

SEISMOLOGICAL DEPARTMENT
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 SWEDEN

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SEISMOLOGICAL BULLETIN
 UPPSALA, KIRUNA, UMEÅ, UDDEHOLM

DELARY and MYRVIKEN

Uppsala	(UPP)	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(KIR)	67°50.4'N,	20°25.0'E;	h = 390 m
Umeå	(UME)	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(UDD)	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(DEL)	56°28.2'N,	12°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

JANUARY 1 - 31, 1991

1991					1991				
Jan.	1	UPP	Mx	01 02	Jan.	1	UPP	iP	16 00 54.8
				micr sec			UME	iP	16 00 27.5
			Mx	Z 9.4 16				i	16 00 36.3
		KIR	Mx	00 58			Alaska Peninsula (h = N).		
				micr sec					
			Mx	Z 7.1 20	"	1	UPP	iPKP	17 47 23.8
		UME	iP	00 19 24.1			UME	iPKP	17 47 20.6
		Off coast of Jalisco, Mexico (h = 35 km). M = 6.1 (UPP,KIR).					Tonga Islands (h = 30 km).		
"	1	UME	iP	00 31 24.1	"	1	UPP	iP	18 03 50.6
"	1	UME	iP	03 32 24.6	"	1	UME	iP	18 03 39.4
		Off coast of Jalisco, Mexico (h = 35 km).					UPP	iP	19 24 41.7
							UME	iP	19 24 53.7
		South of Honshu, Japan (h = 400 km).					N.W. Iran-USSR border region (h = 60 km).		
"	1	UPP	iP	05 01 37.7	"	2	UPP	iP	03 08 17.3
		UME	iP	05 01 18.1					micr sec
		South of Honshu, Japan (h = 400 km).						P	Z' 0.1 1.0
		Qinghai Province, China (h = 15 km).							
"	1	UPP	iP	10 55 36.6	"	3	UPP	Mx	14 30
		UME	iP	10 55 18.6					micr sec
		Volcano Islands region (h = 25 km).						Mx	Z 7.5 16
							KIR	Mx	14 28
									micr sec
"	1	UME	eP	12 17 36				Mx	Z 3.4 17
		Near east coast of Honshu, Japan (h = 60 km).					East Papua New Guinea region (h = 15 km). M = 6.1 (UPP,KIR).		

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991							
Jan.	5	UPP	iP	09 29 25.0	Jan.	6	UPP	iP	15 55 17.9		
				Kuril Islands (h = 35 km).					Southern Xinjiang, China (h = 20 km).		
"	5	UPP	iP	15 07 44.4	"	8	UPP	i(PKP)	22 23 22.7		
			i	15 07 51.7			KIR	i(PKP)	22 23 05.9		
			iS	15 16 22				iPKP	22 23 15.1		
				micr sec					micr sec		
			P	Z' 0.2 0.9				P	Z' 0.2 1.0		
			i	Z' 0.7 0.9			UME	i(PKP)	22 23 18.0		
			Mx	Z 139 13				iPKP	22 23 22.7		
		KIR	iP	15 07 38.5					Tonga Islands (h = 35 km).		
				micr sec							
			P	Z' 1.7 2.0							
			Mx	Z 110 13			"	9	KIR	iP	08 23 37.0
		UME	iP	15 07 33.9						Eastern USSR (h = N).	
				Burma (h = 20 km).			"	9	KIR	iP	15 44 25.9
				m = 6.9, M = 7.2 (UPP,KIR).						Sea of Okhotsk (h = 490 km).	
"	5	UPP	iP	16 14 45.2	"	9	UPP	Mx	16 17		
		KIR	iP	16 14 36.9					micr sec		
				Burma (h = 30 km).				Mx	Z 5.1 21		
"	5	KIR	iP	16 29 27.6			KIR	Mx	16 24		
				Northern Yukon Territory, Canada (h = 15 km).					micr sec		
"	5	KIR	iP	19 00 30.3				Mx	Z 0.9 16		
				Kuril Islands (h = N).					New Britain region (h = 30 km). M = 5.7 (UPP,KIR).		
"	6	UPP	iP	03 14 28.6 C	"	10	KIR	iPKP	04 00 10.8		
				micr sec					Tonga Islands (h = 25 km).		
			P	Z' 0.2 0.9	"	10	KIR	iP	07 15 55.8		
		KIR	iP	03 14 30.1 C			UME	iP	07 16 25.9		
				micr sec					Sudan (h = 10 km).		
			P	Z' 0.3 0.9	"	10	KIR	iP	14 06 59.3		
		UME	iP	03 14 25.7 C					Near east coast of Kamchatka (h = 70 km).		
				Northern Sumatera (h = 55 km). m = 6.3 (UPP,KIR).	"	11	UPP	iSg1	13 19 03.0		
"	6	UPP	eSg1	06 31 56				iRg	13 19 06.1		
		UDD	iSg1	06 30 56.1					Dannemora, Uppland, Sweden, 60.2°N, 17.8°E		
		MYV	iSg1	06 31 08.4					Rockburst at the iron ore mine.		
				Southern Norway, 61.3°N, 7.8°E. Origin time = 06 29 21. M _L (UPP) = 2.7 1. Solution from Bergen regional bulletin.	"	11	UPP	iP	14 13 27.6		
"	6	UPP	iPKP1	11 16 01.8			KIR	iP	14 12 40.0		
				Kermadec Islands region (h = 70 km).			UME	iP	14 13 02.0		
					"	11	UPP	iP	23 32 42.9		
									Kuril Islands (h = 100 km).		

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991					
Jan.	13	UPP	iSn	02 25 26.5	Jan.	13	UPP	Mx	12 45
		KIR	iPn	02 23 36.3					micr sec
			iPg1	02 23 45.4				Mx	Z 2.6 19
			iSn	02 24 43.4					South Indian Ocean (h = 10 km).
			iSg1	02 24 58.6					
		UME	iPn	02 23 41.4	"	14	UPP	iPKP1	14 30 36.2
			i	02 23 49.0					South of Fiji Islands (h = 560 km).
			iSn	02 24 53.9					
			iSg1	02 25 10.8	"	14	UPP	iP	21 23 51.2
		UDD	iPn	02 23 45.5			KIR	iP	21 23 38.8
			iSn	02 24 58.4			UME	iP	21 23 46.5
		MYV	iPn	02 23 17.0					Guerrero, Mexico (h = 30 km).
			iSn	02 24 13.2					
		Norwegian Sea, 65.8°N, 5.5°E.			"	15	UPP	iPKP	01 59 10.2
		Origin time = 02 22 05.					UME	iPKP	01 59 04.8
		$M_L(\text{UPP}) = 3.4 (0.11) 2.$							South of Fiji Islands (h = 590 km).
		By combination with Finnish station readings.			"	16	KIR	iP	15 00 00.4
"	13	UPP	iP	03 27 12.3			UME	iP	15 00 18.3
			i	03 27 25.4					Near east coast of Honshu, Japan (h = 60 km).
		KIR	iP	03 28 35.8	"	16	UPP	iPKP1	19 33 18.6
		UME	iP	03 27 54.0					South of Fiji Islands (h = 570 km).
		Romania (h = 140 km).			"	17	KIR	iPn	08 43 01.7
"	13	UME	iP	08 02 20.6				iSg1	08 43 59.0
		Near east coast of Honshu, Japan (h = N).					UME	iSn	08 44 30.6
"	13	UPP	iP	12 03 09.6				iSg1	08 45 00.9
				micr sec			MYV	iPg1	08 43 31.4
			P	Z' 0.1 1.1				iSn	08 44 18.6
			Mx	Z 2.0 15				iSg1	08 44 34.4
		KIR	iP	12 02 43.1					Norwegian Sea, 67.8°N, 10.5°E.
				micr sec					Origin time = 08 42 03.
			Mx	Z 1.0 11					$M_L(\text{UPP}) = 2.9 (0.03) 2.$
		UME	iP	12 02 51.5					By combination with Finnish station readings.
		Northern China (h = 15 km).			"	17	UPP	iP	20 43 42.9
		M = 5.2 (UPP,KIR).					KIR	iP	20 43 18.6
"	13	UPP	iP	12 06 53.2 C			UME	iP	20 43 26.8
				micr sec					Taiwan region (h = 20 km).
			P	Z' 0.3 1.3	"	18	UPP	iP	01 48 16.9
		KIR	iP	12 07 04.6				i	01 48 21.1
				micr sec				iPP	01 51 09.9
			P	Z' 0.3 1.5					micr sec
		UME	iP	12 06 55.7 C				i	Z' 0.3 1.1
		South Indian Ocean (h = 10 km).						Mx	Z 3.6 12
		m = 6.3 (UPP,KIR).							(cont).

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1991					1991				
Jan.	18	(cont).			Jan.	19	(cont).		
		KIR	iP	01 47 53.1			iSg1	21 02 25.2	
				micr sec		UME	iPg1	21 01 51.2	
			P	Z' 0.4 1.5			i	21 01 53.4	
			Mx	Z 5.4 16			i	21 01 56.5	
		UME	iP	01 48 02.1			iSg1	21 02 17.7	
				Taiwan (h = 10 km).			i	21 02 22.9	
				m = 6.2, M = 6.0 (UPP,KIR).		UDD	iSn	21 03 52.2	
							iSg1	21 04 18.9	
"	18	UPP	iPKP1	11 05 04.1		DEL	eSg1	21 06 11	
			i	11 05 09.1		MYV	iPg1	21 02 12.2	
				micr sec			iSg1	21 02 51.6	
			Mx	Z 8.2 23				Lapland, Sweden, 65.7°N, 18.1°E.	
		KIR	iPKP1	11 04 59.3				Origin time 21 01 13.	
		UME	iPKP1	11 05 13.4				$M_L(\text{UPP}) = 3.2 (0.14) 4.$	
				South of Australia (h = 10 km).				By combination with Finnish station readings.	
"	19	UPP	iP	10 16 39.0	"	19	UPP	iP	23 48 47.0
		KIR	iP	10 17 05.3			KIR	iP	23 49 55.0
				Southern Iran (h = N).				Mediterranean Sea (h = 35 km).	
"	19	UPP	iP	13 28 38.8	"	20	UPP	iP	11 18 29.5
				Mindanao, Philippine Islands (h = 55 km).				i	11 18 51.8
"	19	UPP	iPKP1	13 53 22.5					micr sec
		UME	iPKP1	13 53 11.1			P	Z' 0.1 0.6	
				Kermadec Islands region (h = N).		KIR	iP	11 17 42.9	
								Kuril Islands (h = 60 km).	
"	19	UPP	iP	18 02 48.9	"	23	UPP	iP	01 23 13.8
		KIR	iP	18 02 17.3			ipP	01 23 43.3	
				Bonin Islands region (h = 550 km).			iS	01 32 00	
							iP'P'	01 51 22.3	
"	19	UPP	iSn	18 53 22.7					micr sec
		KIR	iPg1	18 51 35.0			P	Z' 0.6 1.5	
			iSg1	18 52 39.9			Mx	Z 10 19	
		UME	iSn	18 52 36.1		KIR	iP	01 22 21.5	
		UDD	iSn	18 52 56.9			ipP	01 22 50.1	
			i	18 53 27.0					micr sec
		MYV	iPn	18 51 14.4			P	Z' 0.8 1.9	
			iSn	18 52 01.0			Mx	Z 7.6 20	
				Norwegian Sea, 66.2°N, 7.8°E.		UME	iP	01 22 47.6	
				Origin time = 18 50 08.			ipP	01 23 16.6	
				$M_L(\text{UPP}) = 3.1 1.$				Rat Islands, Aleutian Islands	
				By combination with Finnish station readings.				h = 110 km (UPP,KIR,UME).	
								m = 6.2, M = 5.9 (UPP,KIR).	
								M uncorrected for focal depth.	
"	19	UPP	iSg1	21 04 13.0					
		KIR	iPg1	21 01 55.9					
			i	21 02 00.0					
				(cont).					

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1991				1991					
Jan.	23	UPP	iP	06 17 23.1 C	Jan.	28	UPP	Mx	19 52
				micr sec					micr sec
			P	Z' 0.2 0.8				Mx	Z 1.5 16
		UME	iP	06 17 15.0					North Atlantic Ridge (h = 10 km).
				Burma (h = 120 km).					
"	23	UPP	iSg1	15 49 04.1	"	28	KIR	iP	22 37 41.8
		UME	iSg1	15 49 25.1			UME	iP	22 37 52.0
		UDD	iSg1	15 48 05.0					Northeastern China (h = N).
		MYV	iPg1	15 47 02.2	"	30	UPP	iP	07 47 59.0
			iSg1	15 47 59.2					micr sec
				Off coast of southwestern Norway,				Mx	Z 3.1 18
				61.8°N, 5.3°E.			KIR	eP	07 47 42.2
				Origin time 15 45 42.					micr sec
				$M_L(\text{UPP}) = 3.1 (0.12) 2.$				Mx	Z 2.7 17
				By combination with Finnish			UME	iP	07 47 54.1
				station readings.					Iceland (h = 10 km).
"	26	UPP	iP	00 32 03.1	"	30	UPP	iP	19 48 43.0
				Southern Sumatra (h = 110 km).			KIR	iP	19 48 29.5
									Turkey (h = 15 km).
"	26	UPP	iP	08 21 42.4	"	31	UPP	iP	02 27 08.0
		UME	iP	08 21 41.3			KIR	iP	02 26 52.9
				Afghanistan-USSR border region			UME	iP	02 26 56.9
				(h = 55 km).					Molucca Passage (h = 35 km).
"	26	UPP	iP	17 31 20.0	"	31	UPP	i(P)	13 17 38.7
		KIR	iP	17 31 09.7	"	31	UPP	iP	13 32 38.8
		UME	iP	17 31 11.0				iLg1	13 35 16.0
				Burma-China border region (h = N).			KIR	iP	13 33 59.9
"	26	UPP	iPKP1	21 42 57.2					micr sec
		UME	iPKP1	21 42 45.2				P	Z' 0.2 0.7
				Kermadec Islands (h = 45 km).			UME	iP	13 33 18.8
"	27	UPP	iPKP1	07 45 17.2					Romania (h = 130 km).
				South of Fiji Islands (h = 550 km).	"	31	UPP	iP	19 58 55.8
"	28	UPP	ePKP1	13 18 48					Ryukyu Islands (h = N).
			iPKP2	13 19 06.7	"	31	UPP	iP	23 11 04.2
		KIR	iPKP1	13 18 34.4				i	23 11 05.1
		UME	iPKP1	13 18 41.1				i	23 11 06.1
				South Island, New Zealand				iS	23 17 07
				(h = 25 km).					micr sec
"	28	UPP	iPKP2	18 21 12.6				i	Z' 2.1 1.0
		KIR	iPKP1	18 20 40.6				Mx	Z 136 22
		UME	iPKP1	18 20 47.5					(cont).
				South Island, New Zealand					
				(h = 20 km).					

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1991

→ Jan. 31 (cont).
 KIR iP 23 11 14.0 C
 micr sec
 P Z' 2.6 1.4
 Mx Z 149 20
 UME iP 23 11 03.9 C
 Hindu Kush region (h = 140 km).
 m = 6.8, M = 6.8 (UPP,KIR).
 M uncorrected for focal depth.

September 7, 1992

Conny Holmqvist
 Klaus Meyer

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DELARY and MYRVIKEN

Uppsala	(UPP)	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(KIR)	67°50.4'N,	20°25.0'E;	h = 390 m
Umeå	(UME)	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(UDD)	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(DEL)	56°28.2'N,	12°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

FEBRUARY 1 - 28, 1991

1991					1991					
Feb.	1	UPP	iP	02 06 50.7	Feb.	3	KIR	iP	23 31 52.4	
		KIR	iP	02 06 15.2			UME	iP	23 31 54.3	
		UME	iP	02 06 32.7			Northern Xinjiang, China (h = 40 km).			
		Bonin Islands region (h = 300 km).				"	4	KIR	iP	03 12 58.9
							Mariana Islands (h = 200 km).			
"	1	KIR	i(PKP)	12 26 36.6	"	4	UPP	iP	22 52 08.2	
		Tonga Islands (h = 25 km).					KIR	iP	22 51 48.3	
"	2	UPP	iP	00 25 45.6			Luzon, Philippine Islands (h = 10 km).			
			ipP	00 25 52.7						
		KIR	iP	00 25 41.6	"	5	KIR	eP	23 45 44	
		India-Bangladesh border region (h = N).					UME	iP	23 45 42.4	
							Leeward Islands (h = 40 km).			
"	2	UPP	iSg1	18 44 20.4	"	5	UME	iP	00 01 08.6	
		UDD	iSg1	18 43 23.6			Leeward Islands (h = 45 km).			
		MYV	iSg1	18 43 08.4	"	6	UPP	iP	08 08 10.9	
		Off coast of southwestern Norway, 62.7°N, 4.8°E.					KIR	iP	08 07 21.7	
		Origin time = 18 40 55.							micr sec	
		M _L (UPP) = 2.9 1.						P	Z' 0.1 1.0	
		By combination with Norwegian station readings.					UME	iP	08 07 44.5	
							Northwest of Kuril Islands (h = 500 km).			
"	2	UPP	iPKP	21 34 19.8	"	7	UPP	iP	04 01 19.9 C	
		UME	iPKP	21 34 13.4				i	04 01 29.1	
		South of Fiji Islands (h = 500 km).							micr sec	
"	3	KIR	eP	09 30 41				P	Z' 0.3 1.1	
		North Atlantic Ridge (h = 10 km).					(cont).			

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Feb.				Feb.			
7	(cont).			9	(cont).		
	KIR	iP	04 01 26.6 C		UPP	iPKKP	16 49 14
		ipP	04 01 37.7				micr sec
			micr sec			Mx	Z 48 27
		P	Z' 0.2 1.2		KIR	iPKP	16 37 45.4
	UME	iP	04 01 52.7 C				micr sec
	Near Islands, Aleutian Islands.					Mx	Z 29 26
	h = 35 km (UPP,KIR).				UME	iPKP	16 37 51.5
	m = 6.2 (UPP,KIR).				Solomon Islands (h = 10 km).		
					M = 6.8 (UPP,KIR).		
"	7	UPP	iP 04 08 40.0	"	9	KIR	iPKP 16 49 15.5
		UME	iP 04 08 12.0			UME	iPKP 16 50 21.1
	Near Islands, Aleutian Islands				Solomon Islands (h = 10 km).		
	(h = 30 km).						
"	7	UPP	iP 04 19 22.4	"	10	UPP	iP 01 50 30.3
	Southwest of Sumatera (h = N).					UME	iP 01 50 27.7
"	7	UPP	iP 06 13 43.6		Afghanistan-USSR border region		
		KIR	iP 06 12 44.2		(h = N).		
			micr sec	"	10	UME	iPKP1 02 39 00.1
		P	Z' 0.2 1.0		South of Kermadec Islands		
	UME	iP	06 13 15.5		(h = 110 km).		
	Alaska (h = 10 km).			"	10	UPP	iP 12 53 29.0
"	7	UPP	iP 13 47 18.5			iS	13 02 20
		UME	iP 13 46 51.7				micr sec
	Unimak Island region (h = N).					P	Z' 0.1 1.2
"	8	KIR	iP 21 38 30.5			Mx	Z 7.7 25
	Fox Islands, Aleutian Islands				KIR	iP	12 53 56.9
	(h = N).						micr sec
"	8	UME	iP 23 06 42.7			P	Z' 0.8 2.5
	Near Islands, Aleutian Islands					Mx	Z 5.1 23
	(h = N).				UME	iP	12 53 45.2
"	9	UPP	Mx 03 24		Central Mid-Atlantic Ridge		
			micr sec		(h = 10 km).		
		Mx	Z 3.6 22		m = 6.2, M = 5.7 (UPP,KIR).		
	KIR	Mx	03 24	"	10	UPP	iP 14 28 23.5
			micr sec			KIR	iP 14 27 56.9
		Mx	Z 1.7 19				micr sec
	Fiji Islands region (h = 30 km).					P	Z' 0.2 1.5
	M = 5.8 (UPP,KIR).				UME	iP	14 28 08.3
"	9	UPP	ePdiff 16 34 29		Mariana Islands (h = 160 km).		
		ePKP	16 37 56	"	11	UPP	iP 09 08 31.0
		iPP	16 39 22			i	09 10 02.7
	(cont).					KIR	iP 09 08 40.5
							micr sec
						P	Z' 0.1 0.5
					(cont).		

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1991				1991			
Feb.	11	(cont). UME iP	09 08 29.8	Feb.	13	UPP eSg1	04 09 46
		Hindu Kush region (h = 220 km).				UDD iSg1	04 08 40.7
"	11	KIR eP	15 56 38			Southern Norway, 59.8°N, 6.5°E.	
		UME iP	15 57 06.1			Origin time = 04 06 53.	
		Iceland region (h = 10 km).		"	13	UME iPKP	15 12 28.8
"	12	UME iP	03 30 57.3			South of Fiji Islands (h = 620 km).	
		Afghanistan-USSR region (h = 190 km).		"	14	UPP iPKP1	01 20 48.1
"	12	UPP eP	09 59 36			i	01 21 09.2
		iS	10 03 16			PKP1 Z'	0.1 0.9
		Mx Z	2.1 16			KIR iPKP	01 20 28.7
		KIR iP	10 00 45.7			UME iPKP	01 20 36.7
		Mx Z	1.1 13			South of Kermadec Islands (h = N).	
		UME iP	10 00 10.8	"	14	UPP iP	08 33 03.6
		Turkey (h = 10 km).				P Z'	0.1 0.7
		M = 4.5 (UPP,KIR).				KIR iP	08 33 42.5
"	12	UPP iPKP	11 50 10.6			UME iP	08 33 17.5
		iPKP1	11 50 17.3			Iran (h = 25 km).	
		PKP Z'	0.2 0.9	"	14	KIR Mx	17 25
		KIR iPKP	11 49 48.2			Mx Z	1.4 15
		UME iPKP	11 49 58.9			Gulf of California (h = 10 km).	
		iPKP1	11 50 00.0	"	14	UPP Mx	20 35
		South of Kermadec Islands (h = 370 km).				Mx Z	1.4 20
"	12	UPP iP	12 56 27.7			KIR Mx	20 34
		KIR iP	12 55 36.2			Mx Z	1.4 20
		Andreanof Islands, Aleutian Is. (h = N).				Solomon Islands (h = 45 km).	
"	12	UPP iP	13 11 04.1			M = 5.5 (UPP,KIR).	
		India-China border region (h = 15 km).		"	15	UPP Mx	24 48
"	12	KIR iPKP	22 01 29.2			Mx Z	1.4 17
		UME iPKP	22 01 36.1			KIR Mx	24 42
		iSKP1	22 04 56.3			Mx Z	2.4 20
		Loyalty Islands region (h = 80 km).				Easter Islands region (h = 10 km).	
						M = 5.7 (UPP,KIR).	
"	15	UPP iP	08 23 44.6	"	15	UPP iP	08 23 44.6
		Kermadec Islands region (h = 190 km).				Kermadec Islands region (h = 190 km).	

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991							
Feb.	15	UPP	iPKP2	11 08 29.8	Feb.	17	UPP	iP	03 31 35.9		
		KIR	iPKP1	11 07 57.3			KIR	iP	03 31 37.6		
				micr sec			UME	iP	03 31 33.1		
			PKP	Z' 0.4 1.6			Northern Sumatera (h = 25 km).				
		UME	iPKP1	11 08 04.0		"	17	UPP	iPKP	07 18 30.0	
		South Island, New Zealand (h = 30 km).						iSKP1	07 21 56.0		
				micr sec				Mx	Z 3.8 27		
"	15	UME	iP	13 33 06.5			KIR	iPKP	07 18 15.3		
		Kuril Islands (h = 260 km).							micr sec		
"	15	UPP	iP	14 00 52.7				PKP	Z' 0.2 1.4		
		South of Panama (h = N).					UME	iPKP	07 18 21.6		
"	16	UME	iP	01 23 56.8				iSKP1	07 21 43.1		
		Carlsberg Ridge (h = 10 km).					Loyalty Islands region (h = 60 km).				
"	16	UPP	iP	01 34 27.1		"	17	UPP	iP	11 25 32.7	
			ipP	01 34 38.0				KIR	iP	11 25 30.5	
			iS	01 43 12			Southern Xinjiang, China (h = 15 km).				
				micr sec			"	18	KIR	iP	02 11 17.3
			P	Z' 0.6 1.4				UME	iP	02 11 24.6	
			Mx	Z 9.0 22			Luzon, Philippine Islands (h = N).				
		KIR	iP	01 33 37.1		"	18	UPP	iP	02 50 30.0	
				micr sec				iSKS	03 01 00		
			P	Z' 0.3 1.4				iS	03 01 27		
			Mx	Z 7.6 19					micr sec		
		UME	iP	01 33 59.8				P	Z' 0.1 1.0		
			ipP	01 34 10.5				Mx	Z 42 16		
			iP'P'	02 02 51.1			KIR	iP	02 50 12.1		
		Kuril Islands. h = 35 km (UPP,UME). m = 6.3, M = 5.8 (UPP,KIR).							micr sec		
"	16	UPP	iPKP	02 25 04.3				P	Z' 0.3 1.3		
		South of Fiji Islands (h = 400 km).						Mx	Z 30 15		
"	16	KIR	iP	03 47 39.1			UME	iP	02 50 18.1		
				micr sec			Mindanao, Philippine Islands (h = 25 km). m = 6.2, M = 6.9 (UPP,KIR).				
			P	Z' 0.1 1.0		"	18	KIR	ipP	06 08 47.2	
		UME	iP	03 47 44.7				UME	ipP	06 08 55.3	
		Halmahera (h = 130 km).					Mexico-Guatemala border region (h = 190 km).				
"	16	UPP	iP	20 37 40.8		"	18	KIR	ePKP	16 34 08	
			ipP	20 37 53.8			Vanuatu Islands (h = 40 km).				
		KIR	iP	20 36 46.7		"	18	UME	iP	23 01 39.8	
		Andreanof Islands, Aleutian Is. (h = 50 km).					Arabian Sea (h = 10 km).				

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Feb.	18	KIR iP UME iP	23 43 06.4 23 43 32.3	Feb.	22	KIR iP	22 17 38.1
		Near Islands, Aleutian Islands (h = N).				P	Z' 0.2 1.5
						UME iP	22 17 15.7
						Tanzania (h = 10 km).	
"	19	UPP iPKP1 KIR iPKP UME iPKP	02 15 11.1 02 14 51.5 02 15 00.0	"	23	UPP iP	09 42 36.6
		South of Kermadec Islands (h = N).				Kuril Islands (h = 40 km).	
"	19	KIR iP UME iP	08 24 20.8 08 24 14.9	"	23	KIR iP	12 38 04.5
		Coast of northern Sumatera (h = 50 km).				Tajik SSR (h = 150 km).	
"	19	UPP iP KIR iP	11 01 13.8 11 00 45.4	"	23	UPP iP ipP	12 40 52.9 12 41 24.5
		Ryukyu Islands (h = 30 km).				P	Z' 0.1 1.0
"	19	KIR iP UME iP	16 02 49.8 16 02 53.9			KIR iP ipP	12 41 02.3 12 41 33.9
		Mindanao Philippine Islands (h = 70 km).				P	Z' 0.1 1.0
"	19	UPP iP	19 36 58.4			UME iP ipP	12 40 51.2 12 41 22.0
		Ionian Sea (h = 15 km).				Hindu Kush region. h = 150 km (UPP,KIR,UME) m = 5.4 (UPP,KIR).	
"	20	UPP iP	11 56 28.5	"	24	UME iPKP	09 56 06.2
		Mindanao Philippine Islands (h = 40 km).				New Caledonia (h = N).	
"	20	UPP iP KIR iP UME iP	20 48 20.1 20 47 31.4 20 47 54.3	"	24	UME iP	19 42 40.2
		Kuril Islands (h = 150 km).				Zaire Republic (h = 10 km).	
"	21	UPP iP iS	02 45 50.3 02 54 02	"	25	UME iP	06 53 59.0
			micr sec			Banda Sea (h = 120 km).	
			P Z' 2.4 2.1	"	25	UME eP	07 30 57
			Mx Z 73 24			Albania (h = 30 km).	
		KIR iP	02 44 53.5	"	25	UPP iP iPP iS iLg2	14 38 19.5 C 14 40 00.0 14 44 34 14 52 46.5
			micr sec			P	Z' 0.2 0.9
			P Z' 1.3 1.5			Mx	Z 67 19
			Mx Z 38 21			KIR iP	14 38 15.1 C
		UME iP	02 45 21.9				micr sec
		Bering Sea (h = 20 km). m = 6.9, M = 6.5 (UPP,KIR).				P	Z' 0.2 1.1
						UME iP	14 38 10.4 C
						Southern Xinjiang China (h = 20 km). m = 5.8 (UPP,KIR).	

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1991

Feb.	25	UPP	iP	14 59 55.8
				micr sec
			P	Z' 0.1 0.9
		UME	eP	14 59 48
		Southern Xinjiang, China (h = N).		
"	25	UPP	iP	15 02 33.8
		Southern Xinjiang, China (h = N).		
"	26	UPP	iP	07 29 50.2 D
			iS	07 33 05.8
			iScP	07 36 46.0
				micr sec
			P	Z' 0.8 0.9
		KIR	iP	07 31 04.2
				micr sec
			P	Z' 1.0 1.0
		Tyrrhenian Sea (h = 400 km).		
		m = 6.1 (UPP,KIR).		
"	27	UME	iP	19 15 10.3
		Mindanao Philippine Islands		
		(h = 60 km).		
"	27	UME	iP	22 43 37.1
		Near east coast of Honshu, Japan		
		(h = 60 km).		
"	28	UPP	ePKP	13 49 09
		KIR	iPKP	13 49 59.0
		UME	iPKP	13 49 06.1
		Tonga Islands (h = 220 km).		
"	28	UME	iP	18 17 02.2
		South of Honshu, Japan (h = 40 km).		

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SEISMOLOGICAL BULLETIN
 UPPSALA, KIRUNA, UMEÅ, UDDEHOLM
 DELARY and MYRVIKEN

Uppsala	(UPP)	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(KIR)	67°50.4'N,	20°25.0'E;	h = 390 m
Umeå	(UME)	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(UDD)	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(DEL)	56°28.2'N,	12°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

MARCH 1 - 30, 1991

1991					1991				
Mar.	1	UPP	iP	02 04 35.7	Mar.	1	(cont).		
		KIR	iP	02 03 30.1			UME	iP	23 17 21.6 C
		UME	iP	02 04 00.2			Near east coast of Honshu, Japan		
		Central Sibiria (h = 20 km).					(h = 55 km).		
"	1	UPP	i(P)	09 57 09.8	"	2	UME	iP	03 08 43.0
							Northwest of Kuril Islands		
"	1	UPP	iP	17 42 47.5			(h = 300 km).		
			ipP	17 43 37.8		2	UPP	iP	03 17 32.7
				micr sec			UME	iP	03 17 16.7
			P	Z' 0.7 1.3		2	UME	iP	03 30 39.5
		KIR	iP	17 42 41.7			Afghanistan-USSR border region		
			i	17 43 06.7			(h = 150 km).		
			ipP	17 43 32.1		2	UPP	iP	03 44 25.3
			iPP	17 46 03.6			UME	iP	03 44 22.6
				micr sec			Guatemala (h = 260 km).		
			P	Z' 1.8 1.7	"	2	UPP	iP	18 25 15.1
		UME	iP	17 42 47.7			UME	iP	18 24 53.2
			ipP	17 43 37.4			Taiwan (h = 20 km).		
		Costa Rica.				2	UPP	iPKP	23 25 25.5
		h = 190 km (UPP,KIR,UME).					KIR	ePKP	23 25 15
		m = 6.5 (UPP,KIR).					UME	i(PKP)	23 25 14.5
"	1	KIR	iP	18 00 43.8	"	2		iPKP	23 25 21.6
		UME	iP	18 00 40.9			Tonga Islands (h = 45 km).		
"	1	UPP	iPKP1	19 50 37.3		3	UPP	iP	08 44 10.0
		UME	iPKP1	19 50 24.6			KIR	iP	08 45 14.1
		South of Kermadec Islands (h = N).					(cont).		
"	1	UPP	iP	23 17 44.5					
		KIR	iP	23 17 03.1					
		(cont).							

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Mar.	3	(cont). UME iP	08 44 37.9	Mar.	5	UPP iP	18 22 08.7
		Turkey (h = 20 km).				ipP	18 22 26.4
"	3	UME iP	14 42 49.2			KIR iP	18 22 08.8
		Hokkaido, Japan region (h = 50 km).				ipP	18 22 26.1
"	3	UPP i(PKP)	15 39 47.7			UME iP	18 22 05.4
			15 39 49.5			ipP	18 22 22.7
			micr sec			Southern Sumatera.	
		Mx Z	7.3 23	"	5	UPP iP	22 48 45.7 C
		KIR i(PKP)	15 39 29.8			ipP	22 49 02.6
		ipKP	15 39 40.5				micr sec
			micr sec			P Z'	0.1 0.7
		Mx Z	1.6 21			KIR iP	22 48 45.3 C
		UME i(PKP)	15 39 35.2			ipP	22 49 01.0
		ipKP	15 39 46.6				micr sec
		Tonga Islands (h = 15 km).				P Z'	0.4 0.9
		M = 6.0 (UPP,KIR).				UME iP	22 48 42.8 C
						ipP	22 48 58.1
"	3	UPP iP	18 16 28.6			Southern Sumatera.	
		KIR iP	18 16 34.1			h = 60 km (UPP,KIR,UME).	
		UME iP	18 16 25.8			m = 6.5 (UPP,KIR).	
		Tajik SSR (h = 30 km).		"	6	UPP iP	02 31 37.9
"	3	UME iSg1	19 40 20.9			KIR iP	02 31 23.6
		Gulf of Bothnia, 65.1°N, 24.5°E.				UME iP	02 31 28.1
		Origin time = 19 39 17.				Minahassa Peninsula (h = 100 km).	
		By combination with Finnish		"	6	UPP iPKP1	16 03 45.8
		station readings.				ipPKP1	16 04 40.1
"	3	UPP iP	23 57 49.5			UME iPKP1	16 03 33.3
		UME iP	23 57 49.2			Kermadec Islands (h = 230 km).	
		Afghanistan (h = 25 km).		"	7	UPP iP	01 21 35.1
"	4	UPP iP	00 53 19.8			ipP	01 23 07.1
		KIR iP	00 52 26.5				micr sec
		UME iP	00 52 53.0			Mx Z	3.4 17
		Andreanof Islands, Aleutian Is.				KIR iP	01 21 34.5
		(h = 45 km).				ipP	01 21 46.9
							micr sec
"	4	UME iP	13 49 58.3			Mx Z	1.1 10
		Honshu, Japan (h = 250 km).				UME iP	01 20 28.2 C
"	5	UPP iP	14 02 18.3			ipP	01 21 39.2
			micr sec			Southern Xinjiang, China.	
		Mx Z	2.4 25			h = 45 km (UPP,KIR,UME).	
		KIR iP	14 02 15.8			M = 5.1 (UPP,KIR).	
		UME iP	14 02 19.9	"	7	UPP iP	07 10 10.8
		Of coast of Central America				KIR iP	07 09 23.4
		(h = 15 km).				UME iP	07 09 45.2
						Kuril Islands (h = 40 km).	

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1991				1991			
Mar.	8	UPP	iP	01 53 46.2	Mar.	8	(cont).
			ipP	01 54 02.7			KIR iP
		KIR	iP	01 53 48.3			12 03 47.9
		UME	iP	01 53 43.6			micr sec
		Nicobar Islands region (h = 55 km).					P Z' 0.2 1.1
"	8	UPP	iP	03 19 32.8			UME iP
		KIR	iP	03 19 04.0			12 04 15.6
		UME	iP	03 19 13.5			Eastern Siberia (h = 10 km).
		Ryukyu Islands (h = 110 km).					m = 6.3 (UPP,KIR).
"	8	UPP	iP	09 12 06.9	"	8	UPP iP
				micr sec			12 08 01.8
			P	Z' 0.3 1.6			micr sec
		KIR	iP	09 11 08.2			P Z' 0.2 1.0
				micr sec			KIR iP
			P	Z' 0.2 1.8			12 07 04.8
		UME	iP	09 11 36.4			micr sec
		Eastern Siberia (h = 10 km).					P Z' 0.2 1.5
		m = 6.0 (UPP,KIR).					UME iP
"	8	UPP	iP	11 46 15.5	"	8	UPP iP
			i	11 46 17.9			12 20 51.1
			iS	11 54 06			Eastern Siberia (h = 10 km).
				micr sec			
			P	Z' 0.1 1.0	"	8	UPP iP
			i	Z' 1.4 1.0			14 24 18.4
			Mx	Z 53 20			Eastern Siberia (h = 10 km).
		KIR	iP	11 45 16.8	"	8	UPP iP
			i	11 45 18.8			21 24 21.9
				micr sec			micr sec
			i	Z' 3.3 1.9			P Z' 0.1 0.8
			Mx	Z 67 15			KIR iP
		UME	iP	11 45 45.1			21 23 22.9
			i	11 45 47.4			UME iP
		Eastern Siberia (h = 15 km).					21 23 51.1
		m = 7.0, M = 6.6 (UPP,KIR).					Eastern Siberia (h = 10 km).
"	8	UPP	iP	11 50 50.7	"	9	UME iP
				micr sec			04 32 05.3
			P	Z' 0.2 1.0			Mariana Islands (h = 60 km).
		KIR	iP	11 49 53.2	"	9	UPP iPKP1
		Eastern Siberia (h = 10 km).					04 43 26.2
							i 04 43 28.7
"	8	UPP	iP	12 04 46.1			Kermadec Islands region
			i	12 08 01.5			(h = 330 km).
				micr sec	"	10	UPP iP
			P	Z' 0.6 1.3			01 00 41.9
		(cont).					KIR iP
							01 01 21.0
							UME iP
							01 00 55.5
							Iran (h = 35 km).
					"	10	UPP iP
							01 05 24.9
							UME iP
							01 05 07.3
							Ryukyu Islands (h = 110 km).

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Mar.	10	UPP	iPKP	01 17 59.5	Mar.	11	(cont).
		KIR	iPKP	01 17 52.6			DEL iPn 21 09 42.8
			iSKP1	01 20 23.3			iPg1 21 09 49.5
		UME	i(PKP)	01 17 48.0			iSn 21 10 12.7
			iPKP	01 17 58.8			iSg1 21 10 19.2
			iSKP1	01 20 34.5			MYV iSg1 21 12 17.0
		Fiji Islands region (h = 610 km).				Jutland, Denmark, 57.3°N, 9.6°E.	
"	10	KIR	iP	03 08 16.5			Origin time = 21 09 05.
		UME	iP	03 08 05.6			$M_L(\text{UPP}) = 3.2 (0.47) 4.$
		Azores Islands region (h = 10 km).				By combination with Finnish station readings.	
"	10	UPP	iP	12 36 33.9	"	11	UPP iPKP 21 34 29.5
		KIR	iP	12 35 34.7			micr sec
		UME	iP	12 36 02.9			Mx Z 5.6 19
		Eastern Siberia (h = 10 km).				KIR iPKP 21 34 44.0	micr sec
"	10	UPP	iP	13 40 48.7			P Z' 0.1 1.0
		Eastern Siberia (h = 10 km).				Mx Z 5.5 19	
"	10	UPP	iP	16 57 04.3			UME iPKP 21 34 35.3
		KIR	iP	16 56 46.9			South of Africa (h = 10 km).
		UME	iP	16 56 50.0			$M = 6.1 (\text{UPP}, \text{KIR}).$
		Qinghai Province, China (h = 10 km).		"	11	UPP iP 21 45 38.1	
"	11	UPP	iP	06 27 32.8	"	12	UPP iP 06 06 32.3
			i	06 28 09.9			Eastern Siberia (h = N).
				micr sec			
			P	Z' 0.1 1.0	"	12	UPP iP 06 15 53.6 C
		KIR	iP	06 26 39.0			micr sec
		UME	iP	06 27 04.7			P Z' 0.2 0.9
		Andreanof Islands, Aleutian Is. (h = 55 km).				Mx Z 5.2 13	
"	11	UPP	iP	18 38 52.9 C			KIR iP 06 15 30.7 C
				micr sec			micr sec
			P	Z' 0.2 1.0			P Z' 0.2 1.5
		KIR	iP	18 39 54.9			Mx Z 2.5 12
				micr sec			UME iP 06 15 38.6
			P	Z' 0.1 1.0			Taiwan (h = 15 km).
		UME	iP	18 39 20.5			$m = 6.0, M = 5.8 (\text{UPP}, \text{KIR}).$
		Turkey (h = 110 km).		"	12	KIR iPg1 07 23 43.9	
		$m = 5.6 (\text{UPP}, \text{KIR}).$				i 07 23 45.4	
"	11	UPP	iSn	21 11 14.4			iSg1 07 24 02.4
			iSg1	21 11 40.0			UME iSg1 07 24 57.1
		UME	iSg1	21 13 27.1			MYV eSg1 07 25 56
		UDD	i	21 10 40.2			Norrbottn, Sweden, 66.8°N, 22.8°E.
			iSg1	21 10 59.1			Origin time = 07 23 19.
		(cont).					$M_L(\text{UPP}) = 2.5 (0.18) 3.$
							By combination with Finnish station readings.

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1991				1991					
Mar.	17	UPP	iP	06 36 37.1	Mar.	19	UPP	iP	21 34 54.9
			i	06 36 40.6			KIR	iP	21 36 01.0
				micr sec			UME	iP	21 35 26.1
			i	Z' 0.1 1.0			Crete (h = 20 km).		
		KIR	iP	06 35 39.1		20	UME	iP	12 10 15.4
		UME	iP	06 36 08.4			Yugoslavia (h = 10 km).		
		Eastern Siberia (h = N).							
"	17	UME	iPKP1	07 37 36.5	"	20	UPP	iP	14 18 15.3
		South of Kermadec Islands					KIR	iP	14 17 22.4
		(h = 40 km).					Andreanof Islands, Aleutian Is.		
		(h = N).							
"	17	UPP	iP	19 26 49.8	"	20	KIR	iP	17 50 55.4
		UME	iP	19 27 30.7			UME	iP	17 50 46.5
		Greece-Albania border region					Tajik-Xinjiang border region		
		(h = 10 km).					(h = 120 km).		
"	18	UPP	iP	14 30 18.9	"	20	UPP	iP	18 15 27.9
		KIR	iP	14 28 33.3			KIR	iP	18 14 33.9
		UME	iP	14 29 28.5			UME	iP	18 15 00.8
		Svalbard region (h = 10 km).					Alaska Peninsula (h = 40 km).		
"	18	UPP	iP	23 33 32.1	"	20	UPP	i(P)	19 53 55.2
		UME	iP	23 34 12.7					
		Greece-Albania border region							
		(h = 10 km).							
"	19	UPP	iP	02 41 43.8 C	"	21	UPP	eP	05 14 27
				micr sec			KIR	iP	05 13 27.2
			P	Z' 0.1 1.0			UME	iP	05 13 58.1
		UME	iP	02 42 24.3			Central Alaska (h = 80 km).		
		Greece-Albania border region							
		(h = 10 km).							
"	19	UPP	iP	02 56 05.1	"	21	UPP	Mx	06 48
		UME	iP	02 56 44.3				micr sec	
		Greece-Albania border region					Mx	Z 4.7 23	
		(h = 10 km).					Off coast of northern Peru		
		(h = 25 km).							
"	19	UPP	iP	12 14 52.3	"	21	UME	iPKP	18 46 29.0
			iS	12 19 18			Santa Cruz Islands (h = 35 km).		
				micr sec					
			P	Z' 0.1 0.8					
		Mx	Z	10 17					
		KIR	iP	12 15 59.8					
				micr sec					
			P	Z' 0.2 0.8					
		Mx	Z	3.7 11					
		UME	iP	12 15 23.8					
		Crete (h = 25 km).							
		m = 5.8, M = 5.3 (UPP,KIR).							

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991					
Mar.	23	UPP	iP	00 44 08.0 C	Mar.	24	UME	iP	21 18 32.2
			ipP	00 44 53.7					
				micr sec	"	25	KIR	ePdiff	15 37 57
			P	Z' 0.1 1.0			UME	iPdiff	15 38 10.0
		KIR	iP	00 44 17.5 C			Ceram Sea (h = N).		
				micr sec					
			P	Z' 0.2 1.0	"	25	UPP	iS	18 21 08
		UME	iP	00 44 06.5 C					micr sec
		Hindu Kush.						Mx	Z 8.0 15
		h = 220 km (UPP).					KIR		micr sec
		m = 5.4 (UPP,KIR).						Mx	Z 2.2 10
"	23	KIR	iSg1	00 54 11.2			UME	iP	18 12 26.8
		Norrbotten, Sweden, 66.1°N, 21.6°E.					Northwestern China (h = 10 km).		
		Origin time = 00 53 15.					M = 5.7 (UPP,KIR).		
		By combination with Finnish station readings.			"	26	UPP	iP	04 10 22.4
"	23	UPP	iPKP1	07 11 25.1				iS	04 20 14
			iPKP2	07 11 30.9					micr sec
		UME	iPKP1	07 11 14.0				P	Z' 0.3 1.0
		Kermadec Islands region						Mx	Z 23 16
		(h = 410 km).					KIR	iP	04 10 00.5
"	23	UPP	eP	08 49 17				i	04 10 05.7
		KIR	iP	08 49 39.9					micr sec
		UME	iP	08 49 31.5				i	Z' 0.4 1.2
		North Atlantic Ridge (h = 10 km).						Mx	Z 20 15
"	23	UME	iPKP	10 23 27.0			UME	iP	04 10 08.1
		Santa Cruz Islands (h = 210 km).						i	04 10 13.2
"	23	UME	iPKP1	17 59 36.9			Taiwan region (h = 20 km).		
		Kermadec Islands region					m = 6.3, M = 6.5 (UPP,KIR).		
		(h = 560 km).			"	26	UPP	iP	06 31 28.0
"	23	UPP	iP	20 49 36.8					micr sec
			iS	20 58 24				P	Z' 0.1 0.9
				micr sec				KIR	iP
			Mx	Z 3.2 17				UME	iP
		KIR	iP	20 48 47.2				Taiwan region (h = 20 km).	
				micr sec	"	26	UME	iPKP1	10 19 19.1
			Mx	Z 1.9 18			Kermadec Islands region		
		UME	iP	20 49 09.8			(h = 450 km).		
		Kuril Islands (h = 40 km).			"	26	UPP	iP	10 36 23.8
		M = 5.4 (UPP,KIR).							micr sec
"	24	UPP	iPKP1	13 04 08.4				P	Z' 0.1 0.8
		UME	iPKP1	13 03 56.0				Mx	Z 3.3 20
		Kermadec Islands (h = 55 km).					KIR	iP	10 36 01.6
									micr sec
								P	Z' 0.1 1.0
								Mx	Z 2.7 15
							(cont).		

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991						1991					
Mar.	26	(cont).				Mar.	29	UPP	iP	09 15 43.7	
		UME	iP	10 36 09.3				KIR	iP	09 16 35.0	
		Taiwan region (h = 10 km).						Sudan (h = 10 km).			
		m = 5.8, M = 5.6 (UPP,KIR).					"	29	UPP	iP	13 37 38.0
"	26	UPP	eP	10 47 17				KIR	iP	13 36 43.0	
		Near coast of Venezuela (h = 25 km).						Eastern Siberia (h = N).			
"	26	UPP	eP	12 46 21		"	30	UPP	iP	13 02 08.6	
			iS	12 55 40					iS	13 04 46.1	
				micr sec							
		Mx	Z	3.2 17		"	30	KIR	iP	13 01 01.6	
"	26	KIR	iP	12 46 21.9					iS	13 09 57.2	
				micr sec						micr sec	
		Mx	Z	2.1 16					P	Z' 0.5 1.0	
		UME	iP	12 46 25.1				Jan Mayen Islands region			
		Dominican Republik region (h = N).						(h = 10 km).			
		M = 5.5 (UPP,KIR).									
"	26	UPP	iP	18 42 19.5							
		KIR	iP	18 41 57.5							
		UME	iP	18 42 04.5							
		Taiwan region (h = 10 km).									
"	28	UPP	iP	02 01 09.5							
"	28	UPP	iP	09 22 35.6							
		UME	iP	09 22 48.2							
"	28	UPP	iSn	17 58 03.9							
		KIR	iPn	17 55 55.8							
			iSn	17 56 51.6							
		UDD	iPn	17 56 21.4							
			iSn	17 57 38.7							
		DEL	iPn	17 57 08.9							
		MYV	iPn	17 55 48.6							
			iSn	17 56 41.4							
		Norwegian Sea, 66.8°N, 7.4°E.									
		Origin time = 17 54 36.									
		By combination with Finnish station readings.									
"	28	UPP	iP	18 39 59.0				November 13, 1992			
		KIR	iP	18 40 06.6				Conny Holmqvist			
		Afghanistan-USSR border region						Klaus Meyer			
		(h = 30 km).									
"	28	UPP	iP	21 32 15.1							
		Kuril Islands (h = N).									

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 UPPSALA, KIRUNA, UMEÅ, UDDEHOLM

DELARY and MYRVIKEN

Uppsala	(UPP)	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(KIR)	67°50.4'N,	20°25.0'E;	h = 390 m
Umeå	(UME)	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(UDD)	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(DEL)	56°28.2'N,	12°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

APRIL 1 - 30, 1991

1991					1991				
Apr.	1	UPP	iP	04 04 21.0	Apr.	1	UPP	iP	22 33 47.4
			i	04 04 25.6					Mindoro, Philippine Islands
			iS	04 13 35					(h = N).
				micr sec					
			i	Z' 0.1 1.0	"	2	UPP	iPKP2	06 41 26.8
			Mx	Z 17 24					Kermadec Islands region (h = 40 km).
		KIR	iP	04 04 17.2					
				micr sec	"	2	UPP	iP	12 59 21.0
			Mx	Z 13 13			KIR	iP	12 59 28.7
							UME	iP	12 59 18.8
				South Burma (h = 15 km).					Afghanistan-USSR border region
				M = 6.2 (UPP,KIR).					(h = 240 km).
"	1	UPP	iP	05 56 37.0	"	2	UPP	iP	18 08 17.7
				micr sec				i	18 08 31.5
			Mx	Z 4.9 25			KIR	iP	18 08 12.9 C
		KIR	iP	05 56 33.5					micr sec
				micr sec				P	Z' 0.1 0.6
			Mx	Z 3.0 15			UME	iP	18 08 09.4
				South Burma (h = 15 km).					Southern Xinjiang, China (h = 10 km).
				M = 5.6 (UPP,KIR).					
"	1	UPP	iP	07 47 37.3	"	2	UPP	iP	18 17 10.2
		KIR	iP	07 47 22.1			UME	iP	18 16 53.5
				Near coast of Guerero, Mexico					Bonin Islands region (h = 510 km).
				(h = 20 km).					
"	1	UPP	iP	18 37 52.7	"	4	UPP	iP	03 35 40.5
				Off east cost of Honshu, Japan				i	03 35 52.1
				(h = 30 km).				iS	03 46 15
									micr sec
								P	Z' 0.3 1.1
"	1	UPP	iP	18 45 55.3			Mx	Z 5.2 25	
			i	18 46 04.1					(cont.)
				Off east coast of Honshu, Japan					
				(h = 20 km).					

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991				
Apr.	10	UPP UME	iPKP1 iPKP1	00 27 37.1 00 27 24.3	Apr.	13	KIR iSg1 UME iSg1	21 19 08.3 21 19 34.2 21 21 36.7
Kermadec Islands region (h = 120 km).				Northern Norway, 69.3°N, 24.1°E. Origin time = 21 18 35. M_L (UPP) = 2.6 1. By combination with Finnish station readings.				
"	10	UPP	iP iS P	01 14 08.9 01 18 48 Z' 0.1 1.0	"	14	UPP iS P Mx	08 20 34.0 D 08 30 09 micr sec Z' 0.7 1.0 Z 6.5 27
KIR iP P Z' 0.2 1.1				KIR iP i micr sec Z' 0.4 1.0 Z 0.9 11				
UME iP Turkey (h = 10 km). m = 5.5 (UPP,KIR).				UME iP Ryukyu Islands (h = 80 km). m = 6.4, M = 5.5 (UPP,KIR). M uncorrected for focal depth.				
"	11	UPP KIR UME	iP iP iP	13 14 24.0 13 13 31.1 13 13 59.4	"	14	UPP iP	21 04 36.3
Unimak Island region (h = 15 km).				Afghanistan-USSR border region (h = 120 km). m = 6.0 (UPP,KIR).				
"	11	UPP	iP	16 10 00.5	"	15	UPP iP P KIR iP P UME iP	10 56 34.4 C micr sec Z' 0.4 1.0 10 55 42.8 C micr sec Z' 0.2 1.0 10 56 31.1 C
Southern Iran (h = 50 km).				Afghanistan-USSR border region (h = 120 km). m = 6.0 (UPP,KIR).				
"	12	UPP UDD DEL	iSg iPg1 iSg1 iSg1	14 34 35.0 14 32 09.2 14 32 34.5 14 34 35.4	"	16	UPP iP P	10 03 42.1 micr sec Z' 0.1 1.0
Southern Norway, 59.8°N, 10.2°E. Origin time= 14 32 43. M_L (UPP) = 2.3 (0.46) 3. By combination with Norwegian station readings.				KIR iP UME iP				
"	12	UPP	iP	17 31 46.9	"	17	UPP iP KIR iP UME iP	05 41 58.3 05 41 02.1 Eastern Siberia (h = 20 km).
"	13	UME	iPKP1	01 44 57.2	Afghanistan-USSR border region (h = 130 km).			
South of Kermadec Islands (h = N).				UPP iP P Z' 0.1 1.0				
"	13	UPP UME	iP iP	01 49 25.0 01 49 01.3	KIR iP UME iP			
Kuril Islands (h = 70 km).				08 06 06.8 micr sec Mx Z 1.6 26 08 05 52.7 08 06 01.6 08 05 59.0 08 06 09.1				
"	13	UPP	iPKP	08 06 06.8	Vanuatu Islands (h = 30 km).			

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991							
Apr.	17	KIR	iPg1	17 47 58.7	Apr.	19	UPP	iP	05 03 54.4		
			iSg1	17 48 20.6				i	05 04 36.9		
		UME	iSg1	17 49 23.5			KIR	iP	05 03 37.6		
		Northern Finland, 67.0°N, 24.6°E.					UME	iP	05 03 43.8		
		Origin time = 17 47 31.					Mindoro, Philippine Islands				
		M _L (UPP) = 2.7 1.					(h = 170 km).				
		Felt.					"	19	KIR	iP	06 51 01.2
		By combination with Finnish station readings.							UME	iP	06 50 59.8
							Leeward Islands (h = 15 km).				
"	18	UPP	iP	09 25 54.4	"	19	UPP	Mx	12 41		
			iS	09 31 51					micr sec		
			Mx	Z 4.8 13				Mx	Z 3.8 23		
		KIR	iP	09 26 05.2			Samoa Islands region (h = 20 km).				
				micr sec			"	19	UPP	iSg1	13 17 27.5
			P	Z' 0.1 1.0					UDD	iSg1	13 16 30.5
			Mx	Z 3.3 8			Near coast of southern Norway, 58.1°N, 6.2°E.				
		UME	iP	09 25 51.4			Origin time = 13 14 22.				
		Afghanistan-USSR border region (h = N).					M _L (UPP) = 2.7 1.				
		M = 5.5 (UPP,KIR).					By combination with Norwegian station readings.				
"	18	UPP	iPKP1	09 59 50.3 C	"	19	KIR	eP	15 46 08		
				micr sec			UME	iP	15 46 30.2		
			PKP1	Z' 0.1 1.0			Off coast of Oregon (h = 10 km).				
		KIR	i(PKP)	09 59 31.5			"	19	KIR	eP	18 28 17
			iPKP	09 59 41.1					UME	iP	18 28 56.4
				micr sec			Southern Alaska (h = 130 km).				
			(PKP)	Z' 0.2 0.8			"	19	KIR	iPdiff	22 02 21.7
		UME	iPKP	09 59 39.6						micr sec	
		South of Fiji Islands (h = 470 km).							Pdiff	Z' 0.1 1.0	
"	18	UPP	iP	10 50 43.0	"	19	UME	iPdiff	22 02 26.8		
			i	10 50 56.7			Banda Sea (h = 130 km).				
		KIR	iP	10 49 45.7			"	19	KIR	iP	22 18 13.9
				micr sec					UME	iP	22 18 12.3
			P	Z' 0.1 1.0			"	20	KIR	iPKP	01 20 38.5
		UME	iP	10 50 14.7					UME	iPKP	01 20 44.3
		Eastern Siberia (h = 10 km).					Vanuatu Islands (h = 250 km).				
"	18	UPP	iP	11 08 19.5	"	21	KIR	iPn	01 45 00.9		
		KIR	iP	11 07 21.0			UME	iPn	01 45 50.2		
		Eastern Siberia (h = N).					UDD	iPn	01 46 24.3		
"	19	UPP	iP	03 04 55.6			(cont.)				
		KIR	iP	03 03 57.7							
		UME	iP	03 04 25.2							
		Eastern Siberia (h = 10 km).									

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1991				1991			
Apr.				Apr.			
21	(cont.)			22	(cont.)		
	Norwegian Sea, 71.4°N, 10.2°E.				KIR	iP	22 09 32.7
	Origin time = 01 43 46.						micr sec
	By combination with Norwegian station readings.					P	Z' 3.9 1.9
						Mx	Z 233 16
					UME	iP	22 09 37.1
"	21	KIR	iP 02 03 22.0				Costa Rica (h = 10 km).
		UME	iP 02 04 11.8				m = 7.1, M = 7.7 (UPP,KIR).
"	21	KIR	iPn 02 12 43.8	"	22	UPP	iP 22 19 58.1
		UME	iPn 02 13 32.7			UME	iP 22 19 58.7
		UDD	iPn 02 14 08.6				Costa Rica (h = 10 km).
			i 02 14 19.7				
			Norwegian Sea, 72.3°N, 7.8°E.	"	22	UPP	iP 22 21 17.9
			Origin time = 02 11 14.			UME	iP 22 21 18.9
			By combination with Finnish station readings.				Costa Rica (h = 10 km).
"	21	UPP	iP 08 56 47.9	"	22	UPP	iP 22 23 45.5
			iS 09 00 46			UME	iP 22 23 46.4
			micr sec				Costa Rica.
			P Z' 0.2 1.0	"	22	UPP	iP 22 32 11.0
			Mx Z 0.9 13			UME	iP 22 32 11.6
		KIR	iP 08 58 02.2				Costa Rica (h = 10 km).
			micr sec	"	22	UPP	iP 22 54 36.1
			Mx Z 0.9 13				North of Panama (h = 10 km).
		UME	iP 08 57 26.1	"	22	UPP	iP 22 55 59.4
			Ionian Sea (h = 40 km).				Costa Rica-Panama.
			M = 4.4 (UPP,KIR).	"	22	UPP	iP 23 04 19.8
"	21	UPP	iP 23 24 38.4	"	22	UME	iP 23 04 21.2
			micr sec				Panama-Costa Rica border region
			P Z' 0.2 1.2				(h = 10 km).
		KIR	iP 23 25 11.6 D	"	22	UPP	iP 23 28 55.8
			micr sec			UME	iP 23 28 57.1
			P Z' 0.3 1.6				Costa Rica (h = 10 km).
		UME	iP 23 24 54.3 D				
			Malagasay Republic (h = 20 km).				
			m = 6.1 (UPP,KIR).				
"	22	UME	iP 19 59 32.9	"	23	UPP	eP 03 03 04
"	22	UPP	iP 22 09 36.6			KIR	iP 03 02 47.0
			i 22 09 42			UME	iP 03 02 49.3
			iPP 22 13 15.2				Luzon, Philippine Islands (h = 40 km).
			i 22 19 12	"	23	UME	iP 05 49 52.0
			iSKS 22 20 00				Panama-Costa Rica border region
			micr sec				(h = 10 km).
			P Z' 0.8 1.0				
			Mx Z 344 18				
			(cont.)				

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1991				1991					
Apr.	23	UPP	iP	06 08 34.8	Apr.	24	(cont.)		
			i	06 08 40.2			UME iP	05 26 17.4	
		UME	iP	06 08 35.6			South of Panama (h = 25 km).		
			i	06 08 41.5			m = 6.0 (UPP,KIR).		
		Panama-Costa Rica border region (h = 10 km).				"	24	UPP iP	10 20 00.0
"	23	UPP	iP	06 46 46.3			KIR eP	10 19 43	
		UME	iP	06 46 43.9			Mindanao, Philippine Islands (h = N).		
		Guatemala (h = 70 km).				"	24	UPP eP	10 59 58
"	23	UPP	iP	08 45 23.4			Turkey (h = N).		
		KIR	iP	08 45 19.6	"	24	UME iP	13 27 39.1	
		UME	iP	08 45 24.3			Southern Italy (h = 10 km).		
		Costa Rica (h = 10 km).				"	24	UME iP	15 37 07.6
"	23	UPP	iP	19 09 28.4			Sakhalin Island (h = 25 km).		
		UME	iP	19 09 29.3					
		Costa Rica (h = 10 km).				"	24	UPP iP	19 25 47.8
"	24	UPP	iP	00 43 01.1 C			iSKS	19 36 26	
				micr sec			iS	19 37 22	
			P	Z' 0.2 1.0			P	Z' 0.1 1.0	
		KIR	iP	00 42 17.0 C			Mx	Z 6.3 23	
				micr sec			KIR eP	19 25 44	
			P	Z' 0.5 2.0				micr sec	
		UME	iP	00 42 36.6 C			P	Z' 0.3 1.9	
		Hokkaido, Japan region (h = 60 km).						Mx	Z 6.1 16
		m = 6.2 (UPP,KIR).						UME iP	19 25 48.2
"	24	UPP	iP	05 10 23.0			Costa Rica (h = 15 km).		
			iPP	05 14 04			m = 6.0, M = 6.0 (UPP,KIR).		
			iSKS	05 20 48	"	24	UPP iP	21 55 33.6	
			iS	05 21 18			Kuril Islands (h = N).		
				micr sec	"	25	UPP iPKP1	01 34 28.9 C	
			Mx	Z 13 17				micr sec	
		KIR	iP	05 10 03.8			PKP1	Z' 0.1 0.8	
				micr sec			KIR iPKP1	01 34 06.5	
			Mx	Z 7.3 16			UME iPKP1	01 34 16.3	
		UME	iP	05 10 10.5			Kermadec Islands (h = 60 km).		
		Mindanao, Philippine Islands (h = 15 km).				"	25	UPP iP	02 29 18.7
		M = 6.3 (UPP,KIR).						UME iP	02 29 19.5
"	24	UPP	iP	05 26 15.0			Panama-Costa Rica border region (h = 10 km).		
				micr sec	"	25	UPP iP	03 00 30	
			P	Z' 0.1 1.0			UME iP	03 00 31.5	
		KIR	iP	05 26 15.5			North of Panama (h = N).		
				micr sec					
			P	Z' 0.1 1.0					
		(cont.)							

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1991				1991					
Apr.	25	UPP	eSn	16 31 06	Apr.	26	UPP	iP	17 14 54.8
			i	16 31 21.4			KIR	iP	17 15 28.8
			eSg1	16 31 51			Southern Iran (h = N).		
		KIR	iSn	16 32 20.1	"	26	UPP	iP	17 49 52.6
		UME	iPn	16 30 02.7			KIR	iP	17 49 41.8
			iSn	16 31 38.7					micr sec
		UDD	iPn	16 29 13.4				P	Z' 0.1 1.0
			iSn	16 30 15.3			UME	iP	17 49 47.1
		DEL	ePn	16 29 26			Mindanao, Philippine Islands		
			iSn	16 30 55.1			(h = 70 km).		
		MYV	iPn	16 29 23.4	"	26	UPP	iP	22 31 28.8
			i	16 29 27.4				iS	22 37 26
			iSn	16 30 32.4					micr sec
		Norwegian Sea, 60.4°N, 2.1°E.						Mx	Z 1.7 12
		Origin time = 16 27 49.					KIR	iP	22 31 35.2
		M _L (UPP) = 3.2 1.							micr sec
		Solution from Helsinki regional bulletin.						Mx	Z 1.3 13
"	25	UPP	iPKP1	18 54 20.4			UME	iP	22 31 25.7 C
		KIR	iSKP1	18 56 55.6			Afghanistan-USSR border region		
		UME	iSKP1	18 57 05.8			(h = 45 km).		
		South of Fiji Islands (h = 480 km).					M = 5.0 (UPP,KIR).		
"	26	UPP	iP	00 36 01.0	"	27	UPP	iP	00 46 07.0
		KIR	iP	00 35 35.2				i	00 46 10.3
		Taiwan region (h = 30 km).					KIR	iP	00 45 11.6
"	26	UPP	iP	06 26 34.4			UME	iP	00 45 39.2
				micr sec			Eastern Siberia (h = N).		
			P	Z' 0.1 1.0	"	27	UPP	eP	03 37 33
		KIR	iP	06 25 37.2			KIR	iP	03 38 15.3
				micr sec			Turkey-USSR border region		
			P	Z' 0.1 1.0			(h = 10 km).		
		UME	iP	06 26 06.4	"	27	UPP	iP	05 55 25.2
		Southern Alaska (h = 40 km).						i	05 55 31.1
		m = 5.7 (UPP,KIR).					KIR	iP	05 55 21.3
"	26	UPP	iP	09 26 32.9			UME	iP	05 55 26.1 C
		UME	iP	09 26 27.7				i	05 55 31.8
		Costa Rica (h = 10 km).			"	27	UPP	iP	09 58 34.4 C
"	26	UDD	iSg1	13 17 17.1				i	09 59 20.3
		Off coast of southern Norway,						i	09 59 41.4
		58.0°N, 6.2°E.							micr sec
		Origin time = 13 15 06.						P	Z' 0.1 0.7
		M _L (UPP) = 2.5 1.					KIR	iP	09 58 43.8 C
		Solution from Norwegian station readings.							micr sec
								P	Z' 0.2 0.5

(cont.)

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991						1991				
Apr.	27	(cont.)				Apr.	29	(cont.)		
		UME	iP	09 58 33.1 C				UME	iP	09 18 14.6
		Hindu Kush region (h = 210 km).						Western Caucasus (h = 15 km).		
		m = 5.7 (UPP,KIR).						M = 7.0 (UPP).		
								M obtained from Wiechert records.		
"	27	UME	iP	12 21 44.6		"	29	UPP	iP	10 04 35.3
"	27	UME	iP	15 01 24.0		"	29	UME	iP	10 04 48.2
		Guerrero, Mexico (h = 55 km).						Western Caucasus (h = 10 km).		
"	27	UPP	iP	18 30 53.7		"	29	UPP	iP	10 06 30.5
			iS	18 38 52				UME	iP	10 06 40.3
				micr sec				Western Caucasus (h = 10 km).		
		Mx	Z	1.1 20						
		KIR	iP	18 29 55.7		"	29	UPP	iP	10 20 51.8
				micr sec				UME	iP	10 21 00.5
		P	Z'	0.1 1.0				Western Caucasus (h = 10 km).		
		Mx	Z	1.0 14		"	29	UPP	iP	10 24 54.6
		UME	iP	18 30 23.8				UME	iP	10 25 09.7
		Eastern Siberia (h = N).						Western Caucasus (h = 10 km).		
		M = 4.9 (UPP,KIR).								
"	27	UPP	iP	20 21 30.0		"	29	UPP	iP	10 57 58.6
		KIR	iP	20 21 10.3				Western Caucasus (h = 10 km).		
		Mindanao, Philippine Islands				"	29	UPP	iP	11 15 32.5
		(h = 60 km).						UME	iP	11 15 49.6
"	28	UPP	eP	15 41 32				Western Caucasus (h = 10 km).		
			i	15 41 34.8		"	29	UPP	iP	11 56 26.7
		KIR	eP	15 41 47				UME	iP	11 56 38.0
		UME	iP	15 41 27.7				Western Caucasus (h = 10 km).		
		Pakistan (h = 25 km).				"	29	UPP	iP	13 25 05.1
"	28	UPP	iP	21 27 55.1		"	29	UPP	iP	13 55 09.2
		UME	iP	21 28 32.7				UME	eP	13 55 26
		Romania (h = 170 km).						Western Caucasus (h = 10 km).		
"	29	UPP	iP	00 05 07.1		"	29	UPP	iP	14 48 19.3
		Kuril Islands (h = 70 km).						i		14 48 30.5
"	29	UPP	iP	02 02 21.5				iS		14 52 44
		Eastern Siberia (h = N).							micr sec	
"	29	UPP	iP	09 18 00.0 D				P	Z'	0.2 1.4
			i	09 19 07.7				i	Z'	0.6 1.2
			iS	09 22 20				Mx	Z	6.1 18
				micr sec				UME	iP	14 48 39.0
		P	Z'	4.5 1.2				Western Caucasus (h = 10 km).		
		Mx	E	247 12						
		Mx	N	276 12						
		(cont.)								

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Apr.	29	UPP iP	16 54 02.0	Apr.	29	UPP eP	20 30 01
		UME iP	16 54 13.1				micr sec
		Western Caucasus (h = 10 km).				P	Z' 0.1 1.0
"	29	UPP iP	16 55 13.4			UME iP	20 30 10.2
		UME iP	16 55 25.7			Western Caucasus (h = 10 km).	
		Western Caucasus (h = 10 km).		"	29	UPP iP	20 38 04.9
"	29	UPP iP	17 01 11.2			i	20 38 13.2
		UME iP	17 00 48.1 D			iS	20 42 24
		Near e. coast of Eastern USSR (h = 500 km).					micr sec
						P	Z' 0.2 1.0
						i	Z' 0.5 1.2
						Mx	Z 3.9 17
"	29	UPP iP	18 00 11.7			UME iP	20 38 19.7
		UME iP	18 00 27.8			Western Caucasus (h = 10 km).	
		Western Caucasus (h = 10 km).		"	29	UPP eP	21 29 30
"	29	UPP iP	18 28 29.1			UME iP	21 29 36.9
		iS	18 32 58			Western Caucasus (h = 10 km).	
			micr sec				
		P	Z' 0.3 1.0	"	29	UME iP	21 42 46.6
		UME iP	18 28 44.4			Yugoslavia (h = 20 km).	
		Western Caucasus (h = 10 km).		"	29	UME iP	22 19 01.1
"	29	UPP iP	18 35 54.4			Mindanao, Philippine Islands (h = 70 km).	
		i	18 36 02.0	"	29	UPP iP	22 33 35.0
		iS	18 40 08			i	22 33 43.7
			micr sec			UME iP	22 33 48.9
		P	Z' 0.9 1.5			Western Caucasus (h = 10 km).	
		i	Z' 0.9 1.2	"	29	UPP iP	23 37 42.0
		Mx	Z 8.3 16			UME iP	23 37 57.3
		UME iP	18 36 08.9			Western Caucasus (h = 10 km).	
		Western Caucasus (h = 15 km).		"	29	UPP iP	23 37 42.0
"	29	UPP eP	19 12 18			UME iP	23 37 57.3
		UME iP	19 12 32.5			Western Caucasus (h = 10 km).	
		Western Caucasus (h = 10 km).		"	30	UPP iP	02 29 35.5
"	29	UPP iP	19 25 09.1			UME iP	02 29 34.3
		UME iP	19 25 23.1			South of Panama (h = 10 km).	
		Western Caucasus (h = 10 km).		"	30	UPP iP	08 35 08.7
		Western Caucasus (h = 10 km).				Western Caucasus (h = 10 km).	
"	29	UPP iP	19 50 08.8	"	30	UPP iP	11 20 38.2
		i	19 50 11.3			iS	11 24 56
		UME iP	19 50 21.6				micr sec
		Western Caucasus (h = 10 km).				P	Z' 0.1 1.0
"	29	UPP eP	20 17 23			Mx	Z 0.6 11
		UME iP	20 17 34.3			KIR	micr sec
		Western Caucasus (h = 10 km).				Mx	Z 0.6 10

(cont.)

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991

Apr.	30	(cont.)			
		UME	iP	11 20	54.8
		Western Caucasus (h = 10 km).			
		M = 4.3 (UPP,KIR).			
"	30	UPP	Mx	13 44	
				micr	sec
			P	Z' 1.4	20
		KIR	Mx	13 44	
				micr	sec
			P	Z' 1.6	21
		East Papua New Guinea region			
		(h = 60 km).			
		M = 5.5 (UPP,KIR).			
		M uncorrected for focal depth.			
"	30	UPP	iPKP1	15 18	54.2 D
		UME	iPKP	15 18	42.7
		South of Fiji Islands (h = 520 km).			
"	30	UPP	iP	16 12	50.1
		UME	iP	16 13	04.9
		Western Caucasus (h = 10 km).			

November 26, 1992

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SEISMOLOGICAL DEPARTMENT
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SEISMOLOGICAL BULLETIN
 UPPSALA, KIRUNA, UMEÅ, UDDEHOLM

DELARY and MYRVIKEN

Uppsala	(UPP)	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(KIR)	67°50.4'N,	20°25.0'E;	h = 390 m
Umeå	(UME)	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(UDD)	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(DEL)	56°28.2'N,	12°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

M A Y 1 - 31, 1991

1991					1991			
May	1	UPP	iP	00 31 11.3	May	1	(cont).	
		KIR	iP	00 31 24.5			UME	iP 07 27 53.3 C
		UME	iP	00 31 39.3				ipP 07 28 21.1
		Kuril Islands region (h = 15 km).					Central Alaska.	
"	1	UPP	eP	03 12 02			h = 130 km (UPP,KIR,UME).	
		KIR	iP	03 12 46.7			m = 6.6, M = 5.5 (UPP,KIR).	
		UME	iP	03 12 19.2			M uncorrected for focal depth.	
		Western Caucasus (h = 10 km).			"	1	UME	eP 23 24 37
"	1	UPP	iP	05 18 45.4			Western Caucasus (h = 10 km).	
				micr sec	"	2	UPP	iP 01 30 43.4
		Mx	Z	1.4 17				i 01 30 54.7
		KIR	eP	05 19 31				iS 01 35 14
				micr sec				micr sec
		Mx	Z	1.0 12				i Z' 0.1 0.9
		UME	iP	05 19 02.5			Mx	Z 4.3 1.6
		Western Caucasus (h = 10 km).					KIR	micr sec
		M = 4.5 (UPP,KIR).					Mx	Z 3.5 11
"	1	UPP	iP	07 28 20.6 C			UME	iP 01 30 58.1
			ipP	07 28 49.2			Western Caucasus (h = 10 km).	
			iS	07 36 06			M = 5.1 (UPP,KIR).	
			eP'P'	07 58 32	"	2	UPP	iP 07 14 27.6
				micr sec				i 07 14 39.1
		P	Z'	0.8 1.1				iS 07 24 42
		Mx	Z	10 30				micr sec
		KIR	iP	07 27 23.6 C			Mx	Z 1.7 21
			ipP	07 27 51.3			KIR	iP 07 14 27.1
				micr sec				ipP 07 14 36.7
		P	Z'	1.0 1.0				micr sec
		Mx	Z	4.1 22			P	Z' 0.2 1.6
		(cont).					(cont).	

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
May	6	UPP	micr sec	May	8	(cont).	
		Mx	Z 1.3 16			UME	iP 18 13 12.0
		KIR	iPn 18 48 17.7			Leyte, Philippine Islands (h = 25 km).	
			iSn 18 49 34.2				
			micr sec		"	8	UPP iP 18 34 55.1
		Mx	Z 0.9 13			KIR	eP 18 34 23
		UME	iPn 18 49 05.3			UME	iP 18 34 37.6
			iSn 18 50 55.4			Hawaiian Islands (h = 35 km).	
		UDD	iPn 18 49 50.0		"	8	UPP iP 18 53 15.9
		Greenland Sea (h = 10 km).				UME	iP 18 52 58.3
		M = 3.8 (UPP,KIR).				Ryukyu Islands (h = N).	
"	6	UPP	i(PKP) 23 09 02.6		"	8	UPP eP 21 51 50
			i 23 11 05.3			UME	iP 21 51 44.6
		UME	iPKP 23 09 01.7			Southern Xinjiang, China (h = N).	
			iSKP1 23 11 53.6				
		Fiji Islands region (h = 500 km).			"	8	UPP iP 23 36 41.8
"	7	UME	iP 07 23 22.9				micr sec
"	7	UME	iP 09 06 47.6			Mx	Z 1.1 17
		Western Caucasus (h = 10 km).				KIR	eP 23 36 14
"	7	UPP	iP 13 20 52.4			UME	iP 23 26 23.9
			i 13 20 53.8			Ryukyuan Islands (h = 30 km).	
			iPP 13 23 32		"	9	UPP iP 01 30 26.0
			iPPP 13 25 16			KIR	iP 01 30 06.1
			iS 13 30 10			UME	iP 01 30 11.6
			micr sec			Mindanao Philippine Islands	
		i	Z' 1.3 1.4			(h = 70 km).	
		Mx	Z 9.9 22		"	9	UPP iP 05 36 20.9
		KIR	iP 13 20 10.9			KIR	iP 05 35 26.1
			i 13 20 11.6			Near east coast of Kamchatka (h = N).	
			micr sec		"	9	UPP iPKP 22 00 52.9
		i	Z' 0.9 1.4			UME	iPKP 22 00 45.9
		Mx	Z 4.3 16			South of Fiji Islands (h = 550 km).	
		UME	iP 13 20 29.1		"	10	UPP iP 01 24 32.6
		Off east coast of Honshu, Japan				UME	iP 01 24 53.9
		(h = 10 km).				Zambia (h = 10 km).	
		m = 6.8, M = 5.8 (UPP,KIR).			"	10	UPP iP 01 30 25.0
"	7	KIR	iP 21 59 26.5			KIR	eP 01 31 07
		Leyte, Philippine Islands (h = 50 km).				UME	iP 01 30 39.4
"	8	UPP	iP 12 50 26.3				ipP 01 30 43.3
		Ryukyu Islands (h = N).				Western Caucasus (h = 10 km).	
"	8	UPP	iP 18 13 23.2		"	10	UME iPKP 13 52 50.8
			micr sec			Tonga Islands (h = 120 km).	
		Mx	Z 1.1 21				
		(cont).					

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991				
May	10	UPP	eP	20 35 53	May	12	(cont).	
			ipP	20 35 58.3			KIR	
		UME	iP	20 36 08.9			Mx	
		Western Caucasus (h = 30 km).				Z	0.8 15	
"	10	UPP	iP	20 57 40.4	"	13	UPP	
		KIR	iP	20 58 22.0			iP	
		UME	iP	20 57 56.0			UME	
		Western Caucasus (h = 10 km).					iP	
"	11	UPP	iP	02 25 41.8	"	13	KIR	
			ipP	02 25 58.3			iP	
			i	02 26 09.1			Southern Sumatera (h = N).	
		KIR	iP	02 25 36.0	"	13	UPP	
		UME	iP	02 25 34.8			iP	
			ipP	02 25 51.6			Poland (h = 10 km).	
		Burma-India border region. h = 60 km (UPP,UME).		"	13	UPP	iP	
"	11	UPP	iP	15 35 40.7			iS	
			ipP	15 35 46.3			micr sec	
		KIR	iP	15 35 22.9			P	Z' 0.2 1.1
			ipP	15 35 28.5			Mx	Z 2.3 17
		UME	iP	15 35 58.5			KIR	iP
		Eastern Gulf of Aden. h = 20 km (UPP,KIR).					16 40 40.6	
"	11	UPP	iP	16 55 07.7			micr sec	
		Off east coast of Kamchatka (h = N).					P	Z' 0.1 1.0
"	11	UPP	iP	17 02 04.1			Mx	Z 3.8 17
		KIR	iP	17 02 02.1			UME	iP
				micr sec			ipP	
		P	Z'	0.1 0.9			16 40 31.5	
		Northern Sumatera (h = 220 km).					16 40 39.4	
"	12	UPP	iP	10 42 19.0	"	13	UPP	iP
		UME	iP	10 42 01.1			KIR	iP
		Bonin Islands region (h = 380 km).					UME	iP
"	12	KIR	iPn	11 52 46.1			19 11 40.0	
		UDD	iPn	11 54 10.5			19 11 57.7	
		Norwegian Sea (h = 10 km).				19 11 17.2		
"	12	UME	iPKP	12 47 15.6			Hokkaido, Japan region (h = 70 km).	
		Tonga Islands (h = 35 km).		"	14	UPP	eP	
"	12	UPP	iP	16 21 49.6			ipP	
				micr sec			i	
		Mx	Z	1.6 15			KIR	
		(cont).					eP	
							i	
							UME	
							iP	
							00 03 12	
							00 03 18.1	
							00 03 21.0	
							00 03 21	
							00 03 29.0	
							00 03 10.3	
							Afghanistan-USSR border region (h = 20 km).	
"	12	UPP	iSg1	10 20 57.9	"	14	UPP	iSg1
		UDD	iPg1	10 19 30.9			UDD	iPg1
				10 19 59.1				iSg1
				10 20 42.0			DEL	iSn
				10 20 48.2				iSg1
				(cont).			(cont).	

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
May	25	UPP iP	17 17 50.2	May	26	(cont).	
		Burma-India border region				UME iP	12 31 09.6
		(h = 90 km).				Southern Italy (h = 10 km).	
						M = 4.5 (UPP,KIR).	
"	25	KIR iP	19 09 50.2	"	27	UPP iP	01 25 46.6
		UME iP	19 10 07.0			KIR eP	01 25 09
		Off coast of Hokkaido, Japan (h = N).				UME iP	01 25 25.6
"	26	UPP iP	06 31 47.0			Near s. coast of Honshu, Japan	
						(h = 20 km).	
"	26	KIR iP	07 15 16.7	"	27	UME iP	01 36 44.5
		Kalimantan (h = N).				South of Honshu, Japan (h = N).	
"	26	UPP iP	08 11 31.6	"	27	UPP iP	09 21 34.8
		Gansu Province, China (h = N).				i	09 21 35.5
"	26	UPP iSg1	09 03 17.5				micr sec
		UME iSg1	09 04 17.3			P	Z' 0.1 1.0
		UDD iSg1	09 02 16.6			KIR iP	09 21 06.3
		Southwestern Norway, 59.8°N, 6.1°E.				i	09 21 07.2
		Origin time = 09 00 18.					micr sec
		Solution from Bergen regional				P	Z' 0.1 1.0
		bulletin.				UME iP	09 21 14.7
"	26	UPP iP	10 50 26.2			i	09 21 15.5
		Kuril Islands (h = 110 km).				USSR-Mongolia border region	
						(h = 20 km).	
						m = 5.6 (UPP,KIR).	
"	26	UPP iP	11 12 44.8	"	27	UME iP	18 53 15.1
		KIR iP	11 12 30.6			Panama-Costa Rica border region	
			micr sec			(h = 10 km).	
			P				
			Z' 0.1 1.0				
		UME iP	11 12 34.4	"	27	KIR iP	21 16 01.5
		Kalimantan (h = N).				UME iP	21 15 55.1
"	26	KIR iP	11 27 13.9			Nepal-India border region	
		Kalimantan (h = N).				(h = 55 km).	
"	26	KIR iP	11 29 43.5	"	28	UPP iP	02 05 41.4
			micr sec			UME iP	02 05 15.6
			P			Unimak Island region (h = N).	
			Z' 0.1 1.0				
		Kalimantan (h = 20 km).		"	28	UPP eP	18 31 29
"	26	UPP eP	12 30 22			UME eP	18 32 05
		iS	12 33 56			Turkey (h = 25 km).	
			micr sec				
			Mx				
			Z 1.4 15	"	28	UPP iP	19 03 48.4
		KIR iP	12 31 53.4			Southern Greece (h = 25 km).	
			micr sec				
			Mx				
			Z 1.5 14				
		(cont).					

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1991					1991				
May	29	UPP	iP	07 23 25.4	May	30	(cont).		
		KIR	iP	07 23 08.3			KIR	iP	13 32 20.1
		Mindanao, Philippine Islands (h = 70 km).							micr sec
							P	Z'	0.2 0.9
"	29	UPP	iP	13 18 36.1			UME	iP	13 32 48.6
		KIR	iP	13 17 41.8			Alaska Peninsula (h = N).		
		UME	iP	13 18 08.3			m = 6.0 (UPP,KIR).		
		Fox Islands, Aleutian Islands (h = N).			"	30	UPP	iP	15 55 05.1
"	29	KIR	iP	15 22 25.2			UME	iP	15 54 38.6
		Iran (h = N).					Alaska Peninsula (h = N).		
"	29	UPP	iP	18 27 16.3	"	30	UPP	iP	18 40 32.1
		KIR	iP	18 27 17.8			Ryukyu Islands region (h = 40 km).		
		UME	iP	18 27 14.0	"	30	UPP	iP	22 42 27.3
		Southwest of Sumatra (h = 25 km).					Eastern Siberia (h = N).		
"	29	UPP	iP	23 16 10.8	"	31	UPP	iP	01 39 28.5
		UME	iP	23 16 53.8			KIR	iP	01 38 40.3
		Northeastern China (h = 25 km).					UME	iP	01 39 02.8
"	29	KIR	iP	23 17 47.6			Kuril Islands (h = N).		
		UME	iP	23 17 25.2	"	31	UPP	iPdiff	05 42 08.0
		Southern Iran (h = 40 km).					KIR	iPdiff	05 41 57.7
"	29	UPP	iP	23 36 32.3			UME	iPdiff	05 41 34.3
		UME	iP	23 36 11.3			Banda Sea (h = N).		
		Near s. coast of Honshu, Japan (h = 80 km).			"	31	UPP	iP	18 59 25.9
"	30	UPP	iP	13 28 25.7 C			Chiapas, Mexico (h = 150 km).		
			iS	13 37 10	"	31	UME	iP	18 37 40.1
			iP'P'	13 56 52.1			Dominican Republic region (h = 120 km).		
				micr sec			November 27, 1992		
			P	Z' 1.1 1.1			Conny Holmqvist		
			Mx	Z 85 26			Yueping Zhou		
		KIR	iP	13 27 31.4 C					
				micr sec					
			P	Z' 1.6 1.0					
			Mx	Z 29 17					
		UME	iP	13 27 59.5 C					
			iP'P'	13 57 27.9					
		Alaska Peninsula (h = 30 km).							
		m = 7.0, M = 6.6 (UPP,KIR).							
"	30	UPP	iP	13 33 14.2					
				micr sec					
			P	Z' 0.1 0.9					
		(cont).							

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 UPPSALA, KIRUNA, UMEÅ, UDDEHOLM

DELARY and MYRVIKEN

Uppsala	(UPP)	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(KIR)	67°50.4'N,	20°25.0'E;	h = 390 m
Umeå	(UME)	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(UDD)	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(DEL)	56°28.2'N,	12°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

JUNE 1 - 30, 1991

1991					1991				
June	1	UPP iP	05 47 04.0		June	2	UPP iP	22 09 11.2	
		UME iP	05 47 39.9				KIR iP	22 08 33.8	
		Southern Greece (h = 40 km).					UME iP	22 08 50.3 C	
"	1	UPP eP	07 04 00		"	3	UPP iP	01 43 45.4 C	
		Andreanof Islands, Aleutian Is. (h = N).						micr sec	
"	1	UPP iP	09 06 48.8 C				P	Z' 0.1 0.9	
			micr sec				KIR iP	01 42 57.2	
			P Z' 0.1 1.0				UME iP	01 43 19.6 C	
		UME iP	09 06 22.4 C				Kuril Islands (h = 20 km).		
		Alaska Peninsula (h = N). m = 5.9 (UPP,KIR).			"	3	UPP iP	10 28 05.7	
"	1	UPP iP	10 47 44.9				iS	10 32 34	
			i 10 47 54.1					micr sec	
		UME eP	10 47 49				Mx	Z 1.5 14	
		Hindu Kush region (h = 25 km).					KIR iP	10 28 51.1	
"	2	UPP iP	03 16 41.8					micr sec	
		UME iP	03 16 18.0				Mx	Z 0.9 10	
		Off east coast of Honshu, Japan (h = 30 km).					UME iP	10 28 23.2	
"	2	UPP iPKP1	16 43 58.9 D		"	3	UPP iP	17 18 20.9	
		KIR iSKP1	16 46 32.3				KIR iP	17 17 30.3	
		UME iSKP1	16 46 43.0				UME iP	17 17 53.9	
		South of Fiji Islands (h = 510 km).					Northwest of Kuril Islands (h = 420 km).		
"	2	UPP iPKP1	17 58 31.6		"	3	UPP iPKP1	22 31 22.3	
		South of Fiji Islands (h = 540 km).					iPKP2	22 31 28.4	
							(cont).		

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991					1991					
June	7	(cont).	iS	12 15 30	June	9	(cont).	ipPKP	08 05 06.9	
				micr sec					micr sec	
			Mx	Z 6.1 18				Mx	Z 6.7 28	
		KIR	iPdiff	12 04 18.6			KIR	i(PKP)	08 03 28.0	
			i	12 04 24.0				iPKP	08 03 42.2	
			i	12 04 33.1				ipPKP	08 04 50.9	
			i(PP)	12 07 44.2					micr sec	
			iPP	12 08 26.5				Mx	Z 3.8 18	
				micr sec			UME	i(PKP)	08 03 35.8	
			i	Z' 0.5 1.0				i(PKP)	08 03 42.6	
			Mx	Z 5.1 17				iPKP	08 03 48.0	
		UME	iPdiff	12 04 25.3				ipPKP	08 05 00.3	
			i(PP)	12 08 08.1				iSKP	08 07 20.6	
			i(PP)	12 08 38.0					Fiji Islands region (h = 270 km).	
			iPP	12 08 49.1					M = 6.1 (UPP,KIR).	
				Flores Sea (h = 540 km).					M uncorrected for focal depth.	
				M = 6.1 (UPP,KIR).						
				M uncorrected for focal depth.		"	9	UPP	iP	11 01 49.9
				(PP) denotes an early PP arrival				KIR	iP	11 00 18.3
				(cf. Meyer, K., 1979. Seismol.						micr sec
				Inst., Uppsala, Rep. 3-79).				P	Z' 0.1 1.0	
									North of Svalbard (h = 25 km).	
"	8	UPP	iP	02 09 25.6	"	9	UPP	iPKP2	11 21 38.5	
		KIR	iP	02 08 38.7			KIR	iPKP1	11 21 06.1	
		UME	iP	02 09 00.3			UME	iPKP1	11 21 13.6	
				Kuril Islands (h = 45 km).					Cook Strait, New Zealand	
"	9	UPP	iP	03 34 43.6					(h = 110 km).	
		KIR	iP	03 34 53.0	"	9	UPP	iP	15 14 10.3	
		UME	iP	03 34 42.3			KIR	eP	15 14 31	
				Afghanistan-USSR border region					Pakistan (h = N).	
				(h = N).						
"	9	UPP	iP	06 01 24.6	"	9	UPP	eP	16 39 48	
		KIR	iP	06 01 06.2			KIR	eP	16 39 07	
		UME	iP	06 01 13.0			UME	iP	16 39 24.8	
				Philippine Islands region (h = N).					Near east coast of Honshu, Japan	
									(h = 60 km).	
"	9	UPP	iP	06 11 23.5	"	9	UPP	iP	20 51 02.9	
		KIR	iP	06 10 29.3			KIR	iP	20 51 01.6	
		UME	iP	06 10 56.1			UME	iP	20 50 57.5	
				Off east coast of Kamchatka					Andaman Islands region (h = 25 km).	
				(h = 30 km).						
"	9	UPP	ipP	08 02 19	"	10	UPP	iP	06 50 18.9	
			iPKP1	08 03 47.0					micr sec	
			i	08 03 52.6				P	Z' 0.1 1.2	
			i	08 03 59.3					(cont).	
				(cont).						

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991								
June	10	(cont).		June	11	(cont).						
		KIR	iP	06 49 25.5		UME	iP	07 22 11.1				
				micr sec			i	07 22 22.5				
			P	Z' 0.2 1.3		North of Severnaya Zemlya						
		UME	iP	06 49 51.5 C		(h = 25 km).						
		Off east coast of Kamchatka				M = 4.9 (UPP,KIR).						
		(h = 35 km).										
		m = 5.9 (UPP,KIR).			"	11	UPP	iPKP	14 50 49.7			
							KIR	iPKP	14 50 45.6			
"	10	UPP	i(P)	13 07 34.7			UME	ePKP	14 50 49			
		Fiji Islands region (h = 630 km).										
"	10	UPP	iP	17 45 30.7 C		"	11	UPP	iP	20 35 29.3		
			i	17 45 43.7				KIR	iP	20 36 12.7		
			iS	17 53 12				UME	iP	20 35 54.2		
				micr sec				North of Ascension Island				
			P	Z' 0.9 2.3				(h = 10 km).				
		Mx	Z	39 23								
		KIR	iP	17 45 51.4 C		"	12	UPP	iP	00 58 52.4		
				micr sec				KIR	eP	00 58 55		
			P	Z' 1.2 2.5				UME	iP	00 59 57.7		
		Mx	Z	12 17				Ecuador (h = 90 km).				
		UME	iP	17 45 44.9 C		"	12	UPP	iP	03 16 41.4		
			i	17 45 54.1						micr sec		
		North Atlantic Ridge (h = 10 km).						Mx	Z	1.4 20		
		m = 6.4, M = 6.2 (UPP,KIR).						KIR	iP	03 16 41.1		
"	11	UPP	iP	02 47 06.5						micr sec		
		KIR	iP	02 46 47.6								
		UME	iP	02 46 53.5						Mx	Z	0.7 14
		Luzon, Philippine Islands						UME	iP	03 16 38.2		
		(h = 120 km).						Andaman Islands region (h = 10 km).				
		M = 5.1 (UPP,KIR).										
"	11	UPP	Mx	06 20		"	12	UPP	iP	04 00 26.2		
				micr sec				KIR	iP	04 00 08.7		
			Mx	Z 4.5 22				UME	iP	04 00 14.6		
		KIR	Mx	06 23				Mindanao, Philippine Islands				
				micr sec				(h = 150 km).				
			Mx	Z 1.8 16								
		Off coast of Mexico (h = 10 km).				"	12	KIR	iPKP1	08 57 29.5		
		M = 5.7 (UPP,KIR).						UME	iPKP1	08 57 39.2		
		East of North Island, N.Z. (h = N).										
"	11	UPP	iP	07 22 48.6		"	12	UPP	iP	18 17 13.1		
			i	07 22 56.0				KIR	iP	18 16 24.7		
				micr sec				UME	iP	18 16 47.4		
			Mx	Z 3.6 17				Kuril Islands (h = N).				
		KIR	iP	07 21 33.9 D								
			i	07 21 42.6								
				micr sec								
			P	Z' 0.5 1.5								
		Mx	Z	2.1 11								
		(cont).										

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991					
June	12	UPP	iP	20 22 25.5 C	June	13	KIR	iPKP	17 37 33.0
			iS	20 31 14				iSKP1	17 40 39.7
				micr sec				Tonga Island (h = 220 km).	
			P	Z' 0.5 1.0					
			Mx	Z 1.1 16	"	14	UPP	iP	12 10 23.5
		KIR	iP	20 21 41.7 C				i	12 10 48.4
			ipP	20 22 08.6			KIR	iP	12 09 30.5
				micr sec			Kuril Islands (h = 100 km).		
			P	Z' 0.7 1.0					
			Mx	Z 0.5 11	"	14	UPP	iP	12 46 43.0
		UME	iP	20 22 01.2 C			UME	iP	12 46 19.9
		Hokkaido, Japan region (h = 110 km).					Eastern Sea of Japan (h = N).		
		m = 6.5, M = 5.0 (UPP,KIR).							
		M uncorrected for focal depth.			"	15	UPP	iP	01 04 32.6
"	13	UPP	iP	01 32 47.1				i	01 04 37.2
		KIR	iP	01 31 50.7				iS	01 08 52
		UME	eP	01 32 19					micr sec
		Southern Alaska (h = 70 km).						P	Z' 0.9 2.5
								i	Z' 3.3 1.5
								Mx	Z 64 17
"	13	UPP	iSg1	10 52 31.5			KIR	iP	01 05 16.7
		KIR	iPg1	10 48 29.1 D				i	01 05 19.5
			iSg1	10 48 33.7				i	01 05 44.7
		UME	iPg1	10 49 33.5				iS	01 10 37.1
			i	10 49 38.0					micr sec
			iSg1	10 50 25.1				P	Z' 0.1 1.5
		UDD	iSg1	10 52 36.2				i	Z' 1.5 1.9
		MYV	i	10 50 37.0				Mx	Z 42 11
			iSg1	10 51 08.8			UME	iP	01 04 49.1 D
		Lapland, Sweden, 67.8°N, 19.6°E.						i	01 04 51.6
		Origin time = 10 48 23.						iS	01 09 23.5
		M _L (UPP) = 3.2 (0.26) 3.					Western Caucasus (h = 10 km).		
		Felt.					m = 6.6, M = 6.2 (UPP,KIR).		
		By combination with Finnish station readings.			"	15	UPP	iPKP	01 32 09.9
"	13	KIR	iPg1	12 53 07.4			UME	iPKP	01 32 18.9
			iSg1	12 53 12.3			South Sandwich Islands region (h = 50 km).		
		Lapland, Sweden, 67.8°N, 19.7°E.			"	15	KIR	iP	01 32 13.0
		Origin time = 12 53 02.					Honshu, Japan (h = 70 km).		
		M _L (UPP) = 2.3 1.			"	15	KIR	iPg1	02 53 12.7
		Felt.						iSg1	02 53 41.1
		By combination with Finnish station readings.					UME	iSg1	02 54 55.7
"	13	UPP	iP	16 37 29.5			Northern Norway, 67.7°N, 15.2°E.		
		KIR	iP	16 36 36.0			Origin time = 02 52 37.		
		Off east coast of Kamchatka (h = N).					M _L (UPP) = 2.7 1.		
							By combination with Finnish station readings.		

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991							
June	15	UPP	iP	07 51 36.1	June	15	UPP	iP	20 34 20.5		
		KIR	iP	07 51 18.4					micr sec		
		UME	iP	07 51 23.9			Mx	Z	1.0 18		
		Luzon, Philippine Islands (h = 10 km).					KIR	iP	20 35 00.4		
"	15	UPP	iP	10 53 41.5			UME	iP	20 34 43.3		
				micr sec			Central Mid-Atlantic Ridge (h = 10 km).				
			Mx	Z	3.0 20	"	15	UPP	iP	23 15 07.8 C	
		KIR	iP	10 53 23.0					micr sec		
				micr sec			P	Z'	0.3 1.0		
			Mx	Z	3.4 18		Mx	Z	4.1 20		
		UME	iP	10 53 29.4 D			KIR	iP	23 14 48.6 C		
		Luzon, Philippine Islands (h = 10 km).					i		23 14 54.6		
		M = 5.6 (UPP,KIR).							micr sec		
"	15	KIR	iP	11 23 28.6			P	Z'	0.2 1.0		
		Luzon, Philippine Islands (h = 10 km).					Mx	Z	2.4 16		
"	15	UPP	iP	11 27 57.9			UME	iP	23 14 55.8 C		
				micr sec			Leyte, Philippine Islands (h = 70 km). m = 6.3, M = 5.7 (UPP,KIR).				
			P	Z'	0.1 1.0	"	16	UPP	iP	02 20 07.6	
			Mx	Z	1.4 20				micr sec		
		KIR	iP	11 27 37.0					Z' 0.3 1.5		
				micr sec			KIR	iP	02 19 50.0 D		
			P	Z'	0.2 1.0				micr sec		
			Mx	Z	2.7 18				Z' 0.2 1.5		
		UME	iP	11 27 44.3					Z 0.8 15		
		Luzon, Philippine Islands (h = 10 km).					UME	iP	02 19 55.8 D		
		m = 6.0, M = 5.4 (UPP,KIR).					Luzon, Philippine Islands (h = 10 km). m = 6.1 (UPP,KIR).				
"	15	UPP	eP	17 12 26			"	16	UPP	Mx	07 53
				micr sec						micr sec	
			P	Z'	0.1 1.0				Mx	Z	0.9 14
		KIR	iP	17 11 32.7			KIR	Mx			07 48
				micr sec							micr sec
			P	Z'	0.1 1.0				Mx	Z	0.8 15
		UME	eP	17 11 58			Luzon, Philippine Islands (h = 15 km). M = 5.2 (UPP,KIR).				
		Off east coast of Kamchatka (h = 30 km).					"	16	KIR	iP	10 03 16.6
		m = 5.8 (UPP,KIR).					Luzon, Philippine Islands (h = 15 km).				
"	15	UPP	iP	17 33 26.8			"	16	UPP	iP	17 25 55.0
		KIR	iP	17 34 23.3					KIR	iP	17 27 07.5
		UME	iP	17 33 58.6					UME	iP	17 26 33.9
		North Atlantic Ocean (h = 35 km).					Greece (h = 10 km).				
"	16	KIR	iP	20 49 00.9			"	16	KIR	iP	20 49 00.9
		Luzon, Philippine Islands (h = 10 km).					Luzon, Philippine Islands (h = 10 km).				

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991						1991						
June	24	UPP	iP	01 41 14.5		June	26	UPP	ePdiff	23 20 28		
		UME	eP	01 41 55				KIR	iPdiff	23 20 14.5 C		
		Greece-Albania border region						UME	iPdiff	23 20 18.8		
		(h = N).						Minahassa Peninsula (h = 110 km).				
"	24	UPP	iP	05 09 14.4 C		"	27	UPP	iP	19 55 19.7		
				micr sec					iS	20 05 44		
			P	Z' 0.1 1.0						micr sec		
		KIR	iP	05 08 21.1 C				KIR	Mx	Z 2.2 20		
				micr sec					iP	19 54 57.7		
			P	Z' 0.1 1.2						micr sec		
		UME	iP	05 08 49.0 C					P	Z' 0.2 1.5		
		Southeastern Alaska (h = 10 km).							Mx	Z 1.7 17		
		m = 5.7 (UPP,KIR).						UME	iP	19 55 08.5		
								Gulf of California (h = 10 km).				
"	24	UPP	iP	20 05 03.2				M = 5.5 (UPP,KIR).				
		KIR	iP	20 04 09.9			28	UPP	iP	14 56 05.0 C		
		UME	iP	20 04 37.3					ipP	14 56 04.6		
		Andreanof Islands, Aleutian Is.							iS	15 06 02		
		(h = N).								micr sec		
"	25	UPP	iP	04 00 43.1					P	Z' 0.2 1.0		
		KIR	iP	04 00 04.1					Mx	Z 2.3 16		
		UME	iP	04 00 21.0				KIR	iP	14 55 27.5 C		
		Near east coast of Honshu, Japan							ipP	14 55 31.5		
		(h = 60 km).								micr sec		
"	25	UPP	iP	20 45 31.5					pP	Z' 0.3 1.0		
		KIR	iP	20 45 27.6					Mx	Z 2.2 15		
		UME	iP	20 45 23.8				UME	iP	14 55 45.9 C		
		Burma (h = 55 km).							ipP	14 55 50.0		
								Southern California.				
"	25	KIR	eP	23 19 43				h = 15 km (UPP,KIR,UME).				
		UME	eP	23 19 51				m = 6.3, M = 5.5 (UPP,KIR).				
		Colombia (h = 15 km).					"	30	UPP	iP	03 20 14.3	
"	26	UPP	iP	11 48 21.6					iS	03 30 10		
			iS	11 52 18						micr sec		
				micr sec					Mx	Z 1.4 21		
			P	Z' 0.4 1.0				KIR	iP	03 21 54.9		
			Mx	Z 6.9 13						micr sec		
		KIR	iP	11 49 37.5					Mx	Z 1.4 17		
			i	11 49 44.0				UME	iP	03 20 36.5 D		
				micr sec				South Atlantic Ridge (h = 10 km).				
			i	Z' 0.1 1.2				M = 5.3 (UPP,KIR).				
			Mx	Z 2.0 14			"	30	KIR	iP	03 52 05.8	
		UME	iP	11 49 00.9								
			i	11 49 07.0				"	30	UPP	iP	20 14 34.8
		Greece (h = 40 km).									micr sec	
		m = 5.6, M = 5.0 (UPP,KIR).								Mx	Z 0.6 14	
								(cont.)				

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991

June	24	(cont.)			
		KIR	eP	20 15 16	
				micr	sec
			Mx	Z 0.6	12
		UME	iP	20 14 47.8	
		Western Caucasus (h = 10 km).			
		M = 4.2 (UPP,KIR).			
"	30	KIR	iPn	22 59 05.3	
				micr	sec
			Mx	Z 0.7	13
		UME	iPn	22 59 53.4	
		UDD	iPn	23 00 34.2	
			i	23 00 46.1	
		DEL	iPn	23 01 24.7	
		MYV	iPn	22 59 56.2	
			i	23 02 11.2	
		Greenland Sea (h = 10 km).			

December 18, 1992

Conny Holmqvist
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 DELARY and MYRVIKEN

Uppsala	(UPP)	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(KIR)	67°50.4'N,	20°25.0'E;	h = 390 m
Umeå	(UME)	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(UDD)	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(DEL)	56°28.2'N,	12°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

JULY 1 - 31, 1991

1991					1991					
July	1	KIR	iSn	00 40 39.3	July	2	KIR	iP	04 51 07.1	
		UME	iSn	00 41 02.8			UME	iP	04 51 14.9	
		UDD	eSg1	00 42 16			Off coast of Central America			
		MYV	iSn	00 40 43.2			(h = 190 km).			
		Off coast of western Norway, 66.1°N, 11.5°E.				"	2	UPP	iP	05 27 10.5
		Origin time = 00 38 49.						iSKS	05 37 31	
		M _L (UPP) = 2.5 1.						iS	05 37 44	
		By combination with Finnish and Norwegian station readings.							micr sec	
							P	Z' 0.2	0.8	
"	1	UPP	iP	13 52 54.3			Mx	Z 6.4	30	
		KIR	iP	13 52 00.4			KIR	iP	05 27 10.7	
		Off east coast of Kamchatka (h = N).							micr sec	
							P	Z' 0.6	1.0	
"	1	UPP	iSKS	13 57 26			Mx	Z 3.8	20	
			iS	13 58 40			UME	iP	05 27 06.9	
				micr sec			Southern Sumatra (h = 55 km).			
		Mx	Z	1.9 18			m = 6.6, M = 5.8 (UPP,KIR).			
		KIR		micr sec		"	2	UPP	iPKP1	06 26 44.7
		Mx	Z	3.1 25				UME	iPKP1	06 26 33.0
		Near coast of Peru (h = 20 km).					South of Fiji Islands (h = 430 km).			
		M = 5.7 (UPP,KIR).				"	2	UPP	iP	21 27 09.2
"	1	UPP	iPKP1	17 00 36.4				iS	21 29 27.9	
			iPKP2	17 00 39.6					micr sec	
		UME	iPKP1	17 00 24.4			Mx	Z 2.4	13	
		Kermadec Islands (h = 420 km).					KIR	iPn	21 25 30.5	
								iSn	21 26 32.6	
"	2	UPP	iP	04 35 06.9					micr sec	
		KIR	iP	04 34 23.4			Mx	Z 3.5	10	
		UME	iP	04 34 42.5			(cont).			
		Hokkaido, Japan region (h = 170 km).								

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
July		(cont).		July	5	(cont).	
	2	UME	iP 21 26 21.1 i 21 26 22.0 iS 21 27 58.1 Norwegian Sea (h = 10 km).		5	KIR	micr sec Mx Z 2.6 23 UME iP 04 44 34.6 South of Bali Island (h = 55 km). M = 5.7 (UPP,KIR).
"	2	UPP	iP 23 41 06.5 Tibet (h = 15 km).	"	5	UPP	iP 11 08 18.6 iS 11 16 19.4 micr sec P Z' 0.5 0.6 KIR iP 11 07 32.0 iS 11 14 54.1 micr sec P Z' 0.5 0.7 UME iP 11 07 53.1 iS 11 15 32.6 Sea of Okhotsk (h = 470 km). m = 6.1 (UPP,KIR).
"	4	UPP	iP 06 31 44.7 iS 06 36 04 micr sec P Z' 0.3 1.5 Mx Z 3.5 12 KIR micr sec Mx Z 1.7 9 UME iP 06 31 59.4 C Western Caucasus (h = 20 km). M = 5.0 (UPP,KIR).		5	UPP	iP 13 58 20.2 KIR iP 13 59 04.4 micr sec P Z' 0.1 1.0 UME iP 13 58 36.5 Iran-Iraq border region (h = 10 km).
"	4	UPP	iPdiff 07 07 44.9 UME iPdiff 07 07 39.5 Java (h = 110 km).	"	5	UPP	iP 16 57 50.9 UME iP 16 57 24.5 Kuril Islands (h = 25 km).
"	4	UPP	iP 10 44 49.4 UME iP 10 44 30.5 Bonin Islands region (h = 30 km).	"	5	UPP	iP 12 33 30.6 micr sec Mx Z 10 24 KIR iPdiff 12 33 38.8 micr sec Mx Z 5.1 23 UME iPdiff 12 33 39.0 ipPdiff 12 34 09.2 Peru (h = 110 km). M = 6.1 (UPP,KIR). M uncorrected for focal depth.
"	4	UPP	eP 11 19 33 UME iP 11 19 22.8	"	6	UPP	iPdiff 12 33 30.6 micr sec Mx Z 10 24 KIR iPdiff 12 33 38.8 micr sec Mx Z 5.1 23 UME iPdiff 12 33 39.0 ipPdiff 12 34 09.2 Peru (h = 110 km). M = 6.1 (UPP,KIR). M uncorrected for focal depth.
"	4	UPP	eP 11 42 52	"	6	UPP	iPdiff 12 33 30.6 micr sec Mx Z 10 24 KIR iPdiff 12 33 38.8 micr sec Mx Z 5.1 23 UME iPdiff 12 33 39.0 ipPdiff 12 34 09.2 Peru (h = 110 km). M = 6.1 (UPP,KIR). M uncorrected for focal depth.
"	4	UPP	iPdiff 11 57 17.9 micr sec Mx Z 18 20 KIR micr sec Mx Z 12 17 UME iPdiff 11 57 09.5 Timor (h = 30 km). M = 6.5 (UPP,KIR).	"	6	UPP	iP 12 49 39.2 i 12 49 42.1 KIR iP 12 49 33.2 UME iP 12 49 23.2
"	5	UPP	iPdiff 04 02 01.2 West Irian region (h = 35 km).	"	6	UME	iP 12 57 52.9
"	5	UPP	iPdiff 04 44 41.5 iPP 04 48 46.6 micr sec Mx Z 3.0 22 (cont).				

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
July	6	UPP iP	15 21 48.2	July	10	UPP iP	06 02 56.0 C
		KIR iP	15 21 32.1				micr sec
		UME iP	15 21 38.3			P	Z' 0.5 1.0
		Molucca Passage (h = 100 km).				KIR	micr sec
"	7	UPP iP	03 19 59.7			P	Z' 0.7 1.0
		UME iP	03 20 21.8			UME iP	06 02 31.0
		South Atlantic Ridge (h = 10 km).				Hokkaido, Japan region (h = 100 km). m = 6.5 (UPP,KIR).	
"	7	UPP iP	04 13 25.5	"	10	UPP iP	10 00 39.2
		KIR iP	04 13 06.0			ipP	10 01 14.7
		UME iP	04 13 12.6			UME iP	10 00 35.6
		Luzon, Philippine Islands (h = 30 km).				ipP	10 01 10.6
"	7	KIR iP	10 04 51.4			Andaman Islands region (h = 120 km).	
		UME iP	10 05 31.1	"	12	UPP iPKP2	05 02 32.6
		Jan Mayen Island region (h = 10 km).					micr sec
"	8	UPP iP	15 42 52.9			PKP2	Z' 0.1 1.5
		KIR iP	15 42 22.1			UME iPKP1	05 02 07.1
		UME iP	15 42 35.1			North Island, New Zealand (h = 70 km).	
		Volcano Islands region (h = N).		"	12	UPP iPKP1	10 20 29.0
"	8	UPP iP	21 24 47.2			UME iPKP1	10 20 19.1
		KIR iP	21 23 53.3			South of Kermadec Islands (h = 50 km).	
		UME iP	21 24 18.1	"	12	UPP iP	10 45 46.5
		Near east coast of Kamchatka (h = 40 km).				i	10 45 50.6
"	9	UPP iP	07 04 26.9			iS	10 48 20
			micr sec				micr sec
		P	Z' 0.1 1.0			i	Z' 0.3 1.0
		Mx	Z 1.4 20			Mx	Z 21 18
		KIR iP	07 04 30.7 C			KIR	micr sec
			micr sec			P	Z' 0.4 1.6
		P	Z' 0.2 1.0			Mx	Z 12 12
		Mx	Z 0.9 20			UME iP	10 46 34.7
		UME iP	07 04 32.1 C			Romania (h = 10 km). m = 5.5 (UPP,KIR).	
		North Atlantic Ocean (h = 10 km). m = 6.0, M = 5.0 (UPP,KIR).		"	12	UPP iPKP2	11 45 30.2
"	9	UME iP	07 08 46.3			UME iPKP1	11 45 09.7
		North Atlantic Ocean (h = 10 km).				Off e. coast of N. Island, N.Z. (h = 70 km).	
"	10	UPP iP	05 27 23.9	"	12	UPP iP	19 02 08.9
		Near east coast of Kamchatka (h = 25 km).				Crete (h = 60 km).	

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
July	12	UPP iP UME iP	22 15 00.5 22 14 46.0	July	14	(cont). UME iP	09 16 34.7 C
		Gansu Province, China (h = 15 km).				Afghanistan-USSR border region (h = 210 km). m = 6.9, M = 6.5 (UPP,KIR). M uncorrected for focal depth.	
"	13	UME iSg1	01 44 38.6	"	14	UPP iP UME iP	14 30 14.3 14 29 53.0
		Norrbotten, Sweden 68.0°N, 23.5°E. Origin time = 01 42 22. M _L (UPP) = 2.7 (0.20) 2. Felt. By combination with Finnish station readings.				Honshu, Japan (h = 190 km).	
"	13	UPP iP iS	03 01 49.9 D 03 11 26	"	14	UME iP	19 37 29.1
			micr sec			Sea of Japan (h = 520 km).	
		P	Z' 2.0 2.3	"	15	UPP iP UME iP	12 33 11.8 12 32 46.6
		Mx	Z 67 17			Kuril Islands (h = 25 km).	
		KIR	micr sec	"	15	UPP iPKP1	16 16 16.3
		P	Z' 2.5 2.7			South of Fiji Islands (h = 510 km).	
		Mx	Z 68 18	"	15	UPP iPKP1	21 26 34.2
		UME iP	03 01 32.0 D			South of Fiji Islands (h = 640 km).	
		Off coast of Oregon (h = 10 km). m = 6.8, M = 6.9 (UPP,KIR).		"	16	UPP iP	15 41 56.7
"	13	UPP iP iS	12 25 57.5 12 34 42				micr sec
			micr sec			Mx	Z 0.9 17
		Mx	Z 16 25			UME iP	15 41 40.0
		KIR	micr sec			Southwestern Ryukyu Islands (h = 45 km).	
		Mx	Z 13 21	"	17	UPP iP	00 27 30.1
		UME iP	12 25 30.4			Ionian Sea (h = 50 km).	
		Kuril Islands (h = 40 km). M = 6.0 (UPP,KIR).		"	17	UPP iP UME iP	01 29 27.1 01 29 13.7
"	13	UPP iP	13 56 15.7			Philippine Islands region (h = 20 km).	
		Southwestern Ryukyu Islands (h = 35 km).		"	17	UPP iP	07 23 00.8
"	13	UPP iP UME iP	17 31 01.4 17 31 53.3				micr sec
		Romania (h = 10 km).				Mx	Z 2.5 23
"	14	UPP iP iS	09 16 37.0 C 09 22 22			KIR	micr sec
			micr sec			Mx	Z 2.8 24
		P	Z' 7.6 1.5			UME iP	07 22 39.2
		Mx	Z 45 13			Vancouver Island region (h = 10 km). M = 5.3 (UPP,KIR).	
		KIR	micr sec	"	17	UPP iP UME iP	17 39 31.2 17 39 39.2
		P	Z' 3.9 1.5			Mid-Indian Rise (h = 10 km).	
		Mx	Z 55 17				

(cont).

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
July	17	UME iP	19 05 14.9	July	19	UPP iP	07 15 41.5
		Carlsberg Ridge (h = 10 km).				Burma-India border region (h = 120 km).	
"	18	UPP iPKP1	00 01 37.3	"	20	UPP iP	11 59 30.1 C
		UME iPKP1	00 01 27.8			i	11 59 47.5
		i	00 01 42.4			iS	12 07 42
		Off e. coast of N. Island, N.Z. (h = N).					micr sec
"	18	UPP iP	10 02 22.2			P	Z' 0.2 1.0
		i	10 02 30.7			Mx	Z 4.9 25
			micr sec			KIR	micr sec
		i	Z' 0.2 1.0			P	Z' 0.3 1.0
		Mx	Z 1.4 25			Mx	Z 1.4 17
		KIR	micr sec			Alaska Peninsula (h = 35 km). m = 6.3, M = 5.3 (UPP,KIR).	
		P	Z' 0.1 1.0	"	20	UPP iPg1	19 05 07.9
		Mx	Z 0.9 16			iSg1	19 05 33.0
		Nicobar Island region (h = 25 km). m = 5.9, M = 5.1 (UPP,KIR).				Off coast of southwestern Finland, 59.8°N, 21.5°E. Origin time = 19 04 35. M _L (UPP) = 2.2 (0.07) 2. By combination with Finnish station readings.	
"	18	UPP iP	12 00 04.6	"	21	UPP iP	10 28 05.6
		i	12 00 11.0			Volcano Island region (h = N).	
		iS	12 02 46.6	"	21	UPP iP	14 31 28.6
			micr sec			Kuril Islands (h = 60 km).	
		Mx	Z 26 7	"	21	UPP iP	23 12 40.4
		KIR	micr sec				micr sec
		Mx	Z 21 8			Mx	Z 1.0 25
		Romania (h = 10 km).				KIR	micr sec
"	18	UPP iP	13 34 51.1			Mx	Z 1.0 21
		Tibet (h = N).				North of Halmahera (h = 35 km). M = 5.2 (UPP,KIR).	
"	18	UPP iP	15 35 49.8	"	23	UPP iP	01 58 26.5
		i	15 35 54.5			Costa Rica (h = 60 km).	
		Nicobar Islands region (h = 15 km).		"	23	UPP iP	11 35 11.4
"	18	UPP iP	20 45 15.7			KIR	micr sec
		ipP	20 45 43.0			P	Z' 0.2 1.0
		Dodecanese Islands (h = 110 km).				Mindanao, Philippine Islands (h = 150 km).	
"	19	UPP iP	01 22 57.2	"	23	UPP iP	13 37 57.1 C
		Romania (h = 10 km).				iS	13 47 58
"	19	UPP iP	01 30 59.3			(cont).	
			micr sec				
		Mx	Z 2.8 9				
		KIR	micr sec				
		Mx	Z 1.9 11				
		Romania (h = 10 km).					

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
July	23	(cont.)		July	24	UPP iP	19 46 27.1
		UPP	micr sec			Burma (h = 90 km).	
		P	Z' 0.2 1.0				
		Mx	Z 1.2 29	"	25	UPP iP	08 30 41.4
		KIR	micr sec			i	08 33 57.7
		P	Z' 0.2 0.6			Black Sea (h = 10 km).	
		Mx	Z 1.0 21				
		Off w. coast of Northern Sumatera (h = 45 km). m = 6.3, M = 5.1 (UPP,KIR).		"	25	UPP iP	15 37 55.4
"	23	UPP i(P)	14 04 26.5			ipP	15 38 27.6
"	23	UPP iP	17 01 46.5			iPP	15 41 11.7
		Tibet (h = N).				iSKS	15 48 06
"	23	UPP eP	17 51 19			iS	15 48 18
		Crete (h = 25 km).					micr sec
"	23	UPP ePdiff	21 30 34			Mx	Z 2.8 23
		Banda Sea (h = 110 km).				KIR	micr sec
"	23	UPP iPKP1	21 35 18.4			Mx	Z 0.8 15
		South of Fiji Islands (h = 470 km).				Oaxaca, Mexico (h = 130 km). M = 5.4 M uncorrected for focal depth.	
"	24	UPP iP	03 21 16.5	"	25	UPP iPP	16 02 20.3
		Off east coast of Kamchatka (h = N).				Near coast of Guerrero, Mexico (h = N).	
"	24	UPP iP	09 47 59.8 D	"	26	UPP iP	07 09 16.5
			micr sec			Luzon, Philippine Islands (h = N).	
"	24	P	Z' 0.1 0.6	"	26	UPP iP	09 02 21.8
		KIR	micr sec			Ionian Sea (h = 25 km).	
"	24	P	Z' 0.1 0.8	"	26	UPP iPKP1	16 22 48.2
		KIR	micr sec			Kermadec Island region (h = 80 km).	
		South of Honshu, Japan (h = 250 km). m = 5.6 (UPP,KIR).		"	27	UPP Mx	10 29
"	24	UPP iP	09 51 40.1				micr sec
			micr sec			Mx	Z 0.9 23
		P	Z' 0.1 1.0			KIR Mx	10 32
		Mx	Z 3.2 10				micr sec
		KIR	micr sec			Mx	Z 1.0 21
		P	Z' 0.3 0.8			Galapagos Islands region (h = 10 km). M = 5.2 (UPP,KIR).	
		Mx	Z 6.2 10	"	27	UPP iP	11 43 27.3
		Iran-Iraq border region (h = 25 km). m = 5.9, M = 5.4 (UPP,KIR).				i	11 43 31.7
"	24	UPP iP	14 06 55.0			iS	11 47 24
		Mozambique (h = 30 km).					micr sec
"	24	UPP eP	18 17 05			Mx	Z 1.5 11
						KIR	micr sec
						Mx	Z 0.5 10
						Turkey (h = 20 km). M = 4.5 (UPP,KIR).	

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991

July	28	UPP	iP	05 47 53.6					
				Oaxaca, Mexico (h = 55 km).					
"	28	UPP	iP	11 24 27.8					
			iPP	11 28 32.7					
				Minahassa Peninsula (h = 620 km).					
"	29	UPP	iP	00 08 10.4					
				Tibet (h = N).					
"	29	UPP	i(P)	03 14 36.4					
"	29	UPP	iP	10 18 31.1					
				Southwestern Ryukyu Islands (h = N).					
"	29	UPP	iPKP1	13 44 38.3					
				Kermadec Islands region (h = 340 km).					
"	29	UPP	iP	15 58 01.0					
				Tibet (h = N).					
"	30	UPP	iP	05 27 44.9					
				micr	sec				
			Mx	Z 1.3	19				
		KIR		micr	sec				
			Mx	Z 1.7	17				
				Kyushu, Japan (h = 30 km). M = 5.3 (UPP,KIR).					
"	30	UPP	iP	09 51 38.3	D				
		KIR		micr	sec				
			P	Z' 0.1	1.0				
				Mariana Islands (h = 600 km).					
"	30	UPP	iP	14 44 02.9					
				Kyushu, Japan (h = 45 km).					
"	30	UPP	iP	22 31 56.3					
				Tibet (h = N).					
"	31	UPP	iPKP1	18 07 29.7					
				South of Fiji Islands (h = 150 km).					

January 22, 1993

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SEISMOLOGICAL BULLETIN
 UPPSALA, KIRUNA, UMEÅ, UDDEHOLM

DELARY and MYRVIKEN

Uppsala	(UPP)	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(KIR)	67°50.4'N,	20°25.0'E;	h = 390 m
Umeå	(UME)	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(UDD)	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(DEL)	56°28.2'N,	12°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

AUGUST 1 - 31, 1991

1991					1991				
Aug.	1	UPP	iPKP	03 42 19.8	Aug.	4	UPP	iP	07 54 36.0
			i	03 42 36.5					
				Kermadec Islands region (h = 15 km).	"	4	UPP	iP	07 58 51.8
									Near coast of Ecuador (h = 20 km).
"	1	UPP	eP	05 46 17	"	4	UPP	iP	09 02 53.9
"	1	UPP	iP	18 50 53.0					Southern Xinjiang, China (h = N).
			ipP	18 51 30.7					
				Andreanof Islands (h = 150 km).	"	4	UPP	iP	12 48 53.3
									Burma (h = 45 km).
"	3	UPP	iP	01 00 48.3	"	4	UPP	iP	14 14 12.9
				Off coast of northern California					
				(h = 5 km).	"	4	UPP	iP	21 31 21.5
"	3	UPP	iP	08 44 56.1					Kuril Islands (h = 70 km).
			ipP	08 45 01.4					
			iS	08 54 09	"	5	UPP	iP	00 51 58.2
				micr sec					
			pP	Z' 0.1 1.2	"	5	UPP	iP	02 12 04.0
			Mx	Z 7.1 13					Kuril Islands (h = 140 km).
		KIR		micr sec	"	5	UPP	i(PKP)	06 25 06.2
			Mx	Z 3.4 14					micr sec
				Ryukyu Islands (h = 15 km).					Mx Z 1.1 20
				M = 5.9 (UPP,KIR).			KIR		micr sec
"	3	UDD	iPn	12 35 34.5					Mx Z 1.6 21
				Norwegian Sea, 72.4°N, 4.8°E.					Tonga Islands (h = 30 km).
				Origin time = 12 32 34.					M = 5.6 (UPP,KIR).
				By combination with Finnish station					
				readings.	Aug.	5	UPP	iP	11 19 01.1 C
"	3	UPP	eP	20 20 29					(cont).
				Southern Greece (h = 10 km).					

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991					
Aug.	5	(cont). UPP		Aug.	7	UPP	iPKP1	13 12 34.7	
			micr sec				iPKP2	13 12 38.7	
		P	Z' 0.1 0.9			Kermadec Islands region (h = 330 km).			
		Rat Islands, Aleutian Islands (h = N). m = 5.8 (UPP,KIR).			7	UPP	iP	17 35 02.0	
"	5	UPP	iP	12 26 30.7	"	8	UPP	iP	02 23 15.5
"	6	UPP	iP	02 29 43.1 C			i	02 23 33.6	
			iS	02 39 46			iPP	02 27 14.3	
			micr sec				eSKS	02 33 36	
		P	Z' 0.4 1.5				iS	02 34 26	
		Mx	Z 1.3 16					micr sec	
		KIR		micr sec			Mx	Z 14 22	
			P	Z' 0.8 1.9			KIR		
			Mx	Z 1.9 18				micr sec	
		Off w. coast of northern Sumatera (h = 20 km). m = 6.5, M = 5.4 (UPP,KIR).			8	UPP	Mx	05 01	
"	6	UPP	iP	09 42 50.4				micr sec	
"	6	UPP	iP	15 01 03.4 C			Mx	Z 2.2 18	
			iPP	15 03 48		KIR	Mx	04 57	
			iS	15 10 31				micr sec	
			micr sec				Mx	Z 3.8 17	
		P	Z' 0.4 1.2				Minihassa Peninsula (h = 45 km). M = 5.7 (UPP,KIR).		
		Mx	Z 4.4 23		8	UPP	iP	11 21 01.1 C	
		KIR		micr sec			ipP	11 21 14.4	
			P	Z' 0.3 1.2			iPP	11 22 46.1	
			Mx	Z 7.6 18				micr sec	
		Near east coast of Honshu, Japan (h = 30 km). m = 6.3, M = 5.8 (UPP,KIR).					P	Z' 0.1 0.8	
"	6	UPP	iP	20 36 43.9			Pakistan (h = 55 km).		
		Near east coast of Kamchatka (h = N).		"	8	UPP	eP	13 35 11	
"	7	UPP	iP	02 02 00.1			Palawan, Philippine Islands (h = 20 km).		
		Northern Sumatera (h = 60 km).		"	8	UPP	iPKP	14 34 45.6	
"	7	UPP	iP	09 23 14.4			South of Fiji Islands (h = 530 km).		
			i	09 23 31.0	"	8	UPP	i(PKP)	16 48 18.8
			i	09 24 55.0			Fiji Islands region (h = 580 km).		
			i	09 25 08	"	8	UPP	iP	17 30 32.2
"	7	UPP	ipP	11 46 34.2	"	8	UPP	iP	22 20 57.2
		India-Bangladesh border region (h = N).					e	22 21 10	

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991					
Aug.	14	UPP	iPKP	19 34 11.4	Aug.	15	(cont).		
			i	19 36 10.7			iSKP1	13 57 59.4	
				micr sec			UME	iPKP	13 54 43.5
			Mx	Z 11.1 22				ipPKP	13 55 33.5
		KIR		micr sec				iSKP1	13 57 45.6
			Mx	Z 3.1 17				Vanuatu Islands (h = 170 km).	
		UME	iPKP	19 34 00.6	"	15	UPP	iP	14 07 08.0
				Vanuatu Islands (h = 15 km).					
				M = 6.2 (UPP,KIR).	"	15	UPP	iP	21 57 46.9
"	14	UPP	iP	23 39 27.4			UME	iP	21 57 20.9
		UME	iP	23 40 18.3			Kuril Islands region (h = N).		
		Romania (h = 10 km).			"	15	UPP	iP	23 38 38.6
"	15	UPP	iP	03 04 56.5				micr sec	
		UME	iP	03 04 29.1				P	Z' 0.2 1.2
		Sea of Okhotsk (h = 500 km).					UME	iP	23 38 18.8
"	15	UPP	iSg1	03 29 03.5			Fox Islands, Aleutian Islands		
		UME	iSg1	03 30 35.8			(h = 110 km).		
		UDD	iPg1	03 27 37.9	"	16	UPP	iP	02 00 26.6
			iSg1	03 28 07.6			Volcano Islands (h = 140 km).		
		DEL	iPn	03 27 49.6	"	16	UPP	iP	14 27 39.4
			iPg1	03 27 58.4			Hokkaido, Japan region (h = 55 km).		
			iSg1	03 28 36.1	"	16	UPP	iP	22 37 54.8
		MYV	iSg1	03 29 20.4				iS	22 47 32
		Off coast of southern Norway,						micr sec	
		58.8°N, 10.2°E.						P	Z' 0.1 1.0
		Origin time = 03 27 02.						Mx	Z 11 18
		M _L (UPP) = 2.5 1.					KIR	micr sec	
		By combination with Bergen regional						P	Z' 0.5 1.9
		bulletin.						Mx	Z 6.8 17
"	15	UPP	Mx	10 57			UME	iP	22 37 33.9 C
				micr sec			Off coast of northern California		
			Mx	Z 1.9 23			(h = 10 km).		
		Near coast of southern Chile					m = 6.1, M = 6.0 (UPP,KIR).		
		(h = 15 km).			"	17	UPP	iP	06 30 35.1
"	15	UPP	Mx	13 27			UME	iP	06 30 34.4
				micr sec			Venezuela (h = 10 km).		
			Mx	Z 3.0 22	"	17	UPP	Mx	07 00
		KIR		micr sec				micr sec	
			Mx	Z 0.8 18				Mx	Z 1.2 22
		Near coast of southern Chile					Venezuela (h = 10 km).		
		(h = 10 km).			"	17	UPP	iP	12 50 44.0
		M = 5.6 (UPP,KIR).					UME	iP	12 50 52.2
"	15	UPP	iPKP	13 54 52.4			Near coast of Venezuela (h = 60 km).		
			i	13 56 51.3					
		(cont).							

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Aug.	22	UPP eP	01 18 55	Aug.	23	UPP iP	07 44 01.5
		Andreanof Islands (h = N).				UME iP	07 44 00.8
						Hindu Kush region (h = N).	
"	22	UPP iPKP	07 26 10.5	"	23	UME iP	16 26 22.0
		South of Fiji Islands (h = 520 km).					
"	22	UME iP	07 28 52.1	"	23	UPP iP	16 29 06.6
						Mindanao, Philippine Islands	
"	22	UPP iPKP	13 36 39.5			(h = 30 km).	
			13 39 32.5	"	23	UPP iP	20 34 56.9
		UME iSKP1	13 39 21.1				
		South of Fiji Islands (h = 540 km).		"	23	UPP iP	22 20 55.2
"	22	UPP iSg1	18 07 18.2			Iran (h = N).	
		KIR iPn	18 03 59.5	"	24	UPP iP	00 18 07.0
			18 04 45.9			UME iP	00 18 04.0
			18 04 53.3			Off w. coast of northern Sumatera	
		UME iPn	18 04 25.3			(h = N).	
			18 05 21.8	"	24	UPP iPKP	08 22 13.0
			18 05 43.7				08 25 29.0
		UDD i	18 05 19.2			UME iPKP	08 22 03.5
			18 06 19.0			Vanuatu Islands (h = 80 km).	
			18 06 54.6			Late first arrival at UPP, when	
		MYV ePn	18 04 25			compared with the NEIC solution.	
			18 05 14	"	24	UPP iPn	10 58 37.9
			18 05 29				11 00 14.0
		Off coast of northwestern Norway,					11 01 03.1
		67.7°N, 12.1°E.				KIR iPn	10 57 47.5
		Origin time = 18 03 10.					10 58 49.5
		$M_L(\text{UPP}) = 3.3 (0.14) 4.$					10 59 08.7
		By combination with Finnish station				UME iSg1	10 58 52.8
		readings.					10 59 17.9
"	22	UPP iP	21 23 37.3			UDD iPn	10 58 55.3
			21 23 45.0				11 00 49.4
			micr sec				11 01 38
			Z' 0.1 0.9			DEL iLg1	11 03 06.0
			Z 2.3 16			MYV iPn	10 58 28.4
		UME iP	21 23 11.7				11 00 58.4
			21 23 17.1				11 01 44.4
		East of Lake Baikal (h = 25 km).				NW Russia, 65.7°N, 33.2°E.	
"	23	UPP iP	05 00 25.9			Origin time = 10 56 27.	
"	23	UPP iP	05 01 40.7			$M_L(\text{UPP}) = 4.0 (0.26) 5.$	
		Kuysyu, Japan (h = 180 km).				By combination with Finnish station	
"	23	UPP iPKP	06 08 17.9			readings.	
		UME iPKP1	06 08 14.9	"	24	UME iP	11 27 06.9
		South of Kermadec Islands				Banda Sea (h = 150 km).	
		(h = 80 km).					

SEISMOLOGICAL DEPARTMENT
 BOX 2101
 S-750 02 UPPSALA
 SWEDEN

BOX 2101
 S-750 02 UPPSALA
 SWEDEN

SEISMOLOGICAL BULLETIN
 UPPSALA, KIRUNA, UMEÅ, UDDEHOLM
 DELARY and MYRVIKEN

Uppsala	(UPP)	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(KIR)	67°50.4'N,	20°25.0'E;	h = 390 m
Umeå	(UME)	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(UDD)	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(DEL)	56°28.2'N,	12°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

SEPTEMBER 1 - 30, 1991

1991					1991					
Sep.	1	UPP	iP	01 19 34.6 C	Sep.	2	UPP	iP	03 14 39.1	
				micr sec			KIR	iP	03 13 56.7	
			P	Z' 0.3 1.1			UME	iP	03 14 16.0	
		KIR	iP	01 21 03.1			Hokkaido, Japan region (h = 65 km).			
		UME	iP	01 20 16.9		"	2	UPP	iP	11 15 05.9 C
		Romania (h = 35 km).							micr sec	
"	1	UPP	iP	02 21 33.0				P	Z' 0.2 1.0	
		Romania (h = N).					KIR	iP	11 14 48.9 C	
"	1	UPP	iP	03 43 24.0					micr sec	
		KIR	eP	03 44 51				P	Z' 0.1 1.0	
		UME	iP	03 44 04.5			UME	iP	11 14 51.9	
		Romania (h = 50 km).					Qinghai, China (h = 10 km).			
"	1	UPP	iP	06 55 34.0		"	2	UPP	iPKP1	15 51 30.5
		KIR	iP	06 53 59.8 C				South of Fiji Islands (h = 480 km).		
				micr sec		"	3	UPP	iP	08 56 28.5
			P	Z' 0.8 1.0				iPP	08 59 21.6	
		UME	iP	06 54 49.4 C				iS	09 06 06	
		Greenland Sea (h = 10 km).							micr sec	
"	1	UPP	Mx	09 40				P	Z' 0.5 1.4	
				micr sec				Mx	Z 16 17	
			Mx	Z 1.3 23			KIR	iP	08 55 52.1	
		KIR	Mx	09 47					micr sec	
				micr sec				P	Z' 1.2 2.0	
			Mx	Z 0.8 18				Mx	Z 19 18	
		Loyalty Islands region (h = 40 km).					UME	iP	08 56 08.6	
		M = 5.5 (UPP,KIR).						iPP	08 58 50.9	
							South of Honshu, Japan (h = 25 km).			
							m = 6.5, M = 6.3 (UPP,KIR).			

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Sep.	3	UPP	iPKP	09 24	32.1		
			iPP	09 26	26.1		
						micr	sec
			PKP	Z' 0.1	1.0		
			Mx	Z 1.9	23		
		KIR	iPKP	09 24	25.7		
			iPP	09 26	03.6		
						micr	sec
			Mx	Z 1.5	16		
		UME	iPKP	09 24	29.7		
		Southern East Pacific Rise					
		(h = 10 km).					
		M = 5.7 (UPP,KIR).					
"	3	UPP	iPKP	12 15	19.4		
						micr	sec
			Mx	Z 3.8	23		
		KIR	iPKP	12 15	13.2		
						micr	sec
			Mx	Z 2.1	17		
		Southern East Pacific Rise					
		(h = 10 km).					
		M = 5.9 (UPP,KIR).					
"	4	UPP	iP	22 39	47.3		
						micr	sec
			P	Z' 0.1	1.0		
		KIR	iP	22 39	29.5		
						micr	sec
			P	Z' 0.3	1.6		
		Luzon, Philippine Islands					
		(h = 20 km).					
		m = 6.0 (UPP,KIR).					
"	6	KIR	iP	14 12	17.7		
"	7	UPP	iPKP1	14 51	23.9		
		UME	iSKP1	14 54	04.4		
		South of Fiji Islands (h = 530 km).					
"	8	UPP	iP	01 05	17.7		
						micr	sec
			Mx	Z 1.4	20		
		KIR	eP	01 05	35		
		Northern Mid-Atlantic Ridge					
		(h = 10 km).					
"	8	UPP	iP	10 22	32.2 C		
						micr	sec
			P	Z' 0.2	1.2		
		(cont.)					
Sep.	8	(cont.)					
		KIR	iP	10 22	40.9		
						micr	sec
			P	Z' 0.2	1.3		
		UME	iP	10 22	30.3 C		
		Afghanistan-Tajikstan bord. reg.					
		(h = 130 km).					
		m = 5.7 (UPP,KIR).					
"	8	UPP	iPKP2	14 10	39.5		
						micr	sec
			PKP2	Z' 0.2	1.1		
		KIR	iPKP1	14 10	06.8		
						micr	sec
			PKP1	Z' 0.1	1.0		
		UME	iPKP1	14 10	14.0		
			iPKP2	14 10	24.4		
		North Island, New Zealand					
		(h = 90 km).					
"	8	UPP	iP	18 32	07.3		
		KIR	iP	18 32	09.1		
		UME	iP	18 32	04.8		
		Nicobar Islands, India (h = 30 km).					
"	8	UPP	iP	19 49	29.6		
						micr	sec
			Mx	Z 0.9	10		
		KIR	eP	19 50	56		
						micr	sec
			Mx	Z 0.5	10		
		UME	iP	19 50	13.9 C		
		Northwestern Balkan region					
		(h = 10 km).					
		M = 4.3 (UPP,KIR).					
"	9	UPP	iP	00 04	11.2		
		KIR	iP	00 03	52.0		
		Qinghai, China (h = 25 km).					
"	9	UPP	iPKP1	05 56	11.7		
			iPKP2	05 56	18.4		
						micr	sec
			PKP2	Z' 0.1	0.6		
		KIR	iPKP1	05 55	50.5		
		Kermadec Islands region					
		(h = 540 km).					

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Sep.	9	UPP iP	15 14 42.2	Sep.	15	UPP Mx	02 42
		KIR iP	15 13 48.7				micr sec
		Andreanof Islands, Aleutian Is. (h = N).				Mx Z	1.7 18
"	9	UPP Mx	16 06			KIR Mx	02 41
			micr sec				micr sec
		Mx Z	2.7 20			Mx Z	0.9 20
		KIR Mx	16 03			Pakistan (h = 25 km). M = 4.8 (UPP,KIR).	
			micr sec	"	15	KIR iPKP	06 58 09.4
		Mx Z	1.4 20			Southern East Pacific Rise (h = 10 km).	
		South of Mariana Islands (h = 30 km). M = 5.5 (UPP,KIR).		"	16	UPP iP	13 30 57.0
"	12	UPP	micr sec			KIR iP	13 31 37.2
		Mx Z	1.8 14			Southern Iran (h = N).	
		KIR iP	00 41 14.5	"	16	UPP iPKP	22 37 56.2
			micr sec			UME iPKP	22 37 48.4
		Mx Z	1.8 13			Vanatu Islands (h = 160 km).	
		Lake Baykal region, Russia (h = 25 km). M = 5.1 (UPP,KIR).		"	17	UPP iPKP1	02 38 06.6
"	14	KIR iP	10 33 58.9			South of Fiji Islands (h = 200 km).	
			micr sec	"	17	UPP iPKP2	13 10 56.5
		P Z'	0.1 1.0			UME iPKP1	13 10 38.1
		UME iP	10 34 28.4			Kermadec Islands, New Zealand (h = N).	
		Southern Yukon Territory, Canada (h = 10 km).		"	17	UPP iPKP1	15 03 42.2
"	14	UPP iP	13 26 11.2			KIR iPKP	15 03 30.4
		i	13 26 18.9			UME i(PKP)	15 03 30.1
		KIR iP	13 25 45.4			iPKP	15 03 39.0
			micr sec			South of Fiji Islands (h = 560 km).	
		P Z'	0.1 1.0	"	17	UPP iP	19 01 32.3
		UME iP	13 25 53.1			KIR iP	19 01 17.9
		Western Nei Mongol, China (h = 25 km).				UME iP	19 01 19.9
"	14	UPP iP	19 11 49.1			Northern Xinjiang, China (h = 20 km).	
			micr sec	"	17	UPP iP	20 57 39.9
		P Z'	0.1 1.0			i	20 57 47.1
		KIR iP	19 11 14.6			UME iP	20 57 24.2
		UME iP	19 11 33.8 C			Southwestern Ryukyu Islands (h = 35 km).	
		Southern Nevada. Underground explosion.		"	17	KIR iP	21 21 57.6
						UME iP	21 22 17.5
						Central California (h = 10 km).	

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991						
Sep.	18	UPP	iP	10 01 00.0	Sep.	21	UPP		micr	sec
			iS	10 11 31				Mx	Z	1.4 21
				micr sec			KIR	iPKP		15 38 52.8
			P	Z' 0.1 1.2					micr sec	
			Mx	Z 8.7 20				Mx	Z	1.3 19
		KIR	iP	10 00 47.1			UME	iPKP		15 39 00.7
				micr sec						Tonga Islands (h = 15 km).
			P	Z' 0.4 1.4						M = 5.6 (UPP,KIR).
			Mx	Z 8.5 19	"	21	UPP	iP		18 28 00.3
		UME	iP	10 00 55.9			KIR	iP		18 28 08.3
				Guatemala (h = 5 km).			UME	iP		18 27 58.1 C
				m = 6.2, M = 6.1 (UPP,KIR).						Afghanistan-Tajikstan bord. reg. (h = 230 km).
"	18	UPP	iP	13 17 18.3	"	21	UPP	iP		19 13 05.5
		KIR	iP	13 16 53.0			KIR	iP		19 13 16.8
				Taiwan region (h = 120 km).			UME	iP		19 13 14.2
"	19	UPP	iPKP1	01 27 29.3						Windward Islands (h = 80 km).
		UME	iPKP1	01 28 17.6	"	21	UPP	iP		20 29 46.9
				Kermadec Islands region (h = 60 km).			KIR	iP		20 29 09.7
"	19	UPP	iP	01 52 32.3			UME	iP		20 29 25.4 D
		KIR	iP	01 51 41.4						Sea of Japan (h = 410 km).
		UME	iP	01 52 05.1	"	22	UPP	iP		02 14 18.1
				Kuril Islands (h = 35 km).			KIR	eP		02 14 47
"	19	UPP	iP	05 06 09.8			UME	iP		02 14 27.3
			i	05 07 47.5						Caspian Sea (h = 60 km).
		KIR	iP	05 06 20.3	"	22	UPP	iP		05 50 41.4
		UME	iP	05 06 08.8			KIR	iP		05 50 58.1
				Hindu Kush region (h = 100 km).			UME	iP		05 50 43.4
"	20	UPP	iP	11 25 50.2 C						Pakistan (h = 10 km).
			i	11 25 54.4	"	22	UPP	iP		06 43 20.4
				micr sec			KIR	iP		06 42 26.9
			P	Z' 0.1 0.5			UME	iP		06 42 57.7
		KIR	iP	11 25 30.4 C						Kuril Islands (h = 30 km).
				micr sec	"	23	UPP	iPn		19 21 44.6
			P	Z' 0.1 1.1				iPg1		19 21 57.2
		UME	iP	11 25 35.3 C				iSn		19 22 41.5
				Qinghai, China (h = 15 km).				iSg1		19 23 01.0
				m = 5.9 (UPP,KIR).				i		19 23 08.0
"	21	UPP	iP	08 20 39.1			KIR	iPn		19 21 22.5
		KIR	iP	08 20 11.3				iPg1		19 21 28.2
		UME	iP	08 20 24.7				iSg1		19 22 10.6
				Mariana Islands (h = 590 km).				i		19 22 14.0
"	21	UPP	iP	14 33 40.8						(cont.)
				Andreanof Islands, Aleutian Is. (h = N).						

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Sep.				Sep.			
23	(cont.)			25	UME iPKP1	14 33 35.1	
	UME iPg1	19 20 47.2 C			South of Kermadec Islands		
	i	19 20 52.6			(h = 200 km).		
	iSg1	19 20 58.6		"	25 UPP iPKP1	18 01 54.8	
	UDD iPg1	19 22 13.0			UME iPKP	18 01 51.1	
	iSn	19 22 57.4			South of Fiji Islands (h = 410 km).		
	iSg1	19 23 26.0		"	25 UME iPKP1	21 06 22.0	
	DEL iSg1	19 25 00.0			West of Macquarie Island		
	MYV iPn	19 21 25.0			(h = 15 km).		
	iPg1	19 21 33.0		"	25 UME iSg1	23 28 34.9	
	iSn	19 22 06.0			Västerbotten, Sweden, 64.4°N, 20.9°E.		
	iSg1	19 22 19.0			Origin time = 23 28 09.		
	Västerbotten, Sweden,				By combination with Finnish station		
	64.5°N, 21.4°E.				readings.		
	Origin time = 19 20 31.			"	26 UPP eP	20 29 33	
	M _L (UPP) = 3.5 (0.09) 4.				KIR iP	20 29 56.3	
	Felt.				UME iP	20 29 58.6	
	By combination with Finnish station				Turkey (h = 10 km).		
	readings.			"	28 UPP iP	09 50 34.3	
"	23 UME iSg1	20 53 55.6			UME iP	09 50 15.1	
	Västerbotten, Sweden,				Bonin Islands region (h = N).		
	64.4°N, 21.5°E.			"	28 UPP iP	11 00 36.9	
	Origin time = 20 53 30.				Bonin Islands region (h = N).		
	M _L (UPP) = 1.9 1.			"	28 UPP ePKP	20 45 33	
	Solution from Helsinki regional				micr sec		
	bulletin.				Mx Z 10 18		
"	24 UME iP	05 09 00.2			KIR micr sec		
	Panama (h = 80 km).				Mx Z 13 25		
"	24 UPP iP	20 15 47.7			UME iPKP	20 45 32.2	
	KIR iP	20 14 53.6			New Britain region (h = 30 km).		
	UME iP	20 15 21.1			M = 6.4 (UPP,KIR).		
	Unimak Island region (h = N).			"	29 UPP iP	04 25 24.9	
"	25 KIR iPg1	11 51 38.4			UME iP	04 24 53.6 C	
	iSg1	11 52 14.5			Near east coast of Honshu, Japan		
	UME iPn	11 51 54.9			(h = 80 km).		
	iSn	11 52 29.0		"	29 UPP iP	04 54 32.7	
	iSg1	11 52 53.0			UME iP	04 54 06.5	
	MYV e	11 51 40.8			Near east coast of Honshu, Japan		
	iSg1	11 52 41.0			(h = 70 km).		
	Northern Norway, 66.6°N, 14.4°E.						
	Origin time = 11 50 57						
	M _L (UPP) = 2.9 (0.30) 2.						
	By combination with Norwegian						
	station readings.						

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991

Sep. 29 UME iP 05 11 04.9
Near east coast of Honshu, Japan
(h = 80 km).

" 30 UPP iPKP1 00 40 01.0
iSKP1 00 42 51.3
micr sec
Mx Z 7.3 24
UME i(PKP) 00 39 47.7
iPKP 00 39 56.3
iSKP1 00 42 38.7
Fiji Islands region (h = 570 km).
M = 6.2 (UPP,KIR).
M uncorrected for focal depth.

" 30 UPP iPKP1 01 00 37.7
iSKP1 01 03 28.0
UME i(PKP) 01 00 25.4
iPKP 01 00 37.0
Fiji Islands region (h = 590 km).

" 30 UPP iP 01 11 12.3
UME iP 01 10 51.6
Northeastern China (h = N).

" 30 UPP iP 09 56 36.0
micr sec
P Z' 0.1 0.7
Mx Z 1.6 15
KIR micr sec
P Z' 0.1 1.0
Mx Z 0.9 16
UME iP 09 56 20.1
Taiwan region (h = 25 km).
m = 5.8, M = 5.3 (UPP,KIR).

" 30 UPP iP 16 42 37.8
micr sec
P Z' 0.1 0.9
UME iP 16 42 21.4
Qinghai, China (h = 20 km).

" 30 UPP iP 18 46 10.8
UME iP 18 46 03.4
Myanmar (h = 80 km).

February 17, 1993

Atia El-Sayed
Conny Holmqvist
Klaus Meyer

SEISMOLOGICAL DEPARTMENT
 BOX 2101
 S-750 02 UPPSALA
 SWEDEN

BOX 2101
 S-750 02 UPPSALA
 SWEDEN

SEISMOLOGICAL BULLETIN
 UPPSALA, KIRUNA, UMEÅ, UDDEHOLM

DELARY and MYRVIKEN

Uppsala	(UPP)	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(KIR)	67°50.4'N,	20°25.0'E;	h = 390 m
Umeå	(UME)	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(UDD)	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(DEL)	56°28.2'N,	12°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

OCTOBER 1 - 31, 1991

1991					1991			
Oct.	1	UME iPKP1	10 43 55.6		Oct.	5	UPP iPKP1	13 28 06.6
								South of Fiji Islands (h = 500 km).
"	1	UPP iP	20 37 47.2		"	6	UPP iP	01 52 07.7
			micr sec				iS	01 56 36
		P	Z' 0.1 1.0					micr sec
		UME iP	20 37 49.5				P	Z' 0.1 1.2
							Mx	Z 2.4 18
			Hindu Kush region, Afghanistan				KIR	micr sec
			(h = 10 km).				Mx	Z 2.6 13
"	3	UPP iPKP1	12 21 28.3				UME iP	01 52 22.1
			South of Kermadec Islands (h = N).					Georgia-Armenia-Turkey bord. reg.
"	5	UME iP	01 00 46.7					(h = 20 km).
			North of Svalbard (h = 10 km).					M = 4.9 (UPP,KIR).
"	5	UME iSg1	06 20 21.2		"	6	UPP iP	10 23 54.9
			Gulf of Bothnia, 64.5°N, 22.1°E.					Andreanof Islands, Aleutian Islands
			Origin time = 06 19 55.					(h = N).
			M _L (UPP) = 1.5 1.		"	6	UPP iP	10 43 48.6
			Solution from Finnish station					Andreanof Islands, Aleutian Islands
			readings.					(h = N).
"	5	UPP iP	07 35 25.1		"	7	UPP iP	10 50 13.5
			micr sec				UME iP	10 49 52.9
		P	Z' 0.1 1.0					Off east coast of Honshu, Japan
		KIR	micr sec					(h = 50 km).
		P	Z' 0.3 1.5		"	7	UME iP	11 41 52.7
		UME iP	07 34 59.1					Talau Islands, Indonesia
			Fox Islands, Aleutian Islands (h = N).					(h = 110 km).
			m = 6.0 (UPP,KIR).					

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991					
Oct.	8	UPP	iP	03 41 56.4 C	Oct.	10	UPP	iPKP1	20 13 35.1
			ipP	03 42 22.8					South of Fiji Islands (h = 560 km).
			iS	03 50 37.5					
			iScS	03 51 39.0	"	11	UPP	iPKP1	02 36 11.3
			iP'P'	04 10 14.3			UME	iPKP1	02 35 58.6
				micr sec					Kermadec Islands, New Zealand
			P	Z' 0.2 0.5					(h = N).
		KIR		micr sec					
			P	Z' 1.0 1.1	"	11	UPP	iP	03 21 37.0 C
		UME	iP	03 41 30.7 C					micr sec
				Kuril Islands (h = 150 km).				P	Z' 0.2 1.0
				m = 6.4 (UPP,KIR).			UME	iP	03 21 50.7
									Northern Iran (h = 40 km).
"	8	UPP	iPKP1	05 53 11.3	"	11	UPP	iP	10 01 01.8
				South of Fiji Islands (h = 500 km).					Northwest of Kuril Islands (h = N).
"	8	UME	iP	11 01 25.2	"	11	UPP	iPKP1	20 40 26.9
				Near west coast of Honshu, Japan					Fiji Islands region (h = 610 km).
				(h = 190 km).					
"	8	UPP	iPKP1	22 42 54.7	"	12	UPP	iP	05 20 30.9 C
				Fiji Islands region (h = 620 km).					Taiwan region (h = 10 km).
"	9	UPP	iP	15 50 13.5	"	12	UPP	iP	12 33 17.8
		KIR		micr sec					Qinghai, China (h = 35 km).
			P	Z' 0.1 1.0	"	12	UPP	eP	16 37 13
		UME	iP	15 49 47.2					Aegean Sea (h = 10 km).
				Fox Islands, Aleutian Islands					
				(h = N).	"	12	UPP	i(PKP)	16 45 12.1
"	9	UPP	iP	17 32 04.6				iPKP	16 45 27.7
			iS	17 40 05				iSKP1	16 48 46.9
				micr sec					micr sec
			P	Z' 0.4 1.8				PKP	Z' 0.1 0.8
			Mx	Z 2.4 20				Mx	Z 9.5 23
		KIR		micr sec			KIR	iPKP	16 45 13.6 C
			P	Z' 0.3 1.3					micr sec
		UME	iP	17 32 29.6				Mx	Z 3.1 21
				Uganda (h = N).			UME	iPKP	16 45 19.5
				m = 6.2 (UPP,KIR).				ipPKP	16 45 33.5
"	10	UPP	iPKP	00 24 59.0					Vanuatu Islands (h = 45 km).
				Vanuatu Islands (h = 200 km).					M = 6.1 (UPP,KIR).
"	10	UPP	iP	02 50 07.9	"	13	UPP	iS	01 21 01
				Georgia-Armenia-Turkey bord.reg.					micr sec
				(h = 10 km).				Mx	Z 3.4 21
							KIR	iP	01 11 12.9
									micr sec
"	10	UPP	iP	09 05 09.2				Mx	Z 1.6 21
				Mindoro, Philippine Islands					Northern Molucca Sea (h = 25 km).
				(h = 55 km).					M = 5.6 (UPP,KIR).

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Oct.	13	UPP	iP	07 35 56.3	Oct.	15	(cont).
				Persian Gulf (h = N).			UME iPdiff 16 31 49.9 D
							Banda Sea (h = 140 km).
"	13	UPP	Mx	19 43			M = 5.3 (UPP,KIR).
				micr sec			M uncorrected for focal depth.
			Mx	Z 7.7 19			
		KIR	Mx	19 40	"	15	UPP iP 23 06 27.1
				micr sec			i 23 06 36.8
			Mx	Z 4.7 20			micr sec
				Southern East Pacific Rise			P Z' 0.2 0.8
				(h = 10 km).			KIR iP 23 07 33.8
				M = 6.4 (UPP,KIR).			micr sec
"	14	UPP	iP	08 34 24.0			P Z' 0.2 1.0
				Greece-Albania border region			UME iP 23 06 58.5 C
				(h = 15 km).			Crete (h = 20 km).
							m = 5.9 (UPP,KIR).
"	14	UPP	iPdiff	16 13 44	"	16	UPP iP 06 17 47.0
			iPKP	16 17 04.2			KIR iP 06 17 10.8
			iPP	16 18 23.8			UME iP 06 17 26.8
				micr sec			South of Honshu, Japan (h = 35 km).
			Mx	Z 44 20			
		KIR	ePKP	16 16 51	"	17	UPP iPKP1 04 33 28.8
				micr sec			UME iPKP1 04 33 12.6
			Mx	Z 32 19			South of Kermadec Islands (h = N).
		UME	iPKP	16 16 57.8	"	17	KIR iPKP 09 24 18.8
				Solomon Islands (h = 25 km).			Tonga Islands (h = 35 km).
				M = 7.0 (UPP,KIR).			
"	14	UPP	iP	20 45 16.2	"	17	UPP iPKP1 17 06 09.7
		KIR	iP	20 44 22.2			Kermadec Islands region (h = 30 km).
		UME	iP	20 44 47.9	"	17	UPP iP 17 08 25.0
				Andeanof Islands (h = 240 km).			Hokkaido, Japan region (h = 70 km).
"	15	KIR	iPn	06 57 52.8	"	17	KIR iP 17 51 31.0
				Arctic Ocean, 73.1°N, 13.2°E.			micr sec
				Origin time = 06 56 29.			P Z' 0.5 1.5
				By combination with Finnish station			UME iP 17 52 15.9
				readings.			i 17 52 20.4
"	15	UPP	iPdiff	16 32 00.7			North of Franz Josef Land
			iSKS	16 42 24			(h = 10 km).
			iS	16 43 36	"	17	UPP iP 18 22 24.1
				micr sec			Near east coast of Kamchatka
			Mx	Z 1.1 21			(h = 30 km).
		KIR	iPdiff	16 31 45.8	"	18	UPP iP 10 44 12.8
				micr sec			KIR iP 10 43 36.2
			P	Z' 0.1 1.0			UME iP 10 43 52.2
			Mx	Z 0.9 20			South of Honshu, Japan (h = N).
				(cont).			

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Oct.	18	UPP eP KIR iP Eastern Mediterranean Sea (h = 50 km).	14 10 16 14 11 21.0	Oct.	21	UPP iP Central Mediterranean Sea (h = 10 km).	23 50 52.6
"	18	UPP iPKP1 UME iPKP1 South of Fiji Islands (h = 200 km).	17 42 01.0 17 41 57.6	"	23	UME iPKP Santa Cruz Islands (h = 140 km).	12 43 35.2
"	18	UME iP Mindanao, Philippine Islands (h = 35 km).	19 23 34.2	"	23	UPP iPKP2 UME iPKP1 Off e. coast of N. Island, N. Z. (h = 260 km).	14 58 22.4 14 58 00.1
"	19	UPP iP Fox Islands, Aleutian Islands (h = N).	04 19 57.6	"	23	UME iP Off east coast of Honshu, Japan (h = 25 km).	18 33 56.6
"	19	UPP iP KIR eP UME iP Kuril Islands (h = 45 km).	05 29 48.8 D micr sec Z' 0.1 0.9 05 29 03 05 29 23.7 D	"	23	UPP iP UME iP Rat Islands, Aleutian Islands (h = N).	23 29 34.6 micr sec P Z' 0.1 1.0 23 29 07.9
"	19	UPP iP iPP iS KIR iP UME iP Northern India (h = 10 km). m = 6.9, M = 7.4 (UPP,KIR).	21 32 06.5 C 21 34 04 21 39 12 micr sec P Z' 1.3 0.8 Mx Z 287 14 21 32 10.4 C micr sec P Z' 3.0 1.6 Mx Z 303 16 21 32 07.0 C	"	24	UPP iP UME iP Rat Islands, Aleutian Islands (h = N).	00 10 41.5 micr sec P Z' 0.1 1.0 00 10 14.6
"	20	UPP iP Northern India (h = 25 km).	05 41 16.7	"	24	UME iP Southern Sumatera, Indonesia (h = 50 km).	23 25 07.7
"	20	UPP iP UME iP Near s. coast of Western Honshu (h = 40 km).	10 02 59.4 10 02 39.1	"	25	UPP iP UME iP Hokkaido, Japan region (h = 100 km).	10 49 52.0 C micr sec P Z' 0.7 0.9 10 49 27.4 C
"	21	UPP iP i UME iP Eastern Caucasus (h = N).	12 03 43.5 12 03 54.6 12 03 55.8	"	25	UPP iPKP1 UME iPKP1 Kermadec Islands region (h = N).	13 44 48.0 13 44 36.7 C
"	21	UPP iP i UME iP Eastern Caucasus (h = N).	12 03 43.5 12 03 54.6 12 03 55.8	"	25	UPP iP UME iP Mindoro, Philippine Islands (h = 25 km).	14 00 54.2 14 00 43.1

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991					
Oct.	25	UPP	iP	14 52 30.9	Oct.	27	UPP	iP	07 08 05.7
			i	14 52 40.1			UME	iP	07 08 07.0
				micr sec			Northwestern Uzbekistan (h = 40 km).		
			Mx	Z 2.1 16					
		KIR		micr sec					
			Mx	Z 1.4 20	"	27	UPP	Mx	11 35
		UME	iP	14 52 13.5					micr sec
			i	14 52 23.6				Mx	Z 0.8 19
		Taiwan region (h = 25 km). M = 5.3 (UPP,KIR).					New Britain region (h = 60 km).		
"	25	UPP	iPKP1	21 25 51.2	"	27	UPP	i(P)	13 41 20.3
		North Island, New Zealand (h = 230 km).			"	27	KIR	iP	14 10 18.4
							UME	iP	14 10 57.4
							Jan Mayen Island region (h = 10 km).		
"	25	UPP	iP	21 29 31.0	"	27	UPP	iPKP	22 23 53.5
				micr sec			KIR	iPKP	22 24 08.5
			Mx	Z 1.5 11			South Sandwich Island region (h = N).		
		UME	iP	21 30 08.9					
		Greece (h = 35 km).			"	28	UPP	eP	00 25 11
"	26	UPP	iP	02 40 13.1				i	00 25 17.6
		UME	iP	02 39 56.7					micr sec
		Mariana Islands (h = 190 km).						Mx	Z 1.4 17
"	26	UPP	iP	05 38 43.9			KIR		micr sec
				micr sec				Mx	Z 0.7 11
			Mx	Z 0.8 20			UME	iP	00 25 59.5
		UME	iP	05 39 03.5			Northwestern Balkan region (h = 70 km). M = 4.2 (UPP,KIR). M uncorrected for focal depth.		
		Central Mid-Atlantic Ridge (h = 10 km).			"	28	UPP	iP	01 20 33.2
"	26	UPP	iP	21 45 46.3			UME	iP	01 20 13.0 D
		UME	iP	21 46 06.1			Kyushu, Japan (h = 15 km).		
		Northwestern Caucasus (h = N).			"	28	KIR	iP	02 29 31.7
"	27	UPP	iP	00 43 12.4			UME	iP	02 29 59.0
		Off coast of northern California (h = 10 km).					Unimak Island region (h = N).		
"	27	UPP	iP	05 18 18.8	"	28	UPP	iSg1	13 17 36.0
		KIR	iP	05 17 40.6			UME	iSg1	13 18 38.2
		UME	iP	05 17 56.4			UDD	iSg1	13 16 33.2
		Near east coast of Honshu, Japan (h = 30 km).					DEL	iSn	13 16 57.2
"	27	UPP	iP	06 49 25.5				iSg1	13 17 23.2
		UME	iP	06 49 06.2			MYV	iSg1	13 17 11.2
		Kyushu, Japan (h = 140 km).					Southern Norway, 59.9°N, 5.9°E. Origin time = 13 14 36. Felt. By combination with Finnish and Norwegian station readings.		

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991					1991						
Oct.	28	UPP	eSg1	16 23 43	Oct.	30	UPP	iP	16 09 06.5		
		KIR	iSn	16 23 14.7			KIR	iP	16 09 14.4		
			iSg1	16 23 29.3			UME	iP	16 09 04.0		
		UME	iPg1	16 21 34.6			Afghanistan-Tajikstan bord. reg.				
			iSg1	16 21 36.2			(h = 170 km).				
			i	16 21 37.6		"	31	UPP	iPdiff	01 25 39.0	
		UDD	iSg1	16 24 03.9				KIR	iPdiff	01 25 19.7	
		MYV	iPg1	16 22 19.2			Irian Jaya region, Indonesia				
			iSn	16 22 49.8			(h = 35 km).				
			iSg1	16 22 54.2			"	31	UPP	iP	02 36 29.7
		Västerbotten, Sweden, 64.1°N, 19.9°E. Origin time = 16 21 29. M _L (UPP) = 2.9 1. Felt. By combination with Finnish station readings.									micr sec
								P	Z'	0.1	1.3
								Mx	Z	4.6	18
								KIR	iP	02 36 32.9	
											micr sec
								Mx	Z	4.9	14
"	28	UPP	iP	21 58 08.7 D				UME	iP	02 36 25.1	
			i	21 59 44.7			Kyrgyzstan (h = 20 km).				
				micr sec			M = 5.4 (UPP,KIR).				
			P	Z'	0.1	0.8					
		KIR	iP	21 58 14.3		"	31	UME	iSg1	08 02 49.6	
				micr sec			Västerbotten, Sweden, 64.5°N, 21.5°E.				
			P	Z'	0.1	0.8	Origin time = 08 02 24.				
		UME	iP	21 58 05.2 D			M _L (UPP) = 2.1 1.				
		Tajikstan (h = 90 km).					Solution from Finnish station readings.				
		m = 5.6 (UPP,KIR).									
"	29	UPP	iP	16 40 10.7							
		UME	iP	16 39 54.1			Western Nei Mongol, China (h = N).				
"	29	UPP	iSKP1	23 35 57.6							
		UME	iPKP	23 32 41.2							
			iSKP1	23 35 44.7			Vanuatu Islands (h = 180 km).				
"	30	UPP	iP	01 06 22.9			Greece (h = 55 km).				
"	30	UPP	ePKP	10 54 55			February 22, 1993				
				micr sec			Victor Gonzales				
			Mx	Z	9.0	22	Conny Holmqvist				
		KIR	iPKP	10 54 43.8			Klaus Meyer				
				micr sec							
			Mx	Z	7.1	23					
		UME	iPKP	10 54 50.8							
			i	10 55 10.0							
		Tonga Islands (h = 20 km).									
		M = 6.3 (UPP,KIR).									

SEISMOLOGICAL DEPARTMENT
 BOX 2101
 S-750 02 UPPSALA
 SWEDEN

BOX 2101
 S-750 02 UPPSALA
 SWEDEN

SEISMOLOGICAL BULLETIN
 UPPSALA, KIRUNA, UMEÅ, UDDEHOLM

DELARY and MYRVIKEN

Uppsala	(UPP)	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(KIR)	67°50.4'N,	20°25.0'E;	h = 390 m
Umeå	(UME)	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(UDD)	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(DEL)	56°28.2'N,	12°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

NOVEMBER 1 - 30, 1991

1991					1991			
Nov.	1	UPP	Mx	03 50	Nov.	4	UPP	iP
				micr sec				01 57 32.3
			Mx	Z 2.7 22				iS
		KIR	Mx	03 49			KIR	iP
				micr sec				01 58 12.1
			Mx	Z 2.4 20			UME	iP
								01 57 50.9
				Minihassa Peninsula (h = 35 km).				Northern Iran (h = 40 km).
				M = 5.6 (UPP,KIR).		"	4	UME
								iP
								05 29 14.3
								South of Honshu, Japan (h = 20 km).
"	1	UPP	iPKP	16 43 04.3	"	5	UPP	iPKP1
			iPKP1	16 43 06.8				18 07 09.1
			iPKP2	16 43 11.7				iPKP2
			iPP	16 46 34				18 07 12.2
				micr sec			UME	iPKP1
			PKP1	Z' 1.1 1.1				18 06 56.8
			Mx	Z 18 24				Kermadec Islands, New Zealand
		KIR	iPKP1	16 42 43.6				(h = 300 km).
				micr sec		"	5	UPP
			Mx	Z 13 23				iP
		UME	iPKP1	16 42 54.1				21 28 56.6
				Kermadec Islands, New Zealand				i
				(h = 20 km).				21 29 11.9
				M = 6.7 (UPP,KIR).				iS
								21 39 30.0
								micr sec
								Mx
								Z 4.7 26
							KIR	eP
								21 29 30
								Mid-Indian Rise (h = 10 km).
"	1	UPP	iPKP1	16 52 39.7	"	7	UPP	iPKP1
		UME	iPKP1	16 52 27.2				06 18 47.5 D
				Kermadec Islands, New Zealand				i
				(h = 10 km).				06 18 54.5
								micr sec
								PKP1
								Z' 1.0 1.0
							KIR	i(PKP)
								06 18 30.9
								iPKP
								06 18 34.5
"	3	UME	iP	15 08 01.4			UME	iPKP1
				South of Honshu, Japan				06 18 35.2
				(h = 110 km).				South of Fiji Islands (h = 200 km).

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991					1991				
Nov.	7	KIR	iPdiff	09 35 08.9	Nov.	8	UPP	iP	17 02 33.9
		UME	iPdiff	09 35 12.5					South of Honshu, Japan (h = N).
				Banda Sea (h = 140 km).					
"	7	UDD	iPg1	13 50 23.0	"	8	UPP	iP	17 25 41.1 C
				Värmland, Sweden, 60.0°N, 13.7°E.			KIR	iP	17 25 40.3 C
				Origin time = 13 50 19.					micr sec
				Felt.				P	Z' 0.4 1.4
				Solution from FOA station readings.			UME	iP	17 25 37.9 C
"	7	UPP	iSn	20 56 09.7	"	8			Southern Sumatera, Indonesia
		KIR	iPn	20 53 16.0					(h = 80 km).
			i	20 53 16.7			KIR	iSg1	22 09 15.9
		UME	iPn	20 53 49.9			UME	iPg1	22 08 21.3
			iPg1	20 53 55.1				iSg1	22 08 44.0
			iSn	20 54 53.6			UDD	iSg1	22 11 13.6
		UDD	iPn	20 54 31.8			MYV	iSn	22 09 42.0
			iSn	20 55 54.2				iSg1	22 10 01.0
			i	20 56 30.5					Gulf of Bothnia, 65.2°N, 22.7°E.
		MYV	iPn	20 53 46.6					Origin time = 22 07 49.
				Norwegian Sea (h = 10 km).					$M_L(\text{UPP}) = 2.5 (0.18) 4.$
"	8	UPP	iSg1	01 21 46.9	"	10	UPP	eP	08 32 59
		UME	iSg1	01 23 53.3			UME	eP	08 33 03
		UDD	i	01 21 20.9					Costa Rica (h = 35 km).
			iSg1	01 21 41.7	"	10	UPP	iPKP1	09 57 00.5
		DEL	iPg1	01 21 06.5					Kermadec Islands region (h = N).
			iSg1	01 21 28.4	"	10	UPP	iPKP	13 23 32.2
			i	01 21 33.4					South Sandwich Islands region
		MYV	iSg1	01 23 09.7					(h = N).
				Småland, Sweden, 58.1°N, 15.0°E.	"	10	UPP	iP	15 26 15.8
				Origin time = 01 20 37.					Northern Iran (h = 45 km).
				$M_L(\text{UPP}) = 2.5 (0.11) 3.$	"	10	UPP	iP	22 32 43.9
				Felt with maximum intensity			KIR	iP	22 32 00.8
				$I_0 = \text{IV (MM)}.$			UME	iP	22 32 19.6
				By combination with Finnish station readings.					Hokkaido, Japan region (h = 50 km).
"	8	UPP	iP	10 11 08.4	"	11	UPP	iP	00 11 41.8
				Volcano Islands region (h = N).			KIR	eP	00 11 56
"	8	UPP	iP	15 22 31.4 C			UME	eP	00 11 38
				micr sec					Afghanistan-Tajikistan bord. reg.
			P	Z' 0.2 1.0					(h = 110 km).
		KIR	iP	15 22 47.6 C	"	11	UPP	iPKP1	06 31 17.8
				micr sec					Kermadec Islands, New Zealand
			P	Z' 0.1 1.0					(h = 180 km).
		UME	iP	15 22 34.3 C					
				India-Pakistan border reg.					
				(h = 20 km).					
				m = 5.8 (UPP,KIR).					

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991					
Nov.	11	UPP KIR	iPKP1 iPKP	16 34 59.5 16 34 48.4	Nov.	16	UPP KIR UME	iPKP1 iPKP2 iPKP1	00 55 01.0 00 55 16.1 00 54 42.7
		South of Fiji Islands (h = 180 km).						iPKP2	00 54 47.8
"	11	UPP	iP	22 47 12.2 D					
			i	22 47 20.1					
				micr sec					
			P	Z' 0.2 0.8					
		KIR	iP	22 46 41.0 D	"	16	UPP	i(P)	01 21 09.2
				micr sec					
			P	Z' 0.4 0.9	"	16	UPP	iP	12 21 37.3
		UME	iP	22 46 52.7 D			UME	iP	12 21 37.8
		Volcano Islands region (h = 25 km). m = 6.4 (UPP,KIR).					Afghanistan-Tajikstan bord. reg. (h = 35 km).		
"	12	UPP	iPKP1	09 13 11.5	"	16	UPP	iP	12 40 01.7
		Kermadec Islands region (h = 110 km).					KIR	iP	12 40 14.9
"	13	UPP	iP	11 25 18.1					
			i	11 36 02	"	16	UPP	iPKP1	19 59 39.2
				micr sec				i	19 59 44.3
			P	Z' 0.2 0.9			UME	iPKP1	19 59 28.0
			Mx	Z 37 25			Kermadec Islands region (h = 450 km).		
		KIR	iP	11 25 00.7 C	"	17	UPP	iPKP	11 04 07.2
				micr sec					micr sec
			P	Z' 0.4 1.3				PKP	Z'0.1 0.8
			Mx	Z 15 21			KIR	iPKP	11 00 46.1
		Mindanao, Philippine Islands (h = 35 km). m = 6.5, M = 6.5 (UPP,KIR).					UME	iPKP	11 00 53.1
"	13	UPP	iP	19 31 11.1			Vanuatu Islands (h = 220 km).		
				micr sec	"	18	KIR	iP	09 07 52.9
			P	Z' 0.1 0.7			UME	iP	09 08 10.8
		KIR	iP	19 30 36.1 C			Off east coast of Honshu, Japan (h = 20 km).		
				micr sec					
			P	Z' 0.2- 0.9	"	18	UPP	iSg1	09 17 22.6
		UME	iP	19 30 51.6 C			DEL	iPn	09 14 43.9
		Near s. coast of Honshu, Japan (h = 310 km). m = 5.7 (UPP,KIR).						iSn	09 15 59.9
"	14	UPP	iSKP1	21 25 10.0			MYV	iPn	09 14 50.0
		Vanuatu Islands (h = 160 km).						iSn	09 16 17.0
								iSg1	09 16 59.0
"	15	UPP	iP	22 03 51.6			Norwegian Sea, 58.8°N, 0.9°E. Origin time = 09 12 59.		
		Afghanistan-Tajikstan bord. reg. (h = N).					Solution from Bergen regional bulletin.		

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991					
Nov.	19	UPP	Mx	15 03	Nov.	21	UPP	iP	12 51 39.5
				micr sec				i	12 51 43.0
			Mx	Z 1.5 19				i	Z' 0.2 1.0
			Southern east Pacific Rise				KIR	iP	12 51 22.7
			(h = 10 km).						micr sec
"	19	UPP	iP	22 41 43.0				P	Z' 0.4 1.1
			i	22 41 46.1 C			UME	iP	12 51 29.6
			iSKS	22 52 12			Mindanao, Philippine Islands		
			iS	22 52 24			(h = 70 km).		
				micr sec			m = 6.6 (UPP,KIR).		
			i	Z' 0.6 1.4	"	24	UPP	iPKP1	11 50 24.1
			Mx	Z 73 22			Kermadec Islands region (h = N).		
		KIR	iP	22 41 44.4	"	24	UPP	iP	21 44 05.7
			i	22 41 47.9					micr sec
				micr sec				P	Z' 0.1 1.0
			i	Z' 1.7 1.5			Andreanof Islands, Aleutian Is.		
			Mx	Z 74 24			(h = 65 km).		
		UME	iP	22 41 46.4	"	26	UPP	iP	10 52 28.4
		Near west coast of Colombia							micr sec
		(h = 20 km).						P	Z' 0.1 1.0
		m = 6.9, M = 7.0 (UPP,KIR).						Mx	Z 7.2 21
"	20	KIR	iP	01 59 15.1			KIR	iP	10 51 35.7
		UME	iP	01 58 29.4					micr sec
		Switzerland (h = 10 km).						P	Z' 0.1 1.0
"	20	UPP	iPKP1	09 42 55.4				Mx	Z 1.6 21
			i	09 43 38.8			UME	iP	10 52 01.6
				micr sec			Andreanof Islands, Aleutian Is.		
			Mx	Z 0.9 21			(h = 25 km).		
		KIR	iPKP1	09 42 38.0			m = 5.9, M = 5.5 (UPP,KIR).		
		UME	iPKP	09 42 42.8	"	26	UPP	iP	19 51 46.6
			iPKP1	09 42 47.0				iS	20 00 44
		Off e. coast of N. Island, N.Z.							micr sec
		(h = 80 km).						Mx	Z 26 30
"	20	UPP	iPKP1	10 02 07.2			KIR	iP	19 51 04.3
				micr sec					micr sec
			PKP1	Z' 0.1 1.0				P	Z' 0.8 1.6
		KIR	iPKP1	10 01 46.5				Mx	Z 16 19
		UME	iPKP1	10 01 55.5 C			UME	iP	19 51 23.0
		Kermadec Islands, New Zealand					Hokkaido, Japan region (h = 55 km).		
		(h = 70 km).					M = 6.2 (UPP,KIR).		
"	21	UPP	iP	04 17 31.8	"	27	UPP	iP	05 14 20.5
		KIR	iP	04 17 21.7					micr sec
		UME	iP	04 17 22.4				Mx	Z 9.2 16
		Myanmar (h = 80 km).					(cont).		

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991

Nov.	27	(cont).			
		KIR	iP	05 13 30.8	
				micr	sec
			Mx	Z 4.7	19
		UME	iP	05 13 54.6	
		Kuril Islands (h = 30 km).			
		M = 5.8 (UPP,KIR).			
"	27	UPP	iPKP1	12 13 31.1	
		Kermadec Islands region			
		(h = 190 km).			
"	28	UPP	iP	17 26 13.8	
				micr	sec
			P	Z' 0.1	1.0
		KIR	iP	17 26 49.4	C
				micr	sec
			P	Z' 0.4	1.0
			Mx	Z 2.4	13
		UME	iP	17 26 24.4	C
		Western Iran (h = 15 km).			
		m = 6.0 (UPP,KIR).			
"	29	UPP	eP	22 38 40	
		Azores Islands (h = 10 km).			
"	30	UPP	i(P)	09 22 02.5	
"	30	UPP	iP	13 15 38.1	
			i	13 15 54.2	
		North Atlantic Ocean (h = 10 km).			

March 4, 1993

Conny Holmqvist
Klaus Meyer

SEISMOLOGICAL DEPARTMENT
 BOX 2101
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 SWEDEN

BOX 2101
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SEISMOLOGICAL BULLETIN
 UPPSALA, KIRUNA, UMEÅ, UDDEHOLM

DELARY and MYRVIKEN

Uppsala	(UPP)	59°51.5'N,	17°37.6'E;	h = 14 m
Kiruna	(KIR)	67°50.4'N,	20°25.0'E;	h = 390 m
Umeå	(UME)	63°48.9'N,	20°14.2'E;	h = 16 m
Uddeholm	(UDD)	60°05.4'N,	13°36.4'E;	h = 240 m
Delary	(DEL)	56°28.2'N,	12°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

DECEMBER 1 - 31, 1991

1991					1991				
Dec.	1	KIR	iP	09 24 10.9	Dec.	3	UPP	iP	11 03 04.6
				micr sec					
			P	Z' 0.1 1.0	"	4	UPP	iP	00 15 16.5
				Iran-Iraq border region (h = 35 km).			UME	iP	00 15 15.5
"	2	UME	iPKP	22 59 49.1					Hindu Kush region, Afghanistan
				Mendoza Province, Argentina					(h = 40 km).
				(h = 120 km).	"	4	UPP	iP	01 16 20.1
↙"	2	UPP	iP	08 53 06.5	"	4	UPP	iP	03 37 43.3 C
			iS	08 56 01				i	03 38 01.8
			i	08 57 34			KIR	iP	03 37 37.5
				micr sec				ipP	03 37 56.7
			P	Z' 0.3 1.0			UME	iP	03 37 35.9
			Mx	Z 15 10				ipP	03 37 56.0
		KIR	iP	08 54 40.8					Myanmar-India border region
				micr sec					h = 70 km (UPP,KIR,UME).
			P	Z' 0.2 1.0	"	5	UPP	iP	01 37 55.9
			Mx	Z 13' 11	"	5	UPP	eP	20 27 13
		UME	iP	08 53 56.1					micr sec
				Romania (h = 10 km).					Z' 0.1 1.1
				m = 5.4, M = 5.5 (UPP,KIR).			KIR	iP	20 27 14.8
"	2	UPP	iP	11 38 38.3				ipP	20 27 39.5
"	3	UPP	iPKP1	10 52 10.9			UME	iP	20 27 40.9
			i	10 52 20.8					Turkey (h = 120 km).
		KIR	iPKP	10 51 53.1	"	7	UPP	iP	11 52 22.5
			iSKP1	10 54 38.8			KIR	iP	11 51 26.1
		UME	iPKP	10 51 58.6				ipP	11 51 43.9
			iSKP1	10 54 48.4					
				South of Fiji Islands (h = 560 km).					

(cont).

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Dec.	7	(cont).		Dec.	7	(cont).	
		KIR	micr sec			UPP	micr sec
		P	Z' 0.2 1.0			P	Z' 0.1 0.9
		UME iP	11 51 55.3			KIR iP	16 45 05.4
		Kenai Peninsula, Alaska (h = 50 km).				UME iP	16 45 26.9
						Kuril Islands (h = 45 km).	
"	7	UPP iP	12 09 56.4	"	8	UPP iP	03 09 18.9
			micr sec			UME iP	03 09 07.1
		P	Z' 0.1 1.0			ipP	03 09 11.4
		Mx	Z 7.3 20			Gaspe Peninsula, Canada (h = 20 km).	
		KIR iP	12 09 10.7				
			micr sec				
		P	Z' 0.1 1.0	"	8	UPP iP	05 10 37.8
		Mx	Z 6.0 19			UME iP	05 10 13.0
		UME iP	12 09 32.3			Kuril Islands (h = 45 km).	
		Kuril Islands. (h = 50 km).					
		m = 5.8, M = 5.8 (UPP,KIR).		"	8	UPP iP	06 45 09.5
						KIR iP	06 44 22.6
"	7	UPP iP	14 07 59.2			UME iP	06 44 44.1
		ipP	14 08 16.5			Kuril Islands (h = 40 km).	
			micr sec				
		P	Z' 0.1 1.0	"	8	UPP iP	08 11 11.7
		KIR iP	14 07 53.7			KIR iP	08 09 49.3
		ipP	14 08 12.1			UME iP	08 10 34.0
		UME iP	14 07 52.0			Kuril Islands (h = 25 km).	
		ipP	14 08 10.3				
		Myanmar-India border region		"	8	UPP iP	14 20 52.1
		h = 70 km (UPP,KIR,UME).				KIR iP	14 20 05.7
						UME iP	14 20 27.4
"	7	UPP eP	14 30 58			Kuril Islands (h = 40 km).	
		ipP	14 31 06.9	"	8	UPP iP	23 45 32.6
			micr sec			KIR iP	23 44 45.1
		Mx	Z 2.0 19			UME iP	23 45 06.9
		KIR iP	14 31 24.4			Kuril Islands (h = 15 km).	
		ipP	14 31 33.5				
			micr sec	"	9	UPP iP	01 11 54.2 C
		Mx	Z 3.4 14			P	Z' 0.1 0.7
		UME iP	14 31 06.8			KIR iP	01 11 55.2 C
		ipP	14 31 15.4			UME iP	01 11 49.9 C
		Southwestern Pakistan				Nepal (h = 30 km).	
		h = 35 km (UPP,KIR,UME).					
		M = 5.4 (UPP,KIR).					
"	7	UPP iP	16 14 17.3	"	9	UPP iP	09 29 58.0
		KIR iP	16 13 30.4				micr sec
		UME iP	16 13 51.5			P	Z' 0.1 1.0
		Kuril Islands (h = 25 km).				KIR iP	09 30 36.8
						UME iP	09 30 20.6
"	7	UPP iP	16 45 52.6			Azores Islands region (h = 10 km).	
		(cont).					

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991						
Dec.	13	UPP	iP	19 32 24.9	Dec.	15	UPP	iPn	15 19 28.0	
				micr sec				iPg1	15 19 31.9	
			P	Z' 0.1 0.8				iSn	15 19 55.8	
		KIR	iP	19 31 37.0				iSg1	15 20 02.3	
				micr sec		KIR	iSn	15 21 24.7		
			P	Z' 0.6 1.6			iSg1	15 21 52.1		
		Kuril Islands (h = 45 km).				UME	iPn	15 19 26.9		
		m = 6.2 (UPP,KIR).					iPg1	15 19 31.4		
"	13	UPP	iP	20 06 06.1			i	15 19 34.2		
				micr sec			iSn	15 19 53.9		
			P	Z' 0.4 1.3		UDD	iPn	15 19 35.5		
		KIR	iP	20 05 19.7			iPg1	15 19 41.4		
				micr sec			iSn	15 20 08.4		
			P	Z' 0.3 1.5			iSg1	15 20 17.5		
		UME	iP	20 05 40.8		DEL	iSg1	15 21 53.8		
		Kuril Islands (h = 50 km).				MYV	iPn	15 19 20.0		
		m = 6.2 (UPP,KIR).					iPg1	15 19 21.8		
"	13	UPP	iP	20 09 18.7			iSg1	15 19 43.2		
				micr sec		Coast of Hälsingland, Sweden, 62.1°N, 17.4°E.				
			P	Z' 0.5 1.5		Origin time = 15 18 51.				
		KIR	iP	20 08 32.5		$M_L(UPP) = 3.1 (0.22) 5$.				
		Kuril Islands (h = 20 km).				Felt with maximum intensity $I_0 = IV +$ (MM). Radius of perceptibility is 35 km and macroseismic magnitude is 3.1. Focal depth deduced from macroseismic data is 15 km.				
"	13	UPP	iP	23 44 30.5		By combination with FOA station readings.				
"	14	UPP	iP	14 37 18.4						
		Western Iran (h = 25 km).				"	15	UPP	iP	20 05 51.1
"	15	UPP	iPKP1	06 56 18.4						
			iPKP2	06 56 22.4						
		KIR	iPKP	06 55 57.6						
		UME	iPKP1	06 56 06.3						
		Kermadec Islands, New Zealand (h = 55 km).				"	15	UPP	iP	21 58 00.0
"	15	UPP	iP	10 27 58.9			KIR	iP	21 57 12.8	
				micr sec			UME	iP	21 57 33.9	
			P	Z' 0.1 1.0			Kuril Islands (h = 45 km).			
			Mx	Z 1.6 20		"	16	UPP	iP	04 58 09.6
		KIR	iP	10 27 11.7				KIR	iP	04 57 15.7
				micr sec			Near east coast of Kamchatka (h = 40 km).			
			P	Z' 0.1 0.9		"	16	UPP	eSg1	15 39 31
		UME	iP	10 27 33.4				KIR	iPn	15 36 08.1
		Kuril Islands (h = 35 km).						iSg1	15 37 10.6	
		m = 5.9 (UPP,KIR).					UME	iPn	15 36 34.0	
"	15	UPP	iP	11 48 08.1				i	15 36 35.0	
		KIR	iP	11 47 19.9				iSn	15 37 37.5	
		Kuril Islands (h = 45 km).					(cont).			

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Dec.				Dec.			
16	(cont).			19	UPP	iP	01 44 40.4
	UME	iSg1	15 38 03.8			i	01 44 43.6
	UDD	iPn	15 37 12.7			iPP	01 48 30.7
		iSn	15 38 28.9				micr sec
	MYV	iPn	15 36 26.4			P	Z' 0.2 0.7
		i	15 36 35.6			Mx	Z 70 23
		iSn	15 37 43.2		KIR	iP	01 43 53.4
	Norwegian Sea, 68.0°N, 10.5°E.						micr sec
	Origin time = 15 35 10.					P	Z' 0.3 1.0
	$M_L(\text{UPP}) = 3.4 (0.24) 2.$					Mx	Z 58 21
	By combination with Finnish and Norwegian station readings.				UME	iP	01 44 15.5
					Kuril Islands (h = 25 km).		
					m = 6.3, M = 6.7 (UPP,KIR).		
"	16	UPP	iPKP1 22 31 32.3	"	19	UPP	iP 03 15 42.7
		UME	iPKP1 22 31 19.8			Romania (h = 10 km).	
		Kermadec Islands, New Zealand (h = 40 km).					
"	17	UPP	iP 02 03 12.8	"	19	UPP	iP 04 52 43.0
		KIR	iP 02 03 12.6			Vancouver Island region (h = 10 km).	
			micr sec				
		P	Z' 0.3 0.9	"	19	UPP	iP 04 55 06.1
		UME	iP 02 03 09.5			Vancouver Island region (h = 10 km).	
		Southern Sumatera, Indonesia (h = 70 km).		"	19	UPP	iP 04 57 50.6
						KIR	iP 04 57 03.9
						Kuril Islands (h = 40 km).	
"	17	UPP	eP 04 01 48	"	19	UPP	iSg1 06 23 03.2
"	17	UPP	iP 04 34 01.8			UDD	iPg1 06 21 38.7
			micr sec				iSg1 06 22 12.0
		P	Z' 0.1 0.9				i 06 22 19.5
		KIR	iP 04 33 17.2			MYV	iSg1 06 23 32.4
		UME	iP 04 33 37.4			Skagerrak, 58.3°N, 10.0°E.	
		Hokkaido, Japan region (h = 55 km).				Origin time = 06 20 54.	
						$M_L(\text{UPP}) = 2.7 1.$	
"	17	UPP	iP 06 48 50.8	"	19	UPP	iP 10 37 47.6
		i	06 49 19.0			Kuril Islands (h = 35 km).	
			micr sec				
		P	Z' 0.1 0.9	"	19	UPP	iPKP1 12 54 46.2
		KIR	iP 06 48 03.0			UME	iPKP1 12 54 31.0
			micr sec			South of Kermadec Islands (h = 100 km).	
		P	Z' 0.6 1.5				
		UME	iP 06 48 25.0	"	19	UPP	iP 19 03 05.1
		ipP	06 49 02.9			KIR	iP 19 03 34.3
		Kuril Islands (h = 160 km).				UME	iP 19 03 15.0
		m = 6.2 (UPP,KIR).				Southern Iran (h = 25 km).	
"	18	UPP	iP 02 41 00.2				
"	18	UPP	iP 02 42 41.5				

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991						
Dec.	20	UPP	iP	02 16 20.7	Dec.	22	UPP	iP	09 24 27.5	
			i	02 16 31.7						
		KIR	iP	02 16 15.1	"	22	UPP	iP	09 37 54.9	
		UME	iP	02 16 13.5			KIR	iP	09 37 07.6	
		Myanmar-India border region (h = 40 km).					UME	iP	09 37 30.1	
							Kuril Islands (h = 35 km).			
"	20	UPP	iP	08 46 35.4	"	22	UPP	iP	10 02 46.8	
			ipP	08 46 49.1			KIR	iP	10 01 58.2	
				micr sec			UME	iP	10 02 21.5	
			P	Z' 0.2 0.9			East of Kuril Islands (h = 45 km).			
		KIR	iP	08 45 49.2	"	22	UPP	iP	10 10 27.9	
			ipP	08 46 00.6			East of Kuril Islands (h = 35 km).			
				micr sec						
			P	Z' 0.3 0.8	"	22	UPP	iP	10 11 09.7	
		UME	iP	08 46 10.0	"	22				
		Kuril Islands (h = 50 km).								
		m = 6.3 (UPP,KIR).				"	22	UPP	iP	10 31 51.4
							Kuril Islands (h = 30 km).			
"	21	UPP	iP	19 53 45.8	"	22	UPP	iP	12 02 11.7	
		KIR	iP	19 53 15.6				i	12 02 23.8	
		UME	iP	19 53 29.0			KIR	iP	12 01 24.7	
		Volcano Islands region (h = 90 km).					UME	iP	12 01 45.9	
"	21	UPP	iP	20 02 22.5			Kuril Islands (h = 35 km).			
		Sikkim, India (h = 55 km).				"	22	UPP	iP	17 18 13.7
"	22	UPP	iP	05 43 36.6			KIR	iP	17 17 27.7	
		Greece. (h = 45 km).					UME	iP	17 17 48.4	
							East of Kuril Islands (h = 35 km).			
"	22	UPP	iP	08 54 12.6	"	22	UPP	iP	20 54 06.6	
			i	08 54 18.1			KIR	eP	20 53 20	
			iS	09 03 18			UME	iP	20 53 42.3	
				micr sec			Kuril Islands (h = 35 km).			
			i	Z' 0.6 0.9	"	22	UPP	iP	21 28 45.5 C	
			Mx	Z 297 23					micr sec	
		KIR	iP	08 53 25.2				P	Z' 0.1 0.9	
			ipP	08 53 32.8			KIR	iP	21 28 44.9	
				micr sec			UME	iP	21 28 42.5	
			pP	Z' 0.6 1.0				ipP	21 28 57.4	
			Mx	Z 582 19			Southern Sumatera, Indonesia (h = 60 km).			
		UME	iP	08 53 46.1	"	22	UPP	iP	22 06 09.2	
			ipP	08 53 53.5			KIR	iP	22 05 13.7	
		Kuril Islands (h = 25 km).					Alaska Peninsula (h = 35 km).			
		m = 6.6, M = 7.6 (UPP,KIR).								
"	22	UPP	iP	09 05 42.9						
		KIR	iP	09 04 55.3						
		UME	iP	09 05 17.1						
			ipP	09 05 29.0						
		East of Kuril Islands (h = 35 km).								

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991				1991			
Dec.	23	UPP eP	00 27 58	Dec.	26	UPP iP	11 46 14.7
		KIR iP	00 27 10.5			i	11 46 18.7
		UME iP	00 27 32.2			KIR iP	11 45 23.8
		Kuril Islands (h = 45 km).				ipP	11 45 31.9
"	23	UPP iP	13 21 03.0			UME iP	11 45 49.2
		i	13 21 04.2			ipP	11 45 57.5
			micr sec			Near east coast of Kamchatka	
		P	Z' 0.4 1.0			h = 35 km (KIR,UME).	
		KIR iP	13 20 15.5	"	26	KIR iP	12 24 02.0
		ipP	13 20 22.7			Banda Sea (h = 35 km).	
			micr sec				
		P	Z' 0.4 1.0	"	26	KIR iP	12 47 26.1
		Mx	Z 3.8 20			UME iP	12 47 35.4
		UME iP	13 20 37.7			Mindanao, Philippine Islands	
		Kuril Islands (h = 25 km).				(h = 80 km).	
		m = 6.5 (UPP,KIR).					
"	23	UPP iPKP1	15 26 42.0	"	27	UPP iP	01 26 05.5
		KIR iPKP1	15 26 25.1			UME iP	01 25 38.9
		UME iPKP1	15 26 33.8			Kuril Islands (h = 55 km).	
		Off E. coast of N. Island, N.Z.					
		(h = 50 km).					
"	24	UPP iP	09 53 54.4				
"	24	UPP iP	17 28 30.6				
		i	17 28 33.5				
"	24	UPP iP	22 25 17.8				
"	25	UPP iP	19 34 21.5				
		UME iP	19 33 56.0				
		Kuril Islands (h = 30 km).					
"	25	UPP iP	22 57 08.5	"	27	UPP eP	04 34 07
		UME iP	22 56 38.7				micr sec
		Off east coast of Kamchatka				P	Z' 0.2 1.2
		(h = 45 km).					
"	26	UME iP	00 17 25.7	"	27	UPP iP	09 17 41.7
		Gulf of California (h = 10 km).				i	09 17 44.7
"	26	UPP iP	00 34 52.9			iPP	09 19 28
		i	00 34 59.5			iS	09 24 06
		UME iP	00 34 49.7				micr sec
		Gulf of California (h = 10 km).				i	Z' 0.5 1.5
						Mx	Z 81 15
						KIR	micr sec
						Mx	Z 29 10
"	26	UPP iP	08 21 01.5			UME iP	09 17 21.6
		Southern Greece. (h = 45 km).					

(cont).

UPP = Uppsala, KIR = Kiruna, UME = Umeå, UDD = Uddeholm, DEL = Delary, MYV = Myrviken

1991

Dec.	27	(cont).		
		UME	ipP	09 17 25.2
		Russia-Mongolia border region (h = 15 km).		
		M = 6.5 (UPP,KIR).		
"	27	KIR	iP	13 43 58.9
		UME	iP	13 44 20.0
		Kuril Islands (h = 20 km).		
"	28	UPP	iPKP	01 11 00.0
				micr sec
		Mx	Z	17 20
		KIR	iPKP	01 11 15.5
				micr sec
		Mx	Z	14 20
		UME	iPKP	01 11 07.8
		South Sandwich Islands region (h = 10 km).		
		M = 6.6 (UPP,KIR).		
"	28	UPP	iP	01 21 09.0
			i	01 21 16.1
"	28	UPP	iP	10 47 29.1
		KIR	iP	10 46 44.3
		Kuril Islands (h = 20 km).		
"	31	UPP	iSg1	05 37 54.0
		KIR	iSg1	05 39 09.0
		UME	iSn	05 37 35.9
			iSg1	05 38 13.7
		DEL	iSn	05 37 31.4
			iSg1	05 38 09.4
		MYV	iPn	05 35 35.0
			i	05 35 51.0
			iSg1	05 36 48.0
		Off coast of southwestern Norway, 61.8°N, 4.2°E.		
		Origin time = 05 34 27.		
		M _L (UPP) = 3.5 (0.12) 4.		
		By combination with Finnish and Norwegian readings.		
"	31	UPP	iP	21 24 25.4
		Sichuan, China (h = 33 km).		

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