.1		C
			i		05 32 16.9		
		Ud	iP		05 32 29.7		C
		De	iP		05 32 26.8		C
			i		05 32 34.6		
		Kashmir (h = N).					
		m = 6.0, M = 5.4 (Up,Ki).					
"	24	Ki	iPn		09 57 35.0		
			iPg1		09 57 43.8		
			iSn		09 58 21.4		
		Um	iSg1		10 00 08.1		
		Northwest USSR-Norway.					
		Explosion.					
"	24	Ki	iP		11 02 15.6		
		Sk	iP		11 02 21.5		
			i(S)		11 04 22.0		
"	24	Ud	iPKP1		11 32 10.8		
"	24	Up	iP		11 38 21.0		
		Ki	iP		11 37 34.5		C
		Um	iP		11 37 55.6		C
		Ud	iP		11 38 27.0		C
		De	iP		11 38 45.1		
		Okhotsk Sea (h = 450 km).					
"	24	Ki	i		13 29 28.0		
			iSg1		13 30 08.1		
		Um	iS*		13 28 21.1		
			iSg1		13 28 31.1		
		Ud	i		13 29 06.5		
		(cont.)					

Date	Day	Sta.	Phase	Comp.	Time / Ampl.	Per.	
1973							
Oct.	24	(cont.)					
		Ud	iSg1		13 29 21.9		
		De	iSg1		13 29 40.8		
		Western USSR.					
		Explosion.					
"	24	Um	iSg1		13 55 58.0		
		Western USSR.					
		Explosion.					
"	24	Sk	iSg1		16 08 16.3		
		Um	iSg1		16 06 50.9		
		Ud	iSg1		16 07 28.0		
		Western USSR.					
		Explosion.					
"	24	Ki	iP		20 05 40.5		C
					micr	sec	
			P	Z'	0.1	1.0	
		Sk	iP		20 06 02.4		
		Um	iP		20 05 35.9		C
		Ud	iP		20 05 54.5		C
		De	iP		20 05 53.0		C
		Kashmir (h = 50 km).					
"	25	Up	iP		01 22 46.1		
		Um	iP		01 23 26.0		
		De	iP		01 22 21.2		
		Rumania (h = 140 km).					
"	25	Um	iP		01 36 51.8		
		Japan (h = N).					
"	25	Ki	iP		05 08 57.3		
					micr	sec	
			P	Z'	0.1	1.0	
		Sk	iP		05 09 17.7		
		Um	iP		05 09 02.2		
		Ud	iP		05 09 21.4		
		Talaud Islands					
		(h = 150 km).					
"	25	Up	iP		06 53 37.0		C
			i		06 53 42.4		
			i		06 55 26.7		
			iS		07 03 55		
					micr	sec	
			P	Z'	0.2	1.2	
			Mx	E	2.6	17	
			Mx	N	2.6	15	
			Mx	Z	4.5	17	
		Ki	iP		06 53 20.0		
			i		06 53 25.7		
			iS		07 03 24		
					micr	sec	
			P	Z'	0.9	2.0	
		(cont.)					

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

1973						
Oct.	25	(cont.)				
		Ki			micr	sec
			Mx	E	11	18
			Mx	N	5.8	18
			Mx	Z	9.6	17
		Sk	iP		06 53 44.6	
		Um	iP		06 53 25.4	
			iS		07 03 35	
		Ud	iP		06 53 45.9	
			i		06 53 51.6	
		De	i		06 54 04.8	
		Mindoro (h = 60 km).				
		m = 6.2, M = 6.1 (Up,Ki).				
"	25	Ki	iPKP1		11 29 07.7	
		Um	iPKP1		11 29 18.7	
		New Zealand (h = 30 km).				
"	25	Ud	iPg1		12 23 26.1	
			iSg1		12 23 45.9	
		De	iSg1		12 24 18.3	
		Dalsland, Sweden.				
		Origin time = 12 23 01.				
"	25	Sk	iSg1		13 14 19.4	
		Um	i		13 12 03.5	
			iSg1		13 12 32.2	
		Lake Ladoga region.				
		Explosion.				
"	25	Up	ipP		14 24 06.0	
			i		14 24 15.0	
			i		14 25 28.0	
			i(PP)		14 26 28.3	
			iSKS		14 31 55	
			i		14 32 37	
			iS		14 33 09	
			iSP		14 34 45	
			iPKKP		14 38 10.8	
					micr	sec
			pP	Z'	0.1	1.0
			(PP)	Z'	0.2	1.2
			Mx	E	1.7	15
			Mx	N	1.8	17
			Mx	Z	3.2	17
		Ki	ipP		14 24 21.0	
			iPP		14 26 59.3	
			ipPP		14 28 33.5	
			iSKS		14 32 17	
			iS		14 33 41	
			iSP		14 35 27	
			i(PKKP)		14 37 41.4	
			iPKKP		14 37 55.6	
					micr	sec
			pP	Z'	0.2	1.5
			PP	Z'	0.3	1.5
		(cont.)				

1973							
Oct.	25	(cont.)					
		Ki			micr	sec	
			Mx	E	2.9	21	
			Mx	N	3.8	23	
		Sk	iP		14 22 04.0		
			ipP		14 24 01.8		
		Um	i(PP)		14 26 26.1		
			ipPP		14 28 30.5		
			iSKS		14 32 05		
			i		14 32 56		
			iS		14 33 32		
			iSP		14 35 10		
			i(PKKP)		14 37 44.3		
			iPKKP		14 38 00.9		
		Ud	iP		14 22 00.3		
			ipP		14 23 55.1		
			i		14 23 58.4		
			i(PP)		14 26 17.0		
			iPKKP		14 38 19.1		
		De	iP		14 21 55.1		
			ipP		14 23 48.6		
			i		14 23 53.0		
			i(PKKP)		14 38 00.8		
		Argentina.					
		h = 520 km (Sk,Ud,De).					
		m = 6.5, M = 6.0 (Up,Ki).					
		M uncorrected for focal depth.					
"	26	Ki	iP		03 32 25.0		
		Kamchatka (h = N).					
"	26	Up	iP		04 33 53.4		
			iPn		04 34 59.0		
			iPP		04 35 12.3		
					micr	sec	
			P	Z'	0.1	1.0	
		Ki	iP		04 33 37.9		
					micr	sec	
			P	Z'	0.1	0.6	
		Sk	iP		04 34 09.0		C
		Um	iP		04 33 38.5		
		Ud	iP		04 34 09.7		C
		De	iP		04 34 16.7		
			iPP		04 35 44.1		
		Kazakh SSR.					
		m = 5.8 (Up,Ki).					
		Underground explosion.					
"	26	Sk	iP		05 50 24.4		
		Ud	iP		05 50 54.9		
		Alaska (h = N).					
"	26	Up	iP		06 04 47.1		
			iLg1		06 11 13.3		
		Ki	iP		06 04 51.9		
		(cont.)					

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

1973						
Oct.	26	(cont.)				
		Sk	iP		06 05 16.9	
		Um	iP		06 04 40.0	
			i		06 04 42.6	
		Ud	iP		06 05 08.6	
		De	iP		06 05 11.0	
			i		06 05 16.1	
		Southern Ural Mountains.				
		Underground explosion.				
"	26	Ud	iP		10 20 11.2	
		Kurile Islands				
		(h = 60 km).				
"	26	Up	i		12 26 09.9	
			i(Sg1)		12 26 44.2	
"	26	Ud	iP		13 16 27.0	
		Pamir.				
		Intermediate depth.				
"	26	Ud	iP		13 17 45.9	
		Caucasus (h = N).				
"	26	Up	iP		14 59 53.9	
		Um	iP		14 59 42.9	
		Ud	iP		15 00 00.9	
			ipP		15 00 18.0	
		Samar.				
		h = 60 km (Ud).				
"	26	Ud	iPKP1		15 30 19.4	
		De	iPKP1		15 30 30.3	
		Fiji Islands (h = 530 km).				
"	26	Up	iP		18 47 43.3	
		Ki	iP		18 47 10.2	
			ipP		18 47 20.6	
		Um	iP		18 47 26.5	
			ipP		18 47 35.6	
		Ud	iP		18 47 49.3	
			ipP		18 48 00.4	
		South of Japan.				
		h = 40 km (Ki,Um,Ud).				
"	26	Um	iP		19 36 07.0	
		Panama (h = N).				
"	26	Up	iP		20 26 45.7	
		Sk	iP		20 27 28.7	
		Um	iP		20 27 26.6	
		Ud	iP		20 26 52.8	
		De	iP		20 26 15.5	
		Greece (h = 55 km).				
"	27	Ud	iP		01 36 26.9	
1973						
Oct.	27	Up	iP		07 04 07.7	
			i		07 04 09.9	
					micr sec	
			P	Z	18 1.0	
			Mx	E	59 4	
			Mx	N	38 3	
			Mx	Z	46 4	
		Ki	iP		07 02 48.6	C
			iS		07 04 56	
					micr sec	
			P	Z	25 2	
			Mx	E	64 4	
			Mx	N	73 5	
			Mx	Z	64 5	
		Sk	iP		07 03 54.7	C
		Um	iP		07 03 20.1	C
			iS		07 05 54	
		Ud	iP		07 04 23.3	C
		De	iP		07 04 55.4	C
		Novaya Zemlya.				
		m = 7.1 (Up,Ki).				
		Underground explosion.				
"	27	Ki	iP		07 55 15.6	
			iS		07 57 23.1	
		Ud	iP		07 56 51.9	
		De	iP		07 57 21.1	
		Novaya Zemlya.				
		Origin time = 07 52 28.				
"	27	Up	iP		08 08 13.4	
		Ki	iP		08 06 48.2	
			iS		08 08 57.4	
		Um	iP		08 07 23.3	
			i		08 09 32.9	
		Ud	iP		08 08 24.7	C
		De	iP		08 08 54.0	C
		Novaya Zemlya.				
		Origin time = 08 04 01.				
"	27	De	iPKP		08 13 06.4	
		New Hebrides Islands				
		(h = 30 km).				
"	27	Ud	iP		08 14 03.9	
		De	iP		08 14 33.9	
		Novaya Zemlya.				
		Origin time = 08 09 40.				
"	27	Up	iP		08 25 33.9	
		Sk	eP		08 25 21	
		Um	iP		08 24 46.7	
			iS		08 27 19.9	
		Ud	iP		08 25 48.2	
		De	iP		08 26 17.5	C
		Novaya Zemlya.				
		Origin time = 08 21 25.				

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

1973					
Oct.	27	Ud	iP	09 00 25.4	
"	27	Up	iP	09 18 02.5	
			iS	09 21 19.8	
			i	09 22 29.3	
		Ki	iP	09 16 38.3	
			iS	09 18 47.5	
		Sk	iP	09 17 51.1	
			eS	09 20 48	
			i	09 21 18.2	
		Um	iP	09 17 12.3	
			iS	09 19 43.8	
		Ud	iP	09 18 15.2	C
		De	iP	09 18 44.5	
		Novaya Zemlya. Origin time = 09 13 52. This series of events marks the first reliable case of aftershocks of Russian nuclear explosions that we have recorded.			
"	27	Up	iPKP2	09 45 50.3	
		Um	iPKP1	09 45 31.6	
		Ud	iPKP1	09 45 43.8	
		South of Kermadec Islands (h = N).			
"	27	Ud	iP	09 59 28.7	
		Pakistan (h = N).			
"	27	Um	iSg1	12 04 22.1	
		Western USSR. Explosion.			
"	27	Ud	eP	14 29 35	
		Iran (h = 20 km).			
"	27	Up	i(Sg1)	15 03 08.0	
"	27	Up	iP	15 51 00.4	
			i	15 51 05.2	
		Ki	iP	15 51 36.8	
		Um	iP	15 51 15.1	
		Ud	iP	15 51 17.9	
		Arabian Sea (h = N).			
"	27	Up	iPKP1	17 00 58.3	C
				micr sec	
			PKP1 Z'	0.1 0.8	
		Ki	iSKP1	17 03 32.6	
		Um	iSKP1	17 03 42.7	
		Ud	iPKP1	17 01 00.7	
		De	iPKP1	17 01 10.2	
		Tonga-Kermadec Islands (h = 500 km).			

1973					
Oct.	27	Up	iPKP	22 21 45.4	
			ipPKP	22 22 02.7	
		Ki	iPKP	22 22 01.7	
			ipPKP	22 22 17.0	
				micr sec	
			PKP Z'	0.2 1.5	
		Ud	iPKP	22 21 43.4	
			ipPKP	22 22 00.8	
		South Sandwich Islands. h = 60 km (Up,Ki,Ud).			
"	28	Ud	iP	02 27 50.0	
"	28	Ud	iP	07 51 01.6	
"	28	Ki	iP	10 05 28.6	
		Ud	iP	10 05 39.8	
		Iceland (h = N).			
"	28	Ki	iP	10 46 24.8	
		Sk	iP	10 46 00.6	
		Ud	iP	10 46 37.2	C
		De	iP	10 47 04.9	
		Iceland (h = N).			
"	28	Ki	i(P)	10 51 50.5	
			iP	10 51 56.8	
				micr sec	
			P Z'	0.1 1.0	
		Um	iP	10 52 11.7	
		Ud	iP	10 52 07.2	
		De	iP	10 52 34.5	
		Iceland (h = N). Several of these events exhibit (at Ki, Ud) small precursors to P, here denoted (P), preceding P by about 5 to 6 sec, a typical feature on our records of events in this region.			
"	28	Sk	iP	10 56 38.5	
		De	iP	10 57 34.2	
		Iceland (h = N).			
"	28	Ki	i(P)	11 15 31.6	
			iP	11 15 37.3	
				micr sec	
			P Z'	0.1 1.2	
		Um	iP	11 15 52.3	
		Ud	i(P)	11 15 41.1	
			iP	11 15 46.9	
		Iceland (h = N).			
"	28	Ki	iP	11 19 05.7	
		(cont.)			

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

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1973
Oct.  28   (cont.)
           Ud   iP          11 19 16.8
           Iceland.
           Origin time = 11 15 32.

 "    28   Ud   iP          11 29 26.4
           Iceland (h = N).

 "    28   Up               micr  sec
                Mx     E    1.0   17
                Mx     N    1.9   21
                Mx     Z    2.5   17
           Ki   iP          11 35 17.8
                            micr  sec
                P      Z'   0.8   2.0
                Mx     E    2.7   15
                Mx     N    1.7   15
                Mx     Z    2.1   16
           Um   iP          11 35 34.7
           Ud   i(P)        11 35 28.6
                iP          11 35 32.7
           De   iP          11 35 58.1
           Iceland (h = N).
           M = 4.6 (Up,Ki).

 "    28   Ki   i(P)        11 51 04.2
                iP          11 51 10.9
                            micr  sec
                P      Z'   0.1   1.0
           Ud   iP          11 51 21.2
           Iceland (h = N).

 "    28   Ki   iP          12 05 24.5
           Ud   iP          12 05 34.3
           Iceland (h = N).

 "    28   Up   iPKP1       14 04 26.6
                iPKP2       14 04 34.2
                            micr  sec
                PKP1   Z'   0.1   1.0
           Ki   iPKP1       14 04 04.7
           Sk   iPKP1       14 04 21.0 C
           Um   iPKP1       14 04 15.8 C
           Ud   iPKP        14 04 22.5
                iPKP1       14 04 28.5 C
           De   iPKP1       14 04 35.8
                iPKP2       14 04 48.4
           South of Kermadec Islands
           (h = 100 km).

 "    28   Ki   iP          14 12 00.6
           Um   iP          14 12 21.3
           Ud   iP          14 12 52.4

 "    28   Up   iPKP1       14 19 58.1
           (cont.)

1973
Oct.  28   (cont.)
           Up   iPKP2       14 20 05.8
           Um   iPKP1       14 19 47.8
           Ud   iPKP1       14 19 59.8
           De   iPKP1       14 20 07.8
           South of Kermadec Islands
           (h = N).

 "    28   Ki   iP          14 29 28.1
                            micr  sec
                P      Z'   0.1   1.0
                Mx     E    1.1   15
                Mx     N    1.2   16
                Mx     Z    1.0   14
           Ud   iP          14 29 40.3
           Iceland (h = N).

 "    28   Up   iP          15 04 05.9
           Ki   iP          15 03 48.9
                            micr  sec
                P      Z'   0.1   1.0
           Sk   iP          15 04 10.9
           Um   iP          15 03 54.5
           Ud   iP          15 04 14.5
           De   iP          15 04 23.5
           Negros (h = 550 km).

 "    28   Um   iP          22 33 22.0 C
                ipP         22 33 32.8
           Ud   iP          22 33 50.7
           De   iP          22 34 05.6
           Japan.
           h = 40 km (Um).

 "    29   Ud   iP          05 46 39.4

 "    29   Up   Mx          06 33
                            micr  sec
                Mx     E    1.2   20
                Mx     N    1.4   20
                Mx     Z    2.7   20
           Ki   Mx          06 33
                            micr  sec
                Mx     E    2.3   19
           New Guinea (h = 35 km).
           M = 5.8 (Up,Ki).

 "    29   Up   iSg1        09 44 42.0
           Sk   iSg1        09 45 04.0
           Ud   iPg1        09 43 00.7
                iSn         09 43 33.5
                iSg1        09 43 48.0
           South coast of Norway,
           58.1°N, 8.1°E.
           Origin time = 09 41 58.
           (cont.)
```

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

1973				
Oct. 29	(cont.) By combination with Kongsberg and Bergen readings.			
" 29	Ud	iP	09 49 00.2	
	Greece (h = 80 km).			
" 29	Um	iSg1	12 16 49.5	
	Ud	iSg1	12 17 20.8	
	De	iSg1	12 17 44.6	
	Esthonia. Explosion.			
" 29	Ud	iP	12 30 06.2	
	North Atlantic Ocean (h = N).			
" 29	Um	iSg1	13 09 18.1	
	Ud	iSg1	13 10 02.3	
	De	iSg1	13 10 28.4	
	Western USSR. Explosion.			
" 29	Ud	iP	14 56 16.4	
	Kurile Islands (h = 50 km).			
" 29	Up	iP	16 05 13.9	
		i	16 05 21.1	
	Ki	iP	16 04 53.4	
	Um	iP	16 05 04.6	
	Ud	iP	16 05 24.3	
	Luzon (h = 50 km).			
" 29	Up	iP	21 15 23.9	
	Sk	eP	21 16 09	
	Um	iP	21 16 06.7	
	Ud	iP	21 15 30.9	
	Albania (h = N).			
" 30	Sk	iP	01 19 00.3	
	Um	iP	01 19 06.8	
	Italy (h = N).			
" 30	Up	iP	02 55 38.3	C
	Ki	iP	02 55 34.4	
	Sk	iP	02 55 54.5	C
	Um	iP	02 55 31.6	
	Ud	iP	02 55 51.0	
	Burma (h = 30 km).			
" 30	Ki	iP	03 05 37.5	
	Sk	iP	03 06 20.7	
	Um	iP	03 06 23.6	
		i	03 06 32.6	
	Ud	iP	03 06 59.0	
	Greenland Sea (h = N).			

1973				
Oct. 30	Up	iPKP1	04 51 49.4	
			micr sec	
		PKP1 Z'	0.1 1.0	
	Sk	iPKP1	04 51 41.9	
	Um	iPKP1	04 51 36.0	
	Ud	iPKP1	04 51 50.6	C
	De	iPKP1	04 51 59.8	
	Kermadec Islands (h = 60 km).			
" 30	Ud	iP	07 30 50.4	
	Ionian Sea.			
" 30	Up	iSg1	09 56 24.7	
	Ud	iSg1	09 57 06.8	
	De	iSg1	09 57 37.3	
	Coast of Södermanland, Sweden. Explosion.			
" 30	Up	iSg1	09 58 43.6	
	Ud	iSg1	09 59 25.9	
	De	i(Pn)	09 59 01.7	
		iSg1	09 59 57.3	
	Coast of Södermanland, Sweden. Explosion.			
" 30	Up	iPg1	10 22 37.7	
		iSg1	10 22 48.3	
	Ud	iSg1	10 23 30.8	
	De	i(Pn)	10 23 04.8	
		iSg1	10 23 59.7	
	Coast of Södermanland, Sweden. Explosion.			
" 30	Up	i	10 27 03.6	
		i(Sg1)	10 27 30.8	
	Sk	iSg1	10 29 24.5	
	Ud	iPg1	10 27 26.3	
		iSg1	10 27 50.6	
	De	iSg1	10 28 17.9	
		iRg	10 28 31.8	
	Eastern Sweden, near 59^{o}N, 17^{o}E. Origin time = 10 26 50.			
" 30	Up	iPg1	10 46 46.2	
		iSg1	10 46 55.3	
		iRg	10 47 05.9	
	Ud	iSg1	10 47 37.0	
	De	iSg1	10 48 08.0	
	Coast of Södermanland, Sweden. Explosion.			

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

1973					
Oct.	30	Up	iSg1		11 42 44.6
		Ud	iSn		11 41 30.7
			iSg1		11 41 50.6
		Southwest Norway. By combination with Kongsberg readings.			
"	30	Sk	iSg1		12 46 24.8
		Um	iSg1		12 45 06.9
		Ud	iSg1		12 45 39.6
		De	iSg1		12 46 05.8
		Esthonia. Explosion.			
"	30	Up	iSg1		13 38 58.1
			i		13 39 24.0
		Um	iSg1		13 39 51.5
			iRg		13 40 13.0
		De	iSg1		13 40 29.2
		Gulf of Finland. Explosion.			
"	30	Ki	iP		16 06 26.5
		Ud	iP		16 06 06.2
		Iran (h = 45 km).			
"	30	Ki	iP		16 45 46.5
		Ud	iP		16 45 33.3
		Caspian Sea.			
"	30	Ud	iP		19 45 22.8
		Turkey (h = 20 km).			
"	31	Ud	iPKP1		08 41 54.0
"	31	Ud	i(Sg1)		11 39 51.6
"	31	Um	iP		12 17 00.9
		Ud	iP		12 17 10.2
			i		12 17 21.0
"	31	Ud	iP		12 57 23.5
"	31	Up	iP		23 18 02.2 C
			iPcP		23 18 25.0
					micr sec
			P	Z'	0.1 0.9
		Ki	iP		23 17 17.8 C
		Sk	iP		23 17 53.6
		Um	iP		23 17 37.8
		Ud	iP		23 18 08.7 C
		De	iP		23 18 26.5 C
		Japan (h = 55 km).			

Markus Båth

May 24, 1975

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SWEDEN

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

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

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

N O V E M B E R   1 - 30, 1973

1973						
Nov.	1	Ud	iPKP1		05 33 34.7	
		De	ePKP1		05 33 45	
		Tonga-Kermadec Islands (h = 540 km).				
"	1	Up	iPKP1		06 58 21.0	
					micr	sec
			PKP1	Z'	0.1	0.9
		Ki	iPKP		06 58 10.2	
					micr	sec
			PKP	Z'	0.1	1.2
		Sk	iPKP1		06 58 15.7	
		Um	iPKP1		06 58 09.9	
			iPKP		06 58 16.9	
		Ud	iPKP1		06 58 22.0	
		De	iPKP		06 58 31.2	
			iPKP1		06 58 33.2	
		Tonga-Kermadec Islands (h = 35 km).				
"	1	Um	iSg1		14 29 08.7	
		Ud	eSg1		14 30 45	
		De	iSg1		14 31 26.5	
		Lake Ladoga region. Explosion.				
"	1	Ud	iP		16 14 15.3	
		De	iP		16 13 57.2	
"	1	Ki	iP		21 12 38.1	
		Aleutian Islands (h = 110 km).				
"	2	Up	iPKP1		05 07 53.9	
		Ud	iPKP1		05 07 54.9	
		De	ePKP1		05 08 05	

1973						
Nov.	2	Up	iPg1		05 44 54.8	
			iRg		05 45 14.2	
		Ud	iRg		05 45 16.7	
		Central Sweden.				
"	2	Up	iP		05 53 16.6	
					micr	sec
			Mx	E	2.8	24
			Mx	N	4.1	25
			Mx	Z	3.1	25
		Ki	iP		05 53 57.0	
					micr	sec
			Mx	E	2.2	15
			Mx	N	1.6	13
			Mx	Z	1.8	12
		Sk	eP		05 53 52	
		Um	iP		05 53 32.5	
		Ud	iP		05 53 30.7	
		De	iP		05 53 12.1	
		Iran (h = 55 km). M = 5.2 (Up,Ki).				
"	2	Up	iP		06 04 11.2	
		Ki	iP		06 04 53.5	
					micr	sec
			P	Z'	0.1	1.0
		Um	iP		06 04 27.5	
		Ud	iP		06 04 26.9	
		De	iP		06 04 08.6	
		Iran (h = 60 km).				
"	2	Ud	iP		07 39 54.5	
"	2	Up	iP		07 40 49.0	
					micr	sec
			Mx	E	1.1	10

(cont.)

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

1973						
Nov.	2	(cont.)				
		Up			micr	sec
			Mx	N	1.3	12
			Mx	Z	1.6	12
		Ki	iP		07 40 03.7	
					micr	sec
			Mx	E	2.2	15
			Mx	N	2.0	15
			Mx	Z	2.2	15
		Sk	iP		07 40 44.1	
		Um	iP		07 40 20.7	
		Ud	iP		07 41 00.1	
		De	eP		07 41 21	
		Eastern USSR (h = N).				
		M = 5.4 (Up,Ki).				
"	2	Up	iSg1		11 19 13.4	
		Ki	iSn		11 16 02.8	
			iSg1		11 16 26.4	
		Sk	iSg1		11 18 51.0	
		Um	iSn		11 16 39.4	
			i		11 16 58.3	
			iSg1		11 17 15.9	
		Ud	iSg1		11 19 49.9	
		Northwest USSR.				
		Explosion.				
"	2	Um	eSg1		12 19 44	
		De	iSg1		12 20 57.1	
		Western USSR.				
		Explosion.				
"	2	Up	ipP		12 20 07.9	
		Sk	iP		12 20 19.7	
		Um	iP		12 19 55.3	
			ipP		12 20 03.0	
		Ud	iP		12 20 15.8	
		Assam.				
		h = 30 km (Um).				
"	2	Up	iSn		12 23 29.2	
			iSg1		12 23 40.3	
		Ki	eSg1		12 26 21	
		Sk	iSg1		12 25 34.8	
		Um	iSg1		12 24 17.8	
		Ud	iSn		12 24 17.6	
			iS*		12 24 41.9	
			iSg1		12 24 46.0	
		De	i		12 24 55.7	
			iS*		12 25 08.2	
			iSg1		12 25 11.5	
		Esthonia.				
		Explosion.				

1973						
Nov.	2	Up	eSg1		12 44 44	
		Um	iSg1		12 44 58.6	
		Ud	iSg1		12 45 41.5	
			iSg2		12 45 53.6	
		De	iSg1		12 46 14.8	
		Western USSR.				
		Explosion.				
"	2	Ki	iSn		13 50 51.2	
			iSg1		13 51 13.7	
		Um	eSg1		13 52 13	
		Northwest USSR.				
		Explosion.				
"	2	Up	iP		13 56 57.9	
		Ki	iP		13 56 26.2	
		Um	iP		13 56 39.4	
		Ud	iP		13 57 05.1	
		De	iP		13 57 16.8	
		Bonin Islands.				
"	2	Ud	iP		14 05 13.7	
"	2	Um	i(P)		15 44 34.9	
"	3	Up	iP		00 30 07.8	
					micr	sec
			P	Z'	0.1	1.1
		Ki	iP		00 29 13.3	
			i		00 29 13.9	
					micr	sec
			P	Z'	0.1	0.8
		Sk	iP		00 29 50.3	
			iPcP		00 30 37.2	
		Um	iP		00 29 38.3	
			i		00 29 39.3	
			iPcP		00 30 30.0	
		Ud	iP		00 30 10.1	
			i		00 30 11.0	
			iPcP		00 30 49.1	
		De	iP		00 30 33.4	
		Kamchatka (h = 60 km).				
		m = 5.9 (Up,Ki).				
		Double P, small and large, average separation = 0.8 sec (Ki,Um,Ud).				
"	3	Up	iP		01 58 43.8	
		Ki	iP		01 58 49.2	
		Sk	iP		01 58 30.3	
		Um	iP		01 58 50.9	
		Ud	iP		01 58 31.8	
			i		01 58 34.8	
		De	iP		01 58 37.0	
		Colombia (h = 20 km).				

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

1973					
Nov.	3	Um	eP		06 04 09
		Ud	iP		06 04 34.1
		Unimak Island (h = 40 km).			
"	3	Ud	iP		07 04 26.8
"	3	Up	iP		08 39 27.4
		Ki	iP		08 40 00.3
					micr sec
			P	Z'	0.1 1.0
		Sk	iP		08 39 57.0
		Um	iP		08 39 40.3
		Ud	iP		08 39 38.9
		Indian Ocean (h = N).			
"	3	Up	iSg1		12 08 06.0
		Um	iSg1		12 09 00.1
		Ud	eSg1		12 09 11
		De	eSg1		12 09 45
		Off coast of south Finland, 59.8°N, 22.2°E.			
		Origin time = 12 06 51.			
		Explosion.			
"	3	Up	iP		13 19 55.2
		Ud	iP		13 19 54.5
		Aleutian Islands (h = 60 km).			
"	3	Up	iSn		13 20 09.4
			iSg1		13 20 35.6
			i		13 20 41.3
		Ki	iSg1		13 21 20.8
		Sk	eSg1		13 21 47
		Um	iSg1		13 19 59.2
		Ud	eSg1		13 21 35
		De	iSg1		13 22 18.5
		Lake Ladoga region.			
		Explosion.			
"	3	Up	iSP		14 46 02
					micr sec
			Mx	E	1.8 19
			Mx	N	1.6 18
			Mx	Z	3.0 20
		Ki	iSP		14 46 43
					micr sec
			Mx	E	1.2 18
			Mx	N	1.0 19
			Mx	Z	1.1 18
		Um	iSP		14 46 31
		Ud	i(PP)		14 36 17.2
		Argentina (h = 35 km).			
		M = 5.7 (Up,Ki).			
		Cf. comment to Aug. 1, 1973, 16 13.			

1973					
Nov.	3	Ud	iP		14 47 36.0
"	3	Ki	iPn		14 56 26.9
			iSg1		14 57 43.6
		Northwest USSR.			
		Explosion.			
"	3	Up	iP		19 02 07.1
		Ki	iP		19 01 52.3
		Um	iP		19 01 57.2
		Ud	iP		19 02 15.7
		Celebes Sea (h = 270 km).			
"	4	Up	iS*		05 36 44.0
			iSg1		05 36 53.3
		Ki	i(Pn)		05 32 45.7
			iPg1		05 32 56.3
			iSn		05 33 36.9
			iSg1		05 33 58.0
		Sk	eSg1		05 36 37
		Um	iSn		05 34 16.0
			i		05 34 31.3
			iSg1		05 34 51.5
		Ud	iSg1		05 37 26.2
		De	iSg1		05 38 57.5
		Northwest USSR.			
		Explosion.			
"	4	Um	iPKP1		05 52 10.6
"	4	Ki	eSg1		08 35 30
		Um	eSg1		08 36 15
		Northwest USSR.			
		Explosion.			
"	4	Um	eSg1		08 42 48
		Northwest USSR.			
		Explosion.			
"	4	Ki	iP		12 58 35.2
					micr sec
			P	Z'	0.1 1.1
		Sk	eP		12 59 00
		Um	iP		12 59 04.7
		Ud	eP		12 59 29
		De	iP		12 59 54.7
		Yukon (h = 7 km).			
"	4	Up	iP1		13 11 35.9
			iP2		13 11 39.2
		Ki	iP2		13 10 47.8
		Um	iP1		13 11 07.9
			iP2		13 11 11.3
		Ud	iP1		13 11 42.3
			iP2		13 11 45.4
		Sakhalin (h = N).			
		In average, P2 - P1 = 3.3 sec.			

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

1973						
Nov.	4	Up	iP		15 56 57.4	C
			iS		16 00 41	
					micr sec	
			P	Z'	2.6 0.9	
			Mx	E	9.4 11	
			Mx	N	21 12	
			Mx	Z	36 12	
		Ki	iP		15 58 12.9	C
					micr sec	
			P	Z'	1.1 1.1	
			Mx	E	44 15	
			Mx	N	16 11	
			Mx	Z	13 11	
		Sk	iP		15 57 38.7	C
		Um	iP		15 57 36.1	C
			iS		16 01 55	
		Ud	iP		15 57 03.5	C
			iS		16 01 03.7	
		De	iP		15 56 23.3	C
		Greece (h = 8 km).				
		m = 6.6, M = 5.9 (Up,Ki).				
"	4	Up	iP		16 16 20.5	
					micr sec	
			P	Z'	0.1 0.7	
		Ki	iP		16 17 36.0	
		Sk	iP		16 17 01.4	
		Um	iP		16 16 59.7	
		Ud	iP		16 16 26.8	
		De	iP		16 15 50.2	
		Greece (h = 6 km).				
"	4	Up	iP		16 32 02.1	
		Ud	iP		16 32 11.0	
		Greece.				
"	4	Up	iP		20 09 32.3	C
			ipP		20 09 42.8	
					micr sec	
			P	Z'	0.1 1.0	
			pP	Z'	0.1 1.3	
		Sk	iP		20 09 14.8	
		Um	iP		20 09 03.8	
		Ud	iP		20 09 35.1	
		De	iP		20 09 57.2	
		Kamchatka.				
		h = 40 km (Up).				
"	5	Up	iP		02 28 44.6	
		Ki	eP		02 28 31	
		Sk	iP		02 28 27.3	
		Ud	iP		02 28 34.7	
		De	eP		02 28 47	
		Mexico (h = 90 km).				
1973						
Nov.	5	Ud	iPKP1		04 17 39.7	
"	5	Ud	iP		05 43 02.7	
		De	eP		05 42 46	
		Iran (h = 50 km).				
"	5	Ud	i		08 02 40.4	
			iSg1		08 02 54.6	
"	5	Ud	eP		08 45 00	
			i		08 45 11.5	
		Italy (h = N).				
"	5	Ud	iP		11 26 00.3	
"	5	Up	iPKP1		11 38 23.0	
		Um	iPKP1		11 38 11.5	
		Ud	iPKP1		11 38 25.5	
		De	iPKP1		11 38 35.5	
		Tonga-Kermadec Islands (h = 580 km).				
"	5	Up	iP		12 02 03.2	
		Ki	iP		12 00 14.6	
			iS		12 01 41.0	
					micr sec	
			P	Z'	0.1 0.9	
		Sk	iP		12 01 19.8	
		Um	iP		12 01 14.1	
			iS		12 03 21.0	
		Ud	iP		12 02 06.9	
		De	iP		12 02 47.2	
		South of Svalbard.				
		Origin time = 11 58 21.				
"	5	Up	iSg1		12 14 35.8	
		Ki	eSg1		12 16 35	
		Sk	eSg1		12 16 22	
		Um	iSg1		12 14 52.4	
		Ud	iSg1		12 15 43.3	
		De	eSg1		12 16 10	
		Western USSR.				
		Explosion.				
"	5	Ki	iPn		12 55 23.3	
			iSn		12 56 11.4	
			iSg1		12 56 29.4	
		Northwest USSR-Norway.				
		Explosion.				
"	5	Ki	iPn		12 57 07.1	
			iSn		12 57 55.2	
			iSg1		12 58 11.1	
		Northwest USSR-Norway.				
		Explosion.				

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

```
1973
Nov.   5   Ud   iSg1      13 52 22.2

 "     5   De   iPKP1     14 30 00.4
           Fiji Islands (h = 630 km).

 "     5   Ki   iP        17 31 15.8
                i         17 31 25.8
           Kodiak Island (h = 45 km).

 "     5   Up   iP        20 11 45.4
           Ud   iP        20 11 51.7
           Japan (h = 60 km).

 "     5   Ud   iP        20 17 58.6
           Turkey (h = 45 km).

 "     6   Ud   iP        00 01 00.3
           Japan (h = 70 km).

 "     6   Sk   iP        01 14 55.3
           Um   iP        01 15 11.1
           Guatemala (h = 110 km).

 "     6   Up   iPKP1     05 37 42.9
                          micr  sec
                PKP1  Z'  0.1   0.8
           Ki   iPKP      05 37 32.8
           Sk   ePKP1     05 37 37
           Um   i(PKP)    05 37 30.0
                iPKP1     05 37 31.5
           Ud   iPKP1     05 37 44.7 D
           De   iPKP1     05 37 55.3 D
           Tonga-Kermadec Islands
           (h = 550 km).

 "     6   Ud   iPKP1     06 22 33.1
           De   iPKP1     06 22 44.0
           Tonga-Kermadec Islands
           (h = 590 km).

 "     6   Ud   iP        09 32 10.9
           South Atlantic Ocean
           (h = N).

 "     6   Up   iP        09 47 03.1
                iS        09 56 02
                          micr  sec
                P     Z'  0.2   0.9
                Mx    E   8.1   21
                Mx    N   20    22
                Mx    Z   32    22
           Ki   iP        09 46 09.9
                          micr  sec
                P     Z'  0.1   1.0
           (cont.)

1973
Nov.   6   (cont.)
           Ki                 micr  sec
                Mx        E   14    22
                Mx        N   9.6   20
                Mx        Z   10    17
           Sk   iP            09 46 41.8
           Um   iP            09 46 38.9
                iS            09 55 14
           Ud   iP            09 47 03.0
           De   iP            09 47 25.6
           Aleutian Islands
           (h = 35 km).
           m = 6.1, M = 6.3 (Up,Ki).

 "     6   Ki   iP            09 50 59.9
           Sk   iP            09 51 21.4
           Um   iP            09 51 17.3

 "     6   Up   iP            10 34 26.9
           Ki   iP            10 33 42.2
           Ud   iP            10 34 34.5
           Kurile Islands
           (h = 100 km).

 "     6   Up   i             11 42 00.9
                iSg1          11 42 26.1

 "     6   Ki   iPn           11 43 24.9
                iPg1          11 43 33.2
                iSn           11 44 11.4
                iS*           11 44 24.2
           Sk   eSg1          11 47 15
           Um   iSg1          11 46 00.7
           Northwest USSR -Norway.
           Explosion.

 "     6   Um   eSg1          12 05 24
           Western USSR.
           Explosion.

 "     6   Ki   iPn           12 23 41.0
                iSn           12 24 28.0
                iSg1          12 24 43.7
           Northwest USSR-Norway.
           Explosion.

 "     6   Ki   eSn           13 37 05
           Um   eSg1          13 38 07
           Northwest USSR-Finland.
           Explosion.

 "     6   Ki   iP            17 12 33.7

 "     6   Up   iP            18 37 32.6 C
           (cont.)
```

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

1973
Nov. 6 (cont.)

```
        Up   i          18 37 33.8
             iS         18 46 26
             iP'P'      19 05 52.1
                        micr  sec
             P     Z'   0.5   0.9
             Mx    E    9.3   21
             Mx    N    27    21
             Mx    Z    41    22
        Ki   iP         18 36 40.1
             i          18 36 41.3
                        micr  sec
             P     Z'   0.2   1.1
             Mx    E    14    20
             Mx    N    14    20
             Mx    Z    17    19
        Sk   iP         18 37 11.6
        Um   iP         18 37 06.6 C
             iS         18 45 38
             iP'P'      19 05 54.5
        Ud   iP         18 37 32.6 C
             i          18 37 33.7
        De   iP         18 37 54.6 C
             i          18 37 56.1
        Aleutian Islands
        (h = 40 km).
        m = 6.4, M = 6.4 (Up,Ki).

"   6   Ud   iP         18 50 44.6
        Aleutian Islands
        (h = 50 km).

"   6   Up   iP         20 43 38.4
        Ud   iP         20 43 47.6
        Greece (h = 15 km).

"   7   Ud   iP         04 55 39.3 C
        Aleutian Islands
        (h = 160 km).

"   7   Up   iSg1       16 38 25.5
        Ud   iPg1       16 37 07.2
             iSg1       16 37 34.9
        De   iSn        16 37 44.9
             iSg1       16 37 53.1
             i          16 38 08.0
        Off coast of Bohuslän,
        Sweden, 58.5°N, 11.1°E.
        Origin time = 16 36 32.
        Explosion.
        Some more explosions from
        the same area follow within
        the next three min.

"   7   Ud   iPKP1      21 17 11.8 D
        (cont.)
```

1973
Nov. 7 (cont.)

```
        De   iPKP1      21 17 23.6 D
        Tonga-Kermadec Islands
        (h = 190 km).

"   8   Up   iP         01 07 41.3
        Ki   iP         01 08 39.8
        Aegean Sea (h = N).

"   8   Up   iP         09 09 49.5
             iS         09 18 27
                        micr  sec
             P     Z'   0.2   0.9
             Mx    E    12    20
             Mx    N    29    20
             Mx    Z    43    20
        Ki   iP         09 08 58.5
             iS         09 16 54
                        micr  sec
             P     Z'   0.3   0.8
             Mx    E    17    20
             Mx    N    19    23
             Mx    Z    16    24
        Sk   iP         09 09 34.6
        Um   iP         09 09 22.3
        Ud   iP         09 09 53.7
        De   iP         09 10 14.9
        Kurile Islands (h = N).
        m = 6.4, M = 6.4 (Up,Ki).

"   8   Ud   iP         11 30 05.8
        Aleutian Islands
        (h = 50 km).

"   8   Ki   iSn        12 29 44.2
             iS*        12 29 56.9
        Um   iSg1       12 31 34.5
        Northwest USSR-Norway.
        Explosion.

"   8   Ud   eP         13 07 49
        Iran (h = 45 km).

"   8   Up   iP         13 30 55.1
        Ki   iP         13 30 36.6
                        micr  sec
             P     Z'   0.1   1.0
        Sk   iP         13 30 34.4
        Um   iP         13 30 48.9
        Ud   iP         13 30 46.0
        De   iP         13 30 53.4
        Mexico (h = 70 km).

"   8   De   i(Rg)      14 41 41.9

"   8   De   i(Rg)      15 04 15.9
```

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

1973
Nov. 8 Ki iPKP1 15 07 03.3
New Zealand (h = N).

" 8 De i(Rg) 15 09 05.0

" 8 Ud iSg1 15 12 41.7
Near southwest coast of
Norway.
Origin time = 15 10 38.
By combination with
Kongsberg readings.

" 8 Ki iP 15 56 30.9
Syria.

" 8 Ki iP 17 35 51.0
micr sec
P Z' 0.1 1.0
Um iP 17 35 56.5
Ud iP 17 36 15.4
Talaud Islands
(h = 150 km).

" 8 Up iPKP1 17 51 11.8
Ud iPKP1 17 51 13.5
De iPKP1 17 51 22.1

" 8 Ki iP 18 31 01.9
Hindu Kush.
Intermediate depth.

" 8 Ud iP 21 29 51.0

" 9 Ud iPKP1 03 21 05.4

" 9 Up iP 07 11 40.8
Ud iP 07 11 44.3
Greece (h = N).

" 9 Ud iP 12 10 29.5
i 12 10 41.2
Luzon (h = 60 km).

" 9 Up iP 13 48 18.4
micr sec
P Z' 0.1 1.0
Mx N 6.6 24
Ki iP 13 46 53.7
micr sec
P Z' 0.3 1.1
Mx E 6.7 15
Mx N 6.9 15
Um eP 13 47 38
Ud iP 13 48 21.7
(cont.)

1973
Nov. 9 (cont.)
De iP 13 48 54.6
Arctic Ocean (h = N).
m = 5.4, M = 5.1 (Up,Ki).

" 9 Up iP 14 23 36.9
ipP 14 24 22.9
micr sec
P Z' 0.3 1.2
pP Z' 0.3 1.2
Ki iP 14 22 43.8
micr sec
P Z' 0.2 1.1
Um iP 14 23 08.1
Ud iP 14 23 38.0
ipP 14 24 25.0
De iP 14 23 59.7
Aleutian Islands.
h = 190 km (Up,Ud).
m = 5.9 (Up,Ki).

" 9 Up eP 14 53 12
micr sec
P Z' 0.1 1.0
Ki iP 14 51 49.6
micr sec
P Z' 0.3 1.4
Um iP 14 52 33.1
Ud iP 14 53 15.2
Arctic Ocean (h = N).
m = 5.4 (Up,Ki).

" 9 Up iP 15 15 13.3
micr sec
P Z' 0.2 1.3
Ki iP 15 13 46.4
micr sec
P Z' 0.3 1.3
Um iP 15 14 30.2
Ud eP 15 15 14
Arctic Ocean (h = N).
m = 5.5 (Up,Ki).

" 9 Up iP 18 58 32.2
micr sec
P Z' 0.1 1.1
Ud iP 18 58 48.6
Iran (h = 40 km).

" 9 Up iP 23 38 34.4
micr sec
P Z' 0.1 1.1
Ki iP 23 38 36.6
Um iP 23 38 32.6
(cont.)

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

1973
Nov. 9 (cont.)
Ud iP 23 38 44.8
De iP 23 38 43.4
Nicobar Islands (h = N).

" 10 Ud iP 05 16 37.6
Japan (h = 70 km).

" 10 Up iP 08 48 11.5
Ki iP 08 47 38.0
Um iP 08 47 52.5
Ud iP 08 48 19.6
South of Japan
(h = 350 km).

" 10 Ud iPKP 14 12 13.4
De iPKP 14 12 19.0

" 10 Ud iP 14 19 14.0
Luzon (h = 70 km).

" 10 Up iPKP1 22 30 39.5
iPKP2 22 30 44.8
Sk iPKP1 22 30 34.1
Um iPKP1 22 30 28.7
Ud iPKP1 22 30 41.4
De iPKP1 22 30 49.7
Kermadec Islands
(h = 290 km).

" 10 Up iP 22 39 05.3
Ud iP 22 39 14.4
Luzon (h = 70 km).

" 10 Um iPKP1 22 58 17.2

" 11 Up iP 02 53 43.9 C
micr sec
P Z' 0.1 0.8
Mx E 4.9 21
Mx N 11 20
Mx Z 18 20
Ki iP 02 52 52.5 C
micr sec
P Z' 0.2 0.9
Mx N 4.7 22
Sk iP 02 53 29.0
Um iP 02 53 16.5 C
Ud iP 02 53 47.7
De iP 02 54 08.3
Kurile Islands (h = 50 km).
m = 6.1, M = 5.9 (Up,Ki).

" 11 Up iP 07 22 06.6
(cont.)

1973
Nov. 11 (cont.)
Up micr sec
P Z' 0.2 1.4
Ki iP 07 22 44.4
micr sec
P Z' 0.1 1.0
Sk iP 07 22 43.1
Um iP 07 22 20.0
Ud iP 07 22 22.3
De iP 07 22 06.8
Iran (h = 10 km).
m = 5.6 (Up,Ki).

" 11 Up iSg1 13 47 49.8
Sk eSg1 13 49 28
Um iSg1 13 48 13.8
Ud iSg1 13 48 52.3
Western USSR.
Explosion.

" 11 Up iPKP1 17 12 29.0
Ki ePKP 17 12 21
Um iPKP 17 12 23.0
Ud iPKP1 17 12 31.2
De iPKP1 17 12 42.6
Tonga-Kermadec Islands
(h = 570 km).

" 11 Up i 18 08 59.7
iSg1 18 09 02.7
Ki iSg1 18 11 31.5
Sk i 18 08 18.9
iSg1 18 08 35.5
Um iSg1 18 10 08.7
Ud ePg1 18 07 09
i(Sn) 18 07 38.4
iSg1 18 08 01.3
De e(Sn) 18 08 12
iSg1 18 08 45.6
Near southwest coast of
Norway, 59.8°N, 6.2°E.
Origin time = 18 06 04.
By combination with Bergen
and Kongsberg readings.

" 11 Ud eP 18 48 00
Iran (h = 50 km).

" 11 Up iPKP1 22 13 58.6
micr sec
PKP1 Z' 0.1 1.0
Ki iPKP 22 13 53.1
Sk iPKP 22 14 02.7
Um ePKP 22 13 59
(cont.)

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

```
1973
Nov.  11   (cont.)
           Ud   iPKP1     22 14 00.8
           De   iPKP1     22 14 10.1
           Fiji Islands (h = 270 km).

 "    12   Up   iP        00 12 33.9
           Ki   iP        00 13 39.3
           Sk   iP        00 13 14.0
           Um   iP        00 13 07.4
           Ud   iP        00 12 41.7 D
                i         00 12 46.2
           De   iP        00 12 10.9
           Dodecanese Islands
           (h = 70 km).

 "    12   Ud   iP        00 17 17.7

 "    12   Up   iP        00 17 15.9
                          micr  sec
                P     Z'  0.1   0.9
                Mx    E   7.3   20
                Mx    N   8.6   14
                Mx    Z   12    14
           Ki   iP        00 18 20.5
                          micr  sec
                P     Z'  0.1   1.0
                Mx    E   6.4   13
                Mx    N   2.0   12
           Sk   iP        00 17 53.1
           Um   iP        00 17 46.7
           Ud   iP        00 17 21.2
                i         00 17 24.5
           De   iP        00 16 49.0
                i         00 16 54.1
           Dodecanese Islands
           (h = N).
           m = 5.6, M = 5.6 (Up,Ki).

 "    12   Um   iP        00 24 37.2

 "    12   Ud   iP        00 41 41.9
           Dodecanese Islands.

 "    12   Up   iPKP1     01 18 17.9
           Ud   iPKP1     01 18 19.7

 "    12   Um   iPKP1     03 48 24.6
           South of Kermadec Islands
           (h = 150 km).

 "    12   Up   iPKP      04 12 25.1
                          micr  sec
                Mx    E   1.7   18
                Mx    N   1.6   18
                Mx    Z   1.6   20
           (cont.)

1973
Nov.  12   (cont.)
           Ki                  micr  sec
                Mx        E    3.7   20
                Mx        N    2.6   18
           Um   iPKP           04 12 19.2
           Ud   iPKP           04 12 27.4
           De   iPKP           04 12 33.1
           Solomon Islands
           (h = 50 km).
           M = 6.0 (Up,Ki).

 "    12   Ud   iP             04 22 10.3
           Dodecanese Islands.

 "    12   Um   iP             06 59 11.1
           Mindanao (h = 140 km).

 "    12   Ud   iP             07 44 51.9

 "    12   Ud   iP             07 59 39.4
           Dodecanese Islands
           (h = N).

 "    12   Sk   eSg1           12 14 30
           Um   iSg1           12 12 58.9
           Ud   eSg1           12 13 47
           Western USSR.
           Explosion.

 "    12   Ki   iPn            12 19 59.6
                iSn            12 20 58.0
                iSg1           12 21 22.6
           Um   iSn            12 21 36.1
                iSg1           12 22 12.8
           Northwest USSR.
           Explosion.

 "    12   Up   iSg1           13 58 37.4
           Um   iSg1           13 59 14.5
           Esthonia.
           Explosion.

 "    12   Ki   eSg1           14 17 41
           Um   iSg1           14 16 19.1
           Lake Ladoga region.
           Explosion.

 "    12   Um   iPKP1          20 09 40.5

 "    12   Sk   ePKP1          23 13 47
           Um   iPKP1          23 13 40.6
           Ud   iPKP1          23 13 53.8

 "    13   Ki   iP             01 22 45.7
           Um   iP             01 23 03.6 C
           (cont.)
```

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

1973					
Nov.	13	(cont.)			
		Ud	iP		01 23 33.3 C
		Japan (h = 80 km).			
"	13	Up	iP		02 57 18.3 C
					micr sec
			P	Z'	0.1 0.8
		Ki	iP		02 56 29.4 C
					micr sec
			P	Z'	0.1 0.6
		Um	iP		02 56 52.1
		Ud	iP		02 57 23.7
		Okhotsk Sea (h = 330 km).			
		m = 5.5 (Up,Ki).			
"	13	Ud	iP		07 41 44.9
"	13	Ud	iP		11 14 03.1
		Tadzhik SSR (h = 55 km).			
"	13	Ki	iPn		11 58 59.8
			iSn		11 59 57.8
			iSg1		12 00 21.2
		Um	iSg1		12 01 12.4
		Northwest USSR.			
		Explosion.			
"	13	Ki	iSg1		12 11 37.0
		Um	iSg1		12 09 46.9
		Ud	iSg1		12 10 33.2
		Western USSR.			
		Explosion.			
"	13	Up	i(P)		12 42 40.9
					micr sec
			(P)	Z'	0.1 1.0
"	13	Up	i(PKP)		16 29 08.8
			iPKP		16 29 18.3
					micr sec
			PKP	Z'	0.1 1.0
		Ki	iPKP		16 29 02.3
			iSKP1		16 31 33.5
					micr sec
			PKP	Z'	0.1 1.0
			SKP1	Z'	0.3 1.4
		Sk	iPKP		16 29 13.0
		Um	iPKP		16 29 09.8
		Ud	i(PKP)		16 29 08.3
			i(PKP)		16 29 12.3
			iPKP		16 29 20.2
		De	i(PKP)		16 29 18.4
		Fiji Islands (h = 570 km).			
"	13	Ki	iP		22 26 45.8
		(cont.)			

1973					
Nov.	13	(cont.)			
		Sk	iP		22 26 42.8
		Um	iP		22 26 14.7
		Ud	iP		22 26 19.2
		Iran (h = 50 km).			
"	13	Ud	ePKP		22 49 46
		De	iPKP		22 49 50.4
		Fiji Islands (h = 550 km).			
"	13	Ki	iP		22 59 34.4
		Ud	iP		22 59 08.5
		Iran (h = 60 km).			
"	14	Up	i(S)		04 04 02.1
		Ki	iP		03 58 39.9
			iS		04 00 28.9
					micr sec
			P	Z'	0.1 1.1
		Sk	eP		03 59 47
		Um	iP		03 59 39.3
			i		03 59 55.8
			iS		04 02 18.7
			i		04 04 03.5
		Ud	iP		04 00 28.7
		Svalbard.			
"	14	Ki	eP		09 40 27
		Sk	eP		09 40 01
		Ud	iP		09 39 28.6
		De	iP		09 38 59.9
		Dodecanese Islands			
		(h = 55 km).			
"	14	Um	iSg1		12 08 27.0
		Ud	eSg1		12 09 15.6
		Western USSR.			
		Explosion.			
"	14	Ud	i(P)		12 53 21.5
"	14	Ki	iSn		13 01 21.4
			iSg1		13 01 38.5
		Northwest USSR-Norway.			
		Explosion.			
"	14	Ki	iP		15 56 57.3
		Sinkiang, China			
		(h = 35 km).			
"	14	Ki	iSg1		16 14 19.3
		Sk	iSg1		16 14 23.8
		Um	iSn		16 14 33.6
			iSg1		16 14 49.2
		Ud	iSg2		16 16 19.8
		(cont.)			

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

1973						
Nov.	14	(cont.) Nordland, Norway, 66.5°N, 13.8°E. Origin time = 16 12 48. Explosion.				
"	15	Up	i(P)		03 08 23.6	
"	15	Ki	eP		06 17 30	
			i		06 17 36.1	
					micr	sec
			P	Z'	0.5	2.0
		Um	iP		06 17 11.1	
			i		06 17 16.6	
		Ud	iP		06 16 39.4	
			i		06 16 45.4	
		North of Ascension Island (h = N).				
"	15	Ki	iP		06 57 27.2	
		Um	iP		06 57 41.6	
		Ud	iP		06 58 08.5	
		South of Japan (h = N).				
"	15	Up	iP		08 31 45.1	
					micr	sec
			P	Z'	0.1	1.0
		Ki	iP		08 31 46.1	
					micr	sec
			P	Z'	0.1	0.8
		Sk	iP		08 32 02.0	
		Um	iP		08 31 41.8	
		Ud	iP		08 31 56.9	
		De	iP		08 31 55.1	
		Nicobar Islands (h = N). m = 5.9 (Up,Ki).				
"	15	Up	iSg1		08 40 21.4	
		Um	iSg1		08 41 29.2	
		Off coast of southwest Finland. Explosion.				
"	15	Um	iSg1		08 41 12.1	
		Ud	iSg1		08 41 12.3	
		Off coast of southwest Finland. Explosion.				
"	15	Up	iSg1		09 25 16.3	
			i(Rg)		09 25 22.0	
		Um	iSg1		09 27 18.7	
		Ud	iSg1		09 26 02.4	
		De	iSg1		09 26 30.8	
		(cont.)				

1973						
Nov.	15	(cont.) Near coast of Södermanland, Sweden, 59.0°N, 17.5°E. Origin time = 09 24 50. Explosion?				
"	15	Ki	iPg1		10 20 09.7	
			iSn		10 20 48.3	
			iS*		10 20 59.7	
			iSg1		10 21 04.7	
		Um	iSg1		10 22 34.6	
		Northwest USSR-Norway. Explosion.				
"	15	Ki	iPn		10 51 08.5	
			iPg1		10 51 16.5	
			iSn		10 51 54.9	
			iS*		10 52 06.7	
			iSg1		10 52 10.9	
		Um	iSg1		10 53 41.8	
		Northwest USSR-Norway. Explosion.				
"	15	Up	iSg1		11 28 20.9	
		Um	iSg1		11 28 54.2	
		Ud	iSg1		11 29 22.6	
		Esthonia. Explosion.				
"	15	Sk	iSg1		14 49 21.1	
		Ud	iPg1		14 47 05.7	
			iSg1		14 47 28.5	
		De	iSg1		14 47 38.3	
		Västergötland, Sweden. Origin time = 14 46 37.				
"	15	Up	iP1		15 17 27.2	
					micr	sec
			P1	Z'	0.2	1.4
		Ki	iP2		15 18 13.8	
					micr	sec
			P2	Z'	0.4	1.6
		Sk	iP1		15 17 33.6	
		Um	iP1		15 17 51.0	
			iP2		15 17 54.1	
		Ud	iP1		15 17 20.6	
			iP2		15 17 23.3	
		North of Ascension Island (h = N). m = 6.2 (Up,Ki). Double P onsets; cf. Nov. 15, 06 17.				
"	15	Up	iP		17 18 45.8	
		Ki	iP		17 19 01.2	
		(cont.)				

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

```
1973
Nov.  15   (cont.)
           Sk   iP          17 19 13.4
           Um   iP          17 18 48.4
           Ud   iP          17 19 02.0
           Pakistan (h = N).

 "    15   Ud   iP          19 04 38.1

 "    15   Ud   iP          23 32 19.1
           Mindanao (h = 80 km).

 "    16   Up   iP          03 44 25.2
           Ki   iP          03 44 32.0
           Sk   iP          03 44 49.7
           Um   iP          03 44 22.0
           Ud   iP          03 44 41.7
           Tadzhik SSR (h = 210 km).

 "    16   Um   iP          04 10 14.6

 "    16   Up   iSg1        11 23 50.2
           Ki   iPn         11 19 36.9
                iSn         11 20 37.0
                iS*         11 20 54.9
           Sk   iSg1        11 23 25.3
                i           11 23 32.0
           Um   iSn         11 21 15.3
                i           11 21 29.6
                iSg1        11 21 49.2
           Ud   iSg1        11 24 27.1
           Northwest USSR.
           Explosion.

 "    16   Up   iRg         12 01 24.7
           Ud   i(Sg1)      12 01 37.2
                iRg         12 01 43.4
           Central Sweden.

 "    16   Ki   iPn         12 06 14.7
                iSg1        12 07 18.3
           Northwest USSR-Norway.
           Explosion.

 "    16   Um   iSg1        12 24 17.0
           Western USSR.
           Explosion.

 "    16   Um   iSg1        12 42 28.8
           Western USSR.
           Explosion.

 "    16   Sk   eP          12 57 41
           Kodiak Island (h = 55 km).

 "    16   Ud   iP          18 54 58.1

1973
Nov.  16   Ud   iP          20 10 10.2

 "    16   Up   i           21 30 47.6
                iRg         21 30 52.2
           Ud   i(Sg1)      21 29 29.7
                iRg         21 29 31.5
           Probably west-central
           Sweden.

 "    16   Up   iPKP1       23 28 30.5
                            micr  sec
                PKP1   Z'   0.2   1.4
                Mx     N    1.4   19
           Ki   iPKP1       23 28 29.5 C
                i           23 28 33.4
                            micr  sec
                PKP1   Z'   0.1   1.0
                i      Z'   0.2   1.0
                Mx     E    1.5   18
                Mx     N    1.2   18
                Mx     Z    1.9   20
           Sk   iPKP1       23 28 38.7 C
           Um   iPKP1       23 28 28.6 C
           Ud   iPKP1       23 28 37.0
                iPKP2       23 28 41.0
           South of Australia
           (h = N).
           M = 5.9 (Up,Ki).

 "    17   Up   iP          00 37 33.3
                            micr  sec
                P      Z'   0.3   1.5
           Ki   iP          00 36 47.7
                            micr  sec
                Mx     E    1.4   17
                Mx     N    1.1   17
                Mx     Z    1.2   16
           Sk   iP          00 37 24.1
           Um   iP          00 37 07.9
           Ud   iP          00 37 38.9
           Kurile Islands (h = N).

 "    17   Sk   eSg1        01 38 14
           Um   iSg1        01 37 09.9

 "    17   Ki   iP          05 54 40.5
           Um   iP          05 55 06.9
           Ud   iP          05 55 37.8
           Komandorsky Islands
           (h = N).

 "    17   Um   eSg1        09 27 48
           Off coast of south Finland.
           Explosion.
```

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

1973 Nov.	17	Up	iSg1		09 27 56.5
		Um	eSg1		09 28 49
		Ud	eSg1		09 29 00
		Off coast of south Finland. Explosion.			
"	17	Up	iP		11 02 50.6
			i		11 03 06.1
			iS		11 12 16
					micr sec
			i	Z'	0.1 1.2
			Mx	E	1.0 17
			Mx	N	1.0 18
		Ki	iP		11 03 13.1
					micr sec
			P	Z'	0.1 1.0
			Mx	E	2.0 16
			Mx	N	1.7 16
			Mx	Z	1.5 16
		Sk	iP		11 03 15.2
		Um	iP		11 02 59.0
			i		11 03 04.7
			iS		11 12 29
		Ud	iP		11 03 02.1
			i		11 03 07.9
		Indian Ocean (h = N). m = 5.8, M = 5.5 (Up,Ki).			
"	17	Ki	iPg1		11 09 49.5
			iSn		11 10 27.7
			iS*		11 10 40.3
			iSg1		11 10 45.0
		Um	iSg1		11 12 17.6
		Northwest USSR-Norway. Explosion.			
"	17	Ki	iSn		13 14 13.6
		Um	iSg1		13 15 32.9
		Northwest USSR. Explosion.			
"	17	Um	iP		19 36 09.9
		Mariana Islands (h = 120 km).			
"	17	Um	iP		21 34 54.8
		Ud	iP		21 35 26.4
		Japan (h = 120 km).			
"	18	Up	iRg		06 38 30.8
		Ud	iRg		06 38 16.5
		Central Sweden.			
"	18	Ki	eSg1		07 58 13
		(cont.)			

1973 Nov.	18	(cont.)				
		Um	eSg1		07 59 05	
		Northwest USSR. Explosion.				
"	18	Up	iP		08 50 44.4	
		Ki	iP		08 50 27.4	
		Um	iP		08 50 32.9	
		Ud	iP		08 50 54.4	
		Luzon (h = N).				
"	18	Ud	iP		10 31 23.7	
"	18	Up	iSg1		11 28 36.7	
		Ki	iSn		11 25 20.6	
			iS*		11 25 36.1	
		Um	iSn		11 26 01.6	
			i		11 26 17.3	
			iSg1		11 26 37.4	
		Ud	eSg1		11 29 13	
		Northwest USSR. Explosion.				
"	18	Up	iP		12 18 34.2	
		Ki	iP		12 17 49.6	
		Um	iP		12 18 09.7	
		Ud	iP		12 18 40.0	
		Kurile Islands (h = 50 km).				
"	18	Um	iP		16 04 09.8	
		Japan (h = 45 km).				
"	18	Ki	eP		16 36 29	
		Sinkiang, China.				
"	19	Up	iPKP1		02 47 41.6	
					micr sec	
			PKP1	Z'	0.1 1.0	
		Ud	iPKP1		02 47 44.1	D
		Tonga-Kermadec Islands (h = 80 km).				
"	19	Ud	iPKP1		02 54 55.0	
"	19	Up	iP		07 34 21.4	
		Ki	iP		07 35 27.7	
		Sk	iP		07 35 00.8	
		Um	iP		07 34 54.7	
		Ud	iP		07 34 30.3	C
		De	iP		07 34 00.2	
		Dodecanese Islands (h = N).				
"	19	Ud	iP		07 39 22.8	
		Dodecanese Islands.				

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

```
1973
Nov.  19   Ki   iP          10 51 32.7
           Burma.

 "    19   Ki   iPP         11 38 57.6
           Argentina (h = 40 km).

 "    19   Up   iP          13 13 11.1 C
                iS          13 22 25
                            micr  sec
                P      Z'   1.1   1.1
                Mx     E    26    22
                Mx     N    23    19
                Mx     Z    49    19
           Ki   iP          13 12 30.3 C
                iS          13 21 14
                            micr  sec
                P      Z'   0.7   1.3
                Mx     E    33    21
                Mx     N    33    23
                Mx     Z    21    17
           Um   iP          13 12 48.2 C
           Ud   iP          13 13 17.7 C
           De   iP          13 13 33.3 C
           Japan (h = 55 km).
           m = 6.6, M = 6.7 (Up,Ki).

 "    19   Ki   iP          18 29 06.2

 "    19   Up   iP          21 22 32.2
                ipP         21 22 44.5
                            micr  sec
                P      Z'   0.1   1.0
           Ki   iP          21 21 51.2
           Um   iP          21 22 09.2
           Ud   iP          21 22 39.2
           Japan.
           h = 45 km (Up).

 "    20   Up   iPKP1       00 44 19.4
           Ud   iPKP1       00 44 21.3 D

 "    20   Up   iPKP1       00 48 09.9
           Ud   iPKP1       00 48 11.8 D

 "    20   Ki   iP          02 40 57.0 C
                            micr  sec
                P      Z'   0.1   0.9
           Ud   iP          02 40 39.3 C
           Iran (h = 45 km).

 "    20   Ud   iP          08 56 40.7
           Japan (h = 80 km).

 "    20   Um   iSg1        12 19 45.5
           (cont.)

1973
Nov.  20   (cont.)
           Ud   iSg1        12 20 32.4
           Western USSR.
           Explosion.

 "    20   Up   iSg1        13 01 04.0
           Ki   iSg1        13 03 53.7
           Sk   iSg1        13 02 59.8
           Um   iSg1        13 01 52.4
           Esthonia.
           Explosion.

 "    20   Up   iP          13 07 18.3
                ipP         13 07 28.0
                            micr  sec
                pP     Z'   0.4   1.5
                Mx     E    2.0   15
                Mx     N    2.7   13
                Mx     Z    4.8   11
           Ki   i(pP)       13 08 40.9
                            micr  sec
                Mx     E    3.1   11
                Mx     N    1.4   14
                Mx     Z    1.1   10
           Sk   iP          13 08 00.9
           Um   eP          13 08 00
                iS          13 12 16
           Ud   iP          13 07 25.7
           Aegean Sea.
           h = 40 km (Up).
           M = 5.1 (Up,Ki).

 "    20   Um   eSg1        13 40 16
           Western USSR.
           Explosion.

 "    20   Up   iP          17 08 10.6
                            micr  sec
                P      Z'   0.2   1.2
                Mx     E    0.9   22
           Ki   iP          17 07 16.1
                            micr  sec
                P      Z'   0.2   1.2
                Mx     E    1.2   14
                Mx     N    1.3   17
                Mx     Z    1.5   16
           Sk   iP          17 07 53.2
           Um   iP          17 07 41.9
           Ud   iP          17 08 14.3
           De   iP          17 08 35.7
           Kamchatka (h = N).
           m = 6.1, M = 5.2 (Up,Ki).

 "    20   Ki   iP          19 23 31.1
           Ud   iP          19 23 44.1
           Sumatra (h = N).
```

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

1973							
Nov.	21	Um	iP		01 01 24.7		
		Lake Tanganyika (h = N).					
"	21	Um	iP		04 55 10.0		
		Japan (h = 340 km).					
"	21	Up	iSg1		12 16 48.7		
		Um	iSg1		12 17 03.0		
		Western USSR.					
		Explosion.					
"	21	Up	iP		12 18 21.3		
		Um	iP		12 18 07.0		
		Ud	iP		12 18 28.5		
		Mindoro (h = 40 km).					
"	21	Ud	i(Sg1)		12 19 57.5		
"	21	Up	iSg1		12 57 03.0		
		Um	iSg1		12 57 36.7		
		Esthonia.					
		Explosion.					
"	21	Up	iSg1		12 57 12.2		
		Um	iSg1		12 57 46.0		
		Ud	iSg1		12 58 10.7		
		De	iSg1		12 58 38.0		
		Esthonia.					
		Explosion.					
"	21	Up	iSg1		13 38 26.5		
		Sk	eSg1		13 38 26		
			e		13 38 42		
		Um	eSg2		13 40 00		
		Ud	iSg1		13 37 29.6		
		Near coast of southwest Norway, 58.5^{o}N, 6.4^{o}E.					
		Origin time = 13 35 23.					
		By combination with Kongsberg readings.					
"	21	Up	iP		13 44 14.1		
					micr	sec	
			Mx	E	1.6	21	
			Mx	N	2.0	22	
			Mx	Z	3.4	21	
		Ki			micr	sec	
			Mx	E	3.3	19	
			Mx	N	3.1	21	
			Mx	Z	3.7	21	
		Sk	iP		13 43 55.5		
		Um	iP		13 44 12.5		
		Ud	iP		13 44 04.7		
		Mexico (h = 60 km).					
		M = 5.8 (Up,Ki).					

1973							
Nov.	21	Um	iPKP		15 19 54.1		
		Ud	iPKP1		15 20 03.6		
		De	iPKP1		15 20 13.4		
		Fiji Islands (h = 620 km).					
"	21	Ki	ePKP		18 47 29		
		South Sandwich Islands (h = N).					
"	21	De	iPKP		19 16 06.9		
"	21	Up	iP1		19 56 30.5		
			iP2		19 56 33.6		
					micr	sec	
			P2	Z'	0.1	1.1	
			Mx	E	1.1	15	
			Mx	N	1.9	18	
			Mx	Z	2.0	19	
		Ki	iP1		19 56 28.5		
			iP2		19 56 32.3		
					micr	sec	
			Mx	N	2.6	16	
		Sk	eP1		19 56 45		
			iP2		19 56 49.3		
		Um	iP2		19 56 31.9		
		Ud	iP1		19 56 45.9		C
			iP2		19 56 49.7		
		De	eP1		19 56 46		
			iP2		19 56 49.5		
		Tibet (h = 25 km).					
		M = 5.3 (Up,Ki).					
		In average, P2 - P1 = 3.6 sec.					
"	21	Up	iP		21 16 09.2		C
					micr	sec	
			P	Z'	0.4	1.3	
		Ki	iP		21 15 21.7		C
					micr	sec	
			P	Z'	0.3	0.9	
		Sk	iP		21 15 57.0		
		Um	iP		21 15 43.4		C
		Ud	iP		21 16 14.5		C
		De	iP		21 16 33.3		C
		Kurile Islands (h = 80 km).					
		m = 6.3 (Up,Ki).					
"	22	Ud	iP		00 54 01.8		
"	22	Up	iP		01 39 09.8		
		Ki	iP		01 38 14.6		
		Um	iP		01 38 43.2		
		Ud	iP		01 39 04.1		
		Yukon (h = N).					

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

1973						
Nov.	22	Ud	iPKP1		10 31 28.1	
		De	iPKP1		10 31 38.7	
"	22	Ki	iSg1		12 38 55.4	
		Um	iSg1		12 37 12.9	
		Ud	iSg1		12 37 57.1	
		Western USSR.				
		Explosion.				
"	22	Um	iSg1		14 41 12.3	
		Lake Ladoga region.				
		Explosion.				
"	22	Um	iP		15 00 09.5	
		Ud	iP		14 59 52.7	
		Turkey (h = N).				
"	23	Up	iSg1		06 51 12.7	
		Sk	iSg1		06 51 09.6	
		Um	iSg1		06 52 19.8	
		Ud	iPg1		06 49 57.0	D
			iSg1		06 50 11.3	
		Southeast Norway,				
		60.5°N, 11.4°E.				
		Origin time = 06 49 40.				
		By combination with Bergen				
		and Kongsberg readings.				
"	23	Up	iSg1		12 38 22.9	
		Ki	iSg1		12 40 53.2	
		Sk	eSg1		12 40 09	
		Um	iSg1		12 38 55.5	
		Ud	eSn		12 39 02	
			iSg1		12 39 28.0	
		Esthonia.				
		Explosion.				
"	23	Um	iSg1		13 25 54.3	
		Western USSR.				
		Explosion.				
"	23	Up			micr	sec
			Mx	E	1.1	15
			Mx	N	2.3	13
		Ki	iP		13 43 53.8	
					micr	sec
			P	Z'	0.3	1.2
			Mx	E	2.2	17
			Mx	N	1.4	14
		Um	iP		13 43 41.0	
		Ud	iP		13 43 10.4	
		Azores Islands (h = 5 km).				
		M = 5.2 (Up,Ki).				
"	23	Up	iP		15 45 09.6	
		Hindu Kush.				
		Intermediate depth.				
1973						
Nov.	24	Up			micr	sec
			Mx	N	1.3	15
		Ki	i(P)		00 06 23.1	
					micr	sec
			Mx	N	1.7	16
		Ud	i(P)		00 06 36.8	
			e		00 06 43	
		Sinkiang, China (h = N).				
		M = 5.1 (Up,Ki).				
		Both readings are late,				
		compared to the NEIS				
		solution.				
"	24	Um	iPKP1		00 41 48.6	
"	24	Up	eSg2		12 10 40	
		Sk	eSg1		12 12 18	
		Um	iSg1		12 10 49.8	
		Western USSR.				
		Explosion.				
"	24	Up	iSg1		12 15 15.9	
		Ki	iSg2		12 17 23.3	
		Sk	iSg1		12 17 04.8	
		Um	iSg1		12 15 31.3	
		Ud	iSg1		12 16 16.4	
		De	eSg1		12 16 48	
		Western USSR.				
		Explosion.				
"	24	Ud	iP		14 07 00.2	
		Formosa (h = 80 km).				
"	24	Up	iP		14 11 11.9	
			ipP		14 11 15.2	
					micr	sec
			pP	Z'	0.1	0.8
			Mx	E	1.0	14
			Mx	N	1.2	17
		Ki	iP		14 12 24.7	
					micr	sec
			P	Z'	0.1	1.2
			Mx	E	3.3	15
			Mx	N	2.7	13
		Sk	iP		14 11 38.8	
		Um	iP		14 11 50.8	
		Ud	iP		14 11 05.8	
			ipP		14 11 08.6	
		De	iP		14 10 34.7	
			ipP		14 10 38.0	
		Algeria.				
		h = 15 km (Up,Ud,De).				
		m = 5.6, M = 5.0 (Up,Ki).				
"	24	Up	iP		15 27 35.8	
		(cont.)				

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

1973
Nov. 24 (cont.)
Up iS 15 32 03
micr sec
P Z' 0.1 1.0
Mx E 1.7 18
Mx N 1.6 18
Mx Z 2.3 17
Ki iP 15 28 48.4
micr sec
Mx E 6.6 16
Mx N 2.5 12
Mx Z 2.0 12
Sk eP 15 28 02
Um iP 15 28 13.4
iS 15 33 05
Ud iP 15 27 28.4
De iP 15 27 00.1
Algeria (h = N).
M = 5.1 (Up,Ki).

" 24 Um iP 19 58 13.9
Japan (h = 370 km).

" 24 Um iP 22 26 26.4
i 22 26 37.7
Volcano Islands (h = N).

" 25 Up iP 04 25 47.6
micr sec
P Z' 0.1 1.0
Ki iP 04 26 58.1
Sk iP 04 26 12.7
Um iP 04 26 24.3
Ud iP 04 25 40.6
De iP 04 25 09.8
Algeria (h = N).

" 25 Up iP 04 36 16.0 D
ipP 04 36 29.5
micr sec
pP Z' 0.1 1.1
Ki iP 04 35 40.3 D
ipP 04 35 54.1
micr sec
pP Z' 0.1 1.0
Sk ipP 04 36 28.0
Um iP 04 35 55.2 D
ipP 04 36 08.8
Ud iP 04 36 23.2
ipP 04 36 37.2
Japan.
h = 50 km (Up,Ki,Um,Ud).
m = 5.7 (Up,Ki).

" 25 Up iSg1 05 22 03.8
(cont.)

1973
Nov. 25 (cont.)
Ki iSn 05 18 49.2
iS* 05 19 07.0
Sk iSg1 05 21 39.1
Um iSn 05 19 25.9
iSg1 05 20 00.4
Northwest USSR.
Explosion.

" 25 Up iSg1 05 54 03.5
Ki iSn 05 50 47.6
iSg1 05 51 10.6
Sk iSg1 05 53 36.2
Um iSn 05 51 27.9
iSg1 05 51 58.8
Northwest USSR.
Explosion.

" 25 Um iP 06 07 53.2
Ud iP 06 08 24.9

" 25 Ki i 07 12 24.6
i(Sn) 07 12 39.5
i 07 12 49.1
Um iSn 07 13 18.5
iSg1 07 13 52.9
Northwest USSR.
Explosion.

" 25 Ud iP 07 44 37.7
North of Ascension Island
(h = N).

" 25 Ud i(Sg1) 08 55 54.7

" 25 Up iP 09 30 41.3 D
ipP 09 30 57.3
micr sec
P Z' 0.3 1.3
pP Z' 0.3 1.3
Ki iP 09 30 06.5 D
ipP 09 30 21.3
micr sec
pP Z' 0.1 1.2
Sk iP 09 30 38.6
ipP 09 30 54.3
Um iP 09 30 21.3 D
ipP 09 30 36.8
Ud iP 09 30 49.8 D
ipP 09 31 04.2
Japan.
h = 55 km (Up,Ki,Sk,Um,Ud).
m = 5.9 (Up,Ki).

" 25 Ud iP 10 03 36.1

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

1973					
Nov.	25	Up	iSg1		10 49 55.3
		Ki	eSg2		10 50 47
		Sk	iSg1		10 51 01.9
		Um	iSg1		10 49 15.0
		Ud	iSg1		10 50 51.9
		Lake Ladoga region. Explosion.			
"	25	Ud	iP		15 38 30.2
"	25	Ki	iPKP		17 30 24.0
					micr sec
			PKP	Z'	0.2 1.6
		South Sandwich Islands (h = N).			
"	26	Ud	iP		15 48 59.3
			i		15 49 10.3
		Japan (h = 70 km).			
"	26	Ud	iP		21 17 28.2
"	26	Up	iPg1		21 46 31.0
			iS*		21 47 03.9
			iSg1		21 47 07.7
			i		21 47 15.1
		Ki	iSn		21 47 47.0
			iSg1		21 48 07.7
			iSg2		21 48 17.7
		Sk	ePg1		21 46 24
			iSg1		21 47 02.5
		Um	iPg1		21 45 57.8
			iSg1		21 46 14.0
		Ud	iPg1		21 46 39.5
			iSn		21 47 17.6
			iSg1		21 47 29.2
		Ångermanland, Sweden, 62.9°N, 18.5°E. Origin time = 21 45 38. Felt.			
"	26	Ud	iP		22 03 02.7
		Tsinghai, China (h = N).			
"	26	Ud	iP		23 27 10.8
"	27	Um	iP		00 55 53.0
		Ud	iP		00 56 08.9
		Pakistan (h = 25 km).			
"	27	Up	iP		06 30 30.0
		Um	iP		06 30 05.1
		Ud	iP		06 30 35.7
		Kurile Islands (h = 55 km).			

1973					
Nov.	27	Up	iPKP1		08 21 15.7
		Ud	iPKP1		08 21 18.3
		De	iPKP1		08 21 29.4
		Tonga-Kermadec Islands (h = 460 km).			
"	27	Up	iP		09 40 16.3
		Ki	eP		09 40 10
		Sk	iP		09 40 34.1
		Um	iP		09 40 08.0
		Ud	iP		09 40 30.9
		De	iP		09 40 32.5
		Tibet (h = N).			
"	27	Ki	iP		11 16 53.4
		Aleutian Islands (h = 20 km).			
"	27	Sk	iP		12 07 13.8
		Windward Islands (h = 8 km).			
"	27	Ki	iSg1		13 00 46.6
		Sk	eSg1		12 59 52
		Um	iSg1		12 58 43.2
		Esthonia. Explosion.			
"	27	Up	eSg1		13 31 06
		Sk	eSg1		13 32 56
		Um	iSg1		13 31 25.0
		Ud	iSg1		13 32 06.6
			iSg2		13 32 18.5
		De	iSg1		13 32 32.5
		Western USSR. Explosion.			
"	27	Up	iP		14 02 51.0
			i		14 05 36.5
					micr sec
			P	Z'	0.9 1.0
			Mx	E	1.5 20
			Mx	N	2.5 20
			Mx	Z	3.4 21
		Ki	iP		14 01 56.5
			i		14 01 57.9
					micr sec
			P	Z'	0.6 1.0
			Mx	E	1.9 17
			Mx	N	3.4 16
			Mx	Z	1.9 18
		Sk	iP		14 02 34.6
		Um	iP		14 02 22.1
			i		14 02 23.3

(cont.)

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

1973
Nov. 27 (cont.)
Ud iP 14 02 54.7
iPP 14 05 11.8
De iP 14 03 16.1
Kamchatka (h = 60 km).
m = 6.8, M = 5.6 (Up,Ki).

" 27 Ud iPKP1 16 26 22.8
De iPKP1 16 26 33.4
Tonga-Kermadec Islands
(h = 460 km).

" 28 Ud iP 02 11 05.7

" 28 Ki iP 05 34 09.1
Sk iP 05 34 42.7
Um iP 05 34 25.8 D
Ud iP 05 34 55.4
Japan (h = 220 km).

" 28 Up iP 05 51 42.8
Um iP 05 51 18.1
Ud iP 05 51 48.7
Kurile Islands (h = 60 km).

" 28 Up iP 06 57 22.2
ipP 06 58 19.8
Ki iP 06 57 12.7
ipP 06 58 10.0
micr sec
pP Z' 0.6 2.1
Sk iP 06 57 05.0
ipP 06 58 01.9
Um iP 06 57 20.2
ipP 06 57 17.9
Ud iP 06 57 12.5
ipP 06 58 10.0
De ipP 06 58 17.1
Guatemala.
h = 240 km (Up,Ki,Sk,Um,Ud).

" 28 Up iP 07 17 55.5
ipP 07 18 12.0
Ki iP 07 17 57.0
Um iP 07 17 53.5
Ud iP 07 18 06.4
ipP 07 18 22.8
Sumatra.
h = 60 km (Up,Ud).

" 28 Um iP 08 28 26.0
Hindu Kush.
Intermediate depth.

1973
Nov. 28 Up micr sec
Mx E 1.7 22
Mx N 3.4 19
Mx Z 4.1 20
Ki micr sec
Mx E 3.6 18
Mx N 3.9 20
Mx Z 1.4 17
Ud iPP 08 31 09.6
Prince Edward Island (h = N).
M = 6.1 (Up,Ki).

" 28 Ki iSn 08 36 10.9
Northwest USSR-Norway.
Explosion.

" 28 Ud iP 09 05 23.8

" 28 Ud iP 11 12 43.6
Talaud Islands (h = 80 km).

" 28 Up eSg1 12 45 54
Um iSg1 12 46 12.4
Ud eSg1 12 46 52
De iSg1 12 47 23.1
Western USSR.
Explosion.

" 28 Up iSg1 13 02 34.1
Ki iSg2 13 05 03.5
Um iSg1 13 02 52.1
Ud iSg1 13 03 37.0
De iSg1 13 04 10.8
Western USSR.
Explosion.

" 28 Up iP 16 03 36.2
i 16 03 40.0
Ki iP 16 03 31.3
i 16 03 35.5
Um iP 16 03 27.8
i 16 03 32.0
Ud iP 16 03 52.0
i 16 03 56.2
De iP 16 03 53.3
i 16 03 57.7
Sinkiang, China (h = N).
Double P, in average 4.2
sec apart.

" 28 Ki iPKP 17 20 38.3
Solomon Islands (h = N).

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

1973						
Nov.	28	Um	iPKP		18 13 17.5	
		Ud	iPKP		18 13 27.9	
		Santa Cruz Islands				
		(h = 220 km).				
"	28	Ki	iP		19 01 19.5	
		Ud	iP		19 01 44.0	
"	28	Ud	iP		20 06 40.3	
"	29	Up	iPKP1		01 02 36.1	
		Ud	iPKP1		01 02 38.0	
		De	iPKP1		01 02 47.6	
"	29	Up	Mx		01 37	
					micr	sec
			Mx	E	2.4	18
			Mx	N	1.9	18
			Mx	Z	5.6	19
		Ki	Mx		01 34	
					micr	sec
			Mx	E	2.7	19
			Mx	N	3.1	21
			Mx	Z	2.4	20
		New Guinea (h = N).				
		M = 6.0 (Up,Ki).				
"	29	Ki	iPKP		04 21 57.6	
		South Sandwich Islands				
		(h = N).				
"	29	Ud	i(Sg1)		10 20 34.1	
"	29	Um	iSg1		10 49 50.0	
		Off coast of southwest Finland.				
		Explosion.				
"	29	Um	iSg1		10 51 01.3	
		Probably of the same kind and location as the preceding event.				
"	29	Up	iP		11 03 03.8	
			i		11 03 06.2	
			iS		11 07 24	
					micr	sec
			P	Z'	0.1	1.1
			i	Z'	0.3	1.1
			Mx	E	18	18
			Mx	N	16	19
			Mx	Z	29	16
		Ki	iP		11 04 12.9	
			i		11 04 15.2	
			iS		11 09 25	
		(cont.)				
1973						
Nov.	29	(cont.)				
		Ki			micr	sec
			P	Z'	0.1	0.9
			i	Z'	0.4	0.9
			Mx	E	19	16
			Mx	N	28	19
			Mx	Z	11	15
		Sk	iP		11 03 42.3	
			i		11 03 44.2	
			iS		11 08 35.0	
		Um	iP		11 03 36.8	
			i		11 03 38.8	
			iS		11 08 22	
		Ud	iP		11 03 10.6	
			iS		11 07 38.0	
		De	iP		11 02 37.3	
			i		11 02 39.7	
			iS		11 06 42.7	
		Crete (h = 25 km).				
		m = 6.1, M = 5.9 (Up,Ki).				
		Double P, in average 2.2 sec apart.				
"	29	Up	iP		11 10 18.7	
					micr	sec
			P	Z'	0.1	0.9
"	29	Ud	iP		11 34 13.9	
"	29	Sk	eP		11 49 39	
		Mexico (h = 60 km).				
"	29	Ki	iPKP		12 26 42.7	
					micr	sec
			PKP	Z'	0.1	1.2
			Mx	E	1.1	17
			Mx	N	1.1	20
		South Sandwich Islands				
		(h = 4 km).				
"	29	Ki	iSg1		12 28 38.4	
		Um	iSg1		12 27 01.7	
		Western USSR.				
		Explosion.				
"	29	Um	eSg1		13 12 01	
		Lake Ladoga region.				
		Explosion.				
"	29	Up	iSg1		13 47 31.7	
		Sk	eSg1		13 49 30	
		Um	iSg1		13 48 07.5	
		Ud	iSn		13 48 07.4	
			iSg1		13 48 37.5	
		De	iSg1		13 49 05.6	
		Esthonia.				
		Explosion.				

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

1973						
Nov.	29	Ki	iPKP		13 48 15.1	

New Hebrides Islands (h = 90 km).

"	29	Ud	iP		14 04 11.7	

Crete.

"	29	Ki	iSg1		16 27 59.6	
		Sk	iSg1		16 28 07.1	
		Um	iSn		16 28 13.2	
			iSg1		16 28 27.9	

Nordland, Norway, 66.5°N, 14.2°E.
Origin time = 16 26 33.
Explosion.

"	29	Up	iP		17 30 34.6	
		Ki	eP		17 29 51	
		Sk	eP		17 30 27	
		Um	iP		17 30 09.9	
		Ud	iP		17 30 40.9	
		De	iP		17 30 57.1	

Japan (h = 55 km).

"	29	Up	iP		18 08 51.6		D
			iPcP		18 09 25.5		
					micr	sec	
			P	Z'	0.2	0.9	
		Ki	iP		18 08 00.3		D
					micr	sec	
			P	Z'	0.3	0.8	
		Sk	iP		18 08 37.0		D
			iPcP		18 09 16.8		
			ipP		18 10 18.7		
		Um	iP		18 08 24.0		D
			iPcP		18 09 09.1		
		Ud	iP		18 08 56.0		D
			iPcP		18 09 29.0		
			ipP		18 10 37.5		
		De	iP		18 09 16.1		D

Okhotsk Sea.
h = 520 km (Sk,Ud).
m = 5.7 (Up,Ki).

"	29	Sk	iP		19 49 17.8	
		Ud	iP		19 48 46.5	

Aegean Sea (h = 160 km).

"	30	Um	iP		00 45 37.9	

Japan (h = 80 km).

"	30	Ki	iPKP		08 04 21.6	

South Sandwich Islands (h = N).

1973							
Nov.	30	Up	iP		08 25 43		
			iPKP		08 28 52.8		C
			isPKP		08 29 36.0		
			iPP		08 31 03		
			iSKP1		08 32 05.0		
					micr	sec	
			PKP	Z'	0.3	1.1	
			SKP1	Z'	0.4	0.9	
			Mx	E	4.5	23	
			Mx	N	5.2	22	
			Mx	Z	7.9	23	
		Ki	iPKP		08 28 36.9		C
					micr	sec	
			PKP	Z'	0.5	1.0	
			Mx	E	6.1	21	
			Mx	N	11	25	
			Mx	Z	7.1	20	
		Sk	i(PKP)		08 28 40.9		
			iPKP		08 28 47.2		C
			iSKP1		08 32 01.1		
		Um	i(PKP)		08 28 30.7		
			i(PKP)		08 28 37.5		
			iPKP		08 28 42.9		C
			iPP		08 30 43		
		Ud	i(PKP)		08 28 44.2		
			iPKP		08 28 53.4		C
			iSKP1		08 32 09.9		
			isSKP1		08 33 10.9		
			iSP		08 41 20.0		
			iPS		08 41 34.8		
		De	i(PKP)		08 28 47.9		
			iPKP		08 29 00.3		C
			iSKP1		08 32 20.3		

New Hebrides Islands (h = 120 km).
M = 6.4 (Up,Ki).
M uncorrected for focal depth.

"	30	Um	iSg1		13 03 41.9	

Western USSR.
Explosion.

"	30	Sk	i(Sg1)		14 59 19.6	

"	30	Ki	iP		17 12 09.2	
		Sk	eP		17 12 36	
		Um	iP		17 12 19.4	

Japan (h = 220 km).
Some of these arrivals are close to those expected from the following event, whence a reliable separation cannot be guaranteed.

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

1973				
Nov.	30	Ud	iP	17 12 28.8
			i	17 12 37.6

Molucca Passage (h = N).

Markus Båth
Klaus Meyer
Rutger Wahlström

May 31, 1975

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BOX 517
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SWEDEN

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BOX 517
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SWEDEN

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

U P P S A L A, K I R U N A, S K A L S T U G A N, U M E Å,

U D D E H O L M and D E L A R Y

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

D E C E M B E R 1 - 31, 1973

1973						
Dec.	1	Up	iPKP		00 38 20.5	
			i		00 38 34.6	
					micr	sec
			PKP	Z'	0.1	0.8
		Ki	iPKP		00 38 34.0	
			i		00 38 36.1	
					micr	sec
			PKP	Z'	0.1	1.0
		Sk	iPKP		00 38 25.1	
			e		00 38 36	
			i		00 38 44.2	
		Um	iPKP		00 38 28.0	
			i		00 38 41.6	
		Ud	iPKP		00 38 18.6	
		South Sandwich Islands (h = 30 km).				
"	1	Ud	iPKP		00 48 29.5	
		South Sandwich Islands (h = N).				
"	1	Ud	iP		07 32 03.5	
"	1	Up	iP		10 49 54.0	
			i		10 50 02.8	
					micr	sec
			P	Z'	0.2	0.8
			Mx	E	1.6	17
			Mx	N	1.3	18
			Mx	Z	2.3	17
		Ki	iP		10 49 09.3	
					micr	sec
			P	Z'	0.1	1.0
			Mx	E	1.8	18
			Mx	N	2.6	19
			Mx	Z	2.4	20
		(cont.)				

1973						
Dec.	1	(cont.)				
		Sk	iP		10 49 44.2	
		Um	iP		10 49 28.8	
			i		10 49 46.1	
			iS		10 58 04	
		Ud	iP		10 50 00.1 C	
		De	iP		10 50 17.4	
		Kurile Islands (h = 35 km). m = 6.2, M = 5.5 (Up,Ki).				
"	1	Um	iP		11 56 09.2	
"	1	Ki	iPn		12 44 12.2	
			iSn		12 45 01.5	
		Northwest USSR-Norway. Explosion.				
"	1	Ki	iPn		13 48 24.9	
			iSn		13 49 24.4	
			iS*		13 49 43.3	
		Sk	iSg1		13 52 15.3	
		Um	iSn		13 50 02.5	
			iSg1		13 50 32.3	
			iSg2		13 50 51.8	
		Northwest USSR. Explosion.				
"	1	Ki	iP		17 02 10.2	
		Zaire (h = 15 km).				
"	1	Up			micr	sec
			Mx	E	1.2	21
			Mx	N	1.0	19
			Mx	Z	2.6	21
		Ki	iPKP		17 19 50.9	
		(cont.)				

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

1973						
Dec.	1	(cont.)				
		Ki			micr sec	
			Mx	E	1.0 19	
			Mx	N	0.8 19	
			Mx	Z	1.2 20	
		Sk	iPKP		17 19 41.3	
		Um	iPKP		17 19 48.8	
		Ud	iPKP		17 19 40.3	
			iPKKP1		17 29 56.4	
			i		17 30 08.5	
		Chile (h = 35 km).				
		M = 5.7 (Up,Ki).				
"	1	Sk	iP		17 31 38.0	
		Um	iP		17 31 27.6	
"	1	Sk	iP		17 36 37.0	
		Ud	iP		17 36 03.5	
"	1	Ki	iPKP		18 07 17.2	
		South Sandwich Islands (h = N).				
"	1	Ki	iP		19 36 27.9	
		Ud	iP		19 36 05.9	
"	1	Ki	iP		20 06 29.5	
			iPP		20 09 42.9	
		Um	iP		20 06 28.5	
		Ud	iP		20 06 40.3	
		Sumatra (h = N).				
"	1	Ki	iP		20 11 09.8	
		Um	iP		20 11 06.7	
		Ud	iP		20 11 19.7	
		Sumatra.				
"	1	Up	iP		23 27 59.7	
			ipP		23 28 12.6	
					micr sec	
			P	Z'	0.1 1.0	
		Ki	iP		23 27 14.2	
					micr sec	
			P	Z'	0.1 0.9	
		Sk	iP		23 27 49.1	C
		Um	iP		23 27 34.3	C
			ipP		23 27 47.5	
		Ud	iP		23 28 05.5	C
			ipP		23 28 18.1	
		De	iP		23 28 23.1	
		Kurile Islands.				
		h = 50 km (Up,Um,Ud).				
		m = 5.8 (Up,Ki).				
"	1	Up	iP		23 29 06.9	C
			iS		23 38 07	
		(cont.)				
1973						
Dec.	1	(cont.)				
		Up			micr sec	
			P	Z'	0.4 1.0	
			Mx	E	4.8 17	
			Mx	N	11 18	
			Mx	Z	17 16	
		Ki	iP		23 28 21.9	C
			iS		23 36 45	
					micr sec	
			P	Z'	0.4 1.0	
			Mx	E	20 16	
			Mx	N	24 17	
			Mx	Z	19 17	
		Sk	iP		23 28 57.2	
		Um	iP		23 28 42.3	C
			iS		23 37 22	
		Ud	iP		23 29 12.7	C
		De	iP		23 29 30.3	C
			i		23 30 16.4	
		Kurile Islands (h = 40 km).				
		m = 6.4, M = 6.4 (Up,Ki).				
"	2	Ki	ePgl		00 26 09	
			iSgl		00 26 17.4	
			iRg		00 26 21.4	
		Um	i(Sgl)		00 27 39.4	
"	2	Um	iP		00 39 59.0	
			i		00 40 04.7	
		Ud	iP		00 39 30.7	C
		Ascension Island (h = N).				
"	2	Up	iP		00 56 39.7	
		Ki	iP		00 55 56.3	
		Um	iP		00 56 16.5	
		Ud	iP		00 56 46.9	
		Kurile Islands (h = N).				
"	2	Ki	iP		01 01 37.6	
		Um	iP		01 01 51.9	
		Sea of Japan (h = 410 km).				
"	2	Ki	iP		01 40 28.5	
		Um	iP		01 40 10.1	
		Ud	iP		01 39 42.3	
		Ascension Island (h = N).				
"	2	Um	iP		01 43 06.4	
		Japan (h = 110 km).				
"	2	Ki	iPKP		04 27 05.6	
		Um	iPKP		04 26 58.0	
		Ud	e(PP)		04 28 12	
		South Sandwich Islands (h = N).				
"	2	Um	iP		10 27 49.3	
		Ud	iP		10 28 20.3	
		Kurile Islands (h = N).				

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

1973
Dec. 2 Ud iP 12 10 35.2
Hindu Kush.
Intermediate depth.

" 2 Up iPKP1 13 22 00.8
micr sec
PKP1 Z' 0.1 0.5
Ki iPKP 13 21 51.0 C
Um iPKP1 13 21 48.8
iPKP 13 21 54.5
Ud iPKP1 13 22 02.7 C
De iPKP1 13 22 13.0
Tonga-Kermadec Islands
(h = 460 km).

" 2 Um iP 14 03 47.6
De iP 14 04 02.4
Celebes (h = 110 km).

" 2 Ki iP 15 21 47.4
Um iP 15 21 58.9

" 2 Up iP 17 49 37.1
Ud iP 17 49 49.6

" 2 Ki iPKP 18 38 55.1
micr sec
PKP Z' 0.2 1.5
South Sandwich Islands
(h = N).

" 2 Up iP 22 20 50.6 C
i 22 21 07.0
micr sec
P Z' 0.2 1.0
Ki iP 22 19 57.8 C
micr sec
P Z' 0.4 1.0
Sk iP 22 20 27.4 C
Um iP 22 20 24.2 C
iPcP 22 21 03.1
Ud iP 22 20 49.9 C
De iP 22 21 12.4 C
Aleutian Islands (h = 40 km).
m = 6.4 (Up,Ki).

" 3 Ud iP 00 08 40.4

" 3 Ud iP 04 33 38.8
i 04 34 22.3

" 3 Up iP 12 08 47.5
Ki iP 12 08 18.1
Sk iP 12 08 47.2
Um iP 12 08 29.2
Ud iP 12 08 56.4
Ryukyu Islands (h = 70 km).

1973
Dec. 3 Um iP 17 52 14.6

" 4 Up iP 01 37 07.7
micr sec
P Z' 0.1 0.9
Ki iP 01 36 23.1
micr sec
P Z' 0.1 1.0
Sk iP 01 36 56.9
Um iP 01 36 42.5 C
Ud iP 01 37 14.1 C
De iP 01 37 30.7
Kurile Islands (h = N).
m = 6.0 (Up,Ki).

" 4 Up iP 12 59 17.7
Ki eP 12 59 20
Um iP 12 59 10.6 C
Ud iP 12 59 30.9 C
Burma (h = 60 km).

" 4 Um iSgl 15 41 42.0
Western USSR.
Explosion.

" 4 Up i 15 53 00.8
iSKP1 15 53 19.1
micr sec
SKP1 Z' 0.3 1.5
Ki iPKP 15 49 39.6
Um iPKP 15 49 46.1
i 15 50 00.5
New Hebrides Islands
(h = 9 km).

" 5 Up iPKP1 01 25 01.6
Ud iPKP1 01 25 03.9
De iPKP1 01 25 14.1

" 5 Up iP 03 56 08.4
iS 04 00 43.4
micr sec
P Z' 0.1 0.7
Ki iP 03 57 15.6
ipP 03 57 34.4
i 04 01 25.7
micr sec
P Z' 0.2 0.5
Sk iP 03 56 47.8
Um iP 03 56 40.9
ipP 03 56 57.4
Ud iP 03 56 16.3
i 03 56 22.7
i 04 01 12.0
De iP 03 55 44.3
ipP 03 55 58.8
(cont.)

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

1973
Dec. 5 (cont.)
De i 03 56 31.4
Crete.
h = 80 km (Ki,Um,De).
m = 5.9 (Up,Ki).

" 5 Ki i(P) 10 32 53.7
Ud i 10 31 49.0

" 5 Um iPKP 10 34 26.0
i 10 34 28.0
New Hebrides Islands
(h = 35 km).

" 5 Ki iPgl 11 30 13.6
iSn 11 30 47.8
iSgl 11 30 55.0
Sk ePgl 11 30 17
iSgl 11 30 55.3
Um ePn 11 30 21
iPgl 11 30 28.8
iSn 11 31 05.8
iSgl 11 31 19.1
Ud iSgl 11 32 40.5
Nordland, Norway,
66.4°N, 14.1°E.
Origin time = 11 29 23.

" 5 Ki iP 11 46 56.6
i 11 47 06.2
Formosa (h = 70 km).

" 5 Ud iP 14 49 30.3

" 5 Ki iP 18 03 08.2
Sk iP 18 02 35.4
Um iP 18 03 06.3
Ud iP 18 02 40.6
De iP 18 02 46.3
North Atlantic Ocean
(h = N).

" 5 Um iPKP 23 17 32.2
South Sandwich Islands
(h = N).

" 6 Um iP 05 46 24.3
Ud iP 05 47 12.9

" 6 Um iP 07 33 01.7

" 6 Um iP 08 02 13.9
Ud i(P) 08 02 53.9

" 6 Up iP 08 02 56.1
Ki iP 08 03 32.7
Um iP 08 03 10.2
(cont.)

1973
Dec. 6 (cont.)
Ud iP 08 03 08.5
Arabian Sea (h = N).

" 6 Um iP 10 28 16.9
Ud i 10 29 44.3

" 6 Um iP 10 41 18.1
Japan (h = 60 km).

" 6 Um i 11 41 55.7
iSgl 11 42 05.9
Ud i(Sn) 11 42 03.8
iSgl 11 42 40.6
Esthonia.
Explosion.

" 6 Um iSgl 12 24 13.6
Western USSR.
Explosion.

" 6 Ki iPKP 14 55 42.5
South Sandwich Islands
(h = N).

" 6 Up iPKPl 16 14 45.2
Um iPKPl 16 14 27.8
i 16 14 44.7
Ud iPKPl 16 14 40.8
i 16 15 01.8
Kermadec Islands (h = N).

" 6 Ki iPKP 18 10 49.8
South Sandwich Islands
(h = N).

" 6 Ki eP 19 58 27
Um iP 19 57 49.7
Ud iP 19 57 30.1
i 19 57 43.3
De iP 19 57 02.5
Dodecanese Islands
(h = 40 km).

" 7 Um i(Sgl) 11 05 18.5

" 7 Ki i 11 23 17.1
iSgl 11 23 48.1
Um iSgl 11 23 02.0

" 7 Um i(Sgl) 12 03 52.6

" 7 Ki ePn 12 06 40
iPgl 12 06 48.5
iSn 12 07 26.8
Um iS* 12 09 10.2
iSgl 12 09 15.6
Northwest USSR-Norway.
Explosion.

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

```
1973
Dec.   7   Um   iSgl        12 12 48.0
           Western USSR.
           Explosion.

 "     7   Up   iP          15 37 00.0
           Ud   iP          15 37 08.1 C
           Celebes Sea (h = 630 km).

 "     7   Um   iP          16 15 23.6

 "     7   Sk   i(P)        19 10 06.7
           Um   iP          19 09 34.1

 "     7   Up   iP          21 18 34.2
                            micr  sec
                P        Z' 0.1   1.3
           Ki   iP          21 17 53.3 C
           Um   iP          21 18 11.3 C
                i(pP)       21 18 30.4
           Ud   iP          21 18 41.7
           Japan (h = 60 km).

 "     7   Ki   iP          22 45 43.9
           Talaud Islands (h = 80 km).

 "     7   Um   iPKP1       23 31 23.4

 "     8   Sk   iP          00 06 36.7
           Um   iP          00 06 49.2
           Kodiak Island (h = 50 km).

 "     8   Up   iP          01 07 49.2
           Ki   eP          01 07 41
           Sk   iP          01 07 32.7
           Um   iP          01 07 47.1
           Ud   iP          01 07 40.2
           De   iP          01 07 46.0
           El Salvador (h = 90 km).

 "     8   Ud   eP          02 22 29
           Pamir.

 "     8   Up   iP          02 51 55.3
           Ki   iP          02 51 02.9
           Um   iP          02 51 30.1
           Ud   iP          02 51 54.8
           De   iP          02 52 17.6 C
           Unimak Island (h = 45 km).

 "     8   Um   iP          03 12 02.0

 "     8   Up   eP          05 01 16
           Ki   iP          05 00 54.0
                i           05 01 02.6
           Um   eP          05 01 02
                i           05 01 07.0
           Ud   iP          05 01 19.1
                i           05 01 23.5
           (cont.)

1973
Dec.   8   (cont.)
           Mindanao (h = 120 km).

 "     8   Up   iP          06 22 38.7
                ipP         06 22 46.8
                            micr  sec
                P        Z' 0.1   1.4
                Mx       E  1.0   18
                Mx       N  1.8   20
                Mx       Z  2.7   18
           Ki   iP          06 22 40.3
                ipP         06 22 48.5
                i           06 22 55.5
                iS          06 33 11
                            micr  sec
                P        Z' 0.2   1.5
                Mx       E  3.6   18
                Mx       N  3.5   21
           Sk   iP          06 22 56.4
                i           06 23 01.8
           Um   iP          06 22 36.2
                ipP         06 22 44.5
                iS          06 32 54
           Ud   iP          06 22 49.3
                ipP         06 22 56.8
           De   iP          06 22 47.8
                ipP         06 22 54.6
           Sumatra.
           h = 30 km (Up,Ki,Um,Ud,De).
           m = 6.0, M = 5.8 (Up,Ki).

 "     8   Ki   iS*         11 33 28.6
                iSgl        11 33 35.7
           Um   iSgl        11 31 32.6
           Ud   iSgl        11 32 03.0
           De   iSgl        11 32 28.4
           Esthonia.
           Explosion.

 "     8   Up   iP          13 03 09.0
                ipP         13 03 21.2
           Ki   iP          13 02 52.8 C
                i           13 02 59.0
                            micr  sec
                P        Z' 0.1   1.0
           Sk   eP          13 03 17
                i           13 03 39.2
           Um   iP          13 02 58.1 C
           Ud   iP          13 03 17.0 C
                ipP         13 03 29.6
           Talaud Islands.
           h = 45 km (Up,Ud).

 "     8   Um   iPKP        13 28 15.2
           Santa Cruz Islands
           (h = 15 km).

 "     8   Ud   iPKP1       13 43 58.9
```

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

1973						
Dec.	8	Um	i(PKP)		14 27 16.1	
			iPKP		14 27 26.3	
		New Hebrides Islands				
		(h = 240 km).				
"	8	Ki	iP		19 46 23.5	
		Ud	iP		19 45 29.3	
		Turkey (h = 15 km).				
"	8	Ud	iP		21 08 16.0	
		De	iP		21 07 49.9	
		Dodecanese Islands (h = N).				
"	9	Up	iP		02 44 47.0	
			iPP		02 46 11.7	
					micr	sec
			PP	Z'	0.2	1.6
		Ki	iP		02 44 53.3	
			i		02 44 58.5	
					micr	sec
			P	Z'	0.1	1.0
		Sk	iP		02 45 11.3	
		Um	iP		02 44 44.0 C	
		Ud	iP		02 45 03.3 C	
			i		02 45 38.6	
		De	iP		02 45 01.8 C	
		Kashmir (h = N).				
		m = 5.6 (Up,Ki).				
"	9	Ki	iP		04 45 14.8	
		Um	iP		04 45 43.0	
		Kodiak Island (h = 45 km).				
"	9	Ki	iSn		05 05 05.9	
			iS*		05 05 30.3	
		Sk	iSg1		05 07 57.7	
			iSg2		05 08 09.9	
		Um	iSn		05 05 45.4	
			iSg1		05 06 14.8	
			iSg2		05 06 33.1	
		Northwest USSR.				
		Explosion.				
"	9	Up	iSg1		05 29 49.0	
		Ki	iPg1		05 25 50.9	
			e		05 26 29	
			iSn		05 26 35.5	
			iS*		05 26 52.9	
		Sk	iSg1		05 29 19.1	
		Um	i		05 27 27.8	
			i(S*)		05 27 34.9	
			iSg1		05 27 46.5	
		Ud	iSg1		05 30 19.9	
		Northwest USSR.				
		Explosion.				
"	9	Up	iP		17 52 26.3	
		(cont.)				

1973						
Dec.	9	(cont.)				
		Up	i		17 52 27.6	
		Ki	iP		17 51 33.6	
		Sk	eP		17 52 09	
		Um	iP		17 51 59.5	
		Ud	iP		17 52 26.9	
		De	iP		17 52 49.7	
		Aleutian Islands				
		(h = 50 km).				
"	9	Um	iP		17 58 06.0	
		Kodiak Island (h = 40 km).				
"	9	Up	ePKP		20 15 01	
			iPP		20 17 41.2	
			iSKP1		20 18 35	
					micr	sec
			PP	Z'	0.3	1.6
			Mx	E	8.4	25
			Mx	N	16	25
			Mx	Z	17	23
		Ki	iPKP		20 14 47.5	
			i		20 14 54.0	
			iPP		20 16 54	
			iSKP1		20 18 21	
					micr	sec
			PKP	Z'	0.4	1.7
			Mx	E	12	20
			Mx	N	13	21
			Mx	Z	11	21
		Sk	iPKP		20 15 00.0	
			i		20 15 04.8	
		Um	iPKP		20 14 54.5	
		Ud	i(PKP)		20 14 58.6	
			iPKP		20 15 09.2	
			iPP		20 17 30.5	
		De	i(PKP)		20 15 09.7	
			iPKP		20 15 15.1	
			iPP		20 18 03.2	
		New Hebrides Islands				
		(h = 40 km).				
		M = 6.8 (Up,Ki).				
"	9	Ki	iPKP		21 17 02.2	
		Um	iPKP		21 17 07.5	
			i		21 17 18.3	
		New Hebrides Islands				
		(h = 35 km).				
"	10	Um	iP		01 55 01.0	
		Ud	iP		01 55 05.2	
		Iran (h = 60 km).				
"	10	Ud	iP		02 05 35.0	
		Greece (h = N).				
"	10	Um	iP		08 17 50.9	
		(cont.)				

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

1973

Dec. 10 (cont.)
Ud iP 08 18 17.8
South of Japan (h = 20 km).

" 10 Up iP 16 09 46.2
Um iP 16 09 25.2
Ud iP 16 09 51.8
South of Japan (h = 20 km).

" 10 Ki iP 19 41 13.1
Um iP 19 41 15.3
Ud iP 19 41 02.3
Ecuador (h = 180 km).

" 10 Up iSgl 20 07 44.5
Ki iPgl 20 04 31.8
iSgl 20 05 03.1
Sk eSn 20 06 42
iSgl 20 07 09.8
Um iPgl 20 04 53.0
iSn 20 05 32.0
iS* 20 05 40.4
iSgl 20 05 44.4
Ud iS* 20 08 02.8
iSgl 20 08 14.0
Northern Finland,
66.7°N, 25.6°E.
Origin time = 20 03 50.

" 10 Ki iPgl 20 08 38.7
iSn 20 09 02.9
iSgl 20 09 10.3
Sk iSgl 20 11 17.1
Um iS* 20 09 45.5
iSgl 20 09 51.0
Northern Finland,
66.7°N, 25.6°E.
Origin time = 20 07 57.

" 10 Ki iP 21 15 24.5
Um iP 21 14 59.4
Ud iP 21 15 00.6
De i(P) 21 14 38.1
iP 21 14 45.3
Iran (h = 15 km).
The readings, except (P) at De, are 6-13 sec late compared to the NEIS solution - possibly another shock.

" 11 Ki iP 00 17 35.1
i 00 17 40.4
micr sec
P Z' 0.3 1.7
Um iP 00 17 26.0
Azores Islands (h = N).

1973

Dec. 11 Ki iP 02 49 33.7
micr sec
Mx E 2.3 19
Mx N 2.6 19
Um iP 02 49 45.7
ipP 02 49 56.0
Mariana Islands.
h = 40 km (Um).

" 11 Up iP 03 54 32.8
Ki iP 03 55 38.1
Ud iP 03 54 34.0
i 03 54 38.6
Crete (h = 35 km).

" 11 Um iP 09 03 39.4
i 09 03 45.6
Japan (h = 55 km).

" 11 Um iSgl 12 15 23.9
Western USSR.
Explosion.

" 11 Um iSgl 13 00 06.1
Esthonia.
Explosion.

" 12 Um iP 00 06 37.4
Austria (h = 5 km).

" 12 Up iP 03 36 20.2
Ki iP 03 35 54.2
Um iP 03 36 07.8
Ryukyu Islands (h = 70 km).

" 12 Up iSgl 13 11 48.7
Um iSgl 13 12 03.2
Western USSR.
Explosion.

" 12 Ud iP 21 44 24.5

" 13 Up iP 01 17 10.2
Um iP 01 16 52.2
ipP 01 17 11.7
Bonin Islands.
h = 70 km (Um).

" 13 Um iP 02 01 58.6 C
Tyrrhenian Sea.
Intermediate depth.

" 13 Um iP 02 33 18.2

" 13 Um iP 05 38 20.7

" 13 Ki i(P) 05 41 38.3
Um i(P) 05 42 21.6

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

```
1973
Dec.  13   Up   iPKPl        06 51 18.6
           Sk   iPKPl        06 51 11.6
           Um   iPKPl        06 51 06.6
           Kermadec Islands (h = 40 km).

 "    13   Ki   iP           09 51 36.9
           Um   iP           09 51 48.6

 "    13   Um   iSn          12 10 43.3
                iSgl         12 11 05.2
           Ud   iSgl         12 12 01.8
           Western USSR.
           Explosion.

 "    13   Um   iPKP         20 12 39.1
           Tonga Islands (h = 30 km).

 "    13   Um   iPKP         21 40 45.6
           Santa Cruz Islands
           (h = 55 km).

 "    13   Ud   iP           23 36 24.8

 "    14   Um   iP           00 12 22.9 D
           Ud   iP           00 12 48.5
           Aleutian Islands.

 "    14   Up   iP           03 55 39.6
                             micr  sec
                P        Z'  0.1   1.0
           Ki   iP           03 54 46.8
           Um   iP           03 55 13.6
                iPcP         03 55 47.6
           Ud   iP           03 55 39.9
           Aleutian Islands (h = 55 km).

 "    14   Up   iPKPl        06 18 29.6
           Ud   iPKPl        06 18 38.0
           Tonga-Kermadec Islands
           (h = N).

 "    14   Up   iP           07 53 55.0 C
                iPn          07 54 57.0
                iPP          07 55 12.7
                             micr  sec
                P        Z'  1.3   1.0
                PP       Z'  0.2   0.9
           Ki   iP           07 53 37.3 C
                             micr  sec
                P        Z'  0.9   0.6
           Sk   iP           07 54 09.7 C
                iPP          07 55 32.5
                iPcP         07 56 30.5
                e            08 04 05
           Um   iP           07 53 39.4 C
                i            07 57 32.9
           Ud   iP           07 54 11.0 C
           (cont.)

1973
Dec.  14   (cont.)
           De   iP           07 54 18.2 C
           Kazakh SSR.
           m = 6.7 (Up,Ki).
           Underground explosion.

 "    14   Up   iP           09 17 15.2
                iPn          09 17 28.3
                iSn          09 22 07.8
                             micr  sec
                P        Z'  0.1   1.0
           Ki   iP           09 17 50.0 C
                iPn          09 18 24.4
                iSn          09 23 37.4
                             micr  sec
                P        Z'  0.2   0.9
           Sk   iP           09 17 50.4 C
                iPn          09 18 21.6
                iPP          09 18 40.7
                iSn          09 23 42.2
           Um   iP           09 17 26.1 C
                iPn          09 17 47.6
                iSn          09 23 10.0
           Ud   iP           09 17 32.7 C
                iPn          09 17 51.4
                iSn          09 22 51.2
           De   iP           09 17 16.0 C
                iPn          09 17 23.6
           Caspian Sea (h = 80 km).
           m = 5.5 (Up,Ki).
           Very clear Pn and Sn phases.

 "    14   Um   iSgl         12 14 47.2
           De   iSgl         12 15 43.1
           Esthonia.
           Explosion.

 "    14   Ki   iP           13 33 26.5
           Um   iP           13 33 53.5
           Ud   iP           13 34 20.0
           De   iP           13 34 42.1
           Aleutian Islands
           (h = 210 km).

 "    14   Up   iSgl         15 38 04.6
           Sk   iSgl         15 37 44.9
           Ud   iPgl         15 36 43.2
                iSgl         15 37 05.3
                iRg          15 37 14.0
           South Norway,
           60.8°N, 10.8°E.
           Origin time = 15 36 14.
           Near-surface event.

 "    14   Up   iP           17 48 31.8
                i            17 48 44.4
           (cont.)
```

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

```
1973
Dec.  14   (cont.)
           Up              micr   sec
                P      Z'  0.2    1.0
                Mx     N   1.8    20
           Ki   iP         17 47 38.7 C
                i          17 47 55.5
                           micr   sec
                P      Z'  0.2    1.0
                Mx     E   1.5    16
                Mx     N   1.3    17
           Sk   iP         17 48 11.6
                iPcP       17 48 43.1
           Um   iP         17 48 04.8 C
                i          17 48 28.3
                iPcP       17 48 40.1
                iP'P'      18 16 57.5
           Ud   iP         17 48 31.7 C
                iPcP       17 48 57.7
           De   iP         17 48 54.4
                iPcP       17 49 12.4
           Aleutian Islands
           (h = 55 km).
           m = 6.1, M = 5.4 (Up,Ki).

 "    14   Up   iP         17 49 16.5
                           micr   sec
                P      Z'  0.2    1.0
           Ki   iP         17 48 23.9
                           micr   sec
                P      Z'  0.3    1.0
           Ud   iP         17 49 13.0
           De   iP         17 49 38.3
           Aleutian Islands.
           Origin time = 17 38 19.
           m = 6.3 (Up,Ki).

 "    14   Ki   iP         18 39 20.5
           Um   iP         18 39 26.5
           Ud   iP         18 39 57.9
           Ryukyu Islands (h = 210 km).

 "    14   Up   iP         21 10 54.8

 "    14   Up   i(PcP)     21 47 20.9
           Ki   iP         21 46 19.9
           Um   iP         21 46 39.0
           Ud   iP         21 47 09.3
                i          21 47 19.6
           Japan (h = 50 km).

 "    15   Up   iPKPl      02 38 28.7
           Ud   iPKPl      02 38 31.7
           De   iPKPl      02 38 41.9
           Tonga-Kermadec Islands.

 "    15   Up   iP         04 22 11.3
           (cont.)
```

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1973
Dec.  15   (cont.)
           Up              micr   sec
                P      Z'  0.1    1.0
           Ki   iP         04 22 33.7
           Sk   eP         04 22 35
           Um   iP         04 22 19.9
                ipP        04 22 27.0
           Ud   iP         04 22 21.5 C
                ipP        04 22 28.5
           Chagos Islands.
           h = 25 km (Um,Ud).

 "    15   Um   iP         04 34 54.4
           Ud   iP         04 35 18.1
           Kodiak Island (h = 50 km).

 "    15   Um   iP         04 41 58.6
           Ud   iP         04 41 59.7 C
           Chagos Islands (h = N).

 "    15   Ki   iP         04 45 01.1
           Ud   eP         04 44 47

 "    15   Up   iPKPl      07 28 20.3
           Um   iPKPl      07 28 08.6
           Ud   iPKPl      07 28 22.5 C
           De   iPKPl      07 28 33.1 C
           Tonga-Kermadec Islands
           (h = 460 km).

 "    15   Up   iSKPl      11 15 54.4
           Ki   iPKP       11 12 56.4
                iSKPl      11 15 31.8
           Sk   ePKP       11 12 58
           Um   iPKP       11 13 02.9
                i          11 13 06.8
                iSKPl      11 15 42.9
           Ud   iPKPl      11 13 06.4
           De   iPKPl      11 13 17.6
           South of Fiji Islands
           (h = 570 km).

 "    15   Up   iP         18 18 01.9
           Um   iP         18 17 39.4
           Ud   iP         18 18 10.0
           Kurile Islands (h = 1 km).

 "    15   Up   iP         20 35 00.6
                i          20 35 05.2
           Ki   iP         20 34 46.8 C
           Sk   iP         20 35 13.0
           Um   iP         20 34 49.6
           Ud   iP         20 35 15.0
           Tsinghai, China.

 "    15   Ki   iPKP       23 16 03.2
           (cont.)
```

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

1973
Dec. 15 (cont.)
Um iPKP 23 16 09.9
Ud ePKP 23 16 17
De iPKP 23 16 24.6
New Hebrides Islands
(h = 7 km).

" 15 Up iP 23 39 33.4 C
i 23 40 10.9
Ki iP 23 38 31.5
Sk iP 23 39 14.3
Um iP 23 39 02.3
Ud iP 23 39 36.6
De iP 23 40 04.3 C
New Siberian Islands (h = N).

" 15 Ud iPKPl 23 41 28.6

" 16 Up iP 04 22 16.3
Ki iP 04 22 03.6
Um iP 04 22 03.6
i 04 22 06.9
Ud iP 04 22 27.2
Szechwan, China.

" 16 Ki iPn 05 06 28.9
iSn 05 07 28.4
iS* 05 07 51.2
Um iSn 05 08 09.3
iSgl 05 08 43.0
Northwest USSR.
Explosion.

" 16 Up iP 07 33 37.4
Um iP 07 33 37.4
Ud iP 07 33 27.8
Costa Rica (h = N).

" 16 Up iP 08 32 26.7
Ki iP 08 33 04.6 C
Sk iP 08 33 02.8
Um iP 08 32 41.1
Ud iP 08 32 42.6 C
De iP 08 32 26.1
Iran (h = N).

" 16 Up iP 09 24 41.7
Ki iP 09 24 48.6
Sk iP 09 25 09.1
Um iP 09 24 41.4
Ud iP 09 25 00.6
Kashmir-India (h = N).

" 16 Up iP 11 47 43.6
Ud iP 11 47 44.1

" 16 Up iP 19 17 54.2
(cont.)

1973
Dec. 16 (cont.)
Ki iP 19 18 01.4
Sk iP 19 18 17.9
Um iP 19 17 52.0
Ud iP 19 18 10.1 C
De iP 19 18 07.3
Kashmir (h = 45 km).

" 17 Ki iP 10 18 13.3
i 10 18 27.2
Um iP 10 18 03.2
Ud iP 10 18 17.0
Hindu Kush (h = N).

" 17 Ud iP 15 47 31.3

" 17 Up iP 22 04 51.5
i 22 06 05.8

		micr	sec
P	Z'	0.2	1.2
Mx	E	0.7	18
Mx	N	1.1	20
Mx	Z	2.1	22

Ki iP 22 04 02.3

		micr	sec
P	Z'	0.1	1.1
Mx	E	1.3	19
Mx	N	1.5	18
Mx	Z	1.9	18

Sk eP 22 04 42
Um iP 22 04 25.3
Ud iP 22 04 56.2
De iP 22 05 15.5
Kurile Islands (h = N).
m = 6.0, M = 5.2 (Up,Ki).

" 18 Um iP 02 46 26.7

" 18 Um iPP 04 27 27.1
Solomon Islands
(h = 410 km).

" 18 Up iSgl 12 55 12.5
Um iPgl 12 55 02.6
iSn 12 55 45.7
iSgl 12 56 03.1
Ud iSn 12 56 04.9
iSgl 12 56 32.8
De iSgl 12 56 56.1
Esthonia.
Explosion.

" 18 Um i(P) 13 23 55.7

" 18 Ud iP 14 56 08.3

" 18 Ud iP 15 38 35.8

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

1973							
Dec.	19	Up	iP		04 56 59.9		
			i		04 57 12.3		
			iPP		05 01 21.3		
					micr	sec	
			P	Z'	0.1	1.0	
			PP	Z'	0.2	1.2	
			Mx	E	4.2	24	
			Mx	N	4.1	25	
			Mx	Z	8.4	27	
		Ki	iP		04 56 50.2		
			iPP		05 01 02.3		
					micr	sec	
			P	Z'	0.3	1.2	
			Mx	E	7.1	24	
			Mx	N	6.1	23	
			Mx	Z	7.7	23	
		Sk	iP		04 57 08.4		
			i		05 01 12.6		
			iPP		05 01 35.0		
		Um	eP		04 56 51		
			i		04 59 34.8		
			iPP		05 00 54.5		
		Ud	iP		04 57 07.7		C
			i		05 00 18.1		
			iPP		05 01 33.8		
		De	iPP		05 01 38.8		
		Sumba Island (h = 60 km).					
		m = 6.6, M = 6.1 (Up,Ki).					
		The unidentified phases preceding PP at Sk,Um,Ud probably belong to the group of early PP.					
"	19	Ud	iPKPl		07 01 10.3		
"	19	Ki	iP		07 25 54.3		
		Sinkiang, China.					
"	19	Up	iPKPl		13 14 47.5		
			i		13 14 49.7		
			iSKPl		13 18 12.8		
			iSKKP		13 26 42.8		
					micr	sec	
			PKPl	Z'	0.1	0.5	
			SKPl	Z'	0.2	1.2	
		Ki	i(PKP)		13 14 31.4		
			iPKP		13 14 41.0		
			iSKPl		13 17 47.7		
					micr	sec	
			PKP	Z'	0.1	1.0	
			SKPl	Z'	0.4	1.5	
		Sk	i(PKP)		13 14 42.5		
			iPKP		13 14 52.6		
			iSKPl		13 18 06.6		
		Um	i(PKP)		13 14 35.0		
			i		13 14 39.0		
		(cont.)					

1973							
Dec.	19	(cont.)					
		Um	iPKP		13 14 43.0		
			iSKPl		13 18 03.0		
		Ud	iPKPl		13 14 48.6		
			iSKPl		13 18 14.6		
		De	iPKPl		13 15 00.8		
			iSKPl		13 18 25.7		
		Tonga Islands (h = 250 km).					
"	19	Ud	iP		18 34 03.2		
		Iran (h = N).					
"	20	Um	iP		05 17 07.3		
		Ud	iP		05 17 38.3		
		Japan.					
"	20	Ud	i(P)		11 22 13.3		
			i(PcP)		11 22 22.6		
		De	eP		11 22 20		
			i		11 22 23.5		
		Japan (h = N).					
"	20	Up	iSgl		11 52 04.7		
		Um	iSgl		11 52 39.6		
		Ud	iSgl		11 53 13.3		
		Esthonia.					
		Explosion.					
"	20	Um	iP		12 43 57.1		
		Ud	iP		12 44 28.4		
		Kurile Islands (h = 55 km).					
"	20	Up	iP		17 48 49.5		D
			iS		17 52 24.7		
					micr	sec	
			P	Z'	0.3	0.9	
		Ki	iP		17 50 03.1		D
					micr	sec	
			P	Z'	0.3	0.8	
		Sk	iP		17 49 23.8		D
		Um	iP		17 49 27.5		D
			i		17 49 37.4		
		Ud	iP		17 48 50.5		D
		De	iP		17 48 14.0		D
		Tyrrhenian Sea (h = 270 km).					
		m = 5.8 (Up,Ki).					
"	20	Up	iP		21 04 45.2		
		Um	iP		21 04 24.2		
			ipP		21 04 56.4		
		Ud	eP		21 04 53		
		Japan.					
		h = 130 km (Um).					
"	20	Um	iP		21 57 33.8		
		Mariana Islands (h = 50 km).					

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

1973
Dec. 21 Up iP 02 18 39.3
Um iP 02 18 28.9
Ud iP 02 18 52.7
De eP 02 18 55
Tibet (h = N).

" 21 Up iPKP1 02 34 01.7
Um iPKP1 02 33 42.0

" 21 Um iP 02 50 41.7
Ud eP 02 50 15
Rumania (h = 170 km).

" 21 Ki iP 09 54 26.9
Um iP 09 54 53.7
Ud iP 09 55 19.7
De iP 09 55 41.7
Aleutian Islands
(h = 45 km).

" 21 Ki iP 10 01 44.0
micr sec
P Z' 0.1 1.0
Um iP 10 02 10.5 D
Ud iP 10 02 36.2
Aleutian Islands
(h = 45 km).

" 21 Um iSgl 10 54 45.5
Ud iSgl 10 55 16.3
Esthonia.
Explosion.

" 21 Up iP 15 39 13.9
micr sec
P Z' 0.1 1.1
Ki iP 15 38 20.7
micr sec
P Z' 0.1 1.0
Um iP 15 38 47.0
Ud iP 15 39 13.1 C
De iP 15 39 35.3
Aleutian Islands
(h = 50 km).
m = 5.8 (Up,Ki).

" 21 Ki iP 16 09 03.8
Um iP 16 09 30.6
Ud iP 16 09 56.2
Aleutian Islands
(h = 50 km).

" 21 Ki iP 16 10 45.3
Um iP 16 11 11.4
Ud iP 16 11 37.0
Aleutian Islands (h = N).

" 21 Um iP 16 20 02.9
(cont.)

1973
Dec. 21 (cont.)
Ud iP 16 19 31.8
North of Ascension Island
(h = N).

" 21 Ki iP 16 28 03.7
Um iP 16 28 29.4
Ud iP 16 28 55.0
Aleutian Islands
(h = 50 km).

" 21 Um iP 16 37 37.3
Ud iP 16 38 02.7
Aleutian Islands
(h = 35 km).

" 21 Up ePKP1 17 11 42
Ki iPKP 17 11 33.8
Um iPKP 17 11 39.0
Ud iPKP1 17 11 47.1
De iPKP1 17 11 58.1
Fiji Islands (h = 610 km).

" 21 Um iP 19 24 06.6
i 19 24 14.4
Ud iP 19 24 16.1
i 19 24 24.4
California (h = 30 km).

" 21 Up iPKP1 21 29 35.8
Sk iPKP1 21 29 31.3
Um iPKP1 21 29 24.1
Ud iPKP1 21 29 37.0
South of Kermadec Islands
(h = 30 km).

" 22 Um iPKP1 01 00 17.1

" 22 Up eP 01 31 26
Ki iP 01 30 52.6
ipP 01 31 09.5
Sk iP 01 31 26.8
Um iP 01 31 07.9
ipP 01 31 27.7
Ud iP 01 31 38.3
De iP 01 31 50.6
Japan.
h = 70 km (Ki,Um).

" 22 Ud iP 02 40 52.7
De iP 02 40 21.2
Crete (h = N).

" 22 Up iSgl 07 15 25.1
Ud e(Pgl) 07 13 41
iSgl 07 14 24.1
De iSgl 07 15 06.0
(cont.)

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

1973				
Dec.	22	(cont.)		
		Southwest Norway, 59.9°N, 6.6°E.		
		Origin time = 07 12 30.		
		By combination with Bergen and Kongsberg readings.		
"	22	Ki	iPKP	14 38 03.5
		Um	iPKP	14 38 10.8
		New Hebrides-Fiji Islands (h = N).		
"	22	Sk	iPKP1	15 04 03.7
		Um	iPKP1	15 03 58.2
		Ud	iPKP1	15 04 09.7
		South of Kermadec Islands (h = 130 km).		
"	22	Ud	iP	15 12 22.4
"	22	Um	iP	23 32 55.5
"	22	Ki	iP	23 34 28.8
			ipP	23 34 41.1
		Um	iP	23 34 55.3
			ipP	23 35 08.4
		Ud	iP	23 35 20.6
		De	ipP	23 35 56.9
		Aleutian Islands. h = 45 km (Ki,Um).		
"	23	Up	iSn	04 59 38.0
			iS*	05 00 27.2
			i	05 00 30.0
			iSgl	05 00 34.1
		Ki	iPn	04 56 19.5
			iSn	04 57 16.7
			iS*	04 57 41.6
		Sk	iSn	04 59 17.2
			iSgl	05 00 04.7
		Um	iPn	04 56 43.3
			iPgl	04 57 03.9
			iSn	04 57 56.1
			iSgl	04 58 29.1
		Ud	iPn	04 57 47.4
			iSgl	05 01 04.8
		De	iSgl	05 02 36.3
		Northwest USSR. Explosion.		
"	23	Up	iP	09 15 16.9
		Ki	iP	09 14 49.2
		Ud	iP	09 15 23.9
		Mariana Islands (h = 170 km).		
"	23	De	iP	22 08 01.7
		Crete.		

1973					
Dec.	23	Ki	iP		23 59 58.7
		Halmahera (h = 130 km).			
"	24	Up	i(P)		07 28 36.3
			i		07 28 45.0
			iPKP1		07 31 03.6
			iPKP2		07 31 10.5
			ipPKP1		07 32 00.0
					micr sec
			PKP1	Z'	0.1 1.2
			PKP2	Z'	0.1 1.1
		Ki	iPKP1		07 30 42.9
		Sk	iPKP1		07 30 57.9
			ipPKP1		07 31 54.7
		Um	iPKP1		07 30 52.7
			i		07 31 08.7
			ipPKP1		07 31 48.7
		Ud	iPKP1		07 31 05.1
			ipPKP1		07 32 02.3
		De	iPKP1		07 31 13.7
		Kermadec Islands. h = 220 km (Up,Sk,Um,Ud).			
"	24	Up	iPKP		08 33 27.3
		Ki	iPKP		08 33 22.1
		Sk	iPKP		08 33 31.5
		Um	iPKP		08 33 19.7
			i		08 33 28.7
		Ud	iPKP		08 33 26.8
		De	iPKP1		08 33 38.4
			i		08 33 46.8
		Tonga Islands (h = 120 km).			
"	24	Um	iP		10 12 19.3
"	24	Um	iPKP		10 50 21.9
		Ud	iPKP1		10 50 25.7
		De	iPKP1		10 50 36.3
		Tonga-Kermadec Islands (h = 560 km).			
"	24	Um	iSgl		12 20 03.5
		Ud	iSgl		12 20 50.8
		De	iSgl		12 21 21.9
		Western USSR. Explosion.			
"	24	Um	iP		13 06 44.9
			ipP		13 06 54.0
		Mariana Islands. h = 35 km (Um).			
"	24	Um	iPKP1		13 38 16.2
"	24	Up	iP		13 59 19.4
		Ki	iP		14 00 24.2
		Sk	iP		13 59 59.7
		(cont.)			

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

1973
Dec. 24 (cont.)
Um iP 13 59 53.7
Ud iP 13 59 26.8
De iP 13 58 55.4
Dodecanese Islands
(h = N).

" 24 Ud iP 14 48 02.1

" 24 Um iP 15 46 21.7
Ud iP 15 46 52.8
Probably Sea of Japan.
Deep.
Origin time = 15 36 12.

" 24 Ki iP 15 48 08.5
Um iP 15 48 24.7
Ud iP 15 48 53.6
Sea of Japan (h = 400 km).

" 24 Ud iP 18 31 59.1
Peru (h = N).

" 24 Up iP 20 28 10.3
i 20 28 23.2
Ki iP 20 29 18.7
Sk iP 20 28 48.7
Um iP 20 28 42.9 C
Ud iP 20 28 17.7
De iP 20 27 44.9
Crete (h = 35 km).

" 24 Up iP 20 51 20.9
micr sec
Mx E 0.6 17
Mx Z 1.2 18
Ki iP 20 51 43.0
Sk iP 20 51 11.3
Um iP 20 51 35.7
Ud iP 20 51 07.0
De iP 20 51 02.0
North Atlantic Ocean (h = N).

" 24 Up iP 21 01 53.2
micr sec
Mx E 1.0 21
Mx N 1.5 21
Mx Z 0.6 15
Ki iP 21 01 29.5
micr sec
P Z' 0.1 1.0
Mx E 0.6 14
Mx N 0.6 16
Mx Z 0.5 14
Sk iP 21 01 56.4
Um iP 21 01 38.3
(cont.)

1973
Dec. 24 (cont.)
Ud iP 21 02 02.5
Formosa (h = 25 km).
M = 5.3 (Up,Ki).

" 24 Up iP 23 49 28.1
Ki iP 23 48 44.0
Sk iP 23 49 18.7
Um iP 23 49 04.4
ipP 23 49 13.7
Ud iP 23 49 34.6
ipP 23 49 45.0
Japan.
h = 35 km (Um,Ud).

" 25 Up iP 00 50 52.9
Um iP 00 51 26.6
Ud iP 00 50 43.8
Gibraltar (h = N).

" 25 Ki iP 02 17 30.3
Sk iP 02 17 59.0
Um iP 02 17 59.2
Ud eP 02 18 23
Kodiak Island (h = N).

" 25 Ud iP 03 04 33.3

" 25 Sk iP 09 46 09.1
Um iP 09 46 09.0
Ud iP 09 46 52.0
Svalbard (h = N).

" 25 Up i 12 50 51.9
iSgl 12 51 07.8
Sk iSgl 12 52 54.3
Um i 12 51 05.6
iSgl 12 51 23.1
Ud e(Sn) 12 51 30
iSgl 12 52 04.9
De iSgl 12 52 38.3
Western USSR.
Explosion.

" 26 Um iP 01 39 38.7
Japan (h = N).

" 26 Up iP 01 52 49.1
Sk eP 01 53 11
Um iP 01 52 42.2
Ud iP 01 53 02.1
ipP 01 53 17.6
Burma-India.
h = 55 km (Ud).

" 26 Up iP 03 11 44.0
(cont.)

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

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1973
Dec.  26   (cont.)
           Ud   iP          03 11 52.5
           De   iP          03 11 40.9
                i           03 11 46.6
           Indian Ocean (h = N).

 "    26   Up   iPKP1       04 06 40.2
           Ud   iPKP1       04 06 43.0

 "    26   Um   iSgl        09 41 56.1
           Ud   iPn         09 41 17.8
                iSgl        09 43 35.9
           Lake Ladoga.
           Explosion.

 "    26   Um   iSgl        12 16 47.9
           Lake Ladoga.
           Explosion.

 "    26   Um   iSgl        12 40 38.6
           Ud   i(Sn)       12 40 30.0
                iSgl        12 41 04.3
           Esthonia.
           Explosion.

 "    26   Ki   iP          13 02 46.7
           Ud   iP          13 03 43.7
           Kurile Islands (h = 55 km).

 "    26   Ud   iP          14 25 49.7
           Aleutian Islands (h = 60 km).

 "    26   Um   iP          14 45 53.4 C
           Ud   iP          14 46 19.8

 "    26   Up   iPKP1       18 05 14.8
                            micr  sec
                PKP1   Z'   0.1   0.8
           Sk   iPKP1       18 05 07.1
           Um   iPKP1       18 05 03.0
           Ud   iPKP1       18 05 16.7
           De   iPKP1       18 05 26.8
           Tonga-Kermadec Islands
           (h = 190 km).

 "    26   Up   iP          20 41 47.1
                            micr  sec
                P      Z'   0.3   1.5
           Ki   iP          20 41 10.2
                iX          20 43 56.9
                            micr  sec
                P      Z'   0.2   1.5
           Sk   iP          20 41 42.2
                iX          20 44 37.8
           Um   iP          20 41 26.4 C
           Ud   iP          20 41 54.2
           (cont.)

1973
Dec.  26   (cont.)
           Ud   iPP         20 44 44.9
                iX          20 45 03.1
           De   iP          20 42 08.6
                iPP         20 45 00.5
           Japan (h = 60 km).
           m = 5.9 (Up,Ki).
           Phases marked X could be P
           of another earthquake.

 "    27   Um   iP          02 45 14.0
           Ud   eP          02 45 22

 "    27   Ki   iP          06 01 37.3
           Um   iP          06 01 46.0
           Mariana Islands
           (h = 55 km).

 "    27   Um   iPKP1       06 28 21.9
                i           06 29 40.5
           New Zealand (h = 260 km).

 "    27   Up   iP          13 40 03.0
                i           13 40 17.4
                            micr  sec
                P      Z'   0.1   0.7
           Sk   iP          13 40 43.1
           Um   iP          13 40 42.3
           Ud   iP          13 40 09.6
                i           13 40 12.7
           Greece (h = 40 km).

 "    27   Up   iP          17 42 02.9
           Sk   iP          17 41 43.2
           Um   iP          17 42 03.0
                i           17 42 12.7
           Ud   i(P)        17 42 02.1
           Caribbean Sea (h = N).

 "    27   Ud   iP          17 51 39.5

 "    27   Sk   iPKP1       23 21 30.6
           Ud   iPKP1       23 21 38.2

 "    28   Ud   iP          01 32 54.7

 "    28   Up   iPKP1       05 49 32.2 C
                ipPKP1      05 51 39.5
                iSKP1       05 52 21.8
                isPKP1      05 52 37.7
                iSKKP       06 00 47.2
                            micr  sec
                PKP1   Z'   0.9   1.0
                pPKP1  Z'   1.4   2.0
                sPKP1  Z'   1.1   1.5
           Ki   i(PKP)      05 49 13.0 C
           (cont.)
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Up = Uppsala, Ki = Kiruna, Sk = Skalstugan, Um = Umeå, Ud = Uddeholm, De = Delary

1973						
Dec.	28	(cont.)				
		Ki	iPKP		05 49 21.7	
			i		05 51 09.1	
			iSKPl		05 52 03.6	
			iSKKP		06 01 50.4	
					micr sec	
			PKP	Z'	2.0 2.5	
			SKPl	Z'	4.3 2.7	
		Sk	iPKPl		05 49 24.8	
			iPKP		05 49 31.6	
			ipPKP		05 51 37.9	
			iSKPl		05 52 18.6	
		Um	i(PKP)		05 49 18.8	
			iPKP		05 49 28.5	
			ipPKP		05 51 36.9	
			iSKPl		05 52 14.1	
			iSKKP		06 01 12.8	
			i		06 01 32.7	
		Ud	iPKPl		05 49 33.8	C
			i		05 49 34.5	
			ipPKPl		05 51 40.1	
			iSKPl		05 52 26.6	
			iSKKP		06 00 38.0	
		De	iPKPl		05 49 43.3	C
			i		05 50 01.2	
			ipPKPl		05 51 47.2	
			iSKKP		06 00 26.3	
		Tonga-Kermadec Islands.				
		h = 560 km (Up,Sk,Um,Ud,De).				
"	28	Up	i(P)		05 56 11.7	
		Ki	i(P)		05 55 29.4	
					micr sec	
			(P)	Z'	0.1 1.2	
		These phases could belong to the preceding event.				
"	28	Ki	iPKP		05 56 36.6	
		Ud	iPKPl		05 56 44.3	C
		De	iPKPl		05 56 54.4	
		Tonga-Kermadec Islands.				
"	28	Ud	iPKPl		06 07 42.5	C
		De	iPKPl		06 07 53.4	
		Tonga-Kermadec Islands.				
"	28	Ud	iPKPl		06 39 01.1	C
		De	iPKPl		06 39 12.3	
		Tonga-Kermadec Islands.				
"	28	Up	iPKPl		06 39 29.6	
		Um	iPKP		06 39 27.8	
		Ud	iPKPl		06 39 31.5	
		De	iPKPl		06 39 42.2	C
		Tonga-Kermadec Islands.				
"	28	Ki	iPn		10 01 42.4	
		(cont.)				

1973						
Dec.	28	(cont.)				
		Ki	iSn		10 02 42.5	
			iS*		10 03 01.5	
		Um	iSn		10 03 22.8	
			iSg2		10 04 10.3	
		Northwest USSR.				
		Explosion.				
"	28	Um	iSgl		10 02 54.9	
		Northwest USSR.				
		Explosion.				
"	28	Ki	iPn		10 43 12.7	
			iSn		10 43 50.9	
			iS*		10 44 05.9	
		Northwest USSR-Norway.				
		Explosion.				
"	28	Um	iPKP		11 40 08.2	
		New Hebrides Islands				
		(h = 20 km).				
"	28	Um	iSgl		12 34 20.5	
		Ud	iSgl		12 35 16.7	
		Western USSR.				
		Explosion.				
"	28	Um	i(P)		13 18 23.3	
		Ud	iP		13 17 54.0	
"	28	Up	i(PKP)		14 00 56.9	
			iPKP		14 00 58.4	
			iPP		14 03 05	
			i(SKPl)		14 04 19.0	
			iSKPl		14 04 26.4	
					micr sec	
			PKP	Z'	0.4 1.0	
			SKPl	Z'	0.9 1.0	
			Mx	E	100 22	
			Mx	N	160 22	
			Mx	Z	250 21	
		Ki	i(PKP)		14 00 39.1	C
			iPKP		14 00 46.2	
			i(SKP)		14 04 20.6	
			iSKP		14 04 27.6	
					micr sec	
			PKP	Z'	0.9 1.0	
			SKP	Z'	0.1 1.0	
			Mx	E	79 20	
			Mx	N	74 19	
			Mx	Z	150 20	
		Sk	i(PKP)		14 00 50.3	
			i		14 00 54.1	
			iPKP		14 00 58.3	
			iSKPl		14 04 20.1	
		Um	i(PKP)		14 00 44.4	
			iPKP		14 00 50.8	
		(cont.)				

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

1973				
Dec.	28	(cont.)		
		Ud	i(PKP)	14 00 48.2
			iPKP	14 01 00.7
			i(SKP1)	14 04 22.3
			iSKP1	14 04 28.1
			i	14 04 54.3
		De	i(PKP)	14 00 53.7
			i	14 00 57.6
			iPKP	14 01 07.2
			i(SKP1)	14 04 33.2
			iSKP1	14 04 38.2
		New Hebrides Islands (h = 25 km). M = 7.7 (Up,Ki). (SKP) and (SKP1) have been interpreted as precursors, analogous to (PKP).		
"	28	Ud	iSKP1	14 08 46.7
"	28	Up	iP	14 09 52.6
		Ud	i(P)	14 10 03.4
"	28	Ki	iPKP	14 10 40.9
			i	14 11 02.1
		Um	e	14 11 20
		Ud	iPKP	14 10 58.9
		New Hebrides Islands.		
"	28	Up	iP	14 13 47.5
		Um	iP	14 13 47.9
		Ud	iP	14 13 37.0
"	28	Um	iPKP	14 19 47.5
		De	iPKP	14 19 55.7
		New Hebrides Islands.		
"	28	Up	iSKP1	14 27 31.8
		Ki	iPKP	14 23 50.0
		Um	iPKP	14 23 52.2
		Ud	iSKP1	14 27 34.1
			i	14 27 35.8
		De	iSKP1	14 27 46.3
		New Hebrides Islands.		
"	28	Ki	iP	14 35 58.1
"	28	Up	iPKP	14 38 00.5
		Ki	iPKP	14 37 45.8
			i	14 38 00.4
		Sk	iPKP	14 37 58.9
		Um	iPKP	14 37 53.6
			i	14 38 10.4
		Ud	iPKP	14 38 03.5
			i(SKP1)	14 41 22.7
			iSKP1	14 41 33.9
		(cont.)		

1973					
Dec.	28	(cont.)			
		De	iPKP		14 38 08.9
			i		14 38 22.0
			i(SKP1)		14 41 33.4
			iSKP1		14 41 42.5
		New Hebrides Islands (h = N).			
"	28	Ki	ePKP		15 05 34
		Um	i(PKP)		15 05 29.7
			iPKP		15 05 33.5
		Ud	iPKP		15 05 43.0
		De	iPKP		15 05 50.5
		New Hebrides Islands (h = N).			
"	28	Um	iP		15 18 24.7
"	28	Up	iPKP		15 27 18.5
			iSKP1		15 30 51.5
		Ki	iPKP		15 27 04.1
		Sk	iPKP		15 27 17.5
		Um	i(PKP)		15 27 10.4
			iPKP		15 27 16.2
		Ud	iPKP		15 27 22.8
			i(SKP1)		15 30 46.1
			iSKP1		15 30 55.5
		De	iPKP		15 27 32.2
		New Hebrides Islands (h = N).			
"	28	Ud	iSKP1		15 49 44.9
		New Hebrides Islands (h = N).			
"	28	Up	iSKP1		16 30 48.7
					micr sec
			SKP1	Z'	0.1 1.0
		Ki	iPKP		16 27 07.4
		Sk	iPKP		16 27 19.0
		Um	iPKP		16 27 13.7
		Ud	iPKP		16 27 23.5
			i		16 28 34.8
			i(SKP1)		16 30 44.0
			iSKP1		16 30 52.9
		De	iPKP		16 27 29.7
			iSKP1		16 31 05.1
		New Hebrides Islands. Origin time = 16 08 09.			
"	28	Ki	e(P)		16 36 14
		Ud	iP		16 36 45.7
"	28	Ud	iSKP1		17 23 39.9
		New Hebrides Islands (h = 35 km).			

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

1973
Dec. 28 Ki iPKP 17 35 54.0
New Hebrides Islands
(h = N).

" 28 Ud iSKP1 17 36 35.3
New Hebrides Islands
(h = N).

" 28 Ud eSKP1 18 12 59
New Hebrides Islands
(h = N).

" 28 Um iPKP 18 38 30.7
i 18 38 32.5
Ud iSKP1 18 42 07.4
New Hebrides Islands
(h = 45 km).

" 28 Up iPKP 21 24 41.2
Ki iPKP 21 24 27.0
Sk ePKP 21 24 42
Um iPKP 21 24 32.4
i 21 24 44.4
Ud iPKP 21 24 49.8
iSKP1 21 28 10.3
De iPKP 21 24 55.0
New Hebrides Islands
(h = 50 km).

" 28 Up iP 21 56 55.3
i 21 57 13.3

" 28 Up iP 21 59 44.7
Ud iP 21 59 50.5
De iP 21 59 22.4
Greece.

" 28 Up iP 23 26 33.8
Ki iP 23 26 04.3
Um iP 23 26 13.6
i 23 26 21.5
Ud iP 23 26 38.9
De iP 23 26 52.0
Mariana Islands (h = 45 km).

" 28 Up iP 23 39 40.5
ipP 23 39 50.4
Ki iP 23 39 15.1
ipP 23 39 24.0
Um iP 23 39 25.8
ipP 23 39 36.8
Ud iP 23 39 51.0
Mariana Islands.
h = 35 km (Up,Ki,Um).

" 29 Up i(PKP) 00 38 36.4
(cont.)

1973
Dec. 29 (cont.)
Up iPKP 00 38 41.0
iPP 00 40 49
i(SKP1) 00 41 58.5
iSKP1 00 42 07.2
micr sec
PKP Z' 0.2 1.0
SKP1 Z' 0.3 0.9
Mx E 47 22
Mx N 68 22
Mx Z 120 22
Ki i(PKP) 00 38 22.6 C
iPKP 00 38 28.6
micr sec
PKP Z' 0.3 0.6
Mx E 33 20
Mx N 56 22
Mx Z 57 20
Sk i(PKP) 00 38 31.3
i 00 38 35.2
iPKP 00 38 41.3
Um i(PKP) 00 38 20.2
i 00 38 27.9
iPKP 00 38 31.5
iPKKP1 00 48 14.7
Ud i(PKP) 00 38 27.3
iPKP 00 38 39.6
i 00 40 49.4
i(SKP1) 00 42 02.8
iSKP1 00 42 08.8
iPKKP 00 48 35.8
De i(PKP) 00 38 30.9
i 00 38 38.6
iPKP 00 38 47.9
i(SKP1) 00 42 12.2
iSKP1 00 42 17.5
iPKKP 00 48 37.0
New Hebrides Islands
(h = 45 km).
M = 7.4 (Up,Ki).

" 29 Up iP 00 50 08.1

" 29 Um iP 00 50 53.2

" 29 Up iP 00 51 03.9
Um iP 00 51 18.5
Ud iP 00 51 28.3

" 29 Ud iSKP1 01 35 37.3
New Hebrides Islands.

" 29 Up i(pP) 01 41 40.6
Ki iP 01 41 05.7
Um i(pP) 01 41 26.7
Mariana Islands
(h = 80 km).

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

1973					
Dec.	29	Um	iP		02 16 45.3
		Ud	eP		02 17 15
		South of Japan (h = 45 km).			
"	29	Ud	iP		03 10 06.0
"	29	Up	iP		06 23 52.5 D
					micr sec
			P	Z'	0.1 0.9
		Ki	iP		06 23 20.4
		Um	iP		06 23 33.8
		Ud	iP		06 23 58.9
			iPP		06 27 10.5
		De	iP		06 24 11.6
		Bonin Islands (h = N).			
"	29	Ki	ePKP		07 03 12
		Um	iPKP		07 03 17.5
		Ud	iPKP		07 03 28.0
			iSKPl		07 06 54.5
		De	iPKP		07 03 34.5
		New Hebrides Islands (h = N).			
"	29	Up	iP		08 30 43.2
			i		08 30 45.7
			iS		08 39 15
					micr sec
			P	Z'	0.3 1.3
			Mx	E	5.8 20
			Mx	N	6.1 20
			Mx	Z	14 20
		Ki	iP		08 29 49.5
					micr sec
			P	Z'	0.4 1.5
			Mx	E	7.6 18
			Mx	N	8.2 18
			Mx	Z	10 20
		Sk	iP		08 30 24.3
			i		08 30 31.5
		Um	iP		08 30 13.9
			i		08 30 17.4
		Ud	iP		08 30 45.9
			i		08 30 57.8
		De	iP		08 31 10.4
			i		08 31 19.5
		Komandorsky Islands (h = N). m = 6.3, M = 6.0 (Up,Ki).			
"	29	Ud	iP		08 44 39.5
"	29	Um	iPKP		09 09 55.3
		New Hebrides Islands (h = 20 km).			
"	29	Up	i(P)		10 42 56.4

1973				
Dec.	29	Ki	iPn	13 09 27.8
			iSn	13 10 16.9
		Um	i	13 11 38.9
			iSgl	13 12 04.8
		Ud	iSgl	13 14 26.8
		Northwest USSR-Norway. Explosion.		
"	29	Ud	iP	14 49 30.1
		Sinkiang, China.		
"	29	Up	iP	17 35 11.8
			i	17 35 18.4
		Ud	iP	17 35 25.2
		Szechwan, China.		
"	29	Ki	ePKP	19 32 41
		Um	iPKP	19 32 47.0 C
		Ud	iPKP	19 32 59.5
			iSKPl	19 36 19.8
		De	iPKP	19 33 04.2
		New Hebrides Islands (h = 35 km).		
"	30	Ud	ePKPl	02 03 36
"	30	Sk	iPKPl	03 19 16.6
		Um	iPKPl	03 19 13.2
		Ud	iPKPl	03 19 25.6
"	30	Um	iPKP	07 01 21.5
		New Hebrides Islands (h = N).		
"	30	Um	iPKP	07 04 16.8
		New Hebrides Islands (h = N).		
"	30	Up	iSgl	09 27 03.1
		Um	iSgl	09 27 46.1
		Ud	iPgl	09 26 52.9
			iSgl	09 27 19.6
		Hälsingland, Sweden.		
"	30	Ud	iP	10 05 14.6 C
		Tibet.		
"	30	Ud	iP	10 36 31.3
"	30	Up	iP	10 36 35.7
		Ud	iP	10 36 43.1
		Mindanao-Leyte (h = 40 km).		
"	30	Up	iP	12 05 14.7
		Um	iP	12 04 52.3
		Ud	iP	12 05 18.7
			i	12 05 36.8
		South of Japan (h = N).		

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

1973						
Dec.	30	Ud	iP		13 32 47.0	
		Tien-Shan.				
"	30	Up	i(PKP)		16 58 43.3	
			iPKP		16 58 50.6	
			iSKP1		17 02 25.0	
					micr	sec
			Mx	E	12	22
			Mx	N	24	23
			Mx	Z	47	25
		Um	iPKP		16 58 38.2	
		Ud	e(PKP)		16 58 46	
			iPKP		16 58 54.4	
			i(SKP1)		17 02 16.1	
			iSKP1		17 02 28.5	
		De	i(PKP)		16 58 51.9	
			iPKP		16 59 05.9	
		New Hebrides Islands (h = 10 km). M = 6.9 (Up).				
"	30	Um	iP		18 31 13.0	
		Ryukyu Islands (h = 110 km).				
"	31	Um	iP		01 53 00.8	
		Ud	iP		01 53 28.2	
		South of Japan (h = N).				
"	31	Up	iPKP1		03 02 24.9	
		Um	iPKP1		03 02 12.1	
		Ud	iPKP1		03 02 26.7	
		De	iPKP1		03 02 35.3	
		Kermadec Islands (h = 45 km).				
"	31	Up	iPKP1		03 19 28.4 D	
			ipPKP1		03 20 23.6	
					micr	sec
			PKP1	Z'	0.6	1.0
			pPKP1	Z'	0.3	1.0
		Ki	iPKP1		03 19 13.3	
		Sk	iPKP1		03 19 20.6	
			ipPKP1		03 20 15.5	
		Um	iPKP1		03 19 15.6	
			ipPKP1		03 20 12.4	
		Ud	iPKP		03 19 26.6	
			iPKP1		03 19 30.1	
			ipPKP1		03 20 25.2	
		De	iPKP		03 19 32.3	
			iPKP1		03 19 38.8	
			ipPKP1		03 20 34.1	
		Kermadec Islands. h = 220 km (Up,Sk,Um,Ud,De).				
"	31	Ud	iPKP1		05 04 37.5	
			i		05 04 58.6	
1973						
Dec.	31	Up	iPKP		11 06 02.5	
		Ki	ePKP		11 06 20	
		Um	iPKP		11 06 10.1	
		Ud	iPKP		11 06 00.6	
		South Sandwich Islands (h = 40 km).				
"	31	Um	iP		11 10 51.9	
			i		11 11 01.1	
		Ud	iP		11 11 22.4	
		China (h = N).				
"	31	Ki	i(P)		11 14 56.9	
		Ud	i(P)		11 15 51.9	
"	31	Um	iPKP		15 17 24.6	

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September 2, 1975