

SEISMOLOGICAL INSTITUTE
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S E I S M O L O C 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 A N U A R Y 1 - 31, 1978

1978				1978			
Jan.	1	Up iP	03 20 02.6	Jan.	2	Up iP	06 36 49.2
		Ki iP	03 19 09.1			iSn	06 41 26
		Um iP	03 19 34.2				micr sec
		Ud iP	03 20 05.8			P	Z' 0.7 1.6
		De iP	03 20 27.1			Mx	E 9.0 17
		Off east coast of Kamchatka				Mx	N 16 18
		(h = N).				Mx	Z 7.3 17
"	1	Ki iP	04 29 09.4			Ki iP	06 37 31.2
		Ud eP	04 27 46				micr sec
		Yugoslavia (h = N).				P	Z' 0.2 1.0
"	1	Um iP	05 32 31.3			Mx	E 14 13
		South of Honshu, Japan				Mx	N 13 15
		(h = 100 km).				Um iP	06 37 04.0
"	1	Up iP	07 43 39.6			iSn	06 41 57
		iPP	07 43 53.7			Ud iP	06 37 06.3
		iS	07 46 22.3			De iP	06 36 48.1
			micr sec			Western Caucasus (h = 10 km).	
		P	Z' 0.1 0.8			m = 5.9, M = 5.8 (Up,Ki).	
		Ki iP	07 45 03.2	"	2	Ki iPKP	07 29 40.9
			micr sec			Um iPKP	07 29 47.5
		P	Z' 0.1 0.9			New Hebrides Islands	
		Sk iP	07 44 34.9			(h = 250 km).	
		Um iP	07 44 21.1	"	2	Um iPKP	08 46 23.0
		Ud iP	07 43 54.7			Ud iPKP	08 46 12.5
		De iP	07 43 15.3			S. Chile-Argentina border	
		Romania (h = 140 km).				region (h = 130 km).	
		m = 5.4 (Up,Ki).		"	2	Um iP	18 10 05.1
"	1	Up iSKP1	13 29 24.4			Adriatic Sea (h = N).	
		Ki iPKP	13 25 58.7	"	2	Up iPKP1	20 35 34.9
		Ud iPKP	13 26 14.9			Sk iPKP1	20 35 26.7
		iSKP1	13 29 29.6			Um iPKP1	20 35 21.9
		New Hebrides Islands				Ud iPKP1	20 35 35.9
		(h = 130 km).				Kermadec Islands region	
"	2	Ki iP	01 30 27.6			(h = N).	
		Um iP	01 30 23.6				
		Nicobar Islands region (h = N).					

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

1978

Jan. 2 Up iP 21 08 37.7
 Ki iP 21 07 44.7
 Um iP 21 08 11.9
 Ud iP 21 08 38.8
 Andreanof Islands, Aleutian
 Islands (h = N).

" 2 Um iP 23 58 20.8
 Ud iP 23 58 33.1
 Pakistan (h = 30 km).

" 3 Up i(P) 06 33 26.6

" 3 Um iP 08 49 22.7
 Ud iP 08 49 49.2
 South of Honshu, Japan
 (h = 480 km).

" 3 Um iP 12 38 18.4
 Off east coast of Honshu,
 Japan (h = 10 km).

" 4 Up iP 01 08 14.5
 micr sec
 P Z' 0.1 1.0
 Ki iP 01 07 32.5
 Sk iP 01 08 07.1
 Um iP 01 07 51.3 D
 Ud iP 01 08 22.4 D
 Hokkaido, Japan region
 (h = 100 km).

" 4 Up micr sec
 Mx E 0.9 7
 Mx N 1.6 7
 Ki iP 14 56 33.9
 micr sec
 P Z' 0.3 0.6
 Sk iP 14 57 13.8
 i 14 57 19.0
 Um iP 14 57 15.5
 Ud iP 14 57 46.7
 Lomonosov Ridge (h = N).

" 4 Ki iP 23 04 53.3
 Um iP 23 04 58.3
 Ud iP 23 04 48.3
 Costa Rica (h = 70 km).

" 5 Um iP 03 35 01.9
 Ud iP 03 35 12.4
 Pakistan (h = N).

" 5 Up iP 04 34 28.9
 Um iP 04 34 29.8
 Ud iP 04 34 34.1

1978

Jan. 5 Up iSgl 11 33 00.7
 iRg 11 33 09.3
 Ud iPgl 11 32 32.8
 iSgl 11 32 54.6
 iRg 11 33 05.8
 Central Sweden.
 Origin time = 11 32 03.
 Near-surface event.

" 5 Up iP 17 19 57.3
 Um iP 17 19 39.5
 i 17 19 46.9
 Ud iP 17 20 03.8
 Volcano Islands region
 (h = N).

" 5 Ud i(P) 19 33 18.4

" 5 Um iP 19 38 11.0
 Ud iP 19 38 11.8
 Southern Iran (h = 55 km).

" 6 Up iP 04 53 33.1
 il 04 53 36.9
 iS 05 03 41
 micr sec
 P Z' 0.1 1.0
 il Z' 0.7 1.3
 Mx E 12 18
 Mx N 11 18
 Mx Z 16 15
 Ki iP 04 53 11.6
 il 04 53 16.1
 micr sec
 P Z' 0.1 1.0
 il Z' 0.7 1.4
 Mx E 13 15
 Mx N 25 19
 Sk il 04 53 41.1
 Um iP 04 53 19.4
 il 04 53 23.4
 iS 05 03 14
 Ud iP 04 53 42.3
 il 04 53 46.3
 Luzon, Philippine Islands
 (h = N).
 m = 6.5, M = 6.5 (Up,Ki).

" 6 Ud iP 05 35 02.7
 Southern Iran (h = N).

" 6 Up iP 06 03 21.3
 Ki iP 06 02 59.0
 Ud iP 06 03 30.5
 Luzon, Philippine Islands
 (h = N).

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

1978				1978								
Jan.	6	Up	iP	07 19	37.5	Jan.	7	Ud	iP	16 54	24.4	
			i	07 19	51.2				Turkey (h = N).			
		Ki	eP	07 18	45		"	8	Ki	iP	01 09	35.2
		Ud	iP	07 19	38.7				Near west coast of Colombia (h = N).			
		Andreanof Islands, Aleutian Islands (h = 60 km).										
"	6	Up	iP	19 53	18.9	"	8	Ud	iP	03 03	10.7	
		Um	ipP	19 53	12.3				Iran (h = N).			
		Ud	iP	19 53	26.6	"	8	Up	iP	06 43	20.1	
			ipP	19 53	43.6			Um	iP	06 43	38.1	
		De	iP	19 53	43.2			Malawi (h = N).				
		Hokkaido, Japan region. h = 60 km (Ud).				"	8	Ki	iP	06 43	08.0	
"	6	Up	ipP	22 09	07.9			Burma (h = 100 km).				
		Ki	ipP	22 08	11.7	"	8	Up	iPKP1	07 27	37.0	
		Ud	iP	22 08	54.1			Um	iPKP	07 27	21.6	
			ipP	22 09	05.2				i	07 27	44.8	
		De	ipP	22 09	29.2			Ud	iPKP1	07 27	38.8	
		Kenai Peninsula, Alaska. h = 40 km (Ud).				"	8	Um	iP	09 21	40.2	
"	7	Up	iP	03 07	22.9	"	8	Ud	iP	11 00	49.3	
			i	03 07	54.8	"	8	Up	iP	22 24	23.3	
		Ki	i	03 09	40.8			Ki	iP	22 23	30.4	
		Um	iP	03 07	25.3			Um	iP	22 23	57.2	
			i	03 08	16.4				i	22 24	06.7	
		Ud	iP	03 07	38.1			Ud	iP	22 24	21.4	
			i	03 08	08.3			De	iP	22 24	44.4	
			i	03 08	26.1			Kodiak Island region (h = 25 km).				
		De	i	03 08	31.1	"	7	Ud	iPKP	03 57	23.6	
			i	03 08	52.7			Scotia Sea (h = N).				
"	7	Up	iP	07 32	13.2	"	7	Up	iP	07 32	13.2	
		Ki	iP	07 32	16.7			Ki	iP	07 32	16.7	
		Ud	iP	07 32	28.7			Ud	iP	07 32	28.7	
		Tibet-India border region (h = N).				"	8	Up	iP	22 43	54.8	
"	7	Up	eP	09 02	02			Ki	iP	22 43	53.7	
		Ki	iP	09 01	44.1			Um	iP	22 43	52.0	
		Ud	iP	09 02	08.7			Ud	iP	22 44	04.5	
		Mindanao, Philippine Islands (h = 90 km).				"	9	Sk	e	02 50	06	
"	7	Up	iPKP1	10 56	36.9				iSgl	02 50	10.9	
		Um	iPKP1	10 56	25.0			Um	eSgl	02 51	45	
		Ud	iPKP1	10 56	39.1			Ud	iSgl	02 49	42.0	
		De	iPKP1	10 56	48.1			Coast of southwest Norway, near 59 3/4°N, 5 1/2°E. Origin time = 02 47 39. M _L = 2.4 (Ud).				
"	7	Up	iPKP1	10 56	36.9			Felt. By combination with Bergen and Konsberg readings.				
"	7	Ud	iP	11 53	40.5	"	9	Ki	iP	09 19	11.0	
			i	11 53	47.5				iS	09 21	46.1	
								Iceland region (h = 10 km).				

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

1978				1978			
Jan.	11	(cont.)		Jan.	13	(cont.)	
		Sk	iP 20 37 46.5				micr sec
			ipP 20 38 03.0			P	Z' 0.2 1.0
		Um	iP 20 37 31.5 C			Mx	E 7.4 17
			ipP 20 37 46.4			Mx	N 12 18
		Ud	iP 20 38 02.2 C			Mx	Z 18 19
			i 20 38 13.2		Ki	iP	20 13 14.9
			ipP 20 38 19.0				micr sec
		Hokkaido, Japan region.				P	Z' 0.2 1.1
		h = 60 km (Up,Sk,Um,Ud).				Mx	E 8.3 15
						Mx	N 15 17
"	12	Ki	eP 09 10 30		Sk	eP	20 13 54
			iS 09 13 02.3		Um	iP	20 13 36.4
		Um	iP 09 10 48.2		Ud	iP	20 14 07.7
		Iceland region (h = 10 km).			Kuril Islands (h = 50 km).		
					m = 6.1, M = 6.3 (Up,Ki).		
"	12	Up	iP 20 13 49.4		"	13	Ud iP 21 50 45.8
		Ki	eP 20 15 00				Kuril Islands (h = 50 km).
		Sk	iP 20 14 28.8		"	14	Um iP 00 47 32.1
		Um	iP 20 14 25.2				Near s. coast of Honshu,
		Ud	iP 20 13 55.0				Japan (h = 20 km).
		Mediterranean Sea (h = 55 km).			"	14	Um iP 00 56 49.1
"	13	Ki	iP 00 34 46.7				Near s. coast of Honshu,
			iS 00 37 23.8		"	14	Um iP 00 58 54.7
		Um	iP 00 35 09.2				Near s. coast of Honshu,
		Ud	eP 00 34 56				Japan (h = 20 km).
		Iceland region (h = 10 km).			"	14	Um iP 00 58 54.7
"	13	Um	iP 01 41 10.8				Near s. coast of Honshu,
		Ud	iP 01 41 29.5		"	14	Up iP 03 36 15.8
		Mindanao, Philippine Islands					i 03 36 21.0
		(h = 580 km).					iPP 03 39 07.5
"	13	Up	iP 08 36 10.0				iS 03 45 58
		Ki	iP 08 35 22.5				micr sec
		Ud	iP 08 36 04.2				i Z' 3.2 1.7
		Queen Charlotte Islands					Mx E 73 19
		region (h = N).					Mx N 65 17
"	13	Up	iP 10 09 51.1				Mx Z 56 20
		Ud	iP 10 09 56.5		Ki	iP	03 35 38.6
		Kuril Islands (h = 35 km).					i 03 35 44.2
"	13	Up	iP 10 22 45.5				iPP 03 38 10.5
							iS 03 44 47
"	13	Ud	iP 11 37 02.3				micr sec
							i Z' 4.6 2.5
"	13	Up	i(P) 12 00 27.0				Mx E 152 17
			micr sec				Mx N 171 18
			(P) Z' 0.1 0.9		Sk	eP	03 36 12
		Ud	i(P) 12 00 49.5				i 03 36 16.5
"	13	Up	iP 20 14 02.0		Um	iP	03 35 54.0
			iS 20 23 10.0		Ud	iP	03 36 23.3
		(cont.)					i 03 36 28.9
							Near s. coast of Honshu,
							Japan (h = 15 km).
							m = 7.1 (Up,Ki).
							Double P, small and large, in
							average 5.5 s apart.

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1978				1978					
Jan.	14	Ki	iP	04 52 58.2	Jan.	14	Ud	iP	17 57 46.9
		Um	iP	04 53 13.8	"	14	Um	iP	18 40 17.0
		Ud	iP	04 53 43.2	"	14	Um	iP	18 57 40.1
		Near s. coast of Honshu, Japan (h = 5 km).			"	14	Ud	iP	18 58 08.7
"	14	Up	iP	09 14 16.1	Near s. coast of Honshu, Japan (h = 10 km).				
				micr sec					
		Mx	E	1.6 17	"	14	Um	iP	19 12 15.0
		Ki	iP	09 13 30.6	"	14	Up	iPKP1	19 15 35.5
		Um	iP	09 13 49.5			i	19 15 43.5	
		Ud	iP	09 14 20.9			Sk	i	19 15 33.5
		Kuril Islands (h = 50 km).					Um	iPKP1	19 15 22.9
"	14	Up	iP	09 31 28.0			Ud	iPKP1	19 15 37.3
		Ki	eP	09 30 44	"	14	Up	iPKP1	20 05 14.8
		Um	iP	09 31 04.5			ipPKP1	20 05 25.7	
		Ud	iP	09 31 33.5				micr sec	
		Kuril Islands (h = 55 km).					pPKP1	Z' 0.1 1.0	
"	14	Up	iP	14 03 14.1			Sk	ipPKPY	20 05 18.1
		Ki	iP	14 02 59.5			Um	iPKP1	20 05 02.6
		Um	iP	14 03 04.0			Ud	iPKP1	20 05 16.7
		Ud	iP	14 03 22.9			ipPKP1	20 05 28.3	
		Molucca Passage (h = 45 km).					Kermadec Islands. h = 40 km (Up,Ud).		
"	14	Up	iPKP1	15 40 35.5	"	14	Up	iPKP1	20 14 36.7
			iPKP2	15 40 40.1			i	20 14 44.4	
				micr sec			Sk	iPKP1	20 14 31.0
		PKP1	Z'	0.1 1.0			Um	iPKP1	20 14 24.6
		PKP2	Z'	0.6 1.0			Ud	iPKP1	20 14 38.3
		Mx	E	4.0 23	"	14	Up	iPKP1	20 22 24.6
		Mx	N	6.8 23			ipPKP1	20 22 32.6	
		Mx	Z	9.8 23				micr sec	
		Ki	iPKP1	15 40 15.3			pPKP1	Z' 0.1 1.0	
		i		15 40 27.6			Ki	ePKP	20 22 10
				micr sec			Sk	iPKP1	20 22 17.6
		Mx	E	3.7 20			Um	iPKP1	20 22 12.6
		Mx	N	6.0 20			Ud	iPKP1	20 22 26.0
		Mx	Z	9.3 21			Kermadec Islands. h = 30 km (Up).		
		Sk	iPKP1	15 40 30.9	"	14	Up	iP	20 41 23.3
		Um	iPKP1	15 40 23.3			Ki	iP	20 40 28.7
		Ud	iPKP1	15 40 37.3			Um	iP	20 40 56.6
		Kermadec Islands (h = 45 km).					Ud	iP	20 41 21.4
		M = 6.5 (Up,Ki).					Unimak Island region (h = 40 km).		
"	14	Up	iPKP1	16 45 01.0	"	14	Up	iSg1	21 27 47.8
				micr sec			Ki	iPg1	21 25 19.7
		PKP1	Z'	0.1 1.0			iSg1	21 26 04.5	
		Ki	ePKP	16 44 45			Sk	iSg1	21 25 43.9
		Sk	iPKP1	16 44 54.1			(cont.)		
		Um	iPKP1	16 44 47.0					
		i		16 44 54.9					
		Ud	iPKP1	16 45 03.3					
"	14	Ud	iP	17 46 53.1					

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1978

Jan. 14 (cont.)
 Um iSn 21 26 06.8
 iSgl 21 26 23.1
 Ud eSgl 21 27 36
 Coast of Nordland, Norway,
 near 66 1/4°N, 2 1/2°E.
 Origin time = 21 24 20.
 M_L = 2.7 (Ki,Um).

" 14 Up iP 22 43 22.7
 micr sec
 P Z' 0.2 1.6
 Mx E 4.2 14
 Mx N 6.8 15
 Mx Z 9.8 16
 Ki iP 22 42 44.6
 micr sec
 Mx E 7.1 15
 Mx N 6.5 14
 Mx Z 10 14
 Sk iP 22 43 18.6
 Um iP 22 43 00.5
 iS 22 52 16
 Ud iP 22 43 29.4
 Near s. coast of Honshu,
 Japan (h = 10 km).
 M = 6.2 (Up,Ki).

" 14 Up iP 22 47 45.3
 micr sec
 P Z' 0.1 1.2
 Ki iP 22 47 08.8
 Sk iP 22 47 41.7
 Um iP 22 47 25.0
 Ud iP 22 47 54.6
 Near s. coast of Honshu,
 Japan (h = 15 km).

" 15 Ud iPKP1 01 24 45.6
 Fiji Islands region
 (h = 620 km).

" 15 Ud iP 07 10 40.9
 Iran (h = N).

" 15 Up iPKP1 07 16 18.7
 i 07 16 28.8
 micr sec
 PKP1 Z' 0.1 0.9
 i Z' 0.4 0.9
 Mx N 4.4 24
 Mx Z 7.0 25
 Ki iPKP1 07 15 59.4
 Sk iPKP1 07 16 11.9
 i 07 16 24.4
 (cont.)

1978

Jan. 15 (cont.)
 Um iPKP1 07 16 06.6 C
 Ud iPKP1 07 16 20.4 C
 iPKP2 07 16 26.3
 i 07 16 31.7
 Kermadec Islands (h = 15 km).
 Multiple event with
 successively increasing
 amplitudes.

" 15 Ud iPKP1 08 00 34.8
 South of Fiji Islands (h = N).

" 15 Up iP 10 30 08.8
 micr sec
 P Z' 0.1 0.9
 Ki iP 10 31 33.8
 i 10 31 37.9
 Sk iP 10 31 02.1
 Um iP 10 30 49.1
 Ud iP 10 30 23.1
 i 10 30 25.1
 Romania (h = 140 km).

" 15 Ud iP 13 20 15.5

" 15 Up iPKP1 13 36 56.4
 Sk i 13 37 01.6
 Um iPKP1 13 36 44.3
 Ud iPKP1 13 36 58.1
 Kermadec Islands (h = N).

" 15 Ud iP 17 40 05.0

" 16 Up ePKP1 01 36 14
 Um iPKP 01 36 06.9
 Ud iPKP 01 36 13.1
 Kermadec Islands (h = 60 km).

" 16 Up iP 01 45 21.6
 Ud iP 01 45 27.9
 Kuril Islands (h = N).

" 16 Up iSgl 02 32 42.1
 Ki iPgl 02 28 39.2 C
 iSgl 02 28 49.9
 Sk iSgl 02 31 31.8
 Um iPgl 02 29 37.6
 iSgl 02 30 32.7
 Norrbotten-Lappland, Sweden,
 67.9°N, 22.6°E.
 Origin time = 02 28 24.
 M_L = 2.9 (Um).
 Checked with Finnish station
 readings.

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1978				1978										
Jan.	16	Up	iP	03 27	27.9	C	Jan.	17	(cont.)					
			ipP	03 28	21.2				Ud	iP	08 10	00.4		
			iPP	03 29	03.7				Kuril Islands (h = 180 km).					
			i	03 29	08.8			"	17	Ki	e	11 52	06	
											iPP	11 53	19.5	
			P	Z'	0.5	1.0			Ud	i		11 51	55.5	
		Ki	iP	03 27	37.4	C				iPP		11 52	39.5	
			iPP	03 29	14.5					iPKKP		12 02	49.4	
									San Juan Province, Argentina (h = 25 km).					
			P	Z'	0.5	1.0		"	17	Up	iSgl	14 28	07.3	
		Sk	iP	03 27	53.7	C			Ud	eSgl		14 27	07	
			iPP	03 29	34.1				De	eSn		14 27	02	
		Um	iP	03 27	26.5	C				eSgl		14 27	18	
			iPP	03 27	58.6				South coast of Norway, near 58 1/4°N, 6 1/2°E. Origin time = 14 25 01. M _L = 2.7 (Ud).					
		Ud	iP	03 27	44.6	C			By combination with Kongsberg readings.					
			iPP	03 29	22.1			"	17	Up	iP	15 08	53.9	
			i	03 29	30.2									
		Hindu Kush region. h = 250 km (Up). m = 5.9 (Up,Ki).												
"	16	Um	iP	05 40	08.1			"	17		P	Z'	0.1	1.0
		Near s. coast of Honshu, Japan (h = 10 km).							Ki	iP		15 09	43.8	
"	16	Ki	iP	05 43	23.2									
		Um	iP	05 43	42.2						P	Z'	0.2	1.0
		Ud	iP	05 44	12.1				Sk	iP		15 09	28.5	
		Off east coast of Honshu, Japan (h = 10 km).							Um	iP		15 09	16.8	
"	16	Up	iP	05 57	25.3				Ud	iP		15 09	04.1	
		Ud	iP	05 57	27.3					i		15 09	09.7	
"	16	Ud	iSgl	09 47	36.6				De	iP		15 08	39.4	
"	16	Up	i	13 07	12.8				Red Sea (h = 10 km). m = 5.8 (Up,Ki).					
			iSgl	13 07	33.5			"	17	Ki	eP	19 18	13	
		Ud	i	13 05	43.3				Ud	iP		19 17	47.9	
			iSgl	13 06	27.8				Turkey-USSR border region (h = 15 km).					
"	16	Ud	iP	18 09	30.3			"	18	Up	iP	02 24	53.8	
			i	18 09	36.8				Ud	iPKP1		02 24	55.0	
		North Atlantic Ridge (h = 25 km).								iPKP2		02 24	58.0	
"	16	Sk	iPKP1	20 20	53.5				Kermadec Islands region (h = N).					
		Um	iPKP1	20 20	49.2			"	18	Sk	iP	03 54	32.6	
		Ud	iPKP1	20 21	00.4				Ud	iP		03 54	02.0	
"	16	Ud	iP	21 03	54.6			"	18	Ki	iP	05 47	24.5	
		Kyushu, Japan (h = 40 km).							Ud	iP		05 47	09.5	
"	17	Up	iP	08 09	54.9				Peru-Brazil border region (h = 170 km).					
		Ki	iP	08 09	07.6									
		Um	iP	08 09	29.5									
		(cont.)												

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

1978				1978					
Jan.	18	Ki	iP	08 57 18.3	Jan.	19	Ki	iPKP	11 02 17.4
				Off east coast of Kamchatka (h = 45 km).			Ud	ePKP1	11 02 23
								iPKP	11 02 33.8
"	18	Ki	iPKP	10 14 06.0			De	iPKP1	11 02 32.8
		Um	iPKP1	10 14 21.9					Fiji Islands region (h = 570 km).
			iPKP2	10 14 35.5					
				Off e. coast of S. Island, N.Z. (h = 70 km).	"	19	Ud	eP	14 43 57
								i	14 44 04.1
"	18	Up	iPKP1	19 27 06.0	"	20	Sk	iP	02 25 02.4
				micr sec			Um	iP	02 25 18.3
			PKP1	Z' 0.1 1.0			Ud	iP	02 25 11.6
		Ki	iPKP1	19 26 46.8					Near coast of Chiapas, Mexico (h = 80 km).
		Sk	iPKP1	19 27 01.1					
		Um	iPKP	19 26 53.6	"	20	Ki	iPKP	05 01 36.2
			iPKP1	19 26 56.2			Um	iPKP	05 01 33.6
		Ud	iPKP	19 27 00.6			Ud	iPKP	05 01 25.0
			iPKP1	19 27 07.8					Chile-Argentina border region (h = 130 km).
				South of Kermadec Islands (h = 25 km).					
"	18	Up	iP	20 46 29.6	"	20	Ki	iP	05 34 55.6
		Um	iP	20 46 13.9					Mariana Islands (h = 130 km).
		Ud	iP	20 46 41.0	"	20	Ki	iP	17 34 17.4
				Kansu Province, China (h = N).			Um	iP	17 34 31.7
"	18	Up	iPKP1	21 32 22.0					Volcano Islands region (h = N).
		Sk	iPKP1	21 32 15.2	"	20	Ud	iP	18 30 33.3
		Um	iPKP1	21 32 09.2	"	20	Ki	iP	20 49 35.6
		Ud	iPKP1	21 32 22.6			Um	iP	20 49 57.8
				Kermadec Islands (h = N).			Ud	iP	20 50 29.7
"	19	Um	iP	01 56 57.7					Kuril Islands (h = 45 km).
		Ud	ipP	01 57 33.2	"	20	Ki	iP	21 44 50.1
				Off east coast of Honshu, Japan (h = 15 km).					Banda Sea (h = 50 km).
"	19	Sk	iPKP1	06 08 04.6	"	20	Up	iP	22 52 17.3
		Um	iPKP1	06 07 58.4			Ud	iP	22 52 10.1
		Ud	iPKP1	06 08 12.1	"	21	Up	iP	05 23 30.1
				Kermadec Islands (h = N).			Ki	iP	05 22 40.7
"	19	Ki	i	10 30 26.9			Ud	iP	05 23 35.8
			iSgl	10 30 28.2					Kuril Islands (h = N).
		Sk	i	10 30 34.5	"	21	Um	iP	08 17 28.2
			iSgl	10 30 38.6	"	21	Up	iP	08 32 01.5
			i	10 30 43.6			Ki	iP	08 32 04.1
		Um	iSgl	10 30 55.1			Sk	iP	08 31 48.1
		Ud	iSgl	10 30 24.7			Um	iP	08 32 05.8
				Nordland, Norway, near 66 1/2° N, 14 1/2° E. Origin time = 10 29 06. M _L = 2.7 (Ki,Sk,Um,Ud). Explosion?			Ud	iP	08 31 50.3
							De	iP	08 31 51.7
									Northern Colombia (h = 40 km).

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

1978

Jan. 21 Up iPgl 09 34 11.6 C
 iSgl 09 34 28.5
 i 09 34 32.2
 iRg 09 34 36.3
 Sk iPgl 09 34 54.0
 iSn 09 35 32.3
 iSgl 09 35 43.9
 Um iPgl 09 35 06.6
 iSn 09 35 48.9
 iSgl 09 36 04.7
 Ud iPgl 09 34 00.0 C
 iSgl 09 34 08.9
 iRg 09 34 13.2
 De iPgl 09 34 53.7
 i 09 35 21.8
 iSgl 09 35 42.5

Grängesberg, Dalarna-
 Västmanland, Sweden,
 60.1°N, 15.0°E.
 Origin time = 09 33 49.
 Rockburst.
 Felt.

" 21 Ud iP 14 41 38.4
 " 21 Up iP 20 20 12.9 C
 micr sec
 P Z' 0.1 1.0
 Ki iP 20 19 29.4
 micr sec
 P Z' 0.1 1.0
 Um iP 20 19 48.7 C
 Ud iP 20 20 19.7 C
 De iP 20 20 36.7
 Hokkaido, Japan region
 (h = 80 km).
 m = 5.8 (Up,Ki).

" 21 Ki iP 22 00 14.9
 micr sec
 P Z' 0.1 1.0
 Um iP 22 00 27.3
 " 21 Sk eP 22 52 56
 Um iP 22 53 07.2
 Near coast of Michoacan,
 Mexico (h = 90 km).

" 21 Up iPKP2 22 55 27.0
 Sk iPKP1 22 55 18.3
 Um iPKP1 22 55 14.0
 Ud iPKP1 22 55 26.4

" 21 Up iP 23 33 50.3
 Ki iP 23 33 15.1
 Um iP 23 33 30.1
 (cont.)

1978

Jan. 21 (cont.)
 Ud iP 23 33 57.5
 Near s. coast of Honshu,
 Japan (h = 340 km).
 " 22 Um iP 00 15 47.3
 Ud iP 00 15 16.2
 " 22 Um iPKP 00 53 01.0
 Ud iPKP 00 53 08.2
 Tonga Islands (h = N).
 " 22 Up iP 06 48 11.9
 Ki iP 06 47 41.9
 micr sec
 P Z' 0.1 1.0
 Sk iP 06 48 12.0
 Um iP 06 47 55.4
 Ud iP 06 48 19.2
 Volcano Islands region (h = N).
 " 22 Up iP 08 20 25.2
 i 08 20 32.4
 micr sec
 P Z' 0.2 0.8
 Ki iP 08 19 33.1
 micr sec
 P Z' 0.1 0.8
 Sk iP 08 20 04.5
 Um iP 08 19 57.7
 Ud iP 08 20 26.0
 De iP 08 20 48.1
 Rat Islands, Aleutian Islands
 (h = 30 km).
 m = 6.1 (Up,Ki).
 " 22 Ki iP 11 56 06.5
 Um iP 11 56 15.2
 Ud iP 11 56 46.1
 De iP 11 56 56.4
 Northern China (h = N).
 " 22 Ki iP 14 43 38.8
 Sk iP 14 43 49.6
 Um iP 14 44 13.8
 Ud iP 14 44 33.1
 " 22 Um iP 14 59 16.2
 " 22 Ki iP 16 11 03.1
 " 22 Ud iP 18 13 15.4
 " 23 Ki iP 08 18 56.5
 Volcano Islands region (h = N).
 " 23 Ki iP 08 50 56.8
 Volcano Islands region (h = N).

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

1978				1978					
Jan.	23	Up	iPKP1	13 52 30.5	Jan.	24	Ki iP	11 45 43.8	
		Sk	iPKP1	13 52 23.7			Volcano Islands region (h = N).		
		Um	iPKP1	13 52 17.8					
		Ud	iPKP1	13 52 32.2	"	24	Ud iPKP	13 36 54.3	
"	24	Up	iP	06 05 20.3			San Juan Province, Argentina (h = 20 km).		
			ipP	06 05 37.3	"	24	Ud iP	13 47 43.4	
				micr sec	"	24	Up	micr sec	
		P	Z'	0.1 0.9			Mx N	2.2 20	
		Mx	E	6.2 19			Um iPP	15 51 44.5	
		Mx	N	8.1 17			New Britain region (h = 100 km).		
		Mx	Z	13 17	"	24	Ud iP	16 11 38.7	
		Ki iP		06 04 34.0			Kuril Islands (h = N).		
				micr sec	"	24	Um iP	23 34 33.0	
		P	Z'	0.1 1.0	"	25	Up i(P)	14 28 29.5	
		Mx	E	5.2 16			(P) Z'	0.1 0.9	
		Mx	N	9.4 16	"	25	Up iP	21 54 02.6	
		Mx	Z	12 17			Ki iP	21 53 09.7	
		Sk iP		06 05 10.8				micr sec	
		Um iP		06 04 55.0			P Z'	0.1 0.8	
				06 13 38			Sk iP	21 53 40.1	
		Ud iP		06 05 26.2 C			Um iP	21 53 36.2	
		De iP		06 05 45.4			Ud iP	21 54 01.8	
		Kuril Islands.					De iP	21 54 24.8	
		h = 60 km (Up).					Fox Islands, Aleutian Islands (h = 20 km).		
		m = 5.8, M = 6.1 (Up,Ki).				"	25	Um iP	22 08 48.3
"	24	Um iP		06 43 33.1			Ud iP	22 08 12.4	
"	24	Ki iP		09 38 44.9			Azores Islands (h = 10 km).		
		Um iP		09 39 02.9	"	25	Up iPKP	23 37 34.2	
		Iceland region (h = 10 km).					iPKKP	23 48 21	
"	24	Up iP		10 15 21.6				micr sec	
		Ki iP		10 15 27.4			Mx E	6.5 20	
		Um iP		10 15 18.8			Mx N	5.8 19	
		Ud iP		10 15 38.1			Mx Z	17 22	
		Afghanistan-USSR border region (h = 130 km).				Ki iPKP		23 37 23.9	
"	24	Up iP		10 37 28.4				micr sec	
		Ki iP		10 36 47.8			Mx E	9.8 21	
				micr sec			Mx N	9.0 22	
		P	Z'	0.1 0.8			Mx Z	18 21	
		Sk iP		10 37 22.3		Sk iPKP		23 37 34.6	
		Um iP		10 37 06.0		Um iPKP		23 37 27.7	
		Ud iP		10 37 36.7				iPKKP	23 48 18.7
		De iP		10 37 52.2		Ud iPKP		23 37 37.1	
		Hokkaido, Japan region (h = 170 km).				De iPKP		23 37 41.7	
"	24	Ki iP		11 37 20.7		New Britain region (h = 45 km). M = 6.4 (Up,Ki).			
		Um iP		11 37 33.5					
		Volcano Islands region (h = N).							

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

1978				1978			
Jan.	26	Ud	i(P) 08 32 00.3	Jan.	28	(cont.)	
"	26	Ud	iP 08 34 35.7 Greece (h = N).			Up	micr sec
"	26	Um	iP 12 38 06.5 Poland (h = 10 km).			Mx N	1.6 15
"	26	Ud	iSgl 13 09 09.9			Mx Z	1.8 15
"	26	Ud	iP 15 02 52.3			Ki iP	03 36 09.4
"	26	Ud	iPKKP 22 18 46.4 East Papua, New Guinea region (h = 70 km).				micr sec
"	27	Um	iP 02 58 41.2			Mx N	1.6 17
"	27	Up	eP 07 35 32			Sk iP	03 35 38.5 C
"	27	Ki	eP 07 35 02			Um iP	03 35 32.9
"	27	Um	iP 07 35 17.1			Ud iP	03 35 06.9 C
"	27		Mariana Islands (h = 40 km).			iS	03 39 33.6
"	27	Sk	iP 11 05 16.2			De iP	03 34 33.5 C
"	27	Um	iP 11 12 36.7	"	28	Sk iP	10 18 29.0
"	27	Um	iP 19 02 30.3			Ud iP	10 17 57.5
"	27		Kenai Peninsula, Alaska (h = 70 km).	"	28	Up iP	10 27 20.5
"	27	Up	iP 19 51 39.0			i	10 27 31.3
"	27	Ki	iP 19 51 42.3			Ud eP	10 27 13
"	27	Um	iP 19 51 37.8				Near coast of Oaxaca, Mexico (h = 45 km).
"	27		Nicobar Islands region (h = 110 km).	"	28	Up iP	13 30 56.9
"	27	Up	iP 19 51 42.7			Ki iP	13 30 21.4
"	27	Ud	il 19 51 55.3			Um iP	13 30 37.0
"	27	De	il 19 51 54.9			i	13 30 49.7
"	27	Um	iP 22 26 06.3			Ud iP	13 31 04.0
"	27		Hindu Kush region (h = 90 km).	"	28		South of Honshu, Japan (h = 45 km).
"	28	Up	iP 02 13 43.1	"	28	Ud iP	14 24 53.3
"	28	Ki	iP 02 14 16.9				Turkey (h = N).
"	28	Um	i 02 14 14.2	"	28	Up iP	19 56 01.3
"	28	Ud	iP 02 13 30.6			i	19 56 05.1
"	28		Central Mid-Atlantic Ridge (h = N).			iSKP	19 59 17.6
"	28	Um	iP 02 49 25.4			iSS	20 17 55
"	28	Up	iP 03 34 59.6				micr sec
"	28		(cont.)			PKP1 Z'	1.6 1.0
						Mx N	2.2 20
						Ki iP	19 55 43.7
							micr sec
						Mx E	1.8 20
						Mx N	2.9 19
						Mx Z	3.1 19
						Sk iP	19 55 53.8
						Um iP	19 55 45.4
						iPKP1	19 55 50.4
						Ud iP	19 56 03.4
						ipPKP1	19 56 20.2
						De iP	19 56 09.1
						iPKP1	19 56 13.6
							South of Fiji Islands. h = 100 km (Ud). M = 6.0 (Up,Ki).

Up = Uppsala, Ki = Kiruna, Sk

tugan, Um = Umeå, Ud = Uddeholm, De = Delary

1978

1978

Jan. 28 Um iP 23 34 35.1
Banda Sea (h = 20 km).

" 29 Up iP 02 15 40.4 C
iPcP 02 16 07.3
micr sec
P Z' 0.2 0.9
Ki iP 02 14 53.7
micr sec
P Z' 0.3 1.0
Sk iP 02 15 28.6
iPcP 02 16 00.5
Um iP 02 15 15.1 C
Ud iP 02 15 46.1 C
De iP 02 16 04.1
Kuril Islands (h = 150 km).
m = 6.0 (Up,Ki).

" 29 Up iPcP 05 20 23.2
micr sec
PKcP Z' 0.2 1.0
Ki ePKP 05 20 06
Sk iPcP 05 20 16.2
Um iPcP 05 20 11.1
Ud iPcP 05 20 26.1
De iPcP 05 20 33.7
Kermadec Islands (h = 45 km).

" 29 Up iP 10 16 16.0
Sk iP 10 16 07.1
Um iP 10 15 51.2
Ud iP 10 16 22.1 C
Hokkaido, Japan region
(h = 55 km).

" 29 Up iP 10 29 07.4
iS 10 33 27.7
micr sec
P Z' 0.2 1.3
Ki iP 10 30 15.3
micr sec
P Z' 0.1 1.0
Sk iP 10 29 47.0
Um iP 10 29 40.4
Ud iP 10 29 15.5
De iP 10 28 43.2
Crete (h = 35 km).
m = 5.6 (Up,Ki).

" 29 Sk ePKP 14 36 10
Um iPcP 14 36 05.9
Ud iPcP 14 36 11.9
De iPcP 14 36 18.3
New Britain region
(h = 20 km).

Jan. 29 Ud iP 17 41 38.2
Eastern Gulf of Aden (h = N).

" 29 Sk iP 18 22 47.4
South of Panama (h = N).

" 29 Up iPcP 21 53 31.1
Um iPcP 21 53 26.0
Ud iPcP 21 53 33.3
De iPcP 21 53 39.6
South of Tonga Islands
(h = 40 km).

" 29 Ki iP 22 00 57.8
Um iP 22 01 24.8
Near east coast of Kamchatka
(h = 20 km).

" 30 Ki iP 05 09 48.9
Near east coast of Kamchatka
(h = 30 km).

" 30 Ud iPcP 05 19 23.0
Kermadec Islands region
(h = 45 km).

" 30 Up eSgl 05 31 17
Sk iSgl 05 29 55.5
Ud iSgl 05 30 17.9
Off coast of west Norway,
near 62°N, 4 1/2°E.
Origin time = 05 27 54.
M_L = 2.7 (Ud).
By combination with Bergen
readings.

" 30 Up iP 07 10 55.0
i 07 11 07.4
micr sec
P Z' 0.1 1.0
i Z' 0.1 0.9
Ki iPcP 07 10 31.3
Sk iPcP 07 10 47.8
i 07 10 57.3
Um iPcP 07 10 42.7
Ud iPcP 07 10 56.2
i 07 11 09.2
De iPcP 07 11 05.2
i 07 11 14.6
Kermadec Islands (h = 40 km).

" 30 Up iP 07 58 32.7
Ki iP 07 59 29.4
Sk iP 07 59 13.1
Ud iP 07 58 35.6
Cyprus (h = 35 km).

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

1978

Jan. 30 Ki iP 13 27 45.9
 Ud iP 13 28 11.3
 Mindanao, Philippine Islands
 (h = 70 km).

" 31 Ki iPKP 02 36 03.5
 Um iPKP 02 36 56.2
 South Sandwich Islands region
 (h = 130 km).

" 31 Up iP 05 49 44.6
 Ki iP 05 48 51.8
 Sk iP 05 49 28.2
 Um iP 05 49 16.9
 Ud iP 05 49 48.5
 De iP 05 50 10.8
 Kamchatka (h = 290 km).

" 31 Up iP 06 43 58.1
 Ki eP 06 45 12
 Sk iP 06 44 41.8
 Um i 06 44 40.1
 Ud iP 06 44 05.8
 i 06 44 08.1
 Greece (h = 40 km).

" 31 Ud iP 07 30 45.7
 De eP 07 30 55
 Taiwan (h = 60 km).

" 31 Sk iSgl 09 37 19.4
 Ud iSgl 09 37 28.5
 Off coast of west Norway,
 near $61\frac{1}{2}^{\circ}\text{N}$, $4\frac{1}{2}^{\circ}\text{E}$.
 Origin time = 09 35 04.
 $M_L = 2.5$ (Ud).
 By combination with Bergen
 readings.

" 31 Ud eSgl 14 29 19

" 31 Up iSgl 20 10 16.7
 Ki ePn 20 08 57
 iPgl 20 09 04.5
 iSn 20 09 42.9
 iSgl 20 09 56.6
 Sk iSgl 20 10 07.5
 Um iPgl 20 08 08.9
 iSgl 20 08 18.8
 iRg 20 08 23.8
 Ud eSgl 20 10 40
 Gulf of Bothnia,
 63.9°N , 22.0°E .
 Origin time = 20 07 55.
 Near-surface event.

October 29, 1979

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SEISMOLOGICAL SECTION
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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

FEBRUARY 1 - 28, 1978

1978					1978				
Feb.	1	Sk eP	00 22 04		Feb.	1	Ud iP	23 03 37.2	
		Um iP	00 21 56.1				Halmahera (h = 110 km).		
		Ud iP	00 21 58.1						
"	1	Sk eSgl	03 41 31		"	1	Um iP	23 38 26.5	
		Ud iSgl	03 41 44.6				Tonga Islands (h = 250 km).		
		Off coast of west Norway,			"	1	Up iP	23 47 48.0	
		near 61 1/2°N, 4 1/2°E.						micr sec	
		Origin time = 03 39 19.					Mx N	1.9 18	
		M _L = 2.4 (Ud).					Ki iP	23 47 00.6	
		By combination with Bergen						micr sec	
		readings.					Mx E	0.8 14	
"	1	Ki iP	09 15 52.1				Mx N	1.2 18	
"	1	Um iP	14 09 15.5				Mx Z	1.2 18	
		South of Honshu, Japan					Um iP	23 47 22.5	
		(h = N).					Ud iP	23 47 53.5	
"	1	Up iP	15 09 15.5		"	2	Ud iP	07 01 39.7	
		Ki eP	15 08 26				Northwest of Kuril Islands		
		Sk eP	15 09 03				(h = 400 km).		
		Um iP	15 08 48.3		"	2	Up Mx	09 06	
		Ud iP	15 09 20.4					micr sec	
		De eP	15 09 40				Mx E	1.2 20	
		Kuril Islands (h = 100 km).					Mx N	1.4 20	
"	1	Up iS	18 14 00				Mx Z	2.4 20	
		Ki iP	18 08 43.6				Ki Mx	09 08	
			micr sec					micr sec	
		Mx E	1.3 13				Mx E	1.3 19	
		Mx N	1.3 15				Mx N	1.3 19	
		Mx Z	1.4 15				Mx Z	2.1 19	
		Sk iP	18 09 31.0				New Britain region (h = N).		
		Um iP	18 09 30.1				M = 5.7 (Up,Ki).		
		iS	18 12 44		"	2	Up iP	11 16 13.0	
		Ud iP	18 10 09.8				Sk eP	11 16 58	
		De iP	18 10 48.3				Um i	11 17 09.9	
		Greenland Sea (h = N).					Ud iP	11 16 21.3	
							Greece (h = N).		

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

1978				1978			
Feb.	2	Ki e	12 49 22	Feb.	3	Up iPKP1	17 03 36.8
		iSgl	12 49 46.1			Sk ePKP1	17 03 31
		Sk iSgl	12 49 51.9			Um iPKP1	17 03 25.8
		Um iSn	12 49 59.5			Ud iPKP1	17 03 37.9
		iSgl	12 50 14.0				
		Ud iSgl	12 51 45.1	"	3	De iPKP1	22 12 07.7
		Nordland, Norway, near				Fiji Islands region	
		66 1/2°N, 14 1/2°E.				(h = 620 km).	
		Origin time = 12 48 25.					
		M _L = 2.6 (Ki,Ud).		"	3	Up iP	23 57 06.3 C
		Explosion?				ipP	23 57 35.2
						P	Z' 0.1 0.7
"	2	Ud iP	13 03 30.8			Ki iP	23 57 00.6
		Kuril Islands (h = N).				Sk iP	23 57 22.3
"	2	Sk iPKP1	23 20 58.0			ipP	23 57 50.8
		Um iPKP1	23 20 53.0			Um iP	23 56 59.3
		Ud iPKP1	23 21 06.8			ipP	23 57 27.8
"	3	Up iPKP1	00 15 08.8			Ud iP	23 57 19.4 C
		Sk ePKP1	00 15 02			ipP	23 57 48.3
		Um iPKP1	00 14 53.9			De iP	23 57 21.5
"	3	Ki iP	02 00 31.6			Burma-India border region.	
		Mariana Islands (h = 140 km).				h = 120 km (Up,Sk,Um,Ud).	
"	3	Ki iPKP	04 40 14.6	"	4	Ud i(P)	00 05 57.0
		South Sandwich Islands region		"	4	Um iPKP	00 32 54.6
		(h = N).				Santa Cruz Islands (h = N).	
"	3	Um iP	05 05 38.9	"	4	Up iSgl	10 44 35.9
		South of Honshu, Japan				Sk eSgl	10 43 52
		(h = N).				Ud i	10 43 26.5
"	3	Up iPKP1	07 58 53.0			iSgl	10 43 31.9
		Um i(PKP)	07 58 45.8			De eSgl	10 44 49
		iPKP	07 58 52.4			Southern Norway, near	
		Ud iPKP1	07 58 55.4			60 3/4°N, 8°E.	
		De iPKP1	07 59 05.0			Origin time = 10 42 08.	
		Fiji Islands region				M _L = 2.4 (Ud).	
		(h = 510 km).		"	4	Ki i(P)	13 26 01.5
"	3	Up iP	14 46 37.3			Um i(P)	13 26 21.7
		i	14 46 39.3	"	4	Ud iP	21 39 36.5
		Ki iP	14 46 20.8	"	4	Ki iPKP	22 01 52.8
		i	14 46 23.3			Um iPKP	22 01 59.0
			micr sec			Ud iPKP	22 02 08.3
		i	Z' 0.2 1.1			De iPKP	22 02 15.2
		Sk eP	14 46 43			New Hebrides Islands	
		Um iP	14 46 25.7			(h = 200 km).	
		i	14 46 28.2	"	5	Up iP	01 49 55.0
		Ud iP	14 46 44.8			Ki iP	01 49 06.0
		i	14 46 47.5			Um iP	01 49 28.5
		De eP	14 46 51			(cont.)	
		Talaud Islands (h = 190 km).					

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

1978				1978					
Feb.	5	(cont.)		Feb.	7	Up	iP	07 15 07.8	
		Ud	iP	01 50 00.5			i	07 15 12.0	
		De	eP	01 50 18			iPP	07 19 03.2	
		Kuril Islands (h = 50 km).					iS	07 25 40	
								micr sec	
"	5	Ki	iP	16 13 30.6			i	Z' 0.1 1.0	
		Um	iP	16 14 03.0			Mx	E 1.6 21	
		Queen Elizabeth Islands (h = N).					Mx	N 4.2 21	
						Ki	Mx	Z 2.6 19	
"	5	Ki	ipP	18 32 02.4			iP	07 14 53.7	
		Ud	iP	18 30 58.1			i	07 14 59.2	
		Southern Sumatera (h = 290 km).						micr sec	
							i	Z' 0.2 1.1	
"	5	Ud	iP	21 33 05.6			Mx	E 3.3 19	
		De	iP	21 32 32.7			Mx	N 5.5 21	
		Mediterranean Sea (h = N).					Mx	Z 3.7 21	
"	5	Ki	iP	23 23 35.7		Sk	eP	07 15 16	
		Um	iP	23 23 40.8			i	07 15 19.5	
		Halmahera (h = 160 km).				Um	iP	07 14 58.1	
							i	07 15 03.2	
"	6	Up	iP	03 32 53.4			iSKS	07 25 30	
				micr sec			iS	07 26 02	
			P	Z' 0.2 1.3		Ud	iP	07 15 15.4	
		Ki	iP	03 31 58.9			i	07 15 21.9	
				micr sec		De	iP	07 15 20.2	
			P	Z' 0.1 1.3		Molucca Sea (h = 80 km).			
		Sk	iP	03 32 36.4		m = 6.4, M = 6.0 (Up,Ki).			
		Um	iP	03 32 24.0	"	7	Um	iP	07 31 49.6
		Ud	iP	03 32 56.6			Molucca Sea (h = N).		
		De	eP	03 33 22	"	7	Up	iP	12 41 59.8 C
		Kamchatka (h = 55 km).						micr sec	
		m = 5.9 (Up,Ki).					P	Z' 0.2 1.0	
"	6	Um	iP	05 17 23.8			Mx	E 1.2 21	
"	6	Up	ePKP1	21 02 28			Mx	N 3.4 19	
		Ki	iPKP	21 02 21.2			Mx	Z 2.4 18	
		Sk	ePKP	21 02 31		Ki	iP	12 42 00.1 C	
		Um	i(PKP)	21 02 16.9				micr sec	
			iPKP	21 02 28.9			P	Z' 0.2 1.0	
		Ud	iPKP1	21 02 30.0			Mx	E 1.7 16	
			i	21 02 33.6			Mx	N 4.5 19	
		De	iPKP1	21 02 41.7 D			Mx	Z 2.1 17	
			i	21 02 43.9		Sk	iP	12 42 17.1 C	
		South of Fiji Islands (h = 390 km).				Um	iP	12 41 56.1 C	
"	6	Um	iP	21 23 51.5		Ud	iP	12 42 11.9 C	
			i	21 23 59.0		De	iP	12 42 10.6 C	
"	7	Ki	eP	03 01 34		Andaman Islands region (h = N)			
		Um	iP	03 01 42.1		m = 6.1, M = 5.7 (Up,Ki).			
			i	03 01 53.0	"	7	Up	iP	13 45 29.8
							Ki	iP	13 45 30.8
							Sk	iP	13 45 47.7
							Um	iP	13 45 26.6
							Ud	iP	13 45 42.5
						Andaman Islands region (h = N)			

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

1978				1978									
Feb.	7	Sk	iP	13 48	37.6	Feb.	8	Up	iP	00 27	26.2		
		Um	iP	13 48	16.6				i	00 27	51.3		
		Ud	iP	13 48	33.0								
		Probably Andaman Islands region.							P	Z'	0.1 1.0		
									Mx	E	6.4 17		
									Mx	N	5.7 17		
"	7	Ud	iP	13 57	35.2				Mx	Z	12 17		
								Ki	iP	00 27	02.0		
"	7	Up	iPKP1	15 51	13.3				P	Z'	0.1 1.0		
			iSKP1	15 54	02.4				Mx	E	3.0 14		
		Ki	ePKP	15 51	05				Mx	N	3.7 15		
			iSKP1	15 51	37.7				Mx	Z	3.4 14		
		Um	i(PKP)	15 51	05.8			Sk	iP	00 27	29.7		
			iPKP	15 51	12.6			Um	iP	00 27	10.7		
			iSKP1	15 53	49.7				iS	00 36	38		
		Ud	iPKP1	15 51	13.8			Ud	iP	00 27	35.6		
			iSKP1	15 54	03.6			De	iP	00 27	44.7		
		De	iPKP1	15 51	24.8			Taiwan region (h = 40 km).					
			iSKP1	15 54	12.8			m = 5.8, M = 6.0 (Up,Ki).					
		Fiji Islands region (h = 580 km).						"	8	Um	iP	01 38	37.1
										Taiwan region (h = 40 km).			
"	7	Up	iP	20 43	13.9			"	8	Um	iP	04 15	34.7
			iS	20 52	34					Ud	iP	04 14	54.6
										Southern Italy (h = 100 km).			
			P	Z'	0.4 1.3			"	8	Up	eP	04 17	23
			Mx	E	2.5 19					Ki	iP	04 17	24.4
			Mx	N	5.7 21					Sk	iP	04 17	40.8
			Mx	Z	4.4 19					Um	iP	04 17	20.8
		Ki	iP	20 43	14.2					Ud	iP	04 17	36.4
			P	Z'	0.2 1.1			"	8	Ud	iP	04 44	02.1
			Mx	E	2.5 15								
			Mx	N	8.1 19			"	8	Ki	iPgl	09 15	10.5
			Mx	Z	2.4 17					North of Norway, near			
		Sk	iP	20 43	30.9					71 1/2°N, 28 1/2°E.			
		Um	iP	20 43	10.0					Origin time = 09 13 50.			
		Ud	iP	20 43	26.0					Solution from Helsinki			
		De	iP	20 43	24.5					regional bulletin.			
		Andaman Islands region (h = N).											
		m = 6.2, M = 6.0 (Up,Ki).						"	8	Ki	iPKP2	09 49	06.4
"	7	Sk	eP	21 12	06					West of Macquarie Island			
		Um	iP	21 11	46.1					(h = N).			
		Ud	iP	21 12	02.2								
		Andaman Islands region (h = N).						"	8	Sk	eP	10 13	21
"	7	Up	iP	21 34	56.0								
		Ki	iP	21 34	56.1								
		Sk	iP	21 35	13.0			"	8	Up	iP	13 18	23.9
		Um	iP	21 34	51.7					Ki	iP	13 18	22.9
		Ud	iP	21 35	08.2					Sk	iP	13 18	36.9
		Andaman Islands region (h = N).								Um	iP	13 18	20.8
"	7	Um	iP	22 15	18.1					Ud	iP	13 18	32.8
		Andaman Islands region (h = N).								Southern Sumatera (h = 80 km).			

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

1978									
Feb.	8	Up	iP	16 20	11.4				
		Ki	iP	16 21	22.2				
						micr	sec		
			P	Z'	0.2	1.5			
			Mx	E	0.6	14			
		Sk	eP	16 20	41				
		Um	iP	16 20	48.3				
		Ud	iP	16 20	09.0				
		De	iP	16 19	36.9				
		Tunisia (h = 25 km).							
"	8	Ki	iPKP1	22 28	52.7				
		South of Kermadec Islands (h = 250 km).							
"	8	Ud	iP	23 31	46.0				
"	8	Um	iPKP1	23 32	34.8				
		Ud	iPKP1	23 32	45.6				
		Kermadec Islands region (h = 120 km).							
"	9	Up	iP	05 46	20.8				
		Ki	iP	05 46	14.5				
			ipP	05 46	43.7				
		Sk	iP	05 46	37.0				
			ipP	05 47	05.9				
		Um	iP	05 46	13.5				
			ipP	05 46	42.9				
		Ud	iP	05 46	33.9				
			ipP	05 47	02.0				
		Burma-India border region. h = 120 km (Ki,Sk,Um,Ud).							
"	9	Up	iP	08 13	02.2				
			iS	08 21	58				
						micr	sec		
			P	Z'	0.1	0.9			
			Mx	E	3.3	19			
			Mx	N	5.1	17			
			Mx	Z	7.7	18			
		Ki	iP	08 12	15.6				
						micr	sec		
			P	Z'	0.1	1.2			
			Mx	E	3.4	16			
			Mx	N	3.7	17			
			Mx	Z	4.8	17			
		Sk	iP	08 12	50.9				
		Um	iP	08 12	36.6				
			iS	08 21	18				
		Ud	iP	08 13	07.8				
		De	iP	08 13	26.3				
		Kuril Islands (h = 45 km). m = 5.8, M = 5.8 (Up,Ki).							
1978									
Feb.	9	Ud	iP	13 13	12.4				
"	9	Um	iP	13 20	40.3				
		Andaman Islands region (h = N).							
"	9	Um	iP	14 57	12.7				
		Ud	iP	14 57	43.1				
			ipP	14 57	54.0				
		Kuril Islands (h = 50 km).							
"	9	Ki	iP	16 35	51.4				
		Sk	iP	16 35	06.2				
		Um	iP	16 35	08.9				
		Yugoslavia (h = 20 km).							
"	9	Sk	iSgl	16 39	14.9				
		Um	iSgl	16 40	48.0				
		Ud	eSgl	16 38	39				
		De	e	16 39	26				
		Coast of southwest Norway, near 59 1/2°N, 6°E. Origin time = 16 36 41. By combination with Bergen and Kongsberg readings.							
"	9	Ud	iPKP1	19 46	37.8				
		De	iPKP1	19 46	49.4				
		South of Fiji Islands (h = 580 km).							
"	9	Up	iP	21 16	03.4				
		Ki	iP	21 17	02.6				
		Um	iP	21 16	27.9				
		Ud	iP	21 16	16.4				
		Turkey (h = 35 km).							
"	9	Up	iPKP1	21 54	55.8	C			
			iPKP2	21 55	00.7				
			iSS	22 17	41				
						micr	sec		
			PKP1	Z'	0.1	1.3			
			PKP2	Z'	0.3	1.0			
			Mx	E	15	20			
			Mx	N	47	21			
			Mx	Z	51	21			
		Ki	iPKP	21 54	38.4				
			i	21 54	46.2				
						micr	sec		
			Mx	E	17	19			
			Mx	N	66	20			
			Mx	Z	58	21			
		Sk	iPKP1	21 54	48.9				
		(cont.)							

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

1978				1978					
Feb.	9	(cont.)		Feb.	9	Up	iPKP1	22 37 06.3	
		Um	iPKP1	21 54 43.6		Sk	iPKP1	22 37 01.0	
		Ud	iPKP1	21 54 57.7		Um	iPKP1	22 36 55.6	
		De	iPKP1	21 55 07.5		Ud	iPKP1	22 37 08.6	
		Kermadec Islands (h = N).				Kermadec Islands.			
		M = 7.4 (Up,Ki).							
"	9	Sk	iPKP1	22 00 57.5	"	9	Um	iPKP1	22 38 57.1
			i	22 01 13.6			Ud	iPKP1	22 39 10.1
		Um	iPKP1	22 00 53.1			Kermadec Islands.		
		Kermadec Islands.			,	9	Up	iPKP1	22 41 29.4
"	9	Up	i	22 07 02.7				micr	sec
		Sk	iPKP1	22 07 41.2			PKP1	Z'	0.1 1.0
			i	22 06 56.4		Ki	iPKP1	22 41 06.8	
		Um	iPKP1	22 06 35.9		Sk	iPKP1	22 41 22.5	
			i	22 06 51.6		Um	iPKP1	22 41 17.5	C
		Ud	i	22 07 05.9			i	22 41 37.0	
		Kermadec Islands.				Ud	iPKP	22 41 28.3	
"	9	Um	iP	22 11 45.3			iPKP1	22 41 30.8	
						De	iPKP1	22 41 38.5	
"	9	Ud	iP	22 14 22.8			iPKP2	22 41 50.9	
"	9	Up	iPKP2	22 17 56.3			Kermadec Islands (h = N).		
		Sk	iPKP1	22 17 45.8	"	9	Um	iP	22 44 46.2
		Um	iPKP1	22 17 40.9	"	9	Sk	iPKP1	23 03 30.4
		Ud	iPKP1	22 17 53.6			Um	iPKP1	23 03 26.5
		De	iPKP1	22 18 01.1			Ud	iPKP1	23 03 39.6
		Kermadec Islands.					Kermadec Islands (h = N).		
"	9	Um	iP	22 22 54.7	"	9	Up	iPKP1	23 14 39.3
"	9	Up	iPKP2	22 26 08.9			Sk	iPKP1	23 14 33.5
		Sk	ePKP1	22 25 58			Um	iPKP1	23 14 28.6
		Um	iPKP1	22 25 50.9			Ud	iPKP1	23 14 42.0
		Ud	iPKP1	22 26 05.5			De	iPKP1	23 14 50.3
		Kermadec Islands.					Kermadec Islands (h = N).		
"	9	Um	iP	22 29 25.3	"	9	Ki	iP	23 15 27.9
"	9	Up	iPKP1	22 31 42.2			Sk	iP	23 16 17.4
		Ki	i	22 31 35.6			Um	iP	23 16 22.0
		Sk	iPKP1	22 31 33.7			Ud	iP	23 16 58.1
		Um	iPKP1	22 31 29.1	"	9	Up	iPKP1	23 17 58.6
		Ud	iPKP1	22 31 42.1			Ki	iPKP	23 17 42.8
		De	iPKP1	22 31 52.2			Sk	iPKP1	23 17 53.0
		Kermadec Islands (h = N).					Um	iPKP1	23 17 47.1
"	9	Up	iPKP2	22 35 26.0				i	23 17 58.2
		Sk	iPKP1	22 35 13.0			Ud	iPKP1	23 18 00.0
		Um	iPKP1	22 35 08.1			De	iPKP1	23 18 10.6
		Ud	iPKP1	22 35 21.1				i	23 18 20.7
		Kermadec Islands.					Kermadec Islands (h = N).		
"	9	Up	ePKP1	23 20 47	"	9	Up	ePKP1	23 20 47
		Um	iPKP1	23 20 32.2			Um	iPKP1	23 20 32.2
		Ud	ePKP1	23 20 49			Ud	ePKP1	23 20 49
		Kermadec Islands.					Kermadec Islands.		

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

1978

Feb.	9	Um	iP	23 32	41.4
"	10	Up	ePKP1	00 07	14
		Sk	iPKP1	00 07	07.0
		Um	iPKP1	00 07	01.1
			i	00 07	02.1
		Ud	iPKP1	00 07	15.3
			Kermadec Islands.		
"	10	Um	iP	00 33	05.3
"	10	Um	iP	00 35	03.0
"	10	Um	iP	01 04	09.3
			i	01 04	19.7
"	10	Up	iPKP1	01 16	06.3
				micr	sec
			PKP1	Z'	0.1 1.0
			Mx	E	1.1 19
			Mx	N	2.5 20
			Mx	Z	2.4 20
		Ki	iPKP	01 15	49.5
				micr	sec
			Mx	E	1.5 20
			Mx	N	2.6 19
			Mx	Z	2.4 20
		Sk	iPKP1	01 15	59.6
		Um	iPKP1	01 15	53.6
		Ud	iPKP1	01 16	08.0
		De	iPKP1	01 16	16.3
			Kermadec Islands (h = N).		
			M = 6.1 (Up,Ki).		
"	10	Um	iP	01 28	20.0
"	10	Up	i	01 46	41.3
		Sk	iPKP1	01 46	22.3
			i	01 46	34.6
		Um	iPKP1	01 46	17.1
			i	01 46	29.1
		Ud	iPKP1	01 46	30.6
			Kermadec Islands.		
"	10	Um	iPKP1	02 50	11.6
		Ud	iPKP1	02 50	24.2
			Kermadec Islands.		
"	10	Um	iP	04 18	27.1
			i	04 18	37.8
"	10	Um	iP	04 31	55.6
"	10	Up	e	04 33	57
			i	04 34	07.1
			(cont.)		

1978

Feb.	10	(cont.)			
		Um	iPKP1	04 33	36.0
		Ud	i	04 33	57.0
			Kermadec Islands.		
"	10	Up	iPKP1	05 55	26.0
		Sk	ePKP1	05 55	20
		Um	iPKP1	05 55	13.0
			i	05 55	14.3
		Ud	iPKP1	05 55	27.7
		De	iPKP2	05 55	46.1
			Kermadec Islands (h = N).		
"	10	Up	iP	06 14	46.8
"	10	Um	iP	06 33	48.5
"	10	Um	iPKP1	09 37	12.0
			Kermadec Islands (h = N).		
"	10	Um	iP	13 45	01.9
"	10	Up	ePKP1	15 33	23
			i	15 33	41.7
		Sk	iPKP1	15 33	17.2
		Um	iPKP1	15 33	11.5 C
		Ud	iPKP1	15 33	23.6
			Kermadec Islands (h = N).		
"	10	Up	iP	16 08	40.0
		Ki	iP	16 07	51.2
		Um	iP	16 08	13.9
		Ud	iP	16 08	46.1
			Kuril Islands (h = 140 km).		
"	10	Up	iP	17 39	19.6 C
				micr	sec
			P	Z'	0.2 1.0
		Ki	iP	17 39	19.1 C
				micr	sec
			P	Z'	0.1 0.8
		Sk	iP	17 39	39.2 C
		Um	iP	17 39	14.0 C
		Ud	iP	17 39	34.4 C
			Nepal (h = N).		
			m = 6.0 (Up,Ki).		
"	10	Ud	iP	19 04	25.3
			Mindanao, Philippine Islands		
			(h = 120 km).		
"	10	Ud	iP	19 33	47.5
"	10	Up	iPKP1	19 52	19.7
			i	19 52	31.4
			(cont.)		

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

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Feb. 10

(cont.)

Up			micr	sec
	PKP1	Z'	0.2	1.1
	i	Z'	0.3	1.0
	Mx	E	1.9	20
	Mx	N	2.4	19
	Mx	Z	2.6	21
Ki	iPKP1		19 51	58.4
			micr	sec
	Mx	E	2.6	20
	Mx	N	5.0	20
	Mx	Z	3.4	19
Sk	iPKP1		19 52	12.8
Um	iPKP1		19 52	07.5
Ud	iPKP1		19 52	20.8
	i		19 52	34.0
De	iPKP1		19 52	30.0
	i		19 52	42.1
Kermadec Islands (h = N).				
M = 6.2 (Up,Ki).				

" 10

Up	iP		20 59	11.3
	ipP		20 59	19.0
			micr	sec
	P	Z'	0.1	1.2
Ki	iP		20 59	37.0 C
	ipP		20 59	44.1
			micr	sec
	P	Z'	0.1	0.6
Sk	iP		20 59	41.5
	ipP		20 59	49.5
Um	iP		20 59	19.0 C
	ipP		20 59	26.0
Ud	iP		20 59	26.0 C
	ipP		20 59	34.0
De	iP		20 59	14.4
	ipP		20 59	21.8
Pakistan.				
h = 30 km (Up,Ki,Sk,Um,Ud,De).				
m = 5.7 (Up,Ki).				

" 10

Um	iP		21 20	39.6
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" 10

Um	iPKP1		22 55	01.3
Ud	iPKP1		22 55	14.8
Kermadec Islands.				

" 11

Up	iPKP1		00 09	18.0
Sk	iPKP1		00 09	11.1
Um	iPKP1		00 09	05.9
Ud	iPKP1		00 09	19.1
Kermadec Islands.				

" 11

Up	iPKP1		00 10	40.2
(cont.)				

1978

Feb. 11

(cont.)

Sk	iPKP1		00 10	34.0
Um	iPKP1		00 10	28.2
Ud	iPKP1		00 10	41.7
De	iPKP1		00 10	50.3
Kermadec Islands.				

" 11

Up	iPKP1		00 25	06.9
	i		00 25	13.2
			micr	sec
	i	Z'	0.3	1.2
	Mx	E	3.1	18
	Mx	N	4.7	19
	Mx	Z	11	20
Ki	iPKP		00 24	51.6
			micr	sec
	Mx	E	5.9	20
	Mx	N	14	20
	Mx	Z	10	20
Sk	iPKP1		00 25	00.8
Um	iPKP1		00 24	53.0
Ud	iPKP1		00 25	07.0
De	iPKP1		00 25	14.2
Kermadec Islands (h = N).				
M = 6.6 (Up,Ki).				

" 11

Up	iPKP1		00 36	04.3
Sk	ePKP1		00 35	57
Um	iPKP1		00 35	49.1
Ud	iPKP1		00 36	05.4
Kermadec Islands (h = N).				

" 11

Um	iPKP1		00 41	09.8
Ud	iPKP1		00 41	24.4
Kermadec Islands.				

" 11

Sk	eP		01 11	04
Um	iP		01 10	49.6
Ud	iP		01 11	09.3

" 11

Um	iP		01 19	12.4
----	----	--	-------	------

" 11

Um	iP		01 24	20.5
----	----	--	-------	------

" 11

Up	iPKP1		01 24	46.9
Sk	iPKP1		01 24	38.5
	i		01 24	50.2
Um	iPKP1		01 24	33.2
Ud	iPKP1		01 24	47.9
Kermadec Islands.				

" 11

Sk	iSgl		01 35	34.9
Um	eSgl		01 37	23
Ud	iSn		01 35	20.4
	iSgl		01 35	48.6
(cont.)				

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

1978				1978			
Feb.	11	(cont.) Off coast of west Norway, near 61 1/4°N, 4°E. Origin time = 01 33 19. M _L = 2.9 (Ud). By combination with Bergen readings.		Feb.	11	(cont.) Ki iP 07 24 50.8 Sk iP 07 25 08.2 Um iP 07 24 40.7 Ud iP 07 24 59.4 De iP 07 24 55.8 Afghanistan-USSR border region (h = 120 km).	
"	11	Up iP 01 37 11.4 Ki iP 01 37 45.4 Sk iP 01 37 13.3 Um iP 01 37 32.2 Ud iP 01 37 01.5 Central Mid-Atlantic Ridge (h = N).		"	11	Um iP 07 57 31.1	
"	11	Um iP 01 50 39.0		"	11	Um iP 10 56 21.1	
"	11	Um iP 04 20 26.9		"	11	Um iPKP1 12 11 44.8 Ud iPKP1 12 12 00.1 Kermadec Islands (h = N).	
"	11	Up iPKP1 04 32 16.3 i 04 32 23.2 Ki iPKP 04 32 01.6 Sk iPKP1 04 32 10.1 Um iPKP1 04 32 4.7 C Ud iPKP1 04 32 18.2 C De iPKP2 04 32 37.3 Kermadec Islands (h = N).		"	11	Um iPKP1 12 19 31.1 i 12 19 43.0 Ud iPKP1 12 19 43.9 i 12 20 01.5 Kermadec Islands.	
"	11	Up iPKP1 05 23 20.5 Sk iPKP1 05 23 14.2 Um iPKP1 05 23 08.9 Ud iPKP1 05 23 21.6 Kermadec Islands region (h = N).		"	11	Up iP 12 21 07.8 C P Z' 0.1 0.5 Ki iP 12 20 13.5 C P Z' 0.1 0.7 Sk iP 12 20 48.3 C Um iP 12 20 39.5 C Ud iP 12 21 09.5 C De iP 12 21 31.7 Near Islands, Aleutian Islands (h = N). m = 6.0 (Up,Ki).	
"	11	Um iP 05 44 40.3		"	11	Um iP 12 33 24.5 Off coast of Central America (h = 80 km).	
"	11	Up iPKP2 06 15 06.8 i 06 15 19.8 Sk iPKP1 06 14 56.7 Um iPKP1 06 14 50.2 Ud iPKP1 06 15 03.6 Kermadec Islands (h = N).		"	11	Up iP 13 03 33.8 iS 13 11 00 P Z' 0.2 1.7 Mx E 1.5 19 Mx N 3.0 19 Mx Z 3.4 18 Ki iP 13 04 12.6 P Z' 0.3 1.7 Mx E 2.1 18 Mx N 1.5 18 Mx Z 2.4 20 Sk iP 13 04 06.2	
"	11	Ki iP 06 29 24.2 Um iP 06 29 59.7 North of Severnaya Zemlya (h = N).				(cont.)	
"	11	Up iP 07 24 42.9 iPP 07 26 17.1 P Z' 0.2 1.0 (cont.)				(cont.)	

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

1978				1978				
Feb.	11	(cont.)		Feb.	11	Um	iPKP	22 16 11.1
		Um	iP					East Papua New Guinea region
			i					(h = 90 km).
			iS					
		Ud	iP	"	12	Um	iP	00 41 12.6
				"	12	Ki	iP	03 48 18.8
								micr sec
							P	Z' 0.1 1.0
"	11	Um	iP			Sk	iPP	03 53 07.1
						Um	iP	03 48 21.5
"	11	Um	iP				i(PP)	03 52 07.6
			i				iPP	03 52 40.9
		Ud	eP			Ud	iP	03 48 39.8
								Timor (h = 110 km).
				"	12	Ud	iP	04 35 35.7
"	11	Sk	iPKP1	"	12	Up	i	05 56 08.1
		Um	iPKP1			Sk	ePKP1	05 55 47
			i			Um	iPKP1	05 55 40.6
		Ud	iPKP1			Ud	iPKP1	05 55 54.2
							i	05 56 05.4
								Kermadec Islands.
"	11	Ki	iP	"	12	Sk	iPKP1	08 03 19.4
		Sk	eP			Um	iPKP1	08 03 14.0
		Um	iP			Ud	iPKP1	08 03 26.5
		Ud	iP					Kermadec Islands.
"	11	Um	iP	"	12	Up	iP	09 06 43.6 C
								micr sec
							P	Z' 0.2 1.0
						Ki	iP	09 05 47.8
								micr sec
"	11	Up	i				P	Z' 0.2 0.9
		Sk	ePKP1			Sk	iP	09 06 15.6 C
		Um	iPKP1			Um	iP	09 06 17.0 C
		Ud	iPKP1			Ud	iP	09 06 40.3 C
						De	iP	09 07 04.9
								Southern Alaska (h = 70 km).
"	11	Up	iP					m = 6.2 (Up,Ki).
				"	12	Um	iP	10 52 27.7
				"	12	Um	iP	11 03 51.2
				"	12	Um	iP	11 22 01.7
								Mariana Islands (h = 150 km).
				"	12	Um	iP	11 26 34.3
				"	12	Ki	iP	12 29 16.6
						Sk	iP	12 29 09.7
"	11	Um	iP			Um	iP	12 29 23.3
		Ud	iP					Near coast of Chiapas,
								Mexico (h = 55 km).

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

1978				1978									
Feb.	12	Ki	iP	14 30	36.8	Feb.	13	(cont.)					
		Um	iP	14 31	16.9			Ki		micr	sec		
"	12	Sk	iPKP1	16 10	38.1			P	Z'	0.1	1.1		
		Um	iPKP1	16 10	33.3			Mx	N	1.0	19		
		Ud	iPKP1	16 10	46.8			Sk	iP	13 12	39.5		
		Kermadec Islands region						Um	iP	13 12	28.7 C		
		(h = N).							iPcP	13 13	24.2		
"	12	Um	iP	18 23	59.5			Ud	iP	13 13	00.3 C		
		Near east coast of Kamchatka						De	iP	13 13	23.1		
		(h = N).						m = 5.8, M = 5.1 (Up,Ki).					
"	12	Up	iPKP1	19 37	56.6		"	13	Um	iP	14 15	12.3	
		Ki	iPKP	19 37	38.5				Ud	iP	14 15	32.3	
		Sk	iPKP1	19 37	50.2			Afghanistan-USSR border					
		Um	iPKP1	19 37	44.3 C			region (h = 90 km).					
		Ud	iPKP1	19 37	58.0			"	13	Um	iP	15 44	30.8
		De	iPKP1	19 38	06.3					Ud	iP	15 44	47.8
		Kermadec Islands (h = 90 km).								De	iP	15 44	44.1
"	13	Um	iP	01 26	23.7			Hindu Kush region (h = 110 km).					
		Southern Alaska (h = 130 km).					"	13	Up	iPKP1	17 28	05.3 D	
"	13	Um	iPKP1	05 32	23.9				iPKP2	17 28	09.7		
		Ud	iPKP1	05 32	36.1					micr	sec		
		Kermadec Islands.							PKP1	Z'	0.2	1.0	
"	13	Um	iP	05 51	57.9				PKP2	Z'	0.3	0.9	
"	13	Up	ePKP1	06 34	59			Ki	iPKP1	17 27	42.8		
		i		06 35	10.3			Sk	iPKP1	17 27	59.0 D		
		Sk	iPKP1	06 34	50.2			Um	iP	17 27	53.4 D		
		Um	iPKP1	06 34	45.9			Ud	iPKP1	17 28	07.2 D		
		Ud	iPKP1	06 34	58.9				iPKP2	17 28	12.4		
		i		06 35	12.2			De	iPKP1	17 28	15.7 D		
		De	iPKP2	06 35	20.7			Kermadec Islands region					
		Kermadec Islands (h = N).						(h = 330 km).					
"	13	Sk	iSgl	09 02	20.7		"	13	Up	iP	18 29	37.6	
"	13	Ud	eP	09 07	38					micr	sec		
		i		09 07	47.8			P	Z'	0.3	1.5		
		De	iP	09 07	58.2			Ki	iP	18 28	44.3		
"	13	Ud	iP	10 43	15.9					micr	sec		
"	13	Ud	iP	11 11	31.6			P	Z'	0.1	1.0		
"	13	Up	iP	13 12	57.4			Sk	iP	18 29	20.8		
		i		13 13	07.1			Um	iP	18 29	09.3		
				micr	sec			Ud	iP	18 29	41.4		
		P	Z'	0.1	1.1			De	iP	18 30	02.1		
		i	Z'	0.1	1.0			Off east coast of Kamchatka					
		Mx	E	1.8	19			(h = 45 km).					
		Ki	iP	13 12	02.3 C			m = 6.0 (Up,Ki).					
		(cont.)					"	13	Um	iP	18 49	48.8	
								Southern Iran (h = N).					

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

1978				1978					
Feb.	13	Up	iPKP1	19 44 35.2	Feb.	15	Um	i(P)	00 34 10.4
		Um	iPKP1	19 44 25.8	"	15	Um	iP	00 36 55.8
		Ud	iPKP1	19 44 37.8	"	15	Ki	iP	02 03 32.3
		Kermadec Islands.					Um	iP	02 03 29.3
"	13	Ud	iP	22 35 22.7			Southern Sumatera (h = N).		
			i	22 35 33.9	"	15	Ki	iSgl	02 22 49.1
		Luzon, Philippine Islands					Sk	iSgl	02 22 55.6
		(h = 70 km).					Um	iSn	02 23 02.5
"	13	Um	iP	23 34 01.3				iSgl	02 23 16.8
"	14	Ki	iP	00 17 10.1			Nordland, Norway,		
		Um	iP	00 17 09.9			66.4°N, 14.2°E.		
		Java (h = 90 km).					Origin time = 02 21 22.		
"	14	Up	ePKP1	11 38 39			M _L = 2.4 (Ki,Um).		
		Sk	i	11 38 38.3	"	15	Up	iP	03 23 02.7
		Um	iPKP1	11 38 27.5				i	03 23 05.3
		Ud	iPKP1	11 38 39.1			Ki	iP	03 23 45.7
		Kermadec Islands (h = 55 km).						i	03 23 48.4
"	14	Up	iSgl	14 08 32.6			Um	iP	03 23 16.4
		Ud	iSgl	14 07 31.6			Ud	iP	03 23 15.5
			iRg	14 07 42.3				i	03 23 26.8
		Regional, near-surface event.						i	03 23 34.5
"	14	Um	iPKP1	15 18 31.4			De	iP	03 22 53.9
		Kermadec Islands (h = 15 km).					Turkey (h = N).		
"	14	Um	i(P)	18 26 06.1	"	15	Up	i	03 33 06.2
"	14	Um	iPKP1	20 42 43.5				i	03 33 22.4
		Kermadec Islands region							micr sec
		(h = N).							Z' 0.2 1.5
"	14	Um	iP	21 47 09.9			Ki	eP	03 33 50
"	14	Up	iP	22 42 56.3				i	03 33 55.1
		Um	iP	22 43 27.7			Um	iP	03 33 20.6
			i	22 43 33.9			Ud	i	03 33 27.2
			iS	22 47 16.9				i	03 33 37.3
		Ud	iP	22 43 09.8			Turkey (h = N).		
		Black Sea (h = N).		"	15	Up	iPKP1	05 37 19.6	
"	14	Um	iP	23 05 34.5			Ki	iPKP	05 37 00.9
"	14	Um	iP	23 10 44.4			Sk	iPKP1	05 37 11.8
		Ud	iP	23 10 59.1			Um	iPKP1	05 37 06.7
"	14	Um	iPKP	23 35 47.9			Ud	iPKP1	05 37 20.1
		New Hebrides Islands (h = N).					De	iPKP1	05 37 28.3
"	15	Ud	iPKP1	00 09 26.0			Kermadec Islands region		
		De	iPKP1	00 09 36.8			(h = 35 km).		
		South of Fiji Islands		"	15	Up	i	05 53 17.7	
		(h = 40 km).					i	05 53 30.1	
						Ki	iP	05 54 03.2	
						Sk	eP	05 53 51	
						Um	iP	05 53 31.0	
							i	05 53 35.9	
						Ud	eP	05 53 28	
							i	05 53 37.6	
							i	05 53 43.3	
						Turkey (h = 20 km).			

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

1978				1978					
Feb.	15	Ud	iPKP2	06 49 58.6	Feb.	16	Up	iP	00 10 06.8
				Kermadec Islands (h = 40 km).			Um	iP	00 10 02.5
							Ud	iP	00 10 18.9
"	15	Up	iP	08 30 41.8	"	16	Up	iP	04 00 12.6
		Ki	iP	08 30 42.4				ipP	04 00 19.1
				micr sec					micr sec
			P	Z' 0.4 1.9				P	Z' 0.1 1.0
		Sk	iP	08 30 58.8			Ki	iP	04 00 13.9
		Um	iP	08 30 38.0				ipP	04 00 20.1
			i	08 30 43.2					micr sec
		Ud	iP	08 30 53.8				P	Z' 0.1 1.1
		De	eP	08 30 52			Sk	iP	03 59 59.9
			i	08 30 57.6				ipP	04 00 06.1
				Andaman Islands region			Um	iP	04 00 16.4
				(h = N).				ipP	04 00 22.3
"	15	Um	iP	11 28 35.4			Ud	iP	04 00 03.2
		Ud	eP	11 29 06				ipP	04 00 09.4
				Hokkaido, Japan region			De	iP	04 00 05.9
				(h = 310 km).				ipP	04 00 11.9
"	15	Sk	i(P)	11 29 48.8					Near west coast of Colombia.
"	15	Sk	iP	12 49 36.7					h = 20 km (Up,Ki,Sk,Um,Ud,De).
"	15	Up	i(P)	13 02 03.2					m = 5.9 (Up,Ki).
		Ud	i(P)	13 01 37.4	"	16	Up	iPKP2	07 33 50.3
"	15	Sk	iSgl	14 20 21.5			Um	iPKP1	07 33 33.3
		Ud	iSgl	14 19 20.0				i	07 33 45.6
				Near coast of south Norway,			Ud	iPKP1	07 33 45.9
				near 58 1/2°N, 6 1/2°E.				iPKP2	07 33 52.0
				Origin time = 14 17 16.					Kermadec Islands region
				M _T = 2.7 (Sk,Ud).					(h = N).
				By combination with Bergen	"	16	Um	ePKP1	08 56 33
				and Kongsberg readings.			Ud	iPKP1	08 56 46.7
"	15	Up	iP	15 24 19.6			De	iPKP1	08 56 54.9
		Um	iP	15 24 16.9	"	16	Sk	iSgl	11 38 07.6
		Ud	iP	15 24 36.3	"	16	Sk	iP	14 27 25.3
				Afghanistan-USSR border	"	16	Ud	iP	14 51 25.9
				region (h = 220 km).	"	16	Up	iP	15 07 33.9
"	15	Up	iP	18 07 38.7 C					Caribbean Sea (h = N).
		Ki	iP	18 07 46.0 C	"	16	Ud	iRg	15 36 05.5
		Sk	eP	18 08 04					Regional, near surface-event.
		Um	iP	18 07 36.0 C	"	16	Sk	iP	18 10 55.1
		Ud	iP	18 07 55.2 C				i	18 10 59.2
			ipP	18 08 26.6	"	16	Up	iP	18 44 38.8
		De	iP	18 07 52.4			Um	iP	18 44 12.2
				Afghanistan-USSR border region.			Ud	iP	18 44 37.8
				h = 140 km (Ud).					Fox Islands, Aleutian Islands
"	15	De	iPKP1	21 12 14.0					(h = 35 km).
				South of Fiji Islands					
				(h = 60 km).					

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

1978				1978							
Feb.	16	Ud	iP	21 41	26.7	Feb.	17	Ki	iP	22 32	16.2
								Um	iP	22 32	41.7
											Off east coast of Kamchatka (h = N).
"	17	Up	iPKP2	02 00	36.4	"	17	Up	iP	23 25	34.9 C
		Ki	iPKP2	02 00	36.3			Ki	iP	23 25	43.0 C
		Um	iPKP2	02 00	40.9						micr sec
		Ud	iPKP2	02 00	27.5				P	Z'	0.1 0.7
								Sk	iP	23 26	00.2
								Um	iP	23 25	32.7 C
								Ud	iP	23 25	50.4 C
								De	iP	23 25	48.4
											Afghanistan-USSR border region (h = 120 km).
"	17	Up	iP	06 45	17.0	"	18	Up	iP	03 56	16.2
			iS	06 47	50.3						micr sec
			i	06 48	29.6				P	Z'	0.1 0.7
		Ki	iP	06 44	11.3			Ki	iP	03 56	16.0
			i	06 44	20.5						micr sec
									P	Z'	0.2 0.9
								Sk	iP	03 56	29.8
								Um	iP	03 56	13.6
								Ud	iP	03 56	26.5
									i	03 56	35.6
								De	iP	03 56	24.8
											Southern Sumatera (h = 55 km). m = 6.3 (Up,Ki).
"	17	Ki	iSgl	12 39	05.9	"	18	Ki	eP	04 11	17
		Sk	iSgl	12 39	19.8			Um	iP	04 11	20.4
		Um	iSn	12 39	21.5			Ud	iP	04 11	38.1
			iSgl	12 39	34.5						Celebes Sea (h = 520 km).
"	17	Um	iP	13 02	50.3	"	18	Up	ePKP1	10 17	07
								Sk	ePKP1	10 17	01
								Um	iPKP1	10 16	54.9
								Ud	iPKP1	10 17	07.1
									i	10 17	13.3
											South of Kermadec Islands (h = 30 km).
"	17	Up	iSgl	13 34	02.6	"	18	Ud	iPKP1	10 24	58.6
		Ud	iSgl	13 33	57.5			De	iPKP1	10 25	07.7
		De	iSgl	13 32	06.8						Fiji Islands region (h = 640 km).
"	17	Um	ePKP1	16 57	58	"	18	Ud	i(P)	11 27	39.4
		Ud	iPKP1	16 58	13.5	"	18	Sk	ePKP1	11 33	12
								Um	iPKP1	11 33	07.2
								Ud	iPKP1	11 33	19.5
"	17	Up	iP	19 14	51.6	"	18	Ud	iSgl	12 30	31.5
		Um	iP	19 14	49.7						
		Ud	iP	19 15	08.5						
		De	iP	19 15	05.0						
											Hindu Kush region (h = 210 km).

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

1978				1978								
Feb.	18	Um	iP	12 36	24.2	Feb.	19	Up	iP	05 01	50.8	
		Ud	iP	12 36	38.4			Ki	iP	05 01	50.3	
"	18	Up	iP	15 13	26.7			Sk	iP	05 02	11.2	
		Ki	iP	15 13	07.6			Um	iP	05 01	45.8	
		Um	i	15 13	23.1			Ud	iP	05 02	05.9	
		Ud	iP	15 13	34.1			Tibet (h = 15 km).				
		Samar, Philippine Islands (h = 15 km).				"	19	Up	iP	05 09	53.1	
								Um	iP	05 08	27.8	
								Ud	iP	05 08	58.8	
"	18	Up	iPKP1	17 39	59.2	"	19	Up	iP	06 13	08.8	
			i	17 40	07.2						micr sec	
			i	17 40	20.0				P	Z'	0.1 0.9	
		Sk	e	17 39	58			Sk	eP	06 13	06	
		Um	iPKP1	17 39	49.6 D			Um	iP	06 12	50.5	
			i	17 40	03.1				i	06 13	26.0	
		Ud	iPKP1	17 40	01.3 D			Ud	iP	06 13	15.9	
			i	17 40	08.6				i	06 13	42.0	
		South of Kermadec Islands (h = 40 km).						De	iP	06 13	28.5	
"	18	Up	iP	17 44	36.7			Bonin Islands region (h = 70 km).				
			ipP	17 44	49.0			"	19	Ud	iSgl	06 37 42.6
		Ki	iP	17 43	56.1			"	19	Up	iP	12 33 26.8
		Sk	eP	17 44	31					Ki	iP	12 33 11.8
		Um	iP	17 44	14.6						i	12 33 46.9
			ipP	17 44	25.6							micr sec
			i	17 44	34.6					P	Z'	0.1 1.1
		Ud	iP	17 44	44.1			Um	iP	12 33	17.2	
			ipP	17 44	55.9				i	12 33	48.8	
		De	iP	17 45	00.3				ipP	12 37	30.2	
		Near east coast of Honshu, Japan. h = 40 km (Up,Um,Ud).						Ud	iP	12 33	35.6	
"	18	Ki	ePKP	18 34	47				i	12 33	12.4	
		Um	iPKP	18 34	50.6 D				i(PP)	12 36	49.7	
		Ud	iPKP	18 35	01.9				i(PP)	12 37	34.5	
		South of Kermadec Islands (h = 110 km).							ipP	12 38	02.3	
"	18	Um	iPKP	19 24	18.9			De	iP	12 33	40.6	
			i	19 24	41.0			Ceram (h = 90 km).				
		Solomon Islands (h = 80 km).				"	19	Up	ePKP1	16 13	57	
"	18	Up	iPKP	20 15	37.1			Um	iPKP1	16 13	49.2	
		Um	iPKP	20 15	25.8			Ud	iPKP1	16 14	00.2	
		Ud	iPKP	20 15	39.6				i	16 14	15.2	
"	19	Ud	iP	00 27	10.1			"	19	Ud	iP	17 14 03.4
			i	00 27	31.0					De	iP	17 13 32.8
		Southwest of Sumatera (h = N).						Dodecanese Islands (h = 110 km).				
"	19	Ud	iP	03 06	47.0			"	19	Up	iP	18 23 43.2
		Halmahera (h = 45 km).								Ud	iP	18 23 41.7
										De	iP	18 23 52.5
										i	18 23	56.1

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

1978				1978							
Feb.	19	Ud	iP	18 51	25.0	Feb.	20 (cont.)				
"	19	Up	iP	19 55	24.0		i	04 48	18.0		
			i	19 55	54.1		iS	04 57	26.3		
			i	19 56	06.8			micr	sec		
		Ki	i	19 55	45.9		i	Z'	0.3	1.0	
		Sk	iP	19 55	04.2		i	Z'	1.6	1.5	
		Um	iP	19 55	20.2		Mx	E	14	23	
		Ud	iP	19 55	12.5		Mx	N	17	22	
		De	i	19 55	50.6		Mx	Z	27	19	
		Near coast of Guatemala (h = 70 km).					Ki	iP	04 47	32.4	
							i	04 47	34.1		
							i	04 47	37.2		
							iS	04 56	13		
								micr	sec		
"	19	Up	iPKP1	20 42	04.8		i	Z'	0.2	1.0	
			i	20 42	13.4		i	Z'	0.5	1.1	
			iSKP1	20 44	53.4		Mx	E	9.8	15	
		Ki	iPKP	20 41	57.0		Mx	N	13	17	
			iSKP1	20 44	29.6		Mx	Z	20	17	
		Sk	ePKP1	20 41	57		Sk	iP	04 48	06.6	
			iSKP1	20 44	46.3		i	04 48	10.4		
		Um	iPKP1	20 41	52.9		Um	iP	04 47	50.0 C	
			i	20 41	59.2		i	04 47	52.5		
			i	20 42	03.7		i	04 47	55.5		
			iSKP1	20 44	41.7		iS	04 56	45.5		
		Ud	iPKP1	20 42	05.9		Ud	iP	04 48	19.8 C	
			iSKP1	20 44	54.9		i	04 48	22.1		
		De	iPKP1	20 42	17.5		i	04 48	25.1		
			iSKP1	20 45	04.1		iS	04 57	41.5		
		Fiji Islands region (h = 610 km).					De	iP	04 48	35.3	
							i	04 48	37.3		
"	19	Ud	iP	20 53	25.0		i	04 48	40.2		
			i	20 53	29.1		iS	04 58	11.3		
"	19	Um	ePKP	21 36	28		Near east coast of Honshu, Japan (h = 60 km). m = 6.6, M = 6.4 (Up,Ki). Triple P onsets with successively increasing amplitudes. In average P2 - P1 = 2.2 s, P3 - P1 = 5.2 s.				
		West Chile Rise (h = N).									
"	20	Um	iP	00 08	26.6						
		Ud	eP	00 08	33						
"	20	Up	eP	00 09	35						
		Ud	iP	00 09	37.9		"	20	Up	iP	05 04 45.2 C
		De	iP	00 09	48.4				Um	iP	05 04 22.5 C
"	20	Ud	iP	00 52	28.8				Ud	iP	05 04 52.1 C
		Halmahera (h = 230 km).							De	iP	05 05 07.0
"	20	Up	iP	03 56	33.7				Near east coast of Honshu, Japan (h = 70 km).		
		Um	iP	03 56	07.3		"	20	Um	iP	05 11 23.5
		Ud	iP	03 56	36.7				Ud	iP	05 11 52.5
		Rat Island, Aleutian Islands (h = 45 km).							Near east coast of Honshu, Japan (h = 60 km).		
"	20	Up	iP	04 48	12.5 C		"	20	Um	iP	05 50 36.5
			i	04 48	14.9				Near east coast of Honshu, Japan (h = 80 km).		
		(cont.)									

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1978				1978			
Feb.	21	(cont.)		Feb.	21	(cont.)	
		Ud	iP 07 27 14.2			Ud	iP 15 44 00.7
			i 07 31 10.8			Jan Mayen Island region	
			i(PP) 07 31 27.9			(h = N).	
		Banda Sea (h = 535 km).			"	21	Up iP 22 13 10.3
"	21	Up	iP 08 00 23.1			Um	iP 22 13 31.3
			iPKKP 08 16 15.7			Ud	eP 22 13 23
		Ki	iP 08 00 10.0 C			Red Sea (h = N).	
			iPKKP 08 16 24.8		"	22	Up iP 06 20 12.0 C
			micr sec				ipP 06 20 31.8
		P	Z' 0.1 0.9				i 06 20 45.1
		Sk	iP 08 00 29.5				iSKS 06 30 28
			iPKKP 08 16 12.7				micr sec
		Um	iPKKP 08 16 23.2			P	Z' 0.1 1.1
		Ud	iP 08 00 31.5			Mx	E 6.8 22
			iPKKP 08 16 10.1			Mx	N 3.2 22
		De	iP 08 00 35.9			Mx	Z 14 23
		Banda Sea (h = 530 km).				Ki	iP 06 20 01.6 C
"	21	Ki	iP 08 04 35.6				ipP 06 20 19.5
		Sk	iP 08 04 39.1				iS 06 30 19
		De	iP 08 04 45.1				micr sec
"	21	Up	iP 09 07 40.4 C			P	Z' 0.4 1.4
			micr sec			Mx	E 11 24
		P	Z' 0.1 0.8			Mx	N 13 24
		Ki	iP 09 06 56.3			Sk	iP 06 19 54.5 C
		Sk	iP 09 07 31.4				ipP 06 20 13.4
		Um	iP 09 07 16.1 C			Um	iP 06 20 09.7 C
		Ud	iP 09 07 47.2 C				ipP 06 20 27.7
		De	iP 09 08 04.2				iS 06 30 32
		Hokkaido, Japan region				Ud	iP 06 20 02.7 C
		(h = 110 km).					ipP 06 20 20.5
"	21	Up	iP 12 53 03.8			De	iP 06 20 09.7 C
		Um	eP 12 53 53				ipP 06 20 28.2
		Ud	eP 12 53 21			Guatemala.	
		Tsinghai Province, China				h = 70 km (Up,Ki,Sk,Um,Ud,De).	
		(h = N).				m = 6.1, M = 6.2 (Up,Ki).	
"	21	Um	iP 13 35 10.5		"	22	Sk eP 08 32 00
		Ud	iP 13 35 49.2			Um	iP 08 32 17.4
		De	iP 13 36 29.1			Ud	iP 08 32 03.2
		Greenland Sea (h = N).				De	iP 08 32 05.7
"	21	Up	iP 15 44 16.5			Northern Colombia (h = 55 km).	
		Ki	iP 15 43 09.9		"	22	Up iP 09 17 52.3 C
			i 15 43 18.5			Ki	iP 09 17 46.6 C
			iS 15 45 01.5			Sk	iP 09 18 08.1 C
			micr sec			Um	iP 09 17 45.2 C
		P	Z' 0.1 0.7			Ud	iP 09 18 05.7 C
		Sk	iP 15 43 15.4 C			Burma-India border region	
			i 15 43 24.0			(h = 80 km).	
			iS 15 45 07.1		"	22	Up iSgl 14 30 26.8
		Um	iP 15 43 45.0			Ki	eSgl 14 31 45
		(cont.)				(cont.)	

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

1978

Feb.	22	(cont.)			
		Sk	iSgl	14 29	02.5
		Ud	iSgl	14 29	26.6
		De	iSgl	14 30	40.7
		Off coast of west Norway, near 62°N, 4°E.			
		Origin time = 14 26 55.			
		$M_L = 2.8$ (Ud).			
		By combination with Bergen and Kongsberg readings.			
"	22	Sk	eP	15 38	58
			i	15 39	05.7
"	22	Up	iP	18 12	14.0
			ipP	18 12	28.3
			iS	18 21	47.2
				micr	sec
		P	Z'	0.7	1.1
		Mx	E	1.9	17
		Mx	N	1.7	19
		Mx	Z	3.6	17
		Ki	iP	18 11	43.0
			ipP	18 11	56.7
				micr	sec
		P	Z'	0.3	1.0
		Mx	E	2.4	18
		Mx	N	2.4	17
		Sk	iP	18 12	13.2
			i	18 12	23.9
		Um	iP	18 12	55.4
			ipP	18 13	09.8
			iS	18 21	14.3
		Ud	iP	18 12	23.0
			ipP	18 12	37.2
		De	iP	18 12	34.4
			ipP	18 12	48.0
		Ryukyu Islands.			
		h = 50 km (Up,Ki,Um,Ud,De).			
		m = 6.4, M = 5.6 (Up,Ki).			
"	22	Sk	iP	18 36	10.8
		Um	iP	18 36	24.9
"	22	Sk	eP	19 44	02
			i	19 44	21.8
		Um	iP	19 44	15.2
		Guatemala (h = 100 km).			
"	22	Up	iPKP1	19 56	33.7
		Ki	iPKP	19 56	25.1
		Sk	ePKP1	19 56	27
		Um	iPKP1	19 56	22.4
			iPKP	19 56	29.8
		(cont.)			

1978

Feb.	22	(cont.)			
		Um	i	19 56	50.8
		Ud	iPKP1	19 56	34.7
		De	iPKP1	19 56	44.5
			i	19 56	46.9
		South of Fiji Islands (h = 90 km).			
"	22	Up	iP	20 25	43.8
			i	20 25	52.1
		Ki	iP	20 26	15.0
			ipP	20 26	21.2
		Sk	iP	20 26	18.2
			i	20 26	25.8
		Um	iP	20 25	54.8 C
			ipP	20 26	01.4
		Ud	iP	20 25	58.8 C
			ipP	20 26	05.6
		De	iP	20 25	44.8 C
			ipP	20 25	51.2
		Southern Iran. h = 25 km (Ki,Um,Ud,De).			
"	23	Ki	iP	02 09	53.8
		Sk	iP	02 10	14.1
		Um	iP	02 09	45.9
		Ud	iP	02 10	05.5
		Kashmir-India border region (h = 35 km).			
"	23	Ud	iP	09 19	19.1
"	23	Um	iP	14 18	24.6
		Ud	iP	14 17	50.0
"	23	Up	iPKP1	15 27	39.3
			i	15 27	47.2
				micr	sec
			PKP1	Z'	0.2 0.9
		Um	iPKP1	15 27	27.8
		Ud	iPKP1	15 27	42.0
		De	iPKP1	15 27	51.7
		South of Fiji Islands (h = 440 km).			
"	23	Up	eP	16 10	35
			i	16 10	42.9
		Sk	eP	16 11	04
		Um	iP	16 10	38.5
		Ud	iP	16 10	51.1
		Afghanistan (h = N).			
"	23	Up	iP	17 11	48.5 C
			i	17 11	50.1
		(cont.)			

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

1978					1978					
Feb.	23	(cont.)			Feb.	23	(cont.)			
		Up		micr sec			Ud i	23 29 38.9		
		P	Z'	0.1 0.9			Burma-India border region.			
		i	Z'	0.2 1.1			h = 110 km (Up,Ki,Sk,Um,Ud).			
		Ki	iP	17 11 14.6 C		"	23	Up	iP 23 32 33.5	
			i	17 11 15.9				ipP	23 34 20.2	
			P	micr sec				Ki	iP 23 33 04.9	
			i	Z' 0.1 0.9				Sk	iP 23 33 07.0	
		Sk	iP	17 11 22.7 C				i	23 33 13.0	
			i	17 11 24.0				Um	iP 23 32 44.4	
		Um	iP	17 11 34.1 C				Ud	iP 23 32 49.2	
			i	17 11 35.5				i	23 32 54.6	
		Ud	iP	17 11 40.7 C				De	iP 23 32 34.9	
			i	17 11 42.2				i	23 32 39.0	
		De	iP	17 11 57.3 C				Southern Iran (h = 25 km).		
			i	17 11 58.6		"	24	Um	iP 00 54 58.4	
		Southern Nevada.						Ud	iP 00 54 28.1	
		m = 6.2 (Up,Ki).						North of Ascension Island		
		Underground explosion.						(h = 10 km).		
		Double P-phases, in average						Phases are about 9 s late		
		1.4 s apart.						when related to the NEIS		
"	23	Um	iP	19 53 16.3				solution.		
		Ud	iP	19 52 40.1		"	24	Ki	eP 02 57 42	
			i	19 52 42.6				Um	eP 02 57 08	
		Sicily (h = 10 km).						Turkey (h = 10 km).		
"	23	Up	iP	21 36 39.1 C		"	24	Ud	iP 03 17 25.1	
		Ki	iP	21 36 49.1 C		"	24	Ud	iP 07 10 01.4	
			P	micr sec				Off coast of Oregon		
		Sk	iP	Z' 0.1 0.9				(h = 15 km).		
		Um	iP	21 36 27.8 C		"	24	Up	iP 07 13 42.9 D	
		Ud	iP	21 36 47.4 C				ipP	07 13 49.9	
		De	iP	21 36 28.4					micr sec	
		Windward Islands (h = 110 km).							P	Z' 0.3 1.5
"	23	Up	iP	23 28 55.3				Ki	iP 07 14 28.0	
			ipP	23 29 20.9				ipP	07 14 35.1	
			i	23 29 25.8					micr sec	
			i	micr sec					P	Z' 0.3 1.5
		Ki	iP	Z' 0.1 0.7				Sk	iP 07 13 55.9 D	
			ipP	23 28 49.4				ipP	07 14 03.0	
			i	23 29 16.6				Um	iP 07 14 08.1 D	
			pP	micr sec				ipP	07 14 15.1	
		Sk	iP	Z' 0.1 1.2				Ud	iP 07 13 38.2 D	
			ipP	23 29 11.1				ipP	07 13 45.3	
			i	23 29 38.5				De	iP 07 13 18.2 D	
		Um	iP	23 29 41.7				ipP	07 13 25.4	
			ipP	23 28 48.1				North of Ascension Island.		
			i	23 29 14.8				h = 25 km (Up,Ki,Sk,Um,Ud,De).		
		Ud	iP	23 29 18.8				m = 6.1 (Up,Ki).		
			ipP	23 29 08.2		"	24	Sk	i(P) 09 10 09.5	
			i	23 29 34.0						
		(cont.)								

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1978				1978						
Feb.	24	Up	iSgl	11 08 44.8	Feb.	25	Um	iP	07 04 51.0	
		Sk	ePn	11 06 01			Ud	iP	07 05 04.6	
			i	11 06 51.8		"	25	Um	iP	22 16 48.0
			iSn	11 06 55.1			Ud	iP	22 17 00.7	
			i	11 07 35.5		"	26	Up	iP	00 16 27.3
		Um	iSn	11 08 14.9			Ki	iP	00 15 37.6 C	
		Ud	iPn	11 06 07.7			Sk	eP	00 16 13	
			i	11 06 15.8			Um	iP	00 16 00.6 C	
			iSn	11 07 09.6			Ud	iP	00 16 32.8	
			iSgl	11 07 37.3				i	00 16 35.1	
		De	iSn	11 08 03.1			De	iP	00 16 52.3	
			iSgl	11 08 56.1				i	00 16 53.4	
		Off coast of west Norway, near 62°N, 2 1/2°E. Origin time = 11 04 44. M _L = 3.4 (Up,Ud,De).					Kuril Islands (h = 45 km).			
"	24	Up	iSgl	14 23 07.9	"	26	Up	iP	02 13 58.8	
		Sk	eSgl	14 23 09			Um	iP	02 13 35.4	
			i	14 23 14.4			Ud	iP	02 14 00.2	
		Ud	iSgl	14 22 02.1	"	26	Ud	eP	02 32 33	
		Near coast of south Norway, near 58 1/4°N, 6 1/2°E. Origin time = 14 19 59. M _L = 2.9 (Ud).						i	02 33 16.9	
		By combination with Bergen and Kongsberg readings.					Minahassa Peninsula (h = 150 km).			
"	24	Up	iPKP2	18 36 19.7	"	26	Up	iP	05 19 11.0	
		Sk	ePKP1	18 36 09			Ki	ipP	05 19 13.9	
			i	18 36 20.2				pP	Z' 0.1 1.3	
		Um	iPKP1	18 36 03.9 C			Um	iP	05 19 13.6	
			i	18 36 13.9				ipP	05 19 19.1	
		Ud	iPKP1	18 36 16.7			Jamaica region. h = 20 km (Um).			
			iPKP2	18 36 22.1	"	26	Ki	iP	06 46 20.5	
		De	iPKP2	18 36 37.8			Ud	eP	06 45 58	
		Kermadec Islands (h = 50 km).					Caspian Sea (h = 10 km).			
"	24	Up	iPKP2	21 32 15.7	"	26	Up	i(PP)	09 38 24.4	
			i	21 32 21.0				iPP	09 38 34.0	
				micr sec					micr sec	
			i	Z' 0.1 1.3				PP	Z' 0.2 1.7	
		Sk	iPKP1	21 32 02.6			Ki	iPKP	09 36 00.0	
			i	21 32 14.1					micr sec	
		Um	iPKP1	21 31 57.9 C				PKP	Z' 0.2 1.6	
			i	21 31 07.9			Sk	iPKP	09 35 58.8	
		Ud	iPKP1	21 32 11.1			Um	iPKP	09 36 04.9	
			i	21 32 23.8			Ud	iPKP	09 36 01.1	
		De	iPKP2	21 32 31.6			Easter Island region (h = N).			
		Kermadec Islands (h = 20 km).			"	26	Ki	iP	10 55 22.9	
"	25	Um	iP	01 15 37.1 C			Um	iP	10 55 49.0	
		Ud	eP	01 16 04			Ud	iP	10 56 14.7	
							De	iP	10 56 36.0	
"	25	Ki	iP	06 24 24.1	"	26	Ki	iP	10 58 09.5	
		Ud	iP	06 24 40.5			Um	iP	10 58 36.0	
		Sumbawa Island region (h = N).					Ud	iP	10 59 01.1	

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1978				1978									
Feb.	26	Up	iP	13 44	07.3	Feb.	27	Ud	iP	12 43	01.4		
		Ud	iP	13 43	43.8			Iran-USSR border region (h = 10 km).					
"	26	Up	iP	13 45	33.6	"	27	Um	iP	18 21	14.6		
"	26	Up	iP	15 02	32.2			Ud	iP	18 21	44.1		
		Ki	iP	15 02	27.8			Near east coast of Honshu, Japan (h = 30 km).					
		Um	iP	15 02	32.7			"	27	De	i(P)	20 22	40.7
		Ud	iP	15 02	23.4			"	28	Um	iP	00 43	22.8
		De	iP	15 02	26.6			"	28	De	iP	04 58	40.0
		Panama-Costa Rica border region (h = 35 km).						"	28	Um	iP	11 09	16.0
"	26	Up	iP	15 34	26.3	"	28	Ud	iP	12 03	38.1		
		Ud	iP	15 34	27.9			"	28	Ud	i	12 03	56.3
		De	iP	15 34	36.5			"	28	Um	iP	13 22	56.0
"	26	Up	iP	15 35	17.4			Ud	eP	13 23	17		
		Ud	iP	15 35	20.1			"	28	Up	i(P)	14 29	52.6
"	26	Up	iP	21 54	49.0	C	"	28	Up	iP	17 15	33.6	
		Um	iP	21 54	36.5			Ki	iP	17 15	53.9		
		Ud	iP	21 54	50.5	C		Sk	eP	17 16	02		
		i		21 55	24.9			i		17 16	04.7		
		De	iP	21 55	00.8			Um	iP	17 15	37.2		
"	27	Up	iP	00 33	15.0			i		17 15	40.0		
		i		00 33	21.1			Ud	iP	17 15	48.2		
		Um	i	00 33	31.5			De	iP	17 15	40.6		
		Mid-Indian Rise (h = 10 km).						Pakistan (h = N).					
"	27	Up	iPKP2	00 57	18.0		"	28	Up	i	20 26	36.4	
				micr	sec			i		20 26	58.1		
				PKP2	Z' 0.1	1.3		iSgl		20 27	02.8		
		Ki	iPKP1	00 57	12.2			Ki	iSgl	20 28	25.3		
				micr	sec			Sk	iSn	20 25	25.2		
				PKP1	Z' 0.1	1.6		i		20 25	46.9		
		Sk	iPKP2	00 57	30.9			iSgl		20 25	49.1		
		Um	iPKP1	00 57	11.1			Um	eSn	20 26	46		
			iPKP2	00 57	16.1			i		20 27	32.1		
		Ud	iPKP2	00 57	24.5			iSgl		20 27	35.8		
		De	i	00 57	26.0			Ud	iSn	20 25	34.7		
		West of Macquarie Island (h = 10 km).						iSgl		20 25	58.6		
"	27	Ud	iP	04 58	57.5			De	iSgl	20 27	03.6		
		De	iP	04 59	08.5			Off coast of west Norway, near 61 1/4°N, 3 1/2°E. Origin time = 20 23 25. M _L = 3.4(Up,Ki,Sk,Um,Ud,De).					
"	27	Up	ipP	06 18	37.6		"	27	Up	ipP	06 18	55.5	
		Ud	ipP	06 18	55.5			Tadzhik SSR (h = 35 km).					
"	27	Um	ipP	06 53	21.2		"	28	Up	iP	23 03	06.3	
		Eastern Sea of Japan (h = N).						(cont.)					

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

1978

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(cont.)

Up	iS	23 07	02.0
	iLgl	23 09	40.7
		micr	sec
	P	Z'	0.1 1.0
Ki	iP	23 03	53.3
	i	23 09	21.3
	iLgl	23 12	11.0
Sk	eP	23 03	49
	i	23 04	01.0
	i	23 04	24.7
	i	23 09	18.7
	i	23 11	29.6
	iLgl	23 11	49.7
Um	iP	23 03	24.9
	iS	23 07	45.3
	i	23 09	52.4
	iLgl	23 10	31.7
Ud	iP	23 03	26.3
	iS	23 07	41.9
	iLgl	23 10	33.8
De	iP	23 03	09.0
	iLgl	23 09	58.5

Western Caucasus (h = 10 km).

February 1, 1980

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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 R C H 1 - 31, 1978

1978				1978						
Mar.	1	Up	iP	00 19 16.8 C	Mar.	1	Up	iP	10 01 33.8	
				micr sec			Ki	iP	10 02 06.0	
		P	Z'	0.2 1.2			Sk	iP	10 02 08.0	
		Ki	iP	00 18 28.7			Um	iP	10 01 45.1	
				micr sec			Ud	iP	10 01 48.4	
		P	Z'	0.2 1.3			De	iP	10 01 34.5 C	
		Sk	iP	00 19 04.3			Southern Iran (h = N).			
		i		00 19 14.4		"	1	Up	iP	11 15 59.1 C
		Um	iP	00 18 51.0 C				Ki	iP	11 15 11.5
		Ud	iP	00 19 22.2				Um	iP	11 15 33.5 C
		De	iP	00 19 41				Ud	iP	11 16 04.6 C
		i		00 19 54.3				i		11 16 15.8
		Kuril Islands (h = N).						De	iP	11 16 23.0
		m = 6.1 (Up,Ki).						Kuril Islands (h = N).		
"	1	Up	iP	02 07 55.3	"	1	Up	iP	11 58 31.1	
				micr sec			Um	iP	11 58 05.4 D	
		P	Z'	0.1 1.0			Ud	iP	11 58 36.3	
		Ki	iP	02 08 35.1			Kuril Islands (h = N).			
		Sk	iP	02 08 27.7	"	1	Up	iRg	14 35 05.1	
		ipP		02 08 33.5			Regional, near-surface event.			
		Um	iP	02 08 12.0 C	"	1	Up	iP	15 56 49.1 C	
		Ud	iP	02 08 06.6 C			iS		16 06 24	
		ipP		02 08 13.0					micr sec	
		De	iP	02 07 49.4			P	Z'	0.1 1.4	
		Eastern Gulf of Aden.					Mx	E	1.8 14	
		h = 20 km (Sk,Ud).					Mx	N	1.6 15	
"	1	Up	iP	03 40 57.1			Mx	Z	2.1 16	
		i		03 41 08.0			Ki	iP	15 56 09.3	
		Ud	iP	03 40 57.9					micr sec	
		De	iP	03 41 19.2			Mx	E	4.0 15	
"	1	Up	iP	09 57 23.0			Mx	N	3.9 20	
		Sk	eP	09 57 00			Mx	Z	3.7 14	
		Ud	iP	09 56 38.3			Sk	iP	15 56 43.4 C	
		De	iP	09 56 24.3			Um	iP	15 56 27.7 C	
		Southern Iran.					iS		16 05 46	
		Origin time = 09 48 36.					(cont.)			

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

1978		1978	
Mar.	1	(cont.)	
		Ud iP	15 56 56.0 C
		De iP	15 57 09.8 C
		Off east coast of Honshu, Japan (h = 30 km). M = 5.8 (Up,Ki).	
"	1	Um iPKP	20 52 48.8
		Ud iPKP	20 52 58.5
		Tonga Islands (h = N).	
"	1	Up eP	19 41 35
"	1	Up iP	22 56 17.5 C
		i	22 56 44.6
		Ki iP	22 57 23.9 C
		Sk eP	22 56 57
		Um iP	22 56 49.3
		Ud iP	22 56 26.6 D
		i	22 56 28.2
		De iP	22 55 54.7 C
		Dodecanese Islands (h = 90 km).	
"	1	Up iP	23 33 20.1
		Um iP	23 33 38.4
		Ud iP	23 33 37.8
		Turkey-USSR border region (h = N).	
"	2	Ki iP	03 05 20.7
"	2	Up eP	04 53 01
		Um iP	04 52 34.6
		Ud iP	04 53 03.2
"	2	Up eP	05 10 30
		Um eP	05 10 12
"	2	Up i(P)	05 40 09.2
		Ud i(P)	05 40 11.6
"	2	Up iP	11 47 47.4
		Sk eP	11 47 31
		Um iP	11 47 45.8
		Ud iP	11 47 35.8
		De iP	11 47 45.0
		El Salvador (h = 100 km).	
"	2	Up iP	11 48 45.9
		e	11 48 52
		i	11 49 27.9
		Ki iPP	11 50 41.0
		Sk e	11 49 43
		Ud iP	11 49 01.0
		Iran-USSR border region (h = N).	
Mar.	2	Up iP	12 05 27.5
"	2	Up iP	12 24 51.6
		Sk iP	12 25 05.3
		Um iP	12 24 41.6
		Ud iP	12 25 05.0 C
		De iP	12 25 08.0
		Burma-India border region (h = 90 km).	
"	2	Up iP	14 45 19.2
		i	14 45 25.0
		micr sec	
		i	Z' 0.6 1.8
		Mx	E 2.5 19
		Mx	N 2.5 20
		Mx	Z 2.6 21
		Ki iP	14 44 24.1
		ipP	14 44 35.1
		micr sec	
		pP	Z' 0.2 1.3
		Mx	E 1.3 15
		Mx	N 3.2 20
		Mx	Z 1.2 18
		Sk iP	14 45 02.0
		ipP	14 45 11.6
		Um iP	14 44 50.9
		ipP	14 45 01.1
		iS	14 52 59
		Ud iP	14 45 21.8
		ipP	14 45 34.0
		De iP	14 45 43.7
		Komandorsky Island region. h = 35 km (Ki,Sk,Um,Ud). m = 6.2, M = 5.5 (Up,Ki).	
"	2	Up iP	14 52 05.2
		i	14 52 26.8
		Ki iP	14 51 10.6
		Sk iP	14 51 39.8
		Um iP	14 51 38.7
		Ud iP	14 52 03.1
		Alaska Peninsula (h = 90 km).	
"	2	Up iP	17 30 36.3
"	2	Up eP	17 56 13
		i	17 56 22.1
		Ki eP	17 56 00
		Um eP	17 56 11
		Ud iP	17 55 52.9
		i	17 55 55.5
		De iP	17 56 12.7
		Iceland region (h = 10 km).	

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

1978				1978									
Mar.	2	Um	i	18 42	42.0	Mar.	3	(cont.)					
		Ud	iPKP1	18 42	31.7			De	i	08 02	00.0		
		De	iPKP1	18 42	42.9			Tonga Islands region (h = N).					
			i	18 42	57.2		"	3	Up	iP	11 03	40.3 C	
		Tonga Islands region (h = N).								ipP	11 03	52.6	
"	2	Up	iP	22 19	42.6					iPP	11 06	06.1	
		Ki	iP	22 18	47.2					iS	11 12	05	
		Um	iP	22 19	14.2					micr sec			
		Ud	iP	22 19	45.7				P	Z'	0.7	1.9	
		Komandorsky Islands region (h = N).							pP	Z'	1.2	1.7	
"	2	Up	iP	23 04	50.8				Mx	E	6.4	17	
		Um	iP	23 04	26.6				Mx	N	8.6	14	
		Ud	iP	23 04	57.5				Mx	Z	10	17	
		Kuril Islands (h = N).						Ki	iP	11 02	43.2		
"	3	Up	iP	01 56	52.8				ipP	11 02	58.3		
			i	01 56	55.8				iPP	11 04	53.6		
		Ud	iP	01 57	08.1				iS	11 10	24		
"	3	Up	iPKP1	02 19	20.5				micr sec				
			i	02 19	30.2				P	Z'	0.1	1.1	
		Ki	ePKP	02 18	59				pP	Z'	0.5	1.5	
		Sk	iPKP1	02 19	13.8				Mx	E	4.4	14	
			i	02 19	32.1				Mx	N	8.7	14	
		Um	iPKP1	02 19	08.9 C				Mx	Z	2.9	13	
			i	02 19	22.7			Sk	iP	11 03	22.2		
		Ud	iPKP1	02 19	22.3 C			Um	iP	11 03	11.7 C		
			i	02 19	32.0				ipP	11 03	24.2		
		De	iPKP1	02 19	30.7 C				iS	11 11	13		
			i	02 19	41.0			Ud	iP	11 03	42.8		
		Kermadec Islands (h = 440 km).							ipP	11 03	56.7		
"	3	Up	iP	02 49	26.3				Komandorsky Islands region.				
			i(PP)	02 50	30.5				h = 50 km (Up,Ki,Um,Ud).				
		Ki	iP	02 50	07.7				m = 6.5, M = 6.1 (Up,Ki).				
		Sk	iP	02 50	11.3			"	3	Um	iPKP	11 07	16.7
		Um	i	02 49	42.7					i	11 07	39.7	
		Ud	iP	02 49	42.3				Ud	iPKP	11 07	27.8	
			i	02 49	43.9					i	11 07	52.3	
		De	iP	02 49	24.8				Tonga Islands (h = N).				
		Western Iran (h = N).						"	3	Up	iP	17 40	27.5
"	3	Um	iP	02 50	16.2 C					Ki	iP	17 40	55.2
"	3	Ud	iPKP1	07 54	25.8					Sk	eP	17 40	57
		De	iPKP1	07 54	37.5					Um	iP	17 40	38.7 C
			i	07 54	51.1						i	17 40	59.4
		Tonga Islands region (h = N).								Ud	iP	17 40	40.0
"	3	Ud	iPKP1	08 01	34.2						i	17 40	46.1
		De	iPKP1	08 01	45.6				Carlsberg ridge (h = N).				
		(cont.)						"	3	Up	iP	18 59	07.0
"	3	Ud	iPKP1	08 01	34.2					Ki	iP	18 58	13.8
		De	iPKP1	08 01	45.6					Sk	iP	18 58	40.3
		Tonga Islands region (h = N).								Um	iP	18 58	41.2
"	3	Ud	iPKP1	08 01	34.2				Kodiak Islands region (h = 35 km).				
		De	iPKP1	08 01	45.6								

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

1978				1978									
Mar.	4	Up	iP	01 35	05.0	Mar.	4	Up	eP	10 33	34		
		Ki	iP	01 34	39.0			Ki	iP	10 32	40.0		
				micr	sec			Sk	iP	10 33	07.2		
			P	Z'	0.1 1.0			Um	iP	10 33	08.3		
		Sk	iP	01 35	03.9			Ud	iP	10 33	30.8		
		Um	iP	01 34	49.3 C			Kodiak Island region					
		Ud	iP	01 35	10.7			(h = 20 km).					
		South of Mariana Islands						"	4	Up	eP	11 28	54
		(h = N).								i	11 28	56.4	
"	4	Ki	i(P)	02 57	22.2 C			Sk	iP	11 28	47.1		
		Um	i(P)	02 57	11.1			Ud	iP	11 28	55.9		
		Ud	i(P)	02 57	31.4			"	4	De	iPn	13 02	45.7
		Southwest of Sumatra								Czechoslovakia (h = N).			
		(h = 45 km).						"	4	Up	iPdiff	15 12	57.8
"	4	Up	iPKP1	04 10	01.3					i	15 16	28.1	
			iSKP1	04 12	54.1					iPKP	15 16	45.9	
		Ki	iSKP1	04 12	32.6					iPKKP	15 27	21.4	
		Sk	iSKP1	04 12	48.0					micr	sec		
		Um	iSKP1	04 12	43.4					Mx	E	2.2 27	
		Ud	iPKP1	04 10	02.9					Mx	N	2.5 27	
			i	04 10	16.1					Mx	Z	3.1 25	
			iSKP1	04 12	55.4					Ki	iPdiff	15 12	30.7 C
		South of Fiji Islands								iPKP	15 16	32.0	
		(h = 510 km).								micr	sec		
"	4	Up	ePKP	05 06	02					Pdiff	Z'	0.1 1.0	
			i	05 06	14.3					Mx	E	2.9 27	
				micr	sec					Mx	N	4.2 24	
			Mx	E	1.4 18					Mx	Z	4.7 25	
			Mx	N	2.0 19					Sk	iPdiff	15 12	54.5
			Mx	Z	3.3 19					iPKP	15 16	45.4	
		Ki		micr	sec					Um	iPdiff	15 12	41.8
			Mx	E	1.7 19					iPKP	15 16	39.9	
			Mx	N	2.6 18					i	15 16	57.2	
			Mx	Z	2.4 17					i	15 17	23.3	
		Um	iPKP	05 05	55.3					iPKKP	15 27	35.2	
		Ud	iPKP1	05 05	58.9					Ud	iPdiff	15 13	05.2
			i	05 06	07.5					e	15 16	15	
		Tonga Islands (h = N).								iPKP	15 16	48.9	
		M = 6.0 (Up,Ki).								i	15 17	39.6	
"	4	Up	eP	06 35	35					iPKKP	15 27	19.1	
		Ki	iP	06 34	56.9					De	iPKP	15 16	54.2 C
		Um	iP	06 35	14.3					i	15 17	21.1	
		Ud	eP	06 35	42					New Ireland region (h = 80 km).			
		Off east coast of Honshu,								M = 5.9 (Up,Ki).			
		Japan (h = 40 km).						"	4	Up	iP	17 47	43.4
"	4	Um	iP	07 44	36.4 C					ipP	17 48	12.1	
		Ud	iP	07 45	01.0					Ki	eP	17 47	32
		Fox Islands, Aleutian									i	17 47	53.2
		Islands (h = 50 km).									micr	sec	
				P	Z'	0.1 1.4				(cont.)			

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

1978		1978	
Mar.	4	(cont.)	
		Sk iP	17 47 26.0 C
		i	17 47 45.4
		Um iP	17 47 41.0
		i	17 48 00.7
		Ud iP	17 47 34.2 C
		ipP	17 48 02.4
		De iP	17 47 41.2
		Guatemala.	
		h = 110 km (Up,Ud).	
"	4	Up iSgl	19 00 23.0
		Sk eSgl	19 00 36
		Um iSgl	19 01 50.8
		Ud iPgl	18 58 46.1
		iSgl	18 59 28.2
		De eSgl	18 59 33
		Coast of south Norway,	
		near 58 1/4°N, 8 1/2°E.	
		Origin time = 18 57 49.	
		M _L = 2.8 (Ud).	
"	5	Up iPKP	01 04 25.2
		Ud iPKP	01 04 26.7
		De iPKP	01 04 36.3
"	5	Up iPKP1	01 14 28.5
		Sk ePKP1	01 14 24
		Um iPKP1	01 14 16.9
		Ud iPKP1	01 14 30.3 C
		De iPKP1	01 14 39.4
		iPKP2	01 14 51.5
		Kermadec Islands (h = N).	
"	5	Um iP	01 57 40.4 C
"	5	Ud iP	03 13 24.1
		Kirgiz SSR (h = 60 km).	
"	5	Up iP	04 41 46.0
		Um eP	04 42 27
		Ud eP	04 41 54
		Greece (h = N).	
"	5	Ud iP	04 50 58.9
"	5	Up eP	05 31 28
		Ki eP	05 32 38
		Sk eP	05 32 09
		Um iP	05 32 02.5
		Ud iP	05 31 35.8
		i	05 31 37.3
		iPP	05 32 30.2
		(cont.)	
Mar.	5	(cont.)	
		De iP	05 31 02.5
		i	05 31 22.5
		Crete (h = N).	
"	5	Up eP	05 50 49
		Um iP	05 50 44.9
		Ud iP	05 51 00.0
"	5	Up eP	10 11 09
		Ki eP	10 12 19
		Sk e	10 12 18
		Um eP	10 11 51
		Ud iP	10 11 17.6
		De iP	10 10 40.5
		Mediterranean Sea (h = N).	
"	5	Up iP	10 58 45.0 C
		Ki iP	10 57 56.4
		Sk eP	10 58 32
		Um iP	10 58 19.4 C
		Ud iP	10 58 50.8
		i	10 59 01.8
		Kuril Islands (h = N).	
"	5	Ki iSgl	14 10 00.1
		Sk eSgl	14 10 16
		Um iSgl	14 08 38.5
		Ud eSgl	14 09 54
		Western USSR, near 59°N,	
		35 1/2°E.	
		Origin time = 14 04 11.	
		Explosion?	
		Solution from Helsinki	
		regional bulletin.	
"	5	Up iP	23 34 19.8
		Um eP	23 34 59
		Ud iP	23 34 27.1
		De eP	23 33 49
		Southern Greece (h = N).	
"	6	Up	micr sec
		Mx N	1.0 19
		Ki ePKP	00 41 34
			micr sec
		Mx N	1.0 14
		Um iPKP	00 41 38.0
		Ud ePKP	00 41 33
		Southern Pacific Ocean	
		(h = N).	
		M = 5.6 (Up,Ki).	
"	6	Up iP	01 29 20.5
		(cont.)	

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

1978				1978					
Mar.	6	(cont.)		Mar.	7	Up	iPn	02 33 24.1	
		Up	micr sec				iSn	02 34 26.6	
		P	Z' 0.2 1.5				i	02 34 29.3	
		Ki	iP			Sk	e	02 33 48	
		Um	iP				i	02 35 42.4	
		Ud	iP			Ud	iPn	02 33 02.7	
		Komandorsky Islands region					i	02 34 01.9	
		(h = N).				De	iPn	02 32 48.5	
"	6	Um	iP				i	02 33 09.6	
		Ud	iP				iSn	02 33 24.1	
		Skagerrack, near 57°N, 8°E.					Origin time = 02 32 01.		
		By combination with Finnish and Norwegian station readings.							
"	6	Up	iSKP1	02 36 29.4	"	7	Up	iP	02 59 40.5 C
		Ki	iSKP1	02 36 06.2				iS	03 08 45
		Sk	iSKP1	02 36 22.9				micr sec	
		Um	iSKP1	02 36 18.1			P	Z' 0.2 0.6	
		Ud	iPKP1	02 33 44.2			Ki	iP	02 59 06.8 C
		De	iPKP1	02 33 55.7 D				iS	03 07 43
		Fiji Islands region					micr sec		
		(h = 620 km).					P	Z' 0.4 0.6	
"	6	Up	eP	05 33 20			Sk	iP	02 59 37.4 C
		Um	iP	05 33 41.6			Um	iP	02 59 21.1
"	6	Ud	iP	10 01 37.3				iS	03 08 10
"	6	De	iPKP1	10 03 53.7			Ud	iP	02 59 47.8
		Fiji Islands region				De	iP	03 00 00.3	
		(h = 440 km).				South of Honshu, Japan			
"	6	Up	iP	15 22 00.9 D			(h = 440 km).		
			micr sec			m = 6.1 (Up,Ki).			
		P	Z' 0.1 1.0		"	7	Up	iP	02 59 46.6
		Ki	iP	15 21 24.2 D				ipP	03 01 22.5
			micr sec					i	03 08 52
		P	Z' 0.2 1.0					micr sec	
		Sk	iP	15 21 57.5			P	Z' 8.0 1.4	
		Um	iP	15 21 39.6 D			Mx	E 16 17	
			ipP	15 23 09.0			Mx	N 22 16	
		Ud	iP	15 22 09.6			Mx	Z 21 17	
			ipP	15 23 43.6			Ki	iP	02 59 13.3
		De	iP	15 22 23.0				isP	03 01 55.2
		Sea of Japan.						iS	03 07 49
		h = 440 km (Um,Ud).						iP'P'	03 27 08.2
		m = 5.6 (Up,Ki).						micr sec	
"	6	Ki	iP	18 43 23.1			P	Z' 3.5 1.5	
		Ud	iP	18 44 20.3			Mx	E 17 13	
		Komandorsky Islands region					Mx	N 19 14	
		(h = N).					Mx	Z 22 16	
"	6	Ki	eP	18 50 27			Sk	iP	02 59 43.9
		Ud	iP	18 51 18.1				ipP	03 01 22.7
		Andreanof Islands, Aleutian						iPP	03 02 39.6
		Is. (h = 70 km).						iS	03 08 41.5
							(cont.)		

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

1978

Mar. 7 (cont.)
 Um iP 02 59 28.0
 ipP 03 01 07.1
 iS 03 08 16
 Ud iP 02 59 54.9
 ipP 03 01 34.3
 iS 03 09 00.5
 De iP 03 00 07.4
 ipP 03 01 48.6
 iS 03 09 28.9
 South of Honshu, Japan.
 h = 460 km (Up,Sk,Um,Ud,De).
 m = 6.9, M = 6.6 (Up,Ki).
 M not corrected for focal
 depth.

" 7 De iPgl 08 15 50.3
 Poland (h = N).

" 7 Ud iP 10 31 21.2
 Nepal (h = N).

" 7 Ud iP 12 34 37.8
 Crete (h = N).

" 7 Um iP 15 48 10.5
 South Burma (h = N).

" 7 Up iPKP 16 53 32.3
 Ki iPKP 16 53 47.6 C
 Um iP 16 53 40.8
 Ud iP 16 53 30.7
 South Sandwich Islands
 region (h = N).

" 7 Up iPKP 18 58 43.0
 Ki iPKP 18 58 57.6
 Um iPKP 18 58 51.1
 South Sandwich Islands
 region (h = N).

" 7 Up iP 20 11 31.1 D
 Ki iP 20 11 32.0 D
 i 20 11 45.5
 micr sec
 P Z' 0.1 1.0
 Um iP 20 11 29.0 D
 i 20 11 42.6
 Ud iP 20 11 41.2
 De iP 20 11 39.7 D
 Southern Sumatra (h = N).

" 7 Up iP 22 39 14.3
 iS 22 43 39.2
 (cont.)

1978

Mar. 7 (cont.)
 Up iScP 22 46 18.8
 micr sec
 P Z' 0.1 1.1
 Mx E 1.3 12
 Mx N 2.3 16
 Mx Z 3.6 17
 Ki iP 22 40 22.0 C
 i 22 43 41.6
 micr sec
 P Z' 0.2 0.9
 Mx E 2.3 22
 Mx N 4.5 13
 Mx Z 4.7 12
 Sk eP 22 39 53
 Um iP 22 39 46.8 C
 i 22 41 41.3
 Ud eP 22 39 22 C
 i 22 39 23.6
 De iP 22 38 49.4 C
 i 22 40 22.7
 Crete (h = 40 km).
 m = 5.7, M = 5.1 (Up,Ki).

" 7 Up eP 23 05 27
 Sk eP 23 06 07
 i 23 06 26.8
 Um iP 23 06 00.3
 Ud iP 23 05 34.8
 De iP 23 05 02.5
 Crete (h = N).

" 7 Up ePKP 23 50 16
 micr sec
 Mx E 0.9 23
 Mx N 0.9 24
 Mx Z 1.3 23
 Ki iPKP 23 50 33.6
 i 23 50 36.9
 micr sec
 Mx N 1.3 22
 Mx Z 1.7 22
 Um iPKP 23 50 26.3
 i 23 50 29.5
 Ud ePKP 23 50 17
 South Sandwich Islands
 region (h = N).
 M = 5.5 (Up,Ki).

" 8 Up iSgl 04 36 56.9
 i 04 37 02.5
 Sk iSn 04 35 28.5
 i 04 35 53.7
 iSgl 04 36 00.0
 Um iSgl 04 37 43.5
 (cont.)

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

1978			1978		
Mar.	8	(cont.)	Mar.	8	(cont.)
		Ud iPn 04 34 32.6			Ki iSgl 11 06 43.4
		i 04 34 39.0			Sk i 11 08 23.8
		iSn 04 35 27.1			iSgl 11 08 29.3
		i 04 35 41.3			Um iSgl 11 08 17.5
		iSgl 04 35 56.7			Ud iSgl 11 10 11.4
		i 04 35 59.5			Same location as the events
		i 04 36 08.2			10 26 and 10 32 this day.
		De iSgl 04 36 52.5			Origin time = 11 05 49.
		i 04 37 04.9			$M_L = 2.7$ (Ki,Sk,Um).
		Off west coast of Norway,			
		near $60\ 1/2^\circ\text{N}$, $3\ 1/2^\circ\text{E}$.			
		Origin time = 04 33 18.			
		$M_L = 2.9$ (Sk,Um,Ud).			
"	8	Um iPKP 07 07 55.2	"	8	Up iSgl 14 28 45.7
		South Sandwich Islands			Ud iSgl 14 27 41.3
		region (h = N).			Southwest coast of Norway.
					By combination with Bergen
					and Kongsberg readings.
"	8	Ud iP 07 53 22.5	"	8	Up iP 23 59 53.9
		Komandorsky Islands region			Ki eP 24 01 05
		(h = N).			Ud iP 24 00 01.1
					De iP 23 59 26.7 C
					Mediterranean Sea (h = N).
"	8	Up iSgl 10 30 34.2	"	9	Up e(PKP) 14 40 07
		i 10 30 44.5			i 14 41 12.2
		Ki iPgl 10 26 41.4			iSKP 14 42 49.3
		iSgl 10 27 04.3			Ki iPKP 14 39 59.4
		Sk iSgl 10 28 50.6			iSKP1 14 42 26.1
		Um iSgl 10 28 38.4			Um iPKP 14 40 06.7
		Ud iSgl 10 30 30.0			iSKP 14 42 36.7
		De eSgl 10 32 30			Ud iPKP 14 40 08.9 C
		Nordland, Norway, near			i 14 41 13.6
		$68\ 1/2^\circ\text{N}$, 16°E .			iSKP 14 42 51.2
		Origin time = 10 26 10.			De iPKP1 14 40 20.4 C
		$M_L = 2.8$ (Ki,Sk,Um).			Fiji Islands region
					(h = 670 km).
"	8	Up iSgl 10 37 15.3	"	9	Up iSn 18 04 24.9
		i 10 37 25.1			i 18 05 02.9
		Ki iPgl 10 33 21.9 C			iSgl 18 05 08.1
		iSgl 10 33 44.3			Ki e 18 02 23
		Sk iSgl 10 35 31.0			i 18 02 24.2
		Um iSgl 10 35 18.7			iPgl 18 02 26.1
		Ud iSgl 10 37 11.2			i 18 02 46.6
		Same location as the			iSgl 18 03 03.3
		preceding event.			Sk iPn 18 02 28.0
		Origin time = 10 32 51.			iPgl 18 02 29.8
		$M_L = 2.8$ (Ki,Sk,Um).			iSgl 18 03 10.0
					i 18 03 16.8
"	8	Um iP 10 38 59.0			Um iPn 18 02 34.8 D
		Near east coast of Honshu,			iPgl 18 02 41.8
		Japan (h = 40 km).			iSn 18 03 17.0
"	8	Up iSgl 11 10 14.8			iSgl 18 03 30.2
		i 11 10 23.8			i 18 03 36.0
		Ki iPgl 11 06 20.3			(cont.)
		(cont.)			

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

1978

Mar. 9 (cont.)
 Ud iSn 18 04 23.9
 i 18 04 40.0
 iSgl 18 04 55.8
 De eSn 18 05 52
 iSgl 18 06 51.6
 i 18 06 56.8
 Nordland, Norway, 66.5°N,
 14.2°E.
 Origin time = 18 01 36.
 $M_L = 3.4$ (Up,Ki,Sk,Um,Ud,De).
 Explosion?

" 9 Up Mx 22 55
 micr sec
 Mx E 0.9 23
 Mx N 2.2 20
 Mx Z 2.3 21
 Ki Mx 22 51
 micr sec
 Mx N 1.5 18
 New Britain region
 (h = 70 km).
 $M = 5.7$ (Up,Ki).

" 9 Up iP 23 52 52.3
 micr sec
 P Z' 0.1 1.0
 Ki eP 23 52 04
 i 23 52 21.1
 Um iP 23 52 26.7
 Ud iP 23 52 58.3
 Kuril Islands (h = 45 km).

" 10 Up eP 00 28 27
 Ki iP 00 29 35.6 C
 Um eP 00 28 58
 i 00 29 00.7
 Ud iP 00 28 32.7
 De iP 00 27 59.5
 Crete (h = 55 km).

" 10 Ud iP 06 20 33.1
 Crete (h = 80 km).

" 10 Ki iSgl 16 21 47.2
 Um iSgl 16 21 52.5
 i 16 22 00.6
 Coast of north Baltic Sea,
 65.7°N, 24.6°E.
 Origin time = 16 20 28.
 $M_L = 2.0$ (Um).
 By combination with Finnish
 station readings.

1978

Mar. 10 Um iP 17 23 58.3
 Ud iP 17 24 14.7
 Northern Sumatera
 (h = 120 km).

" 10 Ki iP 17 39 27.6
 i 17 39 34.4
 Um iP 17 39 25.8
 Sumba Island region (h = N).

" 10 Ud iP 19 34 33.3
 Southern Sinkiang prov.,
 China (h = N).

" 10 Ki iP 22 31 39.7
 Um iP 22 31 57.6
 Ud iP 22 32 27.9 C
 Off east coast of Honshu,
 Japan (h = 30 km).

" 11 Ki iP 03 11 50.9
 Um eP 03 11 58
 Ud iP 03 12 19.4
 Samar, Philippine Islands
 (h = N).

" 11 Up iP 03 25 33.9
 Ki iP 03 25 13.3 C
 micr sec
 P Z' 0.1 1.1
 Um iP 03 25 20.4
 Ud iP 03 25 41.1
 Samar, Philippine Islands
 (h = N).

" 11 Up iP 04 31 32.4
 i 04 31 45.3
 Ki iP 04 31 16.9
 i 04 31 37.0
 micr sec
 i Z' 0.3 1.4
 Sk iP 04 31 38.6
 i 04 31 50.0
 Um iP 04 31 22.0 C
 i 04 31 29.9
 Ud eP 04 31 40
 i 04 31 53.7
 De iP 04 31 46.2
 i 04 31 55.0
 Molucca Passage (h = 60 km).

" 11 Ki iP 07 27 56.6
 Um iP 07 27 55.6
 Ud iP 07 28 08.7
 Southern Sumatera (h = N).

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

1978				1978			
Mar.	11	Ki	iP	10 51	24.9	Mar.	12 (cont.)
			i	10 52	36.4	Up	micr sec
		Um	iP	10 51	28.9	pP	Z' 0.4 1.1
			i	10 52	42.4	Mx	E 5.2 8
		Ud	iP	10 52	49.5	Mx	N 3.4 19
		Halmahera (h = 240 km).				Mx	Z 5.5 8
"	11	Up	iP	19 25	38.9 C	Ki	iP 08 36 57.6 C
			i	19 25	52.8	ipP	08 37 05.4
			iS	19 29	46		micr sec
						P	Z' 0.3 0.6
						pP	Z' 0.4 0.9
			P	Z'	0.4 1.5	Mx	E 8.0 15
			Mx	E	1.2 9	Mx	N 5.0 17
			Mx	N	3.4 9	Mx	Z 9.1 14
			Mx	Z	3.7 8	Sk	iP 08 37 23.9 C
		Ki	iP	19 26	54.4 C	ipP	08 37 31.6
						Um	iP 08 36 54.5 C
						ipP	08 37 02.5
			P	Z'	0.4 1.5	iPP	08 38 25.5
			Mx	E	2.2 9	Ud	iP 08 37 21.0 C
			Mx	N	2.7 11	ipP	08 37 28.7
			Mx	Z	3.5 12	De	iP 08 37 24 C
		Sk	iP	19 26	15.7 C	ipP	08 37 31
			i	19 26	27.9	iPP	08 39 11
		Um	iP	19 26	18.6 C	Southern Sinkiang prov., China.	
			i	19 26	31.4	h = 30 km (Up,Ki,Sk,Um,Ud,De). m = 6.1, M = 5.7 (Up,Ki).	
			i	19 26	55.5	"	12
			iS	19 31	08	Up	iPKP1 16 32 55.5 C
		Ud	iP	19 25	40.6	ipPKP2	16 32 59.6
			i	19 25	54.5		micr sec
		De	iP	19 25	04.0 C	PKP1	Z' 0.1 1.1
			i	19 25	12.2	PKP2	Z' 0.3 1.1
		Southern Italy (h = 35 km). m = 5.8 (Up,Ki).				Ki	ePKP1 16 32 33
"	11	Um	iP	20 23	22.8	Sk	iPKP1 16 32 49.3 C
		Oaxaca, Mexico (h = 120 km).				Um	iPKP1 16 32 44.2 C
"	11	Up	iP	21 22	21.5	Ud	iPKP1 16 32 57.7
		Ki	iP	21 21	36.3	De	iPKP1 16 33 06 C
		Um	iP	21 21	55.0	Kermadec Islands (h = 35 km).	
		Ud	iP	21 22	27.1	"	12
		Kuril Islands (h = N).				Up	iP 16 51 13.3
"	12	Ud	iP	00 09	51.8	Ki	iP 16 50 44.3
		California-Mexico border region (h = 5 km).				Sk	iP 16 51 19.6
"	12	Um	eP	01 54	22	Um	iP 16 50 55.1
		Ud	iP	01 54	30.1	Ud	iP 16 51 27.0
						De	iP 16 51 38
						Mongolia (h = N).	
"	12	Up	iP	08 37	04.8 C	"	12
		ipP		08 37	12.4	Up	iP 18 11 03.1 C
						Ki	iP 18 10 22.4 C
						Sk	i 18 11 01.9
						Um	iP 18 10 40.5 C
						i	18 10 50.9
						(cont.)	
						(cont.)	

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

1978

Mar. 12 (cont.)
 Ud iP 18 11 10.5
 De iP 18 11 27
 Near east coast of Honshu,
 Japan (h = 60 km).

" 13 Ud iP 02 50 08.6
 Off east coast of Honshu,
 Japan (h = N).

" 13 Ud iP 13 11 51.1
 Dodecanese Islands (h = N).

" 13 Ud iP 16 23 45.9
 Pakistan (h = N).

" 14 Up iP 02 10 14.4
 Ki iP 02 09 56.4
 i 02 09 59.5
 micr sec
 i Z' 0.1 0.6
 Sk eP 02 10 21
 Um iP 02 10 04.3
 Ud iP 02 10 24.5
 Mindanao, Philippine Islands
 (h = 80 km).

" 14 Um iPKP1 03 46 04.8
 Ud iPKP1 03 46 18.4
 Kermadec Islands region
 (h = N).
 Late arrivals, by about
 17 s, when compared with
 the NEIS solution.

" 14 Ki iP 11 46 52.5
 Eastern Kashmir (h = N).

" 14 Up iP 19 55 45.7
 Talaud Islands (h = 190 km).

" 14 Up iP 20 44 01.7
 i 20 44 30.9
 micr sec
 P Z' 0.1 0.8
 Mx E 3.9 17
 Mx N 3.5 18
 Mx Z 9.1 17
 Ki iP 20 43 37.4 C
 micr sec
 P Z' 0.1 1.0
 Mx E 2.2 16
 Mx N 2.4 15
 Mx Z 1.5 14
 Sk iP 20 44 05.1 C
 (cont.)

1978

Mar. 14 (cont.)
 Um iP 20 43 45.7 C
 Ud iP 20 44 10.8 C
 De iP 20 44 20
 Taiwan region (h = 45 km).
 m = 5.8, M = 5.8 (Up,Ki).

" 15 Up iPKP1 03 52 27.8
 Um iPKP1 03 52 17.3
 Ud iPKP1 03 52 29.9
 De iPKP1 03 52 38
 i 03 52 46

" 15 Ki iP 12 28 53.6
 iS 12 29 53.2
 i 12 30 03.1
 Greenland Sea, approximate
 location 73°N, 15°E.
 Origin time = 12 27 28.
 Solution from Helsinki
 regional bulletin.

" 15 Ki iP 15 00 02.4
 Sumbawa Island region
 (h = 90 km).

" 15 Ki iP 15 11 56.9 C
 Um iP 15 12 23.8 C
 Ud iP 15 12 49.1
 Fox Islands, Aleutian
 Islands (h = 20 km).

" 15 Up iP 22 00 48.0
 i 22 00 55.6
 Um iP 22 01 13.8 D
 Ud eP 22 00 43
 North of Ascension Island
 (h = N).

" 15 Up iP 22 05 33.1
 micr sec
 P Z' 0.1 0.7
 Ki iP 22 04 48.3 C
 micr sec
 P Z' 0.2 1.0
 Sk iP 22 05 23.5
 Um eP 22 05 08
 Ud iP 22 05 38.5 C
 De iP 22 05 57
 Off coast of Hokkaido,
 Japan (h = 55 km).
 m = 6.0 (Up,Ki).

" 15 Up iP 22 16 30.8
 iP 22 17 40.2
 (cont.)

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

1978				1978			
Mar.	15	(cont.)		Mar.	16		
	Up	iPP	22 19 44.8		Up	iP	02 20 33.2 C
		iS	22 26 19.6			ipP	02 20 46.3
			micr sec				micr sec
		P	Z' 2.0 0.8			P	Z' 0.2 1.0
	Ki	iP	22 15 59.5		Ki	iP	02 19 39.8 C
		iPP	22 18 52.9				micr sec
		iS	22 25 20.4			P	Z' 0.3 1.0
			micr sec		Sk	iP	02 20 10.2 C
		P	Z' 2.1 1.0		Um	eP	02 20 07
	Sk	iP	22 16 28.0		Ud	iP	02 20 32.0 C
		iPP	22 19 38.1			ipP	02 20 44.2
		iS	22 26 17.3		De	iP	02 20 54 C
	Um	iP	22 16 13.2		Fox Islands, Aleutian		
		ipP	22 17 22.6		Islands.		
		iPP	22 19 15.9		h = 45 km (Up,Ki).		
		iS	22 25 45.6		m = 6.2 (Up,Ki).		
	Ud	iP	22 16 38.0	"	16	Ki	iP 02 41 11.4 C
	De	eP	22 16 49			Um	iP 02 41 38.9 C
		iS	22 26 56			Ud	iP 02 42 04.2
	Bonin Islands region.				Fox Islands, Aleutian		
	h = 300 km (Up,Um).				Islands (h = 50 km).		
	m = 6.9 (Up,Ki).						
"	16	Up	iP 02 08 06.8	"	16	Up	iP 02 55 53.7
		ipP	02 08 14.5			Ki	eP 02 55 23
			micr sec			Sk	eP 02 55 50
		pP	Z' 0.1 1.0			Um	iP 02 55 35.9
		Mx	E 7.2 18			Ud	iP 02 56 00.5
		Mx	N 9.0 17		Bonin Islands region		
	Ki	iP	02 08 25.3		(h = 480 km).		
		i	02 08 26.7	"	16	Up	iP 03 40 55.7
			micr sec				micr sec
		i	Z' 0.1 1.1			P	Z' 0.1 1.0
		Mx	E 7.6 16		Ki	iP	03 40 02.6
		Mx	N 7.9 14				micr sec
		Mx	Z 8.3 16			P	Z' 0.1 1.0
	Sk	iP	02 08 36.1		Sk	iP	03 40 30.5
		i	02 08 37.2		Um	iP	03 40 29.6 C
	Um	iP	02 08 11.0		Ud	eP	03 40 55
	Ud	iP	02 08 22.8		Fox Islands, Aleutian		
		ipP	02 08 30.6		Islands (h = N).		
	De	eP	02 08 16		m = 5.9 (Up,Ki).		
		i	02 08 21	"	16	Up	iP 05 56 58.7 D
	Pakistan.					i	05 57 32.7
	h = 25 km (Up,Ud).						micr sec
	m = 5.6, M = 5.9 (Up,Ki).					P	Z' 0.1 1.0
"	16	Ki	iP 02 10 52.8		Ki	eP	05 58 05
		Um	iP 02 11 20.8		Sk	iP	05 57 38.1 D
		Ud	iP 02 11 46.5		Um	iP	05 57 34.5
		De	iP 02 12 08		Ud	iP	05 57 05.2
	Fox Islands, Aleutian				De	iP	05 56 29 D
	Islands (h = 40 km).				Southern Greece (h = 60 km).		

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

1978				1978									
Mar.	16	Up	iP	06 03	14.4	Mar.	17	Sk	iPKP1	11 19	56.7		
		Sk	iP	06 03	53.6			Um	iPKP	11 20	00.5		
		Um	iP	06 03	50.3			Ud	i(PKP)	11 20	02.2		
		Ud	iP	06 03	20.5			De	iPKP1	11 20	16		
				Southern Greece (h = 70 km).					i	11 20	33		
								Tonga Islands region (h = N).					
"	16	Um	iP	06 13	19.4 C	"	17	Um	iP	23 15	04.5 D		
			i	06 13	26.6			Ryukyu Islands (h = N).					
				Yugoslavia (h = N).				"	17	Up	iP	24 00	15.8
										Ki	iP	23 59	57.5 C
"	16	Um	iP	06 38	05.0			micr sec					
				Adriatic Sea (h = N).				P	Z'	0.1	1.0		
"	16	Up	iSgl	10 15	30.9			Um	iP	24 00	03.4 C		
		Sk	iSn	10 14	11.5			Ud	iP	24 00	23.3		
			iSgl	10 14	49.5			Luzon, Philippine Islands					
		Um	iSgl	10 16	25.3			(h = 110 km).					
		Ud	iSn	10 13	55.0			"	18	Um	iP	04 56	34.7
			i	10 14	20.4					Ud	iP	04 56	59.7 C
				Off coast of southwest				Luzon, Philippine Islands					
				Norway, near 59 1/4°N,				(h = 90 km).					
				1 1/2°E.				"	18	Ki	iPKP	09 32	28.6
				Origin time = 10 11 15.						Um	iPKP	09 32	29.5 C
				M _L = 3.0 (Up,Sk,Um).				West Chile rise (h = N).					
				By combination with Bergen				"	18	Sk	iP	15 57	19.6
				and Kongsberg readings.						Um	iP	15 57	45.1
"	16	Ud	i(PKP)	18 20	08.2					Ud	iP	15 57	13.9
				Tonga Islands region (h = N).				"	18	Up	iP	18 51	15.2
"	16	Ki	iP	18 57	30.7					Um	iP	18 51	07.9
				Samar, Philippine Islands						Ud	iP	18 51	28.5
				(h = N).				India-Bangladesh border					
"	16	Up	iP	19 53	27.5			region (h = N).					
		Ki	eP	19 53	59			"	19	Up	iP	01 52	02.8
		Um	iP	19 53	34.2						i	01 52	42.4
		Ud	iP	19 53	40.9						iSKS	02 02	32
				Caspian Sea (h = 70 km).							iS	02 02	42
"	16	Um	iP	21 57	23.5						micr sec		
		Ud	iP	21 57	26.9					P	Z'	0.1	1.3
				Eastern Caucasus (h = N).						Mx	E	6.5	18
"	16	Up	ipP	23 02	28.4					Mx	N	9.8	19
		Ki	iP	23 01	57.1					Mx	Z	16	18
		Sk	i	23 02	25.9					Ki	iP	01 51	46.5 C
		Um	iP	23 02	05.7						i	01 52	03.8
		Ud	iP	23 02	29.4						iS	02 02	14
				Luzon, Philippine Islands							micr sec		
				(h = 45 km).						P	Z'	0.1	1.0
"	17	Ki	iP	10 45	18.5					i	Z'	0.1	1.0
		Sk	iP	10 44	45.3					Mx	E	14	18
		Um	iP	10 44	57.6					Mx	N	14	20
		Ud	iP	10 44	26.7					Sk	iP	01 51	44.0
										Um	iP	01 51	56.3 C
								(cont.)					

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

1978			1978		
Mar.	19	(cont.)	Mar.	20	(cont.)
		Um i 01 52 15.7			Up iSn 04 00 14.5
		iS 02 02 28			i 04 00 32.7
		Ud iP 01 51 53.7 C			iSgl 04 00 44.0
		i 01 52 24.0			Ki eSn 04 00 54
		De iP 01 52 03.9 C			iSgl 04 01 43.6
		Guerrero, Mexico (h = 35 km).			Sk iPn 03 58 22.9
		m = 6.0, M = 6.4 (Up,Ki).			iPgl 03 58 28.8
"	19	Up iP 03 53 50.1 C			i 03 58 35.1
		iPn 03 54 53.6			i 03 58 58.3
		Ki iP 03 53 34.5 C			iSgl 03 59 02.9
		micr sec			Um iSn 04 00 17.2
		P Z' 0.1 0.6			i 04 00 32.8
		Sk iP 03 54 05.5 C			iSgl 04 00 51.5
		Um iP 03 53 34.9 C			Ud iPn 03 58 43.7
		iPn 03 54 26.3			iPgl 03 58 54.8
		Ud iP 03 54 06.2 C			iSgl 03 59 51.9
		De iP 03 54 13.4			De iPgl 03 59 50.1
		iPn 03 55 26.8			iSn 04 00 45.1
		Eastern Kazakh SSR.			iSgl 04 01 21.2
		Underground explosion.			Coast of west Norway,
"	19	Ud eP 06 00 03			62.6°N, 7.1°E.
		Southern Greece (h = N).			Origin time = 03 57 46.
"	19	Up iP 06 39 49.0			M _L = 3.5 (Up,Ki,Sk,Um,Ud,De).
		Ud iP 06 39 37.9			Felt.
		Northern Colombia (h = 170 km).	"	20	Ki i 04 09 18.4
"	19	Up iP 15 00 29.6 C			Sk iP 04 08 27.7
		Ki iP 14 59 38.8 C			Um iP 04 08 29.7
		Sk eP 15 00 19			Southern Alaska (h = 150 km).
		Um iP 15 00 02.3 C	"	20	Up iP 07 30 23.6
		Ud iP 15 00 34.4 C			Ki iP 07 29 39.3
		De iP 15 00 54.2			Sk eP 07 30 15
		Kuril Islands (h = 60 km).			Um iP 07 29 59.3
"	19	Up iP 18 54 27.9			Ud iP 07 30 30.0
		micr sec			De iP 07 30 47.0
		P Z' 0.2 1.5			Hokkaido, Japan region
		Ki iP 18 55 12.2			(h = 80 km).
		i 18 55 16.0	"	20	Um iP 08 49 10.8
		micr sec			Ud iP 08 48 33.0
		i Z' 0.2 1.5			North of Ascension Island
		Sk iP 18 54 40.5			(h = N).
		Um iP 18 54 52.8	"	20	Up iP 10 35 37.8 C
		Ud iP 18 54 21.4			micr sec
		i 18 54 48.1			P Z' 0.3 0.8
		De eP 18 54 02			Ki iP 10 34 59.6 C
		North of Ascension Island			Sk iP 10 35 32.9 C
		(h = N).			Um iP 10 35 16.3 C
		m = 6.0 (Up,Ki).			Ud iP 10 35 43.6
"	20	Up iPgl 03 59 28.2			i 10 35 45.5
		(cont.)			De iP 10 35 59.7 C
					Honshu, Japan (h = 70 km).

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

1978				1978						
Mar.	20	Up	iP	15 53	50.5	Mar.	21	(cont.)		
			i	15 53	56.0			Ud		
				micr sec				iP		
			i	Z'	0.2 1.2			i		
			Mx	E	1.0 17			De		
			Mx	N	1.5 17			iP		
			Mx	Z	4.6 19			13 55 07.9		
		Ki	iP	15 54	27.2			Luzon, Philippine Islands		
				micr sec				(h = 45 km).		
			P	Z'	0.2 1.6			m = 5.9 (Up,Ki).		
			Mx	N	2.2 22		"	21		
		Sk	iP	15 53	55.7			Up		
		Um	iP	15 54	12.8			eP		
		Ud	iP	15 53	43.0			15 43 15		
		Central Mid-Atlantic ridge							micr sec	
		(h = N).							P	
		m = 6.0, M = 5.4 (Up,Ki).							Z'	
									0.4 1.7	
								Ki	eP	
									15 42 19	
									i	
									15 42 22.1	
								Sk	iP	
									15 42 58.2 C	
								Um	iP	
									15 42 45.9	
									i	
									15 42 47.2	
								Ud	iP	
									15 43 18.6	
								De	eP	
									15 43 39	
								Near east coast of Kamchatka		
								(h = 55 km).		
"	20	Up	iP	18 20	49.0 C		"	21	Um	
			i	18 21	05.4				iP	
				micr sec					17 07 49.8	
			P	Z'	0.4 1.5				17 08 18.4	
			Mx	E	5.7 24				Near east coast of Honshu,	
			Mx	N	4.2 23				Japan (h = 60 km).	
			Mx	Z	12 20			"	21	
		Ki	iP	18 21	24.5 C				Ki	
				micr sec					iPKP	
			P	Z'	0.2 1.3				18 12 07.8 C	
			Mx	E	2.2 22				i	
		Sk	eP	18 20	52				18 12 16.5	
		Um	iP	18 21	09.9 C			Sk	i	
		Ud	iP	18 20	39.9 C				18 12 27.8	
		De	iP	18 20	23.6			Um	iPKP	
		Central Mid-Atlantic ridge								18 12 13.8
		(h = N).								18 12 20.5
		m = 6.1, M = 5.6 (Up,Ki).								18 12 39.3
								De	i	
								New Hebrides Islands		
								(h = 25 km).		
"	20	Ud	iP	23 32	21.7		"	21	Ki	
		Iran-USSR border region							iPKP	
		(h = N).							19 33 06.3	
								Um	iPKP	
									19 33 12.4 C	
								Ud	iPKP	
									19 33 20.9	
								New Hebrides Islands		
								(h = 25 km).		
"	21	Ud	iP	02 43	46.4		"	21	Up	
		Turkey (h = 110 km).							i	
								Ki	iP	
									23 13 26.5	
									23 12 35.8	
									micr sec	
									P	
									Z'	
									0.1 1.2	
								Sk	i	
									23 13 19.5	
								Um	iP	
									23 12 56.0 C	
								Ud	iP	
									23 13 28.0	
									i	
									23 13 33.9	
								Sakhalin Island (h = N).		
								"	22	
									Up	
									iP	
									01 01 34.9	
									iS	
									01 10 36.5	
									micr sec	
									P	
									Z'	
									7.1 2.1	
								(cont.)		
								(cont.)		
								(cont.)		

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

1978				1978			
Mar.	22	(cont.)		Mar.	22	(cont.)	
		Up	micr sec			Ud iP	01 28 45.9
		Mx	E 55 17			Probably Kuril Islands	
		Mx	N 55 17			region.	
		Mx	Z 55 14				
		Ki	iP 01 00 47.9	"	22	Um iP	01 33 54.1
			iS 01 09 14			Ud iP	01 34 37.1
			micr sec			Probably Kuril Islands	
		P	Z' 2.7 2.1			region.	
		Mx	E 89 18				
		Mx	N 96 18	"	22	Up iP	01 34 57.0 C
		Mx	Z 45 15			ipP	01 35 08.9
		Sk	iP 01 01 24.3				micr sec
		Um	iP 01 01 09.0			P	Z' 0.2 1.0
			iS 01 09 52			Ki iP	01 34 09.8
		Ud	iP 01 01 40.5 C				micr sec
			i 01 02 23.2			P	Z' 0.2 1.0
		De	iP 01 01 58.3			Sk iP	01 34 46.5
			i 01 02 12.6			Um iP	01 34 30.9 C
		Kuril Islands (h = N).				ipP	01 34 43.1
		m = 7.2, M = 7.1 (Up,Ki).				Ud iP	01 35 02.7 C
						ipP	01 35 14.3
"	22	Up	iP 01 08 17.7 C			De i	01 35 32.2
			micr sec			Kuril Islands.	
		P	Z' 0.1 1.0			h = 40 km (Up,Um,Ud).	
		Ki	iP 01 07 31.8			m = 6.2 (Up,Ki).	
			micr sec				
		P	Z' 0.1 1.0	"	22	Um iP	01 56 23.5
		Um	iP 01 07 51.8 C			Ud iP	01 56 56.7
		Ud	iP 01 08 23.8 C			Sakhalin Island (h = N).	
		Kuril Islands region					
		(h = N).		"	22	Up iP	02 15 42.1
		m = 5.9 (Up,Ki).					micr sec
"	22	Um	iP 01 10 55.2			P	Z' 0.1 1.2
		Ud	iP 01 11 25.9			Ki iP	02 14 56.4
		Kuril Islands (h = N).					micr sec
"	22	Up	iP 01 24 33.9 C			P	Z' 0.1 1.0
			ipP 01 24 46.1			Um eP	02 15 17
			micr sec			i	02 15 18.4
			pP Z' 0.1 1.0			i	02 15 29.6
		Ki	iP 01 23 47.9 C			i	02 15 41.2
			micr sec			Ud iP	02 15 48.3
		P	Z' 0.1 0.9			i	02 15 56.1
		Sk	iP 01 24 23.6			Kuril Islands (h = 45 km).	
			ipP 01 24 35.8			m = 5.8 (Up,Ki).	
		Um	iP 01 24 08.9 C	"	22	Um iP	02 42 06.0
			ipP 01 24 21.1			Ud iP	02 42 37.0
		Ud	iP 01 24 40.1 C			Kuril Islands (h = 70 km).	
			ipP 01 24 52.1				
		Kuril Islands region.		"	22	Up iP	02 43 41.8
		h = 45 km (Up,Sk,Um,Ud).				ipP	02 43 56.1
		m = 5.9 (Up,Ki).					micr sec
"	22	Um	iP 01 28 14.9			P	Z' 0.2 1.1
		(cont.)				Ki iP	02 42 54.7 C
						(cont.)	

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

1978				1978			
Mar.	22	(cont.)		Mar.	22	(cont.)	
		Ki	micr sec			Ud iSgl	13 46 24.7
		P	Z' 0.1 1.0			Southern Norway, near	
		Sk iP	02 43 31.3			60 1/4°N, 7°E.	
		Um iP	02 43 15.9 C			Origin time = 13 44 38.	
		Ud iP	02 43 47.5 C			M _L = 2.5 (Ud).	
		ipP	02 44 01.6			By combination with Kongsberg	
		De iP	02 44 05.5 C			readings.	
		ipP	02 44 19.4				
		Kuril Islands.		"	22	Up iP	14 01 43.1
		h = 50 km (Up,Ud,De).				Ud iP	14 02 09.5
		m = 6.0 (Up,Ki).					
"	22	Ud iP	02 59 36.4	"	22	Up iP	14 06 20.4
		Kuril Islands region (h = N).				Ki iP	14 05 34.5
							micr sec
"	22	Ki iP	03 00 40.4 C			P	Z' 0.1 1.0
		Um iP	03 01 01.4 C			Um iP	14 05 55.2 C
		Ud iP	03 01 32.4			Ud iP	14 06 26.0
		Kuril Islands (h = N).				i	14 06 40.8
						Kuril Islands region	
"	22	Um iP	03 08 24.1			(h = 40 km).	
"	22	Um iP	03 52 38.4	"	22	Ud iP	18 06 25.3
"	22	Ud iP	04 08 33.0	"	22	Up iP	19 34 20.9 C
"	22	Um iP	06 34 19.4			Um iP	19 33 56.0
		Kuril Islands region (h = N).				Ud iP	19 34 26.8 C
						Kuril Islands (h = 50 km).	
"	22	Up iP	08 36 21.0	"	22	Up iP	21 24 11.7
		ipP	08 36 33.7			Um iP	21 23 46.9
		Ki iP	08 35 34.9			Ud iP	21 24 18.2
			micr sec			Kuril Islands.	
		P	Z' 0.1 1.3			Origin time = 21 13 10.	
		Sk eP	08 36 10			Approximate origin times,	
		Um iP	08 35 55.9			based upon the same epicentral	
		ipP	08 36 09.8			coordinates as for the	
		Ud iP	08 36 26.3			earthquake at 00 50 32,	
		ipP	08 36 40.5			March 22, are given for	
		De iP	08 36 45.1			those Kuril Islands after-	
		Kuril Islands.				shocks which have not been	
		h = 50 km (Up,Um,Ud).				reported by NEIS.	
"	22	Um iP	11 02 50.4	"	22	Up iP	21 45 35.2 C
		Ud iP	11 03 22.8			iS	21 54 35
		Sakhalin Island (h = N).					micr sec
"	22	Um iP	11 56 24.1			P	Z' 0.5 1.0
		Ud iP	11 56 55.2			Mx E	37 17
		Kuril Islands (h = 50 km).				Mx N	49 16
						Mx Z	50 16
"	22	Up iSgl	13 47 29.1			Ki eP	21 44 49
		Sk eSgl	13 46 57			iS	21 53 10
		(cont.)					micr sec
						P	Z' 0.4 1.0
						(cont.)	

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

1978				1978			
Mar.	22	(cont.)		Mar.	23	(cont.)	
		Ki	micr sec			Ud iP	00 36 17.3
		Mx E	43 16			Kuril Islands.	
		Mx N	54 18			Origin time =	00 25 09.
		Mx Z	42 17				
		Sk iP	21 45 25.0	"	23	Up iP	00 42 02.4 C
		Um iP	21 45 10.4 C			iS	00 51 00
		i	21 45 30.0			iP'P'	01 10 18.7
		iS	21 53 49				micr sec
		Ud iP	21 45 41.4 C			P Z'	0.9 1.0
		i	21 45 58.0			Mx E	159 16
		De iP	21 45 59.3 C			Mx N	212 19
		Kuril Islands (h = N).				Mx Z	234 18
		m = 6.5, M = 6.9 (Up,Ki).				Ki iP	00 41 15.3
"	22	Ud iP	21 49 22.2			iP'P'	01 10 37.2
							micr sec
"	22	Um iP	21 53 51.9			P Z'	0.6 1.2
		Ud iP	21 54 23.1			Mx E	224 17
		Probably Kuril Islands.				Mx N	233 16
"	22	Um iP	21 55 48.4			Sk iP	00 41 51.9 C
		Ud iP	21 56 19.8			Um iP	00 41 36.5 C
		Probably Kuril Islands.				iP'P'	01 10 27.0
"	22	Up iP	22 21 50.3 C			Ud iP	00 42 08.1 C
			micr sec			iP'P'	01 10 15.7
		P Z'	0.1 1.0			De iP	00 42 25.8 C
		Ki iP	22 21 04.2 C			Kuril Islands (h = 45 km).	
			micr sec			m = 6.7, M = 7.6 (Up,Ki).	
		P Z'	0.1 1.0	"	23	Up iP	00 47 35.2 C
		Sk iP	22 21 40.9 C				micr sec
		Um iP	22 21 25.3 C			P Z'	0.3 1.0
		Ud iP	22 21 56.5 C			Ki iP	00 46 48.4
		Kuril Islands (h = N).					micr sec
		m = 5.9 (Up,Ki).				P Z'	0.1 1.0
"	23	Up iP	00 29 48.6			Sk iP	00 47 24.7
		i	00 29 53.8			Um iP	00 47 10.4 C
		Ki iP	00 29 02.6			Ud iP	00 47 41.5 C
		Um iP	00 29 23.5 C			De iP	00 47 59.2 C
		i	00 29 35.5			Kuril Islands (h = 55 km).	
		Ud iP	00 29 54.5			m = 6.1 (Up,Ki).	
		i	00 30 06.5	"	23	Up iP	00 50 43.4 C
		De iP	00 30 12.0				micr sec
		Kuril Islands (h = N).				P Z'	0.5 1.3
"	23	Um iP	00 34 56.1			Ki iP	00 49 57.1 C
		Ud iP	00 35 27.3				micr sec
		i	00 35 39.6			P Z'	0.2 1.2
		Probably Kuril Islands.				Sk iP	00 50 32.7 C
"	23	Up iP	00 36 11.6			Um iP	00 50 18.4 C
		Um iP	00 35 46.4			i	00 50 30.6
		(cont.)				Ud iP	00 50 49.5 C
						De iP	00 51 06.9 C
						i	00 51 21.1
						Kuril Islands (h = N).	
						m = 6.3 (Up,Ki).	

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

1978				1978									
Mar.	23	Up	iP	00 56	10.6	Mar.	23	(cont.)					
		Ud	iP	00 56	12.6			Sk	iP	01 15	36.2	C	
				Probably Kuril Islands.				Um	iP	01 15	21.9	C	
"	23	Up	iP	00 57	35.7			Ud	iP	01 15	53.0	C	
					micr sec			De	iP	01 16	10.6	C	
			P	Z'	0.1 1.0			Kuril Islands (h = N).					
		Ki	iP	00 56	49.9			m = 6.0 (Up,Ki).					
					micr sec	"	23	Um	iP	01 17	23.0		
			P	Z'	0.1 1.2			Ud	iP	01 17	54.4		
		Um	iP	00 57	10.5	C		Probably Kuril Islands.					
		Ud	iP	00 57	41.5	C							
		De	iP	00 57	58.8		"	23	Ud	iP	01 19	25.2	
				Kuril Islands (h = 45 km).			"	23	Up	iP	01 23	19.3	
				m = 5.8 (Up,Ki).									
"	23	Up	iP	01 00	54.3				P	Z'	0.1 0.9		
		Um	iP	01 00	25.5			Ki	iP	01 22	32.2		
		Ud	iP	01 00	55.7			Um	iP	01 22	54.3		
				Kuril Islands.				Ud	iP	01 23	25.3		
				Origin time = 00 49 49.				Kuril Islands (h = N).					
"	23	Um	iP	01 03	03.0		"	23	Up	iP	01 35	02.9	
"	23	Up	iP	01 05	26.6			Ud	iP	01 35	08.6		
					micr sec			Kuril Islands (h = 45 km).					
			P	Z'	0.1 1.0		"	23	Um	iP	01 40	34.0	
		Ki	eP	01 04	39								
		Um	iP	01 05	01.3	C	"	23	Up	iP	02 00	37.5	
		Ud	iP	01 05	31.9	C							
			i	01 05	38.9				P	Z'	1.2 1.5		
		De	iP	01 05	50.1	C		Ki	iP	01 59	51.0		
				Kuril Islands (h = 50 km).									
"	23	Up	iP	01 08	10.1				P	Z'	0.5 1.0		
		Ud	iP	01 08	16.0			Sk	iP	02 00	27.0		
				Probably Kuril Islands.				Um	iP	02 00	12.4		
"	23	Up	iP	01 08	26.0	C		Ud	iP	02 00	42.7		
					micr sec			De	iP	02 01	01.3		
			P	Z'	0.1 0.9			Kuril Islands region (h = N).					
		Ki	iP	01 07	40.3			m = 6.7 (Up,Ki).					
		Sk	iP	01 08	15.4		"	23	Up	iP	02 05	32.2	
		Um	iP	01 08	01.0	C							
		Ud	iP	01 08	31.9				P	Z'	0.1 1.0		
				Kuril Islands.				Ki	iP	02 04	46.2		
				Origin time = 00 57 24.									
"	23	Up	iP	01 15	46.5	C			P	Z'	0.1 1.0		
					micr sec			Sk	eP	02 05	19		
			P	Z'	0.2 1.0			Um	iP	02 05	07.3	C	
		Ki	iP	01 15	00.5			Ud	iP	02 05	28.3		
					micr sec			De	iP	02 05	57.7		
			P	Z'	0.1 1.0			Kuril Islands (h = N).					
				(cont.)				m = 5.9 (Up,Ki).					

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

1978				1978								
Mar.	23	Um	iP	02 10 03.5	C	Mar.	23	(cont.)				
"	23	Up	iP	02 32 28.8				De	iP	03 25 48.0	C	
		Um	iP	02 32 04.0				Kuril Islands (h = N).				
		Ud	iP	02 32 35.0				m = 6.5, M = 7.8 (Up,Ki).				
		Kuril Islands.					"	23	Up	iP	03 26 16.2	
		Origin time = 02 21 27.							i		03 26 22.7	
											micr sec	
"	23	Up	iP	02 44 47.0				P	Z'	0.4	1.0	
		Um	iP	02 44 21.8				i	Z'	2.1	1.3	
		Ud	iP	02 44 51.5				Ki	iP	03 25 30.6		
		Kuril Islands.									micr sec	
		Origin time = 02 33 45.							P	Z'	1.4	1.8
"	23	Up	iP	02 47 59.7				Sk	iP	03 26 06.3		
			i	02 48 00.9				Um	iP	03 25 51.8		
				micr sec					iP'P'	03 54 48.0		
			i	Z'	0.6	1.0		Ud	iP	03 26 22.2		
		Ki	iP	02 47 13.2				De	iP	03 26 39.7		
				micr sec				Kuril Islands (h = N).				
			P	Z'	0.2	1.1		m = 6.9 (Up,Ki).				
		Sk	iP	02 47 49.9	C		"	23	Up	iP	03 35 27.9	
		Um	iP	02 47 34.5					i		03 35 28.7	
		Ud	iP	02 48 06.1					ipP		03 35 40.4	
			i	02 48 06.7							micr sec	
		De	iP	02 48 24.5					i	Z'	0.4	1.5
		Kuril Islands (h = 50 km).							pP	Z'	0.2	0.9
		m = 6.4 (Up,Ki).						Ki	iP	03 34 42.6		
"	23	Up	iP	02 58 22.4							micr sec	
"	23	Ud	iP	03 06 46.4				P	Z'	0.1	1.1	
"	23	Ud	iP	03 19 43.2				Sk	iP	03 35 17.8		
"	23	Ud	iP	03 19 43.2				Um	iP	03 35 03.8	C	
"	23	Up	iP	03 25 25.0	C			Ud	iP	03 35 34.5		
			iP'P'	03 53 41.4					ipP	03 35 46.5		
				micr sec				De	iP	03 35 52.1		
			P	Z'	0.6	0.9		Kuril Islands region.				
		Mx	E	213	17			h = 45 km (Up,Ud).				
		Mx	N	309	18			m = 6.1 (Up,Ki).				
		Mx	Z	348	17		"	23	Ud	iP	03 39 03.9	
		Ki	eP	03 24 37			"	23	Ud	iP	03 59 25.5	
			i	03 24 39.8				Kuril Islands (h = N).				
			iP'P'	03 53 59.0			"	23	Up	iP	04 00 28.5	
				micr sec					i		04 00 29.1	
			i	Z'	0.4	1.5			ipP		04 00 41.5	
			Mx	E	473	18					micr sec	
			Mx	N	399	18			pP	Z'	0.1	1.0
			Mx	Z	371	18		Um	iP	04 00 03.7		
		Sk	iP	03 25 13.8					ipP		04 00 17.0	
		Um	iP	03 24 59.2				Ud	iP	04 00 33.8		
			i	03 25 02.3				De	i	04 01 05.7		
		Ud	iP	03 25 30.3	C			Kuril Islands.				
		(cont.)						h = 50 km (Up,Um).				

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

1978				1978							
Mar.	23	Up	iP	04 01 51.1	Mar.	23	Up	iP	04 22 47.2		
			i	04 01 52.1			Um	iP	04 22 22.0		
				micr sec			Ud	iP	04 22 53.0		
			i	Z' 1.0 1.2			Kuril Islands.				
		Ki	iP	04 01 05.1			Origin time = 04 11 45.				
				micr sec			"	23	Up	iP	04 24 42.1
			P	Z' 0.2 1.2							micr sec
		Sk	iP	04 01 42.3					P	Z'	0.1 0.9
		Um	iP	04 01 26.0			Ki	iP	04 23 55.9		
		Ud	iP	04 01 57.0			Sk	eP	04 24 32		
		De	eP	04 02 15			Um	iP	04 24 16.6	C	
		Kuril Islands (h = 50 km).					Ud	iP	04 24 47.4		
		m = 6.4 (Up,Ki).					Kuril Islands (h = N).				
"	23	Up	iP	04 04 26.7	"	23	Ud	iP	04 28 53.8		
		Ud	iP	04 04 23.3			"	23	Up	iP	04 31 14.0
"	23	Up	iP	04 05 51.3			Ud	iP	04 31 20.0		
		Ud	iP	04 05 57.5			Probably Kuril Islands.				
"	23	Up	iP	04 06 25.6	"	23	Up	iP	04 36 27.1		
		Ud	iP	04 06 31.4					micr sec		
		Probably Kuril Islands.						P	Z'	0.1 0.9	
"	23	Up	iP	04 07 14.7			Um	iP	04 36 01.0		
		Ud	iP	04 07 20.2			Ud	iP	04 36 32.9	C	
		Probably Kuril Islands.					Kuril Islands (h = N).				
"	23	Up	iP	04 08 26.0	"	23	Up	iP	04 39 56.2		
		Ud	iP	04 08 32.3			Ud	iP	04 40 01.5		
		Probably Kuril Islands.					Probably Kuril Islands.				
"	23	Up	iP	04 09 22.1	"	23	Up	iP	04 42 36.5		
"	23	Up	iP	04 14 31.5			Ud	iP	04 42 43.1		
		Ki	iP	04 13 45.8			Probably Kuril Islands.				
		Um	iP	04 14 05.9	"	23	Ki	iP	04 44 25.8		
		Ud	iP	04 14 37.4			Ud	iP	04 45 20.7		
		Kuril Islands (h = N).					Kuril Islands (h = N).				
"	23	Up	iP	04 18 22.3	"	23	Up	iP	04 47 45.5	C	
		Ud	iP	04 18 28.3			Um	iP	04 47 20.6		
		Probably Kuril Islands.					Ud	iP	04 47 51.6		
"	23	Up	iP	04 20 18.7			Kuril Islands (h = N).				
		Ud	iP	04 20 24.8	"	23	Up	iP	04 59 18.3		
		Probably Kuril Islands.						i	04 59 31.0		
"	23	Up	iP	04 21 48.0			Ki	iP	04 58 31.8		
		Um	iP	04 21 22.8			Sk	eP	04 59 08		
		Ud	iP	04 21 54.1			Um	iP	04 58 53.0	C	
		Kuril Islands.					Ud	iP	04 59 24.3	C	
		Origin time = 04 10 46.					Kuril Islands (h = 45 km).				
"	23	Ud	iP	05 12 00.5	"	23	Ud	iP	05 12 00.5		

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

1978				1978			
Mar.	23	Up	iP	05 23	56.2	C	
			ipP	05 24	09.5		
					micr	sec	
			P	Z'	0.1	0.9	
		Ki	iP	05 23	09.8		
		Um	iP	05 23	32.0		
			ipP	05 23	44.3		
		Ud	iP	05 24	02.1	C	
			ipP	05 24	14.7		
		De	iP	05 24	16.6		
		Kuril Islands.					
		h = 45 km (Up,Um,Ud).					
"	23	Ud	iP	05 30	40.8		
		Kuril Islands (h = N).					
"	23	Up	iP	05 34	20.4	D	
			i	05 34	34.2		
		Um	iP	05 33	53.6		
		Ud	iP	05 34	26.3	D	
		Kuril Islands (h = N).					
"	23	Up	iP	05 41	14.7		
		Ud	iP	05 41	20.8		
		Probably Kuril Islands.					
"	23	Up	iP	05 44	07.9		
		Ud	iP	05 44	13.7		
			i	05 44	26.8		
		Probably Kuril Islands.					
"	23	Up	iP	05 45	36.7		
		Ud	iP	05 45	42.9		
		Probably Kuril Islands.					
"	23	Up	iP	05 49	31.7		
			ipP	05 49	45.8		
		Ud	iP	05 49	37.4		
			ipP	05 49	52.0		
		Kuril Islands.					
		h = 55 km (Up,Ud).					
"	23	Up	iP	05 52	30.7		
		Um	iP	05 52	06.2		
		Ud	iP	05 52	36.6		
			i	05 52	49.5		
"	23	Up	iP	05 53	50.3	C	
		Ki	iP	05 53	04.6		
		Um	iP	05 53	25.6		
		Ud	iP	05 53	56.6		
		Kuril Islands (h = N).					
"	23	Up	iP	06 16	46.4		
		(cont.)					
Mar.	23	(cont					
		Up			micr	sec	
			P	Z'	0.1	1.0	
		Um	iP		06 16	21.4	
		Ud	iP		06 16	52.6	
		Kuril Islands (h = N).					
"	23	Ud	iP		06 20	40.2	
"	23	Up	iP		06 23	30.2	
		Um	iP		06 23	04.2	
		Ud	iP		06 23	35.4	D
		Kuril Islands.					
		Origin time = 06 12 27.					
"	23	Ud	iP		06 45	30.8	
		Kuril Islands (h = 50 km).					
"	23	Up	i(P)		06 55	30.1	
"	23	Up	iP		07 10	26.0	
		Ud	iP		07 10	31.4	
		Probably Kuril Islands.					
"	23	Up	iP		07 14	59.5	C
		Ki	iP		07 14	14.1	
					micr	sec	
			P	Z'	0.1	1.0	
		Sk	iP		07 14	49.1	
		Um	iP		07 14	34.5	C
		Ud	iP		07 15	05.2	C
		Kuril Islands region (h = N).					
"	23	Um	iP		07 20	10.9	
		Ud	iP		07 20	37.4	
		Probably Kuril Islands.					
"	23	Up	iP		07 22	34.5	
		Ud	iP		07 22	40.4	
		Probably Kuril Islands.					
"	23	Up	iP		07 29	39.2	
		Um	iP		07 29	14.0	
		Ud	iP		07 29	45.2	
		Kuril Islands.					
		Origin time = 07 18 37.					
"	23	Up	iP		07 34	12.7	
					micr	sec	
			P	Z'	0.2	1.1	
		Ki	iP		07 33	19.0	
					micr	sec	
			P	Z'	0.4	1.2	
		(cont.)					

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

1978					1978						
Mar.	23	(cont.)			Mar.	23	(cont.)				
		Sk	iP	07 33 49.9			De	i	08 26 08.9		
		Um	iP	07 33 45.2			Kuril Islands (h = 50 km).				
		Ud	iP	07 34 11.7			m = 6.1, M = 5.9 (Up,Ki).				
		De	iP	07 34 34.5		"	23	Up	iP	08 37 34.9	
		Fox Islands, Aleutian						Ud	iP	08 37 43.5	
		Islands (h = 25 km).					Probably Kuril Islands.				
		m = 6.3 (Up,Ki).									
"	23	Up	iP	07 40 31.4	"	23	Up	iP	09 02 02.9 C		
		Um	iP	07 40 06.4			Um	iP	09 01 37.6		
		Ud	iP	07 40 37.0 C				i	09 01 50.0		
		Kuril Islands.					Ud	iP	09 02 08.9		
		Origin time = 07 29 29.					Kuril Islands (h = N).				
"	23	Up	iP	07 43 16.2	"	23	Up	iP	09 06 27.5		
			i	07 43 29.5			Um	iP	09 06 03.0		
				micr sec			Ud	iP	09 06 33.3		
		P	Z'	0.1 1.0				i	09 06 45.1		
		Ki	iP	07 42 28.9			Kuril Islands (h = 40 km).				
		Um	iP	07 42 50.5		"	23	Ud	iP	09 07 14.8	
		Ud	iP	07 43 22.3 C							
		Kuril Islands (h = 45 km).									
"	23	Up	iP	07 46 35.3	"	23	Up	iP	09 26 14.7		
		Um	iP	07 46 10.9			Ud	iP	09 26 21.1		
		Ud	iP	07 46 41.4 C			Probably Kuril Islands.				
		Kuril Islands.									
		Origin time = 07 35 34.					"	23	Up	iP	09 26 12.5
"	23	Up	iP	08 02 27.2			Ki	iP	09 29 25.4		
							Um	iP	09 29 46.1		
							Ud	eP	09 30 17		
							Kuril Islands (h = 50 km).				
"	23	Up	iP	08 03 07.1	"	23	Ud	iP	09 37 00.5		
		Ud	eP	08 03 12							
		Kuril Islands (h = 50 km).									
"	23	Ud	iP	08 11 29.3	"	23	Up	iP	09 57 09.1		
							Ud	iP	09 57 14.5		
							Probably Kuril Islands.				
"	23	Up	iP	08 25 31.3 C	"	23	Up	iP	09 59 53.6		
				micr sec			Um	iP	09 59 29.0		
		P	Z'	0.3 0.9			Ud	iP	10 00 00.9		
		Mx	E	3.9 16			Kuril Islands (h = N).				
		Mx	N	3.4 16							
		Mx	Z	3.2 18							
		Ki	iP	08 24 44.9 C	"	23	Up	iP	10 03 07.7		
				micr sec				ipP	10 03 19.9		
		P	Z'	0.1 0.9			Ki	iP	10 02 21.4		
		Mx	E	4.7 16			Ud	iP	10 03 13.7		
		Mx	N	4.6 16				ipP	10 03 26.1		
		Mx	Z	4.6 16			Kuril Islands.				
		Sk	eP	08 25 21			h = 45 km (Up,Ud).				
		Um	iP	08 25 06.1 C	"	23	Ud	iP	11 03 27.3		
		Ud	eP	08 25 36			Kuril Islands (h = 50 km).				
			i	08 25 37.5							
		De	iP	08 25 55.1 C							
		(cont.)									

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

1978				1978									
Mar.	23	Up	iP	11 17	39.3	Mar.	23	Up	iP	14 55	27.6		
			i	11 17	56.9			Ud	iP	14 55	33.5		
		Ud	iP	11 17	20.7			Probably Kuril Islands.					
"	23	Ki	iP	11 22	44.0	"	23	Up	i	15 03	13.2		
		Um	iP	11 22	21.0			Ki	i	15 03	48.2		
		Ud	iP	11 22	20.0			Um	iP	15 03	28.2		
		Southern Iran (h = N).						Ud	i	15 03	02.2		
"	23	Up	iP	11 37	38.3			Central Mid-Atlantic ridge (h = 10 km).					
				micr	sec			"	23	Up	iP	15 20	19.6
			P	Z'	0.1 1.0						ipP	15 20	31.5
		Um	iP	11 37	12.8			Ki	iP	15 19	33.5		
		Ud	iP	11 37	43.5						ipP	15 19	45.8
		Kuril Islands (h = 45 km).						Um	iP	15 19	53.8		
"	23	Ud	iP	11 55	14.0						ipP	15 20	05.8
"	23	Um	iP	13 03	09.0			Ud	iP	15 20	24.5		
		Ud	iP	13 03	39.2						ipP	15 20	37.0
		Probably Kuril Islands.						Kuril Islands. h = 45 km (Up,Ki,Um,Ud).					
"	23	Up	iP	13 21	52.2	"	23	Up	iP	15 27	53.2		
		Ud	iP	13 21	58.6			Um	iP	15 27	28.8		
		Kuril Islands (h = N).						Kuril Islands (h = N).					
"	23	Up	iP	13 33	59.5 C	"	23	Up	iP	15 53	21.8		
		Um	iP	13 33	34.5 C			Ud	iP	15 53	27.7		
		Ud	iP	13 34	05.6			Kuril Islands (h = N).					
		Kuril Islands (h = 45 km).						"	23	Up	iP	16 34	02.9
"	23	Ud	iP	13 49	40.4			Um	iP	16 33	36.6		
"	23	Up	iP	14 00	45.1			Ud	iP	16 34	08.6 C		
				micr	sec			Kuril Islands (h = N).					
			P	Z'	0.2 0.9			"	23	Up	iP	16 41	48.9 C
		Ki	iP	13 59	59.5							micr	sec
		Sk	eP	14 00	35						P	Z'	0.2 1.0
		Um	iP	14 00	19.4			Ki	iP	16 41	14.9 C		
		Ud	iP	14 00	50.7							micr	sec
		De	iP	14 01	10.1						P	Z'	0.3 1.5
		Kuril Islands (h = 50 km).						Sk	iP	16 41	23.0		
"	23	Up	iP	14 06	25.0			Um	iP	16 41	34.0 C		
		Ud	iP	14 06	30.8			Ud	iP	16 41	41.0 C		
"	23	Ud	iP	14 13	49.6			De	iP	16 41	57.3 C		
"	23	Up	i	14 18	30.7			Southern Nevada. Underground explosion. m = 6.2 (Up,Ki).					
		Um	iP	14 17	54.5			"	23	Um	iP	16 49	15.0 C
		Ud	i	14 18	37.3						i	16 49	23.7
		Kuril Islands (h = N).						"	23	Ud	iP	16 52	36.4
"	23	Up	iP	14 29	42.8			"	23	Up	iP	17 03	36.3
		Ud	iP	14 29	50.1							(cont.)	
		Kuril Islands (h = N).											

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

1978				1978			
Mar.	23	(cont.)		Mar.	23	(cont.)	
		Up	ipP 17 03 49.1 micr sec			Ki	micr sec
			P Z' 0.2 0.9			P	Z' 0.2 1.1
		Ki	eP 17 02 49 micr sec			Mx	E 50 15
			P Z' 0.1 1.0			Mx	N 63 17
		Sk	iP 17 03 26.7			Mx	Z 33 17
		Um	iP 17 03 10.8			Sk	iP 19 23 16.3
		Ud	iP 17 03 42.0			Um	iP 19 23 00.0
		De	ipP 17 03 55.1				iS 19 31 39
			iP 17 04 00.3 C			Ud	iP 19 23 31.8 C
			ipP 17 04 13.1			De	iP 19 23 49.5
			Kuril Islands. h = 45 km (Up,Ud,De). m = 6.0 (Up,Ki).				Kuril Islands (h = N). m = 6.4, M = 7.0 (Up,Ki).
"	23	Ki	iP 17 37 24.4	"	23	Up	iP 19 32 01.5
			ipP 17 37 37.7			i	19 32 03.2
		Um	iP 17 37 46.0				micr sec
			ipP 17 37 58.0			i	Z' 0.1 0.9
		Ud	iP 17 38 17.4 C			Um	iP 19 31 36.5
			ipP 17 38 30.3			Ud	iP 19 32 07.2 C
			Kuril Islands. h = 45 km (Ki,Um,Ud).				i 19 32 09.5
"	23	Up	iP 17 45 01.9	"	23	De	iP 19 32 26.8
		Um	iP 17 44 36.5 C				Kuril Islands (h = N).
		Ud	iP 17 45 07.6			Up	iP 19 57 25.9
			Kuril Islands. Origin time = 17 34 00.				micr sec
"	23	Up	iP 18 49 29.6			P	Z' 0.2 1.0
			ipP 18 49 33.8			Ki	iP 19 56 40.6
			micr sec			i	19 56 51.3
			P Z' 0.1 1.2				micr sec
		Sk	iP 18 50 11.3			P	Z' 0.1 1.0
			ipP 18 50 15.9			Sk	iP 19 57 16.5
		Um	iP 18 50 13.6 C			Um	eP 19 57 01
			ipP 18 50 18.4			Ud	iP 19 57 31.8
		Ud	iP 18 49 30.4			De	iP 19 57 50.5 C
			ipP 18 49 34.3				Kuril Islands (h = N). m = 6.0 (Up,Ki).
			Yugoslavia. h = 15 km (Up,Sk,Um,Ud).	"	23	Up	iP 20 32 15.7 C
"	23	Up	iP 19 23 26.0			ipP	20 32 28.1
			iS 19 32 31				micr sec
			micr sec			P	Z' 0.1 0.9
			P Z' 0.7 1.0			Ki	iP 20 31 29.3 C
			Mx E 50 19			Um	iP 20 31 50.5 C
			Mx N 57 17				ipP 20 32 03.3
			Mx Z 69 17			Ud	iP 20 32 21.6 C
		Ki	iP 19 22 38.7			ipP	20 32 34.4
			iS 19 31 02			De	i 20 32 51.9
			(cont.)				Kuril Islands. h = 45 km (Up,Um,Ud).
"	23	Ud	iP 21 05 48.5	"	23	Ki	iP 21 20 31.6
"	23	Ki	iP (cont.)				(cont.)

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

1978				1978			
Mar.	23	(cont.)		Mar.	24	(cont.)	
		Um	iP 21 20 31.5			Ki	iS 01 01 20
		Ud	iP 21 20 58.0				iP'P' 01 22 09.3
		Eastern Kazakh SSR (h = N).					micr sec
"	23	Ud	iP 21 37 38.9			P	Z' 1.0 1.8
"	23	Ud	iP 21 41 38.5			Mx	E 6.3 22
"	23	Um	iP 22 02 54.0			Mx	N 5.3 20
		Near east coast of Honshu, Japan (h = 55 km).				Mx	Z 3.8 20
"	23	Up	iPKP1 22 03 24.7			Sk	iP 00 52 37.6 C
			micr sec				iPcP 00 53 26.1
			PKP1 Z' 0.1 0.9				iP'P' 01 22 14.2
		Um	i(PKP) 22 03 13.3			Um	iP 00 53 00.9 C
			iPKP 22 03 19.5				iPcP 00 53 40.1
			iSKP1 22 06 11.0				iS 01 01 28
		Ud	iPKP1 22 03 27.3				iP'P' 01 22 04.6
			iSKP1 22 06 22.7			Ud	iP 00 52 44.3 C
		De	iP 22 03 37.8 C				iPcP 00 53 29.7
		South of Fiji Islands (h = 480 km).				De	iP 00 52 49.5 C
							iPcP 00 53 33.6
						North Atlantic Ocean (h = 20 km). m = 6.8, M = 5.8 (Up,Ki).	
"	23	Up	iP 22 31 21.4	"	24	Ud	iP 01 22 47.2
		Um	iP 22 30 55.5				
		Ud	iP 22 31 26.9	"	24	Ud	iP 02 57 47.9
		Kuril Islands. Origin time = 22 20 19.				De	iP 02 57 59.2
"	23	Ud	iP 22 30 28.3	"	24	Ki	iP 04 09 39.1
"	23	Up	iP 23 44 03.0			Um	iP 04 09 59.7
		Um	iP 23 43 37.0			Ud	iP 04 10 30.7
		Ud	iP 23 44 08.8 C			Kuril Islands. Origin time = 03 59 23.	
		Kuril Islands (h = 40 km).		"	24	Um	iP 04 43 39.7
"	24	Ud	iP 00 04 23.3			Ud	iP 04 43 11.1
"	24	Ud	iP 00 09 34.4			Greece (h = N).	
"	24	Um	iP 00 18 56.0	"	24	Ud	iP 05 27 12.1
		Ud	iP 00 19 27.3 C	"	24	Ki	iP 05 32 14.8 D
		Probably Kuril Islands.				Um	iP 05 32 41.1
"	24	Up	iP 00 52 58.0 C			Ud	iP 05 33 06.9
			iPcP 00 53 37.5			Fox Islands, Aleutian Islands (h = 35 km).	
			iS 01 01 24	"	24	Up	iP 07 23 41.9
			micr sec			Um	iP 07 23 17.6
		P	Z' 1.7 2.0			Ud	iP 07 23 53.4
		Mx	E 6.9 25			Kuril Islands (h = 45 km).	
		Mx	N 4.4 22	"	24	Up	iP 07 51 22.9
		Mx	Z 14 24			Um	iP 07 50 58.1
		Ki	iP 00 52 56.0 C			Ud	iP 07 51 29.3
			iPcP 00 53 37.4			Kuril Islands. Origin time = 07 40 21.	
		(cont.)					

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

1978				1978				
Mar.	24	Up	i	07 52 18.6	Mar.	24	(cont.)	
		Ud	iP	07 52 13.1			Ki	micr sec
			i	07 52 25.2			P	Z' 0.2 1.1
		Probably Kuril Islands.					i	Z' 2.1 1.4
"	24	Up	iP	07 56 39.8			Sk	iP 19 58 43.7
			ipP	07 56 51.1			i	19 58 46.9
		Um	iP	07 56 14.7			Um	iP 19 58 26.4 C
			ipP	07 56 25.7			i	19 58 29.6
		Ud	iP	07 56 45.3 C			Ud	iP 19 58 56.7 C
			ipP	07 56 57.4			i	19 59 00.2
		Kuril Islands.					De	iP 19 59 15.1
		h = 40 km (Up,Um,Ud).					i	19 59 18.8
		Origin time = 07 45 38.					Kuril Islands (h = N).	
							m = 7.2 (Up,Ki).	
							Double P, small and large, average separation 3.8 s.	
"	24	Ud	iP	09 24 50.3	"	24	Ud	iP 20 08 24.3
			i	09 25 00.8			i	20 08 46.6
		Kuril Islands (h = N).						
"	24	Ki	iPKP	11 06 11.4	"	24	Up	iP 20 09 35.1
		Sk	iPKP	11 06 22.3			i	20 09 47.2
		Um	iPKP	11 06 17.5				micr sec
		Ud	iPKP	11 06 27.7			P	Z' 0.1 1.0
		De	iPKP	11 06 33.8			Ki	iP 20 08 49.2
		Santa Cruz Islands						micr sec
		(h = 250 km).					P	Z' 0.2 1.0
"	24	Ud	iP	11 38 25.2			Um	iP 20 09 10.8
"	24	Ud	iP	11 46 17.1			i	20 09 22.6
		Kuril Islands (h = N).					Ud	iP 20 09 41.3 C
"	24	Ud	iP	12 52 00.6			i	20 09 52.8
"	24	Up	iP	14 34 18.7			Kuril Islands.	
		Um	eP	14 33 53			m = 6.0 (Up,Ki).	
		Ud	iP	14 34 23.9			Origin time = 19 58 34.	
			i	14 34 36.7	"	24	Up	iP 20 11 20.9
		Kuril Islands (h = 40 km).						micr sec
"	24	Um	iP	17 05 49.4			P	Z' 0.3 1.1
			i	17 05 59.1			Ki	iP 20 10 35.2
"	24	Up	iP	18 41 08.2 C				micr sec
		Ki	iP	18 40 23.1			P	Z' 0.2 1.1
		Um	iP	18 40 43.1 C			Sk	iP 20 11 12.7
		Ud	iP	18 41 13.6			Um	iP 20 10 56.6 C
		Kuril Islands (h = 50 km).					Ud	iP 20 11 27.2
"	24	Up	iP	19 58 51.8 C			De	iP 20 11 44.5
			iS	20 07 56.1			Kuril Islands region	
				micr sec			(h = 45 km).	
			P	Z' 3.7 1.3			m = 6.2 (Up,Ki).	
		Ki	iP	19 58 04.7	"	24	Up	iP 20 12 23.7
			i	19 58 10.6				micr sec
		(cont.)					P	Z' 0.1 1.0
					"	24	Up	iP 20 15 01.9 C
								micr sec
							P	Z' 0.1 1.0
							(cont.)	

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

1978				1978			
Mar.	24	(cont.)		Mar.	24	(cont.)	
		Ud	iP 20 15 07.6			Um	iP 21 13 11.5 C
"	24	Um	iP 20 15 13.6			Ud	iP 21 13 37.8 C
"	24	Ud	iP 20 20 41.2			De	iP 21 13 40.5 C
"	24	Up	iP 20 24 28.1	"	24	Alma-Ata region (h = 35 km). m = 6.9 (Up,Ki).	
		Um	iP 20 24 04.1			Um	iP 21 35 57.4
		Ud	iP 20 24 34.6			Kuril Islands (h = N).	
		Kuril Islands. Origin time = 20 13 27.		"	24	Up	iP 21 37 36.8 C
"	24	Up	iP 20 25 26.7 C				micr sec
		Sk	eP 20 25 16			P	Z' 0.1 0.7
		Um	iP 20 25 02.1 C	"	24	Up	iP 21 41 20.4
		Ud	iP 20 25 32.8			i	21 41 32.7
		Kuril Islands. Origin time = 20 14 25.				Um	iP 21 40 55.9
"	24	Um	iP 20 27 11.4			Ud	iP 21 41 26.7
		Ud	iP 20 27 42.5			i	21 41 43.2
		Kuril Islands (h = N).				Kuril Islands. Origin time = 21 30 19.	
"	24	Up	iP 20 29 11.6	"	24	Up	iP 21 56 42.4
		Kuril Islands (h = N).				Um	iP 21 56 17.3
"	24	Up	iP 20 30 29.7			Ud	iP 21 56 48.8
						De	iP 21 57 06.3
"	24	Um	iP 20 41 46.6			Kuril Islands region (h = 45 km).	
		Ud	iP 20 42 18.0	"	24	Up	iP 21 59 48.9
		Kuril Islands region (h = N).				Um	iP 21 59 10.6
"	24	Up	iP 20 49 22.3			Ud	iP 21 59 42.3
		Ud	iP 20 49 28.0			i	21 59 54.8
		Kuril Islands region (h = N).				Kuril Islands. Origin time = 21 48 34.	
"	24	Up	iP 20 52 34.3	"	24	Up	iP 22 00 12.8
		Ud	iP 20 52 43.0			Um	iP 21 59 48.0
		Probably Kuril Islands.				Ud	iP 22 00 18.6
"	24	Ud	iP 20 57 27.0			De	iP 22 00 37.5 C
						Kuril Islands. Origin time = 21 49 11.	
"	24	Ud	iP 20 59 19.1	"	24	Up	iP 22 00 45.3
		Kuril Islands region (h = N).				Um	iP 22 00 19.9
"	24	Up	iP 21 13 21.1 C			Ud	iP 22 00 51.3
			micr sec			Kuril Islands. Origin time = 22 49 43.	
		P	Z' 5.9 1.6	"	24	Up	iP 22 01 55.1
		Ki	iP 21 13 14.7			Ki	eP 22 01 08
			micr sec			Um	iP 22 01 29.1
		P	Z' 1.6 1.1			Ud	iP 22 02 00.9
		Sk	iP 21 13 40.8 C			De	iP 22 02 19.2 C
		(cont.)				Kuril Islands (h = N).	

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

1978				1978								
Mar.	24	Up	iP	22 03	36.1	Mar.	24	Up	iP	22 35	45.3	
			i	22 03	48.9			Um	iP	22 35	21.6	
		Um	iP	22 03	11.1			Ud	iP	22 35	52.6	
		Ud	iP	22 03	42.0 C			De	iP	22 36	10.4	
			i	22 03	55.1			Kuril Islands (h = N).				
		Kuril Islands. Origin time = 21 52 34.					"	24	Ud	iP	22 46	40.9 C
								Kuril Islands (h = 40 km).				
"	24	Ki	iP	22 07	42.2	"	24	Ud	iP	22 51	28.2	
		Um	iP	22 08	01.5							
		Ud	iP	22 08	31.6							
		De	eP	22 08	52		"	24	Um	iP	22 56	11.2
		Kuril Islands region (h = N).						Ud	iP	22 56	42.5	
								Kuril Islands (h = N).				
"	24	Up	iP	22 09	23.9	"	24	Ud	iP	22 58	59.5	
		Um	iP	22 08	59.5							
		Ud	iP	22 09	29.8		"	24	Ud	iP	22 59	58.0
		De	iP	22 09	49.1							
		Kuril Islands (h = N).					"	24	Ud	iP	23 01	25.7
"	24	Up	iP	22 10	40.7	"	24	Up	iP	23 02	03.9	
			ipP	22 10	46.8			Ud	iP	23 02	09.0	
		Um	iP	22 10	15.3			Probably Kuril Islands.				
			ipP	22 10	21.2		"	24	Up	iP	23 04	35.9
		Ud	iP	22 10	47.5				i	23 04	41.2	
			ipP	22 10	53.0				i	23 04	53.1	
		De	iP	22 11	04.8			Ki	eP	23 03	56	
			ipP	22 11	11.3				i	23 04	08.1	
		Kuril Islands. h = 20 km (Up,Um,Ud,De).						Sk	i	23 04	44.7	
								Um	iP	23 04	14.2	
"	24	Up	iP	22 15	51.9				i	23 04	28.1	
		Um	iP	22 15	26.7			Ud	iP	23 04	42.5	
		Ud	iP	22 15	57.9				i	23 04	47.4	
			i	22 16	11.2				i	23 04	59.5	
		Kuril Islands region (h = 50 km).						De	i	23 05	14.9	
								Kuril Islands (h = 45 km).				
"	24	Up	iP	22 19	59.0 C	"	24	Up	iP	23 09	10.1 C	
				micr	sec			Um	iP	23 08	45.0 C	
			P	Z'	0.3 1.0			Ud	iP	23 09	16.1 C	
		Ki	iP	22 19	12.2			De	iP	23 09	33.9	
				micr	sec			Kuril Islands region (h = N).				
			P	Z'	0.2 1.2							
		Sk	iP	22 19	48.3		"	24	Up	iP	23 10	14.0
		Um	iP	22 19	32.8			Um	iP	23 09	49.3	
			i	22 19	34.1			Ud	iP	23 10	20.1	
		Ud	iP	22 20	05.1 C			De	iP	23 10	38.3	
		De	iP	22 20	22.6			Kuril Islands (h = N).				
		Kuril Islands (h = 45 km). m = 6.2 (Up,Ki).					"	24	Up	iP	23 13	02.9
"	24	Ud	iP	22 32	38.8			Um	iP	23 12	38.9 C	
								(cont.)				

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

1978				1978						
Mar.	24	(cont.)		Mar.	25	Ud	iP	00 19 10.6		
		Ud	eP			"	25	Um	iP	00 22 52.2 C
		De	eP			Ud	iP	00 23 23.1		
		Kuril Islands (h = N).				Kuril Islands (h = 45 km).				
"	24	Up	iP			"	25	Ud	iP	00 29 18.6
"	24	Up	iP					i		00 29 30.8
			ipP			"	25	Ud	iP	00 35 22.1
						"	25	Ud	iP	00 37 39.3
						"	25	Up	iP	00 48 39.4 C
										micr sec
			P					P	Z'	0.1 1.0
			Z'					Ki	iP	00 47 53.5 C
			0.1							micr sec
			1.0							
			0.9							
		Ki	eP					P	Z'	0.1 1.1
								Sk	iP	00 48 29.2
								Um	iP	00 48 14.5 C
								Ud	iP	00 48 45.5 C
									i	00 48 57.7
								Kuril Islands region		
								(h = N).		
								m = 5.8 (Up,Ki).		
						"	25	Up	iP	00 49 14.7
								i		00 49 15.7
										micr sec
								i	Z'	0.2 0.9
								Ki	iP	00 48 29.9 C
										micr sec
								P	Z'	0.1 1.0
								Sk	iP	00 49 05.1
								Um	eP	00 48 51
								Ud	iP	00 49 21.7 C
									i	00 49 32.3
								De	iP	00 49 39.4 C
								Kuril Islands region		
								(h = 35 km).		
								m = 6.0 (Up,Ki).		
"	24	Ki	iP			"	25	Ki	iP	00 52 42.9
		Sk	e					Um	iP	00 53 01.7
		Um	iP					Ud	iP	00 53 30.2
		Ud	iP					Kuril Islands.		
		Alma-Ata region (h = N).						Origin time = 00 42 25.		
"	25	Up	iP			"	25	Up	iP	00 55 43.2
		Um	iP					Um	iP	00 55 18.3 C
		Ud	iP						i	00 55 29.8
		De	iP					Ud	iP	00 55 49.4
		Kuril Islands.						Kuril Islands (h = N).		
		Origin time = 23 56 35.								

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

1978				1978			
Mar.	25	Ud	iP	01 02 39.4	Mar.	25	(cont.)
"	25	Up	iP	01 10 07.0			Ki iP 01 51 20.7 C
		Um	iP	01 09 41.3			micr sec
		Ud	iP	01 10 13.1			P Z' 0.1 1.0
		Kuril Islands (h = 45 km).					Um iP 01 51 40.0
"	25	Up	iP	01 19 33.4			i 01 51 41.7
		Um	iP	01 19 07.7 C			Ud iP 01 52 12.1
		Ud	iP	01 19 38.9			ipP 01 52 22.8
		i		01 19 51.5			De iP 01 52 30.4 C
		Kuril Islands (h = 45 km).					ipP 01 02 41.2
"	25	Up	iP	01 36 03.4			Kuril Islands region.
		i		01 36 04.4			h = 35 km (Up,Ud,De).
				micr sec			m = 6.0 (Up,Ki).
		i	Z'	0.1 1.0	"	25	Um iP 01 58 29.7
		Ki	iP	01 35 18.2			Ud iP 01 59 00.8
				micr sec			Kuril Islands (h = N).
		P	Z'	0.1 1.0	"	25	Ud iP 02 04 02.1
		Um	iP	01 35 38.9 C	"	25	Up iP 02 32 53.8
		Ud	iP	01 36 10.0 C			Ki iP 02 32 47.0 C
		Kuril Islands (h = 55 km).					Sk iP 02 33 12.9 C
		m = 5.9 (Up,Ki).					Um iP 02 32 43.7
"	25	Up	eP	01 42 37			Ud iP 02 33 10.0 C
		i		01 42 47.9			Alma-Ata region (h = 30 km).
		Ki	iP	01 41 50.0	"	25	Up iP 02 38 18.3
		i		01 42 13.4			Ud iP 02 38 24.2
		Um	i	01 42 23.2 D			Kuril Islands (h = N).
		i		01 42 34.6	"	25	Ud iP 02 50 50.4
		Ud	eP	01 42 42			Kuril Islands (h = N).
		ipP		01 42 54.1	"	25	Up iP 03 03 29.9
		Kuril Islands region					ipP 03 03 33.9
		(h = N).					Ki iP 03 04 18.4
"	25	Up	iP	01 43 11.7			ipP 03 04 22.8
		Sk	iP	01 43 00.9			Sk iP 03 04 04.6
		Um	iP	01 42 46.6 C			Um eP 03 03 53
		Ud	iP	01 43 17.5			Ud iP 03 03 39.8
		De	iP	01 43 35.5			i 03 03 54.5
		Kuril Islands.					De iP 03 03 17.1
		Origin time = 01 32 10.					Red Sea.
"	25	Up	iP	01 51 18.8			h = 15 km (Up,Ki).
		Um	iP	01 50 54.0	"	25	Up iP 03 06 52.8
		Ud	iP	01 51 24.7			Um iP 03 05 26.3
		i		01 51 30.2			Ud iP 03 05 58.4
		Kuril Islands (h = N).					i 03 06 10.6
"	25	Up	iP	01 52 05.9			Kuril Islands.
		i		01 52 06.9			Origin time = 02 54 49.
		ipP		01 52 17.4	"	25	Ud iP 03 20 17.6
				micr sec	"	25	Um iP 03 43 25.4
		i	Z'	0.2 1.0			(cont.)
		(cont.)					

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

1978				1978					
Mar.	25	(cont.)		Mar.	25	Ud	iP	06 18 22.6	
		Ud	iP			"	Ud	iP	06 33 24.4
			i			"	Ki	iP	06 35 30.4 C
							Um	iP	06 35 26.7
							Ud	iP	06 35 54.1 C
									Alma-Ata region (h = 15 km).
"	25	Ud	iP	"	25	Um	iP	06 47 15.7	
							Ud	iP	06 47 32.7
							i		06 47 52.3
"	25	Ud	iP	"	25	Up	iP	07 21 03.5	
							Ki	iP	07 20 18.4 C
							Um	iP	07 20 38.7 C
							Ud	iP	07 21 09.5 C
							De	iP	07 21 27.2
									Kuril Islands (h = 45 km).
"	25	Ud	iP	"	25	Up	iP	07 28 21.9	
							Um	iP	07 27 56.8
							Ud	iP	07 28 27.7
									Kuril Islands (h = 45 km).
"	25	Um	iP	"	25	Up	iP	07 43 47.0	
		Ud	iP				Um	iP	07 43 22.1
							Ud	iP	07 43 52.6
									Kuril Islands (h = N).
"	25	Up	iP	"	25	Up	iP	08 05 27.7	
							Um	iP	08 05 02.9
							Ud	iP	08 05 33.8
									Kuril Islands (h = N).
"	25	Up	iP	"	25	Up	iP	08 12 48.5	
							ipP		08 13 01.4
									micr sec
							P	Z'	0.1 1.0
							ipP	Z'	0.2 1.1
							Ki	iP	08 12 03.6
									micr sec
							P	Z'	0.1 1.2
							Sk	iP	08 12 38.4
							Um	iP	08 12 23.2
							ipP		08 12 36.6
							Ud	iP	08 12 54.4
							ipP		08 13 07.5
							De	iP	08 13 13.1 C
									Kuril Islands.
									h = 50 km (Up,Um,Ud).
									m = 5.9 (Up,Ki).
"	25	Ud	iP	"	25	Up	iP	08 32 26.6	
									(cont.)
"	25	Up	iP						
		Um	iP						
		Ud	iP						
									Kuril Islands (h = 40 km).

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

1978				1978			
Mar.	25	(cont.)		Mar.	25	(cont.)	
		Um	iP 08 32 01.3			Ud	iSgl 10 52 11.0
		Ud	iP 08 32 32.6 D			Off coast of southwest	
		De	iP 08 32 50.7			Norway, near 61 1/4° N,	
		Kuril Islands (h = N).				4 1/2° E.	
"	25	Ud	iP 08 40 26.9			Origin time = 10 49 46	
"	25	Up	iP 08 42 09.0			By combination with Bergen	
		Um	iP 08 41 43.7	"	25	Um	iP 10 55 28.0
		Ud	iP 08 42 14.7			Ud	iP 10 55 58.6
		Kuril Islands.				Probably Kuril Islands.	
		Origin time = 08 31 07.		"	25	Up	iP 10 58 50.1
"	25	Ud	iP 08 49 59.8	"	25	Up	iP 11 11 03.9
"	25	Up	iP 08 59 52.1			Ki	eP 11 10 18
		ipP	09 00 04.5			Um	iP 11 10 39.2
		Ki	iP 08 59 06.3			Ud	iP 11 11 09.8 D
		ipP	08 59 20.0			De	iP 11 11 27.7
		Um	iP 08 59 26.7			Kuril Islands region	
		ipP	08 59 39.2			(h = 45 km).	
		Ud	iP 08 59 58.1	"	25	Um	iP 11 23 45.7
		ipP	09 00 10.3			i	11 23 55.7
		De	iP 09 00 16.1	"	25	Ud	iP 11 33 14.1
		Kuril Islands.		"	25	Up	iP 11 51 30.0
		h = 45 km (Up,Ki,Um,Ud).					micr sec
"	25	Um	iP 09 05 58.2			P	Z' 0.1 0.7
		i	09 06 11.1			Mx	E 1.1 15
		Ud	iP 09 06 28.7			Mx	N 1.1 20
		Kuril Islands (h = 40 km).				Ki	iP 11 50 43.3
"	25	Up	iP 09 25 01.4				micr sec
		ipP	09 25 14.2			Mx	N 1.2 16
		Ki	iP 09 24 15.7			Mx	Z 0.8 15
		Ud	iP 09 25 07.5			Sk	iP 11 51 19.5
		i	09 25 13.6			Um	iP 11 51 04.2
		ipP	09 25 20.1			ipP	11 51 18.2
		De	iP 09 25 25.1			Ud	iP 11 51 36.3
		Kuril Islands.				ipP	11 51 49.4
		h = 45 km (Up,Ud).				De	iP 11 51 54.2
"	25	Up	iP 09 33 07.5			Kuril Islands.	
		Um	iP 09 33 03.4			h = 50 km (Um,Ud).	
		Ud	iP 09 33 18.2			M = 5.2 (Up,Ki).	
		Andaman Islands region		"	25	Um	iP 12 26 46.2
		(h = N).				Ud	iP 12 27 17.4
"	25	Ud	iP 10 08 03.1	"	25	Ud	iP 12 44 36.3
		Kuril Islands (h = N).		"	25	Um	iP 13 01 07.3
"	25	Up	iP 10 24 25.0			i	13 01 17.7
"	25	Sk	iSgl 10 52 01.4			(cont.)	
		(cont.)					

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

1978				1978			
Mar.	25	(cont.)		Mar.	25	(cont.)	
		Ud	iP 13 01 38.5			Ki	iP 18 20 16.5
		Kuril Islands (h = 40 km).				Sk	iP 18 20 53.9
"	25	Um	iP 13 08 21.7			Um	iP 18 20 37.7
		Ud	iP 13 08 33.3			i	18 20 50.7
"	25	Um	iP 14 04 39.4	"	25	Ud	iP 18 21 08.9
		Ud	iP 14 05 10.0			Kuril Islands (h = 45 km).	
		Kuril Islands (h = N).				Up	iPKP1 19 44 15.8
"	25	Ud	iP 14 32 54.6			i	19 44 39.9
"	25	Um	iP 15 09 46.3			iSKP1	19 47 06.3
		Ud	iP 15 10 17.3				micr sec
		i	15 10 29.3			PKP1	Z' 0.1 0.8
		Probably Kuril Islands.				Ki	iPKP 19 44 08.4
"	25	Up	iP 15 13 07.5			i	19 44 30.2
		Um	iP 15 12 41.8			eSKP1	19 46 43
		Ud	iP 15 13 13.1			Sk	i(PKP) 19 44 08.3
		i	15 13 24.9			iPKP	19 44 18.8
		Kuril Islands.				iSKP1	19 46 59.2
		Origin time = 15 02 05.				Um	i(PKP) 19 44 03.8
"	25	Up	iP 15 20 09.0			iPKP	19 44 15.2
		Um	iP 15 19 44.2			iSKP1	19 46 54.8
		Kuril Islands (h = N).				Ud	iPKP1 19 44 17.1
"	25	Ud	iP 15 32 53.2			iSKP1	19 47 08.0
		Kuril Islands region				De	iPKP1 19 44 28.8
		(h = N).				iSKP1	19 47 17.2
"	25	Ud	iP 15 56 55.8	"	25	Fiji Islands region	
		Kuril Islands (h = N).				(h = 600 km).	
"	25	Ud	iP 16 31 24.7	"	25	Ud	iP 20 02 48.2
"	25	Up	iP 17 06 13.1			Kuril Islands (h = N).	
			micr sec	"	25	Ud	iP 20 45 44.3
		P	Z' 0.1 0.9	"	25	Up	iP 21 05 43.4
		Ki	iP 17 05 26.8			Um	iP 21 05 21.2
			micr sec			Ud	iP 21 05 51.9
		P	Z' 0.1 1.5			Kuril Islands.	
		Sk	iP 17 06 02.7			Origin time = 20 54 44.	
		Um	iP 17 05 47.8 C	"	25	Um	iP 22 55 50.8
		Ud	iP 17 06 19.1			Ud	iP 22 56 21.3
		De	iP 17 06 37.3			Kuril Islands (h = N).	
		Kuril Islands (h = 50 km).		"	25	Ud	iP 23 32 11.4
		m = 5.8 (Up,Ki).		"	26	Up	iP 00 03 17.0 D
"	25	Up	iP 18 21 03.6 C			i	00 03 44.7
			micr sec			iS	00 12 16
		P	Z' 0.1 1.0				micr sec
		(cont.)				P	Z' 0.3 1.0
						Mx	E 4.4 18
						Mx	N 4.8 16
						Mx	Z 6.8 18
						(cont.)	

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

1978				1978					
Mar.	26	(cont.)		Mar.	26	Up	iP	04 03 52.4 C	
		Ki	iP				iPn	04 04 57.0	
							iPP	04 05 11.1	
								micr sec	
		P	Z'			P	Z'	0.2 1.0	
		Mx	E			Ki	iP	04 03 37.3 C	
		Mx	N				iPn	04 04 37.1	
		Mx	Z				iPP	04 04 51.6	
		Sk	iP					micr sec	
			i			P	Z'	0.4 0.6	
		Um	iP			Sk	iP	04 04 08.2 C	
			i				iPP	04 05 29.0	
			iS			Um	iP	04 03 37.5 C	
		Ud	iP				iPn	04 04 38.5	
			i				iPP	04 04 52.4	
		De	iP			Ud	iP	04 04 09.0 C	
			ipP			De	iP	04 04 16.2 C	
							i	04 05 08.4	
		Kuril Islands region				Eastern Kazakh SSR.			
		(h = 45 km).				m = 6.3 (Up,Ki).			
		m = 6.2, M = 6.0 (Up,Ki).				Underground explosion.			
"	26	Ki	iP	00 19 16.3	"	26	Um	iP	04 17 20.0
		Um	iP	00 19 21.0 C			Ud	iP	04 17 49.9
		Molucca Sea (h = N).					i	04 18 01.6	
"	26	Up	iSKP1	00 39 37.3			Kuril Islands (h = N).		
				micr sec	"	26	Ud	iP	04 59 47.3
			SKP1	Z' 0.1 1.3			Kuril Islands region		
		Ki	iSKP1	00 39 14.8 C			(h = 45 km).		
				micr sec	"	26	Ud	eP	05 14 23
			SKP1	Z' 0.2 1.4			i	05 14 33.1	
		Sk	eSKP1	00 39 31	"	26	Ud	iP	05 50 31.7
		Um	i(PKP)	00 36 39.8	"	26	Up	iP	06 11 17.2
			iSKP1	00 39 26.3				micr sec	
		Ud	iPKP1	00 36 52.5			P	Z' 0.1 1.0	
			iSKP1	00 39 39.3			Ki	eP	06 10 30
		De	iPKP1	00 37 04.5			Um	iP	06 10 51.4
		Fiji Islands region					Ud	iP	06 11 22.7 D
		(h = 630 km).					De	iP	06 11 41.3
"	26	Ki	iP	01 03 16.0			Kuril Islands (h = N).		
		Um	iP	01 03 38.2 D	"	26	Ki	eP	07 03 30
		Ud	iP	01 04 09.0 D			Um	iP	07 03 33.5
		Kuril Islands region					Ud	iP	07 03 53.4
		(h = 45 km).					Talaud Islands (h = 50 km).		
"	26	Ki	iP	03 02 13.5 C	"	26	Ki	eP	07 20 12
		Um	iP	03 02 34.3 C			Um	iP	07 20 33.0
		Ud	iP	03 03 05.5			Ud	iP	07 21 03.8
			i	03 03 19.5			Kuril Islands (h = 40 km).		
		Kuril Islands (h = N).							
"	26	Ud	iP	03 56 51.2					
"	26	Ud	iP	04 02 25.8					

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

1978				1978								
Mar.	26	Up	iP	07 34	32.4	Mar.	26	(cont.)				
		Ki	eP	07 34	18			Ud	iP	11 12	51.0	
		Um	iP	07 34	23.1				ipP	11 13	05.5	
		Ud	iP	07 34	41.8			De	eP	11 13	10	
		Talaud Islands (h = 30 km).						Kuril Islands. h = 50 km (Up,Ki,Um,Ud).				
"	26	Ud	iP	07 42	16.1	"	26	Up	iP	13 00	35.9	
		Kuril Islands (h = N).						Um	iP	13 00	43.4	
"	26	Ud	iP	07 47	08.0			Ud	iP	13 00	53.2	
		Kuril Islands (h = N).							i	13 01	19.9	
"	26	Up	ePKP1	08 04	24			Afghanistan-USSR border region (h = 130 km).				
		Ki	ePKP	08 04	17	"	26	Up	iP	15 05	01.8 C	
		Sk	iPKP	08 04	26.6				ipP	15 05	15.7	
		Um	i(PKP)	08 04	18.3						micr sec	
			iPKP	08 04	22.9				P	Z'	0.1 0.9	
		Ud	iPKP1	08 04	25.4			Ki	iP	15 04	15.7	
			i	08 04	34.3						micr sec	
		De	iPKP1	08 04	37.0				P	Z'	0.1 1.0	
		Fiji Islands region (h = 570 km).						Sk	iP	15 04	51.2	
"	26	Up	iP	08 58	58.8			Um	iP	15 04	36.5 C	
		Ki	iP	08 58	52.1 C			Ud	eP	15 05	08	
			ipP	08 58	58.7				ipP	15 05	21.3	
		Sk	iP	08 59	18.2			De	iP	15 05	25.3	
			ipP	08 59	24.0				ipP	15 05	38.9	
		Um	iP	08 58	48.8 C			Kuril Islands. h = 50 km (Up,Ud,De). m = 5.9 (Up,Ki).				
			ipP	08 58	55.9			"	26	Ud	iP	17 37 45.7
		Ud	iP	08 59	15.6 C			"	26	Um	eP	17 49 47
			ipP	08 59	22.4					Ud	iP	17 50 18.7 C
		De	iP	08 59	19.1			Kuril Islands (h = 50 km).				
		Alma-Ata region. h = 25 km (Ki,Sk,Um,Ud).						"	26	Ud	iP	19 20 00.8
"	26	Ud	iP	09 42	38.7			Mindanao, Philippine Islands (h = 70 km).				
"	26	Up	iP	10 40	31.6			"	26	Um	iP	20 09 56.7
		Ki	eP	10 39	46			Guerrero, Mexico (h = 80 km).				
		Sk	eP	10 40	21			"	26	Um	iP	20 45 49.7 C
		Um	iP	10 40	06.4					Ud	iP	20 46 22.0
		Ud	iP	10 40	37.3			Kuril Islands (h = N).				
			ipP	10 40	48.0			"	26	Up	iP	20 57 13.3
		Kuril Islands (h = N).								Ki	epP	20 56 38
"	26	Up	iP	11 12	45.9					Um	iP	20 56 47.8
			ipP	11 12	59.6					Ud	iP	20 57 18.4
		Ki	eP	11 12	00			Kuril Islands (h = 35 km).				
			ipP	11 12	13.5							
		Sk	eP	11 12	36							
			i	11 12	46.3							
		Um	iP	11 12	19.4							
			ipP	11 12	32.3							
		(cont.)										

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

1978				1978									
Mar.	26	Ud	iP	21 14	15.6	Mar.	26	(cont.)					
				Kuril Islands (h = N).				Ud	iP	23 22	34.3		
"	26	Up	iP	21 15	27.0 C				ipP	23 22	46.9		
			i	21 15	31.6					Kuril Islands (h = 45 km).			
			i	21 15	43.4	"	26	Ud	iP	23 38	39.6 C		
				micr sec									
			P	Z'	0.1 1.0	"	27	Up	iP	00 07	48.1		
			i	Z'	0.2 1.2				ipP	00 08	01.9		
		Ki	iP	21 14	33.3 C					micr sec			
			i	21 14	37.9				P	Z'	0.1 1.1		
				micr sec				Ki	iP	00 07	02.2 C		
			P	Z'	0.1 0.7				ipP	00 07	14.8		
		Sk	iP	21 15	09.2 C					micr sec			
		Um	iP	21 14	58.6 C				P	Z'	0.1 1.0		
			i	21 15	02.4			Sk	iP	00 07	37.6		
		Ud	iP	21 15	29.8 C			Um	iP	00 07	22.4		
			i	21 15	35.0				ipP	00 08	35.4		
			i	21 16	05.0			Ud	iP	00 07	53.4 C		
		De	e	21 15	56 C				ipP	00 08	06.5		
		Off coast of Kamchatka							Kuril Islands region.				
		(h = 35 km).							h = 45 km (Up,Ki,Um,Ud).				
		m = 6.0 (Up,Ki).							m = 5.9 (Up,Ki).				
		Double P, average separation 4.6 s. The second onset when interpreted as pP, gives a focal depth of 15 km.						"	27	Um	iP	00 48	29.7
"	26	Up	iP	21 19	12.9			"	27	Um	eP	02 51	58
		Ud	iP	21 19	29.7					Ud	iP	02 52	29.2
"	26	Um	iP	21 29	41.3					Kuril Islands region (h = 35 km).			
"	26	Um	iPKP	21 44	01.6			"	27	Um	iP	04 14	48.2
		Ud	iPKP	21 44	10.6			"	27	Ud	iP	04 50	32.8
		Tonga Islands region (h = N).						"	27	Um	iP	06 24	25.1 C
"	26	Ki	iP	23 07	07.4					Afghanistan-USSR border region (h = 200 km).			
		Um	ipP	23 07	13.5			"	27	Up	i(PKP)	07 31	58.8
		Alma-Ata region (h = 25 km).								iSKP1	07 34	53.2	
"	26	Um	iP	23 13	16.3				Ki	ePKP	07 31	53	
		Ud	iP	23 13	47.1					iSKP1	07 34	28.7	
		Kuril Islands region (h = N).							Sk	iPKP	07 32	02.1	
"	26	Up	eP	23 22	29					iSKP1	07 34	45.8	
		Ki	eP	23 21	42				Um	e(PKP)	07 31	53	
			ipP	23 21	55.2					iPKP1	07 31	59.7	
		Sk	eP	23 22	18					iSKP1	07 34	41.4	
		Um	iP	23 22	03.3				Ud	i(PKP)	07 32	00.7	
			ipP	23 22	35.3					iPKP1	07 32	03.1	
		(cont.)								iSKP1	07 34	55.0	
									De	iPKP1	07 32	12.3	
										i	07 32	26.7	
									Fiji Islands region (h = 550 km).				

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

1978

Mar. 28 Up iP 20 27 48.5
 i 20 27 52.1
 iS 20 36 49
 micr sec
 i Z' 0.1 1.2
 Mx E 6.2 26
 Mx N 10 20
 Mx Z 15 25
 Ki iP 20 26 57.9
 micr sec
 P Z' 0.1 1.2
 Mx E 5.3 19
 Mx N 6.7 18
 Mx Z 8.0 20
 Sk iP 20 27 35.5
 i 20 28 11.3
 Um iP 20 27 21.1
 Ud iP 20 27 53.0
 i 20 27 55.5
 De iP 20 28 14.2
 i 20 28 31.2
 Kuril Islands (h = 55 km).
 m = 5.8, M = 6.0 (Up,Ki).
 " 28 Up iP 21 24 17.3 C
 i 21 24 28.1
 Ki iP 21 23 26.7
 i 21 23 31.1
 Um iP 21 23 51.6
 Ud eP 21 24 22
 i 21 24 22.7
 i 21 24 30.4
 De iP 21 24 40.4
 Kuril Islands (h = 45 km).
 " 28 Up iP 22 22 53.1
 ipP 22 23 05.8
 Um iP 22 22 28.1 C
 ipP 22 22 40.6
 Ud iP 22 22 59.2
 ipP 22 23 11.4
 Kuril Islands.
 h = 45 km (Up,Um,Ud).
 Origin time = 22 11 51.
 " 28 Up iP 22 23 17.3 C
 ipP 22 23 30.1
 micr sec
 P Z' 0.2 0.9
 Ki iP 22 22 30.6
 micr sec
 P Z' 0.1 0.9
 Sk iP 22 23 06.9
 Um iP 22 22 51.5
 (cont.)

1978

Mar. 28 (cont.)
 Um ipP 22 23 05.0
 Ud iP 22 23 23.2 C
 ipP 22 23 36.3
 De iP 22 23 41.1 C
 ipP 22 23 54.2
 Kuril Islands.
 h = 50 km (Up,Um,Ud,De).
 m = 6.0 (Up,Ki).
 " 28 Um iPKP 23 09 20.2
 i 23 09 30.6
 De iPKP1 23 09 32.1
 Loyalty Islands region
 (h = 55 km).
 " 29 Ud iP 01 23 58.1
 " 29 Up iP 02 51 42.4
 ipP 02 51 53.3
 Um iP 02 51 16.8
 Ud iP 02 51 48.4
 ipP 02 51 59.6
 Kuril Islands.
 h = 40 km (Up,Ud).
 " 29 Ud iP 03 21 20.6
 " 29 Ud eP 03 41 26
 " 29 Ud eP 05 57 21
 Kuril Islands (h = N).
 " 29 Ud iSgl 07 16 36.2
 " 29 Ud iP 09 10 11.1
 Tibet (h = N).
 " 29 Up iPKP1 10 19 21.2
 iPKP2 10 19 29.1
 micr sec
 PKP1 Z' 0.1 1.0
 Ki iPKP1 10 19 00.1
 Sk iPKP1 10 19 15.8
 Ud iPKP1 10 19 23.1 C
 iPKP2 10 19 33.3
 De iPKP1 10 19 30.8
 South of Kermadec Islands
 (h = N).
 " 29 Um iPKP1 12 55 58.8
 Ud iPKP1 12 56 00.6
 De iPKP1 12 56 11.9
 South of Fiji Islands
 (h = 600 km).

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

1978				1978	
Mar.	29	Up	iP	13 52 51.0	
		Um	iP	13 52 26.5	
		Ud	eP	13 52 58	
		Kuril Islands.			
		Origin time = 13 41 50.			
"	29	Um	iP	14 20 19.4	
		Ud	iP	14 20 52.9	
		Sakhalin Island (h = 35 km).			
"	29	Ud	iPKP	14 27 51.0	
		Tonga Islands (h = N).			
"	29	Um	iP	16 16 58.1	
		Ud	iP	16 17 28.7	
		Kuril Islands (h = 50 km).			
"	29	Up	iPKP	17 14 52.3	
			iSKP1	17 18 18.0	
		Ki	iPKP	17 14 42.6	
				micr sec	
			PKP	Z' 0.1 0.9	
		Sk	iPKP	17 14 53.6	
		Um	iPKP	17 14 49.4	
			iSKP1	17 18 04.6	
		Ud	iPKP	17 15 00.4	
			i	17 15 25.9	
			iSKP1	17 18 21.0	
		De	iPKP	17 15 04.7	
			iSKP1	17 18 29.9	
		New Hebrides Islands			
		(h = 90 km).			
"	29	Um	iP	17 24 08.2	
		Ud	iP	17 24 38.3	
		Probably Kuril Islands.			
"	29	Up	iP	18 03 34.2	
				micr sec	
			P	Z' 0.2 0.8	
		Ki	iP	18 03 00.8	
				micr sec	
			P	Z' 0.1 1.1	
		Sk	iP	18 03 30.0	
		Um	iP	18 03 15.2	
		Ud	iP	18 03 40.9	
			i	18 03 46.3	
		De	iP	18 03 54.0	
		Bonin Islands region			
		(h = 20 km).			
		m = 6.0 (Up,Ki).			
"	29	Sk	ePKP	22 19 49	
		Um	ePKP	22 19 46	
		Ud	iPKP1	22 19 49.1	
		(cont.)			
Mar.	29	(cont.)			
		Ud	i	22 19 57.8	
		De	iPKP1	22 19 59.0	
		Tonga Islands (h = N).			
"	30	Ki	iP	00 57 37.8	
		Um	iP	00 57 37.4	
		Ud	iP	00 58 00.3	
		Burma (h = N).			
"	30	Up	iP	02 48 40.8	
		Ki	iP	02 47 52.4	
		Um	iP	02 48 15.8 C	
		Ud	iP	02 48 46.7 C	
		De	iP	02 49 04.1	
		Kuril Islands (h = 45 km).			
"	30	Ki	eP	02 55 15	
		South of Mariana Islands			
		(h = 10 km).			
"	30	Up	iP	03 07 55.3	
		Um	iP	03 07 30.4	
		Ud	iP	03 08 01.5	
		Kuril Islands.			
		Origin time = 02 56 53.			
"	30	Ud	iPKP1	03 46 59.0	
		De	iPKP1	03 47 10.0	
		Fiji Islands region			
		(h = 540 km).			
"	30	Ki	iP	04 07 29.2 C	
		Sk	iP	04 07 55.6	
		Um	iP	04 07 26.2	
		Ud	iP	04 07 52.6 C	
		Alma-Ata region (h = 25 km).			
"	30	Up	iP	05 27 34.9	
			ipP	05 27 47.5	
		Ki	eP	05 26 48	
		Sk	eP	05 27 24	
		Um	iP	05 27 09.8	
			ipP	05 27 22.5	
		Ud	iP	05 27 41.2	
			ipP	05 27 53.5	
		De	eP	05 27 59	
		Kuril Islands.			
		h = 45 km (Up,Um,Ud).			
"	30	Ud	iP	08 39 57.9	
		Kuril Islands region			
		(h = N).			
"	30	Ud	iP	10 43 55.0	

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

1978				1978			
Mar.	30	Ud	iSKP1	12 19	32.5	Mar.	31 (cont.)
		De	iSKP1	12 19	42.7		Up ipP
		New Hebrides Islands					03 34 53.1
		(h = 180 km).					micr sec
"	30	Up	iP	12 43	33.1		P Z' 0.1 0.7
			ipP	12 43	45.1		Ki iP
		Ki	iP	12 42	47.0 C		03 34 22.2 C
		Um	iP	12 43	08.0 C		micr sec
			ipP	12 43	20.3		P Z' 0.1 0.9
		Ud	iP	12 43	39.3 C		Um iP
			ipP	12 43	51.8		Ud iP
		De	eP	12 43	57		ipP
		Kuril Islands.					03 34 49.0 C
		h = 45 km (Up,Um,Ud).					03 35 02.6
"	30	Up	i(P)	14 40	57.1		Luzon, Philippine Islands.
"	30	Sk	iP	16 37	12.3		h = 50 km (Up,Ud).
		Um	iP	16 37	00.6		m = 5.9 (Up,Ki).
		Ud	iP	16 37	31.3		
		Kuril Islands region					
		(h = N).					
"	30	Ud	iP	18 23	27.5	"	31 Up iP
		Jonian Sea (h = N).					04 06 27.6
"	30	Up	iP	19 42	49.8		i
		Ki	iP	19 42	40.7 C		04 06 32.7
							Ki eP
			P	Z' 0.1	1.4		04 06 21
		Um	iP	19 42	48.8		Sk eP
		Ud	iP	19 42	40.5		04 06 45
		De	iP	19 42	47.5 C		Um iP
		Guatemala (h = N).					04 06 15.8
"	31	Up	iP	00 47	59.3		Ud iP
		Ki	iP	00 47	02.7 C		04 06 43.2
			ipP	00 47	24.6		Northern Sinkiang prov.,
							China (h = N).
			P	Z' 0.1	0.9	"	31 Up iPKP1
		Sk	eP	00 47	31		04 23 35.7 C
		Um	iP	00 47	31.9 C		Ud iPKP1
		Ud	iP	00 47	56.1		04 23 38.3 C
			i	00 48	47.7		De iPKP1
		De	iP	00 48	21.0		04 23 48.8 C
			ipP	00 48	42.9		
		Southern Alaska.					"
		h = 90 km (Ki,De).					31 De iPKP
"	31	Ud	iP	02 15	22.2		07 20 45.0
"	31	Up	iP	03 34	39.3 C		Solomon Islands (h = 45 km).
		(cont.)					
"	31	Up	iP	03 34	39.3 C		"
							31 Ud iP
							08 04 46.9
							"
							31 Ud iP
							08 39 58.0
							"
							31 Up iP
							09 06 48.9
							micr sec
			P	Z' 0.1	0.8		Ki iP
							09 06 21.1
							micr sec
			P	Z' 0.1	0.6		Sk eP
							09 06 47
							Um iP
							09 06 32.8
							Ud iP
							09 06 55.2
							De iP
							09 07 06.5
							Mariana Islands (h = 400 km).
							m = 5.7 (Up,Ki).
"	31	Ud	iP	11 24	24.7	"	31 Up iP
"	31	Up	iP	13 14	35.5		13 14 35.5
		Um	iP	13 14	20.4		13 14 20.4
		Ud	iP	13 14	34.4		13 14 34.4
"	31	Up	iP	13 48	46.5 C	"	31 Up iP
		(cont.)					(cont.)

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

1978

Mar.	31	(cont.)		
		Ki	iP	13 48 10.1
		Sk	iP	13 48 41.9
		Um	iP	13 48 25.6
		Ud	iP	13 48 53.1
		De	iP	13 49 07.0
		South of Honshu, Japan (h = 70 km).		
"	31	Up	i(P)	15 07 30.1
"	31	Up	iP	19 30 41.9
		Ki	e	19 30 40
		Sk	i	19 30 57.9
		Um	iP	19 30 30.9
		Ud	eP	19 30 55
		Burma-India border region (h = N).		
"	31	Up	i(P)	21 15 37.3

January 14, 1980

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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

A P R I L 1 - 30, 1978

1978				1978			
Apr.	1	Um i	01 50 59.8	Apr.	1	Up iP	10 19 27.1
		Ud ePKP1	01 51 01			Um iP	10 19 02.0
		De iPKP1	01 51 12.1			Ud iP	10 19 33.2
		Tonga Islands region (h = N).				Kuril Islands region.	
"	1	Ud iP	02 08 14.6	"	1	Ud eP	10 24 17
						Kuril Islands region (h = N).	
"	1	Up iP	09 47 37.5	"	1	Um iP	11 02 21.9
		Ki iP	09 47 34.1			Ud iP	11 02 52.5
			micr sec			Kuril Islands region (h = N).	
		P	Z' 0.1 1.5				
		Um iP	09 47 34.5	"	1	Um iP	11 52 01.0
		Ud iP	09 47 50.3				
		De iP	09 47 45.6	"	1	Um iP	12 55 13.5
"	1	Up iP	10 01 17.8 C			Ud iP	12 55 44.1
		Ki iP	10 00 41.8			Kuril Islands region	
		Sk iP	10 01 13.2			(h = 35 km).	
		Um iP	10 00 57.5 C	"	1	Ud iP	13 03 26.2
		Ud iP	10 01 25.2 C	"	1	Um iP	15 03 06.9
		South of Honshu, Japan				Ud iP	15 03 37.9
		(h = 50 km).					
"	1	Up iP	10 10 18.0	"	1	Ud iPKP1	17 27 57.0
			micr sec			De iPKP1	17 28 07.8
		Mx E	1.5 20			Fiji Islands region	
		Mx Z	1.5 19			(h = 380 km).	
		Ki iP	10 09 32.7	"	1	Um iPKP	17 35 02.2
			micr sec			Ud iPKP1	17 35 16.1
		Mx N	1.3 19			i	17 35 33.8
		Mx Z	1.7 17	"	1	Up iP	19 09 34.0
		Um iP	10 09 52.5 C			Um iP	19 09 57.0
		i	10 10 14.3			Ud iP	19 09 20.2
		Ud iP	10 10 23.8 C			Azores Islands region (h = N).	
		Kuril Islands region (h = N).					
		M = 5.2 (Up,Ki).		"	1	Ud eP	20 10 29
"	1	Ud iP	10 14 07.5				

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

1978

Apr. 2 Up iP 00 03 25.2
 Ki iP 00 02 49.6
 Sk eP 00 03 21
 Um iP 00 03 04.7
 Ud iP 00 03 32.1

South of Honshu, Japan
 (h = 210 km).

" 2 Up iP 00 58 42.3
 Ud iP 00 58 39.8
 i 00 58 51.6

" 2 Ud iP 02 53 18.0

" 2 Up iP 04 28 27.4
 Ud iP 04 28 33.7

" 2 Ud iP 05 33 26.6
 De iP 05 33 37.9

" 2 Up iP 06 32 10.2
 Ki iP 06 31 53.3
 Um iP 06 31 58.5
 Ud iP 06 32 19.1

Mindoro, Philippine
 Islands (h = N).

" 2 Um iP 07 00 45.0
 Ud iP 07 00 14.0

" 2 Um iP 09 40 12.6
 Ud iP 09 40 44.2
 Kuril Islands region
 (h = 45 km).

" 2 Ud iP 12 20 27.4

" 2 Ud iP 16 35 16.5

" 2 Um iP 18 50 28.8
 Ud iP 18 50 54.4
 Northeast of Taiwan
 (h = 190 km).

" 3 Up eP 03 38 48
 Um iP 03 38 23.4
 Ud iP 03 38 54.0

" 3 Um iP 03 47 02.1
 iPcP 03 47 28.8
 Ud iP 03 47 33.8
 Off east coast of Honshu,
 Japan (h = N).

1978

Apr. 3 Up iRg 05 37 13.1
 Ud iRg 05 37 26.1
 East-central Sweden.
 Near-surface event.

" 3 Ki iP 06 32 19.7
 Sk iP 06 31 33.5
 Um iP 06 31 42.8
 Ud iP 06 30 53.3
 Corsica (h = 20 km).

" 3 Up iP 09 20 24.8
 Ki iP 09 19 57.0
 Sk iP 09 20 22.4
 Ud iP 09 20 31.6
 Mariana Islands (h = 200 km).

" 3 Up iP 09 27 52.4
 Um iP 09 27 27.5
 iP 09 27 39.8
 Ud iP 09 27 58.4
 iP 09 28 10.4
 Kuril Islands.
 h = 45 km (Um,Ud).

" 3 Up iPP 10 07 20.3
 iS 10 14 46
 micr sec
 PP Z' 0.5 2.0
 Mx E 3.4 18
 Mx N 4.3 20
 Mx Z 4.9 20
 Ki iP 10 02 33.2
 iPP 10 06 51.3
 micr sec
 PP Z' 0.2 1.8
 Mx E 3.7 20
 Mx N 4.5 19
 Mx Z 4.3 19
 Sk iPP 10 07 23.7
 Um iP 10 02 39.2
 iPP 10 06 54.7
 iS 10 14 20
 Ud iP 10 02 57.8
 ePP 10 07 24
 De iPP 10 07 42.5
 West Irian region (h = N).
 m = 6.6, M = 6.1 (Up,Ki).

" 3 Ki iP 11 06 14.5
 Ud iP 11 06 27.4
 i 11 06 36.3
 Tadzhik-Sinkiang border
 region (h = 45 km).

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

1978				1978					
Apr.	3	Um	iPKP	11 47 49.5	Apr.	4	Ki	iP	02 58 46.6
		Ud	iPKP	11 47 42.1			Sk	eP	02 59 04
		Southern Pacific Ocean					Um	iP	02 58 36.1 C
		(h = N).					Ud	iP	02 58 54.7 C
		Phases are about 6 s late					De	iP	02 58 51.1
		when related to the NEIS					Afghanistan-USSR border		
		solution.					region (h = 130 km).		
"	3	Ud	iP	14 45 32.3	"	4	Um	iP	03 34 17.8
							Ud	eP	03 34 33
"	3	Up	iP	15 31 53.7	"	4	Up	iP	07 09 12.5
		Ud	iP	15 32 07.7					micr sec
"	3	Ud	iP	17 42 59.3			Mx	E	1.5 16
							Mx	N	1.1 16
"	3	Um	iP	19 50 47.1			Mx	Z	2.6 16
		Ud	eP	19 51 15			Ki	iP	07 08 55.6
			i	19 51 36.2					micr sec
"	3	Ud	iP	21 34 56.3			P	Z'	0.2 1.9
							Sk	iP	07 09 17.9
"	3	Ud	iP	22 19 56.8			Um	iP	07 09 02.1 C
"	4	Up	iP	00 49 18.6				iSKS	07 19 26
		i		00 49 22.6				iS	07 19 49
		iS		00 56 24			Ud	iP	07 09 21.2 C
				micr sec			Mindanao, Philippine Islands		
							(h = 45 km).		
		i	Z'	0.4 1.3	"	4	Ud	iP	12 12 04.6
		Mx	E	9.8 15	"	4	Up	eP	14 00 25
		Mx	N	49 20	"	4	Up	iP	14 27 35.2
		Mx	Z	15 12			Ki	eP	14 27 19
		Ki	iP	00 49 16.6			Um	iP	14 27 24.2 C
		i		00 49 22.6			Ud	iP	14 27 43.4
		iS		00 56 29			Mindanao, Philippine Islands		
				micr sec			(h = 45 km).		
		P	Z'	0.1 0.7	"	4	Ud	iP	14 57 29.5
		i	Z'	0.4 1.1	"	4	Um	iP	15 12 39.0 C
		Mx	E	9.2 11			Ud	iP	15 13 10.5
		Mx	N	47 14	"	4	Ud	i(P)	15 44 59.5
		Mx	Z	9.9 13	"	4	Ud	iP	17 31 54.4
		Sk	eP	00 49 38	"	4	Um	iPKP	19 52 35.7
		i		00 49 43.4			Ud	iPKP	19 52 27.5
		Um	iP	00 49 12.9			San Juan Province, Argentina		
		i		00 49 17.7			(h = 10 km).		
		iS		00 56 14					
		Ud	iP	00 49 32.6					
		i		00 49 38.6					
		De	iP	00 49 34.4					
		i		00 49 38.5					
		iPP		00 51 37.1					
		Tibet (h = 25 km).							
		m = 6.3, M = 6.6 (Up,Ki).							
"	4	Up	iP	02 58 37.9 C	"	4	Up	iP	21 24 09.9 D
		(cont.)					i		21 24 11.5
							(cont.)		

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

1978

Apr. 4

(cont.)

Up	ipP	21 24	25.7
	iS	21 34	25
			micr sec
	i	Z'	0.4 1.1
	Mx	E	4.3 22
	Mx	N	2.6 21
	Mx	Z	7.9 23
Ki	iP	21 24	09.3 D
	i	21 24	11.0
	ipP	21 24	25.6
	iS	21 34	30
			micr sec
	i	Z'	0.4 1.0
	Mx	E	2.7 17
	Mx	N	3.8 18
	Mx	Z	4.6 18
Sk	iP	21 23	55.8 D
	i	21 23	57.3
	ipP	21 24	11.5
Um	iP	21 24	13.1 D
	i	21 24	14.7
	ipP	21 24	29.0
	iS	21 34	32
Ud	iP	21 23	59.5
	i	21 24	01.2
	ipP	21 24	15.6
De	iP	21 24	02.9 D
	i	21 24	04.6
	ipP	21 24	18.6

North of Panama.

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

m = 6.4, M = 5.9 (Up,Ki).

Double P, in average 1.6 s apart. pP-phases related to the second, larger p-phases for depth calculation.

"	5	Up	i	02 00	47.2
		Ki	iP	01 59	51.8
		Um	iP	02 00	12.3
			i	02 00	15.2
			i	02 00	25.7
		Ud	iP	02 00	43.2
			i	02 00	45.7

Kuril Islands region (h = N).

"	5	Ud	iP	02 25	37.7
---	---	----	----	-------	------

"	5	Sk	iP	04 56	21.3
		Ud	iP	04 55	48.1
		De	iP	04 55	12.4

Southern Greece (h = 45 km).

"	5	Up	iP	08 02	44.4 D
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(cont.)

1978

Apr. 5

(cont.)

Up	ipP	08 03	01.8
			micr sec
	P	Z'	0.1 1.0
	Mx	E	1.0 18
	Mx	N	1.0 18
Ki	iP	08 02	02.6 D
	ipP	08 02	20.4
			micr sec
	P	Z'	0.2 1.4
	Mx	E	1.5 23
	Mx	N	1.3 22
Sk	iP	08 02	36.4 D
Um	iP	08 02	21.2 D
	ipP	08 02	39.7
Ud	iP	08 02	51.2 D
	ipP	08 03	09.8
De	ipP	08 03	25.7

Off east coast of Honshu, Japan.
h = 70 km (Up,Ki,Um,Ud).
m = 5.8, M = 5.3 (Up,Ki).

"	5	Up	iP	09 36	48.0
		Ki	iP	09 35	43.8
		Um	iP	09 36	10.3
			i	09 36	22.7
		Ud	iP	09 36	41.4
			i	09 36	54.1

"	5	Up	i(P)	13 26	08.5
---	---	----	------	-------	------

"	5	Up	iP	14 13	41.4
			ipP	14 13	55.8
		Ki	iP	14 12	55.6
		Um	iP	14 13	15.9
			ipP	14 13	29.2
		Ud	iP	14 13	46.8
			ipP	14 14	02.0

Kuril Islands.

h = 50 km (Up,Um,Ud).

"	5	Up	iP	15 46	13.2
		Ki	eP	15 45	37
		Um	iP	15 45	52.1
		Ud	iP	15 46	21.9

Near east coast of Honshu, Japan (h = 40 km).

"	5	Up	iP	16 15	35.1
					micr sec
		Mx	E	0.9	16
		Mx	N	0.8	15
Ki		iP		16 14	49.2
					micr sec
		Mx	E	1.5	16

(cont.)

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

1978					1978					
Apr.	5	(cont.)			Apr.	6	(cont.)			
		Ki		micr sec			Ki	iP	08 50 08.3 C	
			Mx	N 1.4 16				P	Z' 0.1 1.2	
		Um	iP	16 15 10.7			Um	iP	08 50 28.2 C	
		Ud	iP	16 15 42.0 C			Ud	iP	08 50 59.3 C	
			i	16 15 48.9			De	iP	08 51 15.5 C	
		De	iP	16 15 59.6 C						
		Kuril Islands region					Hokkaido, Japan region			
		(h = 40 km).					(h = 45 km).			
		M = 5.3 (Up,Ki).					m = 5.7 (Up,Ki).			
"	5	Ki	eP	17 57 33	"	6	Up	iP	12 49 15.5	
		Ud	iP	17 56 51.2			Um	iP	12 48 54.4	
		Kenya (h = 25 km).					Ud	iP	12 49 22.6	
		Phases are about 10 s					Near east coast of Honshu,			
		late when related to the					Japan (h = 25 km).			
		NEIS solution.								
"	5	Ki	eP	17 59 05	"	6	Um	eP	13 27 01	
		Um	iP	17 59 23.8				i	13 27 07.9	
			ipP	17 59 38.5			Near east coast of Honshu,			
		Ud	iP	17 59 53.7			Japan (h = 45 km).			
			ipP	18 00 09.6						
		Hokkaido, Japan region.					"	6	Up	iP
		h = 55 km (Um,Ud).							il	15 34 13.3
"	5	Up	iPKP	18 50 06.0				il	15 34 50.9	
			iSKP1	18 53 00.9			Ki	il	15 34 05.3	
		Ki	iPKP	18 49 50.9			Um	iP	15 33 49.5	
		Sk	iSKP1	18 52 51.0				i	15 33 58.2	
		Um	iPKP	18 49 58.3			Ud	iP	15 34 19.4	
			iSKP1	18 52 46.8				il	15 34 57.2	
		Ud	i(PKP)	18 50 04.0			De	eP	15 34 39	
			iPKP	18 50 07.9			Kuril Islands (h = 50 km).			
			iSKP1	18 53 02.8			il-denoted phases may be			
		De	ePKP	18 50 14			P from another shock in the			
		Fiji Islands region					same focal region, 38 s			
		(h = 390 km).					after the first one.			
"	5	Up	iP	20 52 39.3	"	6	Up	iP	16 36 06.4	
		Sk	iP	20 52 03.9				i	16 36 13.4	
		Um	iP	20 52 37.3 C					micr sec	
		Ud	iP	20 52 55.8				i	Z' 0.1 1.0	
		De	iP	20 52 51.9			Ki	iP	16 35 28.2	
		Afghanistan-USSR border					Sk	iP	16 36 02.5	
		region (h = 230 km).					Um	iP	16 35 44.4	
							Ud	iP	16 36 13.9	
							De	iP	16 36 26.4	
							Near east coast of Honshu,			
							Japan (h = 40 km).			
"	6	Up	iP	08 50 51.6 C	"	6	Up	iPKP1	19 00 52.2	
				micr sec			Ud	iPKP1	19 00 54.3	
			P	Z' 0.1 1.4			De	iPKP1	19 01 03.5	
		(cont.)								

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

1978				1978					
Apr.	6	Up	iP	19 22 07.5	Apr.	7	De	iPKP1	07 23 35.6
		Ki	iP	19 22 07.2				Loyalty Islands region	
				micr sec				(h = 40 km).	
			P	Z' 0.1 0.8					
		Sk	iP	19 22 30.4	"	7	Up	eP	07 55 55
		Um	iP	19 22 01.3				i	07 55 56.7
		Ud	iP	19 22 24.8 C				ipP	07 56 09.7
		De	iP	19 22 25.2					micr sec
				Kirgiz SSR (h = 25 km).				i	Z' 0.3 0.8
"	6	Up	iP	22 25 50.0				pP	Z' 0.5 1.0
		Um	iP	22 25 23.9				Mx	E 1.5 19
		Ud	iP	22 25 55.2				Mx	N 2.0 19
"	6	Up	iP	23 41 28.0				Mx	Z 4.1 19
			iS	23 51 00			Ki	iP	07 55 09.2
				micr sec				i	07 55 11.3
			P	Z' 0.4 1.5				ipP	07 55 22.8
			Mx	E 5.1 19					micr sec
			Mx	N 6.4 19				i	Z' 0.1 0.8
			Mx	Z 9.7 19				pP	Z' 0.1 1.1
		Ki	iP	23 40 50.3				Mx	E 1.4 14
			ipP	23 40 59.2				Mx	N 1.7 15
				micr sec				Mx	Z 3.0 19
			P	Z' 0.2 1.4			Sk	eP	07 55 45
			Mx	E 9.3 17				i	07 55 47.1
			Mx	N 11 17				ipP	07 55 59.2
			Mx	Z 13 16			Um	iP	07 55 29.7
		Sk	eP	23 41 24				i	07 55 31.8
		Um	iP	23 41 07.0				ipP	07 55 43.7
			ipP	23 41 16.4				iPcP	07 56 04.1
			iS	23 50 21			Ud	iP	07 56 00.7
		Ud	iP	23 41 35.2				i	07 56 02.1
			ipP	23 41 44.8				ipP	07 56 15.1
		De	iP	23 41 49.8			De	iP	07 56 19.7
				Near east coast of Honshu,				i	07 56 21.0
				Japan.				ipP	07 56 33.9
				h = 30 km (Ki,Um,Ud).					Kuril Islands.
				m = 6.0, M = 6.2 (Up,Ki).					h = 50 km (Up,Ki,Sk,Um,Ud,De).
"	7	Um	iP	00 12 42.0					m = 6.1, M = 5.5 (Up,Ki).
			i	00 12 47.8					Double P phases, in average
				Near east coast of Honshu,					1.8 s apart.
				Japan (h = 20 km).	"	7	Up	iP	08 40 56.9
"	7	Ud	iP	03 21 23.9				i	08 41 01.8
				Kuril Islands region				i	08 41 15.3
				(h = 25 km).					micr sec
								i	Z' 0.1 0.8
"	7	Ud	iP	03 34 02.4			Ki	iP	08 40 11.0
				Mindanao, Philippine Islands			Sk	eP	08 40 50
				(h = 80 km).			Um	iP	08 40 32.0
"	7	Ud	iP	03 40 58.1				i	08 40 36.5
								i	08 40 49.2
"	7	Ud	i(P)	03 40 58.1			Ud	iP	08 41 03.2
								i	08 41 07.9
								i	08 41 21.4

(cont.)

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

1978		1978	
Apr.	7	Apr.	7
	(cont.)		(cont.)
	De iP	Um ipP	23 43 06.1
	i	Ud iP	23 43 12.1
	i	ipP	23 43 25.5
	Kuril Islands (h = 35 km).	India-Bangladesh border region.	
	Triple P phases at Up, Um, Ud and De, in average	h = 50 km (Um,Ud).	
	P2 - P1 = 5 s and		
	P3 - P1 = 18 s.	"	7 Up iP
"	7 Ud i(P)	"	7 Um iP
"	7 Ud iP	"	8 Ud iPKP1
	Kuril Islands (h = N).		De iPKP1
"	7 Ud eP		Tonga Islands region (h = N).
	Kuril Islands (h = N).	"	8 Up iP
"	7 Up iP		Ki iP
	Ki iP		Sk iP
	Sk eP		Um eP
	Um iP		De iP
	Ud iP		i
	De iP		Southern Greece (h = 45 km).
	Kamchatka (h = 140 km).	"	8 Up iSgl
"	7 Up iP		Ki iSgl
	Ki eP		Sk iPgl
	Sk eP		iSgl
	Um iP		Um iSn
	ipP		Sgl
	Ud iP		Ud iSn
	ipP		iSgl
	Near east coast of Honshu, Japan.		De eSgl
	h = 45 km (Um,Ud).		Coast of Nordland, Norway, 65.2°N, 12.4°E.
"	7 Up eP		Origin time = 07 29 09.
	ipP		M _L = 2.6 (Up,Ki,Sk,Um,Ud).
	micr sec	"	8 Ud eP
	Z' 0.2 1.6	"	8 Ud iP
	Ki eP	"	8 Up iSgl
	ipP		Sk eSgl
	Sk eP		Ud iPgl
	ipP		iSgl
	Um iP		Southwest coast of Norway, near 58 1/4°N, 6 1/2°E.
	ipP		Origin time = 09 56 10.
	Ud iP		M _L = 2.5 (Ud).
	ipP		By combination with Bergen and Kongsberg readings.
	De iP	"	8 Up iP
	ipP		(cont.)
	Northern Sumatera.		
	h = 25 km (Up,Ki,Sk,Um,Ud,De).		
"	7 Um iP	"	8 Up iP
	(cont.)		(cont.)
	23 42 52.0		10 19 12.3 C

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

1978				1978				
Apr.	8	(cont.)		Apr.	8	Ud	iP	15 24 18.7
		Up	micr sec					Near coast of Venezuela
		P	Z' 0.1 1.0					(h = N).
		Ki	iP 10 18 36.6 C		8	Ud	eP	15 25 55
		Sk	iP 10 19 07.7 C					Molucca Passage (h = N).
			i 10 19 15.4		8	Up	iP	16 30 42.5
		Um	iP 10 18 52.1 C			Um	iP	16 30 17.5
		Ud	iP 10 19 19.2 C			Ud	iP	16 30 49.1
		De	iP 10 19 32.7					Kuril Islands (h = N).
		South of Honshu, Japan			8	Up	ePKP1	20 38 47
		(h = N).					i	20 38 58.1
"	8	Up	iP 10 38 00.7 C			Um	iPKP1	20 38 32.0
			ipP 10 38 06.9			Ud	ePKP1	20 38 46
			micr sec			De	i	20 39 16.7
		P	Z' 0.5 1.5	"	8	Um	iP	23 54 48.8
		Mx	E 1.0 11			Ud	iP	23 55 17.2
		Mx	N 1.7 14					Near s. coast of southern
		Mx	Z 22 14					Honshu (h = 15 km).
		Ki	iP 10 37 38.3 C		9	Up	iPKP1	04 53 25.7
			ipP 10 37 44.0			Ud	iPKP1	04 53 26.5
			micr sec			De	iPKP1	04 53 38.0
		P	Z' 0.6 1.8					South of Fiji Islands
		Mx	E 2.2 12					(h = 460 km).
		Mx	N 1.2 12	"	9	Up	iP	05 38 21.5
		Mx	Z 3.5 13			Ud	iP	08 06 39.0
		Sk	iP 10 38 04.9 C			Ud	iP	08 06 45.4
			ipP 10 38 10.5					Kuril Islands (h = N).
		Um	iP 10 37 45.8 C	"	9	Up	iP	08 06 39.0
			ipP 10 37 51.5			Ud	iP	08 06 45.4
		Ud	iP 10 38 10.1 C					Kuril Islands (h = N).
			ipP 10 38 16.2	"	9	Ud	iP	08 24 30.8
			i 10 38 59.7					Minahassa Peninsula
		De	iP 10 38 18.7					(h = 120 km).
		Taiwan region.		"	9	Up	iP	09 16 38.0
		h = 20 km (Up,Ki,Sk,Um,Ud).					i	09 16 50.6
		m = 6.3, M = 5.7 (Up,Ki).				Um	iP	09 16 13.2
"	8	Up	iP 11 26 39.8			Ud	eP	09 16 42
		Um	iP 11 26 19.7				i	09 16 55.9
		Ud	iP 11 26 46.5	"	9	Ki	eP	10 22 21
		South of Honshu, Japan				Ud	iP	10 22 43.0
		(h = N).		"	9	Um	iP	15 45 41.9
"	8	Ki	iP 14 02 00.3			Ud	iP	15 46 11.6
		Ud	iP 14 02 18.3					Off east coast of Honshu,
		Southern Sinkiang Prov.,						Japan (h = 30 km).
		China (h = 50 km).		"	9	Ki	iP	17 38 45.4
"	8	Up	iLg2 15 22 32.4					(cont.)
		Um	iP 15 20 24.7					
		Ud	eLg2 15 23 00					
		De	iP 15 18 54.8					
			i 15 19 01.8					
		Poland (h = N).						

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

1978				1978			
Apr.	9	(cont.)		Apr.	10	(cont.)	
		Ud	iP	17	39	10.6	C
			i	17	39	25.2	
		Philippine Islands region (h = 30 km).					
"	9	Ud	iP	21	06	15.8	
		Southern Italy (h = 15 km).					
"	10	Up	iPKP1	02	04	05.1	
		Um	iPKP1	02	03	54.0	
		Ud	iPKP1	02	04	06.7	
"	10	Up	ePKP1	07	52	50	
		Um	ePKP1	07	52	35	
		Ud	i	07	52	43.3	
			iPKP1	07	52	48.9	
			i	07	52	59.2	
"	10	Up	iPKP1	09	08	54.1	
		Um	iPKP1	09	08	37.2	
		Ud	iPKP1	09	08	51.2	
		De	i	09	09	09.7	
"	10	Up	eP	10	21	06	
		Um	iP	10	20	43.9	
		Ud	iP	10	21	09.1	
"	10	Up	iP	10	25	08.2	
		Ki	iP	10	24	21.6	
		Um	iP	10	24	43.6	
		Ud	iP	10	25	14.4	
		Kuril Islands (h = 45 km).					
"	10	Up	ePKP1	10	47	58	
			i	10	48	07.5	
		Sk	e	10	47	59	
		Um	iPKP1	10	47	46.4	
		Ud	iPKP1	10	47	59.5	
			i	10	48	07.5	
		De	i	10	48	16.6	
			i	10	48	23.9	
		Kermadec Islands (h = 40 km).					
"	10	Up	iP	12	49	26.0	
		Ud	iP	12	49	31.7	
"	10	Up	iP	18	07	56.2	
		Um	iP	18	08	12.1	
		Eastern Gulf of Aden (h = N).					
"	10	Up	iPdiff	21	06	22.0	C
			i(PP)	21	09	33.9	
			iPP	21	10	42.2	
		(cont.)					
		Up	iS	21	18	13	
			iSP	21	19	39	
			iPKKP	21	22	26.2	
							micr sec
			Pdiff	Z'	0.1	1.4	
			PP	Z'	2.1	2.0	
			Mx	E	14	28	
			Mx	N	28	24	
			Mx	Z	21	26	
		Ki	iPdiff	21	06	14.2	C
			i(PP)	21	10	12.8	
			iPP	21	10	30.8	
							micr sec
			Pdiff	Z'	0.4	1.5	
			PP	Z'	4.7	3.5	
			Mx	E	21	24	
			Mx	N	25	23	
		Sk	iPdiff	21	06	31.1	C
			i(PP)	21	10	07.5	
			iPP	21	10	58.6	
			iPKKP	21	22	17.6	
		Um	iPdiff	21	06	14.9	C
			i(PP)	21	09	17.6	
			iPP	21	10	24.9	
			iPKKP	21	22	33.6	
		Ud	iPdiff	21	06	30.8	C
			i(PP)	21	09	42.2	
			iPP	21	10	53.1	
			iSP	21	20	07.5	
			iPKKP	21	22	18.1	
		De	iPdiff	21	06	32.1	C
			i(PP)	21	10	07.0	
			iPP	21	10	54.2	
		South of Sumbawa Island (h = N).					
		m = 7.4, M = 6.8 (Up,Ki).					
"	11	Up	iPP	03	01	37	
		Um	iPKP	03	00	21.7	
			iPP	03	01	20.5	
		De	iPKP	03	00	35.1	
		East Papua New Guinea region (h = 15 km).					
"	11	Up	iP	05	23	45.2	
			i	05	23	53.7	
							micr sec
			P	Z'	0.2	1.2	
		Ki	iP	05	22	51.1	
							micr sec
			P	Z'	0.2	1.2	
		Sk	iP	05	23	20.5	
			i	05	23	31.4	
		(cont.)					

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

1978				1978				
Apr.	11	(cont.)		Apr.	11	Up	iP	15 41 48.3
		Um	iP 05 23 18.2				P	Z' 0.1 1.0
		Ud	iP 05 23 43.0			Ki	iP	15 41 14.5
		De	iP 05 24 05.8				i	15 41 33.0
			i 05 24 16.5				P	Z' 0.1 1.2
		Unimak Island region (h = N).				Sk	iP	15 41 22.3 C
		m = 6.1 (Up,Ki).				Um	iP	15 41 33.5 C
"	11	Ud	i(P) 06 22 03.5			Ud	iP	15 41 40.2 C
"	11	Ki	iP 08 04 19.0			De	iP	15 41 56.7 C
		Ud	iP 08 04 31.4			Southern Nevada.		
		Kashmir-Tibet border				m = 5.7 (Up,Ki).		
		region (h = N).				Underground explosion.		
"	11	Up	i 09 36 00.6	"	11	Up	iP	16 04 55.7
		Ki	iP 09 34 36.5			Sk	eP	16 04 36
			iS 09 36 12.4			Um	iP	16 04 50.5
		Sk	iP 09 34 48.6			Near coast of Oaxaca,		
			iS 09 36 33.6			Mexico (h = N).		
		Um	iP 09 35 14.5	"	11	Um	iP	17 34 15.0
			iS 09 37 29.1				i	17 34 21.2
		Ud	iP 09 35 34.2			Ud	iP	17 34 03.6
			i 09 35 46.3			Off coast of Ecuador (h = N).		
			i 09 38 22.5	"	11	Up	iP	17 56 48.7 C
		De	iP 09 36 18.4			Ki	iP	17 56 14.4 C
			i 09 36 25.9				P	Z' 0.1 0.9
		Jan Mayen Island region				Sk	iP	17 56 22.5 C
		(h = 10 km).					i	17 56 29.7
"	11	Ud	iP 12 37 38.4			Um	iP	17 56 33.9 C
			i 12 37 43.9			Ud	iP	17 56 40.5 C
"	11	Up	iP 12 37 49.7			De	iP	17 56 56.9 C
			i 12 37 53.4			Southern Nevada.		
			ipP 12 38 02.1			Underground explosion.		
		Um	iP 12 37 25.0	"	11	Up	iP	19 27 51.9 C
			ipP 12 37 36.7			Ki	iP	19 27 27.5
		Ud	iP 12 37 54.9			Um	iP	19 27 36.1 C
			ipP 12 38 07.1			Ud	iP	19 28 01.5
		De	iP 12 38 12.9			De	eP	19 28 10
		Kuril Islands.				Taiwan (h = 80 km).		
		h = 45 km (Up,Um,Ud).		"	11	Um	iP	19 45 23.3
"	11	Up	iSgl 13 00 37.4			Ud	iP	19 45 53.1
		Ud	iPgl 12 59 13.1			Near east coast of Honshu,		
			iSgl 12 59 35.8			Japan (h = 55 km).		
			iRg 12 59 45.9	"	11	Up	iPKP1	20 07 28.3
		Origin time = 12 58 42.				Sk	ePKP1	20 07 23
		Regional near-surface event.				Um	iPKP1	20 07 17.8
"	11	Ki	iP 14 36 06.9				i	20 07 21.5
		Ud	iP 14 36 21.8			Ud	iPKP1	20 07 30.2 C
		Southern Sinkiang Prov.,						
		China (h = 130 km).						

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

1978				1978									
Apr.	12	Sk	iP	04 26	08.7	Apr.	12	Up	iP	16 53	17.1		
		Um	iP	04 26	09.6						micr sec		
		Kodiak Island region (h = N).							P	Z'	0.2 0.8		
"	12	Sk	iP	04 30	28.0			Ki	iP	16 53	56.7		
		Ud	eP	04 30	53				i	16 54	00.1		
		Kodiak Island region (h = 90 km).						Sk	iP	16 53	53.5		
"	12	Ki	iP	04 36	33.7			Um	iP	16 53	31.5		
		Um	iP	04 37	01.5			Ud	iP	16 53	32.8		
		Kodiak Island region (h = 15 km).						De	iP	16 53	16.6		
"	12	Up	eP	04 57	50			Iran (h = 35 km).					
		Ki	eP	04 56	57		"	12	Sk	epP	17 03	46	
		Sk	iP	04 57	23.1			Um	iP	17 03	43.5		
		Um	iP	04 57	24.0				i	17 04	07.5		
		Ud	eP	04 57	48			Ud	ipP	17 03	52.9		
		Kodiak Island region (h = 15 km).						Near coast of Nicaragua (h = 60 km).					
"	12	Up	iP	05 33	00.1		"	12	Um	iP	17 40	52.0	
		Ki	iP	05 32	05.4 C			Ud	iP	17 41	23.2		
			ipP	05 32	12.3			"	12	Up	iP	20 16	01.6
					micr sec				Ki	iP	20 15	25.8	
			P	Z'	0.1 0.8				Sk	iP	20 15	56.6	
		Sk	iP	05 32	32.7				Um	iP	20 15	41.3	
			ipP	05 32	40.7				Ud	iP	20 16	07.5	
		Um	iP	05 32	33.8			South of Honshu, Japan (h = 15 km).					
		Ud	iP	05 32	57.9		"	12	Um	iP	21 19	58.3	
		De	iP	05 33	21.0			Ud	iP	21 20	25.7		
		Kodiak Island region. h = 25 km (Ki,Sk).					"	13	Ki	iP	05 31	41.7	
"	12	Ki	iP	05 36	44.2						micr sec		
		Sk	iP	05 37	12.2				P	Z'	0.1 1.1		
			i	05 37	18.6			Um	iP	05 31	47.1		
								Ud	iP	05 32	06.0		
									ipP	05 32	32.4		
								Talaud Islands. h = 100 km (Ud).					
"	12	Up	iP	09 44	08.2		"	13	Up	iP	06 06	24.7	
			ipP	09 44	14.8				i	06 06	30.4		
					micr sec						micr sec		
			P	Z'	0.1 1.0				i	Z'	0.1 1.5		
		Ki	iP	09 43	13.5 C			Ki	iP	06 06	21.7		
			ipP	09 43	20.5						micr sec		
					micr sec				P	Z'	0.3 2.1		
			P	Z'	0.1 1.0			Sk	iP	06 05	55.8		
		Sk	iP	09 43	40.5 C				i	06 05	59.4		
		Um	iP	09 43	41.7 C			Um	iP	06 06	25.7		
		Ud	iP	09 44	04.5 C				i	06 06	29.2		
			ipP	09 44	11.3			Ud	iP	06 06	06.0		
		De	iP	09 44	28.2 C				i	06 06	09.9		
			ipP	09 44	34.4				i	06 06	21.7		
		Kodiak Island region. h = 25 km (Up,Ki,Ud,De). m = 5.6 (Up,Ki).						North Atlantic Ocean (h = 30 km). m = 5.5 (Up,Ki).					

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

1978

Apr. 13 Up iP 09 03 20.9
 ipP 09 03 31.6
 micr sec
 pP Z' 0.1 0.8
 Ki iP 09 03 21.6
 ipP 09 03 32.4
 Sk epP 09 03 46
 Um iP 09 03 18.1
 ipP 09 03 28.4
 Ud iP 09 03 32.9
 ipP 09 03 43.9
 De iP 09 03 31.0
 ipP 09 03 42.0

Andaman Islands region.
 h = 35 km (Up,Ki,Um,Ud,De).

" 13 Ud iP 13 58 52.7
 Uzbek SSR (h = N).

" 13 Up iSgl 14 18 28.1
 Sk iSgl 14 18 42.2
 Ud iSgl 14 17 26.7
 i 14 17 33.3

Southwest Norway, near
 58 1/2° N, 6 1/2° E.
 Origin time = 14 15 29.
 $M_L = 2.6$ (Ud).

By combination with Bergen
 and Kongsberg readings.

" 13 Up iP 18 09 20.6
 micr sec
 Mx E 1.7 10
 Mx N 2.7 12
 Mx Z 2.6 10
 Ki iP 18 10 46.8
 micr sec
 P Z' 0.1 1.3
 Mx E 3.0 10
 Mx N 1.3 12
 Mx Z 1.8 12
 Sk iP 18 10 08.2
 Um iP 18 10 04.1
 Ud iP 18 09 28.5
 De iP 18 08 41.7
 i 18 08 50.8
 Yugoslavia (h = N).

" 13 Up iSgl 18 31 55.3
 Ud iSgl 18 31 03.3
 Southwest Norway, near
 58 1/2° N, 6 1/2° E.
 Origin time = 18 28 56.
 By combination with Bergen
 and Kongsberg readings.

1978

Apr. 13 Up iP 19 49 04.1

" 13 Up iPKP1 21 40 01.9
 Ud iPKP1 21 40 03.6
 De iPKP1 21 40 13.4

" 14 Um iPKP 05 09 04.2
 Ud iPKP1 05 09 08.3
 De iPKP1 05 09 18.6
 Tonga Islands (h = N).

" 14 Up iP 06 18 58.7 C
 iPP 06 20 29.1
 micr sec
 P Z' 0.2 1.5
 Ki iP 06 18 57.5 C
 micr sec
 P Z' 0.2 0.8
 Sk iP 06 19 20.8 C
 Um iP 06 18 51.7 C
 iPP 06 20 17.7
 i 06 20 38.8
 Ud iP 06 19 15.5 C
 i 06 19 21.8
 De iP 06 19 16.0 C
 iPP 06 20 48.7
 Kirgiz SSR (h = N).
 m = 5.7 (Up,Ki).

" 14 Up iP 13 23 56.3
 Ki iP 13 23 33.9
 Ud iP 13 24 06.3
 Taiwan (h = 55 km).

" 14 Ki iP 17 18 31.7
 iS 17 20 16.7
 Sk iP 17 18 40.5
 iS 17 20 29.7
 Um iP 17 19 06.1
 Ud eP 17 19 25
 i 17 19 42.9
 Jan Mayen Island region,
 approximate location
 70° N, 7° W.
 Origin time = 17 16 18.

" 14 Ud iP 17 52 58.9

" 14 Ud iP 18 54 28.8

" 14 Ud iP 20 41 20.8
 Near east coast of
 Kamchatka (h = N).

" 14 Ud iP 20 55 47.6
 Near east coast of Honshu,
 Japan (h = N).

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

1978				1978			
Apr.	14	Ud	iP	23 15 15.1	Apr.	15	(cont.)
		Alma-Ata region (h = 15 km).				Up	micr sec
"	15	Um	i(PKP)	09 31 51.3		Mx	Z 20 11
			iPKP	09 31 56.8		Ki	iP 23 39 52.6 D
		Ud	iPKP1	09 31 59.1		i	23 39 59.1
		De	iPKP1	09 32 09.8 D		iS	23 44 44
		Fiji Islands region					micr sec
		(h = 540 km).				P	Z' 0.3 1.0
						i	Z' 1.3 1.5
"	15	De	iPKP1	11 09 07.3		Mx	E 41 12
		Fiji Islands region				Mx	N 28 11
		(h = 560 km).				Sk	iP 23 39 13.6 D
"	15	Ud	ePKP1	15 06 37		Um	iP 23 39 17.0 D
		Kermadec Islands region				iS	23 43 45
		(h = 50 km).				Ud	iP 23 38 38.3 D
"	15	Up	iP	17 31 15.0		i	23 38 41.1
			ipP	17 31 38.1		i	23 38 48.4
		Ki	iP	17 31 03.3		De	iP 23 38 00.6 D
			ipP	17 31 27.7		i	23 38 10.0
		Sk	iP	17 30 56.3		Sicily (h = 15 km).	
		Um	iP	17 31 11.2		m = 6.3, M = 6.2 (Up,Ki).	
			i	17 31 27.8	"	15	Up eP 23 42 36
			ipP	17 34 32.5		Sk	iP 23 43 12.0
		Ud	iP	17 32 04.2		Um	iP 23 43 16.2
		De	iP	17 31 11.9		Ud	iP 23 42 37.9
		Guatemala.				Sicily, from the same focal area as the preceding event.	
		h = 90 km (Up,Ki).				Origin time = 23 37 47.	
"	15	Up	iP	20 20 06.2	"	16	Ki iP 02 34 42.8
		Ki	iP	20 19 33.3		Ud	iP 02 35 09.3
		Um	iP	20 19 47.3		Halmahera (h = 230 km).	
		Ud	iP	20 20 13.1	"	16	Ud iP 06 24 56.6
		De	iP	20 20 25.7		Sicily (h = N).	
		South of Honshu, Japan			"	16	Up iP 10 01 21.1
		(h = 430 km).				Ki	iP 10 00 27.9
"	15	Ud	iP	22 43 36.8			micr sec
		Greece (h = 70 km).				P	Z' 0.1 1.0
"	15	Sk	eP	23 34 38		Sk	iP 10 00 54.7
		Um	iP	23 34 40.8		Um	iP 10 00 56.0
		Ud	iP	23 35 04.5		Ud	iP 10 01 18.6
		Sicily (h = 35 km).				De	iP 10 01 41.8
"	15	Up	iP	23 38 37.1 D		Kodiak Island region	
			ipP	23 38 56.5		(h = 25 km).	
			iS	23 42 37	"	16	Up iP 19 15 12.1
				micr sec		i	19 15 43.8
		P	Z'	1.1 1.5		Um	iP 19 14 47.0
		Mx	E	25 11		i	19 15 19.1
		Mx	N	14 10		Ud	iP 19 15 17.7
		(cont.)				i	19 15 49.9
		(cont.)				(cont.)	

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

1978				1978			
Apr.	16	(cont.) Kuril Islands (h = 45 km). Second phases are probably P-phases of a new event from the same focal area.		Apr.	18	Ki iP 02 27 45.9 Sk eP 02 28 13 Kodiak Island region (h = N).	
"	16	Up iP 19 38 32.1 Ki iP 19 37 17.5 Sk iP 19 37 30.2 iS 19 39 15.5 Um iP 19 37 54.4 Ud iP 19 38 16.6 i 19 38 28.7 De iP 19 39 04.2 i 19 39 09.1 Jan Mayen Island region (h = 10 km).		"	18	Up iPKP1 02 43 27.9 Ud iPKP1 02 43 29.4 i 02 43 33.2 De iPKP1 02 43 39.2	
"	16	Up iP 20 34 24.8 i 20 34 35.5 Um iP 20 33 59.4 Ud iP 20 34 30.2 i 20 34 41.8		"	18	Up iPKP1 08 06 01.7 iSKP1 08 08 48.7 PKP1 Z' 0.3 0.9 Ki iPKP 08 05 49.9 iSKP1 08 08 28.5 Sk iPKP1 08 05 56.5 iSKP1 08 08 43.4 Um iPKP1 08 05 50.1 i 08 08 19.1 iSKP1 08 08 38.4 Ud iPKP1 08 06 04.0 iSKP1 08 08 50.4 De iPKP 08 06 11.4 iPKP1 08 06 14.1 ipPKP1 08 08 26.2 South of Fiji Islands. h = 590 km (De).	
"	16	Ki iP 20 52 32.9 Sk iP 20 52 46.1 iS 20 54 32.3 Ud iP 20 53 32.7 i 20 53 36.8 Jan Mayen Island region.		"	18	Up iP 10 55 34.0 Ud iP 10 55 29.7	
"	16	Up iPKP2 21 24 04.2 Um iPKP1 21 23 47.5 Ud iPKP1 21 24 01.0 iPKP2 21 24 07.2		"	18	Up iP 11 54 40.1 ipP 11 54 52.3 micr sec P Z' 0.2 1.0 Mx E 1.2 20 Mx N 1.3 18 Mx Z 1.1 17 Ki iP 11 53 53.1 ipP 11 54 05.2 micr sec P Z' 0.2 1.0 Mx E 1.0 16 Mx N 1.2 16 Mx Z 1.4 17 Sk iP 11 54 29.9 Um iP 11 54 14.6 ipP 11 54 26.9 Ud iP 11 54 46.0 ipP 11 54 58.0 De iP 11 55 03.2 ipP 11 55 15.9	
"	16	Um iP 23 24 15.3 Ud eP 23 23 40 Yugoslavia (h = N).					
"	17	Up iP 06 00 37.6 Ki iP 05 59 43.7 Um iP 06 00 11.5 ipP 06 00 21.0 Ud iP 06 00 36.2 ipP 06 00 45.8 De iP 06 00 58.8 Unimak Island region (h = N).					
"	17	Up iP 19 27 21.2 Ud iP 19 27 31.2 i 19 27 48.6 Luzon, Philippine Islands (h = 45 km).					
						Kuril Islands. h = 45 km (Up,Ki,Um,Ud,De). m = 6.2, M = 5.3 (Up,Ki).	

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

1978				1978									
Apr.	18	Up	iP	15 38	48.8	Apr.	18	Ud	eP	20 54	44		
"	18	Up	iP	17 40	39.4 C	"	18		i	20 55	03.0		
			i	17 40	41.7	"	19	Ki	iP	01 57	58.5		
			ipP	17 41	06.1			Southern Alaska (h = 160 km).					
			iPP	17 45	03	"	19	Ud	iP	02 45	32.7		
			iSKS	17 51	02	"	19	Up	iP	04 12	38.2		
			iS	17 51	43	"	19		i	04 12	43.8		
				micr sec						micr sec			
		P	Z'	0.1	1.0				P	Z'	0.1 1.0		
		i	Z'	0.2	1.0			Ki	iP	04 11	52.1		
		Mx	E	1.4	18			Sk	iP	04 12	27.6		
		Mx	N	2.9	18			Um	iP	04 12	13.2		
		Mx	Z	2.7	17			Ud	iP	04 12	43.9 C		
		Ki	iP	17 40	22.3 C			De	iP	04 13	01.6		
			ipP	17 40	47.9			Kuril Islands (h = N).					
			iSKS	17 50	42			"	19	Um	iP	06 52	19.7
				micr sec						Ud	iP	06 52	33.8
		P	Z'	0.3	1.0			Nicobar Islands region					
		Mx	E	2.7	18			(h = N).					
		Mx	N	2.9	18			"	19	Up	iP	07 44	50.2
		Mx	Z	3.8	19			Ki	iP	07 44	14.3		
		Sk	iP	17 40	44.2			Um	iP	07 44	29.6		
		Um	iP	17 40	28.1 C			Ud	eP	07 44	57		
			ipP	17 40	55.1				i	07 45	13.6		
			iSKS	17 50	49			De	eP	07 45	12		
			iPKKP	17 57	41.4			South of Honshu, Japan					
		Ud	iP	17 40	47.9 C			(h = N).					
			ipP	17 41	14.6			"	19	Um	iP	10 58	55.6
			iPKKP	17 57	27.7			Ud	iP	10 59	24.8		
		De	iP	17 40	53.5			Near east coast of Honshu,					
			ipP	17 41	18.4			Japan (h = 60 km).					
			i(PP)	17 44	51.0			"	19	Up	iSgl	14 19	20.2
		Philippine Islands region.						Sk	eSgl	14 19	21		
		h = 110 km (Up,Ki,Um,Ud,De).						Ud	iSgl	14 18	20.0		
		m = 6.5, M = 5.9 (Up,Ki).						Southwest coast of Norway,					
"	18	Ki	iP	18 04	57.0			near 58 1/4°N, 6 1/2°E.					
			ipP	18 05	32.1			Origin time = 14 16 09.					
		Um	iP	18 05	02.2			M _L = 2.7 (Ud).					
			ipP	18 05	36.4			By combination with Bergen					
		Ud	iP	18 05	20.2			and Kongsberg readings.					
		Ceram.						"	19	Up	iSKP1	17 09	11.5
		h = 140 km (Ki,Um).						Ki	iPKP	17 06	10.0		
"	18	Ud	iP	18 55	55.5				iSKP1	17 08	50.7		
"	18	Up	i(P)	19 20	26.2			Um	iSKP1	17 09	01.0		
"	18	Ki	eSgl	19 31	42			Ud	iPKP1	17 06	22.2		
		Finnish Lapland, 68.2°N,							iSKP1	17 09	13.1		
		27.8°E.						(cont.)					
		Origin time = 19 30 18.											
		Solution from Helsinki											
		regional bulletin.											

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

1978				1978			
Apr.	19	(cont.)		Apr.	20	(cont.)	
		De	iPKP1 17 06 33.0 ipPKP1 17 08 41.4 iSKP1 17 09 22.1			Up	micr sec
			South of Fiji Islands. h = 560 km (De).			i	Z' 0.1 0.9
"	19	Up	iP 17 11 41.8			Ki	iP 22 29 24.7
		Ki	iP 17 11 34.0			i	22 29 26.2
		Sk	iP 17 11 57.3				micr sec
		Um	iP 17 11 33.2 C			i	Z' 0.1 1.0
			i 17 11 39.0			Sk	iP 22 30 01.7
		Ud	iP 17 11 54.9			i	22 30 02.7
			i 17 12 01.5			Um	iP 22 29 46.8
			India-China border region (h = 50 km).			i	22 29 48.6
						Ud	iP 22 30 18.2 D
						i	22 30 28.2
						De	iP 22 30 37.7
							Kuril Islands (h = 100 km).
"	19	Ud	iP 19 08 53.2	"	21	Ki	iP 13 30 00.3
			India-China border region (h = N).			Ud	iP 13 30 25.8
							Mindanao, Philippine Islands (h = 180 km).
"	19	Up	iP 19 49 22.6	"	21	Up	iP 15 30 20.6 C
		Ki	eP 19 49 03			i	15 31 29.5
		Sk	eP 19 49 26			iPP	15 31 55.1
		Um	iP 19 49 09.2			iS	15 36 15
		Ud	iP 19 49 32.2				micr sec
			Luzon, Philippine Islands (h = 40 km).			P	Z' 1.5 0.7
"	19	Ud	iP 22 36 07.0			Ki	iP 15 30 28.6 C
			Kuril Islands (h = N).			iS	15 36 29
"	19	Um	iP 22 45 11.5				micr sec
"	20	Up	i(P) 09 08 54.9			P	Z' 2.1 1.0
		Ud	i(P) 09 10 00.6			Sk	iP 15 30 45.8 C
"	20	Up	iP 13 51 42.6			Um	iP 15 30 18.4 C
		Ki	iP 13 50 56.6			iS	15 36 11
			i 13 51 09.4			Ud	iP 15 30 36.8 C
		Sk	iP 13 51 31.7			i	15 31 50.1
		Um	iP 13 51 18.2			iS	15 36 46.0
			i 13 51 30.4			De	iP 15 30 33.0 C
			iPcP 13 51 47.9			i	15 32 09.0
		Ud	iP 13 51 48.4			iS	15 36 39.9
			i 13 52 01.0				Afghanistan-USSR border region (h = 230 km). m = 6.7 (Up,Ki).
			Kuril Islands (h = N).	"	21	Up	iP 15 43 54.5 C
"	20	Ud	iPKP1 19 57 28.8			Ki	iP 15 44 02.8 C
		De	iPKP1 19 57 39.8			Sk	eP 15 44 21
			South of Fiji Islands (h = 600 km).			Um	iP 15 43 52.4 C
"	20	Up	iP 22 30 13.0			Ud	iP 15 44 11.1 C
			i 22 30 14.0			De	iP 15 44 07.3
			i 22 30 41.3				Afghanistan-USSR border region (h = 250 km).
			(cont.)	"	21	Ud	iP 20 04 28.7
							Tadzhik SSR (h = 15 km).

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

1978

Apr. 26 (cont.)
 De iPn 12 33 27.9
 i 12 33 38.5
 iPgl 12 33 43.2
 iSgl 12 34 26.6
 Off coast of Jutland,
 Denmark, near 57°N, 8°E.
 Origin time = 12 32 44.
 $M_L = 3.3$ (Up, Ki, Sk, Um, De).
 By combination with Bergen
 and Kongsberg readings.

" 26 Up iP 14 18 37.0
 De iP 14 18 46.3
 Nicobar Islands region
 (h = 130 km).

" 26 Up iP 15 31 53.5
 Um iP 15 31 28.7
 Ud iP 15 31 59.8
 ipP 15 32 11.0
 Kuril Islands.
 h = 40 km (Ud).

" 26 Ud iP 17 53 52.3
 Kuril Islands (h = N).

" 26 Ud iP 18 09 07.5
 Southern Sinkiang prov.,
 China (h = N).

" 26 Up iP 18 46 29.1
 micr sec
 P Z' 0.1 0.9
 Ki iP 18 45 41.9
 micr sec
 P Z' 0.1 1.2
 Um iP 18 46 03.5
 Ud iP 18 46 34.7
 ipP 18 46 45.8
 Kuril Islands.
 h = 40 km (Ud).
 m = 5.8 (Up, Ki).

" 26 Up iP 18 49 39.9
 ipP 18 49 50.7
 micr sec
 P Z' 0.1 1.0
 Mx E 1.0 18
 Mx N 1.2 17
 Mx Z 1.1 16
 Ki iP 18 48 53.0
 micr sec
 P Z' 0.1 1.0
 (cont.)

1978

Apr. 26 (cont.)
 Ki micr sec
 Mx E 1.0 16
 Mx N 1.5 18
 Mx Z 1.1 15
 Sk iP 18 49 29.8
 Um iP 18 49 15.2
 Ud iP 18 49 45.4
 i 18 49 46.7
 ipP 18 49 56.3
 De iP 18 50 03.5
 Kuril Islands.
 h = 40 km (Up, Ud).
 m = 5.9, M = 5.3 (Up, Ki).

" 26 Up iP 19 37 08.5
 Um iP 19 36 43.3
 Ud iP 19 37 14.1
 i 19 37 24.1

" 26 Up i(P) 19 38 24.2

" 26 Up iPKP1 20 39 38.8
 Um ePKP1 20 39 31
 i 20 39 37.5
 iSKP1 20 42 18.7
 Ud iPKP1 20 39 41.2
 De iPKP1 20 39 51.8 D
 South of Fiji Islands
 (h = 490 km).

" 26 Um iP 21 13 36.1
 Near east coast of Nicaragua
 (h = N).

" 27 Up eP 01 51 51
 Ki iP 01 50 51.9
 Sk iP 01 51 19.7
 Um iP 01 51 20.4
 Ud iP 01 51 43.3
 Kodiak Island region (h = N).

" 27 Up iP 08 38 10.9
 i 08 38 11.9
 iS 08 42 05
 iScP 08 45 50.7
 micr sec
 i Z' 0.1 0.8
 Mx E 0.6 10
 Mx N 0.8 11
 Mx Z 0.8 9
 Ki iP 08 39 25.5
 micr sec
 P Z' 0.1 1.0
 (cont.)

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

1978					1978				
Apr.	27	(cont.)			Apr.	28	(cont.)		
		Ki		micr sec			Ud	iP	02 30 21.4
		Mx	E	0.5 11			Near west coast of Honshu, Japan (h = 170 km).		
		Mx	N	0.7 10					
		Mx	Z	0.7 9		"	28	Ki	iP 03 02 24.3
		Sk	iP	08 38 52.9				Ud	eP 03 03 16
		i		08 39 15.6			Kodiak Island region (h = 70 km).		
		Um	iP	08 38 49.6					
		i		08 38 54.7		"	28	Ud	iP 03 33 06.8
		Ud	iP	08 38 19.1			Crete (h = 80 km).		
		i		08 38 21.6					
		iS		08 42 16.0		"	28	Up	iP 04 40 37.2
		De	iP	08 37 40.6				i	04 40 54.0
		Greece (h = 30 km).							micr sec
		m = 5.4, M = 4.5 (Up,Ki).						P	Z' 0.1 1.0
"	27	Up	iP	10 29 05.4			Ki	iP	04 40 38.8
		Ud	iP	10 29 18.6			Sk	iP	04 40 22.9 D
		Burma-India border region (h = 60 km).					Um	iP	04 40 41.2 D
							i		04 40 55.0
"	27	Up	i(P)	16 48 25.9			Ud	iP	04 40 27.0 D
							De	eP	04 40 29
"	27	Ud	iPKP1	18 15 38.2			Near north coast of Colombia (h = 60 km).		
		South of Tonga Islands (h = N).				"	28	Ud	iP 07 20 27.1
"	27	Ki	iP	18 20 28.3		"	28	Up	iSgl 14 23 34.7
		Sk	iP	18 20 45.3			Sk	iSgl	14 23 34.6
		Um	iP	18 20 18.0			Ud	i	14 22 30.8
		Ud	iP	18 20 36.9				iSgl	14 22 37.2
		Northwestern Kashmir (h = N).					De	eSn	14 22 29
"	27	Up	i(P)	19 58 38.6			Southwest coast of Norway, near 58 1/2°N, 6 1/2°E. Origin time = 14 20 28. M _L = 2.8 (Up,Ud). By combination with Bergen and Kongsberg readings.		
"	27	Um	iSgl	20 11 36.4					
		Karelian ASSR, 65.2°N, 33.9°E. Origin time = 20 08 31. Solution from Helsinki regional bulletin.				"	28	Up	iPKP1 19 03 46.4
							Ud	iPKP1	19 03 49.2
"	27	Ki	iS	20 42 08.0			De	iPKP1	19 03 59.3
		Um	iS	20 43 36.9		"	28	Up	i 20 19 41.7
		Norwegian Sea, 71.1°N, 16.2°E. Origin time = 20 40 29. Solution from Helsinki regional bulletin.						iRg	20 19 48.0
							Ud	iSgl	20 20 40.8
							East-central Sweden. Near-surface event.		
"	27	Up	iP	23 06 38.9		"	28	Ki	eP 21 15 11
		Ud	iP	23 06 46.6			Ud	iP	21 15 35.2
		Kuril Islands (h = 35 km).					Mindanao, Philippine Islands (h = 90 km).		
"	28	Um	iP	02 29 51.0					
		(cont.)							

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

1978				1978									
Apr.	28	Ud	iPKP1	21 44	16.5	Apr.	29	Um	iP	07 41	01.8		
		De	ePKP1	21 44	27			"	29	Ud	iP	09 52	44.2
"	29	Up	iP	02 39	59.1 C	"	29	Up	iP	14 39	01.8		
			ipP	02 40	13.9			Ud	iP	14 39	06.9		
				micr sec		"	29	Um	iP	15 06	15.2		
			P	Z'	0.2 1.4			Off east coast of Honshu, Japan (h = N).					
		Ki	pP	Z'	0.2 1.3								
			iP		02 39 58.0 C								
			ipP		02 40 12.6								
			iPP		02 43 37.1								
				micr sec									
			P	Z'	0.2 1.3			Up	iP	15 45	03.8		
			pP	Z'	0.4 1.8			Ki	iP	15 44	16.9		
		Sk	iP		02 40 12.1			Um	iP	15 44	38.6		
			ipP		02 40 26.9			Ud	iP	15 45	09.9		
			iPP		02 44 06.3			Kuril Islands region (h = 40 km).					
			i		02 44 22.3								
		Um	iP		02 39 56.0 C		"	29	Up	iP	19 06	39.1	
			ipP		02 40 10.6			Ki	iP	19 06	06.7		
			iPP		02 43 38.5			Um	iP	19 06	19.7		
			i		02 43 55.4			Ud	iP	19 06	47.7		
		Ud	iP		02 40 08.3 C		"	29	Up	iP	19 37	07.8	
			ipP		02 40 23.0				i	19 37	22.7		
		De	iP		02 40 07.1			micr sec					
			ipP		02 40 21.8			P	Z'	0.1 1.0			
		Southern Sumatera.							i	Z'	0.2 1.3		
		h = 50 km (Up,Ki,Sk,Um,Ud,De).							Mx	E	10 17		
		m = 6.5 (Up,Ki).							Mx	N	23 17		
"	29	Up	iPKP	04 40	01.2			Mx	Z	7.6 14			
			iPP	04 41	39.2			Ki	iP	19 36	44.4		
				micr sec				micr sec					
			Mx	E	1.2 20			P	Z'	0.1 1.0			
			Mx	N	2.6 21			Mx	E	12 14			
			Mx	Z	3.3 20			Mx	N	12 15			
		Ki	iPKP	04 39	48.7			Mx	Z	6.3 12			
				micr sec				Sk	iP	19 37	11.7		
			PKP	Z'	0.1 1.0			Um	iP	19 36	52.0		
			Mx	E	1.8 20				i	19 37	08.2		
			Mx	N	2.6 19				iS	19 46	23		
		Sk	iPKP	04 39	59.8			Ud	iP	19 37	17.4		
			iPP	04 41	34.0				i	19 37	32.5		
		Um	iPKP	04 39	54.5			De	eP	19 37	28		
			i	04 40	05.0			Taiwan region (h = 20 km). m = 5.9, M = 6.5 (Up,Ki).					
			iPP	04 41	18.0								
		Ud	iPKP	04 40	03.0		"	29	Up	iPg1	21 12	37.1	
			iPP	04 41	49.9				iSn	21 13	18.4		
		De	iPKP	04 40	09.6				i	21 13	30.6		
		Solomon Islands (h = 45 km). M = 5.9 (Up,Ki).								iSg1	21 13	47.2	
"	29	Um	iP	05 33	26.6			Ki	ePn	21 12	07		
		Ud	i(pP)	05 34	09.9				iSg1	21 13	15.2		
		Kyushu, Japan (h = 80 km).							Sk	iPg1	21 11	20.5	
									iSg1	21 11	36.0		

(cont.)

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

1978

Apr. 29 (cont.)

Um	iPn	21 11 53.4	C
	iPgl	21 12 01.4	
	iSn	21 12 33.9	
	iSgl	21 12 47.5	
Ud	ePn	21 12 15	
	iPgl	21 12 28.5	
	iSgl	21 13 29.1	
De	iSgl	21 15 19.4	

Central Norway, 64.8°N,
12.6°E.
Origin time = 21 11 00.
 $M_L = 3.2$ (Up, Ki, Sk, Um, Ud).
Felt.

" 29 Ud iP 22 19 01.3
Kirgiz SSR (h = N).

" 29 Ud iP 23 53 36.6
Sicily (h = 340 km).

" 30 Um iP 00 32 40.6

" 30 Um iP 07 55 58.8
Ud iP 07 55 09.4

" 30 Ki iPKP 19 17 46.0
Sk iPKP 19 17 57.9
Um iPKP 19 17 52.1
Ud iPKP 19 18 02.8
New Hebrides Islands
(h = 140 km).

" 30 Ki iP 19 25 39.9
Um iP 19 25 48.1
Ud iP 19 26 07.2
Luzon, Philippine Islands
(h = 45 km).

" 30 Ud iP 21 56 25.5
Afghanistan USSR border
region (h = 190 km).

February 26, 1980

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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°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, 1978

1978				1978					
May	1	Um	iP	06 05 31.4	May	1	Up	iPKP1	09 24 58.1
"	1	Um	iPKP	06 25 09.2			Ki	iSKP1	09 27 29.0
		Ud	iPKP1	06 25 09.4			Um	iSKP1	09 27 39.7
		De	iPKP1	06 25 20.0			Ud	iPKP1	09 25 00.3
		Fiji Islands region						iSKP1	09 27 54.7
		(h = 580 km).					De	iPKP1	09 25 10.7
"	1	Up	iP	07 05 09.1			South of Fiji Islands		
		i		07 05 13.5	"	1	Up		micr sec
		ipP		07 05 21.1			Mx	N	0.8 23
				micr sec			Ki	iP	11 55 21.2
		P	Z'	0.1 1.0					micr sec
		Mx	N	0.6 18			Mx	N	1.0 24
		Mx	Z	0.7 17			Timor (h = 55 km).		
		Ki	iP	07 04 22.4			M = 5.3 (Up,Ki).		
				micr sec	"	1	Up	i(P)	13 36 01.7
		P	Z'	0.1 1.0	"	1	Up	iP	14 32 19.6
		Mx	E	0.4 14			Um	iP	14 31 54.7
		Mx	N	0.9 18			Ud	iP	14 32 26.0
		Mx	Z	0.5 14			Kuril Islands (h = N).		
		Sk	iP	07 04 58.5	"	1	Um	iP	15 03 35.2
		ipP		07 05 10.3			Ud	iP	15 04 06.8
		Um	iP	07 04 43.8			Kuril Islands (h = 55 km).		
		i		07 04 49.1	"	1	Up	iP	15 24 02.2 D
		ipP		07 04 55.9					micr sec
		Ud	iP	07 05 14.4			P	Z'	0.1 0.6
		i		07 05 18.5			Ki	iP	15 23 30.2 D
		ipP		07 05 27.0					micr sec
		Kuril Islands.					P	Z'	0.1 0.6
		h = 45 km (Up,Sk,Um,Ud).					Sk	iP	15 23 59.1
		m = 5.9, M = 5.0 (Up,Ki).					Um	iP	15 23 44.2 D
"	1	Up	iP	07 23 34.4			ipP		15 25 22.7
		ipP		07 23 45.4			Ud	iP	15 24 09.3 D
		Um	iP	07 23 09.2			De	iP	15 24 20.8 D
		ipP		07 23 21.2			Bonin Islands region.		
		Ud	iP	07 23 40.8			h = 430 km (Um).		
		ipP		07 23 51.2			m = 5.6 (Up,Ki).		
		Kuril Islands.							
		h = 40 km (Up,Um,Ud).							

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

1978				1978			
May	1	Up	i(P)	15	36	50.9	
		Ud	i(P)	15	36	24.5	
"	1	Up	iP	16	00	18.0	
			i	16	00	29.6	
		Ud	iP	16	00	23.5	
			i	16	00	35.6	
"	1	Up	iP	16	07	35.6	
"	1	Up	iP	16	42	50.1	
			i	16	43	01.9	
		Um	iP	16	42	22.7	
			i	16	42	36.6	
		Ud	iP	16	42	54.3	
			i	16	43	07.4	
		Kuril Islands (h = N).					
"	1	Up	iP	18	10	10.4	
			i	18	10	22.7	
					micr	sec	
			i	Z'	0.1	0.8	
		Mx		E	0.5	14	
		Mx		N	0.9	16	
		Mx		Z	1.0	15	
		Ki	iP	18	09	23.9	
			i	18	09	36.1	
					micr	sec	
		P		Z'	0.1	0.9	
		Mx		E	0.7	15	
		Mx		N	0.8	17	
		Mx		Z	0.7	17	
		Sk	iP	18	09	59.5	
			i	18	10	11.7	
		Um	iP	18	09	44.9	
			i	18	09	56.8	
		Ud	iP	18	10	16.4	
			i	18	10	28.9	
		Kuril Islands (h = N).					
		m = 5.9, M = 5.1 (Up,Ki).					
"	2	Up	iP	01	49	48.3	
		Ud	iP	01	49	55.0	
"	2	Up	iP	01	51	51.4	
		Ki	iP	01	51	08.5	
		Um	iP	01	51	27.8	
		Ud	iP	01	51	58.6	
		Hokkaido, Japan region					
		(h = 100 km).					
"	2	Up	iP	05	26	00.1	C
					micr	sec	
		P		Z'	0.1	0.8	
		(cont.)					
May	2	(cont.)					
		Ki	iP	05	25	11.4	
		Sk	iP	05	25	47.5	
		Um	iP	05	25	34.2	
		Ud	iP	05	26	05.4	C
		De	iP	05	26	24.4	
		Kuril Islands (h = 110 km).					
"	2	Up	iP	06	12	51.4	
		Ki	iP	06	12	19.0	
		Sk	eP	06	12	49	
		Um	iP	06	12	32.8	
		South of Honshu, Japan					
		(h = 420 km).					
"	2	Up	iPKP	23	37	12.7	
			ipPKP	23	37	36.1	
		Ki	iPKP	23	37	28.6	
			ipPKP	23	37	51.5	
		Sk	iPKP	23	37	19.2	
		Um	iPKP	23	37	21.5	C
			ipPKP	23	37	44.5	
		Ud	iPKP	23	37	11.5	
			epPKP	23	37	36	
		South Sandwich Islands region					
		h = 80 km (Up,Ki,Sk,Um,Ud).					
"	3	Up	iP	02	43	20.8	
					micr	sec	
			Mx	Z	0.5	20	
		Ki	iP	02	43	04.5	
					micr	sec	
			P	Z'	0.1	1.0	
			Mx	Z	1.0	20	
		Sk	iP	02	43	25.4	
		Um	iP	02	43	10.1	
		Ud	iP	02	43	29.1	
		Talaud Islands (h = 45 km).					
"	3	Up	iPKP1	08	00	30.4	
			iSKP1	08	03	46.8	
		Ki	iPKP	08	00	23.5	
		Sk	e(PKP)	08	00	24	
			iPKP	08	00	33.2	
		Um	i(PKP)	08	00	22.7	
			iPKP	08	00	30.7	
			iSKP1	08	03	35.2	
		Ud	iPKP1	08	00	31.9	
			iSKP1	08	03	48.6	
		De	iPKP1	08	00	43.7	D
			ipPKP1	08	02	10.7	
		Fiji Islands region.					
		h = 340 km (De).					

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

1978				1978			
May	7	(cont.)		May	8	(cont.)	
		Up	micr sec			$M_L = 2.2$ (Ud).	
		P	Z' 0.1 0.8			By combination with Bergen and Kongsberg readings.	
		Ki	iP 09 50 19.7				
		Um	iP 09 50 33.5 C				
		Ud	iP 09 50 59.3 C				
		De	iP 09 51 11.6				
		South of Honshu, Japan (h = 510 km).					
"	7	Up	eP 10 40 39	"	8	Sk	iP 14 44 09.6
		Ki	iP 10 40 45.3			Um	iP 14 44 03.0
		Sk	iP 10 41 02.8			Ud	iP 14 43 33.5
		Um	iP 10 40 35.9			Greece (h = 35 km).	
		Ud	iP 10 40 54.0				
		De	iP 10 40 51.7				
		Pakistan (h = 25 km).		"	8	Up	iSKP1 16 58 17.6
						Ki	iPKP 16 54 36.1
						Sk	iPKP 16 54 46.5
						Um	iPKP 16 54 42.7
						Ud	iPKP 16 54 52.0
						New Hebrides Islands (h = N).	
"	7	Ud	iP 10 51 35.3	"	8	Um	iP 18 37 32.7
						Ud	iP 18 38 03.2
						Kuril Islands (h = 45 km).	
"	7	Up	iP 15 39 10.0				
		Ki	iP 15 38 41.7				
		Sk	iP 15 39 07.5				
		Um	iP 15 38 52.9				
		Ud	iP 15 39 15.9				
		Mariana Islands (h = 260 km).		"	9	Up	iP 07 41 26.1
						Ki	iP 07 40 32.8
						Sk	iP 07 41 09.4
						Um	iP 07 40 56.2
						Ud	iP 07 41 29.2
						De	iP 07 41 50.6
						Near east coast of Kamchatka (h = 110 km).	
"	7	Um	iP 19 40 12.4	"	9	Up	iPKP2 10 39 24.8
		Ud	iP 19 40 13.2			Um	iPKP1 10 39 07.5
						Ud	ePKP2 10 39 28
						Kermadec Islands region (h = 340 km).	
"	7	Up	iP 22 55 33.0				
		Um	iP 22 55 51.1				
		Ud	iP 22 55 22.3				
		Central Mid-Atlantic Ridge (h = N).		"	10	Ki	iP 04 02 26.0
						Sk	iP 04 02 54.2
						Um	iP 04 02 39.6
						Ud	iP 04 03 05.2
						Bonin Islands region (h = 490 km).	
"	8	Um	eP 00 17 30	"	10	Up	iSg1 09 09 38.5
		Kamchatka (h = 30 km).				Ki	eSg1 09 13 05
						Sk	iSg1 09 12 01.7
						Um	iSg1 09 11 10.5
						Ud	iSg1 09 10 30.1
						De	iSg1 09 09 47.9
						(cont.)	
"	8	Up	iP 03 46 33.9				
		Ud	iP 03 46 35.5				
"	8	Up	iP 13 35 26.5				
		Ki	iP 13 34 32.9				
		Um	iP 13 34 58.3				
		Ud	iP 13 35 30.3				
		De	iP 13 35 51.6				
		Near east coast of Kamchatka (h = 120 km).					
"	8	Sk	eSg1 14 17 38				
		Ud	iSg1 14 16 37.8				
		Southwest coast of Norway, near 58 1/2° N, 6 1/2° E. Origin time = 14 14 29. (cont.)					

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

1978

May 10 (cont.)
Lithuania, near $55\ 3/4^{\circ}\text{N}$,
 24°E .
Origin time = 09 06 54.
 $M_L = 3.1$ (Up,Um,Ud).
Explosion?

" 10 Ki micr sec
 Mx E 0.4 14
Sk iP 13 18 02.1
Um iP 13 17 58.8
Ud iP 13 17 28.3
Greece (h = 20 km).

" 10 Up iP 15 47 50.8
 ipP 15 48 04.9
 micr sec
 P Z' 0.3 1.2
 Mx N 0.9 25
 Mx Z 0.7 18
Ki iP 15 47 10.7
 micr sec
 P Z' 0.2 1.3
 Mx E 0.7 15
 Mx N 0.7 15
 Mx Z 0.9 16
Sk iP 15 47 44.3
 ipP 15 47 57.8
Um iP 15 47 28.5 C
 ipP 15 47 40.8
Ud iP 15 47 57.4
 ipP 15 48 10.0
De iP 15 48 13.2
 ipP 15 48 25.8
Near east coast of Honshu,
Japan.
h = 50 km (Up,Sk,Um,Ud,De).
m = 6.1, M = 5.0 (Up,Ki).

" 10 Um iP 18 56 45.7
Ud eP 18 56 09
Sicily (h = 25 km).

" 10 Um iP 20 56 21.8
Ud iP 20 56 50.8
Kuril Islands (h = 45 km).

" 10 Ki iP 22 52 57.0
Um iP 22 52 49.3
Ud iP 22 53 10.0
Tadzhik-Sinkiang border
region (h = 130 km).

" 11 Up iP 00 34 32.5
(cont.)

1978

May 11 (cont.)

Up i 00 34 48.8
 iS 00 43 29
 iP'P' 01 02 48.3
 micr sec
 P Z' 0.3 0.8
 Mx E 2.7 20
 Mx N 7.9 21
 Mx Z 12 21
Ki iP 00 33 39.4 C
 ipP 00 33 53.8
 iPcP 00 34 25.1
 iP'P' 01 03 07.7
 micr sec
 P Z' 0.1 1.0
 Mx E 3.7 20
 Mx N 4.6 20
 Mx Z 4.7 21
Sk iP 00 34 11.4
Um iP 00 34 05.9
 iPcP 00 34 41.4
 iS 00 42 39
 iP'P' 01 02 52.9
Ud iP 00 34 26.8 C
De iP 00 34 54.9
 iPcP 00 35 11.3
Andreanof Islands, Aleutian
Islands.
h = 55 km (Ki).
m = 6.0, M = 5.8 (Up,Ki).

" 11 Up micr sec
 Mx E 0.5 12
 Mx N 0.4 11
 Mx Z 0.3 11
Ki iP 02 53 07.6
 micr sec
 Mx E 0.4 9
 Mx N 0.4 10
 Mx Z 0.5 11
Sk iP 02 52 27.6
Um iP 02 52 29.4
Ud iP 02 51 53.0
Sicily (h = 10 km).

" 11 Up iP 06 10 48.9
 i 06 10 52.7
 iS 06 14 54
Ki iP 06 10 44.1
 i 06 10 48.2
 micr sec
 i Z' 0.1 1.3
 Mx E 0.5 12
 Mx N 0.9 15
 Mx Z 0.6 12
(cont.)

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

1978				1978			
May	11	(cont.)		May	12	(cont.)	
		Sk	iP 06 10 14.5			Southern Norway, 60.4°N,	
		Um	iP 06 10 48.9			7.5°E.	
			i 06 10 50.6			Origin time = 11 49 13.	
			iS 06 14 52			M _L = 2.5 (Ud).	
		Ud	i 06 10 31.6			By combination with Bergen	
			Iceland region (h = 10 km).			readings.	
"	11	Ki	iP 10 03 51.0	"	12	Up	iP 12 25 47.4
		Ud	iP 10 03 30.6			i	12 25 54.1
			Southern Iran (h = N).			Ki	iP 12 24 51.3
						i	12 24 56.4
"	11	Up	iP 14 14 39.2				micr sec
		Ki	iP 14 14 37.4			i	Z' 0.1 0.7
		Ud	iP 14 14 48.3			Sk	iP 12 25 18.4
			Southern Sumatera (h = 80 km).			i	12 25 26.0
						Um	iP 12 25 21.1
"	11	Up	Mx 22 25			i	12 25 27.2
			micr sec			Ud	iP 12 25 44.3
			Mx Z 0.6 21			i	12 25 51.4
			Near coast of Chiapas,			De	iP 12 26 10.2
			Mexico (h = 90 km).			i	12 26 17.0
							Central Alaska (h = 70 km).
"	11	Up	iSKS 23 41 37	"	12	Um	iPKP 14 22 58.6
			micr sec				New Hebrides Islands
			Mx E 0.7 19				(h = 210 km).
			Mx N 1.1 21	"	12	Ki	iP 16 10 31.6
			Mx Z 2.7 22			Um	iP 16 10 58.9
		Ki	iP 23 30 58.2			De	iP 16 11 46.9
			eSKS 23 41 27				Unimak Islands region (h = N).
			micr sec	"	12	Up	iP 22 59 02.9 C
			Mx E 0.9 13			ipP	22 59 14.0
			Mx N 1.6 19				micr sec
			Mx Z 1.1 13			P	Z' 0.1 1.0
		Um	iP 23 31 07.1			Mx	E 0.8 14
			iSKS 23 41 36			Mx	N 0.8 15
		Ud	iP 23 30 59.3			Mx	Z 0.8 15
			Off coast of Chiapas,			Ki	iP 22 58 24.0 C
			Mexico (h = 60 km).			ipP	22 58 34.6
			M = 5.5 (Up,Ki).				micr sec
"	12	Um	iP 05 24 08.2			P	Z' 0.1 1.0
		Ud	iP 05 24 33.2			Mx	E 1.1 17
			Taiwan region (h = 30 km).			Mx	N 0.9 18
						Mx	Z 1.2 16
"	12	Sk	iP 06 29 29.5			Sk	iP 22 58 57.1 C
		Um	iP 06 29 17.7			ipP	22 59 08.3
			Ethiopia (h = N).			Um	iP 22 58 41.0 C
"	12	Up	iSgl 11 51 47.8			ipP	22 58 51.6
		Sk	iSgl 11 51 11.9			Ud	iP 22 59 09.9 C
		Ud	iSgl 11 50 49.6			ipP	22 59 20.8
			i 11 50 57.1			De	iP 22 59 24.8 C
		De	e 11 51 35			ipP	22 59 35.6
			iSgl 11 51 51.6				(cont.)
			(cont.)				(cont.)

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

1978				1978			
May	12	(cont.)		May	13	(cont.)	
		Near east coast of Honshu, Japan.				Ud	iPKP 07 27 39.2
		h = 40 km (Up,Ki,Sk,Um,Ud,De).					iPP 07 29 57.3
		m = 5.8, M = 5.3 (Up,Ki).					iSKPl 07 30 47.4
"	13	Ud	iP 01 22 28.3			De	i(PKP) 07 27 21.1
"	13	Ki	iP 03 48 40.7				i(PKP) 07 27 27.9
		Sk	iP 03 48 33.4				i(PKP) 07 27 33.3
		Um	iP 03 48 49.3				iPKP 07 27 44.3
		Near coast of Chiapas, Mexico (h = 70 km).					iSKPl 07 30 57.7
"	13	Ki	iPKP 04 26 24.0			New Hebrides Islands (h = 160 km).	
		Um	iPKP 04 26 32.8			M = 6.3 (Up,Ki).	
		New Hebrides Islands (h = 15 km).		"	13	Ki	iP 08 07 38.2
"	13	Up	i(PKP) 07 27 18.8			Um	iP 08 07 48.9
			i(PKP) 07 27 23.8			Ud	iP 08 08 12.0
			iPKP 07 27 37.1			South of Mariana Islands (h = N).	
			iSKPl 07 30 43.8	"	13	Sk	iP 08 40 48.4
			iSKS 07 34 25			Um	iP 08 40 43.7
			micr sec			Ud	iP 08 40 12.3
			PKP Z' 4.3 1.5			Greece (h = N).	
			Mx E 2.6 17	"	13	Um	iP 11 38 40.0
			Mx N 5.4 23	"	13	Um	iPKPl 15 57 22.9
			Mx Z 6.3 23			Ud	iPKPl 15 57 35.4
		Ki	iP 07 23 54.4	"	13	Um	eP 16 42 15
			i(PKP) 07 27 09.7			Ud	iP 16 42 35.7
			i(PKP) 07 27 17.5			Hindu Kush region (h = 50 km).	
			iPKP 07 27 22.5	"	13	Up	micr sec
			iPP 07 29 07.6				Mx N 1.2 22
			iSKS 07 34 06				Mx Z 1.5 26
			micr sec			Ki	iPKP 17 00 12.3
			P Z' 0.1 1.3				micr sec
			PKP Z' 2.2 0.8				Mx N 0.9 22
			Mx E 4.1 21			Um	iPKP 17 00 19.4
			Mx N 5.0 20				i 17 00 43.1
			Mx Z 4.6 18			Ud	iPKP 17 00 28.5
		Sk	iP 07 24 19.9			Tonga Islands (h = N).	
			i(PKP) 07 27 17.4			M = 5.5 (Up,Ki).	
			i(PKP) 07 27 22.9	"	13	Um	iP 19 17 22.5
			iPKP 07 27 33.6			Ud	iP 19 16 48.3
			iSKPl 07 30 37.4			Greece-Albania border region (h = 70 km).	
		Um	iP 07 24 09.4	"	13	Up	iP 23 15 10.0
			i(PKP) 07 27 09.2			Ki	iP 23 15 19.3
			i(PKP) 07 27 15.9			(cont.)	
			i(PKP) 07 27 21.5				
			iPKP 07 27 28.9				
			iSKS 07 34 18				
		Ud	iP 07 24 30.6				
			i(PKP) 07 27 20.5				
			i(PKP) 07 27 25.8				
		(cont.)					

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

1978

May 13 (cont.)
 Sk iP 23 14 57.2
 Um iP 23 15 18.9
 Ud iP 23 14 59.0
 Windward Islands (h = 160 km).

" 14 Ud iP 01 07 50.4

" 14 Up iP 04 56 01.8
 Ki iP 04 55 41.9
 Um iP 04 55 48.0
 Ud iP 04 56 08.4
 Samar, Philippine Islands
 (h = 55 km).

" 14 Um iP 06 41 15.5
 Ud iP 06 41 46.2
 Kuril Islands (h = 40 km).

" 14 Up eP 08 44 44
 Ki iP 08 44 35.1
 Sk iP 08 44 28.3
 Um iP 08 44 43.4
 Ud iP 08 44 37.3
 Mexico-Guatemala border
 region (h = 100 km).

" 14 Up ePKP2 12 27 02
 micr sec
 Mx Z 1.0 23
 Ki ePKP2 12 27 03
 Um ePKP2 12 27 02
 Ud ePKP2 12 27 09
 Balleny Islands region
 (h = N).

" 14 Up eP 13 40 17
 i 13 40 22.0
 Um iP 13 40 36.5
 i 13 40 40.8
 Ud iP 13 40 27.6
 i 13 40 32.6

" 14 Up iP 17 52 49.7
 ipP 17 53 02.4
 Ki iP 17 52 07.8
 ipP 17 52 21.1
 micr sec
 P Z' 0.1 1.0
 Sk iP 17 52 42.7
 ipP 17 52 56.0
 Um iP 17 52 26.5 C
 ipP 17 52 39.6
 Ud iP 17 52 56.4
 (cont.)

1978

May 14 (cont.)
 Ud ipP 17 53 10.5 C
 Near east coast of Honshu,
 Japan.
 h = 50 km (Up,Ki,Sk,Um,Ud).

" 14 Up micr sec
 Mx E 1.0 18
 Mx N 1.4 19
 Mx Z 2.9 18
 Ki iPKP 18 36 05.1
 micr sec
 Mx E 1.0 19
 Mx N 1.6 17
 Mx Z 0.9 16

Ud iPKP 18 35 50.3
 South Sandwich Islands
 region (h = N).
 M = 5.8 (Up,Ki).

" 14 Up iP 20 26 15.3
 Ki iP 20 26 12.8
 Um iP 20 26 07.0
 Ud iP 20 26 32.2
 Kirgiz SSR (h = N).

" 14 Ud iP 21 56 33.0

" 14 Ki iP 22 46 43.4
 Um iP 22 47 05.3
 Ud iP 22 47 19.9
 British Columbia (h = 10 km).

" 15 Up iPKP 00 55 23.8
 Ki iPKP 00 55 09.6
 iSKP1 00 58 25.3
 Sk iPKP 00 55 21.4
 iSKP1 00 58 43.7
 Um iPKP 00 55 16.3
 iSKP1 00 58 36.1
 Ud i(PKP) 00 55 19.9
 iPKP 00 55 26.6
 iSKP1 00 58 51.8
 De i(PKP) 00 55 24.3
 iPKP 00 55 30.4
 iSKP1 00 58 59.6
 New Hebrides Islands
 (h = 100 km).

" 15 Um iP 04 46 34.1
 Ud iP 04 47 02.8
 Near s. coast of southern
 Honshu, (h = 50 km).

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

1978					1978				
May	17	(cont.)			May	17	(cont.)		
		Ud	iSKP1	01 43 01.3			Northern Sweden, 65.7°N,		
		De	iPKP	01 40 02.1			22.1°E.		
		New Hebrides Islands					Origin time = 09 37 57.		
		(h = 210 km).					Near-surface event.		
"	17	Ki	iP	03 36 09.3	"	17	Um	eP	09 48 31
		Um	iP	03 35 49.3			Ud	eP	09 48 13
		Ud	iP	03 35 19.7			Iceland region (h = 10 km).		
		De	iP	03 35 06.4	"	17	Um	iPKP	10 20 50.3
"	17	Um	iP	04 39 54.3			Ud	iPKP	10 20 49.8
		Yugoslavia (h = N).					De	iPKP1	10 21 00.0
"	17	Up	iP	08 56 15.0 C			Fiji Islands region		
			P	Z' 0.1 1.0			(h = 590 km).		
		Ki	iP	08 55 21.0 C	"	17	Up	iP	16 16 06.4
			P	Z' 0.1 0.9			Ki	iP	16 16 28.1
		Um	iP	08 55 47.1 C			Um	iP	16 16 11.5
		Ud	iP	08 56 16.9			Ud	iP	16 16 23.0
		De	iP	08 56 39.1			Northwestern Afghanistan		
		Near Islands, Aleutian					(h = N).		
		Islands (h = 25 km).			"	17	Um	iPKP	23 42 45.5
		m = 5.7 (Up,Ki).					Ud	iPKP1	23 42 46.0
"	17	Up	iP	09 04 05.4			De	iPKP1	23 42 57.8
			i	09 04 10.5			Tonga Islands (h = 80 km).		
			iS	09 13 43	"	17	Um	iP	23 51 32.8
				micr sec	"	18	Um	iP	00 24 15.8
			P	Z' 0.1 0.9			Ud	iP	00 23 44.1
		Mx	E	0.6 15			De	eP	00 23 10
		Mx	N	0.6 16			Greece (h = 55 km).		
		Mx	Z	0.7 17	"	18	Up		micr sec
		Ki	iP	09 03 28.0			Mx	E	0.4 10
				micr sec			Mx	N	0.6 12
			Mx	E 0.7 15			Mx	Z	0.7 13
			Mx	N 0.6 14			Ki	eP	02 42 29
			Mx	Z 0.8 15					micr sec
		Um	iP	09 03 43.8			Mx	E	0.4 9
			i	09 03 47.8			Mx	N	0.3 12
		Ud	iP	09 04 12.4			Mx	Z	0.4 12
		De	iP	09 04 25.8			Um	iP	02 41 46.6
			i	09 04 31.4			Ud	iP	02 41 09.8
		Off east coast of Honshu,						i	02 41 17.9
		Japan (h = 40 km).					De	iP	02 40 24.2
		M = 5.1 (Up,Ki).					Yugoslavia (h = 10 km).		
"	17	Ki	iPg1	09 38 36.7	"	18	Ud	iP	02 43 40.7
			iSg1	09 39 05.9	"	18	Up	iP	03 36 39.6
		Um	iPg1	09 39 34.3			(cont.)		
			iSg1	09 39 01.8					
			iRg	09 39 16.4					
		(cont.)							

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

1978				1978					
May	18	(cont.)		May	18	Up	eP	17 20 43	
		Ki	iP				eS	17 25 40	
		Ud	iP					micr sec	
		De	iP					Mx E 0.9 16	
		Windward Islands (h = 110 km).						Mx N 0.5 15	
"	18	Up	iPKP					Mx Z 1.6 17	
		Ki	iPKP			Ki	iP	17 21 11.3	
								micr sec	
			PKP					Mx E 0.6 14	
			Z'					Mx N 0.6 14	
		Um	iPKP					Mx Z 0.9 16	
			i			Um	iP	17 20 50.3	
		Ud	iPKP			Ud	iP	17 21 00.2	
		De	i(PKP)			Turkmen SSR (h = N).			
			iPKP			M = 4.6 (Up,Ki).			
		New Hebrides Islands (h = 70 km).							
"	18	Up	iPKP1		"	18	Up	iP	17 20 53.6
		Ki	iSKP1				Ki	iP	17 21 21.7
		Um	iPKP				Um	iP	17 21 00.8
			iSKP1				Ud	iP	17 21 09.9
		Ud	iPKP1				De	iP	17 21 00.4
			iSKP1				Turkmen SSR (h = N).		
		De	iPKP1		"	18	Ud	i(P)	18 57 58.3
			iSKP1		"	18	Ud	iP	20 34 15.4
		South of Fiji Islands (h = 550 km).				Afghanistan-USSR border region (h = 40 km).			
"	18	Ud	i(P)		"	18	Um	iP	22 16 00.6
"	18	Up	iP		"	18	Ud	iP	22 16 13.4
			iS		"	18	Ud	i(P)	23 15 30.6
					"	18	Um	iP	23 29 26.8
					"	19	Ud	i(P)	00 30 33.1
			P		"	19	Um	iP	11 33 14.2
			Z'				Ud	iP	11 33 38.6
			E			Bonin Islands region (h = 460 km).			
			Mx		"	19	Up	iP	13 09 34.4
			N						micr sec
			Z						Mx E 0.3 15
		Ki	iP						Mx N 0.5 13
									Mx Z 0.4 15
						Ki	iP	13 09 23.0	
									micr sec
									Mx N 0.6 18
			P						Mx Z 0.2 13
			Z'			Um	iP	13 09 23.9	
			E			Ud	iP	13 09 47.7	
			Mx			De	iP	13 09 51.5	
			N			(cont.)			
			Z						
		Um	iP						
		iS							
		Ud	iP						
		De	iP						
		Northeastern China (h = N).							
		m = 6.2 (Up,Ki).							
"	18	Up	iP						
		Ki	iP						
		Um	iP						
		Ud	iP						

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

1978				1978					
May	19	(cont.) Yunnan province, China (h = 50 km). M = 4.8 (Up,Ki).		May	20	Up	iP	07 27 03.9	
							ipP	07 27 13.7	
							Mx	Z 0.5 18	
"	19	Ud	iP	14 50 42.2		Ki	iP	07 27 26.5	
				Greece (h = 25 km).		Sk	iP	07 27 27.6	
						Um	iP	07 27 12.1	
"	19	Up	iPKP	15 50 54.0			ipP	07 27 21.8	
		Ki	iPKP	15 51 07.2		Ud	iP	07 27 14.7	
		Um	iPKP	15 51 02.4			ipP	07 27 24.1	
		Ud	iPKP	15 50 52.2				Chagos Archipelago.	
				South Sandwich Islands region (h = 45 km).				h = 35 km (Up,Um,Ud).	
"	19	Up	eP	17 28 20	"	20	Ud	iP	09 09 14.7
		Ki	iP	17 28 04.5	"	20	Ud	iP	09 30 28.3
			i	17 28 16.9	"	20	Ud	iP	09 40 03.5
		Ud	eP	17 28 30	"	20	Ud	iP	09 47 08.3
			i	17 28 41.6	"	20	Ud	iP	13 15 13.9
				Talau Islands (h = N).	"	20	Up	eP	13 24 22
"	19	Ud	iP	22 33 12.9			ePP	13 28 24	
"	20	Ki	eP	00 52 44			iSKS	13 34 53	
		Um	iP	00 52 40.9				micr sec	
		Ud	iP	00 52 56.3			Mx	E 0.9 22	
				Andaman Islands region (h = N).			Mx	N 0.6 18	
"	20	Up	iP	01 51 30.5			Mx	Z 1.6 23	
		Ki	iP	01 51 18.3		Ki	eP	13 24 26	
				micr sec				micr sec	
			Mx	N 0.3 18			Mx	E 0.8 17	
		Sk	iP	01 51 42.9			Mx	N 0.7 20	
		Um	iP	01 51 20.2		Sk	eP	13 24 11	
		Ud	iP	01 51 44.0		Um	iP	13 24 24.6	
		De	iP	01 51 47.1			iSKS	13 35 00	
				Yunnan province, China (h = 55 km).		Ud	iP	13 24 10.9	
"	20	Up	iP	06 12 09.1		De	iP	13 24 12.0	
				micr sec				Near coast of Peru (h = 50 km).	
			Mx	E 0.6 15				M = 5.4 (Up,Ki).	
			Mx	N 0.6 12	"	20	Up	iPKP1	14 36 55.6
			Mx	Z 1.0 13			Um	iSKP1	14 39 39.1
		Ki	iP	06 11 33.4			Ud	iPKP1	14 36 58.0
				micr sec				iSKP1	14 39 51.0
			Mx	E 0.6 13			De	iPKP1	14 37 08.1
			Mx	N 0.5 13					South of Fiji Islands (h = 490 km).
		Sk	iP	06 12 08.8	"	20	Up	iP	14 50 53.1
		Um	iP	06 11 47.4			Ud	iP	14 51 01.9
		Ud	iP	06 12 18.7	"	20	Ud	iP	18 50 47.9
		De	eP	06 12 34					Turkey (h = 10 km).
				Northeastern China (h = N). M = 5.0 (Up,Ki).					

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

1978				1978									
May	20	Ud	iPKP1	21 36	40.0	May	21	Up	eP	15 06	04		
		De	iPKP1	21 36	51.4			Ki	iP	15 05	08.8		
		Fiji Islands region (h = 670 km).						Sk	iP	15 05	37.2		
"	20	Up	iPKP1	22 10	30.1			Um	iP	15 05	37.5		
			iPKP2	22 10	35.3			Ud	iP	15 06	01.2		
		Ki	ePKP	22 10	14	"	21	Kodiak Island region (h = N).					
		Sk	iPKP1	22 10	23.5			Ki	iP	17 48	33.2		
		Um	iPKP1	22 10	18.2 C			Ud	iP	17 49	32.1		
		Ud	iPKP1	22 10	31.7 C			Near east coast of Kamchatka (h = 100 km).					
			iPKP2	22 10	37.2			"	21	Ud	iP	23 28	35.6
		De	iPKP1	22 10	39.9			De	iP	23 28	05.0		
			i	22 10	45.5			Crete (h = N).					
		Kermadec Islands (h = 45 km).				"	22	Up	iP	02 43	12.7		
"	21	De	iPKP1	06 52	42.4								
		Fiji Islands region (h = 540 km).											
"	21	Up	iP	07 36	17.2			Mx	E	0.5	12		
		Ki	iP	07 36	01.5			Mx	N	0.6	16		
		Sk	iP	07 36	22.5			Mx	Z	0.6	12		
		Um	iP	07 36	06.7			Ki	iP	02 43	29.6		
		Ud	iP	07 36	25.5								
		De	iP	07 36	31.0								
		Mindanao, Philippine Islands (h = 570 km).											
"	21	Up	iPKP1	10 53	15.7								
		Um	iPKP	10 53	13.5								
		Ud	iPKP1	10 53	17.9								
		De	iPKP1	10 53	28.7								
		South of Fiji Islands (h = 500 km).				"	22	Ki	eP	03 30	40		
"	21	Ki						Um	iP	03 30	40.6		
				micr	sec			Minahassa Peninsula (h = 35 km).					
		Mx	N	2.2	28	"	22	Up	iP	06 25	29.7		
		Um	iPKP	11 33	23.0				iPP	06 26	37.9		
		Fiji Islands region (h = N).						Ki	iP	06 26	00.6		
"	21	Up	iP	12 19	51.6 C				iPP	06 27	41.4		
			ipP	12 20	06.5								
		Ki	iP	12 19	09.6 C								
			ipP	12 19	23.6								
		Sk	iP	12 19	44.0								
			ipP	12 19	58.6								
		Um	iP	12 19	28.5 C								
			ipP	12 19	43.0								
		Ud	iP	12 19	58.8 C								
			ipP	12 20	13.9								
		De	iP	12 20	14.8								
		Near east coast of Honshu, Japan. h = 55 km (Up,Ki,Sk,Um,Ud).				"	22	Up	iPKP1	07 15	31.9		
									i	07 15	45.7		
								(cont.)					

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

1978				1978			
May	22	(cont.)		May	22	Ki eP	14 43 08
		Ki ePKP1	07 15 14			Um iP	14 43 29.1
		Sk iPKP1	07 15 26.1			Ud iP	14 44 00.0
		i	07 15 38.7			Kuril Islands (h = 80 km).	
		Um iPKP1	07 15 21.1 C	"	22	Up	micr sec
		i	07 15 34.8			Mx E	0.7 18
		Ud iPKP1	07 15 33.6			Mx N	1.5 27
		i	07 15 48.2			Mx Z	2.0 28
		De ePKP1	07 15 43			Ki ePKP	16 11 21
		Kermadec Islands region					micr sec
		(h = N).				Mx E	1.1 20
"	22	Up iP	07 42 43.8 C			Mx N	1.8 20
		i	07 43 14.4			Bouvet Island region (h = N).	
			micr sec			M = 5.7 (Up,Ki).	
		Mx E	1.7 18	"	22	Ki iPKP	20 20 35.2
		Mx N	2.0 14			Sk iSKP1	20 23 37.3
		Mx Z	2.9 13			Um iPKP	20 20 41.1
		Ki iP	07 41 57.5			Fiji Islands region	
			micr sec			(h = 330 km).	
		Mx E	1.8 13	"	22	Ud iP	23 36 18.9
		Mx N	3.0 14	"	23	Ki iPKP	05 22 40.6
		Sk iP	07 42 36.5			Sk iPKP	05 22 52.3
		Um iP	07 42 19.6 C			Um iPKP	05 22 46.5
		iS	07 50 53			Ud iPKP	05 22 56.1
		Ud iP	07 42 51.6 C			New Hebrides Islands	
		De iP	07 43 08.0 C			(h = 45 km).	
		Eastern Sea of Japan		"	23	Up iSKS	06 25 23
		(h = 30 km).					micr sec
		M = 5.6 (Up,Ki).				Mx E	1.0 18
"	22	Up i	09 18 57.2			Mx N	1.3 23
		iSgl	09 19 20.9			Mx Z	2.3 27
		i	09 19 27.0			Ki iP	06 14 31.3
		Ki iPn	09 14 53.0			iPP	06 18 36.1
		iSn	09 15 12.9			iSKS	06 25 10
		iSgl	09 15 14.2				micr sec
		Sk iPn	09 16 07.2			Mx E	1.5 18
		iSn	09 17 20.8			Mx N	1.8 18
		iSgl	09 18 07.3			Sk iPP	06 19 10.2
		Um iPn	09 15 45.5			Um iP	06 14 37.1
		iPgl	09 16 03.1			iPP	06 18 40.7
		iSn	09 16 46.0			iSKS	06 25 13
		i	09 17 09.5			Ud iP	06 14 57.3
		iSgl	09 17 15.9			Halmahera (h = 40 km).	
		Ud i	09 18 26.6			M = 5.6 (Up,Ki).	
		i	09 19 28.9	"	23	Um iP	06 41 38.7
		iSgl	09 19 33.3			Ud iP	06 42 02.9
		De e	09 20 19			Bonin Islands region	
		iLgl	09 21 18.9			(h = 410 km).	
		Finnmark, Norway, near					
		69 1/4° N, 24° E.					
		Origin time = 09 14 25.					
		M _L = 3.5 (Up,Ki,Sk,Um,Ud,De).					
		Felt.					

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

1978				1978							
May	23	Up	iP	08 01 44.3 C	May	23	Ud	iP	17 01 31.6		
			i	08 01 45.8				Kuril Islands (h = N).			
			iS	08 11 00		"	23	Up	iP		
				micr sec					20 22 39.8 C		
			i	Z' 9.2 1.6				i	20 22 42.4		
			Mx	E 11 28				iPP	20 25 06.7		
			Mx	N 3.2 36					micr sec		
			Mx	Z 16 33				P	Z' 0.3 0.9		
		Ki	iP	08 01 12.5 C				i	Z' 0.5 0.9		
			i	08 01 13.8			Ki	iP	20 21 55.6 C		
			iS	08 10 02				iPP	20 24 10.3		
				micr sec					micr sec		
			i	Z' 5.3 1.5				P	Z' 0.4 1.1		
			Mx	E 10 18			Sk	iP	20 22 30.7 C		
			Mx	N 12 16			Um	iP	20 22 15.2 C		
		Sk	iP	08 01 43.8				i	20 22 17.7		
			i	08 01 44.8			Ud	iP	20 22 46.3 C		
		Um	iP	08 01 25.5 C				i	20 22 48.9		
			i	08 01 26.8				iPP	20 25 12.9		
			iS	08 10 26			De	iP	20 23 03.2 C		
		Ud	iP	08 01 53.2 C				i	20 23 06.1		
			i	08 01 54.4				iPP	20 25 39.2		
		De	iP	08 02 05.2			Hokkaido, Japan region				
			i	08 02 06.5			(h = 80 km).				
		Kyushu, Japan (h = 160 km).					m = 6.4 (Up,Ki).				
		m = 7.2 (Up,Ki).					"	23	Up	iPKP1	20 37 38.3
		Double shock, small and							Sk	iPKP1	20 37 31.1
		large, in average 1.3 s							Um	iPKP1	20 37 23.7
		apart.							Ud	iPKP1	20 37 38.0
"	23	Up	il	09 12 39.9			"	23	Up	iP	23 38 38.4
		Ki	iP	09 13 22.5					i	23 38 40.0	
			il	09 13 26.3					iS	23 42 13	
		Sk	el	09 13 10						micr sec	
		Um	eP	09 12 56					i	Z' 0.9 1.6	
		Ud	eP	09 12 44				Mx	E 11 8		
			il	09 12 48.5				Mx	N 21 9		
		De	iP	09 12 19.3				Mx	Z 31 10		
			il	09 12 23.6			Ki	iP	23 39 55.1		
		Kenya (h = 10 km).						iS	23 44 34		
									micr sec		
"	23	Ki	iP	11 39 29.6				P	Z' 0.2 1.0		
		Ud	iP	11 39 15.4				Mx	E 28 13		
		De	iP	11 39 02.1				Mx	N 16 11		
		Iran (h = 25 km).					Sk	iP	23 39 24.0		
"	23	Ud	iP	15 01 39.1				i	23 39 27.1		
"	23	Up	iP	15 33 54.3				iS	23 39 40.2		
				micr sec			Um	iP	23 39 17.7		
			P	Z' 0.1 1.0				i	23 39 21.8		
		Ki	iP	15 33 07.2				iS	23 43 31.1		
		Sk	iP	15 34 43.8			Ud	iP	23 38 48.2		
		Um	iP	15 33 29.4				i	23 38 51.2		
		Ud	iP	15 34 00.6 D			De	iP	23 38 09.3		
		Kuril Islands (h = 35 km).					Greece (h = 10 km).				
							m = 5.8 (Up,Ki).				

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

1978				1978			
May	24	Ki	eP	00	12	27	
		Um	iP	00	12	46.8	
"	24	Ki	iP	02	04	04.8	
			i	02	04	18.4	
		Southern Sumatera (h = N).					
"	24	Up	iP	02	04	55.4	
			ipP	02	05	04.4	
							micr sec
			P	Z'	0.1	0.8	
			pP	Z'	0.1	1.0	
		Ki	iP	02	05	17.7	
			ipP	02	05	26.7	
							micr sec
			P	Z'	0.1	0.9	
			pP	Z'	0.1	1.0	
		Sk	iP	02	05	24.4	
			ipP	02	05	33.6	
		Um	iP	02	05	01.2	
			ipP	02	05	10.3	
		Ud	iP	02	05	09.7	
			ipP	02	05	18.9	
		De	iP	02	04	59.7	
			ipP	02	05	08.3	
		Near coast of Pakistan.					
		h = 30 km (Up,Ki,Sk,Um,Ud,De).					
		m = 5.8 (Up,Ki).					
"	24	Up	iP	02	17	00.4	
			i	02	17	13.8	
			iS	02	20	37	
		Ki	iP	02	18	14.9	
		Sk	iP	02	17	42.3	
		Um	iP	02	17	36.8	
			iS	02	21	47	
		Ud	iP	02	17	05.7	
			i	02	17	09.4	
			i	02	17	20.5	
		Greece (h = 10 km).					
"	24	Up	iRg	04	08	45.6	
		Um	iSgl	04	10	29.8	
		Ud	iSgl	04	09	28.1	
		De	iSgl	04	10	40.5	
		Probably rockburst at the Dannemora iron ore mines, Uppland, Sweden, 60.1°N, 17.5°E.					
"	24	Up	iP	05	19	51.1	
"	24	Up	eP	06	01	54	
		Ki	eP	06	03	12	
		(cont.)					
May	24	(cont.)					
		Ki					micr sec
			Mx	E	0.4	6	
			Mx	N	0.3	8	
		Sk	iP		06	02	42.3
		Um	iP		06	02	35.8
		Ud	iP		06	02	05.8
		Greece (h = 15 km).					
"	24	Up	iP		06	27	55.2 C
			iS		06	36	53
			iP'P'		06	56	06.2
							micr sec
			P	Z'	1.3	1.0	
			Mx	E	22	19	
			Mx	N	32	21	
			Mx	Z	37	20	
		Ki	iP		06	27	02.3 C
			i		06	27	05.0
			eS		06	35	16
			iP'P'		06	56	29.8
			i		06	56	46.3
							micr sec
			P	Z'	0.1	0.9	
			i	Z'	0.5	0.6	
			Mx	E	20	16	
			Mx	N	26	16	
		Sk	iP		06	27	34.1 C
			iP'P'		06	56	26.8
		Um	iP		06	27	28.6 C
			iS		06	36	03
			iP'P'		06	56	12.3
		Ud	iP		06	27	56.2 C
		De	iP		06	27	18.5 C
		Andreanof Islands, Aleutian Is. (h = 25 km). m = 6.9, M = 6.6 (Up,Ki).					
"	24	Up	iPKP2		06	32	36.8
		Ki	iPKP		06	31	51.5
			iPKP1		06	32	04.7
							micr sec
			PKP	Z'	0.1	1.0	
		Ud	iPKP2		06	32	45.9
		Macquarie Islands region (h = N).					
"	24	Up	iP		06	44	17.2 C
							micr sec
			P	Z'	0.1	1.0	
		Ki	iP		06	43	24.2
		Sk	eP		06	43	56
		Um	iP		06	43	49.9
		Ud	iP		06	44	17.9
		Andreanof Islands, Aleutian Is. (h = N).					

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

1978				1978					
May	24	Up	iP	06 47 17.9	May	24	Up	iP	09 36 44.4
"	24	Up	iP	06 58 22.9			i		09 36 49.3
		Ud	iP	06 58 23.5			Ki	iP	09 35 51.4
		Andreanof Islands, Aleutian Is. (h = N).				Andreanof Islands, Aleutian Is. (h = N).			
"	24	Up	iP	07 30 10.8	"	24	Up	iP	09 57 12.6
		Ki	iP	07 29 17.5			Ki	iP	09 56 19.5
		Ud	iP	07 30 11.4			Andreanof Islands, Aleutian Is. (h = N).		
		Andreanof Islands, Aleutian Is. (h = N).			"	24	Up	iP	10 04 02.9 C
"	24	Up	iP	07 31 35.0				P	Z' 0.3 0.9
"	24	Up	iP	07 31 53.3				Mx	E 0.7 19
				micr sec				Mx	N 0.7 19
			P	Z' 0.1 1.0				Mx	Z 1.1 17
		Ki	iP	07 31 00.1			Ki	iP	10 03 09.8 C
		Um	iP	07 31 26.3					micr sec
		Ud	iP	07 31 53.6				P	Z' 0.1 0.9
		Andreanof Islands, Aleutian Is. (h = N).						Mx	E 0.8 17
"	24	Up	iP	07 45 05.0				Mx	N 0.9 18
		Um	iP	07 44 37.9			Sk	iP	10 03 41.8
		Ud	iP	07 45 05.3			Um	iP	10 03 36.1
		Andreanof Islands, Aleutian Is. (h = N).					Ud	iP	10 04 03.4
"	24	Ud	iP	07 51 51.9			De	iP	10 04 24.9
		Andreanof Islands, Aleutian Is. (h = N).					Andreanof Islands, Aleutian Is. (h = N).		
"	24	Up	iP	08 00 28.6			m = 6.2, M = 5.1 (Up,Ki).		
		Ki	iP	07 59 35.7	"	24	Ud	iP	11 00 26.5
		Ud	iP	08 00 28.7	"	24	Up	iP	11 46 23.6
		De	iP	08 00 51.7			Andreanof Islands, Aleutian Is. (h = N).		
		Andreanof Islands, Aleutian Is. (h = N).			"	24	Up	iP	11 55 07.5
"	24	Ud	iP	08 17 46.4			Sk	iSgl	14 30 30.8
		Greece (h = 10 km).					Ud	iSgl	14 29 22.9
"	24	Ud	iP	08 51 07.3			Southwest Norway.		
		Greece (h = 10 km).				By combination with Bergen readings.			
"	24	Up	iP	09 34 55.8	"	24	Ki	eP	14 55 33
				micr sec			Sk	iP	14 56 25.0
			P	Z' 0.1 1.1	"	24	Up	iP	15 11 56.2
		Ki	iP	09 34 02.5			Ki	iP	15 11 01.7
		Um	iP	09 34 29.3			Andreanof Islands, Aleutian Is. (h = N).		
		Ud	iP	09 34 56.1	"	24	Up	iP	19 05 27.2
		Andreanof Islands, Aleutian Is. (h = N).							micr sec
								P	Z' 0.1 1.0
							(cont.)		

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

1978				1978						
May	24	(cont.)		May	25	Up	iPn	07 41 53.4		
		Ki	iP				i	07 42 00.3		
		Um	iP				iSn	07 42 51.6		
		Ud	iP				iSgl	07 43 27.5		
		De	iP			Sk	iSgl	07 43 44.8		
		Andreanof Islands, Aleutian Is. (h = N).				Um	iSgl	07 45 01.9		
						Ud	iPn	07 41 31.4		
"	24	Up	iP				i	07 41 37.5		
			i				i	07 41 45.3		
		Ki	iP			De	iPn	07 41 24.0		
			i				iPgl	07 41 35.0		
		Sk	iP				i	07 42 07.7		
			i				iSgl	07 42 29.2		
		Um	iP			Off coast of south Norway, near 57 3/4°N, 7°E.				
			i			Origin time = 07 40 25.				
		Ud	iP			M _L = 2.7 (Up,Um,Ud,De).				
			i							
		De	iP			"	25	Up	iP	12 52 52.8
			i					Ud	iP	12 52 57.3
		Afghanistan-USSR border region (h = 90 km).				Kuril Islands (h = 30 km).				
"	25	Up	iP	00 00 36.0	"	25	Up	i(P)	15 02 43.4	
		Ki	iP	23 59 43.3	"	25	Up	iP	17 09 13.4	
		Um	iP	00 00 09.4				i	17 09 23.7	
		Ud	iP	00 00 36.1			Um	iP	17 09 53.6	
		Andreanof Islands, Aleutian Is. (h = N).				Ud	iP	17 09 30.1		
						De	iP	17 08 48.1		
"	25	Ki	iPKP	00 53 48.2			Romania (h = 130 km).			
		Um	iPKP	00 53 54.5	"	25	Up	eP	22 34 26	
		Ud	ePKP	00 54 05			Um	iP	22 34 15.4	
		Santa Cruz Islands (h = 120 km).				Ud	iP	22 34 35.1		
"	25	Um	iP	01 45 02.2			De	eP	22 34 40	
		Near east coast of Honshu, Japan (h = 35 km).				Molucca Sea (h = 55 km).				
"	25	Up	iP	02 54 37.8	"	25	Up	iP	23 33 38.7	
		Ki	iP	02 53 55.5			Um	iP	23 33 31.2	
			ipP	02 54 08.9			Ud	iP	23 33 51.2	
		Um	iP	02 54 13.9			De	eP	23 33 53	
			ipP	02 54 27.9			Southeast Asia (h = 10 km).			
		Ud	iP	02 54 45.6	"	26	Um	iPKP	02 00 35.6	
			ipP	02 54 58.6			De	ePKP	02 00 52	
		Hokkaido, Japan region. h = 50 km (Ki,Um,Ud).				Loyalty Islands (h = N).				
"	25	Up	iP	05 23 41.9	"	26	Um	iP	10 30 00.5	
		Um	iP	05 23 17.9			Ud	iP	10 30 31.6	
		Ud	iP	05 23 50.1			Hokkaido, Japan region (h = 140 km).			
		Hokkaido, Japan region (h = 110 km).				"	26	Up	iP	11 03 10.0
								Ud	iP	11 03 26.7
								De	iP	11 03 23.8

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

1978				1978					
May	26	Ud	i(P)	11 33 36.0	May	26	Up iP	17 15 29.1	
"	26	Up	iPKP1	12 29 06.1			Ki iP	17 14 58.3	
		Ud	iPKP1	12 29 08.2			Sk iP	17 15 26.0	
		De	iPKP1	12 29 19.6			Um iP	17 15 12.0 C	
"	26	Up	iP	12 30 07.6			Ud iP	17 15 36.0	
		Ki	iP	12 30 38.9			De eP	17 15 49	
		Um	iP	12 30 18.0			Volcano Islands region		
		Ud	iP	12 30 22.4	"	26	Ud iP	20 12 39.6	
		De	iP	12 30 08.0			Queen Charlotte Islands		
		Southern Iran (h = N).					region (h = N).		
"	26	Up	iP	13 27 48.4	"	26	Up iP	23 23 26.5	
				micr sec			Ki iP	23 22 55.2	
		Mx	E	0.8 20			Sk iP	23 23 23.9	
		Mx	Z	0.8 19			Um iP	23 23 09.3	
		Ki	iP	13 28 04.7			Ud iP	23 23 32.5	
		Ud	iP	13 28 06.5			De iP	23 23 45.1	
		De	iP	13 28 01.3			Volcano Islands region		
		Uzbek SSR (h = N).					(h = N).		
"	26	Up	iP	13 49 00.3 C	"	27	Up iP	00 10 54.0	
		i		13 49 12.0			iPP	00 14 11.0	
		iS		13 53 41			iSKS	00 21 18	
				micr sec			iS	00 21 22	
		P	Z'	0.5 0.9				micr sec	
		Mx	E	2.6 14			P	Z' 0.7 1.5	
		Mx	N	1.6 18			Mx	E 31 22	
		Mx	Z	5.7 14			Mx	N 29 21	
		Ki	iP	13 49 39.3 C			Mx	Z 34 17	
				micr sec			Ki	iP 00 10 23.0 C	
		P	Z'	0.4 0.8			iS	00 20 16	
		Mx	E	3.4 7				micr sec	
		Mx	N	3.6 16			P	Z' 0.5 1.6	
		Mx	Z	1.9 7			Mx	E 36 16	
		Sk	iP	13 49 37.8 C			Mx	N 49 16	
		Um	iP	13 49 13.8 C			Mx	Z 46 17	
			iS	13 54 01			Sk	iP 00 10 50.6 C	
		Ud	iP	13 49 17.6 C			iPP	00 14 06.9	
		De	iP	13 49 03.4 C			Um	iP 00 10 36.5 C	
		Eastern Caucasus (h = 40 km).					iPP	00 13 48.5	
		m = 6.2 (Up,Ki).					iS	00 20 45	
"	26	Up	iSgl	14 20 44.4			Ud	iP 00 11 00.3 C	
		Sk	iSgl	14 20 42.9			iPP	00 14 19.4	
		Ud	iPgl	14 18 50.2			De	iP 00 11 11.8	
			iSgl	14 19 46.1			iPP	00 14 40.8	
		De	iPgl	14 19 00.4			Volcano Islands region		
			iSgl	14 20 05.5			(h = N).		
		Southwest coast of Norway,					m = 6.5, M = 6.9 (Up,Ki).		
		near 58 1/2°N, 6 1/2°E.				"	27	Up iP	00 16 34.1
		Origin time = 14 17 35.						Ki iP	00 16 05.7
		M _L = 3.0 (Ud).						Um iP	00 16 19.5
		By combination with Bergen						Ud iP	00 16 42.6
		and Kongsberg readings.						Volcano Islands region.	

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

1978					1978				
May	27	Um	iP	02 10 51.5	May	27	Up	eP	13 55 57
"	27	Up	iP	02 18 10.8			Mx	E	0.6 17
		Ki	iP	02 17 40.6			Mx	N	0.7 19
		Sk	iP	02 18 07.5			Mx	Z	0.9 14
		Um	iP	02 17 53.5			Ud	iP	13 56 07.7
		Ud	iP	02 18 17.6			Taiwan (h = N).		
		Volcano Islands region (h = N).			"	27	Up	iP	15 11 50.6
							Ki	iP	15 11 31.9
"	27	Um	iP	02 20 50.7				i	15 11 33.4
"	27	Up	iP	03 45 58.9			Ud	iP	15 11 57.1
		Ki	iP	03 46 32.1				i	15 11 58.7
		Sk	iP	03 46 29.5			Mindanao, Philippine Islands (h = 80 km).		
		Um	iP	03 46 12.3	"	27	Ud	iP	16 28 48.2
			il	03 46 17.7			Northern Colombia (h = 160 km).		
		Ud	iP	03 46 11.3	"	27	Ki	iP	16 52 34.7
			i	03 46 23.4			Um	iP	16 52 37.1
		De	il	03 46 00.8			Ud	iP	16 52 57.2
		Arabian Sea (h = N).					Minahassa Peninsula (h = 230 km).		
"	27	Up	iP	07 46 02.4	"	27	Ud	i(PKP)	17 36 07.2
		Um	iP	07 45 46.5			De	iPKP1	17 36 27.2
		Ud	iP	07 46 11.8			Tonga Islands (h = N).		
		De	iP	07 46 20.6	"	28	Up	iPKP1	00 30 51.3
		Northeast of Taiwan (h = 150 km).					Ud	iPKP1	00 30 53.9
"	27	Um	iP	08 00 44.2	"	28	Um	iP	01 02 06.1
		Honshu, Japan (h = 280 km).			"	28	Um	iP	06 38 53.8
"	27	Up	iP	10 29 49.2	"	28	Um	iP	06 38 53.8
			iPP	10 33 07.9			Volcano Islands region (h = N).		
			iS	10 40 11.8	"	28	De	iPKP1	08 04 34.1
							Tonga Islands (h = N).		
					"	28	Up	iPKP1	09 23 15.1
			P	Z' 0.1 1.5				i	09 23 30.0
			Mx	E 3.1 20			Sk	iPKP1	09 23 07.6
			Mx	N 3.2 20			Ud	iPKP1	09 23 15.9
			Mx	Z 3.8 19				i	09 23 30.0
		Ki	iP	10 29 18.4			De	iPKP1	09 23 26.3
							Kermadec Islands region (h = 70 km).		
					"	28	Ud	eP	18 49 10
								i	18 49 18.8
					"	28	Um	iP	19 12 42.8
							(cont.)		
"	27	Um	iP	11 41 39.1					

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

1978				1978					
May	28	(cont.)		May	29	(cont.)			
		Ud	iP	19 13 07.6		Um	iP	05 03 38.1	
		Fox Islands, Aleutian Islands (h = 35 km).				Ud	iP	05 04 09.3	
						De	iP	05 04 17.2	
		Eastern Kazakh SSR.				Underground explosion.			
"	28	Up	iP	19 22 40.8	"	29	Up	i	06 17 58.8
			i	19 22 47.4			Ki	iPn	06 14 59.8
		Sk	iP	19 22 12.7				i	06 15 09.3
		Ud	iP	19 22 23.9				iSn	06 16 27.3
		De	iP	19 22 34.4				i	06 16 48.5
		North Atlantic Ocean (h = 25 km).				Sk	iPn	06 14 32.3	
							iSn	06 15 42.4	
"	28	Up	iP	21 58 08.4			i	06 15 46.5	
		Ki	iP	21 57 35.7		Um	iPn	06 15 11.1	
		Sk	iP	21 57 42.2			iSn	06 16 50.4	
		Um	iP	21 57 44.2 C		Ud	iPn	06 15 11.3	
		Ud	iP	21 57 58.4			iSn	06 16 49.6	
"	28	Up	iP	23 08 14.6			i	06 17 08.8	
		Um	iP	23 07 56.8		De	iSn	06 18 04.0	
		Ud	iP	23 08 20.9			i	06 18 55.0	
"	29	Up		micr sec		Norwegian Sea, near 67° N, 1 1/2° W.			
		Mx	E	1.0 17		Origin time = 06 12 56.			
		Mx	N	1.1 20	"	29	Up	iP	06 36 04.9
		Mx	Z	1.5 16			Ki	iP	06 35 18.0
		Ki		micr sec			Um	iP	06 35 39.9
		Mx	E	0.8 17			Ud	iP	06 36 10.6
		Mx	N	0.6 18		Kuril Islands (h = N).			
		Mx	Z	0.7 17	"	29	Ud	iP	06 40 41.5
		Ud	eP	00 33 42	"	29	Up	iP	08 27 11.0
		Near n. coast of west Irian (h = 15 km).					Ud	iP	08 27 16.4
		M = 5.5 (Up,Ki).			Ionian Sea (h = N).				
"	29	Up	eP	00 58 25	"	29	Ud	iP	13 27 44.8
		Um	iP	00 58 07.6		Off east coast of Honshu, Japan (h = 20 km).			
		Ud	iP	00 58 18.4	"	29	Ud	iP	15 08 47.1
		Off coast of northern California (h = 15 km).			"	29	Up	iP	15 14 24.4
"	29	Up	iP	03 20 26.9 D			Ud	iP	15 14 30.3
		Ki	iP	03 20 35.1 D			De	iP	15 14 48.2
				micr sec		Kuril Islands (h = 40 km).			
		P	Z'	0.1 0.8	"	29	Up	iP	15 56 12.2
		Sk	iP	03 20 13.1 D			Ud	iP	15 56 17.8
		Um	iP	03 20 34.6 D			De	iP	15 56 36.3
		Ud	iP	03 20 14.8 D		Kuril Islands (h = N).			
		De	iP	03 20 14.6 D	"	29	Ud	iPKP	17 39 34.5
		Leeward Islands (h = 45 km).			Off coast of southern Chile (h = N).				
"	29	Up	iP	05 03 52.7	"	29	Ud	iPKP	17 39 34.5
		Ki	iP	05 03 37.3		Off coast of southern Chile (h = N).			
		Sk	iP	05 04 08.5					
		(cont.)							

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

1978				1978					
May	29	Ud	iP	18 03 31.1	May	30	Up	iPKP1	13 24 17.7
"	29	Ud	iP	18 52 29.6			Ud	iPKP1	13 24 19.9
"	29	Ud	iP	19 07 36.8			De	iPKP1	13 24 29.0
"	29	Up	iP	19 40 15.2	"	30	South of Fiji Islands (h = 130 km).		
		Ki	iP	19 39 47.8			Sk	iSgl	14 27 02.8
		Ud	eP	19 40 23				iRg	14 27 07.5
		De	eP	19 40 35			Regional, near-surface event.		
		Mariana Islands (h = 30 km).			"	30	De	iP	14 49 40.3
"	29	Up	iP	20 59 12.8	"	30	Up	iP	15 20 56.2
		Ud	iP	20 59 25.9					micr sec
"	29	Ud	iPKP1	22 55 03.6			Mx	E	0.6 17
		De	iPKP1	22 55 14.9			Mx	N	0.6 18
		South of Fiji Islands (h = 590 km).					Mx	Z	1.4 17
							Ud	iP	15 21 06.2
							Taiwan region (h = 2 km).		
"	30	De	iP	01 07 32.2	"	30	Ud	iP	16 19 19.6
		Mongolia (h = N).							
"	30	Ud	iP	02 18 29.5	"	30	Ud	iP	17 40 40.5
		Tadzhik SSR (h = 210 km).							
"	30	Up	iP	04 07 46.6 C	"	30	Ki	iP	18 15 19.6
		Ki	iP	04 07 27.2			Ud	iP	18 15 49.2
		Sk	iP	04 07 56.2			Szechwan province, China (h = N).		
		Um	iP	04 07 32.2 C					
		Ud	iP	04 07 58.9 C	"	30	Up	iP	20 26 57.7
		De	iP	04 08 06.0			i		20 27 11.6
		Szechwan province, China (h = N).					iS		20 34 51
									micr sec
"	30	Up	iP	07 08 50.0			Mx	E	2.3 15
		i		07 09 21.4			Mx	N	2.4 17
				micr sec			Mx	Z	5.6 19
		P	Z'	0.1 0.8			Ki	iP	20 27 31.0
		Ki	iP	07 08 04.3					micr sec
		Sk	iP	07 08 39.6			P	Z'	0.1 1.0
		Um	iP	07 08 25.2			Mx	E	1.9 17
		Ud	iP	07 08 55.2			Mx	N	7.0 21
		De	iP	07 09 14.8			Mx	Z	2.2 15
		Kuril Islands (h = N).					Sk	iP	20 27 29.1
							Um	iP	20 27 10.7
"	30	Um	iP	09 52 55.2			iS		20 35 15
		Ud	iP	09 52 56.1			Ud	iP	20 27 09.7
		De	eP	09 53 09			De	iP	20 26 54.7
		Gulf of California (h = 10 km).					i		20 27 05.2
							Arabian Sea (h = N). M = 5.7 (Up,Ki).		
"	30	Um	iP	11 28 07.7	"	30	Um	iP	21 12 03.1
		Ud	iP	11 28 09.2			Ud	iP	21 12 30.1
		De	eP	11 28 21			South of Honshu, Japan (h = 120 km).		
		Gulf of California (h = 10 km).							

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1978

May	30	Ki	iP	23 46 26.6
		Um	iP	23 46 34.0
		Ud	eP	23 47 06
		De	iP	23 47 16.8
"	31	Up	iP	01 19 55.9
			ipP	01 20 16.2
			iPP	01 23 20.8
			iSKS	01 30 12
			iS	01 30 25
				micr sec
		Mx	E	7.1 29
		Mx	N	4.3 29
		Mx	Z	4.0 31
		Ki	iP	01 19 49.0
			ipP	01 20 08.4
			iPP	01 23 07.7
				micr sec
		P	Z'	0.1 1.4
		Mx	E	5.8 27
		Mx	Z	4.6 18
		Sk	iP	01 19 39.7
			ipP	01 20 00.3
			iPP	01 22 53.6
		Um	iP	01 19 55.8 C
			ipP	01 20 14.8
			iPP	01 23 17.3
			iSKS	01 30 13
			iS	01 30 25
		Ud	iP	01 19 46.6
			ipP	01 20 07.2
		De	iP	01 19 52.1 C
			ipP	01 20 12.8
			iPP	01 23 15.9

Near coast of Nicaragua.
 h = 80 km (Up,Ki,Sk,Um,Ud,De).
 M = 5.9 (Up,Ki).

" 31 Um iP 01 57 47.3

" 31 Ud iP 02 29 35.5
 De iP 02 29 43.4
 i 02 30 49.4

Tonga Islands region (h = N).
 The second phase at Delary
 might be a new event from
 the same focal area.

"	31	Up		micr sec
		Mx	E	0.8 21
		Mx	N	0.9 24
		Mx	Z	1.7 24
		Ki	iP	02 39 10.5
				micr sec
		Mx	Z	1.4 24
				(cont.)

1978

May	31	(cont.)		
		Um	iP	02 39 16.6
		Ud	iP	02 39 36.1 C
		De	iP	02 39 42.4
				Mindanao, Philippine Islands (h = 140 km).
"	31	Ud	iP	04 09 02.9
"	31	Um	iP	04 32 47.8
		Ud	iP	04 33 01.3
		De	iP	04 33 00.5
"	31	Up	iP	17 32 03.3
		Ud	iP	17 32 20.0
				Hindu Kush region (h = 110 km).
"	31	De	iP	19 04 03.7
"	31	Ud	iP	20 39 13.9
"	31	Ud	iP	21 32 17.9
				Talau Islands (h = 70 km).
"	31	Up	iP	22 41 19.3
		Um	iP	22 40 58.6
		Ud	iP	22 41 27.0
				Off east coast of Honshu, Japan (h = 50 km).

March 4, 1980

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SEISMOLOGICAL SECTION
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 SWEDEN

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

JUNE 1 - 30, 1978

1978				1978			
June				June			
1	Up	iP	01 12 05.5	1	Up	iP	06 32 12.0
		iPP	01 13 42.5		Ki	iP	06 32 11.2
	Ki	iP	01 12 08.2		Ud	iP	06 32 28.0
			micr sec		Tibet (h = 55 km).		
	P	Z'	0.1 1.0				
	Sk	iP	01 12 29.2	"	1	Up	iPKP1 09 22 16.4
	Um	iP	01 12 01.0			Ud	iPKP1 09 22 17.7
		i	01 12 34.5			De	iPKP1 09 22 28.3
	Ud	iP	01 12 21.7		South of Fiji Islands		
	De	iP	01 12 20.0		(h = 520 km).		
	Tadzhik-Sinkiang border region (h = 150 km).			"	1	Up	i(P) 13 06 10.0
"	1	Ki	iP 02 35 40.5	"	1	Ud	i(P) 15 32 15.2
		Um	i 02 35 39.4				
		Ud	iP 02 35 57.6	"	1	Up	eP 19 41 11
	Kirgiz SSR (h = 40 km).					Um	iP 19 40 53.4
						Ud	iP 19 41 07.0
"	1	Up	iP 04 41 20.2	"	1	Up	iP 23 48 12.5
		i	04 41 34.9			Ki	iP 23 47 26.3
			micr sec			Um	i 23 48 16.3
	P	Z'	0.2 1.2			Ud	iP 23 48 18.7
	Ki	iP	04 41 43.7			De	iP 23 48 36.4
			micr sec		Kuril Islands (h = N).		
	P	Z'	0.2 1.5				
	Sk	iP	04 41 42.9	"	2	Ki	iPn 01 03 49.7
	Um	iP	04 41 29.2 C				iPgl 01 03 59.6
		i	04 41 35.8				iSn 01 04 41.0
	Ud	iP	04 41 29.8				iSgl 01 04 57.4
		i	04 41 36.9			Sk	eSgl 01 07 21
		i	04 44 30.2			Um	iSn 01 05 19.4
	De	iP	04 41 18.2				iSgl 01 05 53.3
		i	04 41 24.4		Northwest USSR, near		
	Chagos Archipelago region (h = N).				67 3/4°N, 32°E.		
	m = 6.0 (Up,Ki).				Origin time = 01 02 42.		
	Double P (Um,Ud,De), average separation 6.6 s. The second onset, when interpreted as pP, gives a focal depth of 20 km.				M _L = 2.8 (Ki,Um).		
				"	2	Up	ipP 06 21 26.5
						Ki	iP 06 20 45.2

(cont.)

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

1978				1978			
June	2	(cont.)		June	2	(cont.)	
		Ki	ipP	06 21	54.6		
		Sk	ipP	06 21	23.6		
		Um	iP	06 20	59.4		
			ipP	06 21	08.8		
		Ud	iP	06 21	23.9		
			ipP	06 21	33.8		
		De	ipP	06 21	45.8		
		Bonin Islands region.					
		h = 30 km (Ki,Um,Ud).					
"	2	Up	iPKP	08 57	35.4		
		Um	i(PKP)	08 57	18.5		
		Ud	iPKP	08 57	38.0		
		De	iPKP	08 57	44.6		
"	2	Up	i(PP)	11 48	57.4		
			iPP	11 49	07.8		
				micr	sec		
		Mx	E	0.9	16		
		Mx	Z	1.0	18		
		Ki	iP	11 44	06.6		
			i(PP)	11 48	08.4		
				micr	sec		
		Mx	E	0.7	20		
		Sk	ePKP	11 48	29		
			iPP	11 49	02.0		
		Um	iPP	11 48	41.9		
		Ud	ePdiff	11 44	37		
			iPKP	11 48	38.5		
			iPP	11 49	17.7		
		De	ePKP	11 48	42		
		Admiralty Islands region					
		(h = 20 km).					
		M = 5.3 (Up,Ki).					
"	2	Up	iP	12 55	49.8		
				micr	sec		
			P	Z'	0.1 1.5		
		Ki	iP	12 56	33.8		
				micr	sec		
			P	Z'	0.1 1.5		
		Sk	eP	12 56	02		
		Um	iP	12 56	13.9		
		Ud	iP	12 55	43.6		
			ipP	12 55	49.2		
		De	iP	12 55	24.0		
		North of Ascension Island					
		(h = 20 km).					
		m = 5.7 (Up,Ki).					
"	2	Up	iP	16 34	31.8		
		Ki	iP	16 33	38.1		
		Um	iP	16 34	04.9		
		(cont.)					
		Ud	iP	16 34	29.8		
		De	iP	16 34	52.9		
		Alaska peninsula (h = 20 km).					
"	2	Up	ePKP1	18 52	01		
		Sk	iPKP1	18 51	50.0		
		Ud	iPKP1	18 51	59.8		
			i	18 52	09.8		
		De	iPKP1	18 52	08.9		
"	2	Up	iP	20 52	34.1		
			ipP	20 52	38.7		
			i	20 53	10.5		
				micr	sec		
		Mx	E	0.8	15		
		Mx	N	0.9	16		
		Mx	Z	0.9	17		
		Ki	eP	20 51	45		
				micr	sec		
		Mx	E	0.5	16		
		Mx	N	0.7	16		
		Sk	iP	20 52	04.7		
			ipP	20 52	10.0		
		Um	iP	20 52	13.1 C		
			iS	21 00	46		
		Ud	iP	20 52	27.5 C		
			ipP	20 52	31.5		
		De	iP	20 52	49.2		
		Vancouver Island region.					
		h = 15 km (Up,Sk,Ud).					
		M = 5.1 (Up,Ki).					
"	2	Ud	iSgl	21 08	48.6		
		Southwestern Norway.					
		By combination with Bergen					
		readings.					
"	2	Up	iP	22 35	51.9		
			i	22 35	58.2		
			i	22 36	36.7		
				micr	sec		
		Mx	E	1.1	15		
		Mx	N	0.7	10		
		Ki	iP	22 37	10.1		
				micr	sec		
		Mx	E	1.5	16		
		Mx	N	0.6	10		
		Mx	Z	0.6	10		
		Sk	iP	22 36	35.8		
			i	22 45	33.4		
		Um	iP	22 36	28.7		
			iS	22 40	37		
		Ud	iP	22 35	59.6		
		(cont.)					

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

1978

June 2 (cont.)
 Ud i 22 43 33.5
 De iP 22 35 22.1
 Greece (h = 20 km).
 M = 4.6 (Up,Ki).

" 2 Ud iP 22 44 53.9
 Greece (h = 10 km).

" 3 Ud i(P) 03 07 37.4
 De e(P) 03 07 25

" 3 Up iPKP1 03 12 42.1
 iSKP1 03 15 30.4
 Um iPKP 03 12 42.9
 Ud iPKP1 03 12 44.1
 iSKP1 03 15 30.1
 De iPKP1 03 12 55.3
 Fiji Islands region
 (h = 630 km).

" 3 Up Mx 06 30
 micr sec
 Mx E 1.2 20
 Mx N 1.4 20
 Mx Z 1.3 19
 Ki Mx 06 34
 micr sec
 Mx E 0.7 13
 Mx N 0.8 14
 Mx Z 0.9 13
 South Pacific Cordillera
 (h = N).
 M = 5.9 (Up,Ki).

" 3 Ud iP 09 45 26.5
 Kuril Islands (h = 150 km).

" 3 Ud iP 12 05 20.3
 i 12 05 26.4
 Vancouver Island region
 (h = 30 km).

" 3 Ki iP 16 01 33.6
 iS 16 03 17.5
 Southeast of Svalbard,
 approximate location
 $77\frac{1}{2}^{\circ}\text{N}$, 29°E .
 Origin time = 15 59 16.
 Solution from Helsinki
 regional bulletin.

" 3 Up iP 20 15 13.7
 micr sec
 P Z' 0.1 1.3
 (cont.)

1978

June 3 (cont.)
 Up micr sec
 Mx E 2.1 16
 Mx N 5.1 16
 Mx Z 3.4 15
 Ki iP 20 14 39.0
 micr sec
 P Z' 0.1 1.1
 Mx E 4.1 21
 Mx N 6.8 19
 Mx Z 1.7 19
 Sk iP 20 15 13.1
 Um iP 20 14 53.6 C
 i 20 15 06.8
 Ud eP 20 15 20
 i 20 16 17.3
 De iP 20 15 36.4 C
 Southern Honshu, Japan
 (h = 5 km).
 m = 5.9, M = 5.9 (Up,Ki).

" 3 Ud iP 20 29 30.1
 Rat Islands, Aleutian
 Islands (h = 60 km).

" 3 Ud iP 21 14 37.4
 Southern Honshu, Japan
 (h = 20 km).

" 3 Up iP 21 32 17.2
 micr sec
 Mx E 1.0 17
 Mx N 1.1 15
 Mx Z 0.9 16
 Ki iP 21 31 42.1
 micr sec
 Mx E 0.8 17
 Mx N 3.9 22
 Sk eP 21 32 16
 Ud iP 21 32 25.2
 Southern Honshu, Japan
 (h = 5 km).
 M = 5.5 (Up,Ki).

" 3 Ki iP 21 33 38.5
 Ud iP 21 34 23.8

" 3 Ki iP 23 20 45.9
 Sk i 23 21 17.6
 Ud iP 23 21 37.5
 Kodiak Island region (h = N).

" 4 Up iP 10 02 38.3
 iS 10 12 37
 (cont.)

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

1978				1978			
June	4	(cont.)		June	4	(cont.)	
		Up				Up	
			micr sec				micr sec
		P	Z' 0.1 1.3			Mx	E 7.8 10
		Mx	E 0.9 16			Mx	N 17 13
		Mx	N 0.7 14			Mx	Z 11 9
		Mx	Z 1.8 15			Ki	iP 19 37 22.7 C
		Ki	iP 10 02 16.6			i	19 47 24.9
		i	10 02 26.5				micr sec
			micr sec			P	Z' 0.7 1.2
		i	Z' 0.1 1.4			Mx	E 14 11
		Mx	N 0.5 13			Mx	N 9.5 10
		Sk	iP 10 02 43.1			Sk	iP 19 37 37.2 C
		Um	iP 10 02 23.8			iPn	19 38 55.8
		i	10 02 38.6			i	19 46 55.7
		Ud	iP 10 02 46.3 C			Um	iP 19 37 08.7 C
		De	i 10 03 14.1			iPP	19 38 21.9
		Philippine Islands region				iS	19 42 35
		(h = 50 km).				Ud	iP 19 37 25.8 C
		m = 5.6, M = 5.2 (Up,Ki).				iPn	19 38 37.4
						De	iP 19 37 20.2 C
"	4	Up	iP 12 16 46.2			Uzbek SSR (h = N).	
		i	12 17 01.0			m = 6.5, M = 6.1 (Up,Ki).	
		Ki	iP 12 15 51.5	"	5	Ud	iP 00 44 27.8
		i	12 16 06.6			De	iP 00 44 22.2
		Um	iP 12 16 19.8 C			Uzbek SSR (h = N).	
		i	12 16 34.4	"	5	Um	iP 04 52 47.5
		Ud	iP 12 16 44.6			Gulf of California (h = N).	
		i	12 16 59.1	"	5	Up	iP 05 22 35.0
		De	iP 12 17 07.8 C			Ud	iP 05 22 37.7
		i	12 17 22.4	"	5	Up	iP 07 15 38.3 C
"	4	Up	iPKP 15 33 16.7			i	07 15 41.7
		Ud	iPKP 15 33 14.8				micr sec
		i	15 33 32.4			Ki	i 0.1 0.9
		South Sandwich Islands				Ki	iP 07 14 40.8
		region (h = N).				i	07 14 44.2
"	4	Up	iP 18 51 35.2				micr sec
		Ki	iP 18 50 55.4			i	Z' 0.1 1.0
		Sk	iP 18 51 29.7			Sk	iP 07 15 19.6
		Um	iP 18 51 12.7			i	07 15 22.7
		i	18 51 28.6			Um	iP 07 15 08.2
		Ud	iP 18 51 41.4			i	07 15 11.9
		De	iP 18 51 57.2			Ud	iP 07 15 41.6 C
		Near east coast of Honshu,				i	07 15 45.2
		Japan (h = 50 km).				De	iP 07 16 04.9
"	4	Up	iP 19 37 08.0 C			i	07 16 08.5
		iPn	19 38 02.8			Eastern Siberia (h = N).	
		iPP	19 38 23.2			m = 5.8 (Up,Ki).	
		iS	19 42 33			Double P, small and large,	
		i	19 44 19.0			average separation 3.5 s.	
			micr sec			The second onset, when	
		P	Z' 0.7 1.0			interpreted as pP, gives	
		(cont.)				a focal depth of 10 km.	

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

1978						1978	
June	5	Up	iP	12 28	47.3	June	6 (cont.)
		Um	iP	12 28	25.6		Ud iPn 05 25 08.2
		Ud	iP	12 28	54.9		iSn 05 26 04.5
		Honshu, Japan (h = 60 km).					iSg1 05 26 37.0
"	5	Up	iP	16 13	44.8		iSg2 05 26 44.7
		Ud	iP	16 14	01.6	De	iSn 05 26 55.6
		Hindu Kush region (h = 150 km).					iSg1 05 27 42.6
"	5	Ud	iP	18 52	15.6		iSg2 05 27 51.2
"	5	Up	iP	21 11	20.1	Off coast of southwest, Norway, near 61 1/2° N, 3 1/2° E. Origin time = 05 23 52. M _L = 3.2 (Up,Ki,Sk,Um,Ud,De).	
		Ki	iP	21 10	22.8	"	6 Ki iSn 11 59 39.9
		Um	iP	21 10	50.0		iSg1 12 00 00.3
			i	21 11	10.1	Coast of north Norway, near 71° N, 29 1/2° E. Origin time = 11 57 55. M _L = 3.2 (Ki). Solution partly from Helsinki regional bulletin.	
		Ud	iP	21 11	23.4	"	7 Ud iP 02 23 08.8
		Eastern Siberia (h = N).				"	7 Up iPKP1 04 56 45.2
"	6	Up	iP	04 09	04.8		iPKP2 04 56 49.3
			i	04 09	23.2		micr sec
							PKP1 Z' 0.1 1.0
		Mx	E	1.5	25	Ki	ePKP 04 56 31
		Mx	N	1.4	26	Sk	iPKP1 04 56 38.4
		Mx	Z	2.4	25	Um	iPKP1 04 56 33.6 D
		Ki	iP	04 08	12.7	Ud	iPKP1 04 56 47.0
			i	04 08	26.3		iPKP2 04 56 50.9
						De	iPKP1 04 56 55.2
						Kermadec Islands (h = 520 km).	
		Mx	E	1.1	20	"	7 Up iP 05 52 36.3
		Mx	N	0.7	16		Ki iP 05 51 52.2
		Mx	Z	1.3	19		Sk eP 05 52 29
		Sk	iP	04 08	48.8		Ud iP 05 52 42.8
			i	04 09	14.8		De iP 05 52 59.2
		Um	iP	04 08	37.5	Hokkaido, Japan region (h = 70 km).	
			iPcP	04 09	24.6	"	7 Up iRg 06 30 15.8
		Ud	iP	04 09	07.8		Ud iSg1 06 29 47.9
			iPcP	04 09	36.9		iRg 06 29 51.8
		De	iP	04 09	28.9 C	Grängesberg, Sweden, 60.1° N, 15.0° E. Origin time = 06 29 27. Rockburst. Felt. (cont.)	
			iPcP	04 09	52.8		
		Near east coast of Kamchatka (h = 70 km). M = 5.2 (Up,Ki).					
"	6	Up	ePn	05 25	37		
			i	05 27	06.8		
			iSg1	05 27	35.6		
			iSg2	05 27	48.2		
		Ki	iSn	05 27	54.8		
			iSg1	05 29	03.6		
		Sk	ePn	05 25	05		
			iSg1	05 26	17.4		
		Um	i	05 27	35.6		
			iSg1	05 28	03.7		
			iSg2	05 28	18.9		
		(cont.)					

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

1978				1978			
June	7	(cont.) Grängesberg rockburst Aug. 30, 1974-June 6, 1978 are listed in Reports 6-76 (1976), 5-77 (1977) and 4-78 (1978) of the Seismological Institute, Uppsala. These events are as a rule not reported in our monthly bulletins. On June 6, 1978 the opera- tion of the Grängesberg array was discontinued. Starting with this event (June 9, 1978), rock- burst in Grängesberg detected by the seismo- graph station network of the Seismological Institute, Uppsala will be reported in the monthly bulletins.		June	8	Up iP 02 38 19.1 Ki iP 02 38 33.8 Sk iP 02 38 47.2 Um iP 02 38 19.6 Ud iP 02 38 37.4 De iP 02 38 31.9 Uzbek SSR (h = N).	
"	"			"	8	De iP 10 04 44.8 South of Fiji Islands (h = 190 km).	
"	"			"	8	Up iP 13 51 19.3 Um iP 13 50 56.5 C Ud iP 13 51 25.0 De iP 13 51 42.4 Kuril Islands (h = N).	
"	"			"	8	Up iP 16 14 46.3 C ipP 16 15 04.4 iPP 16 17 46.7 micr sec P Z' 0.1 0.9 Ki iP 16 14 11.8 C micr sec P Z' 0.1 1.0	
"	7	Um i 07 29 03.1 Ud iP 07 28 05.0 Libya (h = N).		"	8	Sk iP 16 14 42.3 C Um iP 16 14 26.7 Ud iP 16 14 53.0 C De iP 16 14 05.5 ipP 16 14 23.8 South of Honshu, Japan. h = 70 km (Up,De). m = 5.7 (Up,Ki).	
"	7	Up iP 07 41 38.6 Ki iP 07 41 16.1 Ud iP 07 41 48.8 Taiwan region (h = N).		"	8	Up iP 18 15 33.4 Ki iP 18 15 04.6 C Um iP 18 15 17.6 De iP 18 15 50.8 Mariana Islands region (h = 50 km).	
"	7	Up iP 08 23 25.9 Ud iP 08 23 28.3 De iP 08 23 38.9		"	8	Up iP 19 13 55.8 Ki eP 19 14 35 Sk iP 19 14 28.1 Ud iP 19 14 07.1 Eastern Gulf of Aden (h = N).	
"	7	Up iP 10 38 14.5 C ipP 10 38 23.7 micr sec pP Z' 0.1 1.1 Ki iP 10 38 16.5 C ipP 10 38 25.7 micr sec P Z' 0.1 0.8 Um iP 10 38 12.2 C i 10 38 28.4 Ud iP 10 38 25.9 ipP 10 38 34.7 De iP 10 38 23.5 ipP 10 38 32.3 Nicobar Islands region. h = 30 km (Up,Ki,Ud,De). m = 5.8 (Up,Ki).		"	8	Up iP 20 09 25.7 Ud iP 20 09 32.5 Kuril Islands (h = 90 km).	
"	7	Ud iP 19 52 20.3		"	8	Up iP 23 54 02.3 Um iP 23 53 41.7 (cont.)	

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

1978		1978	
June	8	June	10
	(cont.)		(cont.)
	Ud iPKP1 23 53 54.3	Up iS 05 42 47.8	
	South of Kermadec Islands	Ki iP 05 40 38.5 C	
	(h = 100 km).		micr sec
"	8 Up iP 23 54 59.4	P Z' 0.1 1.0	
	Ki iP 23 55 04.7	Sk iP 05 40 18.8	
	epP 23 55 31	eS 05 44 28	
	Sk iP 23 54 42.9 C	Um iP 05 40 01.8 C	
	Ud eP 23 54 43	i 05 40 13.4	
	De iP 23 55 10.9	iS 05 44 06.0	
	Leeward Islands (h = 110 km).	Ud iP 05 39 44.4	
		iS 05 43 22.7	
"	9 Up iP 00 19 19.2	De iP 05 39 12.4	
	Ki iP 00 19 56.0	iS 05 42 18.1	
	Sk i 00 20 39.4	Black Sea (h = N).	
	Um iP 00 19 30.9 C	" 10 Up iP 11 28 41.1 C	
	Ud iP 00 19 35.7	Ki iP 11 28 35.5	
	Eastern Caucasus (h = N).	Sk iP 11 28 57.0	
"	9 Sk iP 00 56 13.3	Um iP 11 28 34.1 C	
	Ud iP 00 56 29.9	Ud iP 11 28 54.3	
	Kuril Islands (h = N).	Burma (h = 110 km).	
"	9 Up iP 06 22 12.2 C	" 10 Up iPgl 14 28 53.3	
	Ud iP 06 22 24.9	iSgl 14 29 10.5	
	Burma (h = 110 km).	i 14 29 14.9	
"	9 Ki iP 07 49 00.4	iRg 14 29 18.2	
	Ud iP 07 48 47.9	Sk iSgl 14 30 28.5	
	Peru-Brazil border region	Um iSgl 14 30 47.3	
	(h = 150 km).	Ud iPgl 14 28 44.1	
"	9 Up iP 22 19 06.7	iRg 14 28 52.9	
	micr sec	Bergslagen, central Sweden.	
	P Z' 0.1 1.0	Probably rockburst.	
	Ki iP 22 18 13.4	" 10 Um iP 14 47 00.8	
	Sk iP 22 18 41.3	" 10 Up iP 17 51 03.0	
	Um iP 22 18 40.2 C	ipP 17 52 59.9 C	
	Ud iP 22 19 05.3	i 17 56 52.4	
	De iP 22 19 28.3	Ki iP 17 50 55.3	
	Fox Islands, Aleutian	ipP 17 52 50.7	
	Islands (h = N).	i(PP) 17 54 39.2	
"	10 Ud iPKP 00 39 37.2	Sk iP 17 51 11.8	
	New Britain region	Um iP 17 50 56.4	
	(h = 60 km).	Ud iP 17 51 11.9	
"	10 Um iP 04 42 49.6	ipP 17 53 09.1	
	Near west coast of	i 17 57 11.8	
	Columbia (h = N).	Bali Sea.	
"	10 Up iP 05 39 29.6	h = 530 km (Up,Ki,Ud).	
	i 05 39 37.8	" 10 Ki iP 18 09 17.6	
	(cont.)	Ud iP 18 09 07.6 C	
"	10 Up iP 19 45 15.5	" 10 Up iP (cont.)	
	(cont.)		

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

1978									1978										
June	10	(cont.)							June	11	(cont.)								
		Ki	iP	19 44	17.0 C						Southern Norway	60.4°N,							
					micr sec							7.5°E.							
			P	Z'	0.1 1.0							Origin time =	13 17 47.						
		Sk	iP	19 44	43.6							M _L =	2.7 (Sk,Ud).						
		Um	eP	19 44	45				"	11	Up	iPKP	14 47	10.3					
		Ud	iP	19 45	09.5							ipPKP	14 47	23.2					
		De	iP	19 45	32.7						Ki	iPKP	14 46	55.9 C					
		Southern Alaska (h = 20 km).										ipPKP	14 47	10.7					
"	11	Up	iP	03 03	55.4 C														
					micr sec							PKP	Z'	0.2 1.5					
			P	Z'	1.1 0.8						Sk	iPKP	14 47	06.1					
		Ki	iP	03 03	39.0 C						Um	iPKP	14 47	03.6					
					micr sec							ipPKP	14 47	16.0					
			P	Z'	1.4 0.8						Ud	iPKP	14 47	12.1 C					
		Sk	iP	03 04	10.5 C						Tonga Islands.								
		Um	iP	03 03	40.0 C						h = 50 km (Up,Ki,Um).								
		Ud	iP	03 04	11.7 C				"	11	Up	iP	15 06	26.0					
		De	iP	03 04	18.7 C							i	15 06	42.8					
		Eastern Kazakh SSR.										iS	15 15	29					
		m = 6.9 (Up,Ki).																	
		Underground explosion.																	
"	11	Ki	iP	04 55	03.7							Mx	E	4.0 19					
		Um	iP	04 55	29.7							Mx	N	11 23					
		Ud	iP	04 56	01.9							Mx	Z	17 23					
		Near east coast of Kamchatka (h = N).									Ki	ipP	15 05	41.8					
												i	15 05	54.4					
"	11	Up	iP	10 35	21.0														
					micr sec							Mx	N	19 21					
			P	Z'	0.1 1.0							Mx	Z	12 19					
		Ki	iP	10 35	04.0						Sk	epP	15 06	00					
					micr sec						Um	ipP	15 06	07.0					
			P	Z'	0.1 1.0							iS	15 14	51					
		Sk	iP	10 35	25.5						Ud	eP	15 06	17					
		Um	iP	10 35	09.9							ipP	15 06	22.9					
		Ud	iP	10 35	29.1 C						De	i	15 06	53.9					
		Talaud Islands (h = 80 km).									Vancouver Island region								
		m = 6.2 (Up,Ki).									(h = 10 km).								
											M = 6.2 (Up,Ki).								
"	11	Up	iSgl	13 20	26.3				"	11	Up	iP	17 20	05.5					
		Ki	eSgl	13 22	43						Ud	iP	17 20	11.8					
		Sk	ePgl	13 18	57						Kuril Islands (h = 170 km).								
			iSgl	13 19	45.6				"	12	Up	iP	00 19	25.5 C					
		Um	iSgl	13 21	17.5							ipP	00 19	36.3					
			i	13 21	23.6							iPP	00 23	06.0					
		Ud	i(Pn)	13 18	35.3														
			iPn	13 18	35.8														
			i(Pgl)	13 18	41.4							P	Z'	0.1 0.8					
			iPgl	13 18	42.4							pP	Z'	0.1 1.0					
			i	13 19	28.6						Ki	iP	00 19	24.9 C					
		De	iSgl	13 20	26.3							i	00 19	39.4					
		(cont.)										iPP	00 23	07.4					
											(cont.)								

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

1978

June 12 (cont.)
 Ki micr sec
 P Z' 0.1 1.0
 Sk iP 00 19 38.3 C
 ipP 00 19 48.3
 iPP 00 23 28.4
 Um iP 00 19 22.7 C
 iPP 00 23 01.1
 Ud iP 00 19 34.3 C
 iPP 00 23 12.4
 Southern Sumatra.
 h = 35 km (Up,Sk).
 m = 6.2 (Up,Ki).

" 12 Up iP 08 17 31.6 C
 ipP 08 17 42.6
 micr sec
 P Z' 0.4 1.2
 pP Z' 0.4 1.2
 Ki iP 08 16 49.9
 i 08 16 51.1
 ipP 08 17 02.3
 micr sec
 i Z' 0.3 1.4
 Sk iP 08 17 24.0 C
 ipP 08 17 36.7
 Um iP 08 17 07.9
 i 08 17 10.1
 ipP 08 17 19.9
 Ud iP 08 17 36.3
 i 08 17 38.5
 De iP 08 17 53.3
 Near east coast of Honshu,
 Japan.
 h = 40 km (Up,Ki,Sk,Um).
 m = 6.2 (Up,Ki).
 Double P, small and large,
 average separation 1.9 s.

" 12 Up iP 08 25 47.4 C
 iS 08 35 02
 micr sec
 P Z' 6.0 1.3
 Mx E 515 23
 Mx N 490 19
 Ki iP 08 25 06.2
 iS 08 33 48
 micr sec
 P Z' 4.7 1.0
 Mx E 901 24
 Mx N 621 20
 Sk iP 08 25 39.2 C
 Um iP 08 25 23.8 C
 Ud iP 08 25 53.2
 (cont.)

1978

June 12 (cont.)
 Ud i 08 25 54.5
 De iP 08 26 09.1
 Near east coast of Honshu,
 Japan (h = 45 km).
 m = 7.5, M = 8.0 (Up,Ki).

" 12 Up iP 09 24 16.7
 ipP 09 24 28.1
 micr sec
 P Z' 0.1 1.1
 pP Z' 0.3 1.4
 Ki iP 09 23 36.0
 ipP 09 23 47.8
 micr sec
 P Z' 0.1 1.3
 pP Z' 0.1 1.3
 Sk ipP 09 24 19.0
 Um iP 09 23 54.7
 ipP 09 24 03.7
 Ud iP 09 24 23.5 C
 ipP 09 24 34.7
 De iP 09 24 41.0
 ipP 09 24 52.6
 Near east coast of Honshu,
 Japan.
 h = 35 km (Up,Ki,Um,Ud,De).
 m = 5.9 (Up,Ki).

" 12 Up iP 09 51 50.8
 Ki iP 09 51 08.6
 Sk iP 09 51 43.1
 Um iP 09 51 26.7
 ipP 09 51 39.2
 Ud iP 09 51 56.3
 ipP 09 52 09.0
 De ipP 09 52 23.0
 Near east coast of Honshu,
 Japan (h = 45 km).

" 12 Ki iP 11 24 58.4
 Um iP 11 25 16.6
 Ud iP 11 25 44.5
 Near east coast of Honshu,
 Japan (h = 45 km).

" 12 Ki eP 13 15 29
 Ud iP 13 16 21.7
 Near east coast of Honshu,
 Japan (h = 50 km).

" 12 Up ipP 17 49 18.8
 Ki iP 17 50 31.8
 Sk iP 17 49 59.4
 (cont.)

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

1978				1978				
June	12	(cont.)		June	13	Um	iP	17 20 17.4
		Um	iP			Ud	iP	17 20 48.2
		Ud	iP			Off east coast of Honshu, Japan (h = 30 km).		
		Greece (h = 20 km).						
"	12	Up	iP	"	13	Up	iP	18 35 30.1
		Ki	iP			Ki	iP	18 34 54.1 D
		Um	iP			Sk	iP	18 35 26.5 D
		Ud	iP			Um	iP	18 35 09.1
		Near s. coast of southern Honshu (h = 400 km).				Ud	iP	18 35 37.7 D
						De	iP	18 35 51.4
"	12	Ud	iP			Southern Honshu, Japan (h = 370 km).		
		Southern Italy (h = N).		"	13	Up	iP	19 51 19.5
"	12	Sk	iP			Ki	iP	19 50 23.5
		Um	ipP			Um	iP	19 50 50.0
		Ud	iP			Ud	iP	19 51 22.3 C
		Greece (h = 25 km).				De	iP	19 51 44.4
"	13	Ud	iP			Near east coast of Kamchatka (h = N).		
		Greece (h = N).		"	13	Ki	iP	20 56 59.5 C
"	13	Ki	ePKP			Sk	eP	20 56 25
		Um	iPKP			Um	iP	20 56 17.1 C
		De	iPKP			Ud	iP	20 56 46.5 C
		New Hebrides Islands (h = 190 km).				Near east coast of Honshu, Japan (h = 40 km).		
"	13	Ki	eP			Ki	iP	21 13 24.2
"	13	Ud	iSgl			Um	iP	21 13 13.7
		Coast of south Norway, near 58 1/4° N, 6 1/2° E. Origin time = 14 18 08. M _L = 2.6 (Ud). By combination with Bergen and Kongsberg readings.				Ud	iP	21 13 31.4
						Hindu Kush region (h = 200 km).		
"	13	Up	iSgl			Up	iP	23 28 33.8 C
		Ki	iPgl				ipP	23 28 45.5
			i				i	23 28 50.7
			iSgl				micr	sec
		Sk	iPgl			P	Z'	0.1 0.8
			iSgl			Ki	iP	23 27 49.6
			i				ipP	23 27 59.7
		Um	iPgl				micr	sec
			iSn			P	Z'	0.1 1.0
			iSgl			Sk	iP	23 28 24.5 C
		Ud	iSgl			Um	iP	23 28 08.2
		Nordland, Norway, near 66 1/2° N, 14° E. Origin time = 14 43 33. M _L = 2.8 (Ki,Sk,Um,Ud). Explosion?					i	23 28 25.6
						Ud	iP	23 28 39.7 C
							ipP	23 28 51.6
							i	23 28 56.4
						De	iP	23 28 57.0 C
						Hokkaido, Japan region. h = 40 km (Up,Ki,Ud). m = 5.9 (Up,Ki).		
"	14	Up	iP			Up	iP	01 58 22.5
		(cont.)				(cont.)		

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

1978

June 14	(cont.)				
	Ki	iP	16 20	44.9	
			micr	sec	
		P	Z'	0.1	1.0
		Mx	E	2.0	15
		Mx	N	3.7	17
	Sk	iP	16 21	02.6	C
		ipP	16 21	08.3	
	Um	iP	16 20	36.7	
		ipP	16 20	42.1	
	Ud	iP	16 20	54.7	
	De	iP	16 20	51.0	
		i	16 21	02.2	
	Kashmir-India border region. h = 20 km (Sk,Um). M = 5.4 (Up,Ki).				
" 14	Up	iPP	16 33	09.0	
	Ki	iP	16 32	33.7	
		iPP	16 33	45.8	
	Sk	i	16 33	38.8	
	Um	ipP	16 32	19.7	
		i	16 39	38.1	
	Ud	iP	16 32	22.6	
		ipP	16 32	31.7	
	Iran-USSR border region (h = 20 km).				
" 14	Um	iP	17 24	44.9	
	Near east coast of Honshu, Japan (h = 90 km).				
" 14	Up	iP	20 53	38.5	
	Ki	iP	20 52	41.7	
	Ud	iP	20 53	42.0	
" 14	Ud	iP	22 54	57.7	
" 14	Um	iP	23 09	24.7	
	Ud	iP	23 09	41.2	
" 14	Ud	iP	23 19	24.2	
" 15	Up	iP	00 31	16.5	
			micr	sec	
		Mx	E	0.4	7
		Mx	N	0.4	7
		Mx	Z	0.8	9
	Ki	iP	00 32	28.3	
			micr	sec	
		Mx	E	0.8	12
		Mx	N	0.3	10
	Sk	iP	00 32	01.8	
	Um	iP	00 31	51.5	
	Ud	iP	00 31	27.3	
	(cont.)				

1978

June 15	(cont.)				
	De	eP	00 30	50	
	Turkey (h = 15 km).				
" 15	Ki	eP	00 51	23	
	Sk	eP	00 50	52	
	Um	iP	00 51	12.7	
	Ud	iP	00 50	44.9	
		i	00 50	54.4	
	De	iP	00 50	37.2	
	North Atlantic ridge (h = N).				
" 15	Up	i	01 13	14.8	
	Ki	iP	01 12	40.8	
	Sk	iP	01 13	06.8	
	Um	iP	01 12	52.6	
	Ud	iP	01 13	19.3	
	Volcano Islands region (h = N).				
" 15	Ud	iP	01 15	16.2	
	Greece-Bulgaria border region (h = 10 km).				
" 15	Up	iP	03 29	11.8	
		i	03 29	41.3	
		iPP	03 31	33.8	
		iS	03 37	23	
			micr	sec	
		P	Z'	0.1	1.0
	Ki	iP	03 28	30.7	
		i(PP)	03 30	33.4	
		iS	03 36	06	
			micr	sec	
		P	Z'	0.2	0.9
	Um	iP	03 28	48.4	
		i	03 30	10.7	
	Ud	iP	03 29	19.8	
		iPP	03 31	47.1	
	De	iP	03 29	34.7	
		iPP	03 32	05.0	
	Near e. coast of eastern USSR (h = 380 km). m = 5.5 (Up,Ki).				
" 15	Ud	ePKP	05 17	54	
	De	iPKP1	05 18	05.4	
	South of Fiji Islands (h = 370 km).				
" 15	Ki	iP	06 26	53.2	
	Tibet (h = N).				
" 15	Up	iP	08 31	28.2	C
	(cont.)				

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1978				1978			
June	15	(cont.)		June	15		
		Up				Ki	eP 14 00 18
			micr sec			Sk	eP 14 00 03
		Mx	E 2.4 24			Um	iP 14 00 16.3
		Mx	N 1.8 24			Ud	iP 14 00 06.0
		Mx	Z 4.0 24			De	iP 14 00 02.5
		Ki	iP 08 31 25.7				i 14 00 14.2
			micr sec				
		P	Z' 0.1 1.5	"	15	Um	i(P) 14 18 53.3
		Mx	E 1.8 22				
		Mx	N 3.3 23	"	15	Ud	i(P) 14 21 42.5
		Sk	iP 08 31 11.2				i 14 22 02.4
		Um	iP 08 31 27.0				
			iSKS 08 41 58	"	15	Up	iP 15 15 00.0 C
		Ud	iP 08 31 18.7				ipP 15 15 14.8
			i 08 35 09.0				iS 15 24 15
		De	iP 08 31 21.4				micr sec
		South of Panama (h = N).				P	Z' 0.1 1.1
		M = 5.7 (Up,Ki).				Mx	E 1.3 17
"	15	Up	iP 09 39 55.8			Mx	N 1.6 18
			i 09 40 02.8			Mx	Z 2.6 19
			micr sec			Ki	iP 15 14 19.9 C
		P	Z' 0.3 1.0				ipP 15 14 35.0
		Mx	E 1.0 18				micr sec
		Mx	N 1.2 17			P	Z' 0.1 1.0
		Ki	iP 09 39 09.8			Mx	E 1.6 15
			micr sec			Mx	N 1.6 17
		P	Z' 0.2 1.0			Mx	Z 2.4 17
		Mx	E 1.5 16			Sk	iP 15 14 53.4 C
		Mx	N 2.4 17			Um	iP 15 14 37.8 C
		Sk	iP 09 39 45.3				ipP 15 14 52.0
		Um	iP 09 39 31.2				iS 15 23 36
		Ud	iP 09 40 02.5			Ud	iP 15 15 07.4 C
		De	iP 09 40 19.9 C				ipP 15 15 22.1
		Kuril Islands (h = 60 km).				De	iP 15 15 22.4
		m = 6.2, M = 5.4 (Up,Ki).				Near east coast of Honshu, Japan.	
"	15	Ud	iP 10 39 41.2			h = 55 km (Up,Ki,Um,Ud).	
						m = 5.7, M = 5.5 (Up,Ki).	
"	15	Ud	iP 11 34 09.2	"	15	Ki	i(P) 15 56 20.4
"	15	Up	iPdiff 13 44 43.4	"	15	Ki	i(P) 16 00 36.8
		Ki	iP 13 44 29.3				
		Sk	iPdiff 13 44 48.5	"	15	Up	iP 17 07 35.0
			iPKP 13 48 56.1			Ki	iP 17 07 40.5
		Um	iP 13 44 33.3				i 17 08 50.8
			i 13 48 16.4			Sk	iPn 17 09 37.0
			iPKP 13 48 49.1			Um	iP 17 07 31.8
		Ud	iPdiff 13 44 51.6			Ud	iP 17 07 52.4
			iPKP 13 48 56.7				iPn 17 09 24.8
		Banda Sea (h = 160 km).				De	iP 17 07 49.7
"	15	Sk	iP 13 52 15.9			Tadzhik SSR (h = 50 km).	
		Um	iP 13 52 09.4	"	15	Um	i(P) 18 35 18.2
		De	eP 13 52 18	"	15	Ki	i 20 52 04.5
						(cont.)	

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

1978				1978			
June	15	(cont.)		June	16	(cont.)	
		Ud	iP 20 52 15.8			Up	ipP 08 10 31.2
			i 20 52 28.0				iPP 08 13 40.9
			i 20 53 17.8				iS 08 20 46
		Ceram Sea (h = 55 km).					micr sec
"	16	Ud	iP 02 39 27.3			P	Z' 1.1 1.7
		Strait of Gibraltar (h = N).				Sk	iP 08 09 58.8
						Um	iP 08 09 43.8 C
"	16	Up	iP 04 33 53.5			Ud	iP 08 10 03.1
		Ud	iP 04 33 59.9				ipP 08 10 39.7
		De	iP 04 33 21.9				iPP 08 13 56.6
		Greece (h = N).				De	iP 08 10 09.3
							iPP 08 14 03.2
"	16	Up	iP 05 44 56.1 C			Mindanao, Philippine Islands.	
			iS 05 54 17			h = 150 km (Up,Ud).	
			micr sec	"	16	Up	iP 08 47 20.0
		P	Z' 0.2 1.5				micr sec
		Mx	E 2.5 19			P	Z' 0.1 1.2
		Mx	N 3.3 17			Ud	iP 08 47 27.5
		Mx	Z 2.7 20			Off east coast of Honshu,	
		Ki	iP 05 44 15.6 C			Japan (h = N).	
			eS 05 53 06	"	16	Ud	iP 09 48 19.7
			micr sec				
		P	Z' 0.2 1.5	"	16	Up	iP 10 26 41.5
		Mx	E 11 19				micr sec
		Mx	N 7.3 22			P	Z' 0.1 1.0
		Mx	Z 8.0 16			Ki	iP 10 26 01.3 C
		Sk	iP 05 44 49.2 C			Um	iP 10 26 19.6 C
		Um	iP 05 44 33.9 C			Ud	iP 10 26 49.4
			iS 05 53 34				i 10 26 57.7
		Ud	iP 05 45 03.1			De	iP 10 27 04.3
		De	iP 05 45 18.8 C			Off east coast of Honshu,	
			iPP 05 48 09.7			Japan (h = N).	
		Off east coast of Honshu,		"	16	Ud	iP 10 50 55.9 C
		Japan (h = 35 km).		"	16	Ud	iP 12 00 30.4
		m = 6.0, M = 5.9 (Up,Ki).					
"	16	Ki	iP 05 54 27.9	"	16	Up	iP 12 09 54.3
		Ud	iP 05 54 15.2			Ki	iP 12 09 15.1
		Off east coast of Honshu,				Ud	iP 12 10 02.4
		Japan (h = N).				De	iP 12 10 17.9
"	16	Up	iPKP1 06 47 57.7			Off east coast of Honshu,	
		Sk	iPKP1 06 47 53.1			Japan (h = N).	
		Um	iPKP1 06 47 48.2	"	16	Ud	iP 13 11 12.4
		Ud	iPKP1 06 48 00.1				
		South of Kermadec Islands		"	16	Ud	iP 13 51 49.7
		(h = 70 km).				Near east coast of Honshu,	
						Japan (h = N).	
"	16	De	iPKP 07 30 52.7	"	16	Ki	iP 16 12 26.4
		Solomon Islands (h = 45 km).					i 16 12 52.1
		Late arrival w.r.t. the				Ud	ipP 16 12 54.6
		NEIS solution.				Hindu Kush region (h = 80 km).	
"	16	Up	iP 08 09 54.7				
		(cont.)					

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

1978				1978								
June	18	Ud	iP	00 06	55.9	June	18	Up	iP	19 34	14.3	
"	18	Up	iPKP1	02 03	10.3			Ki	iP	19 34	46.8	
		Ud	iPKP1	02 03	13.2			Sk	iP	19 34	47.9	
		De	iPKP1	02 03	22.7			Um	iP	19 34	25.7	
"	18	Ud	iP	02 07	13.2			Ud	iP	19 34	29.5	
								De	iP	19 34	16.7	
								Southern Iran (h = N).				
"	18	Up	iP	02 32	39.8	"	18	Up	iP	19 49	06.2	
		Ki	eP	02 32	45	"	19	Ud	iP	02 29	06.5	
		Sk	eP	02 32	28	"	19	Ki	iP	02 44	27.5	
		Ud	iP	02 32	30.5			Ud	iP	02 44	41.9	
		De	iP	02 32	31.4	"	19	Up	iP	03 10	17.2	
		Northern Colombia (h = 170 km).						Ki	eP	03 09	37	
"	18	Up	iP	04 38	07.2			Sk	eP	03 10	13	
		Ki	iP	04 38	07.0			Um	iP	03 09	54.7	
		Um	iP	04 38	03.9			Ud	iP	03 10	24.1	
		Ud	iP	04 38	17.3			De	iP	03 10	40.2	
		De	iP	04 38	15.2			Near east coast of Honshu, Japan (h = N).				
		Southern Sumatera (h = 110 km).				"	19	Up	eP	03 17	24	
"	18	Up	iP	10 10	30.9			i		03 17	39.1	
		Ki	iP	10 09	58.7			Ki	eP	03 18	41	
		Sk	iP	10 10	27.7			Sk	eP	03 18	10	
		Um	iP	10 10	12.3			Um	iP	03 18	05.0	
		Ud	iP	10 10	37.6			Ud	iP	03 17	33.4	
		De	iP	10 10	49.3			Greece (h = 10 km).				
		Bonin Islands region (h = 440 km).				"	19	Ki	i(P)	04 13	01.5	
"	18	Ki	i(P)	12 27	12.4			i		04 13	17.6	
"	18	Up	iP	15 11	21.3	"	19	Up	i	07 41	35.3	
		iS		15 20	42			Um	iP	07 41	09.2	
				micr	sec			Ud	iP	07 41	38.9	
		P	Z'	0.1	1.0			i		07 41	56.7	
		Mx	E	1.0	17			Near east coast of Honshu, Japan (h = 30 km).				
		Mx	N	1.5	17	"	19	Up	iP	10 35	32.3	
		Mx	Z	2.0	17			i		10 35	39.1	
		Ki	iP	15 10	41.0			iS		10 39	07.4	
				micr	sec					micr	sec	
		Mx	E	1.3	15			P	Z'	0.3	1.8	
		Mx	N	1.0	16			Mx	E	1.4	7	
		Sk	iP	15 11	14.6			Mx	N	4.2	9	
		Um	iP	15 10	58.9			Mx	Z	6.4	9	
		iS		15 20	00			Ki	eP	10 36	48	
		Ud	iP	15 11	28.7					micr	sec	
		i		15 11	34.7			P	Z'	0.1	1.4	
		De	eP	15 11	44			Mx	E	3.6	6	
		Near east coast of Honshu, Japan (h = N).						(cont.)				
		M = 5.4 (Up,Ki).										

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

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June	19	(cont.)		micr	sec
		Ki			
		Mx	N	2.5	10
		Sk	iP	10 36	18.0
		Um	iP	10 36	12.2
			i	10 36	20.9
			eS	10 40	20
		Ud	iP	10 35	41.6
			i	10 35	47.5
			eS	10 39	31
		De	eP	10 35	02
			i	10 35	10.3
			e	10 38	22
		Greece (h = 10 km).			
		m = 5.3 (Up,Ki).			
"	19	Up	iP2	10 52	40.0
		Ki	eP2	10 53	58
		Sk	iP1	10 53	23.6
		Um	iP2	10 53	20.9
		Ud	iP1	10 52	46.9
			iP2	10 52	49.9
		De	i	10 52	13.6
		Greece (h = 10 km).			
"	19	Up	iP	11 53	30.7
		Sk	eP	11 53	16
		Um	iP	11 53	04.6
		Ud	iP	11 53	34.9
"	19	Ud	i(P)	15 27	22.4
"	19	Ud	iP	16 20	20.3
		De	eP	16 19	44
		Southern Greece (h = 70 km).			
"	19	Up	iP	16 47	21.3
		Ki	iP	16 47	06.4
		Um	iP	16 47	11.1
		Ud	iP	16 47	29.4
		Celebes Sea (h = 360 km).			
"	19	Up	iP	19 16	02.0
		Ki	iP	19 15	08.5
		Um	iP	19 15	35.0
		Ud	iP	19 16	01.7
		De	iP	19 16	23.8
		Andreanof Islands, Aleutian Is. (h = 35 km).			
"	19	Ud	iP	23 21	27.3
"	20	Up	iP	02 40	28.5
		Ki	iP	02 39	33.4
		(cont.)			

1978

June	20	(cont.)			
		Sk	iP	02 40	02.4
		Um	iP	02 40	01.4
		Ud	iP	02 40	26.7
		De	iP	02 40	49.7
		Alaska Peninsula (h = 100 km).			
"	20	Up	iP	03 16	41.1
		Ki	iP	03 15	52.9
		Um	iP	03 16	15.4
		Ud	iP	03 16	45.9
"	20	Ki	iP	04 10	20.8
		Ud	iP	04 09	17.6
		De	eP	04 08	46
		Crete (h = 70 km).			
"	20	Ki	iP	05 28	33.5
		Ud	iP	05 28	40.5
		Hindu Kush region (h = 80 km).			
"	20	Up	iSgl	06 03	15.7
			iRg	06 03	32.2
		Um	iSgl	06 04	41.1
		Ud	iSgl	06 04	15.3
			i	06 04	20.1
		De	eSgl	06 04	24
			i	06 04	34.0
		West of Esthonia, near 58 1/2°N, 22°E.			
		Origin time = 06 01 57.			
		Near-surface event, probably explosion.			
"	20	Up	iP	07 09	03.5
		Sk	iP	07 09	45.6
		Ud	eP	07 09	11
		Greece (h = 10 km).			
"	20	Ud	iRg	11 01	46.3
		Regional, near-surface event.			
"	20	Ud	iP	11 09	16.2
"	20	Up	iP	17 04	16.8
		Ud	iP	17 04	24.6
		Mindanao, Philippine Islands (h = 80 km).			
"	20	Up	iP	17 15	42.1
		Ki	iP	17 15	24.3
		Sk	iP	17 15	46.0
		Um	iP	17 15	29.7
		(cont.)			

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

1978				1978					
June	20	(cont.)		June	20	Um	iP	20 42 01.8	C
		Ud	iP			"	Up	eP	20 42 11
		De	eP				Sk	eP	20 42 56
		Mindanao, Philippine Islands (h = 45 km).					Um	iP	20 42 47.2
"	20	Ud	iP				Ud	eP	20 42 22
		Lake Baikal region (h = N).					De	eP	20 41 39
							Greece (h = 10 km).		
"	20	Up	iP			"	Up	eP	20 49 55
			i				Ki	iP	20 51 11.0
			iS				Sk	iP	20 50 36.0
							Um	iP	20 50 29.5
							Ud	iP	20 50 04.5
							De	eP	20 49 29
							Greece (h = 10 km).		
						"	Up	iRg	20 55 04.6
							Ud	iRg	20 54 52.0
							Central Sweden. Near-surface event.		
						"	Up	eP	20 57 09
							Sk	eP	20 57 53
							Um	iP	20 57 48.7
							Ud	eP	20 57 15
							De	eP	20 56 41
							Greece (h = 10 km).		
						"	Up	iP	21 04 13.8
							Um	iP	21 04 57.5
							Ud	iP	21 04 19.5
							De	eP	21 03 50
							Greece (h = 10 km).		
						"	Ki	iP	21 11 55.9
							Sk	iP	21 12 22.2
							Um	iP	21 12 08.4
							Mariana Islands region (h = 320 km).		
						"	Ud	eP	21 11 57
							Greece (h = 10 km).		
						"	Ud	iP	21 38 36.4
							Greece (h = 10 km).		
						"	Ud	iP	21 44 49.0
						"	Ud	iP	21 52 26.7
						"	Up	iP	21 55 32.4
							cont.)		
"	20	Up	eP	20 32 22					
		Um	eP	20 33 07					
		Ud	iP	20 32 34.4					
		Greece (h = 10 km).							

Greece (h = 5 km).

m = 6.8, M = 6.6 (Up,Ki).

Double P onsets, small and large, in average 2.5 s apart.

Source parameters:

$M_0 = 8.7 \times 10^{25}$ dyne cm,

$\Delta\sigma = 5.2$ bars,

$\bar{u} = 24.5$ cm.

cf. O.Kulhánek and K.Meyer, BSSA vol 69, pp 1289-1294, 1979.

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

1978				1978						
June	21	(cont.)		June	21	De	iP	13 42 01.5		
		De	isP			"	Ud	i(P)	15 00 34.8	
			i			"	Ud	iP	15 20 00.4	
			iS			"	Up	iP	17 35 40.0 C	
			iP'P'				ipP	17 35 47.7		
		Northwest of Kuril Islands.						micr sec		
		h = 420 km (Up,Ki,Um,Ud,De).					P	Z' 0.2 1.2		
		m = 5.9 (Up,Ki).				Ki	iP	17 35 34.0 C		
		The phases denoted as (P'P')					ipP	17 35 41.0		
		are early P'P' phases and						micr sec		
		could be interpreted as					P	Z' 0.1 0.7		
		P' _d P'. (cf. Withcomb 1973).					pP	Z' 0.1 0.9		
"	21	Up	iP			Sk	iP	17 35 59.5 C		
			ipP				ipP	17 36 06.9		
						Um	iP	17 35 30.7 C		
			P				ipP	17 35 38.0		
		Ki	iP			Ud	iP	17 35 56.4 C		
							ipP	17 36 03.9		
			P			De	iP	17 35 58.4		
		Sk	iP				ipP	17 36 05.3		
			ipP			Kirgiz-Sinkiang border region				
		Um	iP			h = 25 km (Up,Ki,Sk,Um,Ud,De).				
						m = 5.5 (Up,Ki).				
		Ud	iP			"	21	Up	iPn	18 01 28.2
			ipP						iSn	18 02 36.9
		De	iP					Um	eSgl	18 03 36
			ipP					De	eSn	18 03 31
		Off east coast of Honshu,				Western USSR, near				
		Japan.				57 3/4°N, 28°E.				
		h = 30 km (Up,Sk,Um,Ud,De).				Origin time = 18 00 00.				
		m = 5.8 (Up,Ki).				Explosion?				
"	21	Up	iP			Solution from Helsinki				
		Ki	iP			regional bulletin.				
		Sk	iP			"	21	Up	i	18 56 34.4
			i					Ki	eP	18 57 49
		Um	iP					Sk	iP	18 57 16.7
								Um	iP	18 57 10.7
		Ud	iP						i	18 57 23.0
								Ud	iP	18 56 40.1
		De	eP						i	18 56 42.9
		Greece (h = 10 km).						De	e	18 56 07
"	21	Up	iSgl			Greece (h = 10 km).				
		Sk	iSgl			"	21	Ud	iP	21 01 32.3
		Um	eSgl			Afghanistan-USSR border				
		Ud	iSgl			region (h = 50 km).				
		De	iSgl			"	21	Ki	iP	22 25 41.2
		Southern Norway, 60.4°N,						Ud	iP	22 26 33.4
		7.5°E.								
		Origin time = 13 19 37.								
		M _L = 3.4 (Ud).								
"	21	Ud	iP							

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

1978				1978									
June	21	Up	iP	22 57	13.2	June	22	(cont.)					
		Um	iP	22 57	02.8			De	iP	04 17	32.8		
		Leyte, Philippine Islands (h = 120 km).						Mindanao, Philippine Islands (h = 45 km).					
"	21	Up	iP	23 33	46.1	"	22	Up	iP	05 52	24.8 C		
		Ki	iP	23 33	28.5			Ki	iP	05 51	31.4		
		Sk	eP	23 32	50			Sk	e	05 52	11		
		Um	eP	23 33	33			Um	iP	05 51	57.3		
		Ud	eP	23 33	21			Ud	iP	05 52	26.2 C		
		De	eP	23 33	46			De	i	05 52	54.9		
		Iceland (h = 10 km).						Andreanof Islands, Aleutian Is. (h = N).					
"	22	De	eP	01 38	39	"	22	Up	iP	06 50	54.4 C		
"	22	Ud	eP	02 31	21			Ki	iP	06 50	36.4 C		
		Greece (h = 10 km).								micr	sec		
"	22	Up	iP	02 36	31.7			P	Z'	0.1	1.2		
			i	02 36	47.4			Sk	iP	06 50	58.0 C		
			i	02 41	06.2			Um	iP	06 50	42.3		
				micr	sec			Ud	iP	06 51	02.5 C		
		Mx	E	0.6	6			De	iP	06 51	08.5 C		
		Mx	N	0.7	6			Mindanao, Philippine Islands (h = 60 km).					
		Mx	Z	1.0	7			"	22	Up	iPKP1	07 18	53.3
		Ki	eP	02 38	13			Ud	iPKP1	07 18	55.7		
				micr	sec			De	iPKP1	07 19	05.1		
		Mx	E	1.6	8			"	22	Up	iP	08 44	09.9
		Mx	N	0.9	8					ipP	08 44	20.1	
		Mx	Z	0.9	8					iS	08 53	07	
		Sk	eP	02 37	27					micr	sec		
			i	02 37	35.0			Mx	E	1.2	20		
		Um	iP	02 37	21.8 C			Mx	N	0.9	17		
		Ud	iP	02 36	42.9 C			Mx	Z	2.2	20		
			i	02 41	48.4			Ki	iP	08 44	47.2		
		De	iP	02 35	58.1			ipP		08 44	57.3		
		Romania (h = 10 km).								micr	sec		
"	22	Up	iP	03 01	04.3			pP	Z'	0.1	1.0		
		Ki	eP	03 02	45			Mx	E	0.8	17		
		Sk	eP	03 01	58			Mx	N	0.7	16		
		Um	iP	03 01	53.9			Mx	Z	1.3	19		
			i	03 05	06.5			Sk	eP	08 44	16		
		Ud	iP	03 01	13.6			Um	iP	08 44	32.2		
		De	iP	03 00	27.9			ipP		08 44	42.0		
		Romania (h = 10 km).						iS		08 53	57		
"	22	Up	iP	04 17	18.7			Ud	iP	08 44	01.3		
		Ki	iP	04 17	00.8			De	iP	08 43	47.2		
				micr	sec			Central Mid-Atlantic Ridge. h = 35 km (Up,Ki,Um). M = 5.2 (Up,Ki).					
		P	Z'	0.1	1.3			"	22	Up	iSgl	09 34	23.2
		Sk	iP	04 17	22.7			(cont.)		(cont.)			
		Um	iP	04 17	06.9								
		Ud	iP	04 17	27.1								
		(cont.)											

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

1978				1978							
June	22	(cont.)		June	22	Up	iP	16 55 00.5			
		Ki	iPgl			Ki	iP	16 54 07.2			
			iSgl			Um	iP	16 54 32.3			
		Sk	e			De	iP	16 55 25.3			
			iSgl			Off east coast of Kamchatka (h = N).					
		Um	iPn								
			i			"	22	Up	iP	19 12 42.1	
			iSgl					Ki	eP	19 13 30	
		Ud	eSgl					Um	iP	19 12 59.7	
		Off coast of Nordland, Norway, 67.4°N, 14.0°E.						Ud	iP	19 12 59.3	
		Origin time = 09 30 22.							i	19 13 02.3	
		M _L = 2.9 (Ki,Sk,Um,Ud).						De	iP	19 12 43.8	
						Western Iran (h = N).					
"	22	Up	iRg	12 48 54.4	"	22	Ki	iSgl	21 16 53.8		
		Ud	iRg	12 48 59.4			Sk	iSgl	21 15 36.0		
		Central Sweden.					Um	iSn	21 16 22.4		
		Near-surface event.						iSgl	21 16 36.2		
"	22	Up	iP	13 45 08.1			Ud	iSgl	21 17 24.0		
		Um	iP	13 45 05.4			Coast of Nordland, Norway, 65.1°N, 12.8°E.				
		Ud	iP	13 45 24.6			Origin time = 21 14 48.				
		De	eP	13 45 21							
		Afghanistan-USSR border region (h = 80 km).				"	22	Sk	eP	21 50 49	
"	22	Ud	iP	13 49 10.2				Um	iP	21 50 36.7	
		De	iP	13 49 27.6				Ud	iP	21 50 28.8	
		Eastern Gulf of Aden (h = N).				"	23	Up	iP	00 00 59.5	
"	22	Up	iSgl	14 25 44.8				Ki	eP	00 00 39	
		Sk	eSgl	14 25 48				Ud	iP	00 01 09.0	
		Ud	iPgl	14 23 51.3			Philippine Islands region (h = N).				
			iSgl	14 24 45.9							
		De	iSn	14 24 34.9			"	23	Up	iP	02 01 28.0
		Southwest coast of Norway, near 58 1/4°N, 6 1/2°E.						Sk	eP	02 02 15	
		Origin time = 14 22 37.						Um	i	02 02 18.7	
		M _L = 2.5 (Ud).						Ud	i	02 01 42.0	
		By combination with Bergen readings.				Greece (h = 10 km).					
"	22	Ud	iP	15 26 47.1	"	23	Ud	iP	02 20 56.7		
		Greece (h = 10 km).				"	23	Up	iP	07 02 22.7	
"	22	Up	iP	16 46 45.2 C				Ud	iP	07 02 37.5	
				micr sec			"	23	Up	iP	09 47 18.6
			P	Z' 0.1 1.1					iPP	09 48 31.5	
		Ki	iP	16 45 51.4 C				Ki	iP	09 47 33.4	
		Sk	iP	16 46 28.3 C					iPn	09 48 44.0	
		Um	iP	16 46 17.2 C				Sk	eP	09 47 48	
		Ud	iP	16 46 48.5 C					iPn	09 49 01.4	
		De	iP	16 47 09.9 C				Um	iP	09 47 19.3	
		Off east coast of Kamchatka (h = 50 km).							iPP	09 48 36.0	
								(cont.)			

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

1978				1978				
June	23	(cont.)		June	24	Up	iP	01 31 38.4
		Ud	iP			Ki	eP	01 30 44
			iPP			Ud	iP	01 31 37.9
		De	eP			Andreanof Islands, Aleutian Is. (h = 70 km).		
		Uzbek SSR (h = N).						
"	23	Up	iP	"	24	Ki	iP	02 05 04.0
		Ud	iP					
		De	iP	"	24	Ki	iP	02 05 18.4
						Banda Sea (h = 650 km).		
"	23	Up	iP	"	24	Ud	iP	03 29 00.1
		Ud	iP			Greece (h = 10 km).		
"	23	Up	iPKP1	"	24	Up	iPKP	03 46 12.5
		Ud	iPKP1				iSKP1	03 49 25.3
"	23	Ki	iP			Ki	iPKP	03 45 58.8
		Ud	iP			Sk	iPKP	03 46 10.4
		Volcano Islands region (h = N).				Ud	iPKP	03 46 13.6
							iSKP1	03 49 29.8
"	23	Ud	eP			New Hebrides Islands (h = 120 km).		
			i					
		Greece (h = 10 km).		"	24	Sk	eP	04 40 45
"	23	Ud	eP			Ud	iP	04 40 12.6
		Greece (h = 10 km).				Greece (h = 10 km).		
"	24	Up	iP	"	24	Up	iP	06 11 41.0
			i	"	24	Up	iPKP1	06 40 19.2
						Ud	iPKP1	06 40 21.5
		Mx	N			De	iPKP1	06 40 32.3
		Mx	Z			Fiji Islands region (h = 570 km).		
		Ki	eP	"	24	Ud	iP	08 06 48.7
				"	24	Ud	iP	08 22 25.2
						Greece-Bulgaria border region (h = 10 km).		
		Mx	E	"	24	Up	iP	09 44 48.7 C
		Mx	N				i	09 44 50.7
		Mx	Z				iSKS	09 55 17
		Sk	iP				iS	09 55 45
		Um	iP					micr sec
		Ud	iP			P	Z'	0.1 1.4
			i			i	Z'	0.1 0.8
		De	iP			Mx	E	4.6 20
			i			Mx	N	16 21
		Albania (h = 10 km).				Mx	Z	12 19
"	24	Up	iP			Ki	iP	09 44 48.4 C
		Ki	iP				i	09 45 00.5
		Sk	iP				iSKS	09 55 17
		Mexico-Guatemala border region (h = N).					iS	09 55 49
"	24	Ud	iP			(cont.)		
"	24	Ud	iP					
		Alabania (h = 10 km).						

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

1978				1978					
June	26	Ud	iP	11 46 57.2	June	27	Ud	iP	04 36 35.5
"	26	De	iP	15 46 39.1	"	27	Up	iP	04 50 39.5
"	26	Up	iPKP1	21 23 40.9 C			Ki	iP	04 51 25.8
			ipPKP1	21 24 29.2			Um	iP	04 50 55.3
		Sk	iPKP1	21 23 33.4 C			Ud	iP	04 50 55.2
		Um	iPKP1	21 23 30.1			De	i	04 50 47.1
		Ud	iPKP1	21 23 42.2 C			Western Caucasus (h = 10 km).		
			ipPKP1	21 24 30.9	"	27	Sk	eP	12 23 21
		De	iPKP1	21 23 51.4 C			Um	iP	12 23 15.1
		Kermadec Islands region.					Ud	iP	12 22 44.2
		h = 180 km (Up,Ud).					Bulgaria (h = 15 km).		
"	26	Up	iP	23 55 23.7	"	27	Up	iP	12 54 38.5 C
		Ud	iP	23 55 36.9				ipP	12 54 47.6
"	27	Ki	iP	00 53 37.6					micr sec
		Sk	eP	00 53 11			P	Z'	0.1 1.0
		Ud	eP	00 52 39			Ki	iP	12 53 50.6 C
		De	eP	00 52 08			Sk	eP	12 54 27
		Crete (h = 60 km).					Um	iP	12 54 12.8 C
"	27	Ud	iP	01 08 29.8				ipP	12 54 21.5
"	27	Up	iPKP2	01 24 40.3			Ud	iP	12 54 43.4 C
		Ki	iPKP1	01 24 26.4				i	12 55 29.7
		Sk	e	01 24 39			De	iP	12 55 03.1
		Um	iPKP1	01 24 26.7				i	12 55 11.1
		Ud	iPKP2	01 24 47.2			Kuril Islands.		
		De	i	01 24 32.7			h = 30 km (Up,Um,De).		
			iPKP2	01 24 44.7	"	27	Ud	e(PKP)	15 03 53
		West of Macquarie Island						i	15 03 59.6
		(h = N).					De	i	15 04 15.6
"	27	Up	iPKP2	01 31 31.2			Tonga Islands region (h = N).		
		Ki	ePKP1	01 31 19	"	27	Um	iP	15 19 23.8
		Sk	iPKP2	01 31 44.4			Ud	iP	15 19 52.4
		Um	iPKP1	01 31 17.2			Off east coast of Honshu,		
		Ud	iPKP2	01 31 39.8			Japan (h = N).		
		De	iPKP1	01 31 18.2	"	27	Up	iSgl	17 37 39.2
			iPKP2	01 31 34.7			Ki	eSgl	17 39 59
		West of Macquarie Island					Sk	eSn	17 36 48
		(h = N).						iSgl	17 36 59.8
"	27	Up	iP	02 20 55.4			Um	eSgl	17 38 34
		Um	iP	02 20 30.2			Ud	iPgl	17 35 56.6
		Ud	iP	02 21 01.3				iSgl	17 36 36.6
		De	iP	02 21 19.1			De	iSgl	17 37 39.6
		Kuril Islands (h = 45 km).					Southern Norway, 60.4°N,		
"	27	Up	i(P)	03 35 03.9			7.5°E.		
"	27	Up	i(P)	04 06 24.1			Origin time = 17 35 03.		
							M _L = 2.5 (Sk,Ud).		
					"	27	Up	iP	19 22 01.5 C
								ipP	19 22 11.2
							cont.)		

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

1978			1978		
June	27	(cont.)	June	28	Ud iPKP 02 21 09.8 Southern Pacific Ocean (h = N).
		Up iPP 19 24 44.5			
		iS 19 31 29			
		micr sec			
		P Z' 0.2 1.2	"	28	De iP 03 50 52.2
		pP Z' 0.7 1.3			
		Mx E 3.1 18	"	28	Up iP 04 03 52.4
		Mx N 3.6 17			Ud iP 04 04 07.7
		Mx Z 5.9 17			
		Ki iP 19 21 21.9 C	"	28	Up iP 05 03 55.1 C
		ipP 19 21 30.9			ipP 05 04 34.4
		micr sec			micr sec
		P Z' 0.2 1.2			P Z' 0.1 0.8
		pP Z' 0.3 1.3			Ki iP 05 03 37.8 C
		Mx E 6.1 14			ipP 05 04 15.8
		Mx N 3.7 14			micr sec
		Mx Z 6.9 15			P Z' 0.1 0.8
		Sk iP 19 21 55.1 C			Sk eP 05 04 00
		ipP 19 22 04.3			Um iP 05 03 43.4 C
		iPP 19 24 34.3			Ud iP 05 04 04.1 C
		Um iP 19 21 39.9 C			ipP 05 04 42.0
		ipP 19 21 48.7			De iP 05 04 09.9
		iS 19 30 47			Mindoro, Philippine Islands.
		Ud iP 19 22 08.9 C			h = 160 km (Up,Ki,Ud).
		ipP 19 22 18.2			m = 5.5 (Up,Ki).
		De iP 19 22 24.0 C			
		ipP 19 22 34.2	"	28	Up iSgl 09 42 56.4
		iPP 19 25 12.7			Sk eSgl 09 42 09
		i 19 25 26.4			Ud iSn 09 41 53.1
		Off east coast of Honshu, Japan.			iSgl 09 42 01.3
		h = 30 km (Up,Ki,Sk,Um,Ud,De).			De eSgl 09 43 09
		m = 6.4, M = 5.9 (Up,Ki).			Southern Norway, 60.6°N, 7.2°E.
					Origin time = 09 40 23.
"	27	Ud eP 20 21 56			M _L = 2.4 (Ud).
		Southern Iran (h = N).			By combination with Bergen and Kongsberg readings.
"	27	Up iP 21 08 40.1	"	28	Ud i(P) 09 58 53.1
		Ki iP 21 08 11.3			i 09 59 17.1
		Um iP 21 08 22.9			
		Ud iP 21 08 47.0	"	28	Sk e(P) 10 39 18
		Mariana Islands region (h = N).			i 10 39 22.4
"	27	Up iP 23 51 34.6	"	28	Up iP 10 59 03.2 D
		Ki iP 23 50 41.1			Ki iP 10 58 29.0 D
		Sk iP 23 51 08.3			micr sec
		i 23 51 31.6			P Z' 0.1 1.0
		Um iP 23 51 08.3			Sk iP 10 58 59.4 D
		Ud iP 23 51 31.7			Um iP 10 58 44.0 D
		De iP 23 51 55.1			Ud iP 10 59 10.5 D
		i 23 52 12.1			De iP 10 59 23.1 D
		South of Alaska (h = 15 km).			South of Honshu, Japan (h = 310 km).

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

1978

June 30 (cont.)
 Ud iSKP 01 16 39.8
 South Sandwich Islands
 region.
 h = 100 km (Ki,Um,Ud).

" 30 Up iP 01 18 26.6 C
 iS 01 20 47.9
 micr sec
 P Z' 0.1 0.8
 Ki iP 01 20 04.1
 iS 01 23 48.3
 Sk iP 01 19 23.3
 Um iP 01 19 12.3
 i 01 19 13.4
 iS 01 22 04.8
 Ud iP 01 18 41.2
 i 01 18 42.2
 iS 01 21 07.0
 De iP 01 18 00.0
 Romania (h = 10 km).

" 30 Ki eP 01 38 43
 Ud iP 01 39 08.5
 Mindanao, Philippine
 Islands (h = 120 km).

" 30 De iP 07 36 50.0
 Romania (h = 10 km).

" 30 Ud i(P) 12 30 58.7

" 30 Ud iP 13 14 10.7

" 30 Ki iPKP 13 46 24.3
 New Hebrides Islands
 (h = 120 km).

" 30 Sk eSgl 14 17 04
 Ud iSgl 14 16 04.5

" 30 Up iP 16 22 50.4
 Ki iP 16 22 29.8
 Um iP 16 22 36.6
 Ud iP 16 22 59.7
 Luzon, Philippine Islands
 (h = 20 km).

" 30 Up eP 17 04 32
 Ud iP 17 04 45.5

January 24, 1980

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SEISMOLOGICAL SECTION
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SEISMOLOGISKA AVDELNINGEN
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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

JULY 1 - 31, 1978

1978					1978				
July	1	Up	i(P)	03 11 32.0	July	1	Um	iPKP	09 53 51.5
		Ud	i(P)	03 11 07.8			Ud	iPKP1	09 53 52.5
							De	iPKP1	09 54 04.3
"	1	Up	iP	04 23 38.2			South of Fiji Islands (h = 350 km).		
		Ki	iP	04 22 53.6					
		Sk	iP	04 23 30.3	"	1	Up	iPKP1	10 37 58.0 D
		Um	iP	04 23 13.7					micr sec
		Ud	iP	04 23 45.0				PKP1	Z' 0.1 0.7
"	1	Up	iP	06 24 37.9			Um	iPKP1	10 37 46.2
		Ki	iP	06 24 14.1			Ud	iPKP1	10 37 59.9
		Sk	iP	06 24 41.2			De	iPKP1	10 38 09.2
		Um	iP	06 24 22.7	"	1	Up	iP	16 28 15.6
		Ud	iP	06 24 47.7			Ud	iP	16 28 34.6
		Taiwan region (h = 230 km).							
"	1	Up	iP	09 06 23.6	"	2	Up	iP	00 23 08.2
		ipP		09 06 50.6			Ki	iP	00 22 38.6
		Ki	iP	09 06 22.6			Sk	iP	00 23 08.8
		ipP		09 06 47.8			Um	iP	00 22 51.9
				micr sec			Ud	iP	00 23 16.9
		P	Z'	0.2 1.4	"	2	Up	eP	01 33 00
		Sk	iP	09 06 08.8			Ki	iP	01 33 09.5
		i		09 06 28.2			Um	iP	01 32 58.5
		ipP		09 06 35.1			Ud	iP	01 33 16.6
		ePP		09 09 09			ipP		01 34 00.7
		Um	iP	09 06 26.2			Hindu Kush region (h = 200 km).		
		i		09 06 45.7	"	2	Up	iP	02 51 21.8
		ipP		09 06 52.5			Ki	eP	02 51 06
		Ud	iP	09 06 12.1			Um	iP	02 51 11.0
		i		09 06 32.7			Ud	iP	02 51 37.1
		ipP		09 06 39.1			Taiwan region (h = 40 km).		
		De	iP	09 06 16.3	"	2	Up	iP	03 01 33.9
		i		09 06 35.4			(cont.)		
		ipP		09 06 43.4					
		Panama. h = 100 km (Up,Ki,Sk,Um,Ud,De).							

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

1978				1978				
July	2	(cont.)		July	2	Up	iSgl	17 50 44.5
		Ki	iP			Ki	eSgl	17 50 29
		Sk	iP			Sk	eSgl	17 50 28
		Um	iP			Um	iPgl	17 48 36.1 D
		Ud	iP				iSgl	17 48 40.8
		Northern Columbia				Ud	i	17 51 06.6
		(h = 160 km).					iSgl	17 51 10.1
"	2	Up	ePKP	04 20 51		Coast of Västerbotten, Sweden, 64.0°N, 20.8°E. Origin time = 17 48 30. M _L = 2.2 (Up).		
			iPP	04 23 19.7				
				micr sec				
		Mx	E	3.1 23				
		Mx	N	8.3 23	"	2	Ki	iP
		Mx	Z	11 24			Um	iP
		Ki	ePKP	04 20 37			Ud	iP
			ePP	04 22 31			Mindanao, Philippine Islands (h = 50 km).	
		Sk	ePKP	04 20 43				
			iPP	04 23 08.1	"	2	Up	iP
		Um	e(PKP)	04 20 28			Ud	iP
			iPKP	04 20 41.7				
			iPP	04 22 55.6	"	2	Ud	iP
		Ud	iPKP	04 20 53.8			De	iP
		De	e(PKP)	04 20 46				
			ePKP	04 20 59	"	2	Um	iP
			i	04 21 14.3				i
		Tonga Islands (h = 25 km).						23 36 28.1
"	2	Ki	iPKP	12 24 59.5	"	3	Up	iP
		Um	iPKP	12 25 05.9				i
		Ud	iPKP	12 25 15.5			Ki	iP
		De	iPKP	12 25 21.8			Sk	iP
"	2	Up	iP	13 13 54.4			Um	iP
		Ud	iP	13 14 00.7			Ud	iP
"	2	Up	iP	13 37 44.6			De	iP
			ipP	13 37 59.5			Iran (h = 45 km).	
		Ki	iP	13 37 43.5	"	3	Up	iP
			ipP	13 37 58.3			Ki	iP
		Sk	iP	13 37 57.9			Um	iP
		Um	iP	13 37 40.3				ipP
			ipP	13 37 55.9			Ud	iP
		Ud	iP	13 37 53.8			Mariana Islands (h = 25 km).	
			ipP	13 38 08.3	"	3	Up	iP
		Southwest of Sumatera.					Ki	iP
		h = 55 km (Up,Ki,Um,Ud).						micr sec
"	2	Up	iP	17 12 28.8			P	Z' 0.1 1.5
		Um	iP	17 12 05.3			Sk	iP
		Ud	eP	17 12 37			Ud	eP
			i	17 12 46.5	"	3	Up	iP
		Off east coast of Honshu, Japan (h = 25 km).						iSKS
							Ki	iP
							(cont.)	

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

1978				1978			
July	3	(cont.)		July	3	Up	micr sec
		Ki eSKS	02 08 01			Mx N	1.0 18
		Sk ePP	02 02 24			Mx Z	1.1 20
		Um iP	01 58 02.8			Ki i	07 28 40.2
		iPP	02 01 50.0			ePKP2	07 28 49
		iSKS	02 08 05.4			Sk ePKP2	07 29 08
		Ud iP	01 58 21.1			Ud ePKP2	07 29 00
		ePP	02 02 15			Balleny Islands region	
		Celebes Sea (h = 310 km).				(h = N).	
"	3	Up iP	03 15 08.7	"	3	Up iP	08 56 09.8
		Ki iP	03 14 43.9			i	08 56 21.6
		Um iP	03 14 57.4			micr sec	
		Ud iP	03 15 16.2			Mx N	1.1 15
		Mariana Islands (h = N).				Mx Z	0.6 11
						Ki eP	08 55 58
"	3	Up iPKP	03 24 45.5			micr sec	
		Ki iPKP	03 24 31.1			Mx E	0.5 12
		i	03 25 42.4			Mx N	0.9 18
		Sk ePKP	03 24 37			Mx Z	0.7 14
		Um iPKP	03 24 36.6			Sk iP	08 56 24.7
		iPP	03 25 48.9			i	08 56 27.0
		Ud i(PKP)	03 24 38.0			Um iP	08 56 01.4
		iPKP	03 24 47.3			ipP	08 56 10.7
		De iPKP	03 24 52.9			Ud iP	08 56 22.9
		New Hebrides Islands				De iP	08 56 29.9
		(h = N).				Tibet (h = N).	
						M = 5.0 (Up,Ki).	
"	3	Up ePKP	03 31 20	"	3	Ud iP	09 41 53.2
		Um iPKP	03 31 14.3				
		Solomon Islands (h = N).					
"	3	Up eP	04 30 41	"	3	Up iP	11 15 12.3
		Um iP	04 30 42.5			Ud iP	11 15 24.8
		iPP	04 34 06.2			Burma-India border region	
		Ud iP	04 30 33.0			(h = 70 km).	
		De eP	04 30 37	"	3	Ud iP	17 35 46.2
		Costa Rica (h = 70 km).		"	3	Ud iP	20 14 28.5
"	3	Um eP	04 38 53			Greece (h = 10 km).	
		Ud iP	04 39 10.7	"	3	Sk eP	20 16 29
"	3	Up eP	06 31 13			Um iP	20 16 23.8
		Ki iP	06 31 11.9			Ud iP	20 15 54.5
		Um eP	06 31 12	"	3	Up iP	21 11 27.2
		Ud iP	06 31 15.5			ipP	21 13 21.2
		Southern Sumatera (h = N).				Ki iP	21 10 48.2
"	3	Um iP	06 35 58.7			Sk iP	21 11 22.9
		Ud iP	06 36 23.7			ipP	21 13 15.3
"	3	Ki eP	06 58 22			Um iP	21 11 03.6
		Um iP	06 58 44.6			i	21 11 04.7
		Ud iP	06 59 17.3			i	21 11 42.1
		Kuril Islands (h = 120 km).				ipP	21 12 51.1
						(cont.)	

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

1978
 July 3 (cont.)
 Ud iP 21 11 35.5
 De iP 21 11 50.3
 E. USSR-N.E. China border region.
 h = 530 km (Up,Sk,Um).

" 4 Up iP 02 52 10.3 C
 ipP 02 52 41.3
 iS 03 01 21
 micr sec
 P Z' 0.2 0.8
 Mx E 1.0 17
 Mx N 1.1 16
 Mx Z 1.2 18
 Ki iP 02 51 36.8 C
 ipP 02 52 06.9
 iS 03 00 20
 eP'P' 03 19 57
 micr sec
 P Z' 0.2 1.0
 Mx E 0.7 15
 Mx N 1.2 16
 Sk iP 02 52 08.5 C
 ipP 02 52 38.6
 Um iP 02 51 50.7 C
 ipP 02 52 20.3
 iS 03 00 43
 Ud iP 02 52 18.4 C
 ipP 02 52 47.7
 De iP 02 52 31.1
 Kuyshu, Japan.
 h = 110 km (Up,Ki,Sk,Um,Ud).
 m = 5.9, M = 5.3 (Up,Ki).

" 4 Um iP 03 25 52.6

" 4 Ud ePKP1 03 46 57
 De iPKP1 03 47 07.4

" 4 Ud iP 07 09 30.3

" 4 Up iP 09 18 36.9
 i 09 18 47.2
 micr sec
 PKP1 Z' 0.1 0.6
 Um iP 09 18 25.5
 iSKP1 09 21 03.9
 Ud iP 09 18 39.3
 De iP 09 18 48.7
 South of Fiji Islands
 h = 660 km.

1978
 July 4 Up iP 15 58 26.4
 ipP 15 58 36.0
 Um iP 15 58 01.8
 ipP 15 58 13.2
 Ud iP 15 58 32.4
 ipP 15 58 43.0
 Near east coast of Honshu, Japan.
 h = 40 km (Up,Um,Ud).

" 4 Up iSgl 16 51 43.5
 Ki eSn 16 51 17
 eSgl 16 51 36
 Sk eSgl 16 51 41
 Um iPgl 16 49 39.1
 iSgl 16 49 49.6
 iRg 16 49 54.7
 Ud eSgl 16 52 10
 Gulf of Bothnia, 63.6°N, 22.1°E.
 Origin time = 16 49 25.
 Near-surface event.

" 4 Um iPgl 16 49 44.4
 iRg 16 50 00.0
 Same location as the preceding event.
 Origin time = 16 49 30.
 Near-surface event.

" 4 Um iP 22 09 40.1

" 4 Ud iP 22 24 06.3
 i 22 24 34.0
 Greece (h = 10 km).

" 4 Up iP 22 27 54.2
 ipP 22 27 59.8
 iS 22 31 35
 micr sec
 P Z' 0.1 0.9
 Mx E 1.6 7
 Mx N 2.9 7
 Mx Z 0.5 7
 Ki iP 22 29 10.2
 ipP 22 29 15.4
 micr sec
 P Z' 0.1 0.9
 Mx E 1.6 8
 Mx N 1.5 9
 Sk iP 22 28 39.4
 ipP 22 28 44.3
 Um iP 22 28 33.6
 (cont.)

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

1978

July 4 (cont.)
 Um iS 22 32 43
 Ud iP 22 28 03.1
 ipP 22 28 07.0
 De iP 22 27 25.4
 Greece.
 h = 20 km (Up,Ki,Sk,Ud).
 m = 5.1 (Up,Ki).

" 4 Up iP 22 44 16.7
 i 22 44 19.4
 iS 22 48 29
 micr sec
 P Z' 0.2 1.6
 i Z' 0.3 1.3
 Ki eP 22 45 17
 i 22 45 19.0
 micr sec
 i Z' 0.1 0.8
 Sk iP 22 44 58.1
 i 22 44 59.6
 Um iP 22 44 43.6
 i 22 44 45.6
 Ud eP 22 44 29
 i 22 44 32.1
 De iP 22 43 59.8
 i 22 44 01.4
 Turkey (h = 15 km).
 m = 5.5 (Up,Ki).

" 4 Up iP 23 16 31.4
 Sk eP 23 16 27
 Um iP 23 16 11.6
 Ud iP 23 16 39.6
 De eP 23 16 58
 Off east coast of Honshu,
 Japan (h = 45 km).

" 5 Up iP 02 53 55.8 C
 micr sec
 P Z' 0.5 0.5
 Ki iP 02 53 39.4 C
 micr sec
 P Z' 1.5 0.5
 Sk iP 02 54 10.7 C
 iPP 02 55 33.7
 Um iP 02 53 40.3 C
 Ud iP 02 54 11.9 C
 De iP 02 54 19.0 C
 iPP 02 55 39.1
 Eastern Kazaakh SSR.
 m = 6.9 (Up,Ki).
 Underground explosion.

1978

July 5 Ud iP 05 13 07.1
 " 5 Up iP 05 19 48.2
 Um iP 05 19 26.6
 Ud iP 05 19 56.3
 Near east coast of Honshu,
 Japan (h = 60 km).

" 5 Up iP 06 42 53.9
 i 06 43 03.1
 micr sec
 Mx N 1.7 14
 Mx Z 0.5 13
 Ki iP 06 41 59.5
 micr sec
 Mx E 1.1 15
 Mx N 1.0 14
 Sk eP 06 42 00
 Um iP 06 42 32.2
 Ud iP 06 42 39.7
 De iP 06 43 15.6
 Jan Mayen Island region
 (h = 10 km).
 M = 4.3 (Up,Ki).

" 5 Ud iP 07 55 54.9
 Tadzhik SSR (h = N).

" 5 Up iP 14 40 22.0
 Um iP 14 40 00.4
 Ud iP 14 40 28.0
 ipP 14 40 32.9
 Off east coast of Honshu,
 Japan (h = 10 km).

" 5 Up eP 14 43 17
 Ud iP 14 43 34.5
 Southern Greece (h = 10 km).

" 5 Up iP 20 27 55.5
 micr sec
 P Z' 0.1 1.1
 Ki iP 20 27 39.9
 micr sec
 P Z' 0.2 1.2
 Um iP 20 27 50.2
 Ud iP 20 27 47.2
 De iP 20 27 55.8
 ipP 20 28 13.0
 Guerrero, Mexico (h = 60 km).
 m = 5.9 (Up,Ki).

" 6 Up eP 06 19 01
 (cont.)

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

1978				1978			
July				July			
6	(cont.)			8	(cont.)		
	Ki	ipP	06 18 31.9		Ud	iP	03 20 30.3
	Um	iP	06 18 38.0		De	iP	03 20 36.7
	Ud	iP	06 19 07.4		Molucca Passage (h = 40 km).		
		ipP	06 19 18.9		m = 6.3 (Up,Ki).		
	Off east coast of Honshu, Japan (h = N).			"	8	Up	i
"	6	Ki	iP			Ki	iP
		Ud	iP				i
	Philippine Islands region (h = N).						iS
"	6	Ud	iSgl				i
"	6	Ki	iSgl			Um	iP
"	6	Up	iP				iS
		Ki	iP				i
		Um	iP			Ud	i
		Ud	iP				i
		De	iP			De	iP
	Mediterranean Sea (h = 30 km).					Greenland Sea, approximate location 73°N, 7°E.	
"	6	Up	iP			Origin time = 05 56 47.	
		Ki	eP	"	8	Ki	i
		Ud	iP				i
		De	iP			Um	iS
	Mediterranean Sea (h = N).					Probably from the same region as the preceding event. Cf. Tromsøe readings for the two events.	
"	7	Ud	iPKP1	"	8	Up	iP
	Fiji Islands region (h = 500 km).					Ki	iP
"	7	Up	iPKP1			Um	iP
		Ki	ePKP			De	iP
		Um	e(PKP)			Andreanof Islands, Aleutian Is. (h = 70 km).	
			ipKP	"	8	Up	iP
		Ud	iPKP1			Ud	iP
		De	iPKP1			Southern Iran (h = 35 km).	
	South of Fiji Islands (h = 220 km).			"	8	Up	iP
"	8	Up	iP	"	8	Um	eP
"	8	Up	iP			Ud	iP
			micr sec			Greece (h = 10 km).	
		P	Z' 0.1 1.0	"	8	Up	iPKP1
	Ki	iP	03 20 07.9			Um	iPKP1
			micr sec			Ud	iPKP1
		P	Z' 0.2 1.1			De	iPKP1
	Um	iP	03 20 12.7			Kermadec Islands (h = N).	
	(cont.)						

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

1978						1978				
July	8	Up	iP	19 19 55.0		July	9	De	ePKP1	16 34 17
			ipP	19 20 07.5					Fiji Islands region	
		Ki	eP	19 19 36					(h = 550 km).	
		Um	iP	19 19 36.0		"	9	Ud	iP	17 24 06.0
		Ud	iP	19 20 06.1					South Atlantic ridge	
			ipP	19 20 17.9					(h = N).	
		Ryukyu Islands.								
		h = 40 km (Up,Ud).								
"	8	Up	iP	20 01 19.9		"	9	Ki	iP	19 12 48.4
		Um	iP	20 01 01.6					Java (h = N).	
		Ud	iP	20 01 24.5		"	9	Um	iP	19 35 24.2
"	8	Up	iP	21 38 44.9				Ud	iP	19 35 57.5
		Ud	iP	21 38 58.4					Kuril Islands (h = 110 km).	
		Burma-India border region				"	9	Up	ipP	23 31 19.2
		(h = N).						Ki	i	23 30 41.9
"	8	Up	iP	22 40 43.1				Ud	iP	23 31 15.3
				micr sec				De	iP	23 31 31.5
			P	Z' 0.1 1.3				Hokkaido, Japan region		
		Ki	iP	22 41 28.6				(h = N).		
				micr sec		"	10	Up	iP	00 25 20.8
			P	Z' 0.1 1.3				Ki	iP	00 24 27.1
		Um	iP	22 41 08.6					ipP	00 24 36.3
		Ud	iP	22 40 39.1				Um	iP	00 24 54.6
		De	iP	22 40 19.1					ipP	00 25 05.2
		Ascension Island region						Ud	iP	00 25 18.7
		(h = N).							ipP	00 25 29.5
		m = 5.5 (Up,Ki).						De	iP	00 25 42.0
"	8	Um	iP	22 56 04.5				Unimak Island region.		
"	9	Ud	iP	02 15 54.1				h = 35 km (Ki,Um,Ud).		
"	9	Ki	e(PKP)	02 32 28		"	10	Ud	iP	04 46 13.0
			ipKP	02 32 31.1				Volcano Islands region		
		Um	ipKP	02 32 38.3				(h = 150 km).		
		Ud	i(PKP)	02 32 41.4		"	10	Up	ipKP1	05 48 58.9
		De	ipKP	02 32 54.8				Um	ipKP1	05 48 48.3
		Fiji Islands (h = N).						Ud	ipKP1	05 48 59.6
"	9	Up	iP	04 27 21.7				South of Kermadec Islands		
		Ki	iP	04 25 39.1				(h = 60 km).		
			iS	04 27 46.5		"	10	Up	iP	06 12 24.9 D
		Um	iP	04 26 31.8					ipP	06 12 54.4
			iS	04 29 20.2					micr sec	
			i	04 29 57.5				P	Z' 0.1 0.7	
			iLg2	04 31 15.2				Ki	iP	06 11 36.6 D
		Ud	iP	04 27 18.2					micr sec	
		De	eP	04 27 55				P	Z' 0.2 0.9	
		Svalbard region.						Um	iP	06 11 59.4
		Origin Time = 04 22 56.							ipP	06 12 38.2
									ipP	06 13 05.0
								(cont.)		

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

1978									1978										
July	10	(cont.)							July	11	(cont.)								
		Ud	iP	06	12	30.5	D				Ud	ipP	03	05	43.3				
			iPcP	06	12	57.3					De	iP	03	05	59.0				
		De	iP	06	12	49.2	D				Queen Charlotte Island region.								
		Northwest Kuril Islands									h = 20 km (Up,Um,Ud).								
		(h = 340 km).									m = 6.0 (Up,Ki).								
		m = 5.6 (Up,Ki).																	
"	10	Ki	iP	07	06	30.5			"	11	Up	iP	03	06	44.4				
		Ud	iP	07	06	39.0					Um	iP	03	06	24.6				
		De	iP	07	06	35.4					Ud	iP	03	06	51.8				
		Afghanistan-USSR border region (h = 220 km).										De	iP	03	07	04.7			
											South of Honshu, Japan (h = 190 km).								
"	10	Ud	iP	09	47	39.1			"	11	Ud	iP	03	15	22.8				
		De	iP	09	47	05.2													
		Mediterranean Sea (h = N).									"	11	Up	iPKP	05	52	59.7		
												Ki	iPKP	05	52	44.0			
"	10	Ki	ipP	13	32	34.3						Um	iPKP	05	52	50.2			
		Ud	iP	13	33	12.1						Ud	ePKP	05	53	04			
			ipP	13	33	22.0							iSKP1	05	56	28.0			
		Off east coast of Honshu, Japan (h = 35 km).										De	iPKP	05	53	09.0			
													iSKP1	05	56	39.4			
"	10	Ud	eP	13	55	23					New Hebrides Islands (h = 50 km).								
		Off east coast of Honshu, Japan (h = N).									"	11	Ki	iPKP	06	00	43.2		
												Um	iPKP	06	00	49.9			
"	10	Ud	iPKP1	18	36	00.9						Ud	iPKP	06	00	59.1			
			i	18	36	18.5							iSKP1	06	04	22.0			
		De	iPKP1	18	36	11.3						De	iPKP	06	01	06.0			
		Kermadec Islands region (h = 130 km).											iSKP1	06	04	31.5			
											New Hebrides Islands (h = 35 km).								
"	10	Ud	iPKP	20	04	53.6					"	11	Up	iP	12	29	29.6		
		De	iPKP	20	05	02.3								ipP	12	31	46.3		
"	10	Ud	eP	20	34	26													
"	11	Ud	iP	02	37	33.4								P	Z'	0.1	0.9		
		Hokkaido, Japan region (h = 65 km).										Ki	iP	12	29	36.7			
													iPP	12	33	43.4			
"	11	Up	iP	03	05	43.6	C							P	Z'	0.2	1.0		
			ipP	03	05	48.9								Um	iP	12	29	35.9	
															i(PP)	12	33	29.1	
														Ud	iP	12	29	20.1	
			P	Z'	0.2	1.0									ipP	12	31	37.2	
		Ki	iP	03	04	54.8	C							De	iP	12	29	19.0	
															ipP	12	31	34.3	
															iPP	12	33	12.9	
			P	Z'	0.1	1.0													
		Um	iP	03	05	20.8													
			ipP	03	05	26.5													
		Ud	iP	03	05	37.2	C												
		(cont.)									Western Brazil.								
											h = 650 km (Up,Ud,De).								
											m = 6.2 (Up,Ki).								

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

1978				1978					
July	11	Up	iP	13 46 00.1 D	July	12	Ki	iP	11 48 12.2
				micr sec			Um	iP	11 48 30.0
			P	Z' 0.1 0.6			Ud	iP	11 48 59.7
		Ki	iP	13 45 12.5 D			Near east coast of Honshu, Japan (h = 45 km).		
				micr sec					
			P	Z' 0.1 0.8	"	12	Up	ipP	11 57 30.3
		Um	iP	13 45 34.6 D					micr sec
		Ud	iP	13 46 06.3 D			Mx	E	0.8 11
		De	iP	13 46 23.6			Mx	N	1.1 13
		Sea of Okhotsk (h = 410 km). m = 5.3 (Up,Ki).					Mx	Z	1.0 11
"	11	Ud	iP	19 51 59.3			Ki		micr sec
"	11	Ud	iP	22 59 07.4			Mx	E	1.1 15
		Pakistan (h = 10 km).					Mx	N	0.7 12
"	11	Up	iP	22 59 42.5			Um	iP	11 57 38.5
		Ki	iP	22 58 56.9			ipP		11 57 48.8
		Um	iP	22 59 18.2			Ud	iP	11 57 41.9
		Ud	iP	22 59 49.2			De	iP	11 57 27.4
		De	iP	23 00 05.3			Eastern Caucasus (h = 45 km). M = 4.7 (Up,Ki).		
		Kuril Islands (h = 40 km).			"	12	Up	iP	12 23 07.6
"	12	Ud	eP	00 14 12			Ki	eP	12 22 23
		Kuril Islands (h = N).					Um	iP	12 22 43.0
"	12	Ki	iP	00 38 49.8			Ud	iP	12 23 12.3
		Ud	iP	00 37 49.4			Near east coast of Honshu, Japan (h = N).		
		De	iP	00 37 17.1	"	12	Up	iP	13 31 39.3
		Crete (h = 80 km).					Ud	iP	13 31 51.8
"	12	Ud	ipP	01 46 22.0			Turkey (h = 5 km).		
		Hindu Kush region (h = 50 km).			"	12	Up	iP	15 02 17.5
"	12	Up	iP	06 41 04.8			Ki	iP	15 03 02.9
		Ki	iP	06 40 12.5			Sk	eP	15 02 26
		Ud	iP	06 41 05.4			Um	iP	15 02 42.9 C
		Andreanof Islands, Aleutian Is. (h = 55 km).					i		15 03 00.4
"	12	Ud	iP	08 21 11.5			Ud	iP	15 02 12.6 C
							De	eP	15 01 52
"	12	Up	iPKP2	08 41 13.8	"	12	Up	iP	17 11 48.8 C
		Ki	iPKP1	08 40 50.1					micr sec
		Um	iPKP1	08 40 58.3			P	Z'	0.2 1.0
		ipPKP1		08 41 09.3			Ki	iP	17 11 14.5 C
		Ud	iPKP1	08 41 10.1					micr sec
		ipPKP1		08 41 19.9			P	Z'	0.1 1.1
		South of Kermadec Islands. h = 35 km (Um,Ud).					Sk	iP	17 11 22.7
							Um	iP	17 11 34.3 C
							Ud	iP	17 11 40.5 C
							De	iP	17 11 57.2 C
							Nevada. m = 6.1 (Up,Ki). Underground explosion.		

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

1978				1978									
July	12	Ki	i	18 02	36.1	July	13	Up	iP	04 24	18.8		
		Sk	eP	18 02	10			Ud	iP	04 24	39.4		
		Um	iP	18 02	47.8			"	13	Up	iP	13 36	16.1
		Ud	i	18 02	38.2					iS	13 45	25	
		Iceland region (h = 10 km).								iP'P'	14 04	46.5	
"	12	Up	iP	22 00	06.6								
			i	22 00	08.3								
					micr sec								
			i	Z'	0.1 1.1					P	Z'	0.3 1.0	
			Mx	E	0.6 10					Mx	E	0.9 16	
			Mx	N	1.0 14					Mx	N	1.4 16	
			Mx	Z	1.0 12					Mx	Z	2.0 17	
		Ki	iP	21 59	48.2			Ki	iP	13 35	22.8		
			i	21 59	50.2				iS	13 43	33.4		
			i	22 00	20.2				eP'P'	14 04	53		
					micr sec								
			P	Z'	0.1 1.1					P	Z'	0.6 1.0	
			Mx	E	0.9 13					Mx	E	1.5 18	
			Mx	N	1.7 15					Mx	N	1.5 18	
		Sk	eP	22 00	17			Sk	iP	13 35	52.5		
			i	22 00	19.7			Um	iP	13 35	49.9		
		Um	iP	21 59	52.8				iS	13 44	22.4		
			i	21 59	55.0				iScS	13 45	43.4		
		Ud	iP	22 00	19.6			Ud	iP	13 36	15.1		
			i	22 00	21.3			De	iP	13 36	37.8		
		De	i	22 00	26.5			Fox Islands, Aleutian Islands (h = N).					
		Szechwan province, China (h = N).						m = 6.5, M = 5.3 (Up,Ki).					
"	12	Um	iP	22 44	12.6	"	13	Ki	iP	15 41	55.3		
"	13	Up	iPKP1	04 01	08.9			Um	iP	15 42	20.4		
		Ki	iPKP1	04 00	57.0			"	13	Sk	iP	17 32	09.1
			iSKP1	04 03	30.7					Um	iP	17 32	01.2
		Sk	iPKP1	04 01	02.5					Ud	iP	17 31	32.7
		Um	iPKP1	04 00	56.0			Greece (h = 10 km).					
			eSKP1	04 03	34			"	13	Up	eP	21 59	26
			iSKP2	04 03	41.2					Ki	iP	21 58	49.7
		Ud	iPKP1	04 01	11.1					Um	iP	21 59	03.1
		De	iPKP1	04 01	20.6					Ud	iP	21 59	25.5
		South of Fiji Islands (h = 640 km).						Volcano Islands region (h = N).					
"	13	Up	eP	04 06	40	"	14	Um	iPKP	00 15	56.5		
		Ki	iP	04 05	57.3			Solomon Islands (h = 70 km).					
		Sk	eP	04 06	36			"	14	Um	iP	02 01	37.1
		Um	iP	04 06	16.9			Turkey (h = N).					
		Ud	iP	04 06	46.1			"	14	Up	iPKP1	05 49	17.7
		De	iP	04 07	05.0					Ki	iPKP	05 49	07.8
		Kuril Islands (h = N).								iSKP1	05 51	54.5	
										Um	iPKP	05 49	14.1
								(cont.).					

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

1978						1978						
July	14	(cont.)				July	14	(cont.)				
		Um	iSKP1	05 52 05.5				Samar, Philippine Islands				
		Ud	iPKP1	05 49 18.9				(h = N).				
				South of Fiji Islands				Double P, in average				
				(h = 470 km).				4.2 s apart.				
"	14	Ki	iP	06 27 00.1		"	14	Ki	eP	20 22 04		
		Ud	iP	06 27 25.3				Ud	iP	20 22 20.6		
				Molucca Passage (h = 60 km).						Tibet (h = N).		
"	14	Um	iP	11 11 30.2		"	14	Up	iPKP1	20 39 05.9		
		Ud	iP	11 12 00.6						micr sec		
				Off east coast of Honshu,					PKP1	Z' 0.1 1.0		
				Japan (h = 50 km).				Ki	ePKP1	20 38 45		
"	14	Um	iP	12 42 10.0				Sk	iPKP	20 38 53.8		
				Arabian Sea (h = N).					iPKP1	20 39 00.4		
"	14	Up	iP	14 16 18.2				Um	iPKP1	20 38 55.0		
				micr sec					i	20 39 05.8		
			P	Z' 0.1 1.2				Ud	iPKP1	20 39 07.5		
		Ki	iP	14 15 38.2				De	ePKP1	20 39 19		
		Sk	iP	14 16 11.2						South of Kermadec Islands		
		Um	iP	14 15 55.9 C						(h = 55 km).		
			ipP	14 16 09.5		"	14	Ud	iP	22 03 48.0		
			iPcP	14 16 24.5								
		Ud	iP	14 16 23.8 C		"	15	Up	iP	02 34 44.1 D		
			ipP	14 16 40.0					i	02 35 37.0		
		De	iP	14 16 39.7						micr sec		
				Near east coast of Honshu,					P	Z' 0.1 1.0		
				Japan.				Ki	iP	02 34 47.6 D		
				h = 55 km (Um,Ud).					i	02 35 35.2		
"	14	Up	iP	16 08 37.1						micr sec		
		Ki	iP	16 07 51.6					P	Z' 0.2 0.7		
		Um	iP	16 08 12.0				Sk	iP	02 35 07.9		
		Ud	iP	16 08 43.0					iPP	02 36 59.7		
		De	iP	16 09 00.6				Um	iP	02 34 40.0		
				Kuril Islands (h = 80 km).					i	02 35 38.1		
"	14	Up	iP	17 25 40.2					iPP	02 36 15.1		
			il	17 25 44.3				Ud	iP	02 35 00.8 D		
				micr sec				De	iP	02 34 59.0 D		
									iPP	02 36 48.6		
			il	Z' 0.1 1.1						Tadzhik-Sinkiang border		
		Ki	iP	17 25 21.1						region (h = 160 km).		
			il	17 25 26.1						m = 5.7 (Up,Ki).		
				micr sec				"	15	Ud	iP	05 32 08.4
			il	Z' 0.1 1.0						Greece (h = 10 km).		
		Um	iP	17 25 28.7				"	15	Ud	iP	08 43 23.8
			il	17 25 32.8				"	15	Up	iP	10 30 29.0
		Ud	iP	17 25 49.1						(cont.)		
			il	17 25 52.7								
		De	il	17 26 02.6								
				(cont.)								

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

1978				1978				
July	15	(cont.)		July	16	Up	iP	03 36 14.5
		Up	micr sec			Ud	iP	03 36 25.0
		P	Z' 0.1 1.0	"	16	Ud	iPKP1	06 27 55.2
		Ki	iP 10 29 50.7			De	iPKP1	06 28 06.6
		Sk	iP 10 30 22.6			South of Fiji Islands		
		Um	iP 10 30 08.3			(h = 540 km).		
		Ud	iP 10 30 35.9	"	16	Up	iP	07 51 35.6
		De	iP 10 30 49.9			Ki	eP	07 50 59
		Off east coast of Honshu, Japan (h = 15 km).				Sk	eP	07 51 30
"	15	Up	iP 17 55 54.6 C			Um	iP	07 51 14.2
		i	17 55 59.2			Ud	iP	07 51 42.4
		ipP	17 56 08.4			Off east coast of Honshu, Japan (h = N).		
			micr sec	"	16	Um	iP	11 50 17.5
		P	Z' 0.1 1.0			Tanibar Islands region		
		Mx	E 1.0 18			(h = 70 km).		
		Mx	N 1.1 20	"	16	Um	iP	16 54 57.2
		Mx	Z 1.4 20	"	17	Up	iPKP1	00 28 04.1 D
		Ki	iP 17 55 11.5 C			iSKP1		00 30 56.4
		i	17 55 16.2			micr sec		
			micr sec			Ki	PKP1 Z' 0.1 1.0	
		P	Z' 0.1 0.9			iSKP1		00 27 53.9
		Mx	E 0.7 16			iSKP1		00 30 35.1
		Mx	N 0.7 15			Sk	iPKP1	00 27 57.7
		Sk	iP 17 55 46.3			iSKP1		00 30 50.2
		Um	iP 17 55 30.6 C			Um	iPKP	00 27 58.3
		i	17 55 35.6			i		00 28 03.2
		ipP	17 55 47.6			iSKP1		00 30 45.9
		iS	18 04 10			Ud	iPKP1	00 28 05.9
		Ud	iP 17 56 00.5 C			iSKP1		00 30 58.1
		ipP	17 56 18.8			De	iPKP1	00 28 15.6
		De	iP 17 56 17.7			ipPKP1		00 30 23.3
		Hokkaido, Japan region.				South of Fiji Islands		
		h = 60 km (Up,Um,Ud).				(h = 55 km).		
		m = 5.7, M = 5.2 (Up,Ki).		"	17	Ki	iSKP1	04 19 02.8
"	16	Up	iP 03 17 17.2			Sk	e(PKP)	04 16 28
			micr sec			Ud	i(PKP1)	04 16 32.6
		P	Z' 0.1 1.4			iPKP1		04 16 35.3
		Ki	iP 03 16 59.5			iSKP1		04 19 26.3
			micr sec			De	iPKP1	04 16 46.3
		P	Z' 0.1 1.1			South of Fiji Islands		
		Sk	eP 03 17 25			(h = 530 km).		
		Um	iP 03 17 04.8	"	17	Ud	iP	05 19 24.9
		Ud	iP 03 17 26.4					
		ipP	03 17 34.8					
		Luzon, Philippine Islands						
		(h = 60 km).						
		m = 5.5 (Up,Ki).						

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

1978				1978					
July	17	Ki	epP	09 28 21	July	18	Sk eP	01 55 20	
			i	09 28 35.5			West of Galapagos Islands (h = N).		
		Sk	eP	09 27 58					
		Ud	ipP	09 28 10.7		"	18	Sk iP	03 16 06.9
		Leeward Islands (h = 45 km).						i	03 16 16.3
"	17	Up	e(PKP)	13 44 42			Ud	eP	03 16 15
			i(PKP)	13 44 50.0				ePP	03 19 23
			iPKP	13 44 57.5			Off coast of Chiapas, Mexico (h = N).		
			iPP	13 47 25.9		"	18	Ud iP	09 21 53.5
			iSKP1	13 47 58.8		"	18	Sk iP	14 38 44.9
			iSKKP	13 57 17.7			Ud	iP	14 38 49.0
		Ki	e(PKP)	13 44 27			De	iP	14 38 51.1
			iPKP	13 44 41.5			Columbia-Ecuador border region (h = 90 km).		
			i(PP)	13 46 16.0		"	18	De iP	15 16 53.5
			iPP	13 46 37.4		"	18	Ki eP	16 52 54
			iSKP	13 47 41.3		"	18	Ud iP	19 52 37.8
			iPPP	13 49 22.3		"	18	Ki ePn	20 17 28
			i	13 57 18.2				iSgl	20 18 35.8
			iSKKP	13 57 56.4			North coast of Norway, near 71 1/4°N, 27 1/2°E. Origin time = 20 16 23. Explosion? Solution from Helsinki regional bulletin.		
		Sk	e(PKP)	13 44 37		"	18	Up iP	22 09 20.7
			iPKP	13 44 52.0				i	22 09 22.2
			iPP	13 47 09.0				ipP	22 11 14.9
			i	13 47 16.6				iS	22 18 27
			iSKP1	13 47 49.4			Ki	iP	22 08 47.8
			i	13 57 34.6				ipP	22 10 39.2
		Um	i(PKP)	13 44 37.3			Sk	iP	22 09 18.2
			i	13 44 40.7				iPP	22 12 18.1
			i	13 44 46.1			Um	iP	22 09 02.4
			iPKP	13 44 49.6				i	22 10 02.0
			iPP	13 46 56.2				ipP	22 10 52.7
			iSKP1	13 47 44.7			Ud	iP	22 09 28.4
			iSKKP	13 57 33.6				ipP	22 11 18.5
		Ud	e(PKP)	13 44 42				iPP	22 12 34.3
			iPKP	13 44 57.8				iS	22 18 41.1
			iPP	13 47 28.2			De	iP	22 09 40.3
			iSKP1	13 48 00.2			South of Honshu, Japan. h = 550 km (Up,Ki,Um,Ud).		
			iSKKP	13 57 15.6					
		De	i(PKP)	13 44 42.8					
			i	13 44 53.8					
			iPKP	13 45 05.1					
			i	13 46 49.8					
			iPP	13 47 57.1					
			iSKP	13 48 12.0					
			iSKKP	13 56 50.0					
		Samoa Islands region (h = 290 km).							
"	17	Up	iP	14 20 49.6					
		Ud	iP	14 20 50.5					
"	17	Ud	iP	15 52 37.4					

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

1978				1978			
July	20	Um	iP	12 57 08.6	July	20	(cont.)
		Ud	iP	12 57 33.2			Ki iP 20 12 43.1
"	20	Um	eP	15 18 22			Ud iP 20 13 36.7
		Molucca Passage (h = 60 km).					Andreanof Islands, Aleutian Is. (h = 70 km).
"	20	Up	iP	16 39 40.9	"	21	Um iP 04 09 52.8
		Ud	iP	16 39 15.8			Ud iP 04 09 35.2
"	20	Up	iP	17 20 00.9			Dominican republic region (h = N).
		Ki	iP	17 19 28.1	"	21	Ud iP 10 30 38.7
		Sk	eP	17 19 55			Baja California (h = N).
		Um	iP	17 19 42.1	"	21	Up iP 13 38 29.1
		Ud	iP	17 20 07.4			Sk iP 13 38 44.1
		De	iP	17 20 19.0			Ud iP 13 38 42.8
		South of Honshu, Japan (h = 420 km).					De iP 13 38 46.0
"	20	Up	iPKP1	17 45 31.4			India-China border region (h = N).
			iPKP2	17 45 50.4	"	21	Um iP 16 13 48.4
		Ki	iPKP1	17 45 18.8			Ki iP 18 49 06.3
			micr sec				Sk eP 18 49 09
			PKP1 Z'	0.1 0.9			Um iP 18 48 44.8
		Um	iPKP1	17 45 24.1			Ud iP 18 48 51.1
			ipPKP1	17 45 30.8			De iP 18 48 36.7
		Ud	iPKP1	17 45 36.5			Southern Iran (h = N).
			iPKP2	17 45 57.0	"	21	Up iP 21 01 26.3
		Off w. coast of S. Island N.Z. (h = N).					iPcP 21 01 51.9
"	20	Up	iP	18 26 04.2 D			Ki iP 21 00 33.2
			ipP	18 26 18.6			iPcP 21 01 18.3
			micr sec				Sk e 21 01 37
			P Z'	0.1 0.9			Um iP 21 00 59.3
		Ki	iP	18 25 11.6 D			iPcP 21 01 34.2
			ipP	18 25 25.1			Ud iP 21 01 26.6
		Sk	iP	18 25 44.8			iPcP 21 01 50.7
		Um	iP	18 25 37.1			De iP 21 01 48.1
			ipP	18 25 51.1			Andreanof Islands, Aleutian Is. (h = 55 km).
		Ud	iP	18 26 05.7 D	"	22	Up iP 03 54 35.9
		De	iP	18 26 27.3			Ki iP 03 53 44.3
		Rat Island, Aleutian Islands. h = 50 km (Up, Ki, Um).					Sk eP 03 54 21
"	20	Up	iP	19 34 47.7			Ud iP 03 54 40.6
		Um	iP	19 33 33.8			Northwest of Kuril Islands (h = 230 km).
		Ud	iP	19 34 49.6	"	22	Up iP 11 49 49.9
"	20	Up	iP	19 54 47.5			Ud iP 11 49 51.4
		Ud	iP	19 54 49.0			
		De	iP	19 55 03.0			
"	20	Up	iP	20 13 36.1			
		(cont.)					

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

1978				1978								
July	23	Up	iP	15 26	17.0	July	23 (cont.)					
		Ki	iP	15 25	52.8			Um	iP	17 07	54.2	
		Sk	eP	15 26	16			Ud	iP	17 08	18.0	
		Um	iP	15 26	02.1			De	eP	17 08	31	
		Ud	iP	15 26	26.5			Taiwan region (h = 20 km).				
		Taiwan region (h = N).										
"	23	Up	eP	15 29	13	"	23	Up	eP	17 42	35	
		Ki	iP	15 28	17.7				i	17 43	12.0	
		Sk	eP	15 28	41			Ki	eP	17 42	17	
		Um	iP	15 28	47.4			Um	iP	17 42	24.9	
		Ud	i	15 29	19.4			Ud	iP	17 42	50.3	
		De	iP	15 29	35.2			Taiwan region (h = N).				
		Central Alaska (h = N).					"	23	Ud	iP	17 52	57.0
"	23	Up	iP	15 44	32.5	"	23	Up	iP	21 43	16.4	
		Ki	iP	15 44	06.6			Ki	eP	21 42	35	
		Ud	iP	15 44	39.4			Um	iP	21 42	57.2	
								Ud	iP	21 43	14.5	
"	23	Up	iP	16 03	51.8	"	24	Ki	iP	01 59	55.2	
			ipP	16 04	00.8			Ud	iP	02 00	18.6	
		Ki	iP	16 03	33.9	"	24	Up	iP	02 09	21.6	
		Sk	eP	16 03	57			Ki	iP	02 09	23.3	
		Um	iP	16 03	42.5			Sk	iP	02 09	45.7	
		Ud	iP	16 04	06.3			Um	iP	02 09	17.3	
		De	ipP	16 04	20.3			Ud	iP	02 09	37.9	
		Taiwan region (h = 20 km).							De	iP	02 09	40.8
"	23	Up	iP	16 14	40.2	"	24	Up	iP	02 48	55.5 C	
		Ki	eP	16 14	13				i	02 49	01.1	
		Sk	eP	16 14	41				i	02 49	27.5	
		Um	iP	16 14	23.2						micr sec	
		Ud	iP	16 14	48.1				P	Z'	0.1 1.0	
		De	iP	16 14	56.8			Ki	iP	02 48	32.6	
		Taiwan region (h = 30 km).								i	02 48	37.6
"	23	Up	iP	16 17	26.1						micr sec	
		Ki	iP	16 17	02.9				P	Z'	0.1 0.9	
		Um	iP	16 17	07.6			Sk	iP	02 48	59.1	
		Ud	iP	16 17	34.2				i	02 49	05.1	
		De	iP	16 17	42.1			Um	iP	02 48	40.1	
		Taiwan region (h = N).								i	02 48	45.3
"	23	Up	iP	16 27	19.7			Ud	iP	02 49	04.5	
		Ki	iP	16 26	31.8				i	02 49	10.6	
		Um	iP	16 26	54.6			De	iP	02 49	12.3	
		Ud	iP	16 27	25.5				i	02 49	17.7	
		De	iP	16 27	42.9			Taiwan region (h = N).				
		Kuril Islands (h = N).							m = 5.8 (Up,Ki).			
"	23	Up	iP	17 08	08.9	"	24	Ki	iP	06 20	01.9	
		Ki	iP	17 07	46.2			Ud	iP	06 20	27.8	
		Sk	eP	17 08	12			Halmahera (h = 170 km).				
		(cont.)										

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

1978									1978									
July	24	Up	iP	06 34	45.6				July	24	Up	iP	16 06	27.2				
			iPcP	06 35	11.0						Ki	iP	16 07	08.2				
		Ki	iP	06 33	58.7						Sk	eP	16 07	05				
		Sk	iP	06 34	35.4						Ud	iP	16 06	43.2				
		Um	iP	06 34	20.1						De	iP	16 06	25.3				
			i	06 34	24.0							i	16 07	57.3				
			ipP	06 34	36.9							Western Iran (h = 55 km).						
			i	06 35	09.4						"	24	Ud	iP	16 30	33.7		
		De	iP	06 35	10.8						"	24	Up	iP	17 20	04.8		
		Kuril Islands region (h = 60 km).										Ki	iP	17 20	14.5			
"	24	Up	iP	08 17	57.4 C						Um	iP	17 20	03.5				
			ipP	08 18	08.4						Ud	iP	17 20	22.0				
					micr sec						De	iP	17 20	17.5				
			P	Z'	0.1 1.0						"	24	Up	iPKP1	17 32	09.8		
		Ki	iP	08 17	42.1 C						Ud	iPKP1	17 32	11.9				
			ipP	08 17	52.2						De	iPKP1	17 32	22.4				
					micr sec						"	24	Ud	iP	19 32	48.8		
			P	Z'	0.1 1.0							Taiwan region (h = N).						
		Sk	iP	08 17	34.8						"	24	Up	ePKP	20 04	52		
			ipP	08 17	44.7								i	20 05	06.3			
		Um	iP	08 17	52.6										micr sec			
			ipP	08 18	04.0								Mx	E	4.3 22			
		Ud	iP	08 17	45.0								Mx	N	4.4 22			
			ipP	08 17	56.6								Mx	Z	9.7 24			
		De	iP	08 17	55.5							Ki	i(PKP)	20 04	29.4			
			ipP	08 18	06.1								iPKP	20 04	42.6			
		Gulf of Mexico. h = 35 km (Up,Ki,Sk,Um,Ud,De). m = 5.7 (Up,Ki).													micr sec			
"	24	Ki	iPKP	11 24	05.9								Mx	E	1.2 21			
		Sk	ePKP	11 24	15								Mx	N	3.0 22			
		Um	iPKP	11 24	10.9								Mx	Z	4.6 22			
		Ud	i	11 24	22.0						Sk	iPKP	20 04	51.8				
		De	iPKP	11 24	24.5							i	20 05	04.2				
		New Britain region (h = N).										Um	i(PKP)	20 04	35.4			
"	24	Up	iP	11 53	47.5 C							iPKP	20 04	47.0				
		Ki	iP	11 53	24.4 C							iSKP	20 07	36.8				
		Sk	eP	11 53	52						Ud	i(PKP)	20 04	48.2				
		Um	iP	11 53	32.5							iPKP	20 04	54.0				
		Ud	iP	11 53	56.7 C						De	iPKP1	20 04	57.2				
		De	iP	11 54	03.2							i	20 05	04.0				
		Taiwan region (h = 30 km).										i	20 08	39.5				
"	24	Ki	iP	12 21	55.3							New Hebrides Islands region (h = 35 km). M = 6.1 (Up,Ki).						
"	24	Ki	iSgl	15 31	58.8					"	25	Up	iP	00 06	41.7			
		Northwest USSR, 66.9°N, 30.5°E. Origin time = 15 29 55. Solution from Helsinki regional bulletin.										ipP	00 06	48.2				
												i	00 07	06.8				
														micr sec				
												P	Z'	0.1 1.0				

(cont.)

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

1978					1978					
July	25	(cont.)			July	25	(cont.)			
		Up		micr sec			Up	i	18 08 27.9	
		Mx	E	1.0 17			Mx	E	0.9 16	
		Mx	N	2.0 16			Mx	N	1.0 18	
		Mx	Z	2.4 15			Mx	Z	1.1 16	
		Ki	iP	00 06 17.9			Ki	iP	18 07 58.8	
		i		00 06 21.9			i		18 08 04.9	
				micr sec					micr sec	
		Mx	E	0.5 12			Mx	N	0.8 17	
		Mx	N	2.6 16			Mx	Z	0.5 11	
		Mx	Z	1.2 14			Sk	eP	18 08 27	
		Sk	iP	00 06 48.0			i		18 08 31.6	
		Um	iP	00 06 28.5			Um	iP	18 08 08.1	
		Ud	iP	00 06 49.2			i		18 08 12.9	
		i		00 06 53.9			Ud	eP	18 08 30	
		De	eP	00 07 00			i		18 08 37.1	
		Taiwan region (h = 20 km).					De	eP	18 08 42	
		M = 5.6 (Up,Ki).					Taiwan region (h = 30 km).			
"	25	Up	eP	03 23 28			M = 5.2 (Up,Ki).			
		Ki	eP	03 23 05		"	25	Ud	iP	18 28 01.8
		Ud	iP	03 23 36.1			Hokkaido, Japan region			
		Taiwan region (h = N).					(h = N).			
"	25	Ud	iP	03 28 31.5		"	25	Up	iP	20 02 20.5
"	25	Ud	iP	04 39 46.8			Ud	iP	20 02 23.8	
"	25	Ki	iP	05 01 52.1		"	25	Ki	iP	20 09 00.6
		Mariana Islands					Ud	iP	20 09 32.8	
		(h = 410 km).					Taiwan region (h = 30 km).			
"	25	Up	ipP	07 17 28.2		"	25	Ud	iPKP1	21 07 19.0
		Ud	ipP	07 17 36.6			De	iPKP1	21 07 29.9	
		Taiwan region (h = 10 km).				"	25	Up	iP	21 11 51.9
"	25	Up	ePKP	07 48 02			Ki	iP	21 11 24.7	
		Ki	iPKP	07 47 45.1		"	25	Up	iP	23 09 13.9
		Ud	iPKP	07 48 00.4			Ki	iP	23 08 20.8	
		De	iPKP	07 48 04.9			Um	iP	23 08 48.1	
		Solomon Islands (h = N).					Ud	iP	23 09 13.0	
"	25	Ki	iPKP	08 13 12.5			De	iP	23 09 35.8	
		South Pacific Ocean					Unimak Islands region			
		(h = N).					(h = N).			
"	25	Ud	iPKP1	11 12 50.3		"	25	Up	iP	23 41 42.5
		De	iPKP1	11 13 01.4			ipP		23 41 46.6	
		Tonga Islands (h = N).							micr sec	
"	25	Ud	iP	12 32 15.8				pP	Z' 0.1 1.0	
"	25	Ud	iP	13 20 54.8			Ki	ipP	23 40 58.4	
"	25	Ud	iP	13 20 54.8			Sk	iP	23 41 13.3	
"	25	Up	iP	18 08 23.2			ipP		23 41 17.9	
		(cont.)					Um	iP	23 41 22.0	
							(cont.)			

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

1978				1978			
July	25	(cont.)		July	26		
		Um	ipP 23 41 26.1			Ki	iP 03 45 31.6
			iS 23 49 59			Um	iP 03 45 38.6
		Ud	iP 23 41 35.6			Ud	iP 03 46 04.2
			ipP 23 41 40.3			Taiwan region (h = 25 km)	
		De	iP 23 41 55.9	"	26	Up	iP 04 45 58.0
			ipP 23 42 00.5			Ki	iP 04 47 10.2
		Vancouver Island region.				Ud	iP 04 46 03.9
		h = 15 (Up,Sk,Um,Ud,De).				De	iP 04 45 32.1
"	26	Up	iRg 00 44 16.0			Southern Greece (h = N).	
		Ud	iRg 00 44 15.6	"	26	Ki	iP 05 00 09.2
		Central Sweden.				Ud	eP 05 00 46
		Near-surface event.				Taiwan region (h = 10 km).	
"	26	Up	iRg 00 44 28.4	"	26	Ud	iP 05 10 22.8
		Ud	iRg 00 44 28.4			Afghanistan-USSR border region (h = 250 km).	
		Central Sweden.					
		Near-surface event.		"	26	Up	iSKP 12 41 42.8
"	26	Up	eP 00 48 33			Ki	iPKP 12 38 35.6
			il 00 48 36.4			Um	iPKP 12 38 42.7
			micr sec				iSKP 12 41 29.6
		Mx	N 0.5 9			Ud	i(PKP) 12 38 44.6
		Mx	Z 0.5 9				iSKP 12 41 40.5
		Ki	il 00 48 46.3			De	iPKP1 12 38 52.1
			micr sec			Fiji Islands region (h = 470 km).	
		Mx	N 0.6 8	"	26	Up	eP 14 11 00
		Mx	Z 0.6 9			Ud	eP 14 11 12
		Sk	el 00 49 03	"	26	Up	iP 14 21 32.0
		Um	il 00 48 34.0				ipP 14 21 41.6
		Ud	iP 00 48 50.4				i 14 21 55.1
			il 00 48 53.4			Ki	iP 14 21 34.7
		De	eP 00 48 47			Um	ipP 14 21 40.5
			il 00 48 49.7			Ud	iP 14 21 44.5
		Afghanistan-USSR border region (h = 45 km).				De	eP 14 21 41
"	26	Up	iRg 00 57 14.6			Off w. coast of North Sumatera.	
		Ud	iRg 00 57 13.4			h = 30 km (Up,Ud).	
		Central Sweden.					
		Near-surface event.		"	26	Up	iSgl 14 26 07.5
"	26	Ud	iP 02 16 43.1			Sk	iSgl 14 26 06.7
"	26	Up	iP 03 37 21.9			Ud	iPgl 14 24 11.7
			ipP 03 37 34.0				iSgl 14 25 06.9
		Ki	eP 03 36 33			De	i 14 24 22.2
		Um	iP 03 36 56.7				iSn 14 24 56.0
			ipP 03 37 09.0			Southwest coast of Norway, near 58 1/2°N, 6 1/2°E.	
		Ud	iP 03 37 28.3			Origin time = 14 22 58.	
			ipP 03 37 39.7			M _L = 2.7 (Up,Ud).	
		De	ipP 03 37 57.3			Explosion?	
		Kuril Islands.					
		h = 40 km (Up,Um,Ud).					

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

1978				1978						
July	26	Up	iP	15 24 29.9	July	26	Up	eP	22 27 25	
		Ud	iP	15 24 50.7			Ki	iP	22 26 46.1	
		De	iP	15 24 38.9			Sk	e	22 27 23	
"	26	Up	eP	17 08 50			Um	iP	22 27 02.2	
		Um	iP	17 08 26.3			Ud	iP	22 27 30.7	
		Ud	iP	17 08 56.2			De	iP	22 27 46.5	
		Off east coast of Honshu, Japan (h = 25 km).					Near east coast of Honshu, Japan (h = 25 km).			
"	26	Up	iP	17 22 58.8	"	26	Um	iP	22 58 23.4	
		Ki	iP	17 22 17.0			Ud	iP	22 58 54.6	
		Um	iP	17 22 35.4			Near east coast of Honshu, Japan (h = 55 km).			
		Ud	iP	17 23 05.7						
		De	iP	17 23 21.0	"	27	Up	iP	07 35 28.7 C	
		Off east coast of Honshu, Japan (h = 35 km).							micr sec	
							P	Z'	0.1 1.1	
"	26	Up	iP	17 25 00.6 C			Ki	iP	07 34 48.3	
			ipP	17 25 11.5			Sk	iP	07 35 22.0	
				micr sec			Um	iP	07 35 06.1	
			P	Z' 0.1 1.0			Ud	iP	07 35 35.1	
		Ki	iP	17 24 18.8			De	iP	07 35 50.3	
			ipP	17 24 29.4			Near east coast of Honshu, Japan (h = 45 km).			
				micr sec						
			P	Z' 0.1 1.0	"	27	Um	iP	07 51 39.6	
		Sk	iP	17 24 52.5			Ud	iP	07 52 05.8	
		Um	iP	17 24 37.3			South of Honshu, Japan (h = 430 km).			
			ipP	17 24 48.2						
		Ud	iP	17 25 07.3	"	27	Up	iP	08 22 48.9	
			ipP	17 25 18.9				ipP	08 24 28.5	
		De	iP	17 25 21.7			Ki	iP	08 23 00.9	
		Off east coast of Honshu, Japan.					Sk	iP	08 23 16.5	
		h = 40 km (Up,Ki,Um,Ud).					Um	iP	08 22 46.8	
		m = 5.7 (Up,Ki).						ipP	08 24 21.8	
"	26	Ud	iP	18 18 26.6			Ud	iP	08 23 05.8	
							De	iP	08 23 01.8	
							Hindu Kush region (h = N).			
"	26	Up	eP	18 42 43	"	27	Um	iP	08 35 25.5	
		Ki	iP	18 42 08.0			Ud	iP	08 35 05.7	
		Sk	iP	18 41 50.5				ipP	08 35 10.2	
		Um	iP	18 42 28.1			Aegean Sea (h = 15 km).			
		Ud	eP	18 42 20						
		De	iP	18 42 58.3	"	27	Ki	eP	11 46 44	
		Iceland region (h = 10 km).					Um	iP	11 46 47.5	
"	26	Um	iP	21 30 44.5			Ud	iP	11 47 22.8	
		Ud	eP	21 31 16			De	iP	11 47 33.1	
			i	21 31 27.8						
		Near east coast of Honshu, Japan (h = N).				"	27	Ki	eP	12 54 28
							Um	iP	12 54 45.2	
							Near east coast of Honshu, Japan (h = 50 km).			

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

1978				1978								
July	27	Up	iP	13 40	46.8	July	28	Ud	eP	02 34	53	
			ipP	13 41	00.2	"	28	Up	iP	02 49	31.1	
					micr sec				ipP	02 49	37.0	
			Mx	N	0.8	15		Ki	iP	02 50	11.1	
			Mx	Z	0.6	16		Sk	iP	02 50	07.5	
		Ki	iP	13 40	07.7			Um	iP	02 49	45.8	
			ipP	13 40	21.6			Ud	iP	02 49	45.5	
					micr sec			De	iP	02 49	27.8	
			Mx	N	0.5	13		Western Iran (h = N).				
			Mx	Z	0.7	14						
		Sk	eP	13 40	40		"	28	Up	iP	02 53 53.0	C
			ipP	13 40	54.4				iPn	02 54	58.7	
		Um	iP	13 40	24.6				iPP	02 55	11.5	
			ipP	13 40	35.5						micr sec	
		Ud	iP	13 40	53.5				P	Z'	0.3	1.0
			ipP	13 41	07.8				Mx	E	0.3	7
		De	iP	13 41	07.7				Mx	Z	0.4	7
			ipP	13 41	20.3			Ki	iP	02 53	37.4	C
		Near east coast of Honshu, Japan.							iPn	02 54	37.2	
		h = 50 km (Up,Ki,Sk,Um,Ud,De).									micr sec	
		M = 5.0 (Up,Ki).							P	Z'	0.4	0.7
"	27	Ud	i(P)	15 28	22.0				Mx	E	0.3	7
		De	i(P)	15 27	25.8				Mx	N	0.3	9
"	27	Up	iP	17 55	12.6				Mx	Z	0.3	7
		Ki	iP	17 54	31.1			Sk	iP	02 54	08.7	C
		Um	iP	17 54	49.9				iPn	02 55	22.8	
			ipP	17 54	58.8				iPP	02 55	30.2	
		Ud	iP	17 55	19.8			Um	iP	02 53	37.8	C
		De	iP	17 55	35.1				i	02 54	17.6	
		Off east coast of Honshu, Japan (h = N).						Ud	iP	02 54	09.4	C
"	27	Up	i	18 44	31.1				iPn	02 55	21.6	
					micr sec			De	iP	02 54	15.7	C
			Mx	N	1.3	23			iPn	02 55	30.4	
			Mx	Z	1.6	23			iPP	02 55	43.2	
		Ki	iPKP	18 44	08.3				iLgl	03 06	39.7	
					micr sec			Eastern Kazakh SSR.				
			Mx	N	1.2	18		m = 6,3 (Up,Ki).				
			Mx	Z	1.2	18		Underground explosion.				
		Sk	ePKP	18 44	17		"	28	Um	iP	03 51	13.3
		Um	iPKP	18 44	17.0		"	28	Up	iSKP1	11 08	17.0
			i	18 44	27.0				Ki	iPKP	11 04	52.2
			iPP	18 46	29.4				Sk	iPKP	11 05	04.0
			iSKP	18 47	43.8					iSKP1	11 08	11.3
		Ud	iPKP	18 44	26.2			Um	iPKP	11 04	59.1	
		De	iPKP	18 44	32.1				iSKP1	11 08	03.0	
			i	18 44	40.2			Ud	ePKP	11 05	07	
		Tonga Islands (h = N).							eSKP1	11 08	17	
		M = 5.6 (Up,Ki).						De	e(PKP)	11 05	08	
									iPKP	11 05	15.3	
									iSKP1	11 08	27.9	
								New Hebrides Islands.				
								(h = 210 km).				

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

1978				1978			
July	28	Ki	iP	14 14	10.5	July	29 (cont.)
		Sk	iP	14 13	52.9	Up	Mx N 0.7 13
		Ud	iP	14 13	53.4		Mx Z 1.5 16
			ipP	14 16	05.3	Ki	iP 04 40 57.2
		De	eP	14 13	50		ipP 04 41 00.2
		Peru-Brazil border region					iPcP 04 43 53.8
		(h = 610 km).					micr sec
"	28	Up	eP	18 18	48		Mx N 0.9 15
		Ki	iP	18 18	41.6		Mx Z 0.7 13
		Savu Sea (h = 55 km).				Sk	eP 04 40 34
"	28	Ki	iP	18 28	47.7		ipP 04 40 37.8
"	28	Up	iP	19 39	33.6		iPcP 04 43 47.7
		Ki	eP	19 40	06	Um	iP 04 40 22.6
		Ud	iP	19 39	49.2		ipP 04 40 27.1
		De	iP	19 39	31.3		iPcP 04 43 44.2
		Western Iran (h = N).				Ud	iP 04 39 43.4
"	28	Up	eP	21 55	29		ipP 04 40 07.5
		Ki	iP	21 56	06.4		iPcP 04 43 39.3
		Um	iP	21 55	40.8	De	iP 04 39 34.4
		Ud	iP	21 55	43.7		ipP 04 39 38.4
		Southern Iran (h = N).					iPcP 04 43 32.8
"	28	Up	iP	22 13	15.6	"	Turkey.
		Um	iP	22 14	07.6		h = 15 km (Up,Ki,Sk,Um,Ud,De).
		Ud	iP	22 13	24.2		M = 4.5 (Up,Ki).
		De	iP	22 12	37.0	"	29 Up iP 08 16 24.9
		Poland (h = 10 km).					Ud iP 08 16 40.0
"	29	Up	iP	00 36	30.5		De iP 08 16 25.4
		Ki	iP	00 35	51.0		Southern Iran (h = 15 km).
		Um	iP	00 36	08.6	"	29 Up iP 09 31 02.7
		Ud	iP	00 36	38.4		Ud iP 09 31 15.0
		Near east coast of Honshu, Japan (h = 60 km).				"	29 Up iP 11 32 47.0
"	29	Up	iP	02 15	19.2	"	29 Up iP 12 40 14.2
		Ki	iP	02 15	42.8		Ki iP 12 39 31.5
		Sk	iP	02 15	43.7		Um iP 12 39 50.2
		Um	iP	02 15	27.2		Ud iP 12 40 21.1
		Ud	iP	02 15	28.0		Hokkaido, Japan region
		Carlsberg Ridge (h = 10 km).					(h = 55 km).
"	29	Ud	iP	03 22	06.3	"	29 Ud iP 13 10 19.4
"	29	Up	iP	04 39	53.2	"	29 Up iP 14 50 16.5
		ipP		04 39	56.2		micr sec
		iPcP		04 43	37.1		P Z' 0.1 1.0
		iS		04 44	10	Ki	iP 14 50 04.8
						Sk	iP 14 49 57.4
						Um	iP 14 50 14.1
						Ud	iP 14 50 06.4
						De	iP 14 50 12.5
		Mx	E	0.7	12		Guatemala (h = 10 km).
		(cont.)					

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

1978

July 31 (cont.)

Ki	eP	12 04 06
	i	12 04 09.9
	ipP	12 04 17.9
		micr sec
Mx	E	1.1 13
Mx	N	4.5 12
Mx	Z	3.9 12
Sk	eP	12 04 29
	i	12 04 33.0
Um	iP	12 04 04.4
	iS	12 10 56
Ud	iP	12 04 25.1
	i	12 04 28.5
	ipP	12 04 35.1

Southern Sinkiang prov.,
China (h = N).
M = 5.5 (Up,Ki).

" 31 Ki eP 16 43 46
Um iP 16 43 20.9
Ud iP 16 43 34.1
ipP 16 43 46.3
Turkmen SSR (h = 40 km).

" 31 Ki iP 16 43 59.4
Ud iP 16 44 30.6
Taiwan region (h = 10 km).

" 31 Ud iP 18 45 49.3
i 18 45 57.4

" 31 Up iP 20 31 28.4
Ki eP 20 31 09
Sk iP 20 31 10.9
Um iP 20 31 26.6
Ud iP 20 31 17.9
De iP 20 31 25.4
Near coast of Guatemala
(h = 55 km).

" 31 Ud iP 22 37 02.6

April 11, 1980

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SEISMOLOGICAL SECTION
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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

AUGUST 1 - 31, 1978

1978					1978					
Aug.	1	Up	iP	06 28 18.7	Aug.	1	Up	iP	18 40 40.7	
			i	06 28 20.7				i	18 41 11.8	
		Ki	iP	06 28 28.6			Ki	iP	18 40 21.4	
			i	06 28 29.8			Um	iP	18 40 27.5	
		Sk	iP	06 28 45.0			Ud	iP	18 40 47.9	
			i	06 28 46.9			Samar, Philippine Islands (h = 60 km).			
		Um	iP	06 28 17.9						
			i	06 28 19.5		"	1	Ki	iP	18 51 18.6
		De	iP	06 28 32.1				Ud	iP	18 51 45.2
			i	06 28 33.8			Samar, Philippine Islands (h = 25 km).			
		Hindu Kush region (h = 100 km).								
"	1	Up	iP	06 33 47.1	"	1	Up	i(P)	19 47 21.0	
		Ud	iP	06 34 01.1						
"	1	Up	iP	09 14 09.2	"	1	Ud	iPKP	20 49 00.0	
		Ki	iP	09 13 30.8			Tonga Islands (h = N).			
		Ud	iP	09 14 00.9						
		De	iP	09 14 20.2		"	2	Ki	iP	00 37 40.1
		Northern California (h = 0 km).						Um	iP	00 37 44.8
								Ud	iP	00 38 10.1
							Near n. coast of West Irian (h = 40 km).			
"	1	Ud	iP	09 58 11.4	"	2	Up	iP	07 02 15.6	
		Northern California (h = 0 km).					Ki	iP	07 02 48.9	
							Sk	eP	07 02 49	
"	1	Up	iPKP1	14 16 11.5			Um	eP	07 02 28	
			i	14 16 16.5			Ud	iP	07 02 31.0	
		Ki	iPKP	14 15 56.5			De	iP	07 02 15.8	
		Sk	iPKP1	14 16 04.6			Southern Iran (h = 40 km).			
		Um	iPKP1	14 16 00.1 C						
		Ud	iPKP1	14 16 12.9	"	2	Ud	iP	07 25 31.2	
			i	14 16 19.4						
		De	iPKP1	14 16 21.2	"	2	Up	iP	07 56 55.0	
								iS	08 06 03	
"	1	Ki	iP	15 40 49.6					micr sec	
			i	15 41 33.2			Mx	E	0.8 20	
		Talaud Islands (h = 120 km).					Mx	N	2.0 22	

(cont.)

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

1978				1978			
Aug.	2	(cont.)		Aug.	2	Sk eP	21 08 49
		Up	micr sec			Greece	(h = 10 km).
		Mx	Z 0.7 18				
		Ki	iP 07 56 45.5	"	3	Up	iP 00 11 59.5
			i 07 56 48.5			Ki	iP 00 11 59.7
			i 07 56 52.0				ipP 00 12 10.0
			micr sec				micr sec
		Mx	N 1.2 18				pP Z' 0.1 1.1
		Mx	Z 0.8 18			Sk	iP 00 11 45.8
		Sk	iP 07 57 10.6				ipP 00 11 55.7
			i 07 57 14.7			Um	iP 00 12 03.3
		Um	iP 07 56 47.1				ipP 00 12 13.0
			iS 08 05 49			Ud	iP 00 11 50.4
		Ud	iP 07 57 07.2				Panama-Colombia border
			i 07 57 10.3				region.
		De	eP 07 57 11				h = 25 km (Ki,Sk,Um).
			Southeast Asia (h = N).	"	3	Up	iP 01 22 28.6 C
			M = 5.3 (Up,Ki).				i 01 22 45.3
"	2	De	i(P) 07 56 59.5				iS 01 32 19
							micr sec
"	2	De	iPKP1 09 16 33.0			P	Z' 0.2 1.4
			Fiji Islands region			Mx	E 1.9 20
			(h = 610 km).			Mx	N 1.3 18
						Mx	Z 2.9 21
"	2	Up	iP 10 23 09.0			Ki	iP 01 22 40.0
		Ki	iP 10 22 16.6				i 01 22 56.7
		Ud	iP 10 23 09.8				micr sec
		De	iP 10 23 33.3			P	Z' 0.1 1.1
			Andreanof Islands,			Mx	N 0.8 17
			Aleutian Is. (h = 50 km).			Mx	Z 1.2 18
"	2	Up	iSgl 13 02 02.2			Sk	iP 01 22 48.7
		Ki	iPgl 12 58 04.5 C				i 01 23 04.9
			iSgl 12 58 25.8			Um	iP 01 22 31.2 C
		Sk	iSgl 13 00 16.9				i 01 22 40.2
		Um	iSgl 13 00 07.1				i 01 22 48.5
		Ud	iSgl 13 01 59.9				iS 01 32 26
			Coast of north Norway,			Ud	iP 01 22 39.8 C
			68.5°N, 16.3°E.				i 01 22 47.3
			Origin time = 12 57 36.				i 01 22 57.0
			M _L = 2.7 (Ki,Um).				South Indian Ocean (h = N).
			Checked with Tromsø and				m = 5.8, M = 5.3 (Up,Ki).
			Finnish station readings.	"	3	Up	iP 02 32 35.9
"	2	Ki	iPKP 16 42 33.7			Ki	iP 02 32 44.3
		Um	iPKP 16 42 40.9			Um	iP 02 32 33.9
			New Hebrides Islands				i 02 33 25.3
			(h = 210 km).			Ud	iP 02 32 52.4
							i 03 33 44.3
							Afghanistan-USSR border
							region (h = 250 km).
"	2	Up	iP 18 20 01.6	"	3	Up	iP 03 39 44.2
		Ud	iP 18 20 11.0				Greece (h = 10 km).
			Luzon, Philippine Islands	"	3	Up	iP 06 15 27.9
			(h = 110 km).				(cont.)

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

1978					1978						
Aug.	3	(cont.)			Aug.	3	(cont.)				
		Up	iS	06 21 49			Ud	iPKP	13 00 33.8		
				micr sec				iSKP1	13 03 49.1		
			P	Z' 0.1 1.0			New Hebrides Islands				
			Mx	E 3.9 14			(h = 130' km).				
			Mx	N 14 20		"	3	Up	iP	15 28 24.3	
			Mx	Z 7.4 14				Ki	iP	15 28 26.3	
		Ki	iP	06 14 55.5						micr sec	
				micr sec					P	Z' 1.0 1.0	
			P	Z' 0.1 1.0				Sk	iP	15 28 39.3	
			Mx	E 1.1 13				Ud	iP	15 28 34.4	
			Mx	N 3.9 14					ipP	15 28 45.3	
			Mx	Z 5.5 15				Southwest of Sumatera			
		Sk	iP	06 15 34.3				(h = N).			
		Um	iP	06 15 06.2			"	3	Up	iPdiff	18 25 50
			i	06 15 13.1					i(PP)	18 29 49	
			iS	06 21 05					iPP	18 30 45	
		Ud	iP	06 15 41.5					iSKS	18 36 19	
		Central USSR (h = N).							iS	18 37 59	
		m = 5.4, M = 5.7 (Up,Ki).							iPKKP	18 39 51	
"	3	Up	iP	08 09 44.1						micr sec	
		Ki	iP	08 09 51.1				PP	Z' 0.4 1.7		
		Sk	iP	08 09 14.4				Mx	E 17 30		
		Um	iP	08 09 19.2				Mx	N 26 35		
		Ud	iP	08 09 38.9				Mx	Z 49 34		
		Southeastern Alaska (h = N).					Ki	iPKP	18 29 50.9		
"	3	Ki	iP	08 50 52.8				iPP	18 30 50.6		
		East of Svalbard, approximate						iS	18 38 29		
		location 77 1/2°N, 32°E.						iPKKP	18 40 31.0		
		Origin time = 08 48 35.								micr sec	
		Solution from Helsinki						PKP	Z' 0.2 1.6		
		regional bulletin.						PP	Z' 0.2 1.8		
"	3	Ki	ePgl	11 16 41				Mx	E 1.8 22		
			iSgl	11 17 34.0				Mx	N 8.8 24		
		Sk	eSgl	11 19 47				Mx	Z 15 26		
		Um	iSgl	11 18 08.8			Sk	iPKP	18 29 41.2		
		Northwest USSR, 66.7°N,						iPP	18 30 18.1		
		30.4°E.						i	18 30 32.6		
		Origin time = 11 15 29.						iPKKP	18 40 45.9		
		M _L = 2.7 (Ki,Um).					Ud	i(PKP)	18 29 17.1		
		By combination with Finnish						iPP	18 30 25.2		
		station readings.						i	18 31 11.8		
"	3	Ud	iP	12 24 23.5				iPKKP	18 40 55.5		
								Near coast of northern			
								Chile (h = 60 km).			
								m = 6.6 (Up,Ki).			
"	3	Up	iPKP	13 00 31.4			"	3	Ud	iPKP1	19 26 22.0
			iSKP1	13 03 44.6					Fiji Islands region		
		Ki	iPKP	13 00 18.1				(h = 620 km).			
				micr sec			"	3	Up	iP	22 47 50.8
			PKP	Z' 0.1 0.8					Ud	iP	22 47 53.1
		Sk	iPKP	13 00 29.2							
		(cont.)									

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

1978					1978						
Aug.	3	Up	iP	23 39 25.9	Aug.	4	(cont.)				
			iSKS	23 50 00			Up	ipP	09 07 16.4		
			iS	23 51 01				iS	09 17 01		
				micr sec					micr sec		
			Mx	E 3.6 21				P	Z' 0.2 1.0		
			Mx	N 4.0 22				Mx	E 1.4 15		
			Mx	Z 9.5 20				Mx	N 0.8 15		
		Ki	iP	23 39 07.1				Mx	Z 2.2 15		
			i	23 39 18.1			Ki	iP	09 06 42.3		
				micr sec					micr sec		
			i	Z' 0.1 1.0				P	Z' 0.2 1.3		
			Mx	E 1.8 20				Mx	E 0.4 14		
			Mx	N 4.3 16				Mx	N 0.5 19		
			Mx	Z 4.3 19				Mx	Z 1.2 14		
		Sk	eP	23 39 33			Sk	iP	09 07 08.1		
		Um	iP	23 39 13.7			Um	iP	09 06 49.7 D		
			i	23 39 24.6				ipP	09 07 02.4		
			iSKS	23 49 49			Ud	iP	09 07 13.1 D		
			iS	23 50 37				ipP	09 07 25.9		
		Ud	iP	23 39 31.8					Philippine Islands region.		
			i	23 39 44.4					h = 45 km (Up,Um,Ud).		
				West Irian region (h = N).					m = 5.9, M = 5.3 (Up,Ki).		
				M = 6.0 (Up,Ki).							
"	4	Up	iP	00 17 49.5	"	4	Ud	iP	10 50 10.9		
		Ki	iP	00 17 32.4					El Salvador (h = 80 km).		
		Ud	iP	00 17 57.9							
				Luzon, Philippine Islands							
				(h = N).							
"	4	Up	iP	03 15 45.8			Up	iP	14 20 46.8		
			i	03 15 49.3					micr sec		
		Ki	iP	03 15 31.1				P	Z' 0.1 1.0		
		Ud	iP	03 15 55.1			Ki	iP	14 21 09.6		
			i	03 15 58.3					micr sec		
				Luzon, Philippine Islands				P	Z' 0.1 1.0		
				(h = 30 km).			Sk	iP	14 21 10.5		
							Um	iP	14 20 55.1		
							Ud	iP	14 20 57.2		
									Chagos archipelago region		
									(h = N).		
									m = 5.7 (Up,Ki).		
"	4	Up	eSgl	03 43 33	"	4	Up	iP	17 52 01.9		
		Ki	iPn	03 40 05.5			Ki	iP	17 51 52.7		
			iPgl	03 40 13.7			Sk	iP	17 52 17.4		
			iSgl	03 41 06.4			Ud	iP	17 52 15.3		
		Sk	ePgl	03 40 21			De	iP	17 52 23.7		
			i	03 41 04.4							
			iSgl	03 41 15.2							
		Um	iSn	03 41 34.8			"	4	Ki	e	19 40 15
			i.	03 41 52.8					Ud	iP	19 40 30.7
			iSgl	03 42 01.4						Talau Islands (h = 70 km).	
				Norwegian Sea, near			"	5	Up	iPP	04 32 16.4
				67 3/4° N, 10° E.						micr sec	
				Origin time = 03 39 03.					Mx	E 1.1 19	
				M _L = 3.0 (Ki).					Mx	N 1.7 19	
									Mx	Z 4.1 20	
"	4	Up	iP	09 07 03.2 D			Ki	iPP	04 31 29.2		
			(cont.)					(cont.)			

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

1978				1978			
Aug.	6	Ud iP	02 11 42.8	Aug.	7	(cont.)	
		Afghanistan-USSR border region (h = 110 km).				Um iP	13 41 09.8
"	6	Ud iP	05 47 55.0			Ud iP	13 41 29.4
		Greece (h = 10 km).		"	7	Up iPKP1	14 24 36.4
"	6	Ud iP	07 05 46.9			Sk ePKP1	14 24 31
"	6	Ud iP	11 36 25.3			Um iPKP1	14 24 25.6
"	6	Ki eP	20 34 48			Ud iPKP1	14 24 37.7
		Sunda Strait (h = 80 km).				South of Kermadec Islands (h = 100 km).	
"	7	Up iP	01 08 07.2	"	7	Ud i(P)	16 08 17.4
		Ki eP	01 07 44	"	8	Up iP	00 09 08.9 C
		Sk e	01 08 16			iPP	00 10 44.3
		Ud iP	01 08 15.2			P Z'	0.5 1.0
		Taiwan region (h = 15 km).				Ki iP	00 09 17.4 C
"	7	Ud iP	03 37 56.7			ipP	00 10 01.8
"	7	Up iP	06 59 52.5			P Z'	0.5 1.0
		Ki iP	06 59 23.4			Sk iP	00 09 34.7 C
		Sk iP	06 59 49.7			i	00 10 39.7
		Um iP	06 59 36.5			iPP	00 11 19.2
		Mariana Islands (h = 40 km).				Um iP	00 09 07.3 C
"	7	Up iPKP1	09 50 31.3			i	00 10 13.1
		Sk iPKP1	09 50 23.9			Ud iP	00 09 25.7 C
		Um iPKP1	09 50 18.6			ipP	00 10 13.6
		Ud iPKP1	09 50 31.9			De iP	00 09 21.9 C
		De iPKP1	09 50 40.9			i	00 10 33.5
		Kermadec Islands (h = 50 km).				Afghanistan-USSR border region. h = 220 km (Ki,Ud). m = 5.9 (Up,Ki).	
"	7	Up iP	10 28 41.7	"	8	Up iP	03 11 02.8 C
		Ki iP	10 28 18.4			P Z'	0.1 0.9
		Ud iP	10 28 51.4			Ki iP	03 11 06.6 C
		Taiwan region (h = N).				P Z'	0.1 1.0
"	7	Up iPKP	12 11 20.0			Sk iP	03 10 50.5 C
		Sk ePKP	12 11 15			i	03 10 56.5
		Um i(PKP)	12 11 09.8			Um iP	03 11 08.0
		Ud iPKP1	12 11 24.3			i	03 11 13.4
		De ePKP1	12 11 32			Ud iP	03 10 52.9 C
		Kermadec Islands region (h = 380 km).				De iP	03 10 54.0
"	7	Ki iP	12 53 21.1			i	03 10 59.4
		Sk eP	12 54 11			Northern Colombia (h = 45 km). m = 5.7 (Up,Ki).	
		Um iP	12 53 57.1	"	8	Ki iP	04 45 08.4
		Ud iP	12 54 36.9			Ud iP	04 46 02.2
		De iP	12 55 05.5			Fox Islands, Aleutian Islands (h = 45 km).	
"	7	Ki e	13 40 15				
		(cont.)					

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

1978									1978										
Aug.	8	Ki	eSn	07 23 23					Aug.	8	Ki	eP	10 26 26						
			iSgl	07 23 29.5							Ud	iP	10 26 56.5						
		Sk	eSgl	07 24 08							West Irian region (h = 25 km).								
		Um	iSgl	07 22 39.4															
			i	07 22 42.4							"	8	Ki	iP	11 43 57.8				
		Coast of Västerbotten, Sweden, 65.0°N, 21.1°E. Origin time = 07 22 02. M _L = 1.6 (Um). Checked with Finnish station readings.										Ud	i	11 44 35.9					
												Mariana Islands (h = 120 km).							
"	8	Up	iPKP	08 05 18.7					"	8	Up	iP	12 15 16.1						
				micr sec							Sk	iP	12 15 56.9						
		Mx	E	2.0 21							Um	iP	12 15 55.5						
		Mx	N	2.8 22							Ud	iP	12 15 20.9						
		Mx	Z	4.5 25							Albania (h = N).								
		Ki	iPKP	08 05 03.4					"	8	Ud	iP	16 20 07.4						
				micr sec							Dodecanese Islands (h = 100 km).								
		Mx	N	1.6 21					"	8	Ud	eSgl	17 15 36						
		Mx	Z	2.3 22					"	9	Up	i(PKP)	01 07 11.1						
		Sk	iPKP	08 05 14.1							Ki	iPKP	01 07 03.0						
		Um	iPKP	08 05 10.4							Sk	iPKP	01 07 13.3						
		Ud	iPKP	08 05 20.6							Um	iPKP	01 07 10.2						
		De	iPKP	08 05 25.5							Ud	i(PKP)	01 07 10.1						
			iSKP1	08 08 49.1								iPKP	01 07 19.5						
		Santa Cruz Islands (h = 90 km). M = 5.8 (Up,Ki). M not corrected for focal depth.										Fiji Islands region (h = 300 km).							
"	8	Ki	iP	08 37 19.5					"	9	Ki	eP	10 25 08						
		Java (h = 100 km).										Ud	iP	10 25 55.0					
"	8	Ki	iP	09 38 58.3					"	9	Ki	iP	11 03 55.9						
		De	iP	09 40 15.3							Sk	e	11 04 34						
		Southern Alaska (h = 55 km).										Um	iP	11 04 07.3					
"	8	Up	iP	10 21 29.8 D							Ud	iP	11 04 39.3						
			ipP	10 21 40.2							De	iP	11 04 48.2						
				micr sec							Mongolia (h = N).								
		P	Z'	0.1 0.5					"	9	Sk	iP	12 31 58.8						
		Mx	E	0.7 18							Um	iP	12 31 48.3						
		Mx	N	1.1 16							Mid-Indian rise (h = N).								
		Mx	Z	1.2 18					"	9	Up	iP	14 44 32.3						
		Ki	iP	10 21 28.0 D							Ki	iP	14 44 04.6						
				micr sec									micr sec						
		Mx	E	0.4 13								Mx	N	0.8 17					
		Mx	N	1.7 15								Mx	Z	1.0 17					
		Mx	Z	0.8 15							Sk	iP	14 44 30.1						
		Sk	iP	10 21 49.6 D							Um	iP	14 44 16.2						
		Um	iP	10 21 23.2 D							Ud	iP	14 44 39.7						
		Ud	iP	10 21 44.9 D							Mariana Islands (h = N).								
		De	iP	10 21 44.5 D					"	9	Up		micr sec						
		Tibet (h = 35 km). M = 5.1 (Up,Ki).										Mx	E	0.8 20					
												(cont.)							

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

1978				1978			
Aug.	9	(cont.)		Aug.	9	(cont.)	
		Up	micr sec			Ki ipP	18 46 36.1
		Mx N	1.5 21			iPcP	18 46 42.6
		Mx Z	2.3 21				micr sec
		Ki ePKP	15 54 25			PcP Z'	0.1 1.3
			micr sec			Mx E	0.5 11
		Mx N	1.1 20			Mx N	1.4 14
		Mx Z	1.6 21			Mx Z	2.0 12
		Sk ePKP	15 54 34			Sk epP	18 47 04
		Um iPKP	15 54 32.4			Um i	18 46 39.8
		Ud i	15 54 48.9			ipP	18 46 44.4
		New Hebrides Islands				iPcP	18 46 50.8
		(h = 25 km).				iS	18 56 08
		M = 5.6 (Up,Ki).				Ud iP	18 47 03.2
						ipP	18 47 09.6
"	9	Ki iPKP	16 00 11.6			Taiwan (h = 20 km).	
		New Hebrides Islands				M = 5.4 (Up,Ki).	
		(h = 20 km).					
"	9	Up iP	17 13 26.6	"	9	Ki iP	19 47 23.3
		Ki iP	17 13 25.3			Um iP	19 47 31.9
		Sk iP	17 13 47.0			Ud iP	19 47 57.6
		Um iP	17 13 20.4			Taiwan region (h = N).	
		Ud iP	17 13 42.0	"	9	Ki iP	20 44 15.6
		De iP	17 13 42.0			Ud iP	20 43 33.4
		Tibet (h = N).				Azores Islands region	
						(h = 10 km).	
"	9	Up iP	18 08 18.2 C	"	9	Ki iPKP	20 58 27.3
		iPcP	18 09 57.4			Um iPKP	20 58 25.0
			micr sec			New Hebrides Islands	
		P Z'	0.1 0.7			(h = N).	
		Ki iP	18 07 22.0 C	"	10	Um iP	04 24 14.4
		iPcP	18 09 35.3			Ecuador (h = 130 km).	
			micr sec	"	10	Up iP	08 04 24.8 C
		P Z'	0.5 1.0			i	08 04 26.3
		Sk iP	18 08 06.2 C				micr sec
		iPcP	18 09 52.9			P Z'	1.3 0.8
		Um iP	18 07 46.9 C			Mx E	0.6 6
		iPcP	18 09 44.5			Mx N	1.5 7
		Ud iP	18 08 26.0 C			Mx Z	2.2 6
		iPcP	18 10 01.4			Ki iP	08 02 54.6 C
		De iP	18 08 48.4 C				micr sec
		iPcP	18 10 12.1			P Z'	2.1 0.5
		Central Siberia,				Sk iP	08 04 03.7 C
		m = 6.1 (Up,Ki).				i	08 04 06.0
		Underground explosion,				Um iP	08 03 32.4
"	9	Up i	18 46 55.3			i	08 03 33.9
		i	18 47 09.2			Ud iP	08 04 35.3
		eS	18 56 35			i	08 04 36.7
			micr sec			Novaya Zemlya,	
		Mx E	1.0 17			m = 6.3 (Up).	
		Mx N	0.9 16			Underground explosion.	
		Mx Z	2.4 18				
		Ki iP	18 46 29.1				
		(cont.)					

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

1978				1978						
Aug.	10	Ki	iPKP	11 14 15.0	Aug.	11	Up	iP	05 35 24.9	
				South Sandwich Islands			Ki	iP	05 35 06.9	
				region (h = N).			Sk	eP	05 35 30	
"	10	Sk	iSgl	12 26 42.0			Ud	iP	05 35 32.9	
		Ud	iSgl	12 27 58.5			Philippine Islands region (h = N).			
"	10	Up	iP	15 03 11.5	"	11	Ud	iP	07 54 29.9	
				micr sec				i	07 54 47.1	
		P	Z'	0.1 0.9			De	iP	07 54 41.0	
		Ki	iP	15 03 01.3	"	11	Ki	iPgl	09 37 33.3	
				micr sec				iSgl	09 38 02.4	
		P	Z'	0.1 0.9			Sk	iSgl	09 39 21.4	
		Sk	iP	15 03 25.7			Lofoten, Norway, near			
		Um	iP	15 03 02.1			68 1/4°N, 14 1/2°E.			
		Ud	iP	15 03 24.7			Origin time = 09 36 54.			
		De	iP	15 03 29.0			M _L = 2.2 (Ki).			
		Burma (h = N).								
		m = 5.8 (Up,Ki).				"	11	Ki	eP	10 36 52
"	10	Up	Mx	17 44	"	11	Ki	iP	12 09 03.4	
				micr sec			Ud	iP	12 07 56.5	
		Mx	E	0.8 21			North Atlantic Ocean			
		Mx	N	1.6 22			(h = 10 km).			
		Mx	Z	2.0 21						
		Ki	Mx	17 47	"	11	Up	iP	12 54 44.9	
				micr sec			Ki	iP	12 54 55.3	
		Mx	N	1.3 22			Sk	eP	12 55 11	
		Mx	Z	1.2 22			Um	iP	12 54 43.7	
		South Atlantic ridge						iPcP	12 56 37.6	
		(h = 10 km).					Ud	iP	12 55 01.0	
		M = 5.5 (Up,Ki).					De	iP	12 54 57.7	
"	10	Ud	i(P)	18 53 26.2			Hindu Kush region (h = 90 km).			
"	10	Ki	eP	19 57 35	"	11	Ud	iP	15 38 37.3	
		Ud	iP	19 57 08.5	"	11	Ud	iP	17 31 34.9	
		Western Iran (h = 55 km).								
"	10	Ki	iPKP	20 26 22.2	"	11	Up	iP	19 58 03.4	
		Fiji Islands region (h = N).					Ki	iP	19 57 43.5	
"	11	Up	iPKP1	02 23 18.7			Um	iP	19 57 49.7	
		Um	iPKP1	02 23 08.2			Ud	iP	19 58 11.0	
		Ud	iPKP1	02 23 21.6	"	11	Up	iP	20 02 35.2	
		De	iPKP1	02 23 28.4	"	11	Up	iP	20 38 47.8	
		Kermadec Islands region					Ki	iP	20 38 45.9	
		(h = 420 km).					Sk	iP	20 39 10.0	
"	11	Ki	iP	03 22 34.3			Um	iP	20 38 40.5	
		Um	iP	03 22 41.9			Ud	iP	20 39 04.6	
		Ud	iP	03 22 59.8			De	iP	20 39 05.0	
		Philippine Islands region					Kirgiz-Sinkiang border			
		(h = 60 km).					region (h = 45 km).			

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1978				1978					
Aug.	11	Sk Ud	iP eP	21 59 13.1 21 58 40	Aug.	12	Ud iP	22 20 37.6	
"	11	Ki Ud	iP iP	23 00 51.9 23 01 11.7	"	13	Ki Central Alaska	eP (h = 70 km).	
		Southern Sinkiang prov., China (h = N).		"	13	Um Ud	iP iP	00 59 30.4 C 00 59 58.6	
"	12	Ud	iP	02 39 59.9	"	13	Ud	iP 02 32 39.1	
"	12	Ud	iP	06 10 41.0			Afghanistan-USSR border region (h = 140 km).		
"	12	Ud	iP	08 50 01.6	"	13	Up	iP 03 53 28.0 C	
"	12	Up Ki Sk Um Ud De	iP iP iP iP iP iP	09 45 06.6 09 44 36.6 09 45 03.2 09 44 49.6 C 09 45 12.6 09 45 23.9			P Mx Mx Ki P Mx Mx	Z' E Z iP Z' N Z	0.1 1.0 0.5 13 0.7 14 03 53 05.4 0.1 1.0 0.6 14 1.0 12
		Mariana Islands region (h = 60 km).		"	13	Sk Um Ud De	iP iP iP i	03 53 33.6 03 53 13.2 03 53 37.7 C 03 53 49.5	
"	12	Up Ki Sk	iSgl eSgl iPgl	12 17 08.2 12 19 21 12 15 39.2			Taiwan region (h = 20 km). m = 5.8, M = 5.0 (Up,Ki).		
			i	12 16 17.0	"	13	Up	iP 10 26 02.8	
			iSgl	12 16 28.4			P	Z' 0.1 1.1	
		Um	eSgl	12 18 04	Ki	eP	10 25 46 C		
		Ud	iPn	12 15 17.1	Sk	eP	10 26 07		
			iPgl	12 15 25.2		i	10 26 11.7		
			i	12 15 45.7	Um	iP	10 25 51.0		
			iSgl	12 16 06.1		i	10 25 55.3		
		De	eSgl	12 17 07	Ud	iP	10 26 10.8		
		Southern Norway, near 60 1/2°N, 7 1/2°E. Origin time = 12 14 28. M _L = 2.6 (Sk,Ud). Explosion?			De	iP	10 26 17.5		
"	12	Ud De	iPKP1 iPKP1	12 45 23.3 12 45 34.3	"	13	Ud	iP 11 28 10.6 C	
		Fiji Islands region (h = 600 km).		"	13	Ud	iP 13 09 12.1		
"	12	Ud De	iPKP1 iPKP1	16 58 45.1 16 58 56.0			Afghanistan-USSR border region (h = 130 km).		
		Fiji Islands region (h = 530 km).		"	13	Up	iP 13 34 16.1		
"	12	Sk Um Ud	eP iP iP	20 54 29 20 54 29.0 20 54 50.4			P	Z' 0.1 1.0	
"	12	Um	iP	20 59 27.9	Ki	iP	13 33 37.9 C		
		Honshu, Japan (h = 60 km).		Sk	iP	13 34 10.7 C			
				Um	iP	13 33 54.4 C			
					i	13 34 19.3			
				Ud	iP	13 34 23.3 C			
				De	iP	13 34 37.0			
				Near s. coast of Honshu, Japan (h = 80 km).					

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

1978									1978									
Aug.	13	Ki	eP	16	59	36			Aug.	14	Up	ipP	03	36	14.3			
		Sk	iP	16	58	59.5					Ki	eP	03	36	31			
		Ud	iP	16	58	24.8					Ud	ipP	03	36	24.2			
		Sicily (h = 130 km).									Mid-Indian Rise (h = N).							
"	13	Ki	iP	17	26	29.8			"	14	Up	iPKP	07	12	42.7			
		De	iP	17	25	34.8					Ki	iPKP	07	12	58.0			
		Turkey (h = N).									Sk	iPKP	07	12	48.8			
"	13	Up	i(PKP)	21	11	56.8					Um	iPKP	07	12	50.4			
		Ki	e(PKP)	21	11	41					Ud	iPKP	07	12	40.9			
			iPKP	21	11	53.2					De	iPKP	07	12	36.0			
		Sk	i(PKP)	21	11	50.0					South Sandwich Islands region (h = 100 km).							
			i	21	12	03.6				"	14	Up	iP	07	13	57.9		
		Um	i(PKP)	21	11	48.4												
			iPKP	21	12	00.6						P	Z'	0.1	1.0			
		Ud	i(PKP)	21	11	56.6					Ki	iP	07	13	40.6			
			i	21	12	11.1												
		De	ePKP1	21	12	09 C						P	Z'	0.1	1.0			
		Fiji Islands region (h = 600 km).									Sk	iP	07	14	02.7			
"	13	Up	iP	22	37	34.3					Um	iP	07	13	45.9			
		Ki	iP	22	37	33.5					Ud	iP	07	14	06.1			
		Sk	iP	22	37	53.5					Mindoro, Philippine Islands (h = 260 km).							
		Um	iP	22	37	26.8				"	14	Up	iP	08	40	08.7		
		Ud	iP	22	37	48.7 C					Ki	iP	08	39	50.4			
		De	iP	22	37	48.7					Um	iP	08	39	00.8			
		Nepal (h = N).									Ud	iP	08	40	17.0			
"	13	Up	iP	23	07	00.6 C					Mindanao, Philippine Islands (h = 80 km).							
			iS	23	17	03				"	14	Up	iP	14	19	42.3		
			iSKS	23	17	11				"	14	Up	iP	14	23	41.2		
											Ki	iP	14	24	42.8			
											Sk	eP	14	23	52			
												e	14	24	37			
			P	Z'	0.3	1.3					Um	iP	14	24	12.5			
			Mx	E	0.8	14						ipP	14	24	21.3			
			Mx	N	1.9	18					Ud	iP	14	23	30.3			
			Mx	Z	3.2	17					De	iP	14	23	07.4			
		Ki	iP	23	06	26.9 C					Strait of Gibraltar (h = 30 km).							
										"	14	De	iP	16	31	00.4		
										"	14	Ki	ipP	17	01	39.8		
												Um	iP	17	01	44.4		
												Ud	ipP	17	02	14.3		
												Taiwan (h = 15 km).						
"	14	Up	iP	00	54	42.0			"	14	Up	iP	18	56	58.2 C			
		Ki	iP	00	54	43.4 C						iS	19	05	37			
		Ud	iP	00	54	54.8 C												
		De	iP	00	54	51.4												
		Northern Sumatera (h = 55 km).											P	Z'	0.3	1.3		

(cont.)

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

1978				1978			
Aug. 14 (cont.)				Aug. 15 (cont.)			
	Up		micr sec		De	i	09 09 52.0
	Mx	N	1.3 24		Western Caucasus.		
	Mx	Z	2.6 19		h = 15 km (Up,Ki).		
	Ki	iP	18 56 07.5 C		m = 5.5, M = 4.9 (Up,Ki).		
			micr sec	"	15	Ud	iP 12 08 33.3
	P	Z'	0.1 1.0		South Atlantic Ridge (h = N).		
	Mx	N	0.8 17				
	Mx	Z	0.7 17	"	15	Up	iP 12 09 31.3
	Sk	iP	18 56 44.6			Ki	iP 12 09 30.9
	Um	iP	18 56 31.8			Ud	iP 12 09 46.4
		iS	19 04 41		Tibet (h = N).		
	Ud	iP	18 57 02.8	"	15	Up	iPKP 12 56 50.8
	De	iP	18 57 23.4			iPKP1	12 56 55.9
	Kuril Islands (h = 90 km).					i	13 05 56.2
	m = 5.9, M = 5.0 (Up,Ki).						micr sec
	M not corrected for focal depth.					PKP	Z' 0.1 1.0
"	14	Ki	iP 19 49 12.8 C			PKP1	Z' 1.2 1.0
		Um	iP 19 49 22.0			Mx	E 5.4 25
		Ud	iP 19 49 37.5			Mx	N 12 25
"	14	Up	iP 20 28 00.5			Mx	Z 19 24
		Ud	iP 20 28 07.0			Ki	i(PKP) 12 56 32.9
	Greece (h = N).					iPKP1	12 56 34.3
"	15	Ki	ePKP 00 03 14				micr sec
		i	00 03 56.9			PKP1	Z' 0.3 1.0
		Ud	i 00 04 13.5			Mx	E 6.5 21
		De	i 00 04 20.7			Mx	N 9.0 23
	East Papua New Guinea region (h = 150 km).					Mx	Z 11 23
"	15	Ud	iP 03 38 49.1			Sk	iPKP1 12 56 49.4 C
"	15	Up	iP 09 09 44.7 C			i	13 05 49.9
		ipP	09 09 49.9			Um	iPKP1 12 56 44.0 C
			micr sec			i	13 05 44.6
		pP	Z' 0.1 1.0			Ud	iPKP 12 56 53.2
		Mx	E 1.0 17			iPKP1	12 56 57.1
		Mx	N 2.6 18			i	13 05 57.9
		Mx	Z 2.2 18			De	iPKP 12 56 58.4 C
	Ki	iP	09 10 28.3 C			iPKP1	12 57 05.9
		ipP	09 10 32.4				micr sec
			micr sec			Kermadec Islands (h = N).	
		P	Z' 0.1 1.0			M = 6.6 (Up,Ki).	
		Mx	E 1.8 13	"	15	Up	iP 13 07 03.2
		Mx	N 1.3 12			ipP	13 07 16.5
		Mx	Z 1.4 12				micr sec
	Um	iP	09 10 01.8			P	Z' 0.1 1.1
		iS	09 14 33			Ki	iP 13 06 25.4
	Ud	iP	09 10 01.1				micr sec
	De	iP	09 09 44.4			P	Z' 0.1 1.0
	(cont.)					Sk	iP 13 06 57.6
						Um	iP 13 06 41.1
						ipP	13 06 53.6
						Ud	iP 13 07 10.2 C
						Off east coast of Honshu, Japan.	
						h = 45 km (Up,Um).	
						m = 5.8 (Up,Ki).	

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

1978				1978			
Aug.	17	Sk eSgl	18 53 15	Aug.	18	(cont.)	
		Near Bergen, Norway.				Ud i	15 48 01.8
		By combination with				ipP	15 48 12.8
		Bergen readings.				iPP	15 51 01.2
"	18	Up iP	03 23 35.1			De iP	15 47 50.6
		Ki iP	03 22 14.7			i	15 48 12.2
		Sk iP	03 23 04.9			iPP	15 51 11.7
		Ud iP	03 23 48.0			Guatemala.	
"	18	Up iP	04 24 30.1			h = 120 km (Up,Ki,Sk,Ud).	
		Ki iP	04 24 10.8			m = 5.9, M = 6.1 (Up,Ki).	
		Ud e	04 24 47			M not corrected for	
		Szechwan province, China		"	18	Up iP	19 02 23.9
		(h = N).				i	19 03 03.7
"	18	Ki iP	09 10 55.0			i	19 06 57.5
		Ud iP	09 11 38.7			iS	19 10 27
		Near east coast of Honshu,					micr sec
		Japan (h = 80 km).				Mx N	1.7 30
"	18	Up iP	11 06 13.6			Mx Z	2.1 30
		Ki eP	11 05 16			Ki iP	19 01 30.1
		Ud iP	11 06 20.1			ipP	19 01 59.8
"	18	Up iP	13 15 12.8			iS	19 08 43
		Ki iP	13 14 36.1				micr sec
		Sk eP	13 15 15			pP Z'	0.1 1.0
		Ud iP	13 15 19.7 C			Mx N	1.6 21
		De iP	13 15 34.1			Mx Z	1.6 21
		Off east coast of Honshu,				Sk iP	19 01 58.2
		Japan (h = 40 km).				i	19 06 40.0
"	18	Up iP	15 47 52.2			Um iP	19 01 58.4
		ipP	15 48 22.1			ipP	19 02 28.6
		iPP	15 51 16.0			i	19 02 38.4
		iSKS	15 58 11			iS	19 09 37
		iS	15 58 27			Ud iP	19 02 22.8
			micr sec			De iP	19 02 45.3
		P Z'	0.2 1.5			Southern Alaska.	
		Mx E	5.4 27			h = 130 km (Ki,Um).	
		Mx N	5.7 30			M = 5.0 (Up,Ki).	
		Mx Z	12 30			M not corrected for	
		Ki iP	15 47 42.0	"	18	Up eP	19 31 46
		ipP	15 48 11.8			i	19 31 50.3
		iS	15 58 05			Um iP	19 31 59.8
			micr sec			De iP	19 31 38.9
		P Z'	0.3 1.5	"	18	Up iP	20 57 32.4
		Mx E	3.2 22			ipP	20 57 35.0
		Mx N	9.3 26			iS	21 00 54
		Mx Z	11 26				micr sec
		Sk iP	15 47 34.7			pP Z'	0.2 1.3
		ipP	15 48 04.1			Mx E	1.1 12
		iPP	15 50 48.9			Mx N	1.9 10
		Ud iP	15 47 43.0 C			Mx Z	2.5 11
		(cont.)				Ki eP	20 58 55
						(cont.)	

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

1978				1978			
Aug.	18	(cont.)		Aug.	19	(cont.)	
		Ki	micr sec			Ud iP	04 09 24.0
		P	Z' 0.1 1.0			Kodiak Island region	
		Mx	E 1.6 10			(h = 25 km).	
		Mx	N 1.0 12	"	19	Ud iP	04 56 01.8
		Mx	Z 1.4 12	"	19	Ud iP	15 08 54.7
		Sk	iP 20 58 18.4 D			De iP	15 08 08.2
			ipP 20 58 21.7	"	19	Up i	15 16 50.0
		Um	iP 20 58 16.3			iSgl	15 17 06.3
			iS 21 02 16			Ki eSgl	15 18 07
		Ud	iP 20 57 39.4			Sk ePgl	15 14 44
		De	iP 20 56 58.0			i	15 15 25.4
			ipP 20 57 02.7			iSgl	15 15 29.8
		Albania.				Um ePn	15 15 23
		h = 15 km (Up,Sk,De).				iSn	15 16 36.9
		m = 5.3, M = 4.8 (Up,Ki).				iSgl	15 17 21.0
"	19	Up	iP 00 09 33.3			Ud iPn	15 14 53.5
		Ki	iP 00 09 09.5			i	15 15 09.1
		Sk	iP 00 09 42.4			i	15 15 54.9
		Um	iP 00 09 15.4 C			iSgl	15 16 09.3
		Ud	iP 00 09 46.9 C			De ePn	15 15 37
		De	iP 00 09 56.3 C			i	15 17 05.4
		Mongolia (h = N).				iSgl	15 17 36.5
"	19	Up	iP 01 41 55.3 C			Off coast of west Norway,	
			ipP 01 42 02.9			near 62 1/2°N, 4 1/2°E.	
			micr sec			Origin time = 15 13 37.	
		Mx	E 0.5 13			M _L = 3.2 (Up,Sk,Um,Ud,De).	
		Mx	N 0.5 13			Felt.	
		Mx	Z 0.9 13	"	19	Ud iP	16 20 20.0
		Ki	iP 01 41 26.9 C	"	19	Um iPKP	17 39 07.8
			micr sec			Ud iPKP1	17 39 11.7
		Mx	Z 0.6 15			Tonga Islands (h = 100 km).	
		Sk	iP 01 41 55.9	"	19	Up iPKP	18 54 06.2
		Um	iP 01 41 38.0 C			Sk iPKP	18 53 59.1
		Ud	iP 01 42 03.8			Um iPKP	18 53 53.8
			ipP 01 42 12.0			Ud iPKP	18 54 08.0 C
		De	i 01 42 15.6			De iPKP	18 54 16.5
		Ryukyu Islands,				i	18 54 25.7
		h = 25 km (Up,Ud).		"	19	Ud eSgl	21 26 44
"	19	Up	iP 02 22 54.7	"	20	Um iP	01 31 42.9
			ipP 02 23 02.2	"	20	Up iP	04 16 16.2
		Ki	ipP 02 22 15.2			Ki iP	04 15 58.7
		Sk	ipP 02 22 50.3			i	04 16 14.0
		Um	iP 02 22 29.7			Um iP	04 16 04.3
		Ud	iP 02 23 00.3			Ud iP	04 16 25.3
			ipP 02 23 07.2			Samar, Philippine Islands	
		Kuril Islands region.				(h = 80 km).	
		h = 25 km (Up,Ud).					
"	19	Ki	iP 04 08 32.9				
		Sk	eP 04 08 59				
		(cont.)					

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

1978				1978			
Aug.	20	Um iP	09 26 23.3	Aug.	21	(cont.)	
		Ud iP	09 26 54.1			Ud iP	00 57 55.2 C
		Hokkaido, Japan region (h = 160 km).				De iP	00 57 52.5
"	20	Up iP	10 48 31.3	"	21	Ki iPn	02 07 05.5
		Um iP	10 48 10.3			Um iPn	02 07 54.5
		Ud iP	10 48 31.8			Ud iP	02 08 44.7 C
						De iP	02 09 18.4
						Norwegian Sea (h = 10 km).	
"	20	Up iP	16 53 34.9	"	21	Ki eP	03 37 57
		Ki ep	16 53 42			Talaud Islands (h = 70 km).	
		Um iP	16 53 33.7				
		Ud iP	16 53 51.2	"	21	Up iP	05 54 59.1
		De iP	16 53 48.6			Ki iP	05 54 41.6 C
		Afghanistan-USSR border region (h = 100 km).					micr sec
"	20	Ud iP	17 43 15.7			P	Z' 0.1 1.1
"	20	Up iP	21 32 08.8			Sk iP	05 55 03.5
		Ki iP	21 32 41.5 C			Um iP	05 54 47.0
		Sk eP	21 32 08			Ud iP	05 55 07.4
		Um iP	21 32 28.8			De iP	05 55 12.5
		Ud iP	21 31 58.3			Mindanao, Philippine Islands (h = 45 km).	
		Central Mid-Atlantic Ridge (h = 10 km).		"	21	Ki iP	10 12 44.4
"	20	Up iP	21 42 34.0			Afghanistan-USSR border region (h = 200 km).	
		Ki eP	21 41 54	"	21	Up iP	16 10 01.6
		Um iP	21 42 11.3 C			Ki iP	16 09 24.1
		Ud iP	21 42 41.3			Sk iP	16 09 56.4
		Near east coast of Honshu, Japan (h = 55 km).				Um iP	16 09 40.9
"	20	Up iP	21 51 45.5			Ud iP	16 10 08.6
			micr sec			i	16 10 23.2
		P	Z' 0.1 1.3			De iP	16 10 22.2
		Ki iP	21 51 27.1			Off east coast of Honshu, Japan (h = N).	
			micr sec	"	21	Up i(P)	19 43 49.4
		P	Z' 0.1 1.2	"	21	Up iSKS	22 30 07
		Sk iP	21 51 50.8				micr sec
		Um iP	21 51 33.3 D			Mx E	2.9 19
		Ud iP	21 51 54.8			Mx N	6.4 20
		De iP	21 52 02.0			Mx Z	9.2 21
		Luzon, Philippine Islands (h = 30 km).				Ki iPKP	22 23 45.0
		m = 5.7 (Up,Ki).					micr sec
"	21	Um iPKP	00 47 07.5			Mx E	2.5 16
		Ud iPKP	00 46 58.6			Mx N	4.8 17
		San Juan province, Argentina (h = 10 km).				Mx Z	6.9 18
"	21	Up iP	00 57 47.2			Sk ePKP	22 23 39
		(cont.)				Um iPKP	22 23 37.6
						Ud iPKP	22 23 39.3
						i	22 23 47.4
						Prince Edward Islands region (h = 10 km).	
						M = 6.2 (Up,Ki).	

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

1978				1978					
Aug.	23	Sk	i(P) i	15 01 11.0 15 01 17.4	Aug.	24	Ki eP Ud ipP Gulf of California (h = N).	15 12 21 15 12 47.4	
"	23	Up Ki	iP iP	19 47 21.6 19 47 05.4 micr sec	"	24	Up Ki Sk	iPKP iSKP1 iPKP iSKP	15 25 50.8 15 29 03.1 15 25 36.8 C 15 25 48.5
			P Z'	0.1 1.1			Um Ud De	iPKP iSKP1 iPKP	15 25 42.9 15 29 08.1 15 26 00.1 C
		Sk Ud	iP iP	19 47 26.3 19 47 30.3			New Hebrides Islands (h = 140 km).		
		Talaud Islands (h = 70 km).							
"	23	Up	iP i	21 09 56.0 C 21 10 05.6 micr sec	"	24	Up	iP	15 49 46.5 C micr sec
			P Z'	0.4 0.9				P Z'	0.1 1.4
		Ki	iP	21 09 02.9 C micr sec			Ki	iP	15 49 21.4 C micr sec
			P Z'	0.2 0.9				P Z'	0.1 1.0
		Sk Ud	iP iP	21 09 35.8 C 21 09 57.2 C			Sk Um Ud	iP iP iP	15 49 24.2 15 49 36.6 15 49 38.5 C
			ipP	21 10 12.7			Gulf of California (h = N). m = 5.8 (Up,Ki).		
		De	iP	21 10 19.2 C					
		Rat Islands, Aleutian Islands (h = 55 km). m = 6.3 (Up,Ki).							
"	23	Up Sk Ud De	iP iP iP iP	21 51 40.4 21 52 20.1 21 51 47.3 21 51 11.2	"	24	Up	iRg	17 47 03.6 Regional near-surface event.
		Greece (h = N).							
"	23	Up Sk Ud	iP iP iP	23 50 53.5 23 51 28.9 23 50 56.0	"	24	Up	iP	18 07 32.0 micr sec
		Southern Greece (h = 30 km).						P Z'	0.1 1.0
							Ki	iP	18 06 35.5 C micr sec
								P Z'	0.1 1.0
"	24	De	i(P) i	04 30 33.3 04 30 40.9	"	24	Sk Um Ud De	iP iP iP iP	18 07 21.9 C 18 07 00.3 18 07 40.9 18 08 03.5
"	24	Ki Sk Ud De	iP iP iP iP	07 01 13.9 07 01 44.1 07 01 44.7 07 01 51.6	"	24	Central Siberia. m = 5.6 (Up,Ki). Underground explosion.		
"	24	Ud De	iPKP iPKP	09 45 21.3 09 45 26.3	"	24	Ki	eP	19 00 50 Kamchatka (h = 150 km).
		New Britain region (h = 60 km).			"	25	Ud	iP	03 04 11.7 Fox Islands, Aleutian Islands (h = 50 km).
"	24	Up	i(P)	13 11 19.0	"	25	Up Ki Sk	iP iP iP	03 12 23.1 03 11 51.4 D 03 12 20.2
"	24	Ki	iP	13 24 43.7 Virgin Islands (h = 45 km).			(cont.)		

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

1978				1978					
Aug.	28	(cont.)		Aug.	29	Up	iP	07 46 52.8	
		Sk	iP					micr sec	
		Um	iP			P	Z'	0.2 1.5	
		Ud	iP			Mx	Z	0.6 16	
		De	iP		Ki	iP		07 46 26.3	
		Western Iran (h = 50 km).						micr sec	
		m = 5.6 (Up,Ki).				P	Z'	0.1 0.9	
"	28	Up	iP		Sk	iP		07 46 54.3	
		Ki	ipP		Um	iP		07 46 37.4	
		Sk	epP		Ud	iP		07 47 02.1 C	
		Um	ipP		De	iP		07 47 11.7 C	
		Ud	ipP		Southwestern Ryukyu Islands				
		Central Mid-Atlantic ridge			(h = 50 km).				
		(h = 10 km).			m = 5.8 (Up,Ki).				
"	28	Ud	iP		"	29	Up	iSgl	08 16 34.7
							Ud	iPgl	08 15 12.6
								iSgl	08 15 32.0
"	29	Ud	iP				Southeastern Norway.		
			i				Origin time = 08 14 47.		
							M _L = 2.1 (Ud).		
"	29	Up	iP		"	29	Up	iP	11 31 02.1 C
		Ki	iP				Ki	iP	11 30 15.2 C
		Sk	iP				Um	iP	11 30 36.6 C
		Um	iP				Ud	iP	11 31 07.3 C
		Ud	iP				Kuril Islands (h = N).		
		De	iP		"	29	Up	iP	14 18 19.6
		Eastern Kazakh SSR.					Ki	iP	14 18 57.5
		Underground explosion.						micr sec	
"	29	Up	iP				P	Z'	0.1 1.0
			ipn				Sk	iP	14 18 55.2
			ipp				Um	iP	14 18 33.1
							Ud	iP	14 18 34.1
							De	iP	14 18 17.9 C
							Southern Iran (h = 35 km).		
					"	29	Ud	i	15 17 19.3
								iRg	15 17 24.3
							Regional near-surface event.		
					"	29	Ud	iRg	15 18 35.1
							Regional near-surface event.		
					"	29	Ki	iP	17 39 43.6
							North Korea (h = N).		
"	29	Up	iP		"	30	Ki	eP	08 38 05
		Ki	iP				Ud	eP	08 38 26
		Sk	eP					i	08 38 41.4
		Um	iP				Talaud Islands (h = N).		
		Ud	iP		"	30	Up	iP	11 46 30.3
		De	iP				Ud	iP	11 46 32.7
		Eastern Kazakh.							
		m = 6.9 (Up,Ki).							
		Underground explosion.							
"	29	Up	iP						
		Ki	iP						
		Sk	eP						
		Um	iP						
		Ud	iP						
		De	iP						
		Kuril Islands (h = 60 km).							

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

1978					1978				
Aug.	30	Up	iPKP	13 45 39.6	Aug.	31	(cont.)		
			iSKP1	13 48 50.3			Up	micr	sec
		Ki	iPKP	13 45 26.1 C			Mx	N	0.8 15
		Sk	iPKP	13 45 36.9			Mx	Z	2.0 15
		Um	iPKP	13 45 33.0			Ki	iP	03 37 02.5 C
		Ud	iPKP	13 45 42.1					micr sec
		De	iPKP	13 45 47.8			P	Z'	0.1 0.9
		New Hebrides Islands					Mx	E	1.3 12
		(h = 130 km).					Mx	N	2.6 19
"	30	Sk	eSgl	14 24 17			Mx	Z	1.5 14
		Ud	iSn	14 24 02.8			Sk	iP	03 37 28.6 C
			iSgl	14 24 10.0			Um	iP	03 38 05.0
		De	iSgl	14 25 13.8			Ud	iP	03 37 29.3
		Southern Norway, near					De	iP	03 37 33.2
		60 1/2°N, 7°E.					Szechwan province, China		
		Origin time = 14 22 32.					(h = 40 km).		
		M _L = 2.5 (Ud).					m = 5.9, M = 5.4 (Up,Ki).		
		Explosion?			"	31	Up	iP	08 51 49.9
"	30	Ud	iP	15 08 00.3					micr sec
							P	Z'	0.1 1.4
"	30	Up	iP	16 04 34.8			Ki	ip	08 51 50.6 C
		Ki	iP	16 04 06.5 C			Sk	eP	08 52 07
			i	16 04 22.3			Um	iP	08 51 46.8
		Um	iP	16 04 18.6					08 52 07.6
		Mariana Islands (h = 20 km).					Ud	iP	08 52 00.7
"	30	Ud	iP	16 11 13.8			De	iP	08 51 59.8
							Andaman Islands region		
"	30	Up	iP	17 16 04.2 C			(h = 55 km).		
		Ki	iP	17 15 35.8 C	"	31	Ki	iPKP	10 19 31.8
		Um	iP	17 15 48.2			Sk	ePKP	10 19 41
			i	17 16 01.6			De	iPKP	10 19 49.8
		Ud	iP	17 16 10.2			New Britain region		
		Mariana Islands (h = N).					(h = 110 km).		
"	30	Ki	iPdiff	20 43 12.1	"	31	Up	iP	10 21 20.2
		East Papua New Guinea							micr sec
		region (h = 80 km).					P	Z'	0.1 1.0
"	30	Ud	iP	20 48 43.3			Ki	iP	10 21 03.0 C
									micr sec
"	30	Sk	iPKP2	23 04 47.9			P	Z'	0.1 0.9
		Um	iPKP2	23 04 42.6 C			Sk	iP	10 21 24.5
		Ud	iPKP2	23 04 55.8 C			Um	iP	10 21 08.2 C
		De	iPKP2	23 05 10.3			Ud	iP	10 21 28.6 C
"	31	Up	iP	03 37 16.5				ipP	10 21 47.8
			iS	03 45 51			De	iP	10 21 34.5
				micr sec				ipP	10 21 52.5
		P	Z'	0.1 0.9			Mindanao, Philippine Islands.		
		Mx	E	1.2 16			h = 70 km (Ud,De).		
		(cont.)			"	31	Sk	i	13 29 03.9
								iRg	13 29 06.0
							Regional near-surface event.		

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

1978

Aug. 31 Up iP 14 11 48.2 C
i 14 12 07.7
micr sec
P Z' 0.1 1.0
Ki iP 14 11 14.1 C
micr sec
P Z' 0.1 1.0
Sk iP 14 11 22.1 C
i 14 11 28.1
Um iP 14 11 33.5 C
i 14 11 52.4
Ud iP 14 11 40.5 C
i 14 11 58.8
De iP 14 11 57.1 C

Southern Nevada.

m = 5.9 (Up,Ki).

Underground explosion.

" 31 Up i(P) 14 33 12.3

" 31 Sk iP 16 32 31.6

Ud iP 16 32 43.0

Near s. coast of southern
Honshu (h = 370 km).

" 31 Ki iP 17 14 36.5

De iP 17 14 30.5

i 17 14 39.8

" 31 Ki iP 18 39 27.7

Taiwan region (h = 10 km).

" 31 Ud iP 20 31 35.1

Southern Iran (h = 15 km).

" 31 Ki i(P) 22 00 22.9

May 27, 1980

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SEISMOLOGICAL SECTION
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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, 1978

1978					1978	(cont.)				
Sept.	1	Up	iP	02 17 33.6	Sept.	1	Sk	iPKP1	07 34 26.9	
		Ki	iP	02 17 30.2			Um	iPKP1	07 34 21.6	
		Sk	iP	02 17 53.8			Ud	iPKP	07 34 31.3	
		Ud	iP	02 17 49.1				iPKP1	07 34 35.1	
		De	Ip	02 17 50.0				iPKP2	07 34 40.9	
		Southern Sinkiang prov., China (h = N).					De	iPKP1	07 34 42.7	
							Kermadec Islands (h = 15 km).			
"	1	Up		micr sec	"	1	Up		micr sec	
		Mx	E	1.2 21			Mx	E	2.1 16	
		Mx	N	2.6 21			Mx	N	3.1 16	
		Mx	Z	3.2 21			Mx	Z	7.1 20	
		Ki	iPKP	04 35 39.2			Ki	i	10 14 45.3	
				micr sec				iPP	10 15 34.5	
		Mx	N	2.4 21					micr sec	
		Mx	Z	2.3 22			Mx	E	3.3 18	
		Sk	ePKP	04 35 51			Mx	N	6.7 21	
			iSKP1	04 39 22.0			Mx	Z	3.0 19	
		Um	iPKP	04 35 44.8			Sk	iPP	10 15 55.7	
			i	04 35 59.4			Ud	i	10 15 01.3	
		Ud	iPKP	04 35 56.9			Solomon Islands (h = N).			
			iSKP1	04 38 28.9			M = 6.2 (Up,Ki).			
		De	e(PKP)	04 35 52						
			iPKP	04 36 00.4		"	1	Ki	iP	11 12 45.7
		New Hebrides Islands (h = 30 km).						Sk	iP	11 12 53.4
		M = 5.9 (Up,Ki).				"	1	Up	iP	18 56 12.1
"	1	Ki	iP	05 06 08.9			Ki	iP	18 55 57.9	
		Sk	iP	05 06 33.3					micr sec	
		Ud	eP	05 06 30				P	Z' 0.1 1.1	
		Southeast Asia (h = 50 km).					Sk	iP	18 56 23.4	
							Ud	iP	18 56 24.6	
"	1	Ud	iP	07 30 46.6			Szechwan province, China (h = N).			
"	1	Up	iPKP1	07 34 34.3		"	1	Up	iP	22 50 55.6
				micr sec					micr sec	
			PKP1	Z' 0.2 1.0				P	0.1 0.8	
		Ki	i(PKP)	07 34 10.5			Ki	iP	22 52 12.1	
			iPKP1	07 34 16.1			Sk	iP	22 51 38.2	
			iPKP	07 34 19.7			Um	il	22 51 38.8	
		(cont.)					(cont.)			

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

1978 (cont.)				1978 (cont.)					
Sept.	1	Ud	iP	22 51 02.9	Sept.	2	(cont.)		
			il	22 51 06.2			Chiapas, Mexico (h = 130 km).		
		De	iP	22 50 26.1			m = 5.9 (Up,Ki).		
				Crete (h = 35 km).					
"	2	Up	iP	02 09 06.9 C	"	2	Ud	iP	16 54 48.8
			ipP	02 09 35.9					Near east coast of Honshu,
			iS	02 18 38.0					Japan (h = 60 km).
				micr sec	"	2	Ud	iP	23 26 30.5
		P	Z'	1.9 1.5	"	3	Up	iP	00 25 41.7 C
		Mx	E	3.2 32				iSn	00 29 04
		Mx	N	1.2 32					micr sec
		Mx	Z	7.4 34			P	Z'	1.4 0.9
		Ki	iP	02 08 42.5 C			Mx	E	6.7 12
			iPP	02 11 21.2			Mx	N	14 13
			iPPP	02 13 09.1			Mx	Z	17 13
			iS	02 17 51.2			Ki	iP	00 26 39.3 C
			iP'P'	02 36 27.0				iSn	00 31 10
				micr sec					micr sec
		P	Z'	2.3 1.6			P	Z'	1.6 1.0
		Sk	iP	02 09 10.2 C			Mx	E	6.9 10
		Um	iP	02 08 51.1 C			Mx	N	14 14
			iS	02 18 08			Mx	Z	12 14
		Ud	iP	02 09 16.4 C			Sk	iP	00 26 28.8 C
			iS	02 18 55.5			i		00 26 29.9
		De	iP	02 09 25.5			Um	iP	00 26 06.0 C
			iPP	02 12 22.6				iSn	00 29 50
				Taiwan region.			Ud	iP	00 26 01.4 C
				h = 110 km (Up).			De	iP	00 25 35.6
				m = 6.7 (Up,Ki).			i		00 25 38.2
"	2	Up	Mx	04 34					Western Caucasus (h = N).
				micr sec					m = 6.4, M = 5.6 (Up,Ki).
			Mx	E 1.1 19	"	3	Sk	iP	01 15 43.2
			Mx	N 1.0 19			Ud	iP	01 15 53.2
			Mx	Z 2.2 20					El Salvador (h = 60 km).
		Ki	Mx	04 34	"	3	Up	eP	05 11 27
				micr sec					micr sec
			Mx	N 1.6 19			Mx	E	5.2 7
			Mx	Z 1.5 18			Mx	N	8.5 7
				Solomon Islands (h = N).			Mx	Z	6.5 7
				M = 5.6 (Up,Ki).			Ki	iP	05 13 08.9
"	2	Up	iP	11 50 44.5				iLgl	05 19 15.3
		Ki	iP	11 50 31.8					micr sec
		Sk	iP	11 50 26.3			P	Z'	0.2 1.4
				Chiapas, Mexico (h = 90 km).			Mx	E	11 8
"	2	Up	iP	16 16 10.1			Mx	N	4.9 10
				micr sec			Mx	Z	3.3 7
		P	Z'	0.1 0.9			Sk	eP	05 12 07
		Ki	iP	16 15 57.6 C			eS		05 15 29
				micr sec			Um	iP	05 12 25.6
		P	Z'	0.2 1.0			iS		05 15 26
		Um	iP	16 16 06.3			Ud	iP	05 11 25.0
		Ud	iP	16 16 01.0			iS		05 13 51.7
		De	iP	16 16 09.3			De	iP	05 10 34.2
				(cont.)			iS		05 12 06.2
							i		05 13 12.7
									Germany (h = 10 km).

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1978				1978					
Sept.	3	Um	iP	05 39.10.4	Sept.	5	Ki	iP	03 51 39.7
"	3	Up	iP	07 41 55.0 D			Um	iP	03 51 34.0
				micr sec			Ud	iP	03 51 46.2
			P	Z' 0.1 0.6			De	iP	03 51 42.1
		Ki	iP	07 41 05.0 D			Off w. coast of north.		
				micr sec			Sumatera (h = N).		
			P	Z' 0.1 0.6	"	5	Up	iP	03 54 21.9
		Sk	iP	07 41 41.1				iS	04 04 03
		Um	iP	07 41 28.0 D			Ki	iP	03 53 56.8
		Ud	iP	07 42 00.0 D			Um	iP	03 54 06.2
		Kuril Islands (h = 110 km).					Ud	eP	03 54 30
		m = 5.8 (Up,Ki).					Taiwan (h = 15 km).		
"	3	Up	iP	10 05 30.1	"	5	Up	iP	13 39 36.4
		De	eP	10 04 49			Ki	eP	13 40 57
			i	10 04 57.5			Um	iP	13 40 16.1
		Germany (h = 10 km).					Ud	iP	13 39 53.3
							De	eP	13 39 13
"	3	Up	iP	20 42 39.4			Romania (h = 150 km).		
		Ki	iP	20 42 37.9	"	5	Um	iPKP1	16 16 07.1
		Sk	iP	20 42 55.9			Ud	iPKP1	16 16 20.7
		Um	iP	20 42 33.0	"	5	Um	iPKP	19 59 01.6
		Ud	iP	20 42 54.3			De	iPKP	19 59 16.4
		Tibet (h = 45 km).					Solomon Islands (h = 150 km).		
"	3	Ki	iP	21 56 08.8	"	6	Up	iSKS	01 24 22
		Southern Sumatera (h = N).					Ki	eP	01 13 44
"	4	Ud	iP	11 19 52.3			Sk	iP	01 13 37.8
"	4	Ki	iP	15 40 18.0			Um	iP	01 13 53.1
"	5	Ki	iP	00 29 57.0				iS	01 24 26
		Sk	iP	00 30 27.8			Ud	iP	01 13 47.7
		Um	iP	00 29 57.2			Near coast of Chiapas,		
		Ud	iP	00 30 28.2			Mexico (h = N).		
"	5	Up	iPKP1	02 06 50.1	"	6	Ud	iP	02 31 00.2
		Ki	ePKP1	02 06 26			Near coast of Guatemala		
		Sk	iPKP1	02 06 42.8			(h = 70 km).		
		Um	iPKP1	02 06 39.1	"	6	Up	iSKP1	04 24 46.3
		Ud	iPKP1	02 06 52.3					micr sec
		Kermadec Islands region					Mx	E	1.7 18
		(h = N).					Mx	N	3.6 20
"	5	Up	i	03 40 09.9			Mx	Z	6.9 21
		Sk	iPKP1	03 39 54.1			Ki	ePKP	04 20 58
		Um	iPKP1	03 39 48.8					micr sec
		Ud	IPKP2	03 40 06.3			Mx	E	1.1 20
		Kermadec Islands region					Mx	N	4.1 18
		(h = 70 km).					Mx	Z	3.0 19
							Sk	iPKP	04 21 10.5
							(cont.)		

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

1978				1978			
Sept.	6	(cont.)		Sept.	6	(cont.)	
		Um	iPKP 04 21 06.1 iSKP1 04 24 29.1			M not corrected for focal depth. Extremely clear PKP-precursors, denoted (PKP).	
		Loyalty Islands (h = 35 km). M = 6.2 (Up,Ki).					
"	6	Sk	ePKP1 07 52 59	"	6	Up	iP 13 08 37.7
		Ud	iPKP1 07 53 07.8			Ki	iP 13 09 08.7
		Kermadec Islands region (h = N).				Sk	iP 13 09 10.8
						De	iP 13 08 39.3
						Southern Iran (h = N).	
"	6	Ud	iP 08 24 00.0	"	6	Ki	iP 14 59 09.1
"	6	Up	iPKP2 08 41 50.5			Um	iP 14 59 14.5
		Ki	ePKP 08 41 29			Panay, Philippine Islands (h = 50 km).	
		Sk	iPKP1 08 41 40.3	"	6	Ud	i(P) 15 05 09.2
		Um	iPKP1 08 41 36.6	"	6	Ud	i(P) 15 16 56.0
		Ud	iPKP1 08 41 49.0 iPKP2 08 41 54.0	"	6	Ud	iP 16 11 28.2
		De	iPKP1 08 42 00.2	"	6	Ud	iP 18 17 21.5
		Kermadec Islands region (h = 45 km).		"	6	Um	iP 19 27 08.4
"	6	Up	i(PKP) 11 26 13.1			Iceland (h = 10 km).	
			iPKP 11 26 26.5	"	7	Sk	iP 01 08 14.5
			iSKP1 11 29 29.8	"	7	Up	iP 04 58 48.0
			micr sec				micr sec
		PKP	Z' 0.4 1.0				Z' 0.1 0.6
		Mx	E 1.6 21			Ki	iP 05 00 01.3
		Mx	N 3.0 19			Sk	iP 04 59 27.6
		Mx	Z 3.8 19			Um	iP 04 59 25.3
		Ki	i(PKP) 11 26 06.1			Ud	iP 04 58 54.2
			iPKP 11 26 12.6				i 04 58 59.9
			iPKKP 11 36 14.6			De	iP 04 58 18.0
			micr sec			Ionian Sea (h = 45 km).	
		PKP	Z' 0.7 1.0	"	7	Up	iP 06 05 20.5
		Mx	E 2.6 20			Ki	iP 06 04 26.3
		Mx	N 3.5 19				iPcP 06 05 17.6
		Mx	Z 3.8 19			Sk	iP 06 04 57.0
		Sk	i(PKP) 11 26 10.9				iPcP 06 05 35.2
			iPKP 11 26 24.2			Um	iP 06 04 57.3 C
		Um	i(PKP) 11 26 08.3				iPcP 06 05 37.6
			iPKP 11 26 19.2			Ud	iP 06 05 19.0 C
			iPKKP 11 36 02.2			De	iP 06 05 42.1
		Ud	i(PKP) 11 26 15.4			Unimak Island region (h = 40 km).	
			iPKP 11 26 28.6				
			iSKP1 11 29 34.2				
		De	i(PKP) 11 26 21.6				
			iPKP 11 26 34.6				
			iSKP1 11 29 44.4				
		New Hebrides Islands (h = 200 km). M = 6.1 (Up,Ki).					
		(cont.)					

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1978				1978						
Sept.	7	Ki	iP	20 47 52.2	Sept.	8	(cont.)			
		Um	iP	20 47 53.9			Sk	iPKP1	23 16 32.7	
			i	20 48 05.3			Um	iPKP1	23 16 27.1	
		Virgin Islands (h = 35 km).					Ud	iPKP	23 16 36.3	
"	8	Up	iSKP1	06 25 23.3				iPKP1	23 16 41.1	
		Ki	iPKP	06 21 43.0			De	iPKP	23 16 42.4	
		Sk	iPKP	06 21 53.9				iPKP1	23 16 49.5	
			iSKP1	06 25 16.0			Kermadec Islands			
		Um	iPKP	06 21 49.8			(h = N).			
		New Hebrides Islands			"	9	Ki	iP	02 18 04.9	
		(h = 40 km).					Um	iP	02 18 23.4	
"	8	Ud	iP	10 31 10.8			Ud	iP	02 18 54.7	
"	8	Ud	iP	12 19 33.1			Near east coast of Honshu, Japan (h = 60 km).			
"	8	Up	iP	12 30 52.4	"	9	Up	iP	05 54 15.1	
		Ki	iP	12 30 28.7				ipP	05 55 03.3	
		Ud	iP	12 31 01.5					micr sec	
		Taiwan (h = 20 km).					P	Z'	0.1 0.9	
"	8	Up	iP	12 42 02.9			Ki	iP	05 53 46.9	
		Ki	iP	12 41 46.9					micr sec	
		Sk	eP	12 42 09				P	Z'	0.1 0.8
		Um	iP	12 41 52.9			Sk	iP	05 54 12.5	
		Ud	iP	12 42 11.9			Um	iP	05 53 59.5	
		Talaud Islands					Ud	iP	05 54 22.0	
		(h = 45 km).					De	iP	05 54 32.9	
"	8	Up	iPKP1	12 50 47.5			Mariana Islands			
		Sk	iPKP1	12 50 34.0			h = 190 km (Up,Ki).			
		Ud	iPKP1	12 50 48.3			m = 5.8 (Up,Ki).			
		De	iPKP1	12 50 57.4	"	9	Ki	iPKP	06 20 11.6	
"	8	Up	iPKP1	21 16 19.6					micr sec	
		Sk	iPKP1	21 16 11.4				PKP	Z'	0.1 1.3
		Um	iPKP1	21 16 08.2			South Sandwich Islands			
		Ud	iPKP1	21 16 21.5			region (h = N).			
		De	iPKP1	21 16 29.5	"	9	Ud	iP	08 41 49.6	
		Kermadec Islands region			"	9	Up	iP	09 34 03.8	
		(h = N).					Ki	iP	09 34 12.5	
"	8	Up	iPKP1	21 24 13.7			Sk	iP	09 34 29.5	
			i	21 24 23.8			Ud	iP	09 34 20.5	
		Sk	iPKP1	21 24 07.5			De	iP	09 34 17.9	
		Um	iPKP1	21 24 00.1			Afghanistan - USSR border			
		Ud	iPKP1	21 24 15.3			region (h = 120 km).			
		De	iPKP1	21 24 23.7	"	9	De	iPKP1	09 55 28.4	
		Kermadec Islands					Fiji Islands region			
		(h = N).					(h = 630 km).			
"	8	Up	iPKP	23 16 35.1	"	9	Up	iPKP1	12 47 02.1	
			iPKP1	23 16 39.0			Um	iPKP1	12 46 51.8	
				micr sec			Ud	iPKP1	12 47 03.9	
			PKP1	Z' 0.3 1.2	"	9	Ki	iPP	13 04 51.3	
		Ki	iPKP1	23 16 16.0			Sk	ePP	13 04 53	
			iPKP	23 16 21.9			South Indian Ocean (h = N).			
		(cont.)								

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

1978				1978			
Sept.	9	Ki iP	13 06 31.5	Sept.	10	Sk iP	12 55 54.2
		Halmahera (h = 170 km).				Um iP	12 55 37.3 D
"	9	Up iP	16 36 52.0			Ud iP	12 56 08.3
		i	16 36 53.8			De iP	12 56 23.7
		i	16 36 58.2			Eastern Sea of Japan	
			micr sec			(h = 290 km).	
		i Z'	0.1 1.0			m = 5.4 (Up,Ki).	
		Ki eP	16 38 04	"	10	Up iP	16 02 21.3
		Sk iP	16 37 31.4			Ki iP	16 01 57.2
		Um iP	16 37 26.6			Sk eP	16 02 25
		Ud iP	16 36 57.9			Um iP	16 02 05.9
		i	16 37 03.3			Ud iP	16 02 31.2
		De iP	16 36 22.1			Taiwan (h = 20 km).	
		Greece (h = 20 km).		"	10	Up iP	16 22 41.5
"	9	Ki iP	22 46 25.0			Ki iP	16 22 17.7
		Sk iP	22 46 27.2			i	16 22 24.7
		Ud iP	22 46 08.6			Um iP	16 22 25.1
		Southern Iran (h = N).				i	16 22 33.3
"	9	Up iP	23 22 04.3			Ud iP	16 22 50.4
		i	23 22 06.4			Taiwan (h = 15 km).	
			micr sec	"	10	Up iP	16 25 34.2
		i Z'	0.1 0.9			Ki iP	16 25 11.7
		Mx E	1.2 20			Ud iP	16 25 44.2
		Mx N	2.5 20			Taiwan (h = 20 km).	
		Mx Z	2.4 20	"	10	Up iP	16 45 50.0
		Ki iP	23 21 52.8			ipP	16 45 57.1
			micr sec			i	16 46 10.0
		P Z'	0.1 1.0				micr sec
		Mx N	1.8 20			P Z'	0.3 1.5
		Mx Z	2.1 19			Mx Z	4.0 15
		Sk iP	23 22 16.9			Ki iP	16 45 25.8
		Um iP	23 21 56.5				micr sec
		Ud iP	23 22 16.8			P Z'	0.1 1.4
		Yunnan province, China				Mx N	1.5 11
		(h = N).				Mx Z	2.0 12
		m = 5.9, M = 5.4 (Up,Ki).				Sk iP	16 45 54.7
"	10	Ki iP	02 50 20.2			Um iP	16 45 35.0
		iS	02 51 41.8			Ud iP	16 45 59.2
		Sk iP	02 51 08.4			Taiwan (h = 15 km).	
		Um iP	02 51 13.0			m = 5.9 (Up,Ki).	
		Ud iP	02 51 55.3	"	10	Up iPKP1	21 55 10.1
		i	02 52 04.5			Sk iPKP1	21 55 04.5
		De iP	02 52 41.2			Um iPKP1	21 54 58.9
		Norwegian Sea (h = 10 km).				Ud iPKP1	21 55 12.9
"	10	Up iP	12 56 00.1	"	10	Up iP	23 36 51.2
			micr sec			i	23 36 53.3
		P Z'	0.1 1.2			iS	23 47 13
		Ki iP	12 55 19.3 D				micr sec
			micr sec			i Z'	0.1 1.1
		P Z'	0.1 0.8			Mx E	4.0 28
		(cont.)				(cont.)	

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

1978				1978						
Sept.	10	(cont.)		Sept.	11	Um	iP	09 39 18.8		
		Up	Mx N 3.7 28			Ud	iP	09 39 28.7		
			Mx Z 1.8 32		"	11	Ud	i(P)	10 18 27.2	
		Ki	iP 23 36 43.9		"	11	Ud	iP	11 26 40.5	
			micr sec					Northeast of Taiwan	(h = 60 km).	
			P Z' 0.2 1.3							
			Mx N 5.7 24							
			Mx Z 9.9 24							
		Sk	iP 23 36 34.5		"	11	Um	iP	17 08 45.5	
		Um	iP 23 36 49.6		"	11	Up	iPKP1	18 07 32.8	
			i 23 36 50.8					i	18 07 39.8	
			iPP 23 40 12.3					ipPKP1	18 07 46.4	
			iS 23 47 13						micr sec	
		Ud	iP 23 36 42.3					i	Z' 0.1 0.9	
			i 23 36 45.3			Ki	iPKP1	18 07 08.0		
			i 23 37 00.5			Sk	iPKP1	18 07 27.1		
		De	iP 23 36 51.1			Um	iPKP1	18 07 22.6 C		
		Guatemala (h = 90 km).						i	18 07 30.1	
		m = 6.0, M = 5.8 (Up,Ki).						ipPKP1	18 07 36.4	
"	11	Up	iP 07 16 30.4			Ud	iPKP1	18 07 34.6 C		
		Sk	iP 07 17 12.4					i	18 07 42.4	
		Ud	iP 07 16 39.2					ipPKP1	18 07 48.6	
		Greece - Albania border				De	iPKP1	18 07 43.8		
		region (h = 60 km).						South of Kermadec Islands.	h = 45 km (Up,Um,Ud).	
"	11	Up	iP 07 52 43.8		"	11	Um	iP	18 21 09.4	
			micr sec				Ud	iP	18 21 31.2	
			P Z' 0.1 1.0		"	11	Ki	iP	18 29 35.1	
			Mx E 4.2 15					i	18 29 36.7	
			Mx N 8.6 14			Sk	iP	18 29 06.3		
			Mx Z 11 17			Um	iP	18 29 25.1		
		Ki	micr sec			Ud	iP	18 28 57.2		
			Mx E 5.7 11					North Atlantic Ridge	(h = N).	
			Mx N 8.3 13		"	11	Um	iPKP1	18 54 13.6	
			Mx Z 6.0 11				Ud	iPKP1	18 54 25.5	
		Sk	iP 07 52 46.2		"	11	Um	iP	19 35 29.2	
		Um	iP 07 52 27.2		"	11	Um	iPKP1	19 41 20.4	
		Ud	iP 07 52 53.2				Ud	iPKP1	19 41 32.6	
		De	iP 07 53 01.9		"	11	Um	iPKP1	19 56 31.0	
		Southwestern Ryukyu Islands						i	19 56 44.6	
		(h = 20 km).						Ud	iPKP1	19 56 43.2
		M = 6.3 (Up,Ki).						i	19 56 56.2	
"	11	Up	iP 08 52 08.4 C		"	11	Um	iP	20 01 49.5	
			micr sec		"	11	Ki	iP	22 37 01.3	
			P Z' 0.2 1.3				Um	iP	22 37 09.6	
		Ki	iP 08 51 20.3 C				Ud	iP	22 37 34.7	
			micr sec					Taiwan (h = 20 km).		
			P Z' 0.1 1.2							
		Sk	iP 08 51 55.1							
		Um	iP 08 51 42.5 C							
		Ud	iP 08 52 13.8 C							
		Kuril Islands (h = N).								
		m = 6.0 (Up,Ki).								

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

1978				1978			
Sept.	12	Up	iP	00 53 15.6 C	Sept.	13	(cont.)
			P	Z' 0.2 0.9			$M_L = 2.5$ (Ud).
		Ki	iP	00 52 44.8 C			By combination with
			P	Z' 0.1 0.7			Bergen readings.
		Sk	iP	00 53 15.3 C	"	13	Ud iP 15 26 40.8
		Um	iP	00 52 57.0 C			Southern Nevada.
		Ud	iP	00 53 24.4 C			Underground explosion.
		De	iP	00 53 35.8 C	"	13	Up iPKP1 18 17 58.1 C
		Ryukyu Islands (h = 140 km).					i 18 18 08.5
		m = 5.8 (Up,Ki).					micr sec
"	12	Ki	e	13 27 32			PKP1 Z' 0.1 1.0
			i	13 27 50.2			Ki ePKP 18 17 44
			iSgl	13 27 53.9			Sk iPKP1 18 17 49.6
		Um	iSgl	13 29 24.0			Um iPKP1 18 17 45.3
"	13	Up	iPKP1	02 31 16.0			Ud iPKP1 18 17 59.0
		Sk	iPKP1	02 31 08.3			De iPKP1 18 18 08.3
		Ud	iPKP1	02 31 16.9			Kermadec Islands region.
		De	iPKP1	02 31 25.8			(h = 30 km).
"	13	Up	iP	04 40 20.3 D	"	13	Um iPKP1 19 37 48.7
			ipP	04 40 27.1			i 19 38 01.2
			pP	Z' 0.2 1.0			Ud iPKP1 19 38 01.9
		Ki	iP	04 39 48.4 D			i 19 38 14.3
			ipP	04 39 55.1	"	13	Um iP 20 23 15.6
			pP	Z' 0.2 0.9	"	13	Ud iPKP1 23 53 20.6
		Sk	iP	04 40 16.9			Kermadec Islands region.
			ipP	04 40 23.8			(h = N).
		Um	iP	04 40 02.2 D	"	14	Up iP 00 09 49.7
			ipP	04 40 08.7			i 00 09 52.7
		Ud	iP	04 40 27.2 D			Ki iP 00 10 57.2
			ipP	04 40 33.7			Sk eP 00 10 32
		De	ipP	04 40 46.3 D			i 00 10 35.8
		Bonin Islands region.					Um iP 00 10 28.6
		h = 20 km (Up,Ki,Sk,Um,Ud).					i 00 10 38.0
		m = 6.2 (Up,Ki).					Ud iP 00 09 58.6
"	13	Ud	iP	12 39 58.7			i 00 10 01.3
		Greece (h = 40 km).					De eP 00 09 17
"	13	Ud	iSgl	13 01 44.1			i 00 09 23.9
		Southern Norway, near					Greece - Albania border
		60 1/2° N, 7° E.					region (h = 55 km).
		Origin time = 13 00 07.		"	14	Up iP 00 14 32.0	
		$M_L = 2.3$ (Ud).				i 00 14 35.8	
		By combination with Bergens				micr sec	
		readings.				Mx E 1.0 11	
"	13	Sk	eSgl	14 28 24			Ki iP 00 15 48.7
		Ud	iSgl	14 27 28.0			Sk iP 00 15 14.0
		Southwest coast of Norway,					Um iP 00 15 12.0
		near 58 1/4° N, 6 1/2° E.					Ud iP 00 14 41.1
		Origin time = 14 25 25.					De i(pP) 00 14 08.3
		(cont.)					Greece - Albania border
							region (h = 45 km).

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

1978				1978						
Sept.	14	Up	iPKP1	00 45 15.7	Sept.	14	Ki	i(P)	15 54 02.8	
		Um	iPKP1	00 45 03.3			Sk	i(P)	15 54 16.5	
		Ud	iPKP1	00 45 16.6		"	14	Up	i	16 58 06.4
		De	iPKP1	00 45 27.1			Ud	iP	16 58 04.0	
			i	00 45 42.1					Greece (h = 55 km).	
				Kermadec Islands region (h = 10 km).		"	14	Up	iPKP1	19 14 23.9
"	14	Up	iPKP1	01 01 49.7			Sk	iPKP1	19 14 16.5	
		Ud	iPKP1	01 01 51.3			Ud	iPKP1	19 14 25.5	
							De	iPKP1	19 14 34.7	
"	14	Up	iP	02 16 22.2		"	14	Up	iP	20 08 35.1
		Sk	iP	02 17 08.7						micr sec
		Um	iP	02 17 05.6				P	Z'	0.1 1.0
		Ud	iP	02 16 31.0			Ki	iP		20 08 16.0
				Greece - Albania border region (h = 55 km).			Sk	iP		20 08 38.2
"	14	Um	iPKP1	02 33 19.2			Um	iP		20 08 23.3
		Ud	iPKP1	02 33 31.0			Ud	iP		20 08 43.0
										Philippine Islands region (h = 70 km).
"	14	Ud	iP	05 11 04.3		"	14	Ud	iP	22 30 13.4
				Eastern Gulf of Aden (h = N).						Crete (h = N).
"	14	Ud	iP	07 23 39.1		"	15	Up	iPKP1	02 21 27.9 C
				Eastern Gulf of Aden (h = N).			Ki	iPKP1		02 21 10.2
"	14	Up	iPKP1	09 08 04.3			Sk	ePKP1		02 21 20
		Ud	iPKP1	09 08 05.2			Um	iP		02 21 16.9
		De	iPKP1	09 08 14.7			Ud	iPKP1		02 21 29.6 C
				Kermadec Islands region (h = N).			De	iPKP1		02 21 39.0 C
										Kermadec Islands region (h = 35 km).
"	14	Up	iPgl	09 12 32.9		"	15	Up	iP	02 43 55.2 C
			iSgl	09 12 56.5				iPn		02 45 01.3
			iRg	09 13 07.8				iPP		02 45 15.1
		Sk	iSgl	09 14 28.0						micr sec
		Um	iSgl	09 13 30.3				P	Z'	1.5 0.9
		Ud	iSgl	09 13 51.2			Ki	iP		02 43 38.9 C
		De	iSgl	09 15 00.8						micr sec
				Gulf of Bothnia, near 60 3/4°N, 20 1/2°E. Origin time = 09 12 01. Near surface event, probably explosion.				P	Z'	1.2 0.8
"	14	Ud	iP	12 57 14.8			Sk	iP		02 44 10.6 C
				Near east coast of Honshu, Japan (h = 130 km).				iPP		02 45 33.5
							Um	iP		02 43 40.2 C
							Ud	iP		02 44 11.8 C
							De	iP		02 44 19.1 C
								iPn		02 45 39.0
										Eastern Kazakh SSR. m = 6.9 (Up,Ki). Underground explosion.
"	14	Up	iP	14 49 16.6		"	15	Ki	iP	05 15 54.0
		Sk	iP	14 49 53.1				i		05 16 02.4
		Ud	iP	14 49 32.1			Sk	iP		05 15 59.0
				Western Iran (h = N).				i		05 16 08.6
							Um	iP		05 16 29.5

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

1978				1978					
Sept.	15	De	i(P)	08 02 38.6	Sept.	16	(cont).		
"	15	Ud	iP	11 39 12.4		Sk	iP	15 43 39.1	
		Southwestern Ryukyu Islands				Um	iP	15 43 14.3	
		(h = 15 km).				Ud	iP	15 43 20.9	
"	15	Up	iP	11 50 11.1		De	iP	15 43 10.1	
			i	11 50 22.3		Iran (h = N).			
				micr sec		m = 7.0 (Up,Ki), M = 7.5 (Up).			
		P	Z'	0.6 1.3		M determind from Wichert records.			
		Mx	N	5.1 19	"	16	Up	iP	16 26 50.0
		Mx	Z	12 19				i	16 27 16.1
		Ki	iP	11 49 21.0		Ki	eP	16 27 16	
				micr sec		Um	i	16 27 10.6	
		P	Z'	0.2 1.3		Iran.			
		Mx	N	5.8 19	"	16	Ud	iP	16 47 52.7
		Mx	Z	5.2 21	"	16	Ud	iP	17 00 47.1
		Sk	iP	11 49 58.5	"	16	Um	iP	17 03 06.8
		Um	iP	11 49 44.5		Ud	iP	17 03 14.7	
			i	11 49 55.9	"	16	Um	iP	17 08 08.6
		Ud	iP	11 50 16.5		Ud	iP	17 08 13.7	
			i	11 50 26.0	"	16	Ud	iP	18 17 08.8
		De	iP	11 50 35.8	"	16	Up	iP	18 32 51.0
		Kuril Islands (h = 45 km).				Um	iP	18 33 00.0	
		m = 6.3 (Up,Ki).				Ud	iP	18 33 07.8	
"	15	Up	iP	11 58 49.9		Iran (h = N).			
		Ud	iP	11 58 52.8	"	16	Up	iP	18 52 20.2
"	15	Sk	i	12 36 25.4		Um	iP	18 52 28.4	
			iRg	12 36 27.6		Ud	iP	18 52 36.1	
		Local near-surface event.				De	iP	18 52 23.9	
"	15	Um	iP	17 17 43.9		Iran (h = 15 km).			
		South Korea (h = N).		"	16	Up	iP	19 27 31.5	
"	16	Ud	iP	11 17 32.6		Um	iP	19 57 25	
			ipP	11 18 17.1		Ud	iP	19 57 33.5	
		Andreanof Islands, Aleutian Is.				De	iP	19 57 43.0	
		h = 180 km (Ud).				Iran (h = N).			
"	16	Ud	iP	13 06 05.7	"	16	Ud	iP	22 14 26.1
"	16	Up	iP	14 34 01.4		Um	iP	23 32 34.4 D	
		Um	iP	14 33 35.9		Ud	iP	23 32 39.4	
		Ud	iP	14 34 06.9		micr sec			
		Kuril Islands (h = N).				PKP1	Z'	0.1 0.9	
"	16	Up	iP	15 43 05.9		PKP2	Z'	0.2 0.8	
			iS	15 48 51		Ki	iPKP1	23 32 13.1	
				micr sec		Sk	iPKP1	23 32 28.8 D	
		P	Z'	3.9 1.4	"	(cont.)			
		Mx	E	337 14					
		Mx	N	264 10					
		Ki	iP	15 43 34.1					
				micr sec					
		P	Z'	4.6 1.8					
		(cont).							

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

1978				1978			
Sept.	16	(cont.)		Sept.	18	Um iP	20 55 40.1
		Um iPKP1	23 32 23.3 D			Ud iP	20 56 07.8
		Ud iPKP1	23 32 36.6 D			Near east coast of Honshu, Japan (h = 90 km).	
		iPKP2	23 32 42.2				
		De iPKP1	23 32 45.0 D	"	19	Sk iPgl	14 29 34.0
		iPKP2	23 32 56.0			iSgl	14 29 38.3
		Kermadec Islands region (h = 290 km).				iRg	14 29 40.8
						Local near-surface event.	
"	16	Up iPKP1	23 57 16.5	"	19	Up iPn	14 54 38.7
		iSKP1	24 00 35.7			iSn	14 55 59.3
			micr sec			i	14 56 18.0
		PKP1 Z'	0.3 1.0			Ki iPn	14 54 53.7
		Ki iPKP	23 57 05.5			iSn	14 56 36.6
		iSKP1	24 00 15.6			i	14 56 53.4
		Sk ePKP1	23 57 12			Sk iPn	14 53 54.2
		iSKP1	24 00 30.0			i	14 54 13.2
		Um iPKP1	23 57 05.3			iSn	14 54 47.9
		iSKP1	24 00 26.2			Um iPn	14 54 40.0
		Ud iPKP1	23 57 18.6			iSn	14 56 09.7
		De iPKP1	23 57 28.8			Ud iPn	14 54 07.4
		South of Fiji Islands (h = 220 km).				iSn	14 55 17.0
"	17	Up iP	08 24 30.5			De iPn	14 54 38.5
			micr sec			iSn	14 56 08.7
		P Z'	0.1 1.0			Norwegian Sea, near 62 1/2°N, 1 1/2°E.	
		Ki iP	08 24 58.9			Origin time = 14 52 37.	
		Ud iP	08 24 47.0	"	19	Ud iP	17 18 42.2
		De iP	08 24 34.4				
		Iran (h = N).		"	20	Up iP	07 28 17.6
"	17	Ud iP	12 36 29.1			Ud iP	07 28 27.6
"	17	Ki iP	12 50 56.5	"	20	Up iP	16 17 26.1
		Iran (h = N).				Ki iP	16 17 30.7
"	18	Ud iP	01 42 09.6			Um iP	16 17 22.7
		Iran (h = N).				i	16 17 26.4
"	18	Up iPKP1	01 59 41.6			Ud iP	16 17 43.5
		Ud iPKP1	01 59 43.2			i	16 17 47.7
		Kermadec Islands region (h = 100 km).				De iP	16 17 42.5
"	18	Ud iP	17 40 21.0			Tadzhik-Sinkiang border region (h = N).	
		Turkey (h = 10 km).		"	21	Ki iP	06 40 31.3
"	18	Up iP	17 42 14.5			Ud iP	06 40 44.2
		Um iP	17 42 22.9			Sunda Strait (h = 60 km).	
		Ud iP	17 42 29.8	"	21	De iPKP1	06 43 23.4
		Iran (h = N).				Fiji Islands region (h = 580 km).	
"	18	Up iP	19 40 23.7	"	21	Ud iPKP1	08 03 19.2
		Ud iP	19 40 37.0			De iPKP1	08 03 31.1
		Burma (h = 110 km).				Fiji Islands region (h = 590 km).	

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

1978				1978								
Sept.	21	Up	iP	11 14	18.2	Sept.	22	Ki	iPKP1	11 01	25.8	
			i	11 14	21.3			Sk	iPKP1	11 01	39.6	
		Ki	eP	11 15	10			Um	iPKP1	11 01	33.7	
			i	11 15	12.7			North Island, New Zealand (h = 190 km).				
		Turkey (h = 10 km).					"	22	Ud	iP	16 23	15.8
								Greece (h = N).				
"	21	Up	iP	15 06	09.5	"	22	Ud	iP	19 00	30.3	
			iPn	15 06	52.5			Iran (h = 35 km).				
		Ki	iP	15 05	19.2		"	22	Up	iPKP1	20 33	48.1
				micr sec				Sk	iPKP1	20 33	41.2	
			P	Z'	0.2 0.9			Um	iPKP1	20 33	35.7	
		Sk	iP	15 06	05.3			Ud	iPKP1	20 33	49.0	
		Um	iP	15 05	38.7			De	iPKP1	20 33	57.9	
		Ud	iP	15 06	21.4		"	22	De	iPKP1	23 35	30.2
		De	iP	15 06	42.2			Tonga Islands (h = 210 km).				
		Central Siberia.					"	23	Up	iP	05 23	18.4
		Underground explosion.								micr sec		
"	21	Ud	iP	16 26	16.2				P	Z'	0.1 1.0	
"	21	Up	eP	19 43	18			Ki	iP	05 22	23.9	
			i	19 44	21.3			Sk	iP	05 23	01.3	
		Ki	eP	19 44	10			Um	iP	05 22	49.6	
		Ud	iP	19 43	30.4			Ud	iP	05 23	21.7	
		Turkey (h = 10 km).						De	iP	05 23	44.1	
"	22	Up	iP	04 09	08.5			Near east coast of Kamchatka (h = 60 km).				
		Ki	iP	04 08	28.8		"	23	Ud	iPKP1	16 29	58.5
		Um	iP	04 08	46.8			De	iPKP1	16 30	09.8	
		Ud	iP	04 09	16.6			South of Fiji Islands (h = 550 km).				
		De	iP	04 09	32.8		"	23	Up	i(PKP)	16 50	42.8
		Off east coast of Honshu, Japan (h = N).							iPKP	16 50	55.1	
"	22	Up	iPKP1	07 18	59.6			iPP	16 52	57.4		
				micr sec				iSKP1	16 54	01.3		
			PKP1	Z'	0.1 0.9			iSKKP	17 03	29.5		
		Ki	iPKP1	07 18	39.1			micr sec				
		Sk	iPKP1	07 18	52.8			PKP	Z'	0.7 1.0		
		Um	iPKP1	07 18	47.2			Mx	E	2.3 17		
		Ud	iPKP1	07 19	01.1			Mx	N	3.4 19		
		De	iPKP1	07 19	10.0			Mx	Z	3.5 20		
		Kermadec Islands (h = 60 km).						Ki	i(PKP)	16 50	34.1	
"	22	Ki	iP	08 01	40.2			iPKP	16 50	40.9		
		Mariana Islands (h = 80 km).						iPKKP	17 00	40.2		
"	22	Up	iPKP1	10 09	22.8			micr sec				
		Ud	iPKP1	10 09	24.3			PKP	Z'	1.1 1.0		
		De	iPKP1	10 09	35.3			Mx	N	2.3 18		
		South of Tonga Islands (h = N).						Mx	Z	1.9 18		
								Sk	i(PKP)	16 50	39.1	
								iPKP	16 50	52.4		

(cont.)

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

1978		1978	
Sept.	23	Sept.	23
	(cont.)	Ki	iP 23 42 58.0
Um	i(PKP) 16 50 37.2	North of Svalbard (h = 10 km).	
	iPKP 16 50 47.1		
Ud	e(PKP) 16 50 36	"	24 Ki iP 07 40 10.1
	i(PKP) 16 50 43.0		Um iP 07 40 15.5
	iPKP 16 50 57.5	Mindanao, Philippine Islands (h = 130 km).	
	iSKP1 16 54 03.8		
	iSKKP 17 03 52.0	"	24 Up iPKP1 07 50 54.0
De	i(PKP) 16 50 48.8		Ud iPKP1 07 50 56.1
	iPKP 16 51 02.8	South of Fiji Islands (h = 520 km).	
	iSKP1 16 54 15.0		
New Hebrides Islands (h = 200 km).			
"	23 Up iP 18 17 04.7	"	24 Ki iPKP 08 02 29.4
	Ki iP 18 16 21.0	Loyalty Islands region (h = 45 km).	
	Sk iP 18 16 57.0		
	Um iP 18 16 40.4	"	24 Up eP 08 12 09
	Ud iP 18 17 11.2		Ki i 08 13 42.0
	De iP 18 17 28.3		Sk eP 08 12 53
Hokkaido, Japan region (h = 120 km).			Um iP 08 12 52.4
			Ud eP 08 12 13
"	23 Ud iPKP1 19 52 50.1	Southern Italy (h = 30 km).	
	De iPKP1 19 53 01.3	"	24 Up iP 10 35 23.8
South of Fiji Islands (h = 530 km).			Um iP 10 35 12.8
			Ud iP 10 35 35.5
"	23 Up iP 22 54 33.0	Szechwan province, China (h = N).	
	ipP 22 54 42.7		
	micr sec	"	24 Ud iP 13 35 40.8
	P Z' 0.1 1.1		
	Mx N 1.4 20	"	24 Ud iP 18 23 28.1
	Mx Z 1.8 19	Iran (h = N).	
Ki	iP 22 53 52.6	"	25 Ud iP 02 01 51.5
	ipP 22 54 01.7	Kuril Islands region (h = N).	
	micr sec		
	P Z' 0.1 1.3	"	25 Ki iPKP 05 13 40.5
	Mx N 0.6 14		Sk iPKP 05 13 52.8
	Mx Z 0.8 15	New Hebrides Islands (h = 25 km).	
Sk	iP 22 54 27.1		
	ipP 22 54 35.7	"	25 Ud iP 09 35 51.9
Um	iP 22 54 10.8 C	Rat Islands, Aleutian Islands (h = 130 km).	
	ipP 22 54 20.2		
	iS 23 03 12	"	25 Ud iP 18 56 11.3
Ud	iP 22 54 40.8 C	South Indian Ocean (h = N).	
	ipP 22 54 49.8		
De	iP 22 54 56.3		
	ipP 22 55 05.2		
Off east coast of Honshu, Japan. h = 30 km (Up,Ki,Sk,Um,Ud,De). m = 5.8 (Up,Ki).			

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

1978		1978	
Sept.	25	Up iP	21 30 40.8
		Um iP	21 30 38.5
		Ud iP	21 30 54.9
		De iP	21 30 50.4
		Uzbek SSR (h = N).	
"	25	Up iP	21 59 49.9
		Ud iP	22 00 03.1
		Szechwan province, China (h = N).	
"	25	Ki iPKP	23 07 39.0
		New Hebrides Islands (h = 35 km).	
"	26	Ki iPKP	00 59 39.9
		Um iPKP	00 59 46.5
		New Hebrides Islands (h = 200 km).	
"	26	Up iP	05 29 56.8
		Ki iP	05 29 42.2
		Ud iP	05 30 09.5
		Szechwan province, China (h = N).	
"	26	Ki iP	06 20 53.5
		Sk eP	06 21 18
		Um iP	06 20 56.0
		Ud iP	06 21 13.6
		De iP	06 21 18.2
		Minahassa Peninsula (h = N).	
"	26	Up iPKP1	10 56 15.5
		iPKP2	10 56 21.6
		Sk iPKP1	10 56 10.0
		Um iPKP1	10 56 05.0 D
		Ud iPKP1	10 56 17.1 D
		iPKP2	10 56 24.1
		De iPKP1	10 56 25.4
		Kermadec Islands region (h = 260 km).	
"	26	De iPKP1	12 34 59.8
		Fiji Islands region (h = 570 km).	
"	26	Up iP	14 37 59.8
		micr sec	
		P	Z' 0.1 0.9
		Ki iP	14 37 33.8 D
		micr sec	
		P	Z' 0.2 1.0
		Sk iP	14 37 58.4
		(cont.)	
Sept.	26	(cont.)	
		Um iP	14 37 44.5 D
		Ud iP	14 38 05.4
		De iP	14 38 19.5
		South of Mariana Islands (h = 90 km). m = 6.1 (Up,Ki).	
"	26	Up iSgl	17 33 05.3
		Um iSgl	17 33 47.4
"	26	Up iP	19 29 14.0
		Ki iP	19 29 20.9
		Um iP	19 29 10.9
		Ud iP	19 29 30.7 C
		De eP	19 29 31
		Tadzhik SSR (h = 15 km).	
"	27	Ki iPKP	00 03 27.2
		South Sandwich Islands region (h = N).	
"	27	Up iP	02 09 24.7
		iS	02 13 05
		micr sec	
		P	Z' 0.4 0.7
		Mx	E 0.4 7
		Mx	N 1.2 7
		Mx	Z 2.0 7
		Ki iP	02 07 54.6 C
		iS	02 10 07
		micr sec	
		P	Z' 1.3 1.0
		Mx	N 1.5 6
		Mx	Z 1.4 6
		Sk iP	02 09 04.5
		Um iP	02 09 32.9 C
		Ud iP	02 09 35.9
		De iP	02 10 08.1 C
		Novaya Zemlya. m = 5.8 (Up).	
		Underground explosion.	
"	27	Up iP	04 06 12.6
		Ki iP	04 05 30.3
		Sk iP	04 06 06.3
		Um iP	04 05 49.2
		Ud iP	04 06 20.0
		De iP	04 06 36.0
		Hokkaido, Japan region (h = 70 km).	
"	27	Up iP	17 11 26.4
		micr sec	
		P	Z' 0.1 1.0
		Ki iP	17 10 51.3
		micr sec	
		P	Z' 0.1 0.8
		(cont.)	

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

1978		1978	
Sept.	27	(cont.)	Sept. 28
		Sk iP	17 11 22.6
		Um iP	17 11 06.5 D
		Ud iP	17 11 33.9
		i	17 11 48.9
		De iP	17 11 47.7
		South of Honshu, Japan (h = 290 km). m = 5.5 (Up,Ki).	
"	27	Up iP	17 11 48.9
		Um iP	17 11 34.6
		Ud iP	17 11 41.4
		Southern Nevada. Underground explosion.	
"	27	Ud iP	17 31 37.4
		Southern Sinkiang prov., China (h = 70 km).	
"	27	Up iP	17 31 48.9 C
		P	Z' 0.3 1.0
		Ki iP	17 31 15.0 C
		P	Z' 0.2 1.0
		Sk iP	17 31 22.7 C
		Um iP	17 31 34.4 C
		Ud iP	17 31 41.0 C
		De iP	17 31 57.6 C
		Southern Nevada. m = 6.3 (Up,Ki). Underground explosion.	
"	28	Ud iP	02 57 49.0
		De iP	02 57 36.2
		Iran (h = 45 km).	
"	28	Up eP	05 40 36
		Ki iP	05 40 42.9
		Sk iP	05 41 01.5
		Um iP	05 40 34.6
		Ud iP	05 40 53.6
		Kashmir - India border region (h = 35 km).	
"	28	Up iP	09 49 11.6
		ipP	09 49 22.2
		Mx E	1.0 18
		Mx Z	2.1 16
		Ki iP	09 48 18.9
		ipP	09 48 31.7
		(cont.)	
		Ki	micr sec
		Mx N	1.9 17
		Mx Z	2.7 15
		Sk eP	09 48 54
		Um iP	09 48 45.2
		ipP	09 48 56.2
		Ud iP	09 49 17.3
		ipP	09 49 27.9
		De ipP	09 49 49.1
		Off east coast of Kamchatka. h = 40 km (Up,Ki,Um,Ud).	
"	28	Up i	10 01 43.6
		Ki i	10 00 51.9
		Um iP	10 01 05.5
		i	10 01 19.6
		Ud i	10 01 47.4
		Off east coast of Kamchatka (h = N).	
"	28	Up iP	10 06 17.1
		ipP	10 06 26.8
		Ki ipP	10 05 36.1
		Um iP	10 05 48.2
		ipP	10 06 00.8
		Ud ipP	10 06 28.3
		De ipP	10 06 52.1
		Off east coast of Kamchatka (h = N).	
"	28	Ud iP	10 33 43.0
		Burma - China border region (h = N).	
"	28	Up iSKP1	10 53 45.5
		Ki iPKP	10 50 15.7
		Sk iPKP	10 50 27.5
		iSKP1	10 53 40.6
		Um iPKP	10 50 23.0
		iSKP1	10 53 33.1
		Ud iPKP	10 50 31.4
		iSKP1	10 53 49.1
		De e(PKP)	10 50 31
		iPKP	10 50 39.5
		iSKP1	10 53 59.7
		New Hebrides Islands (h = 145 km).	
"	28	Up iP	11 24 21.5
		Ki iP	11 24 30.4
		Sk iP	11 24 47.0
		Um iP	11 24 20.0
		Ud iP	11 24 38.3
		De iP	11 24 34.5
		Hindu Kush region (h = 200 km).	

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

1978				1978					
Sept.				Sept.					
	28	Ud	iPKP1	15 07 00.9		29	Um	iP	22 15 46.5
		De	iPKP1	15 07 12.4			Ud	iP	22 16 17.4
		South of Fiji Islands					Kuril Islands (h = N).		
		(h = 580 km).							
"	28	Up	iSgl	15 13 25.1	"	29	Ud	iP	23 30 35.0
		Ki	iPgl	15 10 56.5			Dodecanese Islands (h = 10 km).		
			iSgl	15 11 41.9	"	30	Ud	iP	00 55 47.3
		Sk	ePgl	15 10 42	"	30	Up	iP	01 10 10.1
			i	15 11 16.1				i	01 10 21.9
			iSgl	15 11 16.9			Ki	iP	01 11 23.7
		Um	i	15 11 59.3			Sk	iP	01 10 49.1
			iSgl	15 12 00.0			Um	iP	01 10 48.2
		Ud	eSgl	15 13 11			Ud	iP	01 10 15.7
		Coast of Nordland Norway,					De	iP	01 09 41.0
		66.3°N, 12.7°E.					Ionian Sea (h = 35 km).		
		Origin time = 15 09 55.							
		M _L = 2.8 (Ki,Sk,Um,Ud).		"	30	Up	iPKP1	02 02 53.6	
"	29	Ki	iP	07 26 34.6			Sk	iPKP1	02 02 47.5
		Um	iP	07 26 39.9			Um	iPKP1	02 02 42.6
		Ud	iP	07 26 58.0			Ud	iPKP1	02 02 55.6
		Banda Sea (h = 200 km).					De	iPKP1	02 03 03.9
"	29	Up	iP	09 10 01.4	"	30	Ud	iP	02 28 34.5
		Ki	iP	09 09 55.7			Romania (h = 150 km).		
		Sk	iP	09 10 16.1	"	30	Up	iP	09 15 41.9
		Um	iP	09 09 54.2				i	09 15 44.4
		Ud	iP	09 10 13.5					micr sec
		De	iP	09 10 15.9				i	Z' 0.1 0.7
		Burma (h = 100 km).						Mx	E 5.4 19
"	29	Up	iP	11 18 47.0 C				Mx	N 7.1 19
				micr sec				Mx	Z 10 19
			P	Z' 0.1 0.9			Ki	iP	09 15 39.5
		Ki	iP	11 18 01.2				i	09 15 43.5
				micr sec					micr sec
			P	Z' 0.1 1.0				i	Z' 0.5 1.6
		Sk	iP	11 18 36.1				Mx	N 8.4 16
		Um	iP	11 18 22.0 C				Mx	Z 6.3 15
		Ud	iP	11 18 52.7 C			Sk	iP	09 15 58.9
		De	iP	11 19 10.5			Um	iP	09 15 36.8
		Kuril Islands (h = N).						i	09 15 39.3
		m = 5.9 (Up,Ki).					Ud	iP	09 15 54.7
"	29	Ud	iP	13 02 21.4				i	09 15 58.3
"	29	Up	iP	16 34 20.8			De	iP	09 15 55.9
		Ki	iP	16 34 04.6				i	09 15 59.0
		Sk	iP	16 34 02.5			South Burma (h = 10 km).		
		Um	iP	16 34 14.9			m = 6.1 (Up,Ki).		
		Ud	iP	16 34 12.5	"	30	Ud	iP	15 09 35.4
		De	iP	16 34 22.9	"	30	Up	iPKP1	17 09 48.3
		Michoacan, Mexico					Ki	iPKP	17 09 39.5
		(h = 100 km).					(cont.)		

Up = Uppsala, Ki = Kiruna, Sk = Skalistugan, Um = Umeå, Ud = Uddeholm, De = Dølary

1978

Sept.	30	(cont.)		
		Um	iPKP	17 09 42.2
		Ud	iPKP1	17 09 49.6
		De	iPKP1	17 10 01.0
		South of Fiji Islands		
		(h = 440 km).		
"	30	Up	iP	23 47 19.0
		Ki	iP	23 46 48.4
		Um	iP	23 47 01.3
		Ud	iP	23 47 26.0
		Volcano Islands region		
		(h = N).		

June 10, 1980

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SEISMOLOGICAL SECTION
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 SWEDEN

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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°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 K T O B E R 1 - 31, 1978

1978					1978				
Okt.	1	Ud	iP	11 20 35.1	Okt.	2	Ud	iP	13 22 42.1
"	1	Up	iP	13 36 57.2					Kuril Islands region (h = 25 km).
				micr sec	"	2	Ki	iP	19 16 14.7
		Mx	E	0.6 16					Southern Sumatera (h = 90 km).
		Mx	N	1.5 17					
		Mx	Z	1.4 20					
		Ki	iP	13 36 39.5	"	2	Ud	iPKP1	19 52 02.3
				micr sec					South of Fiji Islands (h = 510 km).
		P	Z'	0.1 1.1					
		Mx	Z	1.7 17	"	2	Up	iP	20 32 16.8
		Sk	eP	13 37 01				i	20 32 29.8
		Um	iP	13 36 45.9				iS	20 35 09.0
		Ud	iP	13 37 03.5					micr sec
				Mindanao, Philippine Islands (h = 45 km).				P	Z' 0.2 1.0
"	2	Up	iPKP1	07 06 16.0				i	Z' 0.3 1.1
				micr sec			Ki	iP	20 33 37.6 C
		PKP1	Z'	0.1 0.9					micr sec
		Ud	iPKP1	07 06 17.9				P	Z' 0.1 0.9
		De	iPKP1	07 06 27.1			Sk	iP	20 33 07.9
			iPKP2	07 06 33.4				i	20 33 12.4
				Kermadec Islands region (h = 260 km).				i	20 33 55.1
								iS	20 36 40.4
"	2	Up	iSgl	08 52 56.4			Um	iP	20 32 57.8
		Ki	iLgl	08 56 03.3				i	20 33 11.8
		Sk	i	08 53 09.8				iS	20 36 22.2
			iSgl	08 53 13.6			Ud	iP	20 32 31.5
		Um	iSgl	08 54 31.4				i	20 32 45.6
		Ud	i	08 51 37.1				iS	20 35 44.6
			iSgl	08 52 02.8			De	iP	20 31 52.4
		De	iPgl	08 50 58.1				i	20 31 59.0
			iSgl	08 51 46.1				i	20 33 00.8
				Skagerrak, near 57 1/2°N, 7 1/2°E.					Romania (h = 160 km). m = 5.4 (Up,Ki).
				Origin time = 08 49 53.					
				M _L = 3.3 (Up,Ki,Sk,Um,Ud,De).					

NOIDA JASCOI...
AJASTU...

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

1978

Oct. 3 Up iSgl 14 21 34.6
 Sk iSgl 14 21 37.8
 Ud iPgl 14 19 42.3
 iSgl 14 20 38.8
 De iPgl 14 19 52.2
 iSgl 14 20 49.1
 Coast of south Norway,
 58.2°N, 6.1°E.
 Origin time = 14 18 26.
 M_L = 2.9 (Up,Ud).

" 4 Up iP 04 05 03.5 C
 i 04 05 05.5
 ipP 04 05 30.2
 micr sec
 P Z' 0.1 0.6
 i Z' 0.3 1.1
 Ki iP 04 04 15.9 C
 micr sec
 P Z' 0.4 1.0
 Sk iP 04 04 52.3
 ipP 04 05 16.7
 Um eP 04 04 38
 Ud iP 04 05 09.3 C
 ipP 04 05 36.2
 De iP 04 05 28.1 C
 ipP 04 05 56.1
 Kuril Islands.
 h = 110 km (Up,Sk,Ud,De).
 m = 6.2 (Up,Ki).

" 4 Up iP 14 03 25.9
 ipP 14 03 32.4
 micr sec
 pP Z' 0.1 0.8
 Ki iP 14 03 24.3 C
 ipP 14 03 30.0
 micr sec
 P Z' 0.1 0.7
 pP Z' 0.1 0.8
 Sk eP 14 03 45
 ipP 14 03 51.3
 Um iP 14 03 22.4
 Ud iP 14 03 40.2
 ipP 14 03 46.8
 De iP 14 03 40.6
 ipP 14 03 44.3
 Nepal.
 h = 20 km (Up,Ki,Sk,Ud,De).
 m = 5.9 (Up,Ki).

" 4 Up iP 16 54 39.8 C
 ipP 16 54 44.4
 micr sec
 pP Z' 0.3 1.5
 (cont.)

1978

Oct. 4 (cont.)
 Ki iP 16 54 05.2
 ipP 16 54 09.4
 micr sec
 pP Z' 0.1 1.4
 Sk iP 16 54 14.7
 Um iP 16 54 24.9
 ipP 16 54 29.9
 Ud iP 16 54 32.5
 ipP 16 54 37.1
 California-Nevada border region.
 h = 15 km (Up,Ki,Um,Ud).
 m = 5.9 (Up,Ki).

" 4 Ud iP 17 50 46.1
 California-Nevada border region.
 (h = 10 km).

" 4 Ud iP 19 03 56.3
 Andreanof Islands, Aleutian Is.
 (h = 60 km).

" 4 Up iP 20 06 12.6
 i 20 06 17.0
 i 20 06 24.3
 micr sec
 P Z' 0.1 1.0
 Ki iP 20 05 20.2 D
 i 20 05 25.0
 i 20 05 32.1
 micr sec
 P Z' 0.1 1.0
 Sk iP 20 05 54.4
 i 20 06 05.1
 Um iP 20 05 45.5
 i 20 05 50.0
 i 20 05 57.1
 Ud iP 20 06 14.9 D
 i 20 06 19.5
 i 20 06 25.8
 De iP 20 06 35.7
 i 20 06 40.8
 i 20 06 47.4

Aleutian Islands region
 (h = N).
 m = 5.9 (Up,Ki).
 Multiple P with arrivals in
 average 4.7 and 11.4 s after
 the first onset. When inter-
 preted as pP, the second and
 third onsets give focal depth
 of 15 and 40 km, respectively.

" 5 Ki eP 13 26 18
 i 13 26 22.4
 (cont.)

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

1978		1978	
Oct.	5	(cont.) Um i 13 26 56.7 Ud iP 13 27 11.5 Off east coast of Kamchatka (h = 40 km).	Oct. 7 Up iP 00 32 20.7 C Ki iP 00 31 54.7 C Sk iP 00 32 22.9 Um iP 00 32 04.5 C Ud iP 00 32 30.4 C Northeast of Taiwan (h = 140 km).
"	5	Um iP 18 33 58.2	" 7 Up i(PKP) 08 35 42.6 i 08 35 44.2 Ki iPKP 08 35 35.7 micr sec PKP Z' 0.1 1.4 Um i(PKP) 08 35 36.6 iPKP 08 35 40.9 Ud i(PKP) 08 35 42.8 iPKP1 08 35 44.8 De iPKP1 08 35 55.6 C Fiji Islands region (h = 500 km).
"	6	Um iP 04 22 45.8 Lake Tanganyika region (h = N).	" 7 Up ipP 10 58 43.0 i 10 58 53.2 Ki ipP 10 58 10.5 Um iP 10 58 16.0 ipP 10 58 23.5 Ud iP 10 58 42.2 Bonin Islands region (h = N).
"	6	Ud iP 09 45 53.3	" 7 Ud iP 18 10 32.7 Off east coast of Honshu, Japan (h = 55 km).
"	6	Ki iP 09 47 43.4 Ud iP 09 48 40.2 Kamchatka (h = 55 km).	" 8 Up iP 00 07 56.3 C Ki iP 00 07 04.6 C Sk iP 00 07 49.1 C Um iP 00 07 26.6 C De iP 00 08 26.0 Central Siberia. Underground explosion.
"	6	Up iP 16 21 04.0 ipP 16 21 09.6 micr sec P Z' 0.1 0.9 pP Z' 0.2 0.9 Mx N 1.6 22 Ki iP 16 20 44.2 ipP 16 20 50.0 micr sec pP Z' 0.1 1.0 Mx N 1.4 23 Um iP 16 20 50.3 ipP 16 20 57.2 Ud iP 16 21 13.3 C ipP 16 21 21.3 De iP 16 21 19.6 ipP 16 21 26.0 Luzon, Philippine Islands. h = 20 km (Up,Ki,Um,Ud,De). m = 6.0 (Up,Ki).	" 8 Up iP 11 32 44.4 i 11 32 50.0 Ki iP 11 33 34.9 Um iP 11 33 10.6 C i 11 33 19.1 Ud i 11 32 36.7 De i 11 32 17.8 North Atlantic Ocean (h = 10 km).
"	6	Ki iP 20 55 33.8 C i 20 55 42.0 micr sec Mx N 0.5 13 Um iP 20 55 49.1 Ud iP 20 56 20.8 i 20 56 27.2 Honshu, Japan (h = 25 km).	" 8 Ki iP 13 43 12.9 Um iP 13 43 31.7 C Ud iP 13 44 02.7 Near east coast of Honshu, Japan (h = 80 km).
"	6	Ki iP 21 37 34.7 Ud iP 21 38 07.2 Near coast of northern Calif. (h = 30 km).	
"	6	Up iP 23 16 24.9 C Ud iP 23 16 38.2	

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

1978					1978						
Oct.	8	Up	iP	14 27 40.5 C	Oct.	9	(cont.)				
			iS	14 33 50.8			Ud	ipP	19 35 03.8		
				micr sec			Southwestern Ryukyu Islands.				
			P	Z' 0.5 1.3			h = 35 km (Up,Um,Ud).				
			Mx	E 8.0 9		"	10	Up	iP	02 54 41.8	
			Mx	N 30 16				Ki	iP	02 54 42.8 C	
			Mx	Z 18 11				Sk	iP	02 54 58.5	
		Ki	iP	14 27 41.6 C				Ud	iP	02 54 53.3	
			i	14 27 48.6				De	iP	02 54 51.7	
			iS	14 33 51			Nicobar Islands region				
				micr sec			(h = N).				
			P	Z' 0.8 1.0		"	10	Ki	iP	16 32 33.1	
			Mx	N 34 12				Ud	iP	16 31 32.0	
			Mx	Z 19 15				De	e	16 31 07	
		Sk	iP	14 28 03.9 C			Mediterranean Sea (h = 10 km).				
			i	14 28 13.2		"	10	Up	eP	17 35 14	
		Um	iP	14 27 34.6 C						micr sec	
			iS	14 33 46				P	Z' 0.1 1.5		
		Ud	iP	14 27 57.4 C				Ki	iP	17 34 43.3 C	
		De	iP	14 27 56.6 C				Sk	iP	17 35 11.3 C	
		Southern Sinkiang prov., China (h = 60 km). m = 6.4 (Up,Ki).						Um	iP	17 34 53.4	
"	8	Ud	iP	16 29 45.3				Ud	iP	17 35 19.8	
"	8	Up	iP	19 20 20.4 D			Mariana Islands region				
		Ki	iP	19 19 43.7 D			(h = N).				
				micr sec		"	10	Ud	iPKP	17 37 44.7	
			P	Z' 0.1 0.6			Santa Cruz Islands region				
		Sk	iP	19 20 16.6 D			(h = N).				
		Um	iP	19 19 59.5 D		"	10	Up	iP	18 25 03.6	
		Ud	iP	19 20 28.6 D				Ki	iP	18 24 57.4 C	
		De	iP	19 20 42.7 D				Sk	iP	18 25 19.5	
		Honshu, Japan (h = 250 km).						Um	iP	18 24 56.0 C	
"	9	Ki	iP	03 16 56.3 C				Ud	iP	18 25 16.8 C	
		Ud	iP	03 17 10.8				i		18 25 33.9	
		Southern Sinkiang prov., China (h = 70 km).					Burma-India border region				
"	9	Ud	iP	16 12 04.0		"	10	Ud	iP	21 39 43.9	
		Iran (h = N).					"	11	Ud	iP	01 22 00.8
"	9	Ud	iP	16 32 05.8			Rat Islands, Aleutian				
		De	iP	16 31 48.1			Islands (h = N).				
		Western Iran (h = N).				"	11	Up	iP	02 00 42.6 C	
"	9	Up	iP	19 34 43.6 C				ipP		02 00 58.2	
			ipP	19 34 54.9				iS		02 10 18	
				micr sec						micr sec	
			pP	Z' 0.1 1.0				P	Z' 0.2 1.1		
			Mx	E 1.0 17				pP	Z' 0.4 1.2		
			Mx	Z 1.1 17				Mx	E 1.2 21		
		Ki	iP	19 34 17.8				Mx	N 1.8 20		
		Um	iP	19 34 27.8				Mx	Z 1.3 23		
			ipP	19 34 36.5			Ki	iP	02 00 05.6 C		
		Ud	iP	19 34 52.7 C				ipP		02 00 20.8	
		(cont.)								micr sec	
								P	Z' 0.3 1.5		
							(cont.)				

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

1978				1978							
Oct.	11	(cont.)		Oct.	12	Up	iPKP1	06 00 39.2			
		Sk	iP			Ud	iPKP1	06 00 40.5			
			ipP			De	iPKP1	06 00 49.3			
		Um	iP			Kermadec Islands region					
			ipP			(h = N).					
			iS								
		Ud	iP								
			ipP								
		De	iP	"	12	Up	iP	06 16 08.5			
			ipP			Ki	iP	06 17 04.4			
		South of Honshu, Japan.				Um	iP	06 16 31.2			
		h = 55 km (Up,Ki,Sk,Um,Ud, De).				Ud	iP	06 16 17.8			
		m = 6.2 (Up,Ki).				De	iP	06 15 51.4			
"	11	Ud	i(P)			Turkey (h = 20 km)					
						Late arrivals when compared with NEIS solutions.					
"	11	Up	iP								
			ipP			"	12	Up	iP	07 02 13.1	
						Ki	iP	07 02 47.9			
			P	Z'				micr sec			
								0.1 1.0			
		Ki	eP			Sk	iP	07 02 46.7			
		Sk	iP			Um	iP	07 02 25.5			
		Um	iP			Ud	iP	07 02 28.1			
			i			De	iP	07 02 13.0			
		Ud	iP			Southern Iran (h = N).					
			ipP								
		De	iP			"	12	Up	iP	07 17 37.4	
			ipP			Ud	iP	07 17 45.6			
		Kuril Islands.				Minahassa Peninsula					
		h = 45 km (Up,Ud,De).				(h = 60 km).					
"	11	Ud	iPKP1	11 33 07.2	"	12	Up	i(P)	09 44 45.7		
		De	iPKP1	11 33 17.3			Ud	i(P)	09 44 42.5		
		South of Fiji Islands									
		(h = 620 km).				"	12	Ud	iP	10 35 26.2	
"	11	Up	iPKP1	19 42 39.9			De	iP	10 35 39.7		
		Ud	iPKP1	19 42 41.6							
		De	iPKP1	19 42 51.7			"	12	Up	iP	11 04 25.1
		South of Fiji Islands				Ki	iP	11 03 38.4			
		(h = 50 km).				Um	iP	11 04 00.0			
"	11	Um	iP	20 04 12.0			Ud	iP	11 04 31.0		
		Ud	iP	20 04 38.5			De	iP	11 04 48.5		
"	12	Up	iP	02 30 52.2	"	12	Ud	iPKP	13 34 27.9		
		Ki	iP	02 30 32.8 C			Central Chile (h = N).				
		Sk	iP	02 30 56.3	"	12	Ud	i(P)	14 10 16.6		
		Ud	iP	02 31 01.5	"	12	Up	iP	15 08 51.4 C		
		De	iP	02 31 07.8			iPP	15 10 11.7			
		Luzon, Philippine Islands				Ki	iP	15 09 20.3 C			
		(h = 55 km).				iPP		15 10 49.9			
"	12	Ud	iP	03 13 37.0 D				micr sec			
		De	iP	03 13 20.5			P	Z' 0.1 1.0			
		Southern Iran (h = N).				Sk	iP	15 09 24.5			
						(cont.)					

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

1978		1978	
Oct.	12	(cont.)	Oct. 13
		Um iP	Ud iPKP1
		15 08 59.8 C	01 17 20.8
		Ud iP	De iPKP1
		15 09 07.2	01 17 32.2
		iPP	South of Fiji Islands
		15 10 36.5	(h = 580 km).
		De iP	" 13
		15 08 55.7	Ud iPKP1
		i	02 00 28.8
		15 09 13.3	De iPKP1
		Iran (h = 15 km).	02 00 38.7
"	12	Ud iP	South of Fiji Islands
		16 34 10.0	(h = 360 km).
		Northern Sumatera	" 13
		(h = N).	Ud iP
		" 12	09 01 33.9
		Ud iP	Near east coast of Honshu,
		16 48 39.0	Japan (h = 45 km).
		De iP	" 13
		16 48 36.1	De i(P)
		Northern Sumatera	12 50 39.9
		(h = N).	" 14
"	12	Up iP	Up iP
		17 20 53.8	01 08 25.2 C
		i	Ki iP
		17 21 07.2	01 08 10.2
		Um iP	Sk iP
		17 21 05.9	01 08 39.6 C
		i	Um iP
		17 21 13.0	01 08 11.5
		Ud i	Ud iP
		17 21 08.5	01 08 40.7
		De i	De iP
		17 20 57.2	01 08 46.1
		Mid-Indian Rise (h = N).	Southern Sinkiang prov.,
"	12	Up iP	China (h = N).
		20 15 17.3	" 14
		ipP	Ud iP
		20 15 22.2	05 11 20.5
		Ki iP	" 14
		20 15 40.0	Up iP
		ipP	11 42 45.8
		20 15 45.3	i
		micr sec	11 42 52.4
		Z' 0.1 1.4	Ki iP
		Sk i	11 42 14.7
		20 15 44.8	Sk iP
		Um i	11 42 43.5
		20 15 31.4	Um iP
		Ud iP	11 42 28.2 D
		20 15 27.2	i
		ipP	11 42 34.7
		20 15 31.3	Ud iP
		De i	11 42 52.8 D
		20 15 20.1	i
		Mid-Indian Rise.	11 42 59.3
		h = 15 km (Up,Ki,Ud).	De iP
"	12	Ki iSgl	11 43 04.8
		21 25 59.6	Bonin Islands region
		Um iPgl	(h = 470 km).
		21 24 15.5	" 14
		iSgl	Up iPKP1
		21 24 20.1	14 03 58.9 C
		Västerbotten, Sweden,	iPKP2
		64.2°N, 20.4°E.	14 04 03.5
		Origin time = 21 24 09.	micr sec
		By combination with Finnish	PKP2 Z' 0.1 0.9
		station readings.	Ki e(PKP)
"	13	Up iP	14 03 36
		01 05 21.8	iPKP
		Ki iP	14 03 41.2
		01 06 52.6	Um iPKP1
		Um iP	14 03 47.7 C
		01 06 04.3	i
		Ud iP	14 03 52.2
		01 05 38.6	Ud iPKP1
		De iP	14 04 00.8 C
		01 04 59.7	iPKP2
		Romania (h = 100 km).	14 04 05.3
			De iPKP1
			14 04 09.0
			i
			14 04 13.1
			Kermadec Islands region
			(h = 55 km).

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

1978				1978								
Oct.	14	Up	iP	18 54	34.5	Oct.	15	Ud	iP	16 49	53.3	
		Ki	iP	18 54	28.5		"	15	Um	iP	20 06 20.4	
		Sk	ePd	18 54	45			Ud	iP	20 06 36.6		
		Um	iP	18 54	28.6			Off coast of northern California (h = 15 km).				
		Ud	iP	18 54	42.9		"	16	Ud	iP	04 34 25.0	
		De	iP	18 54	44.4			Off coast of northern California (h = 15 km).				
		Java (h = 180 km).					"	16	Up	iP	16 38 46.8	
"	14	Up	iP	18 58	22.9			micr sec				
		Ki	iP	18 58	14.9			P	Z'	0.1	1.0	
		Sk	iP	18 58	58.2			Mx	N	0.7	14	
		Um	iP	18 58	28.2			Mx	Z	0.5	12	
		Ud	iP	18 58	44.5			Ki	iP	16 38 23.0		
		De	eP	18 58	44			micr sec				
"	14	Ud	iPKP	23 14	40.4			Mx	E	1.3	12	
			i	23 14	48.2			Mx	N	1.1	17	
		De	iPKP	23 14	45.9			Mx	Z	1.1	13	
		New Britain region (h = 45 km).						Um	iP	16 38 28.8		
"	15	Up	iP	05 43	53.4			Ud	iP	16 39 00.8		
			iPn	05 44	56.4			De	iP	16 39 09.7 C		
			iPP	05 45	11.9			Mongolia (h = N). M = 4.9 (Up,Ki).				
					micr sec			"	17	Ki	iPKP	00 13 18.4
		P	Z'	0.1	0.8			micr sec				
		PP	Z'	0.1	1.2			PKP	Z'	0.1	1.4	
		Ki	iP	05 43	37.5			Ud	i(PKP)	00 13 26.5		
					micr sec			iPKP		00 13 35.0		
		P	Z'	0.1	0.8			De	iPKP1	00 13 33.8		
		Sk	iP	05 44	07.9			Fiji Islands region (h = 570 km).				
		Um	iP	05 43	38.2			"	17	Up	iP	05 04 46.5 C
		Ud	iP	05 44	09.8 C			micr sec				
		De	iP	05 44	16.7 C			P	Z'	1.1	0.5	
		Eastern Kazakh SSR. m = 5.8 (Up,Ki). Underground explosion.						Mx	E	0.6	8	
"	15	Ki	iP	05 50	18.9			Mx	Z	0.9	9	
		Ud	iPKP	05 54	36.3			Ki	iP	05 05 17.9 C		
		De	iPKP	05 54	40.5			micr sec				
		New Britain region (h = 150 km).						P	Z'	2.2	0.9	
"	15	Ud	iPKP	09 51	22.7			Mx	E	1.1	9	
		Catamarca province, Argentina (h = 50 km).						Mx	N	0.6	10	
"	15	Up	iP	11 19	08.8			Mx	Z	1.1	8	
"	15	Ud	iP	15 48	12.4			Um	iP	05 04 53.3 C		
		Off coast of northern California (h = 15 km).						Ud	iP	05 05 07.3 C		
								De	iP	05 04 58.1 C		
								Western Kazakh SSR. m = 6.7 (Up,Ki). Underground explosion.				

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

1978				1978					
Oct.	17	Ud	iP	08 24 30.7	Oct.	18	Up	iP	23 41 30.1 C
				North Atlantic Ocean					micr sec
				(h = N).			P	Z'	0.1 1.0
"	17	Up	iP	14 04 49.4 C			Ki	iP	23 40 45.4
			iS	14 08 45.9					micr sec
				micr sec			P	Z'	0.5 2.0
			P	Z' 0.4 1.1			Um	iP	23 41 05.8
		Ki	iP	14 04 07.2 C			Ud	iP	23 41 36.9 C
			iS	14 07 17.9			Hokkaido, Japan region		
				micr sec			(h = N).		
			P	Z' 0.5 1.0			m = 6.0 (Up,Ki).		
		Mx	E	0.7 9			At De, it is difficult to		
		Mx	Z	0.5 8			separate arrivals due to		
		Sk	iP	14 04 57.7			this and the following event.		
		Um	iP	14 04 17.1	"	18	Ud	iP	23 42 40.8
			iS	14 07 44.5			Crete (h = 10 km).		
		Ud	iP	14 05 07.5 C	"	19	Up	iPKP	01 57 56.0
			i	14 05 12.4			Ki	iPKP	01 57 41.8
			iS	14 09 27.0			Sk	iPKP	01 57 51.0
		De	iP	14 05 25.8			Um	iPKP	01 57 47.9
			i	14 05 33.3			Ud	iPKP	01 57 58.2
		Ural Mountains region.					De	iPKP	01 58 04.9
		m = 5.7 (Up,Ki).					New Hebrides Islands		
		Underground explosion.					(h = 210 km).		
"	17	Sk	eP	20 29 03	"	19	Up	eP	10 21 53
		Um	iP	20 29 19.3	"	19	Up	iP	11 08 54.7
		Ud	iP	20 29 10.9			Ud	iP	11 08 56.8
		El Salvador (h = 120 km).					i	11 09 00.4	
"	17	Up	iP	21 01 45.0			Kuril Islands (h = 25 km).		
		Ki	iP	21 00 51.3	"	19	Up	i(P)	13 25 30.1
		Ud	iP	21 01 43.9	"	19	Up	i(PKP)	13 27 11.4
		Andreanof Islands,					Ki	iPKP	13 27 04.0
		Aleutian Is. (h = 60 km).					Um	iPKP	13 27 11.9
"	17	Up	iPKP1	23 14 48.2			Ud	i(PKP)	13 27 13.4
			iSKP1	23 17 42.2				iPKP1	13 27 15.4
		Ki	iPKP	23 14 41.3 C			De	i(PKP)	13 27 22.6
			iSKP1	23 17 18.1				iPKP1	13 27 24.8
		Sk	eSKP1	23 17 33			Fiji Islands region		
		Um	i(PKP)	23 14 42.9			(h = 400 km).		
		Ud	iPKP1	23 14 50.2	"	19	Up	iSgl	14 47 20.3
			iSKP1	23 17 43.7			Ud	iSgl	14 46 19.9
		De	iPKP1	23 15 01.5			Coast of southwestern Norway.		
			iSKP1	23 17 52.8			Origin time = 14 43 59.		
		Fiji Islands region					M _L = 2.7 (Ud).		
		(h = 550 km).					By combination with Bergen		
"	18	Ud	iP	00 45 33.0			readings.		
"	18	Ud	iP	06 22 07.3					

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

1978				1978 (cont.)			
Oct.	23	(cont.)		Oct.	24	Um	iP 10 47 43.2 C
		Sk	iP 08 15 23.2 D			Mariana Islands (h = 70 km).	
			ipP 08 16 03.6				
			iPP 08 17 07.3	"	24	Up	iP 13 50 10.4
		Um	iP 08 14 55.9 D			Ki	iP 13 50 09.6
			ipP 08 15 35.5				micr sec
			iPP 08 16 28.1				P Z' 0.1 1.4
			iS 08 20 53			Mx	N 2.9 19
		Ud	iP 08 15 14.1 D			Um	iP 13 50 03.7
			ipP 08 15 53.7			Ud	iP 13 50 22.6
			iPP 08 16 58.0			Andaman Islands region	
		De	iP 08 15 10.6 D			(h = N).	
			ipP 08 15 50.7	"	25	Ki	iP 07 56 39.2 C
			iPP 08 16 53.1			Um	iP 07 56 39.1
		Afghanistan-USSR border region.		"	25	Um	iP 19 21 33.8
		h = 190 km (Up,Ki,Sk,Um, Ud,De).				Kamchatka (h = N).	
		m = 6.3 (Up,Ki).		"	25	Ud	eP 20 11 46
"	23	Ud	i(P) 09 56 52.2	"	25	Um	iP 21 50 27.9
"	23	Up	iPKP1 11 43 17.1			Ud	iP 21 50 38.1
			i 11 43 31.9	"	25	Up	iP 22 12 30.9
			micr sec			Ud	i 22 12 33.8
			i Z' 0.1 1.0			Gulf of Alaska (h = 20 km).	
		Um	i 11 43 30.1	"	26	Ud	iP 09 28 04.8
		Ud	iPKP1 11 43 18.9 C			De	i 09 27 19.5
		De	iPKP1 11 43 28.4 C			Mindanao, Philippine Islands	
		Kermadec Islands region (h = 90 km).				(h = 40 km).	
"	23	Up	iP 14 00 36.2	"	26	Ud	ipP 21 27 19.9
		Ki	micr sec			Tibet (h = N).	
			Mx N 1.4 16	"	26	Ud	iP 22 11 42.2
		Ud	iP 14 00 46.4			Tibet (h = N).	
		Volcano Islands region (h = 35 km).		"	27	Ud	eP 01 20 40
"	23	Up	iP 14 46 23.2	"	27	Up	iPKP1 03 38 16.8
		Ki	iP 14 46 21.0				iPKP2 03 38 25.7
		Um	iP 14 46 17.5			Sk	iPKP1 03 38 11.5
		Ud	iP 14 46 38.1 C			Um	iPKP1 03 38 06.7
		Tibet (h = N).				Ud	iPKP1 03 38 18.4 C
"	23	Ud	iP 14 54 11.4			De	iPKP1 03 38 26.5
"	23	Up	iPKP1 22 12 01.6			South of Kermadec Islands	
		De	iPKP1 22 12 14.1 C			(h = 70 km).	
		Tonga Islands region (h = N).		"	27	Up	iPKP1 06 09 55.2
"	24	Up	iP 10 47 59.2			Ud	iPKP1 06 09 57.4
		Ki	iP 10 47 33.3			De	iPKP1 06 10 09.1
			i 10 47 43.0			South of Fiji Islands	
			micr sec			(h = 570 km).	
			P Z' 0.3 1.3	"	27	Up	iPKP1 06 43 10.1
		(cont.)				(cont.)	

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

1978				1978					
Oct.		(cont.)		Oct.		(cont.)			
	27	Up	iSKP1 06 45 57.2		28	De	iP 22 57 56.0		
		Ki	iPKP 06 42 59.9			Hokkaido, Japan region			
		Sk	iSKP1 06 45 51.8			(h = 80 km).			
		Um	iPKP 06 43 07.4		"	29	Up	iP 01 17 51.4	
			iSKP1 06 45 46.2				Ud	iP 01 17 58.2	
		Ud	iPKP1 06 43 10.5			Greece (h = N).			
			iSKP1 06 45 58.8		"	29	Ud	eP 02 20 11	
		De	iPKP 06 43 21.9				De	iP 02 19 37.6	
			iSKP1 06 46 07.5			Dodecanese Islands			
		Fiji Islands region				(h = 10 km).			
		(h = 600 km).			"	29	Um	iP 10 48 18.4	
"	27	Up	iSKP1 17 58 39.6				Ud	iP 10 48 44.1	
		Ud	iSKP1 17 58 43.3			Bonin Islands region			
		De	iSKP1 17 58 53.1			(h = 460 km).			
		New Hebrides Islands			"	29	Ud	iP 14 49 17.6	
		(h = 180 km).				"	29	Ud	iP 19 14 47.1
"	28	Ud	iP 06 11 42.1			Molucca Sea (h = 70 km).			
"	28	Ud	iP 11 14 36.8		"	30	Ud	iP 04 58 15.2	
"	28	Up	iP 16 40 44.9			Java (h = 120 km).			
			micr sec		"	30	Um	iP 13 53 19.5	
		P	Z' 0.1 0.9			Mindanao, Philippine Islands			
		Ki	iP 16 39 53.3			(h = 40 km).			
			micr sec		"	30	Up	eP 13 55 13	
		P	Z' 0.1 0.7					micr sec	
		Sk	eP 16 40 31				Mx	E 1.2 20	
		Um	iP 16 40 16.9				Mx	N 1.0 18	
		Ud	iP 16 40 49.2				Mx	Z 1.9 20	
		De	iP 16 41 09.6				Ki	micr sec	
		Kuril Islands (h = 140 km).					Mx	E 0.7 16	
		m = 5.8 (Up,Ki).					Mx	N 1.1 15	
"	28	Up	epP 16 55 40				Um	iP 13 55 03.2	
		Ud	iP 16 55 39.8					iSKS 14 05 20	
		Taiwan region (h = 45 km).					Ud	iP 13 55 22.1	
"	28	Um	iP 17 38 08.9			Mindanao, Philippine Islands			
		Ud	iP 17 38 39.1			(h = N).			
"	28	Up	iP 21 42 13.4			M = 5.4 (Up,Ki).			
		Ki	iP 21 42 22.8		"	30	Ud	iP 14 03 44.2	
		Um	iP 21 42 12.6		"	30	Up	iP 18 36 15.1	
		Ud	iP 21 42 30.0				i	18 36 45.0	
		De	iP 21 42 26.2				eS	18 46 52	
		Hindu Kush region						micr sec	
		(h = 190 km).					Mx	E 2.9 19	
"	28	Up	iP 22 57 31.6				Mx	N 3.0 19	
			micr sec				Mx	Z 8.5 19	
		P	Z' 0.1 0.9				Ki	iP 18 36 06.8	
		Sk	iP 22 57 24.6				i	18 36 35.0	
		Um	iP 22 57 06.6			(cont.)			
		Ud	iP 22 57 37.6			(cont.)			
		(cont.)				(cont.)			

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

1978										1978									
Oct.	30	(cont.)								Oct.	31	(cont.)							
		Ki		micr	sec							De	iP	11 33	25.2	C			
		Mx	E	4.1	21														
		Mx	N	7.0	21														
		Mx	Z	5.8	22														
		Sk	iP	18 35	57.8					"	31	Ud	i(P)	14 44	57.0				
		Um	iP	18 36	11.3														
			iS	18 46	38														
		Ud	iP	18 36	05.8														
		Near coast of Guatemala																	
		(h = 70 km).																	
		M = 6.0 (Up,Ki).																	
"	30	Up	eP	19 22	22														
		Sk	iP	19 22	04.3														
		Um	iP	19 22	19.1														
		Ud	iP	19 22	11.9														
		Near coast of Guatemala																	
		(h = 60 km).																	
"	30	Ud	iP	19 32	44.1														
		North Atlantic ridge																	
		(h = 10 km).																	
"	31	Up	iP	04 23	53.1 C														
				micr	sec														
		P	Z'	0.1	1.0														
		Ki	iP	04 23	37.7 C														
				micr	sec														
		P	Z'	0.1	0.5														
		Sk	iP	04 24	08.6 C														
		Um	iP	04 23	38.1 C														
		Ud	iP	04 24	09.3 C														
		De	iP	04 24	17.0 C														
		Eastern Kazakh SSR.																	
		m = 5.9 (Up,Ki).																	
		Underground explosion.																	
"	31	Up	Mx	07 20															
				micr	sec														
		Mx	E	08	20														
		Ki	Mx	07	21														
				micr	sec														
		Mx	E	1.0	19														
		Mx	N	1.1	20														
		Near coast of Guatemala																	
		(h = 60 km).																	
		M = 5.2 (Up,Ki)																	
"	31	Ud	iP	10 29	55.7														
"	31	Up	iP	11 33	10.5														
		Ki	iP	11 32	55.3														
				micr	sec														
		P	Z'	0.1	1.0														
		Sk	iP	11 33	16.6														
		Um	iP	11 33	00.6														
		Ud	iP	11 33	18.9														
		(cont.)																	

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July 17, 1980.

SEISMOLOGICAL SECTION
 BOX 12019
 S-750 12 UPPSALA
 SWEDEN

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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°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 . - . 3 0 . , . 1 9 7 8 .

1978				1978					
Nov.	1	Ud	iP	08 49 30.1	Nov.	1	Ki	iP	23 03 06.0
"	1	Up	iSgl	11 45 26.7			Um	i	23 03 03.9
		Um	iSgl	11 46 33.7			Ud	iP	23 03 18.0
							i		23 03 28.7
"	1	Um	iPKP	19 04 57.4			De	iP	23 03 16.4
		Ud	iPKP	19 05 10.3			i		23 03 21.9
							Kirgiz SSR (h = 70 km).		
"	1	Up	iP	19 55 56.7 D	"	1	Up	iPKP	23 31 50.5
			iS	20 02 00			Ud	iPKP	23 31 51.7
				micr sec			De	iPKP	23 32 01.3
		P	Z'	1.9 1.2					
		Mx	E	153 18	"	1	Ki	iP	23 48 36.0
		Mx	N	270 15			Um	eP	23 48 26
		Mx	Z	181 17			Ud	iP	23 48 49.3
		Ki	iP	19 56 00.8 D			Kirgiz SSR (h = N).		
			iS	20 02 09	"	2	Ki	iP	00 28 16.9
				micr sec			Um	eP	00 28 09
		P	Z'	2.5 1.0			Ud	iP	00 28 29.7
		Mx	E	59 9			De	iP	00 28 28.3
		Mx	N	234 15			Kirgiz SSR (h = 60 km).		
		Mx	Z	92 12	"	2	Up	eP	05 25 07
		Sk	iP	19 56 52.5 D			i		05 25 12.8
			i	19 56 28.2			Ki	iP	05 23 24.4
		Um	iP	19 55 52.5			i		05 23 31.5
		Ud	iP	19 56 13.8 D			micr sec		
		De	iP	19 56 12.0 D			i	Z'	0.3 1.1
		Kirgiz SSR (h = 40 km).					Sk	iP	05 24 11.5
		m = 6.7, M = 7.2 (Up,Ki).					i		05 24 16.3
"	1	Ki	iP	20 54 52.1			Um	iP	05 24 15.9
		Ud	iP	20 55 05.4			i		05 24 21.6
		De	iP	20 55 03.3			Ud	iP	05 24 59.1
		Kirgiz SSR (h = 70 km).					i		05 25 05.7
"	1	Ki	iP	21 12 38.9			De	iP	05 25 44.9
		Um	iP	21 12 32.1			i		05 25 48.1
		Ud	iP	21 12 53.3			i		05 25 52.2
		Kirgiz SSR (h = 65 km).					Greenland Sea (h = 10 km).		

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

1978						1978				
Nov.	2	Up	iP	05 33	09.2	Nov.	2	(cont.)		
		Um	eP	05 32	39			Up	micr	sec
		Ud	iP	05 33	05.8			P	Z'	0.1 1.0
		De	iP	05 33	27.3			PP	Z'	0.3 1.3
		Unimak Island region						Mx	E	2.0 7
		(h = 25 km).						Mx	N	4.4 9
"	2	Up	iP	06 29	22.2			Ki	iP	11 23 12.7
		Ki	iP	06 28	49.5				micr	sec
		Ud	iP	06 29	29.1 C			P	Z'	0.2 0.8
		De	iP	06 29	41.0			Mx	N	6.1 12
"	2	Up	iP	06 31	43.5			Sk	iP	11 23 33.7
			i	06 31	44.7			iPP		11 25 12.4
			iPP	06 33	12.9			Um	iP	11 23 04.6
				micr	sec			iPP		11 23 37.2
			i	Z'	0.1 1.0			Ud	iP	11 23 24.6
			PP	Z'	0.3 1.3			iPP		11 25 01.7
			Mx	E	7.4 17			De	iP	11 23 23.8
			Mx	N	6.5 8			iPP		11 25 04.3
			Mx	Z	17 17			Kirgiz SSR (h = 45 km).		
		Ki	iP	06 31	47.7			m = 5.9 (Up,Ki).		
			i	06 31	49.0			"	2	Ki iP 12 10 29.5
				micr	sec					Ud iP 12 10 42.9
			i	Z'	0.3 0.9			Kirgiz SSR (h = 55 km).		
			Mx	E	13 14			"	2	Ud iP 16 58 10.9
			Mx	N	8.5 8			South of Alaska (h = N).		
			Mx	Z	4.8 7			"	2	Ud iP 22 29 33.2
		Sk	iP	06 32	08.8			Kirgiz SSR (h = N).		
			iPP	06 33	48.8			"	2	Ud iP 22 32 03.9
		Um	iP	06 31	39.5			"	3	Up iPKP 03 40 10.9
			i	06 31	40.8					Um iPKP 03 40 19.1
			iPP	06 33	10.0					Ud iPKP 03 40 09.2
		Ud	iP	06 32	00.4 C			South Sandwich Islands		
			i	06 32	01.6			region (h = 90 km).		
			iPP	06 33	38.0			"	3	Ud iP 05 50 54.8
		De	iP	06 31	58.6			Dodecanese Islands (h = 55 km).		
			i	06 32	00.0			"	3	Ki iP 06 47 45.8
			iPP	06 33	37.9					Um iP 06 48 31.6
		Kirgiz SSR (h = 25 km).								Ud i 06 49 27.4
		m = 5.9, M = 6.0 (Up,Ki).							Greenland Sea (h = 10 km).	
		Double P, the second,							"	3
		larger in average 1.3 s								Ki iSgl 10 13 51.8
		delayed.								Sk eSgl 10 14 09
"	2	Ud	iP	06 54	40.7					Um iSn 10 14 15.3
"	2	Ud	iP	07 42	02.1					iSgl 10 14 31.5
		De	iP	07 42	00.2			Coast of Nordland, Norway		
		Kirgiz SSR (h = 50 km).						66.8°N, 13.7°E.		
"	2	Up	iP	11 23	08.3			Origin time = 10 12 25.		
			iPP	11 24	38.4			M _L = 2.9 (Ki,Um).		
		(cont.)								

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

1978									1978											
Nov.	3	Up	i	10 26 29.8					Nov.	3	Up	iP	18 59 21.0							
			iRg	10 26 34.7							Um	iP	18 59 35.1							
		Ud	iSgl	10 26 15.7							Ud	iP	18 59 38.7 C							
			iRg	10 26 20.9									Eastern Caucasus (h = 30 km).							
		Central Sweden.																		
		Near-surface event.								"	3	Ud	ip	23 12 29.9						
"	3	Up	iP	12 25 55.3 C									South of Honshu, Japan (h = 410 km).							
				micr sec																
			P	Z' 0.1 1.0						"	4	Up	iP	05 12 55.0 C						
		Ki	iP	12 25 22.3 C									iPP	05 14 13.3						
				micr sec										micr sec						
			P	Z' 0.1 0.9										P	Z' 0.7 0.9					
		Sk	iP	12 25 51.4								Ki	iP	05 12 38.2 C						
		Um	iP	12 25 36.4										micr sec						
		Ud	iP	12 26 02.0 C										P	Z' 0.7 0.9					
		De	iP	12 26 13.8 C								Sk	iP	05 13 09.8 C						
		Volcano Islands region											iPP	05 14 32.7						
		(h = N).											Um	iP	05 12 39.5 C					
		m = 5.9 (Up,Ki).											Ud	iP	05 13 11.4 C					
												De	iP	05 13 18.7 C						
"	3	Up	iP	13 18 49.0										Eastern Kazakh SSR. m = 6.6 (Up,Ki).						
				micr sec										Underground explosion.						
			P	Z' 0.1 1.0																
		Ki	iP	13 18 19.2																
		Sk	eP	13 18 46						"	4	Up	iPKP2	06 24 15.0						
		Um	iP	13 18 32.2								Ud	iPKP2	06 24 17.1						
		Ud	iP	13 18 55.1										Kermadec Islands region (h = 330 km).						
		De	iP	13 19 06.1																
		Mariana Islands region																		
		(h = 50 km).								"	4	Ki	iP	06 34 25.2						
"	3	Sk	iP	16 54 06.2								Ud	iP	06 34 37.7						
		Ud	iP	16 53 34.2 C										Kirgiz SSR (h = 50 km).						
		De	eP	16 52 59																
		Southern Greece (h = 50 km).								"	4	Ki	iP	08 04 02.2						
"	3	Up	eP	17 17 49								Sk	iP	08 04 14.2						
		Ud	iP	17 17 57.4								Ud	iP	08 05 00.5						
			i	17 18 11.0									i	08 05 12.5						
		Kuril Islands region (h = N).								"	4	Ud	iP	08 37 22.9						
"	3	Up	iP	17 47 04.7										Kuril Islands (h = 190 km).						
			i	17 47 15.9																
				micr sec																
			P	Z' 0.1 1.0										P	Z' 2.0 1.5					
		Ki	iP	17 46 11.5										Mx	E 11 14					
		Sk	iP	17 46 44.9										Mx	N 15 13					
		Um	iP	17 46 37.9										Mx	Z 20 14					
		Ud	iP	17 47 06.2 C								Ki	iP	15 29 02.0 C						
		De	iP	17 47 28.1									iS	15 34 24						
		Rat Islands, Aleutian												micr sec						
		Islands (h = N).												P	Z' 1.5 1.7					
														(cont.)						

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

1978				1978							
Nov.	4	(cont.)		Nov.	4	Ki	iPKP	23 05 01.1			
		Ki	micr sec			Um	iPKP	23 05 08.2			
		Mx	E 9.3 14			Ud	iPKP	23 05 16.8			
		Mx	N 21 16			De	iPKP	23 05 23.7			
		Mx	Z 18 16			Solomon Islands (h = N).					
		Sk	iP	15 29 00.6 C		"	4	Up	iPKP	23 10 51.0	
		Um	iP	15 28 37.0 C						micr sec	
			iS	15 33 43				PKP	Z'	0.1 1.2	
		Ud	iP	15 28 40.2 C		Ki	iPKP	23 10 39.1		micr sec	
		De	iP	15 28 24.6 C				PKP	Z'	0.1 1.0	
		Northwestern Iran (h = 35 km).				Sk	iPKP	23 10 50.0			
		m = 6.7, M = 6.0 (Up,Ki).				Um	iPKP	23 10 44.5			
"	4	Up	iP	15 44 19.1		Ud	iPKP	23 10 52.9			
		Ud	iP	15 44 35.1		De	iPKP	23 10 59.5			
		De	iP	15 44 19.9			i	23 10 14.7			
"	4	Ud	iP	16 18 22.6		Solomon Islands (h = N).					
		Kirgiz SSR (h = 35 km).			"	5	Ud	iP	02 06 27.1		
"	4	Ud	iP	17 19 47.6		Southern Greece (h = 10 km).					
		Iran (h = 35 km).			"	5	Up		micr sec		
"	4	Ud	iP	17 20 28.2			Mx	E	1.5 20		
"	4	Up	iPKP	22 48 22.8			Mx	N	1.7 19		
		i		22 48 28.7			Mx	Z	1.4 20		
		i		22 48 34.3		Ud	iPKP	04 16 03.2			
				micr sec		Solomon Islands (h = N).					
		i	Z'	0.2 1.4	"	5	Up	iP	05 35 36.4 C		
		Mx	E	24 20					micr sec		
		Mx	N	27 20			P	Z'	0.1 0.8		
		Mx	Z	17 20		Ki	iP	05 34 46.3			
		Ki	iPKP	22 48 09.3		Sk	iP	05 35 22.3			
		i		22 48 15.6		Um	iP	05 35 09.4			
		i		22 48 25.3		Ud	iP	05 35 42.2			
				micr sec		De	iP	05 36 00.8			
		i	Z'	0.1 1.0		Kuril Islands (h = 140 km).					
		Mx	E	24 20	"	5	Up	iP	05 56 21.4		
		Mx	N	25 17			Um	iP	05 56 15.5		
		Mx	Z	23 18			Ud	iP	05 56 34.3		
		Sk	ePKP	22 48 21		Burma (h = 60 km).					
		Um	iPKP	22 48 12.8	"	5	Up	iP	06 50 23.1		
		i		22 48 21.5			i	06 50 31.3			
		Ud	iPKP	22 48 22.8				micr sec			
		i		22 48 31.1			i	Z'	0.7 2.1		
		i		22 48 40.2		Ki	i	06 50 59.4			
		De	ePKP	22 48 27			i	06 51 05.5			
		i		22 48 32.4		Ud	iP	06 50 15.6			
		i		22 48 41.8			i	06 50 26.0			
		Solomon Islands (h = N).				Central Mid-Atlantic Ridge					
		M = 7.0 (Up,Ki).				(h = 10 km).					
		Multiple PKP with successively increasing amplitudes.									

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

1978					1978					
Nov.	6	Up	iP	16 04 16.0	Nov.	7	(cont.)			
		Ki	iP	16 03 39.9			Ud	iPKP1	09 51 23.1	
		Sk	iP	16 04 11.2			De	iPKP1	09 51 32.7	
		Um	iP	16 03 55.3			Kermadec Islands region			
		Ud	iP	16 04 23.2 C			(h = N).			
		South of Honshu, Japan				"	7	De	i(P)	11 32 26.3
		(h = N).				"	7	Up	iP	17 15 00.6
"	6	Ud	iP	16 57 23.0				iS	17 22 24	
		De	iP	16 57 11.7					micr sec	
		Iran (h = 10 km).						P	Z' 0.2 1.4	
"	6	Up	iP	18 49 45.0				Mx	E 3.1 15	
		Ki	iP	18 49 19.6				Mx	N 2.9 15	
		Sk	eP	18 49 49				Mx	Z 5.0 15	
		Ud	iP	18 49 54.3			Ki	iP	17 15 46.9	
		Southwestern Ryukyu							micr sec	
		Islands (h = 100 km).						P	Z' 0.4 2.1	
"	6	Up	iP	22 02 18.7				Mx	E 3.0 14	
		Ud	iP	22 02 18.0 C				Mx	N 4.1 14	
		De	iP	22 02 40.4				Mx	Z 4.9 14	
"	6	Up	iP	23 53 42.2			Sk	iP	17 15 33.9	
		Ki	iP	23 54 14.2			Um	iP	17 15 21.5	
		Um	iP	23 53 52.7				iS	17 23 04	
		Ud	iP	23 53 58.4			Ud	iP	17 15 09.1	
			i	23 54 03.3			De	iP	17 14 47.7	
		De	iP	23 53 44.7			Ethiopia (h = N).			
		Iran (h = N).					m = 6.0, M = 5.7 (Up,Ki).			
"	7	Up	iP	03 12 24.6	"	7	Up	iPKP	17 52 55.0	
				micr sec					micr sec	
			P	Z' 0.1 0.6				Mx	E 2.3 20	
		Ki	iP	03 12 30.7				Mx	N 2.2 20	
				micr sec				Mx	Z 3.8 20	
			P	Z' 0.1 1.3			Ki	eI	17 52 49	
		Sk	iP	03 12 49.8					micr sec	
		Um	iP	03 12 21.6				Mx	E 2.0 19	
			ipP	03 12 52.5				Mx	N 2.3 19	
		Ud	iP	03 12 41.3				Mx	Z 3.8 19	
			ipP	03 13 13.7			Sk	eI	17 53 02	
		De	iP	03 12 38.3			Um	iI	17 52 55.2	
		Afghanistan-USSR border					Ud	iI	17 53 04.4	
		region.					De	iPKP	17 53 03.4	
		h = 140 km (Um,Ud).					Solomon Islands (h = N).			
		m = 5.5 (Up,Ki).					M = 6.0 (Up,Ki).			
"	7	Up	iP	05 15 38.1			l-denoted phases are			
		Ki	iP	05 14 49.9			approximately 8 s late			
		Um	iP	05 15 11.7			to be interpreted as			
		Ud	iP	05 15 43.3			PKP, according to the			
		Kuril Islands (h = 55 km).					NEIS solution.			
"	7	Up	iPKP1	09 51 21.0	"	7	Up	iP	18 13 48.6	
		(cont.)						Ki	iP	18 13 24.2
								Um	iP	18 13 33.1
								Ud	iP	18 13 58.3
								De	iP	18 14 06.5
							Taiwan region (h = 30 km).			

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

1978				1978			
Nov.	7	Up	eP	22 14 53	Nov.	8	(cont.)
			ipP	22 15 17.4			Um iPP 01 06 32.9
			isP	22 15 28.9			Ud iP 01 05 33.5 C
		Ki	iP	22 14 59.6			iPP 01 07 08.8
		Um	iP	22 14 49.2			De iP 01 05 32.0 C
			ipP	22 15 14.7			iPP 01 07 09.9
		Ud	iP	22 15 08.8			Kirgiz SSR (h = 40 km).
			ipP	22 15 34.2			m = 6.0 (Up,Ki).
			isP	22 15 46.2			
		De	iP	22 15 06.6	"	8	Up iP 05 17 06.3
			ipP	22 15 30.8			iS 05 24 28
			isP	22 15 44.1			micr sec
		Afghanistan-USSR border region.					Mx E 3.6 16
		h = 110 km (Up,Um,Ud,De).					Mx N 2.4 15
"	7	Ud	iP	22 48 45.0			Mx Z 3.3 13
							Ki iP 05 17 52.4
							micr sec
"	7	Um	iP	22 53 14.2			Mx E 1.6 14
		Ud	iP	22 53 27.9			Mx N 2.4 14
		Northern Sumatera (h = 140 km).					Mx Z 2.7 14
"	7	Ud	iRg	23 40 24.7			Sk iP 05 17 36.4
		Regional near-surface event.					Um iP 05 17 26.9
"	7	Ud	iP	23 43 26.2			iS 05 25 13
		Pakistan (h = 40 km).					Ud iP 05 17 16.9
"	8	Ud	iPKP1	00 04 14.8			De iP 05 16 51.1
		De	iPKP1	00 04 25.2			Ethiopia (h = 60 km).
		South of Fiji Islands (h = 370 km).					M = 5.6 (Up,Ki).
"	8	Up	iP	01 05 16.8 C	"	8	Ki i(P) 14 01 20.8
			i	01 05 42.8	"	8	Up iP 18 04 50.5
			i	01 06 41.1	"	9	Ud iP 00 49 45.5
			iPP	01 06 47.9			Ecuador (h = 180 km).
			micr sec				
		P	Z'	0.1 1.1	"	9	Up Mx 01 54
		PP	Z'	0.6 1.5			micr sec
		Mx	E	2.6 10			Mx E 1.5 20
		Mx	N	2.5 14			Mx N 1.6 22
		Mx	Z	5.9 19			Ki Mx 01 57
		Ki	iP	01 05 20.8 C			micr sec
			iPP	01 06 56.8			Mx N 1.6 19
			micr sec				Mx Z 2.6 19
		P	Z'	0.2 0.7			Solomon Islands (h = 30 km).
		PP	Z'	0.1 1.2			M = 5.7 (Up,Ki).
		Mx	E	3.3 9	"	9	Ud i(P) 10 56 27.4
		Mx	N	2.8 8	"	9	Ud iP 11 09 47.3
		Mx	Z	3.7 9	"	9	Ki iP 11 20 38.9
		Sk	iP	01 05 40.7 C			Um iP 11 20 30.4
			iPP	01 07 18.6			Ud iP 11 20 50.4
		Um	iP	01 05 12.3 C			De iP 11 20 49.6
		(cont.)					Kirgiz SSR (h = 50 km).

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

1978				1978									
Nov.	9	Up	iSgl	15 38	49.4	Nov.	11	(cont.)					
		Ud	iPgl	15 37	25.8			Ki	iSgl	23 25	29.8		
			iSgl	15 37	53.0			Sk	iSgl	23 25	43.8		
		De	eSgl	15 38	36			Um	iSn	23 25	51.0		
		Southeastern Norway, near 59 1/4°N, 10°E. Origin time = 15 36 49. M _L = 2.1 (Ud).							iSgl	23 26	08.1		
"	10	Ud	iP	02 34	41.2			Coast of Nordland, Norway, 66.8°N, 13.7°E. Origin time = 23 23 02. M _L = 2.7 (Ki,Um).					
		Tadzhik-Sinkiang border region (h = 140 km).							Felt.				
"	10	Up	iP	09 17	50.5	"	12	Ki	i	00 33	07.5		
		Ki	iP	09 17	29.3				iSgl	00 33	12.6		
		Ud	iP	09 18	00.3			Sk	eSgl	00 33	33		
		De	iP	09 18	08.0			Um	iSn	00 33	34.9		
		Philippine Islands region (h = N).							i	00 33	46.7		
									iSgl	00 33	53.9		
"	10	Ud	iPKP	12 42	37.1			Coast of Nordland, Norway, 66.8°N, 13.7°E. Origin time = 00 31 48. M _L = 2.6 (Ki,Um).					
		Solomon Islands (h = N).						"	12	Ud	eP	06 31	50
"	10	Up	iPKP	13 43	49.3			Southern Greece (h = 140 km).					
		Ki	iPKP	13 43	43.9	"	12	Ud	iP	19 04	35.5		
		Ud	iPKP	13 43	58.7								
		Solomon Islands (h = N).				"	12	Up	iSgl	22 24	52.9		
"	10	Ki	iP	14 29	35.5			Ki	i	22 22	28.8		
		Um	iP	14 29	51.3				iSgl	22 22	36.4		
		Ud	iP	14 30	17.9			Sk	iSgl	22 22	51.4		
		South of Honshu, Japan (h = N).						Um	iPn	22 22	12.5		
"	10	Ki	iP	23 51	27.7				iSn	22 22	57.1		
			ipP	23 51	35.0				i	22 23	12.3		
		De	ipP	23 52	49.7				iSgl	22 23	14.9		
		Gulf of Alaska (h = N).						Coast of Nordland, Norway, 66.8°N, 13.7°E. Origin time = 22 21 09. M _L = 2.8 (Ki,Um).					
"	11	Um	iP	05 20	26.5			Felt.					
		Ud	iP	05 20	53.0	"	13	Up	iPKP	03 08	42.1		
			i	05 21	03.6			Um	iPKP	03 08	50.0		
		South of Honshu, Japan (h = N).						Ud	iPKP	03 08	40.1		
"	11	Ud	iP	09 47	09.8			South Sandwich Islands region (h = N).					
		Off coast of northern California (h = 10 km).				"	13	Up	iP	03 12	58.9		
"	11	Ud	iP	11 19	09.6				P	Z'	0.1	0.9	
		Afghanistan-USSR border region (h = 260 km).						Ki	iP	03 12	17.2		
"	11	Ki	i	23 25	24.5				P	Z'	0.1	0.9	
		(cont.)						(cont.)					

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

1978				1978			
Nov.	13	(cont.)		Nov.	13	(cont.)	
		Um	iP 03 12 36.2			Um	iSgl 22 13 58.1
		Ud	iP 03 13 04.8			Coast of Nordland, Norway, 66.8°N, 13.7°E.	
		De	iP 03 12 21.5			Origin time = 22 11 52.	
		Near east coast of Honshu, Japan (h = 45 km).				M _L = 2.5 (Ki,Um).	
		m = 5.6 (Up,Ki).				Felt.	
"	13	Ki	iP 07 03 38.1	"	14	Ki	iP 10 22 19.3
		Um	iP 07 04 00.8			Um	iP 10 22 37.9
		Ud	iP 07 04 32.0			Ud	iP 10 23 08.4
		Northwest of Kuril Islands (h = 300 km).				Off east coast of Honshu, Japan (h = N).	
"	13	Up	iPKP1 07 25 19.9	"	14	Ud	i(P) 12 11 46.4
			i 07 25 23.2	"	14	Ud	iP 14 02 01.8
		Um	iPKP 07 25 11.2	"	14	Ud	iP 16 03 54.3
		Ud	iPKP 07 25 17.7			Northern Sinkiang Prov., China (h = N).	
			iPKP1 07 25 21.3				
		De	iPKP1 07 25 30.7				
		Kermadec Islands region (h = N).					
"	13	Up	iP 07 34 40.8 C	"	14	Ud	iPKP1 20 02 03.1
			micr sec				i 20 01 13.4
			Z' 0.1 0.7			Kermadec Islands region (h = N).	
		Ki	iP 07 34 50.0 C	"	14	Up	iSgl 23 43 59.0
			micr sec			Ki	iPgl 23 41 04.7
			Z' 0.2 0.7				i 23 41 35.4
		Sk	iP 07 35 06.4 C				iSgl 23 41 42.1
		Um	iP 07 34 39.5 C			Sk	iPgl 23 41 14.8
		Ud	iP 07 34 57.6 C				iSgl 23 41 58.8
		De	iP 07 34 53.7			Um	iPn 23 41 19.5
		Hindu Kush region (h = 200 km).					iPgl 23 41 27.8
		m = 5.6 (Up,Ki).					iSn 23 42 04.8
"	13	Up	iP 07 54 56.9				iSgl 23 42 20.7
		Sk	iP 07 54 38.4			Ud	eSgl 23 43 47
		Um	iP 07 54 58.8			Coast of Nordland, Norway, 66.8°N, 13.7°E.	
		Ud	iP 07 54 45.6			Origin time = 23 40 15.	
		De	iP 07 54 49.7			M _L = 3.1 (Up,Ki,Sk,Um,Ud).	
		Cuba region (h = N).				Felt.	
"	13	Up	iP 08 33 16.9	"	15	Up	iP 07 57 59.1 C
		Ki	iP 08 32 29.7				micr sec
		Um	iP 08 32 51.1				Z' 0.4 0.8
		Ud	iP 08 33 20.9			Ki	iP 07 57 11.2 C
		Kuril Islands (h = 60 km).					micr sec
"	13	Up	iSgl 22 15 37.0				Z' 0.6 1.0
		Ki	iSgl 22 13 20.2			Sk	iP 07 57 48.4
		Sk	eSgl 22 13 33			Um	iP 07 57 33.2 C
		Um	iSn 22 13 40.7			Ud	iP 07 58 05.0 C
		(cont.)				(cont.)	

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

1978				1978			
Nov.	15	(cont.) De iP	07 58 23.4 C	Nov.	16	Ki iP	10 57 55.5
		Northwest of Kuril Islands (h = 30 km). m = 6.6 (Up,Ki).				P Z'	0.1 0.9
"	15	Ki iP	08 32 56.5			Um iP	10 58 02.5
		iS	08 35 08.5			i	10 58 04.9
		Ud iP	08 34 37.3			Ud iP	10 58 21.7
"	15	Ki iP	08 46 58.5			Mindanao, Philippine Islands (h = 55 km).	
		Ud iP	08 47 02.6	"	16	Up iSgl	12 31 56.7
"	15	Ud iP	12 42 59.2			Ki iPgl	12 29 02.4
"	15	Ud iP	14 21 31.7			iSgl	12 29 39.8
		Luzon, Philippine Islands (h = N).				Sk iSgl	12 29 55.5
"	15	Up iSgl	20 14 49.5			Um iSn	12 30 02.8
		Ki iPgl	20 11 58.2			iSgl	12 30 19.2
		iSgl	20 12 35.2			Ud iSgl	12 31 39.0
		Sk iSgl	20 12 50.7			Coast of Nordland, Norway, 66.8°N, 13.7°E.	
		Um eSn	20 12 57			Origin time = 12 28 13.	
		iSgl	20 13 13.3			M _L = 2.8 (Up,Ki,Sk,Um,Ud).	
		Ud iSgl	20 14 41.1	"	16	Ud iP	21 00 22.8
		i	20 14 47.4			Off east coast of Honshu, Japan (h = N).	
		Coast of Nordland, Norway, 66.8°N, 13.7°E.		"	16	Ki iPgl	21 53 44.2
		Origin time = 20 11 07.				iSgl	21 54 21.1
		M _L = 2.9 (Up,Ki,Sk,Um,Ud).				Sk i	21 54 48.7
		Felt.				Um iSn	21 54 44.2
"	15	Up iSgl	22 08 06.2			iSgl	21 54 58.7
		Ki iSgl	22 05 53.1			Coast of Nordland, Norway, 66.8°N, 13.7°E.	
		Sk iSgl	22 06 06.7			Origin time = 21 52 53.	
		Um iSn	22 06 13.8			M _L = 2.7 (Ki,Um).	
		iSgl	22 06 32.6			Felt.	
		Coast of Nordland, Norway, 66.8°N, 13.7°E.		"	16	Ki iP	22 09 59.3
		Origin time = 22 04 27.				micr sec	
		M _L = 2.9 (Ki,Um).				P Z'	0.4 2.0
		Felt.				Azores Islands (h = 10 km).	
"	16	Ki i	08 36 53.5	"	17	Up iSgl	03 11 32.1
		iSgl	08 36 58.4			Ki ePgl	03 08 43
		Sk eSgl	08 37 13			iSgl	03 09 18.3
		Um eSn	08 37 21			Sk iSgl	03 09 33.1
		iSgl	08 37 37.3			Um iSn	03 09 39.6
		Coast of Nordland, Norway, 66.8°N, 13.7°E.				iSgl	03 09 55.1
		Origin time = 08 35 31.				Ud iSgl	03 11 26.8
		M _L = 2.8 (Ki,Ud).				i	03 11 31.9
		Felt.				Coast of Nordland, Norway, 66.8°N, 13.7°E.	
						Origin time = 03 07 49.	
						M _L = 2.9 (Ki,Um).	
						Felt.	

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

1978					1978						
Nov.	17	Ki	iP	05 43 05.8	Nov.	18	(cont.)				
			ipP	05 43 09.9			Sk	iSgl	01 51 17.8		
				micr sec			Um	iSn	01 51 21.9		
			pP	Z' 0.1 0.7				iSgl	01 51 38.4		
		Sk	eP	05 43 42			Coast of Nordland, Norway,				
		Um	ipP	05 43 36.6			66.8°N, 13.7°E.				
		Ud	iP	05 44 03.1			Origin time = 01 49 32.				
			ipP	05 44 06.9			M _L = 2.6 (Ki,Um).				
		Komandorsky Islands region.					Felt.				
		h = 15 km (Ki,Ud).									
"	17	Ki	iP	05 47 03.0	"	18	Up	iP	15 18 49.9		
		Um	iP	05 47 27.1			Um	iP	15 18 33.1		
							Ud	iP	15 18 56.1 C		
							De	iP	15 19 07.1		
"	17	Ki	ipP	07 31 09.3			Mariana Islands region				
		Um	ipP	07 31 16.0			(h = 80 km).				
		Panay, Philippine Islands									
		(h = 70 km).					"	18	Ud	iP	15 33 51.6
"	17	Ud	i(P)	10 39 45.0	"	18	Up	iPKP	15 51 28.8		
"	17	Sk	i	13 09 23.4			Ud	i(PKP)	15 51 21.9		
		Um	iP	13 06 57.9				iPKP	15 51 31.7		
			iPP	13 08 38.1			De	iPKP1	15 51 33.2		
		Ud	iP	13 07 17.6			Fiji Islands region				
		Afghanistan-USSR border					(h = 400 km).				
		region (h = 25 km).			"	18	Up	iP	17 22 09.5		
"	17	Ki	iP	18 31 01.6			Ki	iP	17 21 15.4		
		Um	iP	18 31 05.9			Ud	iP	17 22 07.6		
		Ud	iP	18 31 24.0			Alaska Peninsula (h = 180 km).				
		Banda Sea (h = 270 km).			"	18	Up	iP	19 11 49.0		
"	17	Um	iP	20 57 08.1			Ud	iP	19 11 40.9		
		Ud	iP	20 57 39.6			Southern Nevada.				
		Hokkaido, Japan region					Underground explosion.				
		(h = 70 km).			"	19	Up	iPKP1	00 43 53.5 D		
"	17	Up	iP	21 53 47.4				micr sec			
			i	21 53 51.0				PKP1	Z' 0.1 0.6		
				micr sec			Ki	iPKP1	00 43 31.2		
			P	Z' 0.1 0.8			Sk	iPKP1	00 43 46.6 D		
		Ki	iP	21 53 29.4			Um	iPKP1	00 43 41.2 D		
				micr sec			Ud	iPKP1	00 43 55.1 D		
			P	Z' 0.1 1.0			De	iPKP1	00 44 03.4 D		
		Sk	iP	21 53 58.9			Kermadec Islands (h = 60 km).				
		Um	iP	21 53 33.4	"	19	Ud	iP	03 33 25.5		
		Ud	iP	21 54 01.0	"	19	Ki	i	17 55 42.0		
		Tsinghai Province, China						iSgl	17 55 47.9		
		(h = N).					Um	iSgl	17 56 27.2		
		m = 5.6 (Up,Ki).					Coast of Nordland, Norway,				
"	18	Ki	iSgl	01 50 59.7			66.8°N, 13.7°E.				
		(cont.)					Origin time = 17 54 21.				
							M _L = 2.4 (Ki).				

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

1978					1978				
Nov. 19	Up	iP	19 53 17.2 C		Nov. 21	Up	Mx	12 10	
			micr sec					micr sec	
		P	Z' 0.1 1.0				Mx	E 1.7 18	
	Ki	iP	19 52 23.6 C				Mx	N 1.8 20	
			micr sec				Mx	Z 3.0 20	
		P	Z' 0.1 0.8			Ki	Mx	12 07	
	Um	iP	19 52 49.8					micr sec	
	Ud	iP	19 53 19.2 C				Mx	E 1.8 18	
	De	iP	19 53 40.7				Mx	N 1.9 17	
			Near Islands, Aleutian				Mx	Z 2.1 17	
			Islands (h = 45 km).					Bismarck Sea (h = N).	
			m = 5.9 (Up,Ki).					M = 5.8 (Up,Ki).	
"	20	Ki	iSn 01 52 30.1		"	21	Um	iP 19 19 17.0	
			iSgl 01 52 34.7		"	21	Up	iP 19 48 28.9	
		Um	iSn 01 52 57.0				Ki	iP 19 47 57.1	
			iSgl 01 53 14.5					micr sec	
			Coast of Nordland, Norway,					Mx E 1.8 15	
			66.8°N, 13.7°E.					iP 19 48 10.2	
			Origin time = 01 51 09.					iP 19 48 38.2	
			M _L = 2.3 (Um).					Kyushu, Japan (h = N).	
			Felt.		"	22	Ki	iP 00 20 52.1	
"	20	Up	iP 10 57 51.0 D				Um	iP 00 20 58.9	
		Ki	iP 10 56 56.8 D					Molucca Passage (h = 50 km).	
			micr sec		"	22	Ud	iP 06 07 50.8	
		P	Z' 0.1 0.9		"	22	Ki	iP 09 20 48.6	
		Um	iP 10 57 22.1 D		"	22	Ki	iP 09 20 48.6	
		Ud	iP 10 57 54.1		"	22	Ud	iP 09 29 41.5	
		De	iP 10 58 16.5		"	22	Ud	iP 09 29 41.5	
			Off east coast of		"	22	Ud	iP 09 45 33.7	
			Kamchatka (h = 50 km).					Mindanao, Philippine	
"	20	Ud	i(P) 11 10 02.3					Islands (h = N).	
"	20	Ud	iSgl 12 07 12.1		"	22	Ud	iP 11 26 09.0	
			i 12 07 18.8		"	22	Ud	i(P) 14 02 04.2	
			Coast of southwestern		"	22	Ud	i(P) 14 02 04.2	
			Norway, near 60°N, 5°E.		"	22	Um	iP 22 40 24.1	
			Origin time = 12 04 54.		"	22	Um	iP 22 40 24.1	
			By combination with		"	23	Ki	iSgl 01 16 05.3	
			Bergen and Kongsberg				Um	iSn 01 16 28.3	
			readings.					iSgl 01 16 44.9	
"	20	Up	iPKP1 13 13 31.9					Coast of Nordland, Norway,	
		Sk	iPKP 13 13 23.4					66.8°N, 13.7°E.	
		Ud	iPKP 13 13 29.4					Origin time = 01 14 39.	
			Kermadec Islands region					M _L = 2.6 (Ki,Um).	
			(h = 640 km).					Felt.	
"	21	Um	iP 04 10 45.7		"	23	Ki	iP 01 54 49.8	
			Talaud Islands (h = 90 km).				Um	iP 01 55 06.5	
								(cont.)	

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1978					1978				
Nov.	23	(cont.)			Nov.	23	(cont.)		
		Ud	iP	01 55 35.9			Sk	iPKP1	15 47 07.6
		Near s, coast of Honshu,					Um	iPKP1	15 47 01.3
		Japan (h = 5 km).					Ud	iPKP2	15 47 20.7
"	23	Up	iP	03 35 33.1			Kermadec Islands region		
		Um	iP	03 35 08.2			(h = N).		
		Ud	iP	03 35 39.1	"	23	Up	iPKP1	17 11 35.5
		Kuril Islands (h = N).					Sk	iPKP1	17 11 28.1
"	23	Up	iPKP1	05 00 54.4 D			Um	iPKP1	17 11 24.2
				micr sec			Ud	iPKP1	17 11 37.5
			PKP1	Z' 0.5 0.8			De	iPKP1	17 11 46.0
		Ki	iPKP	05 00 41.0			Kermadec Islands (h = 70 km).		
				micr sec	"	23	Um	iPKP1	17 54 27.0
			PKP	Z' 0.1 1.3				i	17 54 38.2
		Sk	iPKP1	05 00 45.9			Ud	iPKP2	17 54 49.5
		Um	iPKP1	05 00 41.4 D			Kermadec Islands region		
		Ud	iPKP1	05 00 56.4			(h = N).		
		De	iPKP1	05 01 05.5 D	"	23	Sk	iP	19 47 31.7
		South of Fiji Islands					De	iP	19 46 19.1
		(h = 170 km).					Greece (h = 35 km).		
"	23	Ki	i	10 14 31.9	"	23	Up	iP	23 49 46.1
			iSgl	10 14 36.2			Ki	iP	23 48 20.5
		Um	iSn	10 14 58.1					micr sec
			iSgl	10 15 13.9				P	Z' 0.2 1.5
		Coast of Nordland, Norway,					Um	iP	23 49 06.2
		66.8°N, 13.7°E.					Ud	iP	23 49 44.0
		Origin time = 10 13 08.					North of Svalbard (h = 10 km).		
		M _L = 2.7 (Ki,Um).							
"	23	Ud	iP	12 56 04.1	"	24	Up	iP	05 04 53.5
		Iran (h = 45 km).					Ud	iP	05 04 58.1
"	23	Ud	eSgl	14 15 53			Kuril Islands (h = 50 km).		
		Southwest coast of Norway,							
		near 58 1/2°N, 6 1/2°E.				"	24	Ki	iP
		Origin time = 14 13 48.							05 51 49.0 C
		By combination with Bergen							micr sec
		and Kongsberg readings.						P	Z' 0.1 1.2
"	23	Up	iP	15 29 16.7			Sk	iP	05 52 04.6
			iSn	15 33 03.0			Ud	iP	05 52 02.1
		Ki	iP	15 30 08.7			De	iP	05 52 01.3
		Sk	i	15 30 06.5			Java (h = 80 km).		
		Um	iP	15 29 37.1	"	24	Ud	i(pP)	15 07 31.6
			iSn	15 33 51.9			Kuril Islands region		
		Ud	iP	15 29 34.5			(h = N).		
			iSn	15 33 39.5	"	24	Ud	iP	16 46 56.0
		De	iP	15 29 12.5			Hokkaido, Japan region		
		Western Caucasus (h = 15 km).					(h = 90 km).		
"	23	Up	iPKP2	15 47 18.4	"	24	Up	iRg	21 03 50.8
		(cont.)					Dannemora, central Sweden,		
							60.1°N, 17.5°E.		
							(cont.)		

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

1978					1978					
Nov.	28	(cont.)			Nov.	29	(cont.)			
		Um	iP	18 08 00.2			Um	iP	04 39 44.7 C	
		Ud	iP	18 07 35.1			Ud	iP	04 40 16.5 C	
			i	18 12 29.8			De	iP	04 40 23.5 C	
			iLgl	18 15 44.1			Eastern Kazakh SSR.			
		De	iP	18 07 03.2 D			m = 6.7 (Up,Ki).			
			iS	18 11 01.9			Underground explosion.			
		Dodecanese Islands								
		(h = 120 km).				"	29	Up	iP	09 47 28.9
"	29	Up	iSgl	01 39 23.7			Ki	iP	09 46 39.6	
		Ki	ePgl	01 36 31			Sk	iP	09 47 15.9	
			i	01 37 05.7			Um	iP	09 47 02.4	
			iSgl	01 37 10.4			Ud	iP	09 47 34.5	
		Sk	ePgl	01 36 39			De	iP	09 47 53.4	
			iSgl	01 37 25.7			Kuril Islands (h = N).			
			i	01 37 37.7		"	29	Ud	iPKP1	10 27 03.7
		Um	iPn	01 36 46.1			South of Fiji Islands			
			iPgl	01 36 55.7			(h = 520 km).			
			iSn	01 37 32.2		"	29	Up	iPKP	14 24 13.7
			iSgl	01 37 48.4			Ki	iPKP	14 23 59.9	
		Ud	iSgl	01 39 14.9			Sk	iPKP	14 24 11.3	
		Coast of Nordland, Norway,					Um	iPKP	14 24 06.1	
		66.8°N, 13.7°E.					Ud	iPKP	14 24 16.3	
		Origin time = 01 35 42.					De	iPKP	14 24 22.4	
		M _L = 3.0 (Up,Ki,Sk,Um).					New Hebrides Islands			
		Felt.					(h = 190 km).			
"	29	Up	iP	04 39 52.4 C		"	29	Up		micr sec
		Ki	iP	04 39 37.4 C				Mx	N	1.8 25
				micr sec				Mx	Z	2.2 26
		P	Z'	0.1 0.5			Ki	iP	14 49	27.0
		Sk	iP	04 40 08.3 C					micr sec	
		Um	iP	04 39 37.6 C				Mx	E	0.7 13
		Ud	iP	04 40 09.2 C				Mx	N	0.5 12
		De	iP	04 40 16.6 C				Mx	Z	0.9 13
		Eastern Kazakh SSR.					Gulf of California			
		Underground explosion.					(h = 15 km).			
"	29	Up	iP	04 39 59.9 C			M = 5.3 (Up,Ki).			
				micr sec		"	29	Up	iP	20 05 35.9
		P	Z'	0.8 0.9				i		20 05 39.6
		Mx	E	0.6 6				iPP		20 09 02.4
		Mx	N	0.5 7				iS		20 16 10
		Mx	Z	1.1 9					micr sec	
		Ki	iP	04 39 43.9 C				i	Z'	0.4 1.3
				micr sec				PP	Z'	3.2 2.5
		P	Z'	1.4 0.8				Mx	E	129 20
		Mx	E	0.4 10				Mx	N	113 17
		Mx	N	0.5 8				Mx	Z	274 20
		Mx	Z	0.6 7			Ki	iP	20 05 22.9	
		Sk	iP	04 40 15.1 C				i		20 05 26.1
			iPP	04 41 32.4			(cont.)			
		(cont.)								

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1978

Nov. 30	Ki	iPKP	17 51 15.2
			micr sec
		PKP Z'	0.1 1.4
	Um	iPKP	17 51 20.3
	Ud	iPKP	17 51 25.2
	De	iPKP1	17 51 24.8
		iPKP	17 51 29.7
	Tuamotu archipelago region		
	(h = 0 km).		

July 31, 1980

Conny Holmqvist
Ota Kulhánek
Rutger Wahlström

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

1978				1978			
Dec.	1	Up	eP	23 15 04	Dec.	2	(cont.)
		Um	iP	23 14 41.0			Um iSn 03 04 33.0
			ipP	23 14 50.5			iSgl 03 04 50.4
		Ud	iP	23 15 10.9			Coast of Nordland, Norway,
			ipP	23 15 19.5			66.8°N, 13.7°E.
		Off east coast of Honshu, Japan.					Origin time = 03 02 44.
		h = 35 km (Um,Ud).					M _L = 2.6 (Ki,Um).
"	1	Up	iP	23 47 21.6	"	2	Ud ePKP 08 41 35
				micr sec			De iPKP 08 41 41.9
			P	Z' 0.1 1.0			Solomon Islands (h = 40 km).
		Ki	iP	23 46 36.1	"	2	Um iP 09 56 17.0
			i	23 46 36.8			Ud eP 09 56 30
				micr sec	"	2	Up iP 13 09 04.2
			i	Z' 0.1 1.0			Ki iP 13 09 10.3
		Sk	iP	23 47 12.3			Um iP 13 09 01.3
		Um	iP	23 46 56.6			Ud iP 13 09 20.3
			i	23 46 57.1	"	2	Ud iP 14 02 36.1
		Ud	iP	23 47 27.0	"	2	Ud iP 14 04 01.0
			i	23 47 27.9	"	2	Ki iSgl 14 59 26.2
		De	iP	23 47 45.3			Um iSn 14 59 48.0
		Hokkaido, Japan region					iSgl 15 00 04.8
		(h = 110 km).					Coast of Nordland, Norway,
		m = 5.5 (Up,Ki).					66.8°N, 13.7°E.
		Double P, small and large,					Origin time = 14 57 59.
		in average 0.7 s apart.					M _L = 2.4 (Ki,Um).
"	2	Up	iSgl	02 08 26.7	"	2	Um iP 17 38 24.7
		Ki	ePgl	02 05 35	"	2	Up eP 18 20 15
			iSgl	02 06 10.8			Ki eP 18 19 55
		Sk	iSgl	02 06 25.3			Sk eP 18 20 19
		Um	iSn	02 06 31.6			Um iP 18 20 03.5
			iSgl	02 06 49.5			Ud iP 18 20 21.5
		Ud	iSgl	02 08 14.5			De iP 18 20 29.9
		Coast of Nordland, Norway,					Mindanao, Philippine
		66.8°N, 13.7°E.					Islands (h = 60 km).
		Origin time = 02 04 44.					"
		M _L = 2.8 (Up,Ki,Um,Ud).					2 Um iP 20 53 13.2
"	2	Ki	iSgl	02 25 10.5	"	3	Um iP 02 27 44.1
		Sk	eSgl	02 25 29			Ud iP 02 27 09.7
		Um	iSn	02 25 32.6			Yugoslavia (h = 10 km).
			iSgl	02 25 49.0	"	3	Sk iP 05 05 17.7
		Coast of Nordland, Norway,					"
		66.8°N, 13.7°E.					3 Up i 06 54 43.0
		Origin time = 02 23 43.					iRg 06 54 45.7
		M _L = 2.5 (Ki,Um).					(cont.)
"	2	Up	iSgl	03 06 27.6	"	3	Sk iP 05 05 17.7
		Ki	i	03 04 10.8	"	3	Up i 06 54 43.0
			iSgl	03 04 13.4			iRg 06 54 45.7
		Sk	iSgl	03 04 25.5			(cont.)
		(cont.)					

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

1978									1978									
Dec.	3	(cont.)							Dec.	3	(cont.)							
		Dannemora, central Sweden,									De epP	19 49 54						
		60.1°N, 17.5°E.									Central Alaska (h = 70 km).							
		Origin time = 06 54 29.								"	3	Um i(P)	20 12 34.6					
		Rockburst at the iron								"	4	Um iP	00 27 50.1					
		ore mines.								"	4	Ki iP	00 51 51.1					
		Felt.										Sk eP	00 52 25					
"	3	Up eP	08 15 14									Ud iP	00 52 34.0					
		Ki eP	08 16 30									Southeast of Shikoku,						
		Sk iP	08 15 55.8									Japan (h = N).						
		Um iP	08 15 53.6							"	4	Um iP	01 00 17.3					
		Ud iP	08 15 17.8									Ud iP	01 00 46.0					
		De i	08 14 58.7									Southeast of Shikoku,						
		Albania (h = 10 km).										Japan (h = 30 km).						
"	3	Ud iP	09 02 44.5							"	4	Up iP	03 18 00.1					
"	3	Um i(P)	12 35 35.5									iS	03 22 36					
"	3	Um i(P)	12 49 50.0									Ki iP	03 18 55.2					
"	3	Um i(P)	12 50 48.2										micr sec					
"	3	Up iP	13 27 31.1									P	Z' 0.1 0.8					
		Ki iP	13 26 53.5									Mx	E 0.8 7					
												Mx	N 0.9 10					
												Mx	Z 0.6 7					
												Sk eP	03 18 40					
												Um iP	03 18 23.3					
												iS	03 23 28					
												Ud eP	03 18 13					
												i	03 18 17.3					
												De iP	03 17 50.8					
		Near s. coast of Honshu,										Turkey (h = 10 km).						
		Japan (h = 15 km).								"	4	Um iP	04 33 19.4					
"	3	Um i(P)	14 33 42.9									Ud iP	04 33 47.4					
"	3	Um i(P)	14 55 32.6									Southeast of Shikoku,						
"	3	Um i(P)	15 12 50.0									Japan (h = 45 km)						
"	3	Um i(P)	15 28 44.0								4	Up iSgl	10 50 11.3					
			15 29 01.5									Ki iPn	10 47 16.1					
"	3	Um i(P)	16 10 47.6									iPgl	10 47 22.5					
"	3	Um i(P)	17 57 40.6									i	10 47 53.2					
"	3	Um i(P)	18 16 48.1									iSgl	10 47 57.9					
"	3	Ki iP	19 48 17.6									Sk iPgl	10 47 30.6					
			19 48 21.9									iSgl	10 48 12.5					
			19 48 46									Um iPn	10 47 33.8					
			19 48 48.6									iSn	10 48 19.7					
			19 48 51.1									iSgl	10 48 34.8					
		(cont.)										Ud iSgl	10 50 01.7					
												Coast of Nordland, Norway,						
												66.8°N, 13.7°E.						
												Origin time = 10 46 29.						
												M _L = 3.3 (Up,Ki,Sk,Um,Ud).						
												Felt.						

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

1978				1978					
Dec.	4	Ud	i(P)	14 14 32.2	Dec.	6	Up	iPKP	02 16 50.5
"	4	Ki	iP	15 21 37.5				iSKP1	02 19 54.5
			i	15 21 48.5			Ki	iPKP	02 16 36.6
"	4	Ki	eP	18 39 55			Sk	iPKP	02 16 47.5
		Southern Sinkiang prov., China (h = 50 km).					Um	iPKP	02 16 42.5
"	4	Um	iPKP	20 18 15.1			Ud	iPKP	02 16 52.4
		South Sandwich Islands region (h = 10 km).						iSKP1	02 19 57.4
"	4	Ki	i(P)	21 14 05.9	"	6	Up	iP	04 31 45.8
		Sk	e(P)	21 13 14			Ki	iP	04 30 54.9
"	4	Um	i(P)	21 53 49.9			Ud	iP	04 31 48.9
"	4	Um	i(P)	22 13 18.0				i	04 31 55.2
"	4	Um	i(P)	22 36 44.0			De	iP	04 32 05.6
"	4	Um	iP	23 35 17.3			Kuril Islands (h = N).		
"	5	Um	i(P)	01 12 29.7	"	6	Ud	iP	10 37 47.7
"	5	Um	iP	06 45 15.8			Near east coast of Kamchatka (h = N).		
		Oaxaca, Mexico (h = N).					Ud	eSgl	10 44 46
"	5	Ud	iP	07 29 38.9	"	6	De	iPgl	10 42 42.1
"	5	Up	iRg	14 01 44.0				iSgl	10 43 01.4
		Ud	iRg	14 01 50.8				iRg	10 43 14.0
		Central Sweden. Near-surface event.					South of Sweden. Near-surface event.		
"	5	Up	iP	15 42 49.9	"	6	Up	iP	12 06 17.7
		ipP		15 42 58.8				i	12 06 31.4
				micr sec				iS	12 16 52
				micr sec					micr sec
		Ki	ipP	15 44 27.1			P	Z'	0.2 1.0
				micr sec			Mx	E	4.1 21
				micr sec			Mx	N	3.4 21
		Sk	eP	15 43 26			Mx	Z	7.6 20
			ipP	15 43 36.3			Ki	iP	12 06 09.0
		Um	eP	15 43 36				i	12 06 22.6
			ipP	15 43 44.2				iPP	12 09 24.4
		Ud	eP	15 42 45					micr sec
			ipP	15 42 52.6			P	Z'	0.3 1.5
		De	eP	15 41 55			Mx	E	2.7 22
			ipP	15 42 04.2			Mx	N	3.9 20
		Northern Italy. h = 40 km (Up,Sk,Um,Ud,De). m = 5.2 (Up,Ki).					Mx	Z	2.4 17
							Sk	iP	12 06 00.6
								i	12 06 15.3
								iPP	12 09 10.3
							Um	iP	12 06 15.8
								i	12 06 29.8
								iPP	12 09 41.4
								iS	12 16 52
							Ud	iP	12 06 08.1 C
							(cont.).		

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

1978				1978			
Dec.	6	(cont.)		Dec.	6	(cont.)	
		Ud	iPP 12 09 32.8			De	iP 14 13 13.5
		De	iP 12 06 13.8 C				iS 14 22 18.6
			i 12 06 28.8			Kuril Islands (h = 90 km).	
		El Salvador (h = N).				m = 7.5, M = 7.9 (Up,Ki).	
		m = 6.3, M = 5.9 (Up,Ki).				Multiple event with succes-	
"	6	Up	iP 13 14 13.4			sively increasing amplitudes.	
			i 13 14 25.1			M not corrected for focal	
			micr sec			depth.	
		P	Z' 0.1 1.0	"	6	Up	iP 14 39 40.6 C
		Ki	eP 13 15 13				micr sec
		Sk	iP 13 14 57.8				P Z' 0.1 1.1
		Um	iP 13 14 39.4			Ki	iP 14 39 29.9 C
			i 13 14 41.4				micr sec
		Ud	eP 13 14 28				P Z' 0.3 1.5
			i 13 14 29.8			Sk	iP 14 39 23.0 C
		De	iP 13 14 00.7			Um	iP 14 39 37.8 C
		Turkey (h = 10 km).				Ud	iP 14 39 30.8 C
						De	iP 14 39 38.2 C
"	6	Up	iP 13 39 24.4			Off coast of Chiapas, Mexico	
		Ki	iP 13 39 38.9			(h = 30 km).	
			micr sec			m = 6.2 (Up,Ki).	
		P	Z' 0.1 0.6				
		Sk	iP 13 39 13.3	"	6	Up	iP 14 49 44.3
		Um	iP 13 39 35.0				i 14 49 50.9
		Ud	iP 13 39 12.4				i 14 49 56.5
			i 13 39 19.7				micr sec
		De	iP 13 39 09.4				i Z' 0.1 0.9
		North Atlantic Ocean				Ki	eP 14 49 11
		(h = 10 km).					i 14 49 23.4
							micr sec
"	6	Up	iP 14 12 48.8 C				i Z' 0.1 1.1
			iS 14 21 36.0			Sk	iP 14 49 45.2
			iScS 14 22 36				
			iP'P' 14 41 02.7	"	6	Ud	iP 15 14 17.9
			i 14 41 10.9				
			micr sec	"	6	Um	iP 15 25 43.9
		P	Z' 5.3 1.1			Off coast of Chiapas, Mexico	
		Mx	E 541 27			(h = 30 km).	
		Mx	N 802 36				
		Mx	Z 289 25				
		Ki	iP 14 12 02.7	"	6	Up	iP 15 49 22.2
			iS 14 20 11.5			Um	iP 15 48 56.3
			iP'P' 14 41 24.9			Ud	iP 15 49 27.7
			micr sec			Kuril Islands (h = 160 km).	
		P	Z' 3.8 0.9				
		Mx	E 369 20	"	6	Um	iP 16 00 16.5
		Mx	N 1187 27			Ud	iP 16 00 47.7
		Mx	Z 173 23			Kuril Islands (h = 160 km).	
		Sk	iP 14 12 39.5				
			iS 14 21 24.5	"	6	Up	iP 17 25 21.9
		Um	iP 14 12 23.3				i 17 25 25.8
			iP'P' 14 41 12.8				iPP 17 26 47.2
		Ud	iP 14 12 55.2				micr sec
			iS 14 21 49.9				i Z' 0.2 1.1
			iP'P' 14 41 05.0			Ki	eP 17 25 51
			i 14 41 13.7				i 17 25 54.7
		(cont.)				(cont.)	

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1978				1978			
Dec.	6	(cont.)		Dec.	7	Ud	iP 02 39 13.6
		Ki	i 17 27 09.7				Kuril Islands (h = 120 km).
			micr sec				
			Z' 0.1 1.0	"	7	Um	iP 05 57 59.5
		Sk	iP 17 25 55.5			Ud	iP 05 58 29.2
			iPP 17 27 32.5				Near east coast of Honshu,
		Um	iP 17 25 30.8				Japan (h = 60 km).
			i 17 25 33.8	"	7	Sk	iP 08 30 24.4
		Ud	iP 17 25 37.2	"	7	Up	iP 09 03 50.9
			i 17 25 39.8			Ki	iP 09 03 13.5
			i 17 25 42.1			Sk	iP 09 03 45.6
			iPP 17 27 03.0			Um	iP 09 03 29.4 C
		De	iP 17 25 24.1			Ud	iP 09 03 58.1
			i 17 25 29.3				Near east coast of Honshu,
			Iran (h = 30 km).				Japan (h = 55 km).
			m = 5.7 (Up,Ki).				
			Multiple P-phases.				
"	6	Ud	iP 17 49 40.5	"	7	Ki	iSKP1 10 16 42.3
			Kuril Islands (h = 180 km).			Um	iSKP1 10 16 55.1
"	6	Ud	iP 18 27 06.1			Ud	iPKP1 10 14 20.6
"	6	Up	iP 20 45 20.1				iSKP1 10 17 08.0
			i 20 45 28.1			De	iPKP1 10 14 32.3
			micr sec				South of Fiji Islands
			Z' 0.1 1.1				(h = 600 km).
		Ki	eP 20 45 49	"	7	Ud	i(P) 12 01 35.8
		Sk	eP 20 45 54	"	7	Up	iP 14 25 57.4
		Ud	iP 20 45 36.8			Ki	iP 14 25 11.6
			i 20 45 44.2			Sk	iP 14 25 47.3
			Iran (h = 20 km).			Um	iP 14 25 32.4 C
"	6	Ud	iP 23 43 49.6			Ud	iP 14 26 03.7 C
"	7	Up	iP 00 27 21.7				Kuril Islands (h = 180 km).
		Ki	iP 00 26 26.8	"	7	Um	i(P) 17 07 49.9
		Um	iP 00 26 55.1	"	7	Up	iP 18 48 49.7
			ipP 00 27 25.9				ipP 18 49 02.5
		Ud	iP 00 27 19.6			Ki	iP 18 48 09.3
			ipP 00 27 50.6				ipP 18 48 22.9
			Fox Islands, Aleutian			Sk	iP 18 48 43.5
			Islands.				ipP 18 48 56.4
			h = 130 km (Um,Ud).			Um	iP 18 48 27.4
"	7	Ud	iP 00 35 44.4				ipP 18 48 39.9
"	7	Ud	i(P) 00 42 35.5			Ud	iP 18 48 57.0
"	7	Up	iP 02 13 26.3				ipP 18 49 09.5
		Ki	iP 02 13 21.5			De	iP 18 49 11.8
		Sk	iP 02 13 45.1				ipP 18 49 26.1
		Um	iP 02 13 18.4				Near east coast of Honshu,
		Ud	iP 02 13 41.1				Japan.
		De	iP 02 13 43.7				h = 50 km (Up,Ki,Sk,Um,Ud,De).
			Tibet (h = 40 km).	"	7	Um	iP 21 33 28.9
				"	7	Um	iP 23 49 16.0

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

1978				1978					
Dec.	7	Um	iP	23 50 30.2	Dec.	9	(cont.)		
"	8	Up	iP	00 33 18.3		Sk	iP	04 27 50.3	
		Ki	iP	00 33 14.6			ipP	04 28 01.9	
		Sk	iP	00 33 34.0			iPcP	04 28 18.2	
		Um	iP	00 33 12.5 C		Um	iP	04 27 34.8	
		Ud	iP	00 33 30.8			ipP	04 27 48.4	
				South Burma (h = 15 km).		Ud	iP	04 28 06.1	
							ipP	04 28 19.2	
"	8	Ud	iP	04 05 25.2		De	iP	04 28 24.8	
"	8	Up	iP	04 41 04.6		Kuril Islands.			
		Um	iP	04 40 39.5		h = 50 km (Ki,Sk,Um,Ud).			
		Ud	iP	04 41 10.9	"	9	Ud	iPgl	06 48 54.9
				Kuril Islands (h = 110 km).			iSgl	06 48 59.1	
"	8	Um	iP	05 43 48.3			iRg	06 49 00.3	
				Near east coast of Honshu,		Origin time = 06 48 49.			
				Japan (h = 70 km).		Local near-surface event.			
"	8	Um	iP	06 06 19.5	"	9	Up	iP	07 19 55.9
"	8	Up	iP	06 40 37.2			ipP	07 20 00.6	
			ipP	06 40 40.7				micr sec	
		Ki	iP	06 39 13.6			pP	Z' 0.1 1.1	
			ipP	06 39 17.3		Ki	iP	07 20 59.8	
				micr sec			ipP	07 21 04.1	
				Z' 0.2 1.4				micr sec	
		Sk	iP	06 40 03.8			pP	Z' 0.1 0.7	
		Um	iP	06 39 58.5		Sk	iP	07 20 31.6	
		Ud	iP	06 40 35.7			ipP	07 20 36.9	
				North of Franz Josef Land.		Um	iP	07 20 27.1	
				h = 10 km (Up,Ki).			ipP	07 20 31.6	
"	8	Up	iP	22 30 16.8		Ud	iP	07 20 03.1	
			i	22 30 27.3			ipP	07 20 07.5	
		Um	iP	22 29 51.5		De	iP	07 19 33.7	
			i	22 30 02.0			ipP	07 19 38.2	
		Ud	iP	22 30 23.1		Arab Republic of Egypt.			
			i	22 30 33.8		h = 15 km (Up,Ki,Sk,Um,Ud,De).			
				Kuril Islands (h = N).		m = 5.6 (Up,Ki).			
"	9	Sk	eP	01 00 16	"	9	Ki	iP	09 39 52.2
		Um	iP	01 00 16.9			Um	iP	09 39 57.0
		Ud	iP	01 00 38.3			Ud	iP	09 40 17.0
				Southern Alaska (h = 120 km).		Luzon, Philippine Islands			
"	9	Up	iP	04 28 00.2		(h = 55 km).			
				micr sec	"	9	Up	eP	11 30 46
				E 4.7 19			Ud	i(P)	11 30 56.2
				N 9.3 18	"	9	Ud	i(P)	11 57 44.3
				Z 14 19	"	9	Um	iP	16 02 02.1
		Ki	iP	04 27 13.6			Ud	iP	16 02 32.6
			ipP	04 27 26.5		Off east coast of Honshu,			
				micr sec		Japan (h = 35 km).			
				E 6.0 19	"	9	Sk	e(Sn)	21 04 01
				N 5.5 19			Ud	i(Sn)	21 04 23.5
				Z 6.5 18					
				(cont.)					

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

1978				1978							
Dec.	9	Up	iP	21 11	42.6	Dec.	10	(cont.)			
		Ki	iP	21 10	56.4			Sk	eP	06 52	06
		Um	iP	21 11	17.4			Um	iP	06 52	17.5
		Ud	iP	21 11	48.2			Ud	iP	06 52	19.0
		Kuril Islands (h = 130 km).						De	iP	06 52	31.8
"	9	Ki	e	22 55	15			Gulf of California (h = 15 km).			
			iSgl	22 55	20.7		"	10	Sk	iP	07 03 45.3
		Sk	iSgl	22 55	34.4			Ud	iP	07 03	14.9
		Um	iSn	22 55	41.9		"	10	Up	iSgl	07 06 59.6
			iSgl	22 56	00.0			Ki	iSgl	07 04	41.3
		Coast of Nordland, Norway, 66.8°N, 13.7°E.						Sk	iSgl	07 04	54.3
		Origin time = 22 53 54.						Um	iSn	07 05	01.6
		M _L = 2.4 (Ki, Um).							iSgl	07 05	18.9
"	10	Up	iP	01 38	32.9			Coast of Nordland, Norway, 66.8°N, 13.7°E.			
				micr	sec			Origin time = 07 03 13.			
		Mx	N	0.7	13			M _L = 2.7 (Ki, Um).			
		Mx	Z	1.1	16		"	10	Ki	iP	19 46 09.7
		Ki	iP	01 38	53.0			Ud	iP	19 46	31.6
				micr	sec			Minahassa Peninsula (h = 110 km).			
		Mx	E	0.5	12		"	10	Sk	iP	21 21 35.4
		Mx	N	0.6	14			North Atlantic Ocean (h = 10 km).			
		Sk	iP	01 39	00.9		"	11	Up	eP	01 24 54
			i	01 39	03.0			Ud	iP	01 25	03.4
			i	01 39	17.0			Luzon, Philippine Islands (h = 150 km).			
		Um	iP	01 38	35.6						
			i	01 38	37.7						
			i	01 38	51.7						
		Ud	iP	01 38	46.6						
			i	01 38	48.7						
		Pakistan (h = N).									
		M = 4.8 (Up, Ki).									
"	10	Ki	iP	02 51	52.7		"	11	Up	iP	02 20 53.2
		Ud	iP	02 52	16.4			Ki	eP	02 20	36
		Banda Sea (h = N).						Near coast of Guerrero, Mexico (h = 40 km).			
"	10	Up	iPKP1	03 45	10.4		"	11	Up	iP	03 46 53.0
		Sk	iPKP1	03 45	03.9				iSKS	03 56	44
		Um	iPKP1	03 44	58.2	C				micr	sec
		Ud	iPKP	03 45	07.8				P	Z'	0.1 0.8
			iPKP1	03 45	12.1			Ki	iP	03 46	43.7
			iPKP2	03 45	17.9				ipP	03 48	31.4
		De	iPKP1	03 45	20.9				iSKS	03 56	35
		Kermadec Islands (h = 130 km).							iPKP	04 03	05.7
"	10	Up	iP	05 48	06.1					micr	sec
		Ki	iP	05 47	13.6				P	Z'	0.3 0.9
		Um	iP	05 47	38.2			Sk	iP	03 47	01.9
		Ud	iP	05 48	11.0			Um	iSKS	03 56	38
			ipP	05 48	41.1			Ud	iP	03 47	01.2
		De	iP	05 48	31.5				ipP	03 48	47.8
		Kamchatka.							iPKKP	04 03	53.3
		h = 120 km (Ud).						De	iP	03 47	04.3
"	10	Up	iP	06 52	27.8				iPKKP	04 02	55.2
		Ki	iP	06 52	02.9			Flores Sea. h = 470 km (Ki, Ud). m = 6.7 (Up, Ki).			
		(cont.)									

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

1978				1978					
Dec.	11	Up	iP	06 23 03.0	Dec.	12	Ki	iP	10 10 00.3
		Ud	iP	06 23 44.2			Ud	iP	10 10 18.2
									Nepal (h = 55 km).
"	11	Ki	iSKP1	08 18 55.5	"	12	Up	iP	11 57 19.7 C
		Um	iPKP	08 16 28.4				iS	12 08 04
			iSKP1	08 19 06.2					micr sec
		Ud	iSKP1	08 19 19.0				P	Z' 0.7 1.5
		De	iPKP	08 16 41.8				Mx	E 50 20
				South of Fiji Islands				Mx	N 83 21
				(h = 590 km).				Mx	Z 84 19
"	11	Ki	iSgl	08 28 40.8			Ki	iP	11 57 04.0 C
		Sk	iSgl	08 28 55.4				iPP	12 00 36.6
		Um	iSgl	08 29 18.9				iS	12 07 37.1
				Coast of Nordland, Norway,					micr sec
				66.8°N, 13.7°E.				P	Z' 0.7 1.7
				Origin time = 08 27 13.				Mx	E 49 17
				M _L = 2.5 (Um).				Mx	N 66 17
								Mx	Z 55 17
"	11	Ud	iP	09 02 31.6			Sk	iP	11 57 25.1
		De	iP	09 02 01.9			Um	iP	11 57 08.9 C
				Algeria (h = 10 km).				iPP	12 00 40.3
"	11	Ud	i(P)	09 15 14.5				iS	12 07 45
"	11	Um	iP	13 46 47.7			Ud	iP	11 57 27.5 C
				Mid-Indian Rise (h = 10 km).			De	iP	11 57 33.1
"	11	De	iPKP1	14 14 34.6					Mindanao, Philippine Islands
				Fiji Islands region					(h = N).
				(h = 700 km).					m = 6.7, M = 7.2 (Up,Ki).
"	11	Ud	iP	15 41 15.5	"	12	Up	iP	12 33 50.5
				Molucca Passage (h = N).			Ud	iP	12 33 54.9
"	11	Ud	iP	15 58 50.0					Mindanao, Philippine Islands
"	11	Um	iPKP1	17 32 46.5					(h = N).
		Ud	iPKP1	17 32 58.7					
"	11	Ki	eP	21 20 31	"	12	Up	iRg	12 40 56.4
		Ud	iP	21 20 38.2			Ud	iSgl	12 41 12.5
				Afghanistan-USSR border					Regional near-surface event.
				region (h = 140 km).	"	12	Up	i(P)	12 50 27.5
"	11	Up	iP	23 40 29.4	"	12	Up	iP	13 59 21.7 C
		Um	iP	23 41 11.5				i	13 59 23.9
		Ud	iP	23 40 46.1					micr sec
		De	iP	23 40 06.5				i	Z' 0.1 0.9
				Romania (h = 140 km).				Mx	E 2.1 18
"	12	Up	iPKP1	08 26 37.0				Mx	N 6.0 21
			i	08 26 40.9				Mx	Z 2.8 19
		Ki	ePKP1	08 26 16			Ki	iP	13 58 57.6
		Sk	ePKP1	08 26 30				i	13 58 59.6
		Um	iPKP1	08 26 23.7					micr sec
		Ud	iPKP1	08 26 38.6				i	Z' 0.1 1.0
		De	iPKP1	08 26 46.7				Mx	E 1.0 16
								Mx	N 1.7 15
								Mx	Z 2.4 20
							Sk	iP	13 59 23.9
							Um	iP	13 59 05.7
							Ud	iP	13 59 30.8
								i	13 59 33.2

(cont.)

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

1978						1978						
Dec.	14	(cont.)				Dec.	14	(cont.)				
		Ki		micr	sec			Ud	iP	17 32 39.2		
		i	Z'	0.2	1.1			De	iP	17 33 01.7		
		Mx	E	17	13			Fox Islands, Aleutian Islands (h = 35 km).				
		Mx	N	23	18		"	14	Up	iP	19 39 34.3	
		Mx	Z	19	18					iSKS	19 50 06	
		Sk	iP	07 12	46.3						micr sec	
		i		07 12	54.6				Mx	E	2.6 22	
		iS		07 18	47.4				Mx	N	3.8 26	
		Um	iP	07 12	25.4				Mx	Z	4.1 23	
		i		07 12	30.9			Ki	iP	19 39 16.5		
		Ud	iP	07 12	25.1						micr sec	
		i		07 12	26.6				P	Z'	0.1 1.0	
		i		07 12	30.1				Mx	E	0.9 18	
		iS		07 18	09.3				Mx	N	1.8 20	
		De	iP	07 12	07.3				Mx	Z	2.9 22	
		i		07 12	08.8			Sk	eP	19 39 38		
		Western Iran (h = N).						Um	iP	19 39 22.4 C		
		m = 6.0, M = 6.1 (Up,Ki).								iSKS	19 49 56	
"	14	Up	iP	08 01	34.5			Ud	iP	19 39 41.2		
		Ki	eP	08 02	13					i(PP)	19 42 54.0	
		Ud	iP	08 01	48.3					iPKKP	19 55 55.9	
		Western Iran, from the same focal area as the preceding event.							De	iP	19 39 48.7	
		Origin time = 07 54 44.							Molucca Passage (h = 60 km). M = 5.8 (Up,Ki).			
"	14	Ud	iP	13 49	52.6		"	14	Ki	iSgl	20 47 52.3	
		i		13 49	54.1				Sk	eSgl	20 48 06	
"	14	Up	iSgl	14 26	58.8					i	20 48 08.3	
		Ki	iSgl	14 26	55.3				Um	iSgl	20 48 19.7	
		Sk	iSgl	14 26	50.3				Nordland, Norway, near 66 1/2°N, 14 1/2°E.			
		Um	iPgl	14 24	54.8 D				Origin time = 20 46 32. M _L = 2.5 (Ki,Sk,Um).			
			iSgl	14 24	59.9			"	15	Up	iPKPl	01 55 25.2
		Ud	iPn	14 25	57.1							micr sec
		i		14 26	00.1					PKPl	Z'	0.1 1.0
		i		14 26	43.9			Sk	iPKPl	01 55 18.5		
		i		14 27	22.5			Um	iPKPl	01 55 13.2 C		
		iSgl		14 27	25.6			Ud	iPKPl	01 55 27.0		
		Gulf of Bothnia, 63.7°N, 21.1°E.							De	iPKPl	01 55 35.6	
		Origin time = 14 24 48.							Kermadec Islands (h = N).			
		M _L = 2.9 (Ki,Sk,Ud).					"	15	Um	iP	02 36 11.1	
		Felt.							Ud	iP	02 36 41.2	
"	14	Up	iP	15 49	40.8					i	02 36 42.6	
		Sk	eP	15 50	20				Kuril Islands (h = 150 km).			
		Um	iP	15 49	56.9			"	15	Ki	iP	03 41 58.1
		Ud	iP	15 49	56.3					Sk	eP	03 42 20
		De	iP	15 49	38.7					Um	iP	03 41 51.2
		Western Iran (h = 45 km).								Ud	iP	03 42 13.5
"	14	Up	eP	17 32	41				Southern Sinkiang prov., China (h = 55 km).			
		Ki	iP	17 31	46.4							
		Sk	eP	17 32	17							
		Um	iP	17 32	13.1							
		(cont.)										

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

1978				1978			
Dec.	Day	(cont.)		Dec.	Day	(cont.)	
	18	(cont.)			19	(cont.)	
		Ki Mx E	4.5 9			Ki iP	03 07 09.1
		Mx N	3.6 8			Um iP	03 07 13.7
		Mx Z	4.8 7			ipP	03 07 29.3
		Sk iP	08 05 23.5 C			Ud iP	03 07 31.9
		i	08 05 25.5			Negros, Philippine Islands.	
		Um iP	08 04 53.4 C			h = 55 km (Um).	
		Ud iP	08 05 07.7 C				
		De iP	08 04 58.6 C	"	19	Um iP	07 25 41.0
		Western Kazakh SSR.				Hokkaido, Japan region	
		m = 6.7 (Up,Ki).				(h = 90 km).	
		Underground explosion.					
"	18	Up iP	08 38 23.7	"	19	Um iP	09 10 07.0
		Ki iP	08 38 25.5 C			Near coast of Nicaragua	
		Um iP	08 38 21.6			(h = 30 km).	
		Ud iP	08 38 35.5	"	19	Um iP	12 10 58.4
		De iP	08 38 33.3			Ud iP	12 11 30.4
		Northern Sumatera (h = 70 km).				Hokkaido, Japan region	
						(h = 130 km).	
"	18	Up iP	09 00 41.9	"	19	Up iRg	12 40 24.2
		ipP	09 01 33.7			Ud iSgl	12 40 39.4
		Ki iP	09 00 14.2			East-central Sweden.	
		ipP	09 01 04.6			Near-surface event.	
		Sk eP	09 00 40	"	19	Ud iSgl	14 00 37.0
		Um iP	09 00 26.9			De iSgl	13 58 46.4
		ipP	09 01 15.9			South of Sweden.	
		Ud iP	09 00 49.6	"	19	Up iP	16 44 01.9 C
		De ipP	09 01 51.1			Ki iP	16 43 25.1
		Mariana Islands.				Sk eP	16 43 57
		h = 210 km (Up,Ki,Um).				Um iP	16 43 41.3 C
"	18	Up iPP	10 35 27.3			i	16 43 44.0
			micr sec			Ud iP	16 44 09.2
		Mx E	6.1 21			De iP	16 44 23.2
		Mx N	20 20			South of Honshu, Japan	
		Mx Z	4.8 18			(h = 60 km).	
		Ki ePKP	10 34 53	"	20	Ki iP	04 39 36.3 C
			micr sec			Sk iP	04 40 08.0
		Mx E	6.7 19			Um iP	04 39 37.6
		Mx N	11 22			Ud iP	04 40 08.8
		Mx Z	26 23			Eastern Kazakh SSR.	
		Ud iPP	10 35 32.4			Underground explosion.	
		Bouvet Island region		"	20	Sk iP	06 09 18.8
		(h = 10 km).				Ud iP	06 09 03.9
		M = 6.6 (Up,Ki).		"	20	Ki iP	11 22 31.7
"	18	Ud iP	15 53 54.6			Um iP	11 22 51.1
		Luzon, Philippine Islands				Ud iP	11 23 22.8
		(h = 70 km).				Hokkaido, Japan region	
"	18	Ki iP	19 11 48.6			(h = 110 km).	
		Um iP	19 11 54.2	"	20	Um i(P)	11 34 40.4
		Banda Sea (h = 90 km).					
"	19	Up iP	03 07 24.5				
			micr sec				
		P Z'	0.1 1.0				
		(cont.)					

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

1978				1978								
Dec.	20	Ki	iP	11 45	58.2	Dec.	21	(cont.)				
		Ud	iP	11 46	19.1			Ud	iSKKP	01 05	22.1	
"	20	Up	iP	13 15	49.3			De	iPKP1	00 54	18.7	
		Um	iP	13 15	44.1				iSKP1	00 57	03.7	
		Ud	iP	13 15	58.8				Fiji Islands region			
		De	eP	13 15	58				(h = 590 km).			
		Sunda Strait (h = 50 km).			"	21	Um	iP	01 25	47.3		
							Ud	iP	01 26	17.5		
"	20	Up	iSgl	14 10	23.0			Honshu, Japan (h = 110 km).				
		Ud	iPgl	14 08	58.2	D	"	21	Ki	iPKP	01 32	48.2
			iSgl	14 09	24.2				ipPKP	01 33	02.6	
			iRg	14 09	37.8			Um	iPKP	01 32	45.8	
		De	iSgl	14 10	10.1				ipPKP	01 33	00.4	
		Southeastern Norway,					Ud	iPKP	01 32	37.4		
		59.3°N, 10.0°E.						ipPKP	01 32	51.5		
		Origin time = 14 08 23.						ipKKP	01 42	55.3		
		Near-surface event.					Near coast of central Chile.					
"	20	Up	iP	16 05	23.1			h = 50 km (Ki,Um,Ud).				
							"	21	Up	iS	04 20	33
			P	Z'	0.2	1.0						
		Ki	iP	16 05	06.1							
									Mx	E	2.0	15
			P	Z'	0.1	1.2			Mx	N	2.3	16
		Sk	iP	16 05	27.5				Mx	Z	4.4	15
		Um	iP	16 05	11.9			Sk	iP	04 13	36.6	
			i	16 05	14.7			Um	iP	04 13	23.7	
		Ud	iP	16 05	30.9				iS	04 21	05	
		De	iP	16 05	37.3			Ethiopia (h = N).				
		Talaud Islands (h = N).			"	21	Up	ipP	06 48	09.4		
		m = 6.4 (Up,Ki).					Um	iP	06 47	31.7		
"	20	Ud	iPgl	16 41	03.3	C			ipP	06 47	43.5	
			iSgl	16 41	25.6			Ud	iP	06 48	02.8	
			iRg	16 41	34.0				ipP	06 48	15.8	
		De	iSgl	16 42	23.1			De	iP	06 48	21.3	
		Southeastern Norway,							ipP	06 48	32.3	
		59.5°N, 10.4°E.					Kuril Islands.					
		Origin time = 16 40 33.					h = 45 km (Um,Ud,De).					
		Near-surface event.			"	21	Up	iP	08 19	36.4		
"	20	Ud	iP	20 54	36.2				i	08 19	50.2	
		Mindanao, Philippine					Um	iP	08 19	24.2		
		Islands (h = 50 km).					Ud	iP	08 19	42.2		
								i	08 19	51.5		
"	21	Up	iPKP1	00 54	04.9		"	21	Ud	iP	08 45	43.0
			iSKP1	00 56	53.2							
		Ki	i(PKP)	00 53	44.8		"	21	Up	iP	11 18	16.0
			iPKP	00 53	57.8				Ud	iP	11 18	25.3
			iSKP1	00 56	30.1			Java (h = 90 km).				
		Sk	ePKP1	00 53	58		"	21	Up	i	14 17	22.3
			iSKP1	00 56	48.1				iSgl	14 17	26.0	
		Um	iPKP1	00 53	51.4			Sk	eSgl	14 17	17	
			iSKP1	00 56	42.0			Ud	iSgl	14 16	25.9	
		Ud	iPKP1	00 54	06.6			(cont.)				
			iSKP1	00 56	54.4			(cont.)				
		(cont.)										

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

1978				1978			
Dec.	23	(cont.)		Dec.	24	Um	iP 12 01 48.9
		Ki	micr sec			Ud	iP 12 02 17.2
		P	Z' 3.4 1.4				Southern Honshu, Japan
		Mx	E 143 19				(h = 360 km).
		Mx	N 225 19	"	24	Ud	iP 12 49 57.4
		Mx	Z 156 15				Halmahera (h = 240 km).
		Sk	iP 11 35 06.3 C	"	24	Um	iP 13 22 22.5
		Um	iP 11 34 47.5 C				Central Alaska (h = N).
		Ud	iP 11 35 12.5 C	"	24	Ki	iP 22 54 05.1
		i	11 35 26.6			Sk	iP 22 54 36.0
		De	iP 11 35 20.7 C				iS 22 56 18.2
		Taiwan region (h = 35 km).				Um	iP 22 54 54.2
		m = 7.2, M = 7.8 (Up,Ki).				Ud	iP 22 55 23.8
"	23	Up	iP 12 55 39.3	"	25	Ud	iP 11 15 47.4
		Ki	iP 12 55 45.3	"	25	Ud	iP 20 09 41.3
		Sk	eP 12 55 16				Nepal (h = N).
		Um	iP 12 55 44.5	"	25	Um	P 21 14 40.6
		Ud	iP 12 55 19.8			Ud	P 21 15 08.0
		De	iP 12 55 28.9				South of Honshu, Japan
		North Atlantic Ocean					(h = N).
		(h = N).		"	25	Um	iP 21 49 42.2
"	23	Up	iP 13 13 34.1				South of Honshu, Japan
		Ud	iP 13 13 41.5				(h = N).
		Taiwan (h = N).		"	26	Up	iSKS 00 22 04
"	23	Up	iP 13 20 30.1				micr sec
		Um	iP 13 20 16.9			Mx	E 12 19
		Ud	iP 13 20 39.9			Mx	N 10 19
		Taiwan (h = N).				Mx	Z 24 20
"	23	Up	iP 14 46 29.9			Ki	micr sec
		Ki	eP 14 45 42				Mx E 7.8 15
		Um	iP 14 46 04.1				Mx N 8.4 16
		Ud	iP 14 46 35.4				Mx Z 12 16
		Kuril Islands (h = N).				Sk	eP 00 11 06
"	23	Um	iP 15 15 27.9			Um	iP 00 11 18.5
		i	15 15 36.9				iPP 00 15 07.3
		Ud	iP 15 15 55.1				iSKS 00 22 02
		i	15 16 00.8				Off coast of Mexico
		Taiwan (h = N).					(h = 10 km).
"	23	Um	ipP 22 49 13.9				M = 6.5 (Up,Ki).
		Ud	iP 22 49 31.4	"	26	Um	iP 00 43 33.3
		South of Honshu, Japan		"	26	Um	iP 03 38 55.2
		(h = N).					South of Honshu, Japan
"	24	Um	iP 01 45 31.6				(h = N).
		i	01 45 55.3	"	26	Um	iP 03 48 37.5 C
"	24	Ud	iP 05 41 30.7			Ud	iP 03 49 05.0
"	24	Ud	iPKPL 10 02 04.2				South of Honshu, Japan
		South of Fiji Islands					(h = N).
		(h = 560 km).					

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

1978				1978			
Dec.	28	Ki	iSgl	02 18 23.6	Dec.	29	(cont.)
		Sk	eSgl	02 18 40			South of Kermadec Islands
		Um	iSn	02 18 46.1			(h = 90 km).
			iSgl	02 19 01.3	"	29	Ud iP 04 56 58.4
				Coast of Nordland, Norway,	"	29	Um iP 05 02 11.6
				66.8°N, 13.7°E.	"	29	Ud iP 05 06 10.8
				Origin time = 02 16 55.	"	29	Um iPKP 06 08 43.6
				M _L = 2.5 (Um).	"	29	Ud iPKP1 06 08 46.8
"	28	Ki	iSgl	06 05 34.4			Tonga Islands (h = 45 km).
		Um	iSn	06 05 57.0	"	29	Up iP 09 03 46.0
			iSgl	06 06 13.5			Ki iP 09 03 41.7
				Coast of Nordland, Norway,			Sk iP 09 04 01.5
				66.8°N, 13.7°E.			Um P 09 03 36.9
				Origin time = 06 04 08.			Ud iP 09 03 58.1
				M _L = 2.3 (Um).			Burma-India border region
"	28	Um	iPKP	06 40 12.0			(h = N).
				Solomon Islands	"	29	Um iP 10 45 45.1
				(h = 140 km).			Ud iP 10 46 16.6
"	28	Ki	iP	12 04 54.4			Hokkaido, Japan region
		Ud	iP	12 03 52.2 C			(h = 45 km).
		De	iP	12 03 20.3	"	29	Um iP 12 55 16.0
"	28	Um	iP	12 45 33.0			
		Ud	iP	12 45 48.9	"	29	Um iP 17 05 57.1
				Uzbek SSR (h = N).	"	29	Sk iPKP1 20 38 50.0
"	28	Ki	iP	17 59 39.9			Um iPKP1 20 38 43.6
		Um	iP	17 59 31.6			Ud iPKP1 20 38 58.0
		Ud	iP	17 59 51.0			Kermadec Islands (h = 180 km).
				Tadzhik SSR (h = 80 km).	"	30	Um iP 01 43 49.5
"	28	Ki	iP	20 00 37.2			
		Sk	iP	20 00 31.6	"	30	Ki iP 05 14 32.3
		Um	iP	20 00 46.0			Sk eP 05 14 50
				Oaxaca, Mexico (h = N).			Um iP 05 14 21.2
"	28	Ud	iP	22 52 04.0			i 05 14 22.6
				Western Iran (h = N).			Ud iP 05 14 41.4
"	29	Ki	iP	02 16 05.4			i 05 14 42.4
		Sk	eP	02 15 52			Afghanistan-USSR border
		Um	iP	02 16 08.1			region (h = 10 km).
				Near west coast of Colombia	"	30	Um iPKP 05 35 24.2
				(h = 45 km).			Ud iPKP 05 35 18.1
"	29	Up	iPKP1	02 17 34.9			South Sandwich Islands
			iPKP2	02 17 43.3			region (h = N).
				micr sec	"	31	Um i(P) 06 25 47.8
			PKP2	Z' 0.1 1.0	"	31	Up iP 11 03 19.7
		Ki	iPKP1	02 17 14.3			micr sec
		Sk	iPKP1	02 17 30.3			P Z' 0.1 0.9
			iPKP2	02 17 34.5			Ki iP 11 02 40.4
		Um	iPKP1	02 17 24.1			(cont.)
		Ud	iPKP1	02 17 36.8			(cont.)
			iPKP2	02 17 46.4			
				(cont.)			

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

1978

Dec. 31 (cont.)
Sk iP 11 03 13.4
Um iP 11 02 57.9
Ud iP 11 03 26.5
Off east coast of Honshu,
Japan (h = 40 km).

" 31 Up iPKP1 14 17 52.2
Sk iPKP1 14 17 47.0
Um iPKP1 14 17 41.8
Ud iPKP1 14 17 54.3

" 31 Sk iP 16 01 12.6
Um iP 16 01 06.3
Ud iP 16 00 36.2
Bulgaria (h = 20 km).

" 31 Sk iP 16 31 05.5
Um iP 16 30 58.6
Ud iP 16 30 29.3
Bulgaria (h = 20 km).

" 31 Ud iP 16 49 16.0

" 31 Up iRg 18 04 19.9
Dannemora, Sweden,
60.1°N, 17.5°E.
Origin time = 18 04 03.
Rockburst at the iron
ore mines.
Felt.

" 31 Ud iP 18 53 37.7

" 31 Up iP 23 43 42.7
Um iP 23 43 34.8
Ud iP 23 43 56.3
Burma-India border region
(h = N).

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