

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,	13°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

JANUARY 1 - 31, 1998

1998					1998				
Jan.	1	UPP	iP	06 23 46.3 D	Jan.	2	UPP	iP	21 22 25.3
			iPP	06 27 03.5					Myanmar-India border region
			iS	06 33 58					(h = 110 km).
				micr sec					
			P	Z' 1.1 1.1	"	3	UPP	iP	23 12 58.5
		KIR	iP	06 23 17.0 D				i	23 13 03.1
				micr sec					micr sec
			P	Z' 2.9 1.3				i	Z' 0.1 1.0
				Volcano Islands region (h = 100 km).			KIR	iP	23 12 07.2
				m = 6.9 (UPP,KIR).					micr sec
"	1	UPP	iP	20 14 26.4				P	Z' 0.1 1.1
			i	20 14 34.8					Unimak Island region (h = 10 km).
				micr sec					m = 5.9 (UPP,KIR).
			P	Z' 0.1 1.0	"	4	UPP	i(PKP)	06 31 05.1
				Off east coast of Kamchatka (h = N).				iPKP	06 31 12.0
"	2	UPP	iP	00 06 21.3				iSKP	06 34 42.1
									micr sec
"	2	UPP	iP	00 11 22.3				PKP	Z' 1.5
								Mx	Z 70 28
"	2	UPP	iP	18 30 55.5			KIR	Mx	07 26
				micr sec					micr sec
			P	Z' 0.1 0.7				Mx	Z 19 23
		KIR	iP	18 30 12.3					Loyalty Islands region (h = 100 km).
				micr sec					M = 6.9 (UPP,KIR).
			P	Z' 0.1 1.0					M uncorrected for focal depth.
				Hokkaido, Japan region (h = N).	"	5	UPP	iP	05 34 09.1
				m = 5.9 (UPP,KIR).					Ionian Sea (h = 40 km).
"	5	UPP	iP	16 04 12.7	"	5	UPP	iP	16 04 12.7
				Southern Iran (h = 35 km).					

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

1998				1998					
Jan.	10	UPP	iP	08 32 48.8	Jan.	12	UPP	i(PKP)	04 30 11.6
			iPP	08 36 08.0				South of Fiji Islands (h = 120 km).	
			iSKS	08 43 08					
				micr sec	"	12	UPP	iP	09 43 26.9
			P	Z' 0.2 1.0					
			Mx	Z 66 29		12	UPP	Mx	11 24
		KIR	iP	08 32 38.3 C					micr sec
				micr sec				Mx	Z 11 20
			P	Z' 0.4 1.2			KIR	Mx	11 26
			Mx	Z 45 29					micr sec
		Guatemala (h = N).						Mx	Z 7.1 20
		m = 6.4, M = 6.7 (UPP,KIR).					Near coast of central Chile (h = 35 km).		
"	10	UPP	iP	08 50 09.4					M = 6.3 (UPP,KIR).
		Guatemala (h = 60 km).				12	UPP	iP	14 54 36.9
"	10	UPP	iP	09 04 11.5			UPP	Mx	17 49
		Southern Alaska (h = 35 km).							micr sec
"	10	UPP	iP	15 18 23.8				Mx	Z 12 22
				micr sec			KIR	Mx	17 50
			P	Z' 0.1 1.2					micr sec
"	10	UPP	iP	19 26 55.4				Mx	Z 7.3 21
			iS	19 31 02			Fiji Islands region (h = 25 km).		
				micr sec	"	12	UPP	iP	22 51 26.3
			P	Z' 0.1 1.0					micr sec
			Mx	Z 11 13				P	Z' 0.1 0.7
		KIR	Mx	19 42			Nicobar Islands, India (h = 120 km).		
				micr sec	"	13	UPP	iPKP2	07 41 59.0
			Mx	Z 4.6 9			Kermadec Islands region (h = 200 km).		
		Ionian Sea (h = N).							
		M = 5.4 (UPP,KIR).							
"	11	UPP	ipP	08 15 19.1	"	13	UPP	iPKP2	09 08 01.0
		Northern Iran (h = N).					South Sandwich Islands region (h = N).		
"	11	UPP	iP	09 20 29.9	"	13	UPP	iP	10 04 16.7
		Kuril Islands (h = 70 km).					Banda Sea (h = 45 km).		
"	11	UPP	iP	15 35 58.2			Late arrival when compared with the NEIC solution.		
		Hokkaido, Japan region (h = 200 km).							
"	11	UPP	iP	19 30 51.9	"	13	UPP	iP	14 05 45.8
		Luzon, Philippine Islands (h = N).							
"	12	UPP	iPKP1	01 30 01.9	"	13	UPP	iP	14 14 21.3
			iPKP2	01 30 05.0					
		Kermadec Islands region (h = 370 km).							
					"	13	UPP	iP	17 28 33.3
							Near east coast of Honshu, Japan (h = 60 km).		

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1998				1998			
Jan.	13	UPP	iP	19 53 28.5	Jan.	16	(cont.)
				micr sec			KIR iP
				P Z' 0.1 0.9			13 56 51.1 C
				Xizang (h = 20 km).			micr sec
"	13	UPP	iP	20 58 38.8			P Z' 0.2 0.9
				Eastern Xizang-India border reg.			Fox Islands, Aleutian Islands
				(h = N).			(h = 130 km).
							m = 5.8 (UPP,KIR).
"	14	UPP	Mx	18 37	"	16	UPP iP
				micr sec			21 09 35.0
				Mx Z 17 22			Alaska peninsula (h = 60 km).
		KIR	Mx	18 37	"	16	UPP iPKP1
				micr sec			21 51 47.2
				Mx Z 5.2 21			iPKP2
				Fiji Islands region (h = N).			21 51 49.7
				M = 6.4 (UPP,KIR).			Kermadec Islands region
							(h = 240 km).
"	14	UPP	iP	18 06 49.1	"	17	UPP iP
				Taiwan region (h = N).			10 50 00.0 C
							micr sec
							P Z' 0.5 0.9
"	14	UPP	iP	18 09 11.9			KIR iP
				Taiwan region (h = N).			10 49 12.3 C
							micr sec
							P Z' 1.4 1.5
							East of Kuril Islands (h = 70 km).
							m = 6.7 (UPP,KIR).
"	14	UPP	iP	19 04 46.3	"	17	UPP iP
				Carlsberg ridge (h = 10 km).			12 37 40.7
							Sicily (h = 10 km).
"	15	UPP	iP	03 41 31.9	"	17	UPP iPKP1
				Eastern Siberia, Russia (h = 10 km).			18 51 15.3
							Kermadec Islands, New Zealand
							(h = N).
"	15	UPP	iPKP	06 56 41.9	"	17	UME iP
				South of Kermadec Islands			22 44 36.1
				(h = 150 km).			MYV iP
							22 44 33.8
"	15	UPP	iP	14 22 25.6			Greenland Sea (h = 10 km).
				micr sec			
				P Z' 0.1 0.7	"	17	UME iP
				Kuril Islands (h = 60 km).			23 55 34.1
							MYV iP
							23 55 33.8
							Greenland Sea (h = 10 km).
"	16	UPP	iPKP1	02 57 28.0	"	18	UPP iP
			iPKP2	02 57 36.6			02 22 04.3
				micr sec			Kashmir-Xinjiang border region
				PKP1 Z' 0.1 0.9			(h = 100 km).
				South of Kermadec Islands			
				(h = 100 km).	"	18	UME iP
							02 38 07.8
"	16	UPP	iP	13 57 45.0 C			MYV iP
				micr sec			02 38 27.0
				P Z' 0.1 0.9			Greenland Sea (h = 10 km).
				(cont.)	"	18	UME iP
							05 03 36.4
							MYV iP
							05 03 35.0
							Greenland Sea (h = 10 km).

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1998				1998			
Jan.	18	UPP iP	14 10 51.4	Jan.	22	UPP i(PKP)	21 12 06.3
		Mariana Islands (h = 200 km).				South of Fiji Islands (h = 500 km).	
"	18	UPP iP	20 08 45.8	"	23	UPP iP	02 04 14.2
		i	20 08 50.9			Andreanof Islands, Aleutian Is. (h = N).	
		Taiwan region (h = N).					
"	19	UPP iP	00 57 18.4	"	23	UPP iP	09 31 03.9 C
		Romania (h = 110 km).				i	09 31 12.2
"	19	UPP Mx	19 30			P	Z' 0.2 0.9
			micr sec			KIR iP	09 30 10.6 C
		Mx	Z 7.3 30				micr sec
		KIR Mx	19 34			P	Z' 0.4 1.0
			micr sec			Fox Islands, Aleutian Islands (h = N). m = 6.3 (UPP,KIR).	
		Mx	Z 1.7 22				
		Off coast of southern Chile (h = 10 km). M = 5.9 (UPP,KIR).		"	23	UPP iP	09 36 19.6
"	19	UPP iP	22 05 07.6			Fox Islands, Aleutian Islands (h = N).	
		Off east coast of Kamchatka (h = 45 km).		"	23	UPP iP	12 38 50.8
"	20	UPP iP	15 32 11.6			Fox Islands, Aleutian Islands (h = N).	
		iS	15 41 09	"	24	UPP iPKP1	23 00 39.8
			micr sec			South of Kermadec Islands (h = N).	
		P	Z' 0.1 0.8	"	25	UPP iP	23 50 10.5
		Mx	Z 3.7 21			Kuril Islands (h = 80 km).	
		KIR iP	15 31 27.3	"	25	UPP iPKP2	05 31 24.5
			micr sec			South of Kermadec Islands (h = N).	
		P	Z' 0.1 0.9	"	25	UPP iPKP2	23 21 46.3
		Mx	Z 3.0 19			South of Kermadec Islands (h = N).	
		Kuril Islands (h = 55 km). m = 5.9, M = 5.5 (UPP,KIR).		"	26	UPP iP	07 51 23.7
"	22	UPP iPKP2	15 32 17.7			Fox Islands, Aleutian Islands (h = N).	
		Kermadec Islands region (h = N).		"	26	UPP i(PKP)	18 49 37.2
"	22	UPP iP	16 13 17.7			South of Fiji Islands (h = 160 km).	
		i	16 13 22.4	"	27	UPP i(PKP)	02 32 20.4
			micr sec			Fiji Islands region (h = 640 km).	
		P	Z' 0.1 0.9				
		KIR iP	16 12 58.6				
			micr sec				
		P	Z' 0.1 1.1				
		Eastern Kazakhstan (h = N). m = 5.6 (UPP,KIR).					
"	22	UPP iP	17 53 10.7				
		Ionian Sea (h = N).					

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1998					1998				
Jan.	27	UPP	iP	19 18 16.8	Jan.	30	UPP	iP	16 01 18.3
			i	19 18 31.5					micr sec
				micr sec			P	Z'	0.1 1.0
			P	Z' 0.2 1.1			KIR	iP	16 00 35.3
			i	Z' 0.4 1.5					micr sec
		KIR	iP	19 17 21.4			P	Z'	0.1 1.0
			i	19 17 36.5			Hokkaido, Japan region (h = N).		
				micr sec			m = 5.9 (UPP,KIR).		
			P	Z' 0.2 1.0					
			i	Z' 0.4 1.5	"	31	UPP	iP	13 50 47.4
		Komandorsky Islands region.					Ionian Sea (h = N).		
		h = 55 km (UPP,KIR).							
		m = 6.3 (UPP,KIR).							
"	27	UPP	i(PKP)	20 13 15.3					
			i	20 13 16.7					
			iSKP	20 16 03.3					
				micr sec					
			i	Z' 0.1 0.9					
		South of Fiji Islands (h = 610 km).							
"	27	UPP	i(PKP)	21 24 00.5					
			iSKP	21 26 46.5					
		South of Fiji Islands (h = 610 km).							
"	28	UPP	iP	03 05 10.2					
"	28	UPP	iP	10 58 20.8					
		Andreanof Islands, Aleutian Is. (h = 40 km).							
"	29	UPP	iPKP1	00 11 37.8					
		Kermadec Islands, New Zealand (h = 270 km).							
"	29	UPP	iP	15 28 54.4					
		Ionian Sea (h = N).							
"	30	UPP	iP	09 02 41.6					
		Mariana Islands region (h = 35 km).							
"	30	UPP	iSKS	12 41 06					October 20, 1999
				micr sec					
			Mx	Z 16 22					Conny Holmqvist
		KIR	Mx	13 20					Ota Kulhánek
				micr sec					
			Mx	Z 10 19					
		Near coast of northern Chile (h = 10 km).							
		M = 6.4 (UPP,KIR).							

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,	13°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

FEBRUARY 1 - 28, 1998

1998					1998				
Feb.	1	UPP	iPK1	01 21 35.2	Feb.	3	UPP	iP	03 14 47.0
				South of Kermadec Islands (h = N).				i	03 14 56.0
								iSKS	03 25 12
"	1	UPP	iP	06 31 35.1					micr sec
				Greece-Albania border region				P	Z' 0.1 0.9
				(h = 10 km).				i	Z' 0.1 0.8
								Mx	Z 10 19
"	1	UPP	iP	09 17 53.7 C			KIR	Mx	03 57
				micr sec					micr sec
				P Z' 0.2 0.9				Mx	Z 5.5 15
		KIR	iP	09 17 22.3 C					Near coast of Oaxaca, Mexico
				micr sec					(h = N).
				P Z' 0.2 0.7					M = 6.1 (UPP,KIR).
				Bonin Islands region (h = 500 km).	"	3	UPP	iP	07 30 36.8
				m = 5.7 (UPP,KIR).					Near coast of Oaxaca, Mexico
"	2	UPP	iPK1	13 28 54.8					(h = N).
				South of Fiji Islands (h = 600 km).	"	3	UPP	iP	10 43 47.0
"	3	UPP	iPg1	00 32 41.6					micr sec
				iSg1				P	Z' 0.1 0.9
				iSn					
		UDD	iPg1	00 32 38.9	"	3	UPP	iP	23 44 22.5
				iSg1					Mariana Islands region (h = N).
				iSn					
				Närke, Sweden, 58.8°N, 15.1°E.	"	4	UPP	iP	01 41 00.0
				Origin time = 00 32 13.					Mariana Islands region (h = N).
				Rockburst at the Zinkgruvan mine.	"	4	UPP	iP	14 40 55.3
								iPP	14 42 29.2
								iS	14 47 04

(cont.)

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1998		1998	
Feb.		Feb.	
4	(cont.)	7	(cont.)
		KIR	iP 01 30 05.0
			micr sec
	P	Z' 0.2	0.9
	Mx	Z 22	12
	KIR	iP	14 41 04.6 C
			micr sec
	P	Z' 0.2	1.1
	Mx	Z 25	11
	Afghanistan-Tajikistan bord. reg. (h = N). m = 5.8, M = 6.2 (UPP,KIR).		
"	5	UPP	iPKP1 08 31 31.5
	South of Kermadec Islands (h = N).		
"	5	UPP	iP 10 59 46.0
	Hokkaido, Japan region (h = 55 km).		
"	6	UPP	iP 01 16 13.6
	Kuril Islands (h = N).		
"	6	UPP	iPKP 13 19 52.7
	South Sandwich Islands region (h = 130 km).		
"	6	UPP	iP 19 47 28.9
			micr sec
	P	Z' 0.1	0.9
	KIR	iP	19 46 43.1
			micr sec
	P	Z' 0.1	0.9
	Kuril Islands (h = 90 km). m = 5.7 (UPP,KIR).		
"	6	UPP	iP 01 03 45.4
	Central Italy (h = 10 km).		
"	7	UPP	iP 01 25 11.8 D
			micr sec
	P	Z' 0.3	1.0
	KIR	iP	01 25 42.2 D
			micr sec
	P	Z' 0.6	1.0
	Volcano Islands region (h = 530 km). m = 6.0 (UPP,KIR).		
"	7	UPP	iP 01 30 34.6 D
		iS	01 40 08
			micr sec
	P	Z' 0.3	0.7
	(cont.)		
		KIR	iP 01 30 05.0
			micr sec
		P	Z' 1.9 0.7
	Volcano Islands region (h = 530 km). m = 6.3 (UPP,KIR).		
"	7	UPP	iPKP 03 39 14.1
		iSKP	03 42 27.5
	Vanuatu Islands (h = 130 km).		
"	7	UPP	iP 15 59 30.8
	Andreanof Islands, Aleutian Is. (h = N).		
"	8	UPP	iP 23 23 18.7
	Western Iran (h = N).		
"	9	UPP	iPKP2 02 16 19.5
	South of Kermadec Islands (h = 500 km).		
"	9	UPP	iP 03 11 34.1 D
		i	03 12 03.5
			micr sec
		P	Z' 0.1 0.5
	KIR	iP	03 10 46.1 D
			micr sec
		P	Z' 0.2 0.9
	Sea of Okhotsk (h = 680 km). m = 5.3 (UPP,KIR).		
"	9	UPP	iSg1 13 02 35.1
		KIR	iPg1 13 00 03.4
		iSg1	13 00 45.9
	UME	iPg1	13 00 16.6
		iSg1	13 00 09.4
	UDD	iSg	13 02 22.7
	MYV	iPn	13 00 03.0
		iSg1	13 00 50.0
	West coast of Norway, 66.4°N, 13.1°E. Origin time = 12 59 05. M _L (UPP) = 3.2 (0.21) 4. By combination with Finnish station readings.		
"	9	KIR	i 16 52 24.7
		iSg1	16 53 32.8
	NW Russia, 69.2°N, 32.7°E. Origin time = 16 51 06. (cont.)		

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1998			1998		
Feb.	9	(cont.) M _L (UPP) = 3.1 1. Felt. By combination with Finnish station readings.	Feb.	13	UPP iPKP 11 07 35.6 Fiji Islands region (h = 350 km).
"	9	UPP iP 21 21 03 Hindu Kush region, Afghanistan (h = 80 km).	"	13	UPP iP 13 34 18.4 Kyrgystan (h = N).
"	10	UPP iPKP1 07 52 35.1 i 07 52 East of North Island, N.Z. (h = 158 km).	"	13	UPP iP 17 20 05.5 micr sec P Z' 0.1 1.0 Near Islands, Aleutian Islands (h = N).
"	11	UPP iP 02 36 41.4 Hokkaido, Japan region (h = 80 km).	"	14	UPP iP 00 15 32.8 C micr sec P Z' 0.2 0.9 KIR iP 00 15 41.3 C micr sec P Z' 0.4 0.5 Afghanistan-Tajikistan bord reg. (h = 220 km). m = 5.9 (UPP,KIR).
"	11	UPP iP 12 24 48.7 Mindanao, Philippine Islands (h = 530 km).	"	14	UPP iP 07 00 13.2 i 07 00 17.7 North Atlantic Ocean (h = 10 km).
"	11	UPP iP 13 27 35.7 Leyte, Philippine Islands (h = 55 km).	"	14	UPP iPKP2 07 19 16.7 i 07 19 22.8 Kermadec Islands, New Zealand (h = 200 km).
"	11	UPP iP 20 53 09.4 Mariana Islands (h = 160 km).	"	15	UPP iP 05 58 15.7
"	11	UPP iP 21 27 22.4 Northern Mid-Atlantic ridge (h = 10 km).	"	15	UPP iP 21 56 28.4 Andreanof Islands, Aleutian Is. (h = 60 km).
"	12	UPP iP 17 19 44.7 Philippine Islands region (h = 50 km).	"	16	UPP eP 06 20 31 Near Islands, Aleutian Islands (h = N).
"	12	UPP iP 17 20 23.6 Ionian Sea (h = N).	"	16	UPP iP 11 29 50.5 Mariana Islands region (h = N).
"	12	UPP iPKP1 21 20 21.0 South of Fiji Islands (h = 500 km).	"	16	UPP iP 12 12 32.8
"	12	UPP iPKP1 22 42 58.1 Kermadec Islands reigon (h = 150 km).			
"	12	UPP iP 23 28 02.4 South of Honshu, Japan (h = 320 km).			

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1998				1998			
Feb.	16	UPP	iP	13 42 14.7	Feb.	20	(cont.)
				North Atlantic ocean (h = 10 km).			iS
							12 31 24
							micr sec
"	16	UPP	iP	23 59 18.3C			P
			i	23 59 27.0			Z'
			iS	24 03 56			Z
				micr sec			Mx
			P	Z' 1.2 1.1			Z
			i	Z' 1.5 1.1			Mx
			Mx	Z 86 19			Z
		KIR	iP	23 59 24.5 C			Mx
				micr sec			Z
			P	Z' 0.7 1.5			Mx
			Mx	Z 48 15			Z
				North Atlantic ocean (h = 10 km).			
				m = 6.6, M = 6.3 (UPP,KIR).			
"	18	UPP	iSg1	04 14 01.0	"	20	UPP
		UDD	iPg1	04 12 36.6			iP
			iSg1	04 13 09.1			13 50 54.4
				South coast of Norway, 58.4°N,			Eastern Mediterranean Sea (h = N).
				10.4°E.			
				Origin time = 04 11 58.			
				M _L (UPP) = 2.3 1.			
				By combination with Finnish station			
				readings.			
"	18	UPP	iP	09 12 52.2	"	21	UPP
				Myanmar-India border region			iP
				(h = 45 km).			01 07 02.2
							Near west coast of Honshu, Japan
							(h = N).
"	18	UPP	iP	09 24 26.4	"	21	UPP
				Kuril Islands (h = 50 km).			iP
							06 26 46.7
							Volcano Islands region (h = 120 km).
"	18	UPP	iP	09 25 59.6	"	22	UPP
							iP
							02 50 06.5
							Nepal (h = N).
"	19	UPP	iPdiff	04 35 14.1	"	22	UPP
				Central Peru (h = N).			iP
							04 32 32.1
							Kuril Islands (h = 70 km).
"	18	UPP	iP	09 24 26.4	"	24	UPP
				Kuril Islands (h = 50 km).			iP
							15 17 01.5
							Dodecanese Islands (h = N).
"	18	UPP	iP	09 25 59.6	"	24	UPP
							iP
							21 19 35.1
							21 19 42.2
							micr sec
"	19	UPP	iPdiff	04 35 14.1			i
				Central Peru (h = N).			Z'
							0.1 1.0
							Rat Islands, Aleutian Islands (h = N).
"	19	UPP	iPdiff	14 28 53.5	"	25	UPP
			i	14 29 17.8			iP
			iPP	14 33 14.7			06 53 06.8
				micr sec			Kuril Islands (h = 55 km).
			P	Z' 0.1 1.2	"	25	UPP
			Mx	Z 15 25			iP
				Banda Sea (h = N).			09 23 36.9
							Off east coast of Honshu, Japan
							(h = N).
"	20	UPP	iP	12 25 28.5	"	25	UPP
			i	12 25 31.0			iP
			ipP	12 26 21.5			12 11 58.9
				(cont.)			

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

1998

25	UPP	iS	19 16 44	
			micr sec	
		Mx	Z 9.2	20
			North Atlantic Ocean (h = 10 km).	
"	26	UPP	iP	03 27 33.7
			Kuril Islands (h = 150 km).	
"	26	UPP	iPKP2	06 42 18.8
			South of Kermadec Islands (h = N).	
"	26	UPP	iP	12 12 58.6
			Northwestern Balkan region (h = 25 km).	
"	26	UPP	iPKP	23 58 51.8
			South of Fiji Islands (h = 400 km).	
"	27	UPP	iP	02 16 2.4
			Hokkaido, Japan region (h = N).	
"	27	UPP	iP	19 07 54.8
			Kuril Islands (h = 55 km).	
"	27	UPP	iP	22 29 21.7
			Kuril Islands (h = N).	
"	28	UPP	iPKP	11 05 40.6
			iSKP	11 08 45.9
			Vanuatu Islands (h = 190 km).	
"	28	UPP	iP	17 49 58.8
			micr sec	
		P	Z' 0.5	1.3
		KIR	iP	17 49 22.8
			micr sec	
		P	Z' 0.1	1.0
			South of Honshu, Japan (h = 290 km). m = 5.8 (UPP,KIR).	

November 2, 1999

Conny Holmqvist
Ota Kulhánek

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

1998				1998			
Mar.	6	UPP iP	09 50 02.0	Mar.	9	(cont.)	
			Northern Colombia (h = 55 km).			Origin time = 14 19 58.	
"	6	UPP iP	10 58 37.2			$M_L(\text{UPP}) = 3.2 (0.08)$.	
			Tajikistan-Xinjiang border reg. (h = 130 km).			Felt.	
"	6	UPP iP	13 00	"	9	UPP iP	23 28 57.4
			Myanmar-India border region (h = 70 km).				Afghanistan-Tajikistan (h = 240 km).
"	7	UPP i(PKP)	18 29 13.4	"	10	UPP iP	04 35 39.9
			South of Fiji Islands (h = 580 km).				Dodecanese Islands (h = 140 km).
"	8	UPP iPKP1	00 19 41.2	"	10	UPP ipP	17 54 46.3
			Kermadec Islands, New Zealand (h = N).				Peru-Brazil border region (h = 160 km).
"	8	UPP iP	00 47 31.5	"	11	UPP iP	00 50 51.9
			micr sec				Mindanao, Philippine Islands (h = N).
		P	Z' 0.3 1.0	"	11	UPP iP	01 21 26.3
			Philippine Islands region (h = 160 km).	"	11	UPP iP	15 44 20.5
"	8	UPP iP	04 58 12.2	"	11	UPP iP	19 38 32.6
			Eastern Honshu, Japan (h = 70 km).				Myanmar-India border region (h = 100 km).
"	8	UPP iP	05 11 44.2	"	11	UPP iP	micr sec
			Northern Colombia (h = N).				P Z' 0.1 0.9
"	8	UPP iP	11 53 12.3				Off east coast of Honshu, Japan (h = N).
			Kuril Islands (h = N).	"	12	UPP iP	08 33 58.0
"	8	UPP iPKP1	14 20 39.7				Central Mid-Atlantic ridge (h = 10 km).
			Kermadec Islands, New Zealand (h = N).	"	12	UPP iP	09 10 24.9
"	9	UPP iP	11 26 36.3				Mindanao, Philippine Islands (h = 55 km).
			Dodecanese Islands (h = 70 km).				Late arrival when compared with the NEIC solution.
"	9	UPP iPn	14 21 27.5	"	13	UPP iP	13 18 03.2
		iSn	14 22 40.5			i	13 18 17.8
		iSg1	14 23 10.5				micr sec
		KIR iPg1	14 20 57.1				P Z' 0.1 0.7
		iSg1	14 21 42.4				Romania (h = 150 km).
		MYV iPg1	14 20 45.4				
		iSg1	14 21 26.8				
			Near coast of central Norway, 65.9°N, 13.4°E. (cont.)				

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

1998				1998			
Mar.	14	UPP	iP	19 48 02.7	Mar.	20	(cont.)
			iPP	19 49 39.3			KIR Mx
			iS	19 54 10			22 33
				micr sec			micr sec
			P	Z' 0.3 1.3			Mx Z 5.5 19
			Mx	Z 62 15			Auckland Islands region (h = 10 km).
		KIR	iP	19 48 33.8			Late arrival when compared with
				micr sec			compared with the NEIC solution.
			P	Z' 0.5 1.3			M = 6.5 (UPP,KIR).
			Mx	Z 96 15	"	20	UPP iP
		Northern Iran (h = 10 km).					iPKP1
		m = 6.0, M = 6.7 (UPP,KIR).					22 12 39.3
							Kermadec Islands region
							(h = 150 km).
"	15	UPP	iP	09 27 02.5	"	21	UPP iP
"	15	UPP	iP	20 45 02.0	"	21	UPP iP
		Xizang (h = N).					i
"	15	UPP	iP	23 24 43.4			i
"	16	UPP	iP	16 52 20.6			iS
			i	16 52 23.4			micr sec
				micr sec			i Z' 0.2 1.0
			P	Z' 0.1 1.0			i Z' 1.2 1.5
		Kuril Islands (h = 60 km).					Mx Z 32 19
"	17	UPP	iPKP	03 00 34.8			KIR eP
		Kermadec Islands region					16 36 21
		(h = 450 km).					micr sec
"	17	UPP	iP	21 14 20.1			P Z' 2.9 1.5
		Sea of Okhotsk (h = 500 km).					Mx Z 29 13
"	19	UPP	iP	08 49 17.8	"	21	UPP iP
		Western Caroline Islands					16 49 11.9
		(h = 45 km).					Central Italy (h = 10 km).
"	19	UPP	iP	13 59 17.7 C	"	21	UPP iP
			i	13 59 22.3			18 29 47.8 C
			iS	14 05 31			iPP
				micr sec			18 31 21.8
			P	Z' 0.2 0.9			iS
			i	Z' 0.5 1.1			18 35 38
			Mx	Z 22 12			micr sec
		Southern Xinjiang, China (h = N).					P Z' 1.6 1.0
"	20	UPP	iPKP2	21 28 45.8	"	21	UPP iP
				micr sec			23 48 12.6
			Mx	Z 14 26	"	22	UPP iP
		(cont.)					01 14 22.2
							Off east coast of Honshu (h = N).

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

1998				1998						
Mar.	22	UPP	iP	01 21 13.2	Mar.	23	UPP	iP	20 22 54.6	
			iS	01 31 28				i	20 23 06.3	
				micr sec				iS	20 26 23.0	
			P	Z' 0.1 0.8			MYV	iP	20 22 08.0	
			Mx	Z 4.1 23				iS	20 24 19.0	
		KIR	Mx	02 00			Jan Mayen Island region (h = 10 km).			
				micr sec						
			Mx	Z 2.6 19		"	23	UPP	iP	20 37 14.6
		Mid-Indian ridge (h = 10 km).						Mindoro, Philippine Islands		
		M = 5.6 (UPP,KIR).						(h = 100 km).		
"	22	UPP	iP	03 30 58.5	"	23	UPP	eP	21 43 31	
		Kuril Islands (h = N).					Samar, Philippine Islands (h = 70 km).			
"	22	UPP	iP	04 05 31.2	"	24	UPP	iP	01 32 19.7	
		Southern Xinjiang, China (h = N).					Northern Sumatera, Indonesia			
"	22	UPP	iP	23 26 56.1			(h = 140 km).			
"	23	UPP	iP	02 39 42.7	"	24	UPP	iP	04 34 12.2	
		Off coast of Oregon (h = 10 km).			"	24	UPP	iP	06 46 32.9	
"	23	UPP	iP	02 44 54.1			Crete (h = 40 km).			
			i	02 45 06.4	"	24	UPP	iP	23 42 50.5	
		Philippine Islands region (h = 40 km).			"	25	UPP	iPKP	03 32 23.4	
"	23	UPP	iP	04 53 25.9				i	03 32 39.6	
		Bonin Islands region (h = 460 km).							micr sec	
"	23	UPP	iP	09 48 38.1				PKP	Z' 0.2 1.5	
				micr sec				Mx	Z 247 25	
			P	Z' 0.1 1.0			KIR	Mx	04 37	
		Near east coast of Honshu, Japan							micr sec	
		(h = 40 km).						Mx	Z 136 16	
"	23	UPP	iP	10 19 16.8			Balleny Islands region (h = 10 km).			
		Afghanistan-Tajikistan bord. reg.					M = 7.9 (UPP,KIR).			
		(h = N).			"	25	UPP	iPKP1	05 26 33.7	
"	23	UPP	iP	19 33 39.3			West of Macquarie Island			
			i	19 33 47.2			(h = 10 km).			
			iS	19 36 12.2	"	25	UPP	iPKP2	12 37 46.6	
				micr sec					micr sec	
			Mx	Z 5.4 20				Mx	Z 5.7 20	
		KIR	Mx	19 35			South of Australia (h = 10 km).			
				micr sec	"	25	UPP	iPKP1	13 35 04.6	
			Mx	Z 6.4 13				iPKP2	13 35 23.2	
		MYV	iP	19 32 52.8			South of Australia (h = 10 km).			
			iS	19 34 39.0						
			i	19 35 04.0						
		Jan Mayen Island region (h = 10 km).								

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1998				1998					
Mar.	26	UPP	iP	02 54 42.1	Mar.	29	UPP	iP	07 52 11.6
				micr sec					Rat Islands, Aleutian Islands
			P	Z' 0.1 1.0					(h = 45 km).
				Kuril Islands (h = 55 km).					
"	26	UPP	iPKP1	12 45 15.5	"	29	UPP	i(PKP)	20 06 23.4
			iPKP2	12 45 30.7				i	20 06 25.5
				South of Australia (h = 10 km).				i	20 06 39.2
								iSKP1	20 09 19.3
								iPKS	20 10 10.5
"	26	UPP	iP	13 19 13.5					micr sec
				Off east coast of Honshu, Japan				Mx	Z 6.9 19
				(h = N).					Fiji Islands region (h = 540 km).
"	26	UPP	iP	16 30 08.1	"	29	UPP	i(PKP)	20 56 49.3
			i	16 30 12.0					Fiji Islands region (h = 530 km).
			iS	16 33 22					
				micr sec					
			P	Z' 0.1 0.9	"	29	UPP	i(PKP)	23 39 33.6
			i	Z' 0.6 1.1					Fiji Islands region (h = 530 km).
		KIR	eP	16 31 37	"	30	UPP	iP	01 16 05.5
				micr sec				i	01 16 14.9
			P	Z' 0.4 1.0					Off east coast of Honshu, Japan
				Central Italy (h = 10 km).					(h = 30 km).
				m = 5.8 (UPP,KIR).	"	30	UPP	iP	04 28 02.6
"	26	UPP	iPdiff	23 50 33	"	31	UPP	iPKP2	01 44 30.0
				Irion Jaya, Indonesia (h = 10 km).					South of Australia (h = 10 km).
"	27	UPP	iP	00 49 43.3	"	31	UPP	iP	08 53 28.0
"	28	UPP	iP	00 35 29.4					Philippine Islands region (h = 45 km).
				Turkey (h = 5 km).	"	31	UPP	iPKP1	20 08 53.6
"	28	UPP	iP	16 53 52.4					Kermadec Islands region
				Ionian Sea (h = N).					(h = 150 km).
"	28	UPP	iP	22 10 46.3					
			i	22 10 51.4					
				Lake Tanganyika region (h = 10 km).					
"	28	UPP	iPKP	22 29 51.5					
				South of Fiji Islands (h = 600 km).					
"	29	UPP	iP	07 25 47.8					December 1, 1999
			i	07 26 05.6					
			iS	07 34 32					
				micr sec					
			P	Z' 0.1 0.9					Conny Holmqvist
			Mx	Z 5.9 19					Ota Kulhánek
				North of Ascensian Island					
				(h = 10 km).					

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,	13°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

APRIL 1 - 30, 1998

1998					1998				
Apr.	1	UPP	iP	18 09 00.2 C	Apr.	2	UPP	iP	05 10 07.0
			iSKS	18 19 22					Rat Islands, Aleutian Islands (h = N).
			iS	18 19 30					
				micr sec	"	2	UPP	iP	11 14 36.7
			P	Z' 0.7 0.9				i	11 14 37.5
			Mx	Z 62 28					
		KIR	iP	18 09 00.9	"	2	UPP	iP	19 51 06.7
				micr sec				i	19 51 34.7
			P	Z' 1.2 1.2					Kuril Islands (h = 160 km).
			Mx	Z 63 21	"	2	UPP	iPKP2	21 54 14.2
		Southern Sumatera Indonesia							South of Kermadec Islands (h = N).
		(h = 55 km).							
		m = 6.8, M = 6.9 (UPP,KIR).							
"	1	UPP	iP	21 45 44.2	"	2	UPP	iP	23 12 51.6
		Northern Mid-Atlantic ridge			"				
		(h = 10 km).			"	3	UPP	iPKP1	04 54 16.7
								iPKP2	04 54 24.5
									South of Kermadec Islands (h = N).
"	1	UPP	iPKP	23 01 57.1	"	3	UPP	iP	07 09 41.7
				micr sec					Southern Sumatera, Indonesia
			P	Z' 0.2 1.5					(h = 70 km).
			Mx	Z 11 24					
		KIR	Mx	20 01	"	3	UPP	iP	07 30 38.2
				micr sec					micr sec
			Mx	Z 5.5 19				P	Z' 0.2 1.3
		Off coast of southern Chile						Mx	Z 3.7 14
		(h = 10 km).					KIR	iP	07 32 02.5
		M = 6.3 (UPP,KIR).							micr sec
"	2	UPP	iPKP1	01 29 00.7				P	Z' 0.2 1.3
			iPKP2	01 29 08.1				Mx	Z 1.6 12
		South of Kermadec Islands (h = N).							(cont.)

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

1998				1998			
Apr.	3	(cont.) Central Italy (h = 10 km). m = 5.3, M = 4.7 (UPP,KIR).		Apr.	5	UPP iP	10 28 07.7 micr sec
						P	Z' 0.1 0.9
"	3	UPP iP 08 03 51.4 Central Italy (h = 10 km).					Rat Islands, Aleutian Islands (h = N).
"	3	UPP iP 08 37 36.4		"	5	UPP iP	15 56 20.8 micr sec
"	3	UPP iP 10 58 10.2				P	Z' 0.1 1.0
"	3	UPP iP 13 04 30.5 Afghanistan (h = 70 km).				KIR iP	15 57 48.0 micr sec
						P	Z' 0.1 1.2
"	4	UPP iP 16 51 27.7 Near west coast of Honshu, Japan (h = 45 km).		"	6	UPP iP	00 38 46.3 Off east coast of Honshu, Japan (h = N).
"	3	UPP iP 22 15 11.8 C ipP 22 15 49.6 iPP 22 19 08.8 iSKS 22 25 32 iS 22 26 20 micr sec P Z' 0.6 1.4 KIR iP 22 15 16.3 C ipP 22 15 52.9 iPP 22 19 18.6 i 22 19 23.4 micr sec P Z' 0.4 1.2 Peru-Brazil border region. h = 150 km (UPP,KIR). m = 6.8 (UPP,KIR).		"	6	UPP iP	02 45 46.4 Near east coast of Kamchatka (h = 40 km).
				"	6	UPP iP	05 41 09.9 i 05 41 21.0 Bonin Islands region (h = 35 km).
"	4	UPP iP 16 20 17.3 Mindanao, Phillipne Islands (h = 100 km).		"	7	UPP ipP	13 47 00.0 micr sec Mx Z 1.6 23 Tajikistan (h = 230 km).
"	4	UPP iP 16 21 55.6 iS 16 26 05 micr sec Mx Z 1.6 10 KIR Mx 16 38 micr sec Mx Z 1.2 9 Turkey (h = 10 km). M = 4.8 (UPP,KIR).		"	8	UPP iP	04 15 15.5 Near coast of Oaxaca, Mexico (h = N).
				"	8	UPP iP	17 55 54.5 i 17 56 17.5 Near east coast of Honshu, Japan (h = 90 km).
"	4	UPP iP 16 21 55.6 iS 16 26 05 micr sec Mx Z 1.6 10 KIR Mx 16 38 micr sec Mx Z 1.2 9 Turkey (h = 10 km). M = 4.8 (UPP,KIR).		"	8	UPP iP	20 12 17.0 North Atlantic ocean (h = 10 km).
				"	8	UPP iP	20 18 58.9 North Atlantic ocean (h = 10 km).
"	4	UPP iP 16 21 55.6 iS 16 26 05 micr sec Mx Z 1.6 10 KIR Mx 16 38 micr sec Mx Z 1.2 9 Turkey (h = 10 km). M = 4.8 (UPP,KIR).		"	9	UPP iP	05 40 31.1 Hokkaido, Japan region (h = 40 km).

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1998				1998			
Apr.	9	UPP	iP	08 56 58.2	Apr.	10	(cont.)
			i	08 57 20.9			KIR
				Near east coast of Honshu, Japan (h = 110 km).			iP
							15 08 44.0
							micr sec
							P
							Z' 0.4 1.2
							Mx
							Z 8.8 11
"	9	UPP	iPKP1	12 02 15.3			Northern Iran (h = N).
			iPKP2	12 02 17.7			m = 6.1, M = 5.8 (UPP,KIR).
				Kermadec Islands region (h = 400 km).	"	10	UPP
							iP
							16 51 29.3
							iS
							17 00 18
							micr sec
"	9	UPP	iP	18 03 42.3			Mx
		KIR	iP	18 02 30.7			Z 6.6 16
			i	18 02 44.5			KIR
		UME	iP	18 03 10.5			Mx
			i	18 03 19.4			17 25
		MYV	iP	18 02 55.0			micr sec
			iS	18 04 47.0			Mx
				Jan Mayen Island region (h = 10 km).			Z 6.6 20
							North of Ascension Island (h = 10 km).
							M = 5.9 (UPP,KIR).
"	9	UPP	iP	22 33 27.2	"	10	UPP
				Southern Greece (h = N).			iPKP
							17 03 23.4
							iPKP1
							17 03 28.9
							micr sec
							P
							Z' 0.2 1.5
"	9	UPP	iP	23 39 15.8			PKP1
			iPP	23 42 23.4			Z' 0.2 0.9
			iS	23 49 30			South of Kermadec Islands (h = 45 km).
				micr sec			
			P	Z' 0.1 1.3	"	10	UPP
			Mx	Z 1.8 19			iP
		KIR	iP	23 39 37.8			17 47 50.7
				micr sec			South of Kermadec Islands (h = N).
			P	Z' 0.2 1.3	"	11	UPP
				Mid-Indian ridge (h = 10 km). m = 6.0 (UPP,KIR).			iP
							01 04 02.1
							micr sec
							Mx
							Z 3.6 18
						KIR	Mx
							02 05
							micr sec
"	10	UPP	iP	05 09 43.9			Mx
				Myanmar-India border region (h = 100 km).			Z 2.8 20
							South of Fiji Islands (h = N).
							M = 6.6 (UPP,KIR).
"	10	UPP	iP	07 19 41.3	"	11	UPP
							iPKP
							01 30 18.9
							i
							01 30 30.1
							South of Fiji Islands (h = N).
"	10	UPP	iP	15 08 17.3	"	11	UPP
			i	15 08 20.5			iP
			i(PP)	15 09 46.4			12 42 19.3
			iS	15 14 20			Andaman Islands, India (h = 10 km).
				micr sec			
			i	Z' 0.4 0.9	"	12	UPP
			Mx	Z 8.3 13			iP
							04 21 04.6
							North Atlantic ocean (h = 10 km).

(cont.)

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1998				1998					
Apr.	12	UPP	iP	10 58 48.9	Apr.	15	UPP	iP	04 06 27.1
			iS	11 01 36					Philippine Islands region (h = N).
				micr sec					
			P	Z' 0.2 1.0	"	15	UPP	iP	15 33 04.6
			Mx	Z 40 10				iS	15 41 10
		KIR	iP	11 00 27.4					micr sec
				micr sec				P	Z' 0.1 0.9
			P	Z' 0.4 1.0				Mx	Z 6.4 17
			Mx	Z 28 10			KIR	iP	15 32 07.7
		Austria (h = 10 km).							micr sec
		m = 5.8 (UPP,KIR).						P	Z' 0.3 1.0
								Mx	Z 2.8 13
"	12	UPP	iPKP	15 47 29.8					Kamchatka (h = N).
		South of Fiji Islands (h = 500 km).							m = 6.1 (UPP,KIR).
"	12	UPP	iP	22 11 30.9	"	15	UPP	iP	23 29 47.3
		Ionian Sea (h = N).							
"	12	UPP	iP	23 58 08.5	"	16	UPP	iPKP	08 27 52.1
		Greece (h = N).					South of Fiji Islands (h = 500 km).		
"	13	UPP	iPKP	02 06 09.4	"	17	UPP	iSn	03 24 53.4
		South of Fiji Islands (h = N).					Poland (h = 5 km).		
"	13	UPP	iP	15 19 59.7	"	17	UPP	iP	14 23 06.3
			i	15 20 04.6			Southern Iran (h = N).		
			iS	15 24 28	"	17	UPP	iP	15 46 44.2
				micr sec			Ascencion Island region (h = 10 km).		
			Mx	Z 1.7 13	"	18	UPP	iP	01 00 07.1
		KIR	Mx	15 35			Cyprus region (h = N).		
				micr sec	"	18	UPP	i(PKP)	08 11 50.5
			Mx	Z 0.9 10			South of Fiji Islands (h = 530 km).		
		Turkey (h = N).							
		M = 4.7 (UPP,KIR).							
"	13	UPP	iP	20 01 56.6	"	18	UPP	iP	19 52 45.1
		Turkey (h = N).					Eastern Caucasus (h = N).		
"	13	UPP	iP	02 21 11.7	"	18	UPP	iPKP1	22 32 16.0
		Off east coast of Honshu, Japan (h = 55 km).					South of Fiji Islands (h = 500 km).		
"	14	UPP	i(PKP)	03 59 52.1	"	19	UPP	iP	02 26 17.9
				micr sec	"	19	UPP	iP	03 59 44.4
			P	Z' 0.1 0.9			Kodiak Island region (h = N).		
		South of Fiji Islands (h = 500 km).							
"	14	UPP	iP	07 56 35.0	"	19	UPP	iP	09 51 37.6
		Eastern Sea of Japan (h = 230 km).					Eastern Sea of Japan (h = N).		
"	14	UPP	iP	21 48 17.3					

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

1998				1998			
Apr.	19	UPP iP i	12 33 03.2 12 33 14.2	Apr.	22	UPP iPdiff	08 45 43.8
		Southwestern Ryukyu Islands (h = N).				Minahassa Peninsula, Sulawesi (h = 130 km).	
"	19	UPP iP	16 03 08.6	"	22	UPP iP	11 44 16.1 C micr sec
		Off coast of Oregon (h = 10 km).				P Z'	0.1 1.1
"	19	UPP iP	16 36 51.0	KIR	iP	11 43 39.5 C micr sec	
		Off coast of Oregon (h = 10 km).				P Z'	0.2 1.3
"	20	UPP iP	00 14 32.9			Western Honshu, Japan (h = N). m = 5.9 (UPP,KIR).	
		Southern Sumatera, Indonesia (h = 60 km).		"	22	UPP iP	15 53 14.3 C micr sec
"	20	UPP iP	20 51 26.6			P Z'	0.1 0.8
"	20	UPP i(PKP)	22 43 52.4	KIR	iP	15 52 28.9 C micr sec	
		South of Fiji Islands (h = 550 km).				P Z'	0.1 1.0
"	20	UPP iP iS	23 11 55.2 C 23 22 20			Kuril Islands (h = 45 km). m = 5.9 (UPP,KIR).	
			micr sec	"	23	UPP iP	02 21 03.2
		P Z'	0.2 1.0			Ionian Sea (h = N).	
		Mx Z	1.9 23	"	23	UPP eP	03 05 55
		KIR iP	23 11 39.3	"	23	UPP iP	03 41 33.3
		i	23 11 41.6			i	03 41 38.3
			micr sec			iS	03 45 26
		i Z'	0.7 1.2				micr sec
		Mx Z	1.4 20			i Z'	0.1 1.0
		Guerrero, Mexico (h = 70 km). m = 6.4, M = 5.3 (UPP,KIR). M uncorrected for focal depth.				Mx Z	2.2 23
"	20	UPP iPKP1 iPKP2 i	23 53 46.6 23 54 03.6 23 55 03.1	KIR	Mx	03 43	
		North Island, New Zealand (h = 250 km).				micr sec	
						Mx Z	1.9 23
"	21	UPP iP	05 37 48.2			Greenland Sea (h = 10 km). M = 4.2 (UPP,KIR).	
		Southwestern Ryukyu Islands (h = 90 km).		"	23	UPP iP	11 15 03.5
"	21	UPP iP	05 41 37.7			Bonin Islands region (h = 470 km).	
"	21	UPP iP	16 35 43.9	"	23	UPP iP	12 08 24.2
		South of Mariana Islands (h = N).				Greece (h = 5 km).	
"	21	UPP iPKP	18 50 22.0	"	23	UPP iPKP	18 50 22.0
		South of Fiji Islands (h = 550 km).				South of Fiji Islands (h = 550 km).	

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

1998				1998					
Apr.	23	UPP	iP	21 11 20.2	Apr.	25	UPP	iP	15 46 39.7
				micr sec					Mindanao, Philippine Islands
			P	Z' 0.1 1.0					(h = 70 km).
		KIR	iP	21 11 28.2					Late arrival when compared with the
				micr sec					NEIS solution.
			P	Z' 0.1 1.0	"	26	UPP	iPKP1	01 39 38.3
		Afghanistan-Tajikistan bord. reg.						iPKP2	01 39 44.8
		(h = 130 km).							Kermadec Islands region
		m = 5.5 (UPP,KIR).							(h = 170 km).
"	23	UPP	iP	22 10 21.6	"	26	UPP	iP	03 33 14.7
"	23	UPP	Mx	23 03					Near east coast of Honshu, Japan
				micr sec					(h = 100 km).
			Mx	Z 2.7 22	"	26	UPP	iP	04 52 43.7
		KIR	Mx	23 00					South of Honshu, Japan (h = N).
				micr sec	"	26	UPP	iP	06 28 52.9
			Mx	Z 1.4 20					Hindu Kush region, Afghanistan
		Vanuatu Islands (h = 10 km).							(h = 250 km).
		M = 5.7 (UPP,KIR).		"	26	UPP	iP	14 26 51.7	
"	24	UPP	iP	01 59 42.8				iPcP	14 27 42.3
		Western Gulf of Aden (h = 10 km).							micr sec
"	24	UPP	iP	05 12 38.9				P	Z' 0.1 0.9
			i	05 14 06.6					Congo (h = 10 km).
		Afghanistan-Tajikistan bord. reg.		"	27	UPP	iPKP1	07 16 02.3	
		(h = N).							South of Fiji Islands (h = 500 km).
"	25	UPP	iP	04 46 09.2	"	27	UPP	iP	12 04 21.0
		Kuril Islands (h = N).							Fox Islands, Aleutian Islands (h = N).
"	25	UPP	iP	05 30 22.9	"	27	UPP	ePdiff	18 54 49
		Celebes Sea (h = 330 km).						iSKS	19 05 25
"	25	UPP	Mx	07 02					micr sec
				micr sec				Mx	Z 23 22
			Mx	Z 2.9 21			KIR	Mx	19 44
		UPP	Mx	07 04					micr sec
				micr sec				Mx	Z 8.5 20
			Mx	Z 2.6 23					Irian Jaya region, Indonesia
		Southern Mid-Atlantic Ridge							(h = 55 km).
		(h = 10 km).							M = 6.4 (UPP,KIR).
		M = 5.7 UPP,KIR).		"	28	UPP	iPdiff	00 04 09.2	
"	25	UPP	iP	11 32 07.9				ipP	00 06 19.0
		Chiapas, Mexico (h = 60 km).							Jawa, Indonesia (h = 590 km).
"	25	UPP	iP	11 32 07.9	"	28	UPP	i(PKP)	16 02 19.7
		Chiapas, Mexico (h = 60 km).							Fiji Islands region (h = 610 km).

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

1998

Apr.	29	UPP	iP	03 35 50.0	
			iS	03 40 04	
				micr	sec
			Mx	Z 6.1	10
		KIR	Mx	03 51	
				micr	sec
			Mx	Z 4.4	11
		Southern Greece (h = N).			
		M = 5.3 (UPP,KIR).			
"	29	UPP	iPKP1	08 40 44.5	
		Kermadec Islands region (h = N).			
"	29	UPP	iP	16 38 48.3	
		Hindu Kush region, Afghanistan (h = N).			
"	29	UPP	iP	17 48 10.9	
		Pakistan (h = N).			
"	29	UPP	iP	23 44 40.2	
			iS	23 54 36	
				micr	sec
			P	Z' 0.1	1.0
			Mx	Z 2.4	18
		KIR	iP	23 44 05.1	
				micr	sec
			P	Z' 0.1	1.1
			Mx	Z 3.8	18
		South of Honshu, Japan (h = N).			
		m = 5.8, M = 5.6 (UPP,KIR).			
"	30	UPP	eP	08 35 28	
		South of Honshu, Japan (h = 45 km).			
"	30	UPP	iP	11 04 12.8	December 4, 1999
			i	11 04 19.3	
			iS	11 08 28	
		Southern Greece (h = N).			

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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,	13°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

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1998					1998				
May	1	UPP	iP	04 05 09.6	May	3	UPP	iP	23 42 26.7
			iS	04 09 12				i	23 42 41.1
				micr sec				iS	23 52 26
			P	Z' 0.1 0.8					micr sec
			Ionian Sea (h = N).					P	Z' 0.2 0.8
								i	Z' 1.0 1.0
"	2	UPP	iP	08 47 04.4				Mx	Z 266 16
			iS	08 55 22				Southeast of Taiwan (h = N).	
				micr sec					
			P	Z' 0.2 0.6	"	4	UPP	iP	09 39 40.3
		KIR	iP	08 46 55.9				i	09 39 52.7
				micr sec				Off east of Hokkaido, Japan (h = N).	
			P	Z' 0.2 1.0					
			Myanmar (h = 122 km).		"	4	UPP	iPKP1	18 25 38.4
			m = 6.2 (UPP,KIR).					iPKP2	18 25 47.0
								South of Kermadec Islands (h = N).	
"	3	UPP	eP	02 20 42	"	5	UPP	iP	03 23 22.4
				micr sec				Philippine Islands region (h = N).	
			Mx	Z 3.0 15	"	5	UPP	iP	03 37 23.2
		KIR	Mx	02 55				Philippine Islands region (h = N).	
				micr sec	"	5	UPP	iP	08 45 32.0
			Mx	Z 2.4 17				Volcano Islands region (h = 120 km).	
			Near s. coast of Honshu, Japan		"	5	UPP	iP	14 43 36.9
			(h = 35 km).					micr sec	
			M = 5.5 (UPP,KIR).					Mx	Z 0.7 10
"	3	UPP	iP	17 51 32.7	"	5	UPP	iP	14 43 36.9
			Western Honshu, Japan (h = 370 km).					micr sec	
								Mx	Z 0.7 10
								Crete (h = N).	

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

1998				1998					
May	5	UPP	iP Crete (h = N).	15 20 12.0	May	9	UPP	iP Alaska peninsula (h = 0). Late arrival when compared with the NEIC solution.	01 09 46.9
"	5	UPP	iP	23 29 41.3	"	9	UPP	ipP Philippine Islands region (h = N).	02 28 27.2
"	6	UPP	iP i i iS P Mx Luzon, Philippine Islands (h = N).	02 05 18.7 C 02 05 21.8 02 05 30.8 02 15 20 micr sec Z' 0.1 0.9 Z 2.8 15	"	9	UPP	iP Ryukyu Islands (h = N).	05 19 03.3
"	6	UPP	eP	02 59 03	"	9	UPP	i(PKP) South of Fiji Islands (h = 500 km).	10 19 20.9
"	6	UPP	iP	11 15 52.4	"	9	UPP	iP Greece-Albania border region (h = 10 km).	13 10 41.2
"	6	UPP	iP	11 18 39.4	"	9	UPP	iP i iS Mx KIR Mx Mx Turkey (h = 10 km). M = 4.5 (UPP,KIR).	15 43 31.8 15 43 34.8 15 48 10 micr sec Z 0.7 11 16 00 micr sec Z 0.8 10
"	6	UPP	iPKP1 South of Fiji Islands (h = 520 km).	14 52 56.1	"	9	UPP	iP Hindu Kush region, Afghanistan (h = 80 km).	16 08 23.3
"	6	UPP	iP Myanmar (h = N).	20 07 11.5	"	9	UPP	eP Near coast of Guerrero, Mexico (h = N).	17 16 03
"	6	UPP	iP Kuril Islands (h = 80 km).	20 25 41.3	"	9	UPP	iP Pakistan (h = N).	17 47 22.8
"	7	UPP	iP Southeast of Taiwan (h = N).	15 20 47.0	"	9	UPP	iP Taiwan (h = 90 km).	21 05 16.0
"	7	UPP	iP Philippine Islands region (h = N).	19 13 48.2	"	10	UPP	iPKP2 i South of Kermadec Islands (h = N).	02 22 15.9 02 22 30.7
"	7	UPP	eP	23 28 09	"	8	UPP	iPKP iPKP2 Kermadec Islands region (h = 100 km).	17 05 33.5 17 05 36.8
"	8	UPP	iP i Southeast of Taiwan (h = N).	02 47 18.5 02 47 23.2	"	8	UPP	iP Southeast of Taiwan (h = N).	17 49 09.9

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

1998				1998					
May	10	UPP	iP	06 18 44.1	May	14	UPP	iP	15 21 57.6
			i	06 18 46.4				Northeast of Taiwan (h = 220 km).	
				micr sec					
			Mx	Z 4.9 19	"	14	UPP	iP	15 40 33.4
		KIR	Mx	06 56				South of Honshu, Japan (h = N).	
				micr sec					
			Mx	Z 5.9 19	"	14	UPP	iP	19 07 36.1 C
			Near coast of Guatemala (h = N).					i	19 07 42.6
			M = 5.9 (UPP,KIR).					i(PP)	19 10 10.2
"	11	UPP	eSKS	01 58 48				iS	19 16 48
				micr sec					micr sec
			Mx	Z 3.4 21				P	Z' 0.6 1.3
		KIR	Mx	02 31			KIR	iP	19 06 54.0 C
				micr sec				i	19 07 00.7
			Mx	Z 1.4 15				i(PP)	19 09 13.2
			Off coast of Mexico (h = 10 km).						micr sec
			M = 5.6 (UPP,KIR).					P	Z' 0.5 1.6
"	12	UPP	Mx	17 44				Mx	Z 11 20
				micr sec				Off east coast of Honshu, Japan (h = N).	
			Mx	Z 1.3 19				m = 6.4, M = 6.0 (UPP,KIR).	
		KIR	Mx	17 40				Double P, on average 6.7 s apart.	
				micr sec				The second arrival, when interpreted as pP, gives a focal depth of 20 km.	
			Mx	Z 1.7 19	"	14	UPP	iP	21 47 47.6
			Kuril Islands (h = N).						
			M = 5.1 (UPP,KIR).		"	15	UPP	iP	00 16 05.2
"	14	UPP	Mx	24 10				South of Mariana Islands (h = N).	
				micr sec					
			Mx	Z 16 23	"	15	UPP	iP	05 37 09.3
		KIR	Mx	24 06				Ionian Sea (h = 10 km).	
				micr sec	"	15	UPP	iP	06 11 10.0
			Mx	Z 8.7 22					micr sec
			New Britain region, P.N.G. (h = 60 km).					Mx	Z 1.1 16
			M = 6.4 (UPP,KIR).				KIR	Mx	06 54
"	14	UPP	iP	11 04 57.2					micr sec
				micr sec				Mx	Z 1.2 16
			Mx	Z 2.4 22				Mariana Islands (h = 150 km).	
		KIR	Mx	11 35				M = 5.4 (UPP,KIR).	
				micr sec				M uncorrected for focal depth.	
			Mx	Z 3.0 19	"	15	UPP	iP	08 53 05.6
			Off east coast of Honshu, Japan (h = N).					Andaman Islands, India (h = N).	
			M = 5.4 (UPP,KIR).		"	15	UPP	iP	11 36 25.3
"	14	UPP	iP	14 23 50.5				Eastern Gulf of Aden (h = 10 km).	

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

1998				1998			
May	15	UPP iP Xizang (h = N).	15 49 34.3	May	18	UPP iP Kuril Islands (h = 55 km).	15 51 57.9
"	15	UPP ipP Near s. coast of Honshu, Japan (h = 90 km).	18 56 56.4	"	18	UPP iP iS P Mx KIR iP P	17 23 22.9 D 17 26 57.7 micr sec Z' 1.1 09 Z 0.5 10 17 24 37.2 D micr sec Z' 0.5 1.1
"	16	UPP i(PKP) iPKP iSP1 i (PKP) Mx KIR Mx Mx South of Fiji Islands (h = 590 km). M = 6.0 (UPP,KIR). M uncorrected for focal depth.	02 40 19.4 02 40 27.6 02 43 08.2 02 51 37.4 micr sec Z' 0.6 0.9 Z 3.8 20 03 39 micr sec Z 3.1 21	"	19	UPP iP iS Mx KIR Mx Mx Off east coast of Honshu, Japan (h = N). M = 5.5 (UPP,KIR).	01 30 06.4 01 39 36 micr sec Z 1.9 16 02 06 micr sec Z 2.5 15
"	16	UPP iP	03 16 37.6	"	19	UPP iP South of Honshu, Japan (h = 390 km).	02 07 17.7
"	16	UPP iP Ionian Sea (h = N).	07 34 52.9	"	20	UPP iPKP1 iPKP2 Kermadec Islands region (h = N).	13 28 15.3 13 28 22.0
"	16	UPP iP	10 40 53.1	"	20	UPP iP Southeast of Taiwan (h = N).	19 56 41.5
"	16	UPP eP Northwestern Balkan region (h = 10 km).	10 59 07	"	20	UPP iP Near coast of Honshu, Japan (h = 80 km).	22 05 01.7
"	16	UPP i(PKP) iPKP Fiji Islands region (h = 170 km).	11 00 30.0 11 00 37.1	"	21	UPP iP i iPP iSKS iS Mx KIR iP P Mx	05 47 50.6 05 48 01.3 05 51 44.3 05 58 20 05 58 58 micr sec Z 16 19 05 47 37.3 micr sec Z' 0.6 1.9 Z 18 21
"	16	UPP iP Near coast of Guerrero, Mexico (h = N).	17 54 48.2				
"	17	UPP eP i Southeast of Ryukyu Islands (h = N).	05 39 56 05 40 11.2				
"	17	UPP iP Crete (h = N).	05 58 13.7				
"	18	UPP iPKP2 South of Fiji Islands (h = 700 km).	14 09 52.5				

(cont.)

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

1998				1998			
May	21	(cont.) Minahassa Peninsula, Sulawesi (h = N).		May	24	(cont.) Minihassa Peninsula, Sulawesi (h = N). M = 5.3 (UPP,KIR).	
"	21	UPP	iP 19 23 27.1 South of Honshu, Japan (h = 100 km).	"	25	UPP	iP 13 00 11.2 Central Mediterranean Sea (h = N).
"	21	UPP	Mx 23 44 micr sec Mx Z 3.6 19 KIR Mx 23 46 micr sec Mx Z 3.0 19 Prince Edward Islands region (h = 10 km). M = 5.9 (UPP,KIR).	"	26	UPP	iPKP1 04 32 52.0 South of Fiji Islands (h = 600 km).
"	22	UPP	iSKS 05 13 22 micr sec Mx Z 35 23 KIR Mx 05 45 micr sec Mx Z 13 20 Central Bolivia (h = 25 km). M = 6.6 (UPP,KIR).	"	26	UPP	iP 09 16 08.1 Hindu Kush region, Afghanistan (h = 100 km).
"	22	UPP	iP 20 00 50.5 iS 20 10 04 KIR iP 20 00 16.3 micr sec P Z' 0.2 0.9 Kyushu, Japan (h = 80 km).	"	26	UPP	iP 15 17 16.7
"	23	UPP	iP 17 56 43.4 i 17 59 03.6 iS 18 06 44 KIR iP 17 56 27.7 D micr sec P Z' 1.2 1.0 Mindanao, Philippine Islands (h = 660 km).	"	27	UPP	iP 01 28 36.1 i 01 28 44.8 micr sec P Z' 0.1 0.9 KIR iP 01 28 11.8 i 01 28 20.2 micr sec P Z' 0.1 1.0 Southeast of Taiwan (h = N). m = 5.8 (UPP,KIR). Double P, on average 8.6 s apart. The second arrival, when interpreted as pP, provides a focal depth of 30 km.
"	24	UPP	Mx 03 35 micr sec Mx Z 1.0 19 KIR Mx 03 37 micr sec Mx Z 1.4 20 (cont.)	"	27	UPP	iP 01 31 48.8 Central Mediterranean Sea (h = N).
				"	27	UPP	ePKP2 03 44 02 South of Australia (h = 10 km).
				"	27	UPP	iPKP1 12 53 18.9 iPKP2 12 53 25.4 Kermadec Islands region (h = 340 km).
				"	27	UPP	Mx 16 37 micr sec Mx Z 3.8 20 KIR Mx 16 35 micr sec Mx Z 2.1 19 New Britain region, P.N.G. (h = N). M = 5.8 (UPP,KIR).

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

1998				1998					
May	27	UPP	iPKP1 iPKP2	16 58 20.8 16 58 27.1	May	28	UPP	iP	10 24 27.6
				South of Kermadec Islands (h = 250 km).					Southwestern Pakistan (h = 0). Late arrival, when compared with the NEIC solution.
"	27	UPP	iP iS	20 52 06.1 21 00 40	"	28	UPP	iP	11 33 55.9
				micr sec					
			P	Z' 0.3 1.0	"	28	UPP	iP	13 29 32.6
			Mx	Z 8.7 22					micr sec
		KIR	iP	20 51 12.6			KIR	iP	13 28 39.2
				micr sec					micr sec
			P	Z' 0.3 0.8				P	Z' 0.1 1.0
			Mx	Z 3.1 16					Off east coast of Kamchatka (h = N). m = 5.9 (UPP,KIR).
				Off east coast of Kamchatka (h = 60 km). m = 6.3, M = 5.6 (UPP,KIR). M uncorrected for focal depth.	"	28	UPP	iP	14 06 23.0
"	27	UPP	iP	20 53 04.1	"	28	UPP	iP	15 51 12.0
				Off east coast of Kamchatka (h = N).				i	15 51 15.5
"	27	UPP	iP	21 40 04.9					Hindu Kush region, Afghanistan (h = N).
				Off east coast of Kamchatka (h = N).	"	28	UPP	iP	17 05 02.0
"	27	UPP	iP	23 14 22.7					Unimak Island region (h = N).
				Kamchatka (h = N).	"	28	UPP	iP	18 39 31.0
"	28	UPP	iP	00 31 49.2				iS	18 44 22
			i	00 31 56.3					Egypt (h = 10 km).
				Near east coast of Kamchatka (h = 100 km).	"	28	UPP	iP	21 19 51.9
"	28	UPP	iP	05 09 30.7				iS	21 26 24
			iS	05 18 02					Southern Xinjiang, China (h = N).
				micr sec	"	28	UPP	iP	21 36 48.6
			P	Z' 3.6 18					Southern Xinjiang, China (h = N).
		KIR	Mx	05 36	"	29	UPP	iP	05 00 42.1
				micr sec					Southern Sumatera, Indonesia (h = N).
			Mx	Z 2.7 18	"	29	UPP	iP	11 33 04.1
				Off east coast of Kamchatka (h = 45 km). M = 5.4 (UPP,KIR).	"	29	UPP	Mx	12 20
"	28	UPP	iP	05 34 42.8					micr sec
				Off east coast of Kamchatka (h = N).				P	Z' 1.3 19
"	28	UPP	iP	05 55 00.5			KIR	Mx	12 20
				Off east coast of Kamchatka (h = N).					micr sec
								P	Z' 1.1 18
									Central Bolivia (h = N). M = 5.4 (UPP,KIR).

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

1998				1998			
May	29	UPP	iP	13 26 25.8	May	30	(cont.)
"	29	UPP	iP	22 54 44.2			micr sec
							P Z' 0.3 1.3
							Mx Z 13 19
"	29	UPP	iP	22 57 07.8 C	KIR	iP	18 28 54.2 C
			i	22 57 13.5			micr sec
			iPP	22 58 46.5			P Z' 0.2 1.3
			iS	23 03 12			Mx Z 14 15
				micr sec			Off east coast of Honshu, Japan
			P	Z' 0.2 1.3			(h = N).
			Mx	Z 6.9 13			m = 6.1, M = 6.2 (UPP,KIR).
		KIR	iP	22 57 06.0			
			i	22 57 10.8	"	31	UPP iP 02 08 03.1
				micr sec			
			P	Z' 0.1 0.9	"	31	UPP iP 03 25 43.5
			i	Z' 0.2 1.0			Off east coast of Honshu, Japan
			Mx	Z 3.5 10			(h = N).
				Kyrgyzstan (h = 10 km).			
				m = 5.7, M = 5.5 (UPP,KIR).			
				Double P, on average 5.3 s apart. The			
				second arrival, when interpreted as			
				pP, gives a focal depth of 20 km.			
"	30	UPP	iP	02 05 49.4			
				Hindu Kush region, Afghanistan			
				(h = 200 km).			
"	30	UPP	iP	06 30 03.1			
			i	06 30 13.1			
				micr sec			
			P	Z' 0.3 1.0			
			i	Z' 0.6 1.0			
			Mx	Z 171 15			
		KIR	Mx	06 48			
				micr sec			
			Mx	Z 98 9			
				Afghanistan-Tajikistan bord. reg.			
				(h = N).			
				M = 7.0 (UPP,KIR).			
"	30	UPP	iP	09 50 01.9			
				Afghanistan-Tajikistan bord. reg.			
				(h = N).			January 17, 2000
"	30	UPP	iP	10 46 11.3			Conny Holmqvist
							Ota Kulhánek
"	30	UPP	iP	18 29 35.9 C			
			iS	18 38 55			
				(cont.)			

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,	13°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

JUNE 1 - 30, 1998

1998					1998				
June	1	UPP	iP	01 32 30.9	June	2	UPP	iP	02 05 21.1
				Off east coast of Honshu, Japan (h = 30 km).					Kuril Islands (h = N).
"	1	UPP	iP	05 44 30.4 C	"	2	UPP	iP	08 52 07.6
			iS	05 53 00	"	2	UPP	iP	14 10 54.4
				micr sec	"	2	UPP	i(PKP2)	15 13 51.6
			P	Z' 0.8 1.0					South of Kermadec Islands (h = 500 km).
			Mx	Z 36 21	"	2	UPP	iP	21 18 12.1
		KIR	iP	05 43 36.8 C					Off east coast of Honshu, Japan (h = N).
				micr sec					Late arrival when compared with the NEIC solution.
			P	Z' 1.0 1.0	"	2	UPP	iP	23 15 22.9
			Mx	Z 16 14	"	3	UPP	Mx	09 01
				Off east coast of Kamchatka (h = 45 km).					micr sec
				m = 6.8, M = 6.3 (UPP,KIR).					Mx Z 1.5 13
"	1	UPP	iP	07 46 42.5	"	2	UPP	iP	23 15 22.9
			i	07 48 13.2					Central Italy (h = 10 km).
				micr sec	"	3	UPP	Mx	09 05
			P	Z' 0.1 0.8					micr sec
				Near s. coast of western Honshu (h = 400 km).			KIR	Mx	09 05
"	1	UPP	iP	11 51 48.9					Mx Z 1.3 10
				Afghanistan-Tajikistan bord. reg. (h = N).					Aegean Sea (h = 10 km).
"	1	UPP	iP	14 01 07.1					M = 4.6 (UPP,KIR).
			i	14 01 12.8	"	3	UPP	iP	15 53 38.0
				Central Italy (h = 10 km).					Northern Mid-Atlantic ridge (h = 10 km).

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

1998				1998			
June	3	UPP iPKP2	18 49 33.5	June	6	UPP iP	11 22 39.1
		Off e. coast of N. Island, N.Z.				i	11 22 41.8
		(h = 250 km).				Xizang (h = N).	
"	3	UPP iP	18 47 15.6	"	6	UPP iP	13 44 45.1
		Qinghai, China (h = N).					micr sec
"	4	UPP iP	11 03 06.4			Mx Z	0.7 11
"	4	UPP iP	12 19 34.1			KIR Mx	14 02
"	4	UPP iP	15 13 01.0				micr sec
"	4	UPP iP	21 41 12.1			Mx Z	1.9 10
		iS	21 44 44			Afghanistan-Tajikistan bord. reg.	
			micr sec			(h = N).	
		P Z'	0.1 1.5			M = 5.0 (UPP,KIR).	
		Mx Z	7.1 12	"	7	UPP iP	00 13 14.2
		KIR iP	21 40 56.5			Kyrgystan-Xinjiang border reg.	
		i	21 40 58.4			(h = N).	
			micr sec	"	7	UPP iP	23 32 48.2 C
		i Z'	0.2 1.1			ipP	23 33 15.9
		Mx Z	5.9 14			iSKS	23 43 08
		Iceland region (h = 10 km).					micr sec
		m = 5.3 (UPP,KIR).				P Z'	0.3 1.0
						Mx Z	10 25
"	4	UPP iP	22 06 49.6			KIR iP	23 32 36.7 C
		Afghanistan-Tajikistan bord. reg.				ipP	23 33 01.0
		(h = N).					micr sec
"	5	UPP ipP	02 39 09.8			P Z'	1.3 1.5
		i	02 40 34.6			Mx Z	7.7 23
		Afghanistan-Tajikistan bord.reg.				Near coast of Chiapas, Mexico.	
		(h = N).				h = 100 km (UPP,KIR).	
"	5	UPP iP	21 57 11.0			M uncorrected for focal depth.	
		Central Italy (h = 10 km).		"	8	UPP eP	10 00 30
"	6	UPP iPKP1	04 36 08.6			Northwestern Caucasus (h = N).	
		Kermadec Islands region		"	9	UPP iP	05 36 34.2
		(h = 150 km).				California-Nevada border region	
"	6	UPP iP	04 49 31.2			(h = 5 km).	
		i	04 51 02.3	"	10	UPP iP	08 37 57.4
		Hindu Kush region, Afghanistan				i	08 38 19.3
		(h = N).				Southern Iran (h = 90 km).	
"	6	UPP iP	11 15 58.5	"	11	KIR iSg1	00 33 28.0
		Xizang (h = N).				Bothnian Bay, 65.2°N, 24.0°E.	
						Origin time = 00 31 55.	
						M _L (UPP) = 2.8 1.	
						By combination with Finnish and Norwegian station readings.	

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

1998				1998			
June	11	UPP iP	05 34 14.9	June	13	UPP iPKP2	06 11 31.2
		South of Honshu, Japan				Kermadec Islands region	
		(h = 310 km).				(h = 240 km).	
"	11	UPP iP	09 21 47.9	"	13	UPP iP	08 31 07.7
"	11	UPP iP	10 55 32.8	"	13	UPP iP	08 33 50.2
		Southern Xinjiang, China (h = N).				Greece-Albania border region	
						(h = 10 km).	
"	11	UPP iP	21 50 38.8	"	14	UPP iP	11 05 04.1
"	12	UPP iP	00 40 22.5			Eastern Siberia, Russia	
		Kuril Islands (h = N).				(h = 10 km).	
"	12	UPP iP	07 19 46.9	"	14	UPP iP	11 09 44.1
		Southern Greece (h = N).				Hokkaido, Japan region (h = 45 km).	
"	12	UPP iP	09 29 12.7	"	14	UPP iP	13 28 40.2
"	12	UPP iP	10 09 42.2			i	13 28 48.1
"	12	UPP iP	10 44 13.1			iS	13 38 08
"	12	UPP iP	13 24 25.9			micr	sec
		Rat Islands, Aleutian Islands				P	Z' 0.1 0.9
		(h = 60 km).				i	Z' 0.1 1.0
"	12	UPP iP	13 52 04.6			Mx	Z 4.9 25
		Andreanof Islands, Aleutian Is.				KIR iP	13 28 01.9
		(h = N).				micr	sec
"	12	UPP iP	19 45 50.8			P	Z' 0.2 1.0
		Fiji Islands region (h = 600 km).				Mx	Z 2.5 15
"	12	UPP i(PKP)	21 09 33.9				Near east coast of Honshu, Japan
			micr sec				(h = 45 km).
			P Z' 0.2 0.7				m = 6.0, M = 5.6 (UPP,KIR).
		South of Fiji Islands (h = 500 km).		"	15	UPP iP	00 26 31.5
"	12	UPP ePKP	22 11 23	"	15	UPP iP	01 21 33.2
		Eastern New Guinea reg. P.N.G.				micr sec	
		(h = 140 km).				P	Z' 0.2 1.1
"	13	UPP iP	02 01 15.9			Mx	Z 1.5 19
		Kuril Islands (h = 60 km).				KIR Mx	01 40
"	13	UPP iP	02 31 19.7			micr sec	
		Southern Iran (h = N).				Mx	Z 1.4 15
							Northern Iran (h = 30 km).
							M = 4.8 (UPP,KIR).
"	13	UPP iP	02 01 15.9	"	15	UPP iP	07 40 05.6
		Kuril Islands (h = 60 km).				micr sec	
"	13	UPP iP	02 31 19.7			Mx	Z 1.3 14
		Southern Iran (h = N).				KIR Mx	07 57
						micr sec	
						Mx	Z 0.7 9

(cont.)

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

1998				1998			
June	15	(cont.) Southern Xinjiang, China (h = 55 km). M = 4.9 (UPP,KIR).		June	19	UPP iP	09 39 36.9 Near east coast of Kamchatka (h = N).
"	15	UPP iP	09 36 29.7 Off east coast of Kamchatka (h = N).	"	20	UPP iP iS	02 30 40.5 02 34 44 micr sec
"	16	UPP ipP	07 50 48.8 Samar, Philippine Islands (h = 45 km).	"	20	P Mx	Z' 0.1 1.0 Z 4.0 16 Sicily (h = 10 km).
"	16	UPP Mx	18 20 micr sec Mx Z 1.2 10 KIR Mx	"	20	UPP iP	12 06 42.2 Samar, Philippine Islands (h = N).
"	16	KIR Mx	18 24 micr sec Mx Z 1.6 11 Aegean Sea (h = 10 km). M = 4.6 (UPP,KIR).	"	20	UPP iPKP1	16 57 21.1 micr sec P Z' 0.1 1.0 South of Kermadec Islands (h = N).
"	16	UPP iPKP1	22 02 51.2 Kermadec Islands, New Zealand (h = 150 km).	"	20	UPP iPKP1 iPKP2	20 44 24.9 C 20 44 28.8 micr sec PKP1 Z' 0.1 0.9 PKP2 Z' 0.2 0.5 Mx Z 1.8 22 Kermadec Islands, New Zealand (h = 55 km).
"	18	UPP eP	04 29 38 i 04 29 46.3 iS 04 39 24 micr sec i Z' 0.1 1.2 Mx Z 11 19 Ascension Island region (h = 10 km).	"	21	UPP iP	13 03 58.8 Sicily (h = 10 km).
"	18	UPP iSg1	22 57 31.9	"	21	UPP iP	16 05 55.7 Pakistan (h = N).
"	18	KIR iPg1	22 54 58.3	"	22	UPP iP	07 18 50.0 micr sec P Z' 0.1 0.6 Mx Z 1.7 18 Ryukyu Islands (h = 60 km).
"	18	iSg1	22 55 40.5 Near coast of northern Norway, 66.4°N, 13.4°E. Origin time = 22 54 02. M _L (UPP) = 3.3 (0.27) 2. By combination with Finnish and Norwegian station readings.	"	22	UPP iP	10 14 22.0 Eastern Sea of Japan (h = 320 km).
"	19	UPP iP	02 31 08.0 Hokkaido, Japan region (h = N).	"	22	UPP iP	13 47 23.9
"	19	UPP iP	05 25 32.8 Afghanistan-Tajikistan bord. reg. (h = N).	"	22	UPP iP	20 21 24.0 Mariana Islands (h = 80 km).
				"	23	UPP iP	01 48 54.0 D micr sec Mx Z 2.0 21 North of Panama (h = 35 km).

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

1998				1998					
June	23	UPP	iP	11 08 21.7	June	25	UPP	iP	06 32 12.1
			iS	11 16 12					Mindanao, Philippine Islands
				micr sec					(h = 210 km).
			Mx	Z 1.9 20					
				Northern Mid-Atlantic ridge					
				(h = 10 km).					
"	23	UPP	iP	13 57 55.9	"	25	UPP	iP	06 47 08.7 C
									micr sec
									Z' 0.1 0.9
									Mx Z 3.2 9
							KIR	iP	06 47 01.8 C
									micr sec
									P Z' 0.1 0.8
									Mx Z 2.2 13
				Rat Islands, Aleutian Islands					Southern Xinjiang, China (h = N).
				(h = 130 km).					m = 5.6, M = 5.3 (UPP,KIR).
"	23	UPP	iP	22 47 35.2	"	25	UPP	iP	21 14 49.9
				Ryukyu Islands (h = 55 km).					micr sec
									Mx Z 1.5 22
"	23	UPP	iP	23 47 54.2					Leeward Islands (h = 45 km).
				Off east coast of Kamchakta (h = N).					
"	24	UPP	Mx	11 40	"	25	UPP	iP	23 02 51.6
				micr sec					Vancouver Islands region
									(h = 10 km).
				Mx Z 3.0 40					
		KIR	Mx	11 50	"	26	UPP	iP	01 32 10.5
				micr sec					micr sec
									P Z' 1.9 23
				Mx Z 1.3 19			KIR	Mx	01 55
				Southern Mid-Atlantic Ridge					micr sec
				(h = 10 km).					Mx Z 1.2 11
"	24	UPP	iP	15 03 52.5					Pakistan (h = N).
				Near east coast of Honshu, Japan					M = 5.0 (UPP,KIR).
				(h = 90 km).					
"	24	UPP	iPKP2	18 34 18.9	"	26	UPP	eP	02 31 54
				Kermadec Islands, New Zealand					
				(h = 150 km).					
"	24	UPP	iP	21 42 26.3	"	26	UPP	iP	11 11 16.3
				Near s. coast of Honshu, Japan					Afghanistan-Tajikistan bord. reg.
				(h = N).					(h = 100 km).
"	25	UPP	iP	02 21 52.6	"	26	UPP	iP	12 32 30.0
			iS	02 26 40					Taiwan region (h = 55 km).
				micr sec					
				Mx Z 1.8 19					
				North Atlantic Ocean (h = 10 km).					
"	25	UPP	iP	05 51 51.8	"	26	UPP	i(PKP)	20 26 33.8
				Northern Mid-Atlantic ridge					South of Fiji Islands (h = 150 km).
				(h = 10 km).					
"	25	UPP	iP	05 51 51.8	"	27	UPP	iP	08 16 04.1
				Northern Mid-Atlantic ridge					Philippine Islands region (h = N).
				(h = 10 km).					

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1998				1998			
June	27	UPP	iP	09 15 32.5	June	30	(cont.)
							West of Macquarie Island
							(h = 10 km).
"	27	UPP	iP	14 01 21.8			M = 6.1 (UPP,KIR).
			i	14 01 28.0			
			iS	14 05 48	"	30	UPP iP 03 45 00.2 C
				micr sec			micr sec
			i	Z' 0.7 1.0			P Z' 0.2 0.8
			Mx	Z 74 19			KIR iP 03 45 09.9 C
		KIR	iP	14 02 17.0			micr sec
			i	14 02 23.4			P Z' 0.3 1.0
				micr sec			Hindu Kush region, Afghanistan
			i	Z' 2.6 1.5			(h = 200 km).
			Mx	Z 25 14			m = 5.7 (UPP,KIR).
				Turkey (h = N).			
				m = 6.6, M = 6.1 (UPP,KIR).	"	30	UPP iP 08 10 51.0
							i 08 11 12.0
"	27	UPP	iP	20 55 44.4			Myanmar (h = 120 km).
				Turkey (h = 10 km).			
"	27	UPP	iP	21 14 44.2	"	30	UPP iP 12 12 27.2
				Mindanao, Philippine Islands			Southeastern Siberia, Russia
				(h = 540 km).			(h = N).
"	28	UPP	iP	04 04 59.0	"	30	UPP ipP 14 31 05.7
				Turkey (h = 10 km).			Yunnan, China (h = N).
"	28	UPP	iPKP	21 23 36.5	"	30	UPP ipP 15 53 17.7
				South of Fiji Islands (h = 100 km).			Ethiopia (h = 10 km).
"	28	UPP	iPKP	23 08 02.0	"	30	UPP iP 17 34 11.7
				South of Fiji Islands (h = 500 km).			Eastern Honshu, Japan (h = N).
"	29	UPP	iP	20 43 28.2	"	30	UPP i(PKP) 17 45 06.6
				micr sec			South of Fiji Islands (h = 250 km).
			Mx	Z 1.2 10	"	30	UPP eP 20 30 25
		KIR	Mx	21 01			Bahama Islands (h = 40 km).
				micr sec			
			Mx	Z 2.7 12			
				Afghanistan-Tajikistan bord. reg.			
				(h = N).			
				M = 5.1 (UPP,KIR).			
"	30	UPP	Mx	01 00			January 31, 2000
				micr sec			
			Mx	Z 4.3 30			Conny Holmqvist
		KIR	Mx	01 05			Ota Kulhánek
				micr sec			
			Mx	Z 4.1 22			
				(cont.)			

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

1998				1998			
July	7	UPP iP	08 26 53.4	July	8	UPP iP	12 30 13.9
		Ionian Sea (h = N).				Off east coast of Kamchakta (h = 45 km).	
"	7	UPP iP	13 46 36.8	"	8	UPP iP	15 15 52.8
		Luzon, Philippine Islands (h = 250 km).				Sunda Strait (h = 55 km).	
"	7	UPP iPKP1	14 37 37.6	"	8	UPP iP	18 56 19.1
		iPKP2	14 37 50.3			Off coast of Hokkaido, Japan (h = N).	
		South of Kermadec Islands (h = 55 km).					
"	7	UPP iP	14 43 38.6 D	"	9	UPP iP	01 46 21.5
		South of Honshu, Japan (h = 110 km).				Ionian Sea (h = 10 km).	
"	7	UPP iPKP	15 24 21.5	"	9	UPP iP	05 26 07.7 C
		South of Kermadec Islands (h = 50 km).				iPP	05 27 32.2
						iS	05 31 46
							micr sec
						P	Z' 0.4 1.5
						Mx	Z 32 16
"	7	UPP iP	18 42 22.7 C			KIR iP	05 26 40.8 C
			micr sec				micr sec
		P	Z' 0.1 0.9			P	Z' 1.2 1.6
		Mx	Z 1.8 17			Mx	Z 20 19
		KIR iP	18 42 01.9 C			Azores Islands (h = 10 km). m = 6.3, M = 6.0 (UPP,KIR).	
			micr sec				
		P	Z' 0.1 1.0				
		Mx	Z 1.0 14	"	9	UPP iP	06 45 47.2
		Philippine Islands region (h = N). m = 5.8, M = 5.3 (UPP,KIR).				Off w. coast of Baja California (h = 10 km).	
"	7	UPP Mx	20 52	"	9	UPP iP	08 48 37.8
			micr sec			Kuril Islands (h = 180 km).	
		Mx	Z 1.2 15	"	9	UPP iP	09 31 41.2
		KIR Mx	20 50			Myanmar (h = 55 km).	
			micr sec				
		Mx	Z 1.2 16	"	9	UPP iP	14 25 14.4 C
		Gulf of California (h = 10 km). M = 5.3 (UPP,KIR).				i	14 25 50.3
"	8	UPP iP	03 54 53.3 C			iS	14 30 00
			micr sec				micr sec
		P	Z' 0.1 0.7			P	Z' 0.2 1.0
		KIR iP	03 54 48.0 C			Mx	Z 11 17
			micr sec			KIR iP	14 25 52.9 C
		P	Z' 0.1 1.0				micr sec
		Bhutan (h = N). m = 6.0 (UPP,KIR).				P	Z' 0.6 1.0
						Mx	Z 3.7 13
						Armenia-Azerbaijan-Iran bord. reg. (h = 25 km). m = 6.2, M = 5.4 (UPP,KIR).	

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

1998				1998					
July	9	UPP	iPKP	15 05 06.3	July	10	UPP	iP	08 31 22.2
			iPKP1	15 05 10.5				North of Ascension Island (h = 10 km).	
				micr sec					
			P	Z' 0.1 1.0	"	10	UPP	iPKP1	10 48 44.5
			PKP1	Z' 1.7 1.0				iPKP2	10 48 49.8
			Mx	Z 5.1 20			Kermadec Islands, New Zealand (h = 150 km).		
		KIR	Mx	16 09					
				micr sec					
			Mx	Z 4.7 21		10	UPP	iP	23 05 42.8
		Kermadec Islands, New Zealand (h = 130 km).					Bonin Islands region (h = 50 km).		
		M = 6.2 (UPP,KIR).							
		M uncorrected for focal depth.				11	UPP	iP	00 13 38.3
"	9	UPP	iP	16 34 31.5			Afghanistan-Tajikistan bord. reg. (h = N).		
		North of Ascension Island (h = 10 km).				12	UPP	iP	05 04 36.9
								micr sec	
"	9	UPP	iP	17 41 49.2			Mx	Z 2.0 17	
				micr sec			KIR	Mx	05 41
			Mx	Z 2.7 12				micr sec	
		KIR	Mx	17 56			Mx	Z 1.2 16	
				micr sec			Southwestern Ryukyu Islands (h = N).		
			Mx	Z 1.0 9			M = 5.3 (UPP,KIR).		
		Dodecanese Islands (h = 20 km).				12	UPP	iP	07 23 39.9
		M = 4.8 (UPP,KIR).						micr sec	
"	9	UPP	iP	19 49 34.0			Mx	Z 0.9 7	
			i	29 49 37.0			KIR	Mx	07 41
			ipP	19 50 14.3				micr sec	
				micr sec			Mx	Z 1.2 11	
			i	Z' 0.1 1.0			Kazakhstan-Xinjiang border reg. (h = N).		
			Mx	Z 0.9 16					
		KIR	iP	19 48 38.4		12	UPP	iP	21 00 26.0
			i	19 48 41.4				micr sec	
			ipP	19 49 18.2			Mx	Z 1.6 17	
				micr sec			KIR	Mx	21 23
			i	Z' 0.3 0.9				micr sec	
			Mx	Z 1.2 16			Mx	Z 1.1 15	
		Southern Alaska.					Pakistan (h = N).		
		h = 170 km (UPP,KIR).					M = 4.9 (UPP,KIR).		
		m = 5.9, M = 5.0 (UPP,KIR).				12	UPP	iP	11 26 36.1
		M uncorrected for focal depth.					Andreanof Islands, Aleutian Is. (h = 170 km).		
"	9	UPP	iPKP1	22 49 50.6					
			iPKP2	22 49 56.6					
		Kermadec Islands region (h = 250 km).							
"	10	UPP	iP	00 17 45.0					
		Fox Islands, Aleutian Islands (h = N).							

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

1998				1998					
July	12	UPP	iP	22 24 04.7	July	16	UPP	iPdiff	12 12 04
				micr sec				iPKP	12 15 24.9
			Mx	Z 1.8 17					micr sec
		KIR	Mx	22 45				Mx	Z 51 25
				micr sec			KIR	Mx	12 58
			Mx	Z 1.2 16					micr sec
		Pakistan (h = N).						Mx	Z 14 23
		M = 5.0 (UPP,KIR).					Santa Cruz Islands (h = 180 km).		
							M = 6.8 (UPP,KIR).		
"	13	UPP	iP	02 53 36.9			M uncorrected for focal depth.		
				micr sec					
			Mx	Z 0.9 12	"	16	UPP	iP	14 44 09.3
		KIR	Mx	03 08			Qinghai, China (h = N).		
				micr sec					
			Mx	Z 0.6 9	"	16	UPP	iP	17 34 00.0
		Ionian Sea (h = 35 km).						iS	17 37 54
		M = 4.5 (UPP,KIR).							micr sec
"	14	UPP	iP	01 09 32.7				P	Z' 0.1 0.9
		Pakistan (h = N).						Mx	Z 3.9 14
"	14	UPP	iP	13 11 58.7			KIR	iP	17 35 16.4
		Pakistan (h = 30 km).							micr sec
"	14	UPP	iP	14 33 12.3				P	Z' 0.1 1.1
		Pakistan (h = 30 km).						Mx	Z 2.2 13
"	14	UPP	iP	16 58 41.6			Greece (h = 20 km).		
				16 58 49.1			m = 5.4, M = 4.9 (UPP,KIR).		
		Luzon, Philippine Islands			"	16	UPP	eP	20 37 43
		(h = 25 km).					South of Mariana Islands		
"	14	UPP	iP	22 40 46.7			(h = 150 km).		
		Southern Sumatera, Indonesia			"	17	UPP	iP	05 03 03.6
		(h = N).						iS	05 12 48
"	16	UPP	iP	06 09 54.4					micr sec
		South of Mariana Islands						P	Z' 0.2 1.1
		(h = 10 km).						Mx	Z 4.6 20
"	16	UPP	iP	06 31 47.8			KIR	iP	05 02 41.8
		South of Mariana Islands							micr sec
		(h = 10 km).						P	Z' 0.2 1.0
"	16	UPP	iP	10 20 29.1				Mx	Z 3.4 18
		Crete (h = N).					Taiwan (h = 15 km).		
"	16	UPP	iP	09 01 49.8			m = 6.1, M = 5.7 (UPP,KIR).		
		Costa Rica (h = 10 km).			"	17	UPP	iP	09 01 49.8
"	16	UPP	iP	09 08 35.0			Near n. coast of New Guinea, PNG.		
		Crete (h = N).					(h = 10 km).		
"	16	UPP	iP	09 28 38.6	"	17	UPP	iPP	09 28 38.6
		Crete (h = N).					Near n. coast of New Guinea, PNG.		
		(h = 10 km).					(h = 10 km).		

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

1998				1998					
July	17	UPP	Mx	09 50	July	19	UPP	iP	06 22 10.6
				micr sec					Crete (h = N).
			Mx	Z 107 23					
		KIR	Mx	09 52	"	19	UPP	iPKP1	10 44 46.1
				micr sec					Off e. coast of N. Islands, N.Z.
			Mx	Z 74 22					(h = 300 km).
					"	19	UPP	i(PKP)	16 17 52.5
				Near n. coast of New Guinea, PNG.					micr sec
				(h = 10 km).					Z 1.9 20
				M = 7.2 (UPP,KIR).			KIR	Mx	17 13
"	17	UPP	iP	11 30 50					micr sec
				Mexico (h = 40 km).					Z 1.4 17
"	17	UPP	iP	15 24 01.3					Tonga Islands (h = 70 km).
				Sea of Okhotsk (h = 490 km).					M = 5.7 (UPP,KIR).
"	17	UPP	iP	21 14 40.2					M uncorrected for focal depth.
"	17	UPP	iP	22 16 54.4 C	"	19	UPP	iP	17 05 03.4
			iPP	22 20 35.0					Eastern Kashmir (h = N).
				micr sec	"	19	UPP	iP	18 23 25.6
			P	Z' 0.1 0.9					Southern Iran (h = N).
		KIR	iP	22 16 54.5 C	"	19	UPP	iP	18 28 33.1
				micr sec	"	20	UPP	iP	01 15 26.4
			P	Z' 0.5 0.9					iS
				Southern Sumatera, Indonesia					micr sec
				(h = 50 km).					Z' 0.1 0.7
				m = 6.6 (UPP,KIR).					Mx
"	18	UPP	iPKP	04 37 13.8					Z 3.6 16
			i	04 39 12.0			KIR	iP	01 15 22.1
				Kermadec Islands region					micr sec
				(h = 490 km).					Z' 0.1 1.0
"	18	UPP	iP	06 29 35.1					Mx
				Eastern Kashmir (h = N).					Z 6.1 16
"	18	UPP	iPKP	17 00 32.6	"	20	UPP	iP	01 17 20.8
			i	17 04 08.2					Xizang (h = N).
				micr sec	"	20	UPP	iP	01 27 41.2
			Mx	Z 4.1 20					Xizang (h = N).
		KIR	Mx	17 53	"	21	UPP	iP	14 50 13.7
				micr sec					micr sec
			Mx	Z 2.9 22					Z 0.8 12
				Vanuatu Islands (h = N).			KIR	Mx	15 15
				M = 6.0 (UPP,KIR).					micr sec
"	18	UPP	iP	06 12 08.1					Z 2.1 17
			i	06 12 13.3					Xizang (h = 15 km).
				Eastern Caucasus (h = 45 km).					M = 5.1 (UPP,KIR).

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

1998				1998			
July	21	UPP iP	15 25 01.0	July	24	(cont.)	
		Crete (h = N).				iS	19 05 58
							micr sec
"	21	UPP iP	16 26 57.6			P	Z' 0.2 1.2
		Crete (h = N).				i	Z' 0.2 1.0
"	21	UPP iP	17 35 02.4			Mx	Z 12 19
		Kyushu, Japan (h = 30 km).			KIR	iP	18 56 40.8
						i	18 56 44.1
"	21	UPP iP	22 26 27.7			i	18 56 49.8
		Bonin Islands region (h = 380 km).					micr sec
						i	Z' 0.1 1.0
"	22	UPP iP	12 29 32.3			i	Z' 0.3 1.2
		Kuril Islands (h = 100 km).				Mx	Z 12 14
"	22	UPP iP	21 30 02.2				Taiwan region (h = N).
		Central Mediterranean Sea (h = N).					m = 6.1, M = 6.3 (UPP,KIR).
"	22	UPP iP	21 53 55.9	"	25	UPP iPKP	02 58 26.3
		Central Mediterranean Sea (h = N).				iSKP1	03 01 42.8
"	22	UPP iP	23 26 10.7				micr sec
		Central Mediterranean Sea (h = N).				Mx	Z 10 21
"	22	UPP iP	03 42 33.6			KIR Mx	03 58
		Southern Greece (h = N).					micr sec
"	23	UPP iP	08 06 20.3			Mx	Z 6.4 24
		South of Honshu (h = 420 km).					Vanuatu Islands (h = 45 km).
"	23	UPP iP	11 04 01.5				M = 6.3 (UPP,KIR).
		Xizang (h = N).		"	25	UPP iP	03 11 05.4
"	23	UPP iP	11 37 15.3				
		micr sec		"	26	UPP iP	03 49 20.9
		P Z' 0.1 0.8					Central Mid-Atlantic ridge
		South of Honshu (h = 420 km).					(h = 10 km).
"	24	UPP iP	02 16 22.3	"	26	UPP iPdiff	10 44 02.2
		Luzon, Philippine Islands (h = N).					Savu Sea (h = 130 km).
"	24	UPP iP	04 39 57.8	"	26	UPP iP	19 59 26.0
		Kuril Islands (h = 70 km).					Near east coast of Kamchatka (h = N).
"	24	UPP iP	07 56 36.0	"	27	UPP iP	15 05 43.8
		Xizang (h = N).				i	15 05 57.9
"	24	UPP iP	18 56 03.5				Romania (h = 140 km).
		micr sec		"	27	UPP iP	19 13 35.9
		P Z' 0.1 0.8				i	19 13 52.5
		South of Honshu (h = 420 km).					Myanmar-India border region
"	24	UPP iP	18 56 11.7				(h = 60 km).
		micr sec					
		P Z' 0.1 0.8					
		South of Honshu (h = 420 km).					
"	24	UPP iPP	18 59 02.0				
		(cont.)					

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

1998				1998					
July	28	UPP	iP	04 59 35.1 C	July	30	UPP	iP	10 00 19.5
			iS	05 06 02					Near Islands, Aleutian Islands
				micr sec					(h = N).
			P	Z' 0.2 1.5					
			Mx	Z 6.6 10	"	30	UPP	iP	14 43 47.6
		KIR	Mx	05 17				i	14 43 52.5
				micr sec					Crete (h = 70 km).
			Mx	Z 5.2 9					Early arrival when compared with the
									NEIC solution.
				Southern Xinjiang, China (h = N).					
				M = 5.7 (UPP,KIR).	"	30	UPP	iPKP	23 55 22.0
"	28	UPP	iP	10 50 53.2					South Sandwich Islands region
				Southern Xinjiang, China (h = N).					(h = N).
"	29	UPP	iP	01 25 14.8	"	31	UPP	iP	09 34 58.2
			i	01 25 19.4					Taiwan region (h = 120 km).
				Western Nei Mongol, China (h = N).	"	31	UPP	iPKP	13 00 20.0
"	29	UPP	iPKP	07 33 17.3					micr sec
			i	07 34 06.5				Mx	Z 5.7 23
				micr sec			KIR	Mx	13 55
			PKP	Z' 0.1 1.0					micr sec
			Mx	Z 11 20				Mx	Z 2.8 20
		KIR	Mx	08 20					Loyalty Islands region (h = N).
				micr sec					M = 6.1 (UPP,KIR).
			Mx	Z 8.4 21	"	31	UPP	iPKP	13 07 25.5
				Near coast of central Chile					Loyalty Islands region (h = N).
				(h = 50 km).	"	31	UPP	iPKP	17 30 24.2
				M = 6.4 (UPP,KIR).					Vanuatu Islands (h = 120 km).
"	29	UPP	iP	09 48 52.6					
				Southern Greece (h = N).					
"	29	UPP	iP	18 19 14.9					
"	29	UPP	iPdiff	18 22 50.9					
				micr sec					
			Mx	Z 28 21					
		KIR	Mx	19 01					
				micr sec					
			Mx	Z 21 23					
				Irian Jaya, Indonesia (h = N).					
				Early arrival when compared with the					
				NEIC solution.					
				M = 6.6 (UPP,KIR).					
"	30	UPP	iP	08 27 29.5					March 13, 2000
				Taiwan region (h = N).					Conny Holmqvist
"	30	UPP	iP	09 53 17.6					Ota Kulhánek
				East of Kuril Islands (h = N).					

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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,	13°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

AUGUST 1 - 31, 1998

1998					1998				
Aug.	1	UPP	iP	18 38 42.4	Aug.	3	UPP	iPKP2	05 36 41.0
				Dodecanese Islands (h = 140 km).					micr sec
								P	Z' 0.1 1.0
"	1	UPP	iP	21 34 17.2					South Pacific ocean (h = 10 km).
				Luzon, Philippine Islands (h = N).					
"	1	UPP	iP	23 46 17.6	"	3	UPP	iP	11 20 57.7
									Eastern Honshu, Japan (h = N).
			i	23 46 21.2					
				micr sec	"	3	UPP	iP	15 23 10.2
			i	Z' 0.1 0.8					micr sec
				Southern Iran (h = N).				Mx	Z 3.0 22
"	2	UPP	iP	04 48 28.3			KIR	Mx	15 40
			iS	04 54 52					micr sec
				micr sec				Mx	Z 0.6 10
			P	Z' 0.2 1.2					Southern Xinjiang, China (h = N).
			Mx	Z 17.8 14					M = 4.9 (UPP,KIR).
		KIR	iP	04 48 D	"	3	UPP	iP	15 49 57.8
				micr sec					Alaska peninsula (h = 55 km).
			P	Z' 0.2 1.1	"	3	UPP	iP	21 42 12.6
			Mx	Z 5.1 10					Central Mid-Atlantic ridge
				Southern Xinjiang, China					(h = 10 km).
				(h = 70 km).	"	4	UPP	iP	06 00 26.9
				m = 5.8, M = 5.8 (UPP,KIR).					Myanmar-India border region (h = N).
"	2	UPP	iP	08 25 20.2	"	4	UPP	iP	06 11 40.6
				Kuril Islands (h = 150 km).					Bonin Islands region (h = 520 km).

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

1998				1998					
Aug.	4	UPP	iP	11 48 37.7	Aug.	5	UPP	iP	10 52 34.1
			iPP	11 49 45.6					Near east coast of Kamchatka
				micr sec					(h = N).
			Mx	Z 2.0 10					
		KIR	Mx	12 06	"	5	UPP	Mx	14 30
				micr sec					
			Mx	Z 5.3 13				Mx	Z 4.6 20
							KIR	Mx	14 24
				Turkmenistan-Iran border region					micr sec
				(h = N).				Mx	Z 3.8 19
				M = 5.3 (UPP,KIR).					Pacific-Antarctic Ridge (h = 10 km).
"	4	UPP	iP	17 37 19.3					M = 6.3 (UPP,KIR).
				Eastern Mediterranean Sea (h = N).	"	5	UPP	i(PKP)	22 19 21.9
"	4	UPP	iP	19 12 37.6					South of Fiji Islands (h = 450 km).
			i	19 12 41.2	"	5	UPP	iPKP1	22 36 51.4
			iPP	19 16 24.2					Kermadec Islands region (h = 70 km).
			iSKS	19 23 14	"	6	UPP	iPKP	15 16 29.6
				micr sec					South of Fiji Islands (h = 350 km).
			i	Z' 0.1 1.0	"	6	UPP	iP	15 33 43.1
			Mx	Z 59 23					Andreanof Islands, Aleutian Is.
		KIR	iP	19 12 40.2					(h = 45 km).
			i	19 12 44.2	"	7	UPP	iP	11 44 10.4
			iPP	19 16 21.2					Yunnan, China (h = 10 km).
				micr sec	"	7	UPP	iP	13 14 27.9
			i	Z' 0.3 1.3					Southern Xinjiang, China (h = N).
			Mx	Z 56 23	"	7	UPP	iP	13 19 39.9
				Near coast of Ecuador (h = N).					Kuril Islands (h = N).
				m = 6.4, M = 6.9	"	7	UPP	iP	17 45 05.9
"	5	UPP	iP	03 24 57.5					Kuril Islands (h = 170 km).
			i	03 24 59.5	"	7	UPP	iP	21 18 03.9
			iS	03 31 48					Xizang (h = N).
				micr sec	"	7	UPP	iP	16 21 07.9
			i	Z' 0.1 1.0					Minahassa peninsula, Sulawesi
			Mx	Z 4.1 20					(h = 190 km).
		KIR	Mx	03 47	"	8	UPP	iP	18 13 38.9
				micr sec					Afghanistan-Tajikistan bord. reg.
			Mx	Z 3.4 16					(h = 130 km).
				Pakistan (h = N).					
				M = 5.3 (UPP,KIR).					
"	5	UPP	iP	07 41 41.7					
				Central Mid-Atlantic ridge					
				(h = 10 km).					
"	5	UPP	i(PKP)	09 44 29.1					
				Fiji Islands region (h = 380 km).					

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

1998				1998			
Aug.				Aug.			
9	UPP	iP	00 45 48.0	10	(cont.)		
			micr sec				micr sec
		Mx	Z 0.5 10			i	Z' 0.2 1.0
	KIR	Mx	00 49			i	Z' 0.6 1.0
			micr sec			Mx	Z 6.0 20
		Mx	Z 0.9 11		KIR	iP	10 04 06.6
	Svalbard region (h = 10 km).					i	10 04 12.9
							micr sec
"	9	UPP	iP 00 46 46.9			i	Z' 0.7 1.1
			micr sec			Mx	Z 4.2 18
		P	Z' 0.2 1.3			Nicobar Islands, India (h = N).	
		Mx	Z 1.4 20			m = 6.6, M = 5.8 (UPP,KIR).	
	KIR	iP	00 46 49.4	"	10	UPP	iP 10 30 43.5
			micr sec			Nicobar Islands, India (h = N).	
		P	Z' 0.1 1.3	"	10	UPP	iP 12 05 41.8
		Mx	Z 1.5 18	"	10	UPP	iP 20 21 58.5
	Nicobar Islands, India (h = N).					Southeastern Siberia, Russia	
	m = 5.8, M = 5.3 (UPP,KIR).					(h = 10 km).	
"	9	UPP	iP 05 38 23.5 C	"	11	UPP	iP 02 19 20.1
			micr sec				i 02 19 26.4
		P	Z' 0.1 0.6			Northeast of Taiwan (h = 140 km).	
	KIR	iP	05 37 29.9 C	"	11	UPP	iP 07 10 22.9
			micr sec				i 07 10 26.5
		P	Z' 0.2 0.8			Nicobar Islands, India (h = N).	
	Near Islands, Aleutian Islands			"	11	UPP	iP 07 42 49.7
	(h = 25 km).					Southern Xinjiang, China (h = N).	
	m = 6.2 (UPP,KIR).			"	11	UPP	iP 14 37 59.1
"	9	UPP	iP 08 38 18.0	"	11	UPP	i(PKP) 15 13 50.9
	Nicobar Islands, Indian (h = N).					South of Fiji Islands (h = 530 km).	
"	9	UPP	i(PKP) 10 01 43.8	"	11	UPP	iP 23 17 22.6
	South of Fiji Islands (h = 500 km).					Jan Mayen Island region	
"	9	UPP	iP 11 43 21.4			(h = 10 km).	
	Off east coast of Kamchakta			"	12	UPP	iP 06 24 29.4
	(h = 55 km).					Eastern Honshu, Japan (h = 10 km).	
"	9	UPP	iP 18 36 03.7	"	12	UPP	iP 14 22 25.6
	Crete (h = N).					Central California (h = 10 km).	
"	10	UPP	iP 03 30 18.2	"	13	UPP	iPKP 06 13 49.0
	Southwestern Ryukyu Islands					South Sandwich Islands region	
	(h = N).					(h = N).	
"	10	UPP	iP 10 04 03.1				
		i	10 04 04.9				
		i	10 04 11.2				
		iS	10 13 48				
	(cont.)						

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

1998				1998			
Aug.	13	UPP iP	06 27 30.4	Aug.	16	UPP iP	14 16 45.8
		Near Islands, Aleutian Islands				i	14 16 57.6
		(h = N).					micr sec
"	14	UPP iP	02 04 49.1			P	Z' 0.1 1.1
		Mindoro, Philippine Islands					Near east coast of Honshu, Japan
		(h = 210 km).					(h = 60 km).
"	14	UPP iP	05 08 46.8	"	16	UPP iP	14 19 22.9
		Bonin Islands region (h = 460 km).		"	17	UPP iP	12 57 00.4
"	14	UPP iP	09 23 04.3				Java, Indonesia (h = 80 km).
		Luzon, Philippine Islands		"	18	UPP iP	04 20 15.5 C
		(h = 150 km).				i	04 20 22.0
"	14	UPP iP	13 14 21.9				Bhutan (h = 20 km).
		Kyrgystan-Xinjiang border reg.		"	18	UPP iPKP1	05 20 49.2
		(h = N).					Kermadec Islands, New Zealand
"	15	UPP iP	03 44 01.0				(h = 200 km).
		Sunda Strait (h = N).		"	18	UPP iP	08 30 26.7
"	15	UPP iP	03 56 19.5				Luzon, Philippine Islands (h = 25 km).
		South of Honshu, Japan		"	18	UPP iP	18 10 55.0 C
		(h = 270 km).					micr sec
"	15	UPP iP	05 22 17.9			P	Z' 0.1 0.8
		Central Italy (h = 10 km).					Kuril Islands (h = 120 km).
"	15	UPP iP	07 26 13.2	"	19	UPP iPKP1	00 43 15.1
		Ryukyu Islands (h = 10 km).					South of Fiji Islands (h = 500 km).
"	15	UPP iP	18 42 34.0	"	19	UPP iP	02 26 07.4
			micr sec				Vanuatu Islands (h = 210 km).
			Mx Z 2.0 15	"	19	UPP iP	05 37 15.8
		KIR Mx	19 14				Fox Islands, Aleutian Islands (h = N).
			micr sec	"	19	UPP iPKP	07 08 14.0
			Mx Z 3.1 16				South of Fiji Islands (h = 300 km).
		Eastern Honshu, Japan (h = 10 km).		"	19	UPP iP	08 02 42.8
		M = 5.5 (UPP,KIR).					Northwestern Balkan region
"	16	UPP iP	02 10 07.6				(h = 10 km).
		Andreanof Islands, Aleutian Is.		"	19	UPP iP	12 29 21.7
		(h = N).					Northern Xinjiang, China
"	16	UPP iP	05 11 25.1				(h = 20 km).
		Crete (h = 20 km).					

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

1998				1998					
Aug.	20	UPP	iP	06 52 14.7	Aug.	22	UPP	iP	12 45 28.5
			iS	07 01 36					micr sec
				micr sec				P	Z' 0.1 0.8
			Mx	Z 15 18				Mariana Islands (h = 55 km).	
		KIR	Mx	07 30					
				micr sec	"	22	UPP	iP	23 10 50.8
			Mx	Z 17 15				iS	23 21 01
		Bonin Islands region (h = 440 km).							micr sec
		M = 6.4 (UPP,KIR).						Mx	Z 1.2 15
		M uncorrected for focal depth.					KIR	Mx	23 52
"	20	UPP	iP	09 46 30.6					micr sec
		Near southeast coast of Russia						Mx	Z 1.5 13
		(h = 350 km).						Luzon, Philippine Islands (h = N).	
								M = 5.4 (UPP,KIR).	
"	20	UPP	iP	15 07 33.6	"	23	UPP	iP	05 48 33.9 C
		Rat Islands, Aleutian Islands (h = N).						iS	05 58 48
"	20	UPP	iP	15 10 59.5					micr sec
			iS	15 19 56				P	Z' 1.8 1.2
				micr sec				Mx	Z 3.4 16
			Mx	Z 9.7 18			KIR	Mx	06 24
		KIR	Mx	15 39					micr sec
				micr sec				Mx	Z 5.7 24
			Mx	Z 13 18				Luzon, Philippine Islands (h = 70 km).	
		Rat Islands, Aleutian Islands (h = N).						M = 5.8 (UPP,KIR).	
		M uncorrected for focal depth.							
"	20	UPP	iP	15 18 31.4	"	23	UPP	iP	08 24 08.0
		Rat Islands, Aleutian Islands (h = N).							
"	20	UPP	iP	19 52 34.6	"	23	UPP	iP	12 10 49.7
		Rat Islands, Aleutian Islands (h = N).						East of Severnaya Zemlya, Russia	
								(h = 10 km).	
"	21	UPP	iP	04 19 39.4	"	23	UPP	iP	14 10 01.1
"	21	UPP	iP	18 54 18.5				iPP	14 13 35.6
				micr sec				iSKS	14 20 24
				micr sec					micr sec
			P	Z' 0.1 0.9				P	Z' 0.1 1.1
		Rat Islands, Aleutian Islands (h = N).						Mx	Z 11 20
"	22	UPP	Mx	12 15			KIR	Mx	14 48
				micr sec					micr sec
			Mx	Z 1.9 20				Mx	Z 10 16
		KIR	Mx	12 14				Off coast of Central America	
				micr sec				(h = 55 km).	
			Mx	Z 2.8 20				M = 6.2 (UPP,KIR).	
		Near north coast of New Guinea,		"	23	UPP	iP	14 12 04.8	
		PNG. (h = 20 km).						micr sec	
		M = 5.7 (UPP,KIR).						P	Z' 0.1 1.0
								Rat Islands, Aleutian Island (h = N).	

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

1998				1998			
Aug.	24	UPP iP	05 09 20.0	Aug.	27	(cont.)	
		Southern Sumatera, Indonesia (h = 35 km).				KIR Mx	09 28
							micr sec
"	24	UPP iP	12 22 46.9			P	Z' 28 14
		Unimak Island region (h = 35 km).				Southern Xinjiang, China (h = N). M = 6.4 (UPP,KIR).	
"	24	UPP iP	12 23 45.4	"	27	UPP iP	09 55 47.4
		Malawi (h = 45 km).				Southern Xinjiang, China (h = N).	
"	25	UPP iP	07 51 08.9	"	27	UPP iP	23 17 08.8
		i	07 51 13.1			Andreanof Islands, Aleutian Is. (h = N).	
		iS	07 58 56				
			micr sec				
		i	Z' 0.1 1.0	"	28	UPP iP	03 06 31.6
		Mx	Z 5.0 15			Greece (h = N).	
		KIR Mx	08 15	"	28	UPP iPKP1	08 37 11.7
			micr sec			South of Fiji Islands (h = 550 km).	
		Mx	Z 5.2 15				
		Xizang (h = N).					
		M = 5.7 (UPP,KIR).					
"	25	UPP eP	15 25 31			UPP iPP	12 54 30.9
		Xizang (h = N).					12 58 37.1
							micr sec
						P	Z' 0.1 0.9
						Mx	Z 5.1 19
"	25	UPP iP	23 55 55.2			KIR Mx	13 41
		Ryukyu Islands (h = 120 km).					micr sec
						Mx	Z 2.3 18
"	26	UPP iP	12 53 51.1			Southern Molucca Sea (h = 70 km). M = 5.8 (UPP,KIR). M uncorrected for focal depth.	
		Kuril Islands (h = 40 km).					
"	26	UPP iP	13 00 10.2	"	28	UPP iP	15 42 32.1 C
"	27	UPP iP	02 06 34.5 C				micr sec
		Bonin Islands region (h = N).				P	Z' 0.2 0.9
						Rat Islands, Aleutian Islands (h = N).	
"	27	UPP iP	03 21 06.0	"	28	UPP iP	16 02 23.9
		Andreanof Islands, Aleutian Is. (h = N).				Off east coast of Honshu, Japan (h = 55 km).	
"	27	UPP iP	08 46 44.4	"	28	UPP iP	16 44 30.8
		Southern Xinjiang, China (h = N).				Rat Islands, Aleutian Islands (h = N).	
"	27	UPP iP	09 11 23.5	"	28	UPP iP	22 11 22.0
		i	09 11 24.9			Xizang (h = N).	
		iS	09 17 40				
			micr sec				
		i	Z' 0.2 1.0	"	28	UPP iP	23 58 10.2
		Mx	Z 62 17			Near s. coast of Honshu, Japan (h = 80 km).	
		(cont.)					

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

1998						1998				
Aug.	29	UPP	iPKP	08 49 09.7		Aug.	30	UPP	iP	14 45 09.1 C
				micr sec					iS	14 53 40
			Mx	Z 3.3 20						micr sec
		KIR	Mx	09 43					P	Z' 0.9 1.6
				micr sec					Mx	Z 5.1 20
			Mx	Z 1.4 17				KIR	Mx	15 11
		South Sandwich Islands region								micr sec
		(h = N).							Mx	Z 3.4 17
		M = 5.8 (UPP,KIR).						Off east coast of Kamchatka (h = N).		
		M = 5.6 (UPP,KIR).								
"	29	UPP	iP	15 24 18.6		"	31	UPP	iP	02 35 35.9
		Crete (h = N).						Northwestern Balkan region		
								(h = 10 km).		
"	29	UPP	iP	16 34 31.1		"	31	UPP	iP	02 39 49.1
		Rat Islands, Aleutian Islands (h = N).								
"	29	UPP	iP	22 01 26.9		"	31	UPP	iP	04 59 23.4
		Near Islands, Aleutian Islands						Afghanistan-Tajikistan bord. reg.		
		(h = N).						(h = 230 km).		
"	30	UPP	iP	02 01 21.2		"	31	UPP	iP	14 53 42.2
				micr sec				Crete (h = N).		
			P	Z' 0.2 1.2						
			Mx	Z 6.9 19						
		KIR	Mx	02 41		"	31	UPP	iP	19 28 41.6
				micr sec						micr sec
			Mx	Z 3.3 15					P	Z' 0.1 1.0
		Mariana Islands region (h = N).						Luzon, Philippine Islands (h = 70 km).		
		M = 5.9 (UPP,KIR).								
"	30	UPP	iP	03 47 14.7						
		Xizang (h = N).								
"	30	UPP	iP	04 47 36.4 C						
		Myanmar (h = 70 km).								
"	30	UPP	iP	11 44 25.5						
			i	11 44 32.1						
			iS	11 53 20						
				micr sec						
			Mx	Z 14 22						
		KIR	Mx	12 08						
				micr sec						
			Mx	Z 14 23						
		Vancouver Islands region								
		(h = 10 km).								
		M = 6.0 (UPP,KIR).								

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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,	13°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

SEPTEMBER 1 - 30, 1998

1998					1998				
Sep.	1	UPP	iPKP	04 53 46.9	Sep.	2	(cont.)		
			iPKP1	04 53 52.0			Mindanao, Philippine Islands		
				South of Kermadec Islands			(h = 50 km).		
				(h = 270 km).			M = 7.0 (UPP,KIR).		
"	1	UPP	iPKP	10 48 25.9	"	2	UPP	iPKP1	19 11 59.1
			i	10 49 09.3				iPKP2	19 12 02.4
				micr sec					micr sec
			PKP	Z' 0.1 1.0				PKP1	Z' 0.1 0.9
				South Sandwich Islands region				PKP2	Z' 0.1 0.8
				(h = 150 km).				Kermadec Islands, New Zealand	
								(h = 230 km).	
"	1	UPP	iP	18 23 41.9	"	3	UPP	iP	06 50 51.0
				Vancouver Island region (h = 10 km).				Southern Xinjiang, China (h = N).	
"	2	UPP	iPKP2	07 14 29.3	"	3	UPP	iP	08 09 30.9
				Off e. coast of N. Island, N.Z.				iS	08 18 46
				(h = 180 km).					micr sec
"	2	UPP	iP	08 50 45.9				P	Z' 0.1 0.9
			i	08 50 47.5				Mx	Z 14 17
			iP	08 54 39.1			KIR	Mx	08 41
			iSKS	09 0 16					micr sec
				micr sec				Mx	Z 5.4 14
			P	Z' 0.1 0.9				Eastern Honshu, Japan (h = 40 km).	
			i	Z' 1.6 1.1				M = 6.0 (UPP,KIR).	
			Mx	Z 78 22	"	3	UPP	iP	11 20 26.3
		KIR	Mx	09 35				Leyte, Philippine Islands (h = N).	
				micr sec					
			Mx	Z 62 21	"	3	UPP	iP	13 25 46.3
		(cont.)						Tajikistan (h = N).	

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

1998				1998							
Sep.	3	UPP	iPKP	17 56 36.3	Sep.	6	UPP	iP	00 45 18.3		
			iPP	17 57 32.0					micr sec		
				micr sec			P	Z'	0.1 1.2		
			PKP	Z' 0.2 1.8			Philippine Islands region (h = N).				
			Mx	Z 24 18							
		KIR	Mx	18 50	"	6	UPP	iP	13 53 53.4		
				micr sec			Ionian Sea (h = 10 km).				
			Mx	Z 10 14							
		Near coast of central Chile (h = 25 km). M = 6.7 (UPP,KIR).					"	6	UPP	iP	20 39 23.5
"	3	UPP	iP	18 25 33.2	"	6	UPP	iP	21 00 00.8		
			i	18 25 39.8			Hokkaido, Japan region (h = 50 km).				
				micr sec							
			P	Z' 0.1 0.8	"	6	UPP	iP	21 45 26.6		
			i	Z' 0.5 1.2			Nepal (h = N).				
		Nepal (h = N).			"	7	UPP	ePKP	00 58 46.0		
"	3	UPP	iP	19 01 16.4				i	00 59 05.6		
		Nepal (h = N).							micr sec		
							Mx	Z 2.0 21			
"	3	UPP	iP	20 33 05.0			KIR	Mx	01 56		
		Andreasof Islands, Aleutian Is. (h = 50 km).							micr sec		
							Mx	Z 2.1 16			
							West Chile Rise (h = 10 km). M = 5.8 (UPP,KIR).				
"	3	UPP	iP	21 10 31.8	"	7	UPP	iP	10 54 07.1		
		Nepal (h = N).					Xizang (h = N).				
"	3	UPP	iP	23 12 06.1	"	7	UPP	iP	11 03 56.2		
		Nepal (h = N).					Northeast of Taiwan (h = N).				
"	3	UPP	iP	23 29 32.8	"	7	UPP	iP	12 38 39.9		
		Greece (h = 55 km).					Afghanistan-Tajikistan bord reg. (h = 110 km).				
"	4	UPP	iP	01 19 55.9	"	7	UPP	iPKP	13 09 33.3		
		Nepal (h = N).					South of Fiji Islands (h = N).				
"	4	UPP	iPKP	12 13 46.8	"	7	UPP	iP	23 52 09.7		
		Tonga Islands region (h = 70 km).					Near east coast of Honshu, Japan (h = 45 km).				
"	4	UPP	iPKP	16 19 33.8	"	8	UPP	iP	02 12 56.8		
		South of Fiji Islands (h = 500 km).					Xizang (h = N).				
"	5	UPP	iP	16 03 25.1	"	8	UPP	iP	09 23 12.5		
		Mindanao, Philippine Islands (h = 60 km).					Mariana Islands (h = 140 km).				
"					"	9	UPP	iP	04 03 09.5		

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

1998				1998						
Sep.	9	UPP	iP	11 32 32.5	Sep.	13	UPP	iP	09 36 31.2	
			i	11 32 36.1				Northwest of Kuril Islands		
			i	11 32 39.5				(h = 510 km).		
			iS	11 36 16		"	14	UPP	iP	05 29 45.2
				micr sec						micr sec
			P	Z' 0.1 1.0				P	Z' 0.1 1.3	
			i	Z' 0.4 0.9				Mx	Z 1.9 14	
			i	Z' 0.6 0.9			KIR	Mx	05 43	
			Mx	Z 10 10					micr sec	
		KIR	Mx	11 46				Mx	Z 1.9 15	
				micr sec				Sicily (h = 10 km).		
			Mx	Z 6.7 11				M = 4.7 (UPP,KIR).		
		Southern Italy (h = 10 km).				"	14	UPP	iPKP2	10 22 18.3
		M = 5.4 (UPP, KIR).						Macquarie Islands region (h = 10 km).		
"	10	UPP	iP	04 34 55.7	"	14	UPP	iP	17 31 18.1	
		Mindanao, Philippine Islands						Andreanof Islands, Aleutian Is.		
		(h = 80 km).						(h = N).		
"	11	UPP	iP	03 06 20.8	"	14	UPP	iP	17 37 58.8	
			i	03 06 49.5				Andreanof Islands, Aleutian Is.		
		Kuril Islands (h = 200 km).						(h = N).		
"	12	UPP	iPKP1	13 00 33.8	"	14	UPP	iP	23 27 46.0	
		South of Kermadec Islands (h = N).						iS	23 36 54	
"	12	UPP	iPKP2	14 34 43.8				micr sec		
			i	14 34 55.9				P	Z' 0.2 1.1	
		South of Kermadec Islands (h = N).						Mx	Z 5.7 21	
"	12	UPP	iP	17 07 10.6			KIR	Mx	23 54	
		Kuril Islands (h = N).						micr sec		
"	12	UPP	iPKP2	18 33 47.1				Mx	Z 5.9 19	
		Kermadec Islands region						Andreanof Islands, Aleutian Is.		
		(h = 400 km).						(h = N).		
								M = 5.7 (UPP,KIR).		
"	12	UPP	iP	18 36 15.3	"	15	UPP	iPKP1	08 29 23.9	
		Mariana Islands region (h = N).						iPKP2	08 29 27.1	
"	12	UPP	iP	23 29 02.1				Kermadec Islands region		
		South of Alaska (h = N).						(h = 300 km).		
"	13	UPP	iP	00 25 05.2	"	15	UPP	Mx	09 47	
		Myanmar (h = N).						micr sec		
"	13	UPP	iP	05 46 33.2				Mx	Z 7.7 19	
		Taiwan region (h = 45 km).					KIR	Mx	09 46	
								micr sec		
								Mx	Z 5.9 19	
								New Britain region, P.N.G.		
								(h = 80 km).		
								(cont.)		

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

1998				1998			
Sep.	15	(cont.) M = 6.2 (UPP,KIR). M uncorrected for focal depth.		Sep.	20	UPP iPKP1 07 34 21.1 iPKP2 07 34 32.3 Off e. coast of N. Island, N.Z. (h = 80 km).	
"	15	UPP iP 12 09 26.1		"	20	UPP iP 16 26 00.2 i 16 27 16.7 Andreanof Islands, Aleutian Is. (h = N).	
"	15	UPP iP 17 00 31.1		"	20	UPP iP 21 03 53.7 i 21 04 04.4 East of North Island, N.Z. (h = N).	
"	17	UPP iP 11 22 22.8 micr sec P Z' 0.1 1.0 South of Honshu, Japan (h = 480 km).		"	20	UPP iP 21 35 17.1 Jawa, Indonesia (h = 70 km).	
"	17	UPP iP 18 25 30.2 South of Honshu, Japan (h = 490 km).		"	21	UPP iPKP 03 40 19.4 i 03 40 32.6 Off e. coast of N. Island, N.Z. (h = 100 km).	
"	18	UPP iP 02 59 17.8 Southern Xinjiang, China (h = 50 km).		"	21	UPP iP 03 33 27.4	
"	18	UPP iP 04 01 01.3 Southern Xinjiang, China (h = 45 km).		"	21	UPP iP 07 05 55.9 Minahassa peninsula, Sulawesi (h = 150 km).	
"	18	UPP iP 04 02 23.6 East of Kuril Islands (h = 10 km).		"	21	UPP iP 07 15 41.7 Luzon, Philippine Islands (h = 30 km).	
"	18	UPP iP 07 45 33.5 Bonin Islands region (h = 70 km).		"	21	UPP iPKP 12 28 43.1 i 12 28 46.2 micr sec P Z' 0.2 1.4 Mx Z 11 21 KIR Mx 13 21 micr sec Mx Z 7.0 22 Vanuatu Islands (h = N). M = 6.3 (UPP,KIR).	
"	18	UPP iP 13 56 45.6 North Atlantic ocean (h = 10 km).		"	21	UPP iP 12 41 18.9	
"	19	UPP iP 07 14 53.3 Northern Iran (h = N).		"	21	UPP iP 12 36 17.5 Mariana Islands (h = N).	
"	19	UPP iP 14 36 26.4 Vancouver Island region (h = 10 km).		"	21	UPP iPKP2 18 10 56.6 Off e. coast of N. Island, N.Z. (h = 300 km).	
"	19	UPP iP 21 24 19.2 Northern Iran (h = N).					
"	20	UPP iPKP1 06 50 38.0 iPKP2 06 50 48.9 East of North Island, N.Z. (h = 55 km).					

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

1998				1998					
Sep.	21	UPP	iPKP2	19 29 30.3	Sep.	24	UPP	iP	10 41 50.5
				East of North Island, N.Z. (h = N).					South of Honshu, Japan (h = 80 km).
"	21	UPP	iP	21 42 29.8	"	24	UPP	iP	19 02 39.8 C
				micr sec				i	19 02 51.8
			P	Z' 0.1 0.9				iS	19 09 50
				Northern Iran (h = N).					micr sec
"	22	UPP	iP	01 30 24.8				P	Z' 0.2 1.0
			iSKS	01 41 01				i	Z' 0.4 1.3
				micr sec				Mx	Z 7.6 14
			Mx	Z 5.4 22			KIR	iP	19 02 07.7 C
		KIR	Mx	02 15				i	19 02 19.2
				micr sec					micr sec
			Mx	Z 4.8 17				P	Z' 0.2 1.0
				South of Mariana Islands				Mx	Z 2.5 15
				(h = 10 km).					Mangolia (h = N).
				M = 5.9 (UPP,KIR).					m = 6.1, M = 5.5 (UPP,KIR).
"	22	UPP	iP	06 13 33.1					Double P, on average 11.7 s apart.
				Central Mediterranean Sea					The second arrival, when interpreted
				(h = 70 km).					as pP, provides a focal depth of
									45 km.
"	22	UPP	iP	09 34 02.9	"	25	UPP	iP	09 31 04.8
				East of Kuril Islands (h = N).	"	25	UPP	iP	17 52 56.2
"	22	UPP	iP	23 27 51.3					East of Kuril Islands (h = 10 km).
"	23	UPP	iP	01 32 30.4	"	25	UPP	iP	20 02 53.0
				Kuril Islands (h = 160 km).					Ohio (h = 5 km).
"	23	UPP	iP	15 46 21.8	"	26	UPP	iP	11 56 15.3
				Near east coast of Kamchatka					Greece (h = N).
				(h = N).	"	26	UPP	iP	14 29 07.6
"	23	UPP	iP	20 46 14.9					Greece (h = N).
				Southern Greece (h = N).	"	26	UPP	iP	18 37 03.9 C
"	24	UPP	iPg1	02 11 42.6					micr sec
			iSg	02 12 10.9				P	Z' 0.2 0.7
				Hälsingland, Sweden, 61.9°N, 15.7°E.				Mx	Z 1.1 14
				Origin time = 02 11 04.			KIR	iP	18 37 56.3 C
				By combination with Norwegian					micr sec
				station readings.				P	Z' 0.1 1.0
"	24	UPP	iP	06 14 32.2				Mx	Z 0.8 12
				South of Honshu, Japan (h = 70 km).					Eastern Xizang-India border reg.
"	24	UPP	iP	07 56 14.4					(h = N).
				Hindu Kush region, Afghanistan					m = 6.1, M = 5.0 (UPP,KIR).
				(h = 190 km).	"	27	UPP	iP	09 00 13.6
									Southern Greece (h = N).

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

1998				1998			
Sep.	27	UPP iPKP2	09 45 23.4	Sep.	28	(cont.)	
		East of North Island, N.Z. (h = N).				KIR micr	sec
"	27	UPP i(PKP2)	10 30 28.2			i	Z' 0.3 1.2
		Off e. coast of N. Island, N.Z. (h = N).				Mx	Z 2.8 16
"	27	UPP i(PKP)	11 26 09.7			Jawa, Indonesia (h = 150 km). m = 6.6, M = 5.9 (UPP,KIR). M uncorrected for focal depth.	
		iPKP	11 26 18.3	"	28	UPP iPKP1	18 08 08.8
		Tonga Islands (h = 210 km).				South of Kermadec Islands (h = 420 km).	
"	27	UPP iP	11 46 18.8	"	28	UPP iP	19 36 46.8
			micr sec				micr sec
		Mx	Z 1.7 16			P	Z' 4.9 21
		KIR Mx	12 22			KIR Mx	20 23
			micr sec				micr sec
		Mx	Z 1.1 15			Mx	Z 73 21
		Ryukyu Islands (h = N). M = 5.3 (UPP,KIR).				Talaud Islands, Indonesia (h = 30 km). M = 6.0 (UPP,KIR).	
"	28	UPP iP.	02 56 02.0	"	28	UPP iP	22 41 04.2
		Talaud Islands, Indonesia (h = 40 km).				Eastern Xizang-India border reg. (h = N).	
"	28	UPP iPKP	04 25 52.0	"	29	UPP iP	01 26 19.8
		South of Kermadec Islands (h = 500 km).				Pakistan (h = N).	
"	28	UPP iP	05 56 48.6	"	29	UPP iP	02 27 54.1
		Talaud Islands, Indonesia (h = 70 km).				Talaud Islands, Indonesia (h = 50 km).	
"	28	UPP iP	06 23 19.9	"	29	UPP iP	03 30 25.9
		Ryukyu Islands (h = 80 km).				Azores Islands region (h = 10 km).	
"	28	UPP iP	13 42 50.0	"	29	UPP iP	08 59 20.7
		Talaud Islands, Indonesia (h = 60 km).				Mindanao, Philippine Islands (h = 50 km).	
"	28	UPP iPdiff	13 47 55.5	"	29	UPP iP	09 17 35.9
		i	13 48 01.2			Northern Sumatera, Indonesia (h = 80 km).	
		iSKS	13 58 18	"	29	UPP iP	10 37 13.7
		iS	13 59 16			Talaud Islands, Indonesia (h = 130 km).	
			micr sec				
		i	Z' 0.3 1.2				
		Mx	Z 4.4 19	"	29	UPP iP	17 55 20.3
		KIR iPdiff	13 47 49.1			Kyrgystan (h = N).	
		i	13 47 54.4				
		(cont.)					

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

1998

Sep.	29	UPP	iP	22 18 31.4
			i	22 18 32.7
			i	22 18 38.3
			iS	22 21 20
				micr sec
			i	Z' 0.1 1.0
			i	Z' 0.2 1.0
			Mx	Z 10 11
		KIR	iP	22 20 02.9
			i	22 20 09.9
				micr sec
			i	Z' 0.8 1.0
			Mx	Z 8.6 8

Northwestern Balkan region

(h = 10 km).

M = 5.8 (UPP,KIR).

"	30	UPP	iP	00 00 34.1
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"	30	UPP	iP	02 39 22.4
				Xizang (h = N).

"	30	UPP	iPKP	12 45 35.6
				New Ireland region, P.N.G.
				(h = 80 km).

"	30	UPP	iPKP	19 21 19.1
				Fiji Islands region (h = 350 km).

"	30	UPP	iP	23 47 06.3
			iS	23 50 26
				micr sec
			P	Z' 0.1 1.0
			Mx	Z 4.2 10
		KIR	Mx	23 49
				micr sec
			Mx	Z 3.8 10

Albania (h = 10 km).

M = 5.1 (UPP,KIR).

May 31, 2000

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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,	13°52.2'E;	h = 150 m
Myrviken	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

OCTOBER 1-31, 1998

1998					1998				
Oct.	1	UPP	iP	03 51 56.1	Oct.	1	UPP	iP	20 56 47.5
			iS	04 00 36				i	20 56 56.6
		Northern Mid-Atlantic Ridge (h = 10 km).					Panama-Costa Rica border region (h = 30 km).		
"	1	UPP	iP	12 04 21.9	"	2	UPP	iP	00 21 13.6
		Andreanof Islands, Aleutian Is. (h = N).					Northern Mid-Atlantic Ridge (h = 10 km).		
"	1	UPP	iP	17 07 57.8	"	2	UPP	iP	05 13 22.1
		Turkey (h = 10 km).					Talaud Islands, Indonesia (h = N).		
"	1	UPP	iP	18 08 50.8	"	2	UPP	iP	10 29 51.9
		Talaud Islands, Indonesia (h = N).					Afghanistan-Tajikistan bord. reg. (h = 230 km).		
"	1	UPP	iP	19 26 30.7	"	2	UPP	iP	13 00 03.1
			i	19 26 40.0					micr sec
			iS	19 33 59				P	Z' 0.1 1.0
				micr sec			KIR	iP	12 59 49.3
		Mx	Z	1.6 17					micr sec
		KIR	Mx	19 54				P	Z' 0.1 1.0
				micr sec			Sichuan, China (h = 50 km).		
		Mx	Z	3.8 19			m = 5.9 (UPP,KIR).		
		Arabian Sea (h = 10 km).							
		M = 5.3 (UPP,KIR).							
"	1	UPP	iP	20 41 30.9	"	2	UPP	iP	15 38 12.0
			i	20 41 33.3			Sea of Okhotsk (h = 450 km).		
		Marina Islands (h = 60 km).							
"					"	2	UPP	iP	16 50 17.7
							Mariana Islands (h = 210 km).		

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1998				1998					
Oct.	2	UPP	Mx	17 27	Oct.	4	(cont.)		
				micr sec		KIR	Mx	01 06	
				Z 0.8 12				micr sec	
		KIR	Mx	17 26			Mx	Z 2.7 15	
				micr sec				Western Iran (h = 10 km).	
				Z 0.9 11				M = 4.9 (UPP,KIR).	
		Southern Xinjiang, China (h = N).			"	4	UPP	iP	01 52 11.7
		M = 4.8 (UPP,KIR).							Andreanof Islands, Aleutian Is.
"	3	UPP	Mx	07 58					(h = 50 km).
				micr sec					
				Z 1.3 19	"				
		KIR	Mx	08 02		4	UPP	iP	11 23 22.1
				micr sec					Northwestern Balkan region
				Z 1.4 20					(h = 10 km).
		South Sandwich Islands region			"	4	UPP	iPKP1	16 51 49.6
		(h = N).							Kermadec Islands, New Zealand
		M = 5.6 (UPP,KIR).							(h = 300 km).
"	3	UPP	iP	08 22 22.4	"	5	UPP	iPKP1	00 34 44.8
		Afghanistan-Tajikistan bord. reg.						iPKP2	00 34 50.8
		(h = 200 km).						micr sec	
"	3	UPP	iPKP1	10 49 27.2				PKP1	Z' 0.1 1.0
			iPKP2	10 49 34.8				PKP2	Z' 0.1 0.8
		South of Kermadec Islands							Kermadec Islands region
		(h = 350 km).							(h = 430 km).
"	3	UPP	iP	11 26 58.7	"	5	UPP	iP	01 09 12.2
			i	11 27 01.0					Ionian Sea (h = N).
			i	11 27 55.1	"	5	UPP	iP	02 04 10.5
			iS	11 36 15					Ionian Sea (h = N).
				micr sec					
			i	Z' 0.2 1.0	"	5	UPP	iP	02 27 07.7
			Mx	Z 2.0 21					micr sec
		KIR	iP	11 26 30.6				Mx	Z 2.0 15
			i	11 26 50.5			KIR	Mx	02 44
				micr sec					micr sec
			P	Z' 0.2 1.0				Mx	Z 2.0 13
			Mx	Z 1.2 12					Western Iran (h = 40 km).
		Northwest of Ryukyu Islands							M = 5.0 (UPP,KIR).
		(h = 230 km).			"	5	UPP	iP	02 49 25.9
		M = 5.8 (UPP,KIR).							Ionian Sea (h = N).
"	4	UPP	iP	00 49 23.6	"	5	UPP	iPKP	05 16 32.3
			i	00 49 25.8					South of Fiji Islands (h = 550 km).
				micr sec					
			Mx	Z 1.5 16					
		(cont.)							

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1998

Oct.	5	UPP	iP	10 34 16.9	1998				
				Xizang (h = N).	Oct.	7	UPP	ipP	11 51 51.1
"	5	UPP	iPKP1	14 42 49.3					Kuril Islands (h = N).
			iPKP2	14 42 54.5	"	7	UPP	iPKP1	14 27 21.4
				Kermadec Islands, New Zealand				i	14 27 28.9
				(h = 100 km).					East of North Island, N.Z.
"	5	UPP	iP	21 07 23.1					(h = 70 km).
				Off east coast of Kamchatka	"	7	UPP	iPKP	16 01 40.8
				(h = N).					East of North Island, N.Z.
"	6	UPP	iP	22 52 27.0					(h = 70 km).
				Nicobar Islands, India (h = 110 km).	"	7	UPP	iP	18 53 11.8
"	6	UPP	eP	01 03 10				i	18 53 14.7
			i	01 03 12.4				iS	18 57 50
				Xizang (h = N).					micr sec
"	6	UPP	iP	01 40 00.1				Mx	Z 2.7 17
				North Pacific Ocean (= 10 km).			KIR	Mx	19 09
"	6	UPP	i(PKP)	07 42 01.9					micr sec
			i	07 42 03.6				Mx	Z 3.1 17
				South of Fiji Islands (h = 500 km).					Eastern Mediterranean Sea
"	6	UPP	iP	12 32 43.7					(h = 10 km).
			iS	12 36 37					M = 4.9 (UPP,KIR).
				micr sec	"	8	UPP	iP	03 55 11.0
			P	Z' 0.1 1.0				iS	03 59 08
			Mx	Z 15 12					micr sec
		KIR	iP	12 33 56.6				P	Z' 0.1 0.9
				micr sec				Mx	Z 5.5 12
			P	Z' 0.1 1.1			KIR	iP	03 56 26.9
			Mx	Z 9.0 12					micr sec
				Southern Greece (h = 10 km).				P	Z' 0.1 1.2
				m = 5.5, M = 5.6 (UPP,KIR).				Mx	Z 2.2 13
"	6	UPP	iP	16 49 24.4					Ionian Sea (h = 10 km).
				Southern Greece (h = 10 km).					m = 5.4, M = 5.0 (UPP,KIR).
"	7	UPP	iP	06 07 34.5	"	8	UPP	iPKP	04 23 05.1
				Rat Islands, Aleutian Islands (h = N).					South of Fiji Islands (h = 400 km).
"	7	UPP	iP	06 28 47.5	"	8	UPP	iPdif	05 05 27.5
				Southern Greece (h = N).				iPP	05 09 37.3
"	7	UPP	iP	07 05 28.1					Southern Peru (h = 140 km).
				Mariana Islands region	"	8	UME	iSg1	13 02 29.3
				(h = 300 km).					Bothnian Bay region, 65,2°N,
									22.8°E.
									Origin time = 13 01 34.
									By combination with Finnish and
									Norwegian station readings.

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

1998				1998					
Oct.	8	UPP	iP	15 27 18.4	Oct.	11	UPP	i(PKP)	10 18 52.9
"	8	UPP	iP	20 53 37.8	"	11	UPP	i(PKP)	12 23 04.2
				Turkey (h = 10 km).				i	12 23 06.1
"	8	UPP	iP	21 36 32.9	"	11	UPP	iP	12 59 08.1
				Southern Sumatera, Indonesia (h = N).					Ionian Sea (h = N).
"	8	UPP	iPKP1	23 12 14.9	"	11	UPP	iPKP1	14 15 17.3
			iPKP2	23 12 25.0				i	17 07 42.8
			i	23 12 33.0	"	11	UPP	iP	21 20 13.8
				East of North Island, N.Z.					Xizang (h = N).
				(h = 50 km).	"	11	UPP	iP	21 20 13.8
"	8	UPP	iP	23 38 33.2	"	11	UPP	iP	21 20 13.8
"	9	UPP	iP	05 16 56.3	"	11	UPP	iP	21 20 13.8
				Ionian Sea (h = 10 km).	"	11	UPP	iP	21 20 13.8
"	9	UPP	iP	06 39 12.8	"	12	UPP	Mx	01 12
				Mariana Islands (h = 590 km).					micr sec
"	9	UPP	Mx	12 41			KIR	Mx	01 08
				micr sec					micr sec
			Mx	Z 8.1 22				Mx	Z 1.4 20
		KIR	Mx	12 46					Pacific-Antarctic Ridge (h = 10 km).
				micr sec					M = 6.1 (UPP,KIR).
			Mx	Z 8.9 19	"	12	UPP	iPg1	04 58 26.9
				Near coast of Nicaragua (h = 70 km).				iSg1	04 59 08.1
				M = 6.1 (UPP,KIR).			UME	iPg1	04 57 48.2
				M uncorrected for focal depth.				iSg1	04 58 01.5
"	9	UPP	iP	12 04 48.4					Off coast of Ångermanland,
"	10	UPP	Mx	17 31					63.1°N, 18.6°E.
				micr sec					Origin time = 04 57 29.
			Mx	Z 4.7 23					M _L (UPP) = 2.4 1.
		KIR	Mx	17 33					Felt.
				micr sec					By combination with Finnish and
			Mx	Z 2.3 22					Norwegian station readings.
				Minahassa Peninsula, Sulawesi	"	12	UME	iPg1	08 01 50.3
				(h = N).				iSg1	08 02 12.2
				M = 5.7 (UPP,KIR).					Bothnian Bay region, 65.2°N,
"	10	UPP	iP	20 31 13.4					22.6°E.
				Volcano Islands region (h = N).					Origin time = 08 01 22.
"	10	UPP	iP	21 51 26.9					By combination with Finnish and
				Afghanistan-Tajikistan bord reg.	"	13	UPP	iP	00 51 59.8
				(h = 150 km).					

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

1998				1998					
Oct.	13	UPP	iP	17 06 16.4	Oct.	17	UPP	i(PKP)	07 42 06.1
				Taiwan region (h = N).					Fiji Islands region (h = 550 km).
"	13	UPP	iP	20 52 28.8	"	17	UPP	iP	23 22 56.0
				micr sec					Taiwan region (h = 10 km).
			P	Z' 0.1 1.2	"	17	UPP	iP	23 23 07.5
			Mx	Z 2.6 19					Unimak Island region (h = N).
		KIR	iP	20 51 45.5	"	17	UPP	iP	23 36 28.8
				micr sec					Unimak Island region (h = N).
			P	Z' 0.1 1.2	"	17	UPP	iP	01 51 19.7
			Mx	Z 2.2 15					micr sec
				Off east coast of Honshu, Japan	"	17	KIR	iP	Z' 0.1 1.0
				(h = N).					01 50 48.6 C
				m = 5.8, M = 5.4 (UPP,KIR).					micr sec
"	14	UPP	iP	04 46 53.9					Z' 0.2 1.0
				Northern Mid-Atlantic ridge					Volcano Islands region (h = 110 km).
				(h = 10 km).					m = 5.8 (UPP,KIR).
"	15	UPP	iP	19 17 13.8	"	18	UPP	iP	08 46 37.9
				micr sec					Mariana Islands (h = 150 km).
			P	Z' 0.1 0.9	"	18	UPP	eP	10 03 32
				Nicobar Islands, India (h = N).					Southeast of Shikoku, Japan (h = N).
"	15	UPP	iP	19 20 17.7	"	20	UPP	iPKP	18 15 51.6
				Nicobar Islands, India (h = N).					South of Fiji Islands (h = 550 km).
"	16	UPP	iP	00 15 53.8	"	20	UPP	iP	18 47 35.2
			i	00 15 54.5					Northern Xinjiang, China (h = N).
				micr sec	"	20	UPP	iPKP2	23 24 27.7
			i	Z' 0.2 1.0					South Island, New Zealand
		KIR	iP	00 15 48.0					(h = 10 km).
				micr sec	"	21	UPP	iP	02 42 08.8
			P	Z' 0.5 1.0					Southwest of Sumatera, Indonesia
				Myanmar-India border region					(h = 40 km).
				(h = 100 km).	"	21	UPP	iP	03 30 38.7
				m = 6.3 (UPP,KIR).					Luzon, Philippine Islands
"	16	UPP	iP	02 56 07.3					(h = 80 km).
"	16	UPP	iPKP1	04 24 03.9	"	22	UPP	iPKP	19 20 22.9
				South of Fiji Islands (h = N).					Kermadec Islands region
"	16	UPP	iP	11 41 36.7					(h = 350 km).
				Philippine Islands region					
				(h = 40 km).					
"	16	UPP	iP	15 28 29.3					
				Crimea region, Ukraine (h = N).					

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

1998				1998			
Oct.	23	UPP iP	02 01 54.2	Oct.	31	UPP iP	11 32 09.1
		Peru-Ecuador border region (h = 150 km).				Southwest of Sumatera, Indonesia (h = N).	
"	23	UPP iP	08 44 24.9	"	31	UPP iP	13 51 00.8
		Eastern Mediterranean Sea (h = N).				South of Honshu, Japan (h = 20 km).	
"	25	UPP iP	20 13 35.9	"	31	UPP iP	14 13 44.6
		Hindu Kush region, Afghanistan (h = 60 km).				i	14 14 24.0
"	26	UPP iP	18 37 26.9				micr sec
		Afghanistan-Tajikistan bord reg. (h = 110 km).				P	Z' 0.1 1.3
						Kamchatka (h = 150 km).	
"	27	UPP Mx	12 24				
			micr sec				
		Mx	Z 7.3 17				
		KIR Mx	12 21				
			micr sec				
		Mx	Z 7.5 17				
		Off east coast of Honshu, Japan (h = N).					
		M = 6.0 (UPP,KIR).					
"	27	UPP iP	21 29 52.0				
		Halmahera, Indonesia (h = 60 km).					
"	28	UPP iP	08 13 34.6				
"	28	UPP iP	16 38 36.5				
		i	16 38 46.7				
		iS	16 50 00				
			micr sec				
		Mx	Z 11 21				
		KIR Mx	17 21				
			micr sec				
		Mx	Z 3.4 14				
		Northern Molucca Sea (h = N).					
		M = 6.1.					
"	28	UPP iP	21 53 19.5				
		South of Mariana Islands (h = N).					
"	29	UPP iPKP1	00 55 08.5				
		Kermadec Islands region (h = 320 km).					
"	31	UPP iP	10 52 17.5				
		Sichuan, China (h = N).					

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