SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

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S-750 12 UPPSALA
SWEDEN

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

U P P S A L A, K I R U N A, U M E Å, U D D E H O L M,

D E L A R Y and M Y R V I K E N

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

J A N U A R Y 1 - 31, 1982

1982 Jan. 1 KIR i 04 17 29.3
UME iP 04 17 45.0
Baffin Bay (h = 10 km).

" 1 UME iPKP 11 11 17.0
Fiji Islands region
(h = 590 km).

" 1 KIR iP 13 52 25.1
UME iP 13 52 38.5
Mariana Islands region
(h = 30 km).

" 1 UPP iP 19 03 23.9 C
iPP 19 06 30
iS 19 13 34.8
micr sec
P Z' 3.4 1.5
Mx Z 31 17
KIR iP 19 02 51.3 C
iPP 19 05 43.2
iS 19 12 34.8
micr sec
P Z' 1.8 1.3
Mx Z 20 17
UME iP 19 03 05.3 C
iS 19 12 59.7
Bonin Islands region
(h = 20 km).
m = 7.1, M = 6.7 (UPP,KIR).

" 1 KIR iP 19 37 02.9
Turkey (h = 10 km).

" 2 UME iP 01 19 53.4
Tadzhik SSR (h = N).

1982 Jan. 2 UPP iP 03 43 52.8
KIR eP 03 43 37
Near coast of Guerrero,
Mexico (h = 25 km).

" 2 UPP iSg1 15 04 59.1
Coast of Uppland, Sweden,
60.2°N, 18.5°E.
Origin time = 15 04 42.
Solution from SKI station
readings.

" 2 UME iP 18 33 57.4
Near east coast of Honshu,
Japan (h = 60 km).

" 2 UPP iP 19 08 19.2
KIR iP 19 08 48.1
UME iP 19 08 27.5
Iran (h = N).

" 2 UPP iPKP1 21 14 27.8
UME iPKP1 21 14 17.8

" 3 UPP iP 02 31 30.9

" 3 UPP eP 04 28 04
i 04 28 24.1
UME eP 04 27 52
Taiwan region (h = 55 km).

" 3 KIR eP 07 33 40
Southern Iran (h = N).

" 3 UPP iP 11 47 57.7
KIR iP 11 47 51.1
UME iP 11 47 50.1
Burma-India border region
(h = 70 km).

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

1982
Jan. 3 UPP iP 14 20 50.9 C
iS 14 29 54
micr sec
P Z' 0.2 1.0
Mx Z 16 16
KIR iP 14 21 31.5 C
iS 14 31 23
micr sec
P Z' 0.3 1.6
UME iP 14 21 14.2 C
iS 14 30 46
Central Mid-Atlantic Ridge
(h = 10 km).

" 3 UPP iPKP1 18 01 14.3
UME ePKP 18 01 09
South of Fiji Islands
(h = 140 km).

" 3 UPP ePKP2 21 36 31
UME iPKP1 21 36 14.8 C
Kermadec Islands (h = 110 km).

" 3 UME iP 23 44 49.1

" 4 KIR eP 00 50 13
UME iP 00 50 40.1
Andreanof Islands, Aleutian
Islands (h = N).

" 4 UPP iP 06 17 05.5 D
ipP 06 19 14.8
iSKS 06 26 37.1
i 06 27 06
iS 06 27 19.9
micr sec
P Z' 1.0 1.1
KIR iP 06 16 37.9 D
ipP 06 18 49.9
iSKS 06 26 08.8
micr sec
P Z' 2.2 1.4
UME iP 06 16 49.6 D
i 06 18 59.5
iSKS 06 26 18.3
iS 06 27 04.2
Mariana Islands.
h = 590 km (UPP,KIR,UME).
m = 6.7 (UPP,KIR).

" 4 UPP iP 06 21 10.2
micr sec
P Z' 0.2 0.9
(cont.)

1982
Jan. 4 (cont.)
KIR iP 06 20 42.9
micr sec
P Z' 0.3 1.0
UME iP 06 20 54.4
Mariana Islands (h = 520 km).
m = 6.0 (UPP,KIR).

" 4 UPP iSg1 18 25 15.3
UME eSg1 18 26 24
UDD iSg1 18 24 13.1
DEL iSn 18 24 19.7
Coast of southwestern Norway,
near 59 1/4°N, 5 1/2°E.
Origin time = 18 22 07.
M_L (UPP) = 3.0 (0.09) 5.
Felt.
By combination with Bergen and
Kongsberg readings.

" 4 UPP iPKP1 22 39 56.3
i 22 40 43.9
micr sec
PKP1 Z' 0.2 1.0
KIR e(PKP) 22 39 39
iPKP 22 39 48.3
iSKP1 22 43 02.3
micr sec
PKP Z' 0.8 2.0
UME iPKP1 22 39 44.4
i 22 40 47.7
South of Fiji Islands
(h = 200 km).

" 5 UPP iP 13 55 44.6
i 13 55 49.7
micr sec
Mx Z 0.7 18
UME iP 13 56 07.6
Central Mid-Atlantic Ridge
(h = 10 km).

" 5 UME iSg1 21 57 50.3

" 5 UME iP 22 28 25.2

" 6 UME iP 03 40 14.3

" 6 UME iP 06 43 55.8
Ascension Island region
(h = 10 km).

" 6 KIR iP 09 56 34.5
(cont.)

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

1982
Jan. 6 (cont.)
UME iP 09 56 32.5
Southern Sumatera (h = 55 km).

" 6 KIR iP 12 50 47.5
UME iP 12 50 50.0
Mindanao, Philippine Islands
(h = 470 km).

" 6 UME iP 16 38 03.1
Pyrenees (h = 15 km).

" 6 KIR iP 22 15 49.2
UME iP 22 16 03.0
Bonin Islands region (h = N).

" 7 UPP iPKP 08 22 30.9
micr sec
PKP Z' 0.1 1.0
KIR iPKP 08 22 16.9
micr sec
PKP Z' 0.2 1.0
UME iPKP 08 22 22.9 C
Santa Cruz Islands
(h = 160 km).

" 7 UME iP 08 32 13.5

" 7 KIR iPKP 09 01 26.3
UME iPKP 09 01 33.9
Gilbert Islands region
(h = N).

" 7 KIR iPKP 09 47 58.2
ipPKP 09 48 22.0
micr sec
PKP Z' 0.1 1.0
UME iPKP 09 47 51.5
ipPKP 09 48 15.0
South Sandwich Islands region.
h = 80 km (KIR,UME).

" 7 UPP iPKP 15 26 11.8
iPKP1 15 26 16.9
iPKP2 15 26 22.4
KIR iPKP1 15 25 55.2
UME iPKP1 15 26 04.5
Kermadec Islands region
(h = 450 km).

" 7 UME iP 17 42 01.3

" 7 KIR iP 20 48 24.3
UME iP 20 48 41.1
Honshu, Japan (h = 45 km).

1982
Jan. 8 UPP iP 01 35 00.6
KIR iP 01 35 09.5
UME iP 01 35 08.7 C
Windward Islands (h = 180 km).

" 8 UME iP 08 14 32.7 D
i 08 14 45.6
Near east coast of Honshu,
Japan (h = 45 km).

" 8 UPP iP 22 29 55.3
micr sec
P Z' 0.1 1.1
KIR iP 22 29 27.1
UME iP 22 29 38.0
Ryukyu Islands (h = 35 km).

" 8 UME iP 22 39 35.5
Ryukyu Islands (h = N).

" 8 UME iP 23 04 23.5

" 8 UME iP 23 55 06.2

" 9 UME iP 03 52 12.5
i 03 52 24.3

" 9 KIR eP 05 18 07
UME iP 05 17 47.7

" 9 UME iP 08 05 10.8
Greece (h = 10 km).

" 9 UPP iP 08 21 22.6
KIR iP 08 22 36.2
UME iP 08 22 00.3
Greece (h = 10 km).

" 9 UPP iP 13 02 33.0
iS 13 09 42
micr sec
P Z' 0.4 1.5
KIR iP 13 02 19.7
micr sec
P Z' 0.2 1.5
UME iP 13 02 29.0
New Brunswick (h = 10 km).
m = 6.1 (UPP,KIR).

" 9 UPP iP 16 45 24.2
KIR iP 16 45 10.0
UME iP 16 45 20.4 C
New Brunswick (h = 5 km).

" 9 UPP iP 17 40 45.0
(cont.)

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

1982
Jan. 9 (cont.)

			micr	sec	
UPP	P	Z'	0.1	1.3	
KIR	iP		17 41 35.0		
	i		17 41 41.3		
			micr	sec	
	P	Z'	0.1	1.1	
UME	iP		17 41 09.8		
	i		17 41 14.8		

Zaire Republic (h = N).
m = 5.8 (UPP,KIR).

" 9 UME iP 18 50 21.3
Andaman Islands region
(h = N).

" 9 UPP eP 19 51 00
KIR iP 19 51 08.9
UME iP 19 50 58.7
Hindu Kush (h = 240 km).

" 9 UME iP 21 33 39.4
Near west coast of Honshu,
Japan (h = 45 km).

" 10 UPP iPKP1 04 13 54.4
South of Fiji Islands
(h = 490 km).

" 10 UME iP 06 58 28.9

" 10 UPP iPKP1 08 51 40.4
i 08 51 41.9
KIR iPKP1 08 51 19.8
UME iPKP1 08 51 28.9
Kermadec Islands (h = N).

" 10 UDD iSg1 09 31 29.8
Västergötland, Sweden,
58.1°N, 13.7°E.
Origin time = 09 30 28.
Solution from SKI station
readings.

" 10 UME iP 11 26 01.9

" 11 UPP iP 06 22 44.0 C
i 06 22 47.5
i 06 22 55.6
iS 06 33 16.0

			micr	sec
P		Z'	0.3	1.3
i		Z'	0.6	0.9
i		Z'	2.7	1.5
Mx		Z	119	19

(cont.)

1982
Jan. 11 (cont.)

KIR iP 06 22 24.9 C
i 06 22 28.4
i 06 22 36.0
iSKS 06 32 34
iS 06 32 41

			micr	sec
P		Z'	0.2	1.3
i		Z'	11.2	3.8
i		Z'	18.9	3.2
Mx		Z	37	13

UME iP 06 22 31.8 C
i 06 22 34.8
i 06 22 43.0
Luzon, Philippine Islands
(h = 45 km).
m = 7.5, M = 7.2 (UPP,KIR).

" 11 UPP iP 06 33 39.1
i 06 33 45.8
UME iP 06 33 33.1

" 11 UPP iP 07 01 57.8 C

			micr	sec
P		Z'	0.9	1.4

KIR iP 07 01 38.8 C

			micr	sec
P		Z'	1.0	1.6

UME iP 07 01 45.0 C
Luzon, Philippine Islands
(h = N).
m = 6.7 (UPP,KIR).

" 11 UPP iPKP1 08 20 27.5 C
South of Fiji Islands
(h = 490 km).

" 11 UPP iP 21 03 12.5
UME iP 21 03 05.5
India-Bangladesh border
region (h = N).

" 11 UPP iP 21 49 49.9
UME iP 21 49 46.0 D
New Brunswick (h = 5 km).

" 11 UDD iPg1 23 29 18.0
iSg1 23 29 24.1
Värmland, Sweden,
59.7°N, 13.3°E.
Origin time = 23 29 10.
By combination with SKI
station readings.

" 12 UPP iPKKP 02 14 21.4

			micr	sec
Mx		Z	4.1	20

(cont.)

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

1982
Jan. 12 (cont.)
KIR iPKP 02 03 39.7
i 02 03 50.8
micr sec
i Z' 0.2 1.3
Mx Z 2.4 20
UME ePKP 02 03 33
i 02 03 35.5
iPKKP 02 14 03.0
South of Africa (h = 10 km).
M = 6.0 (UPP,KIR).

" 12 UPP iP 06 01 02.8
micr sec
P Z' 0.3 1.4
Mx Z 9.6 22
KIR iP 06 00 54.9
micr sec
P Z' 0.5 1.5
Mx Z 9.4 19
UME iP 06 00 58.6
i 06 01 01.6
Honduras (h = 5 km).
m = 6.4, M = 6.2 (UPP,KIR).

" 13 UPP iPKP 00 25 30.1
i 00 25 35.1
micr sec
Mx Z 5.1 19
KIR i 00 25 23.7
micr sec
Mx Z 1.4 20
UME iPKP 00 25 23.1
i 00 25 29.2
D'Entrecasteaux Islands
region (h = N).
M = 5.9 (UPP,KIR).

" 13 UME iP 01 46 55.2
i 01 47 05.2

" 13 UME iP 01 54 00.1
i 01 54 01.3

" 13 UME iP 03 00 06.0
Near east coast of Honshu,
Japan (h = 55 km).

" 13 UPP iP 10 42 36.5
UME iP 10 42 59.9
Ascension Island region
(h = 10 km).

1982
Jan. 13 UPP iP 12 38 13.2
KIR iP 12 37 37.5
UME iP 12 37 56.7
Off coast of northern
California (h = 10 km).

" 13 UPP iP 15 40 00.1
UME iP 15 39 43.6
Southwestern Ryukyu Islands
(h = 10 km).

" 13 UPP iRg 20 56 15.7
Dannemora, Uppland, Sweden,
60.1°N, 17.5°E.
Rockburst.

" 14 UPP iPKP2 02 22 27.7
UME iPKP2 02 22 16.5
Kermadec Islands region
(h = 40 km).

" 14 UPP iP 03 19 42.0
UME iP 03 19 16.8
Kuril Islands (h = N).

" 14 UPP iP 07 43 50.6
UME iP 07 43 24.8
Lake Baikal region
(h = 25 km).

" 14 UPP iP 11 47 59.2
micr sec
P Z' 0.1 1.0
KIR iP 11 47 41.2
micr sec
P Z' 0.3 1.1
UME iP 11 47 47.8 C
Mindanao, Philippine Islands
(h = 610 km).
m = 5.8 (UPP,KIR).

" 14 UPP iP 16 26 49.5
UME iP 16 26 22.3
Off east coast of Kamchatka
(h = 35 km).

" 15 UME iPKP 14 07 03.5
D'Entrecasteaux Islands
region (h = 5 km).

" 16 UME iP 00 50 37.0
Near east coast of Honshu,
Japan (h = 45 km).

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

1982
Jan. 16 UPP iP 03 48 46.2
UME iP 03 48 18.9
Rat Islands, Aleutian Islands (h = 50 km).

" 16 UPP iP 11 18 07.0
iS 11 19 33.9
iSg2 11 20 33.9
KIR iP 11 19 49.8
UME iP 11 18 58.3
iS 11 21 14.2
iLg2 11 22 39.8
Poland (h = 10 km).

" 16 UME iP 19 15 00.3
i 19 15 13.1

" 17 UME iP 01 41 06.1

" 17 UPP iP 10 33 05.6
KIR iP 10 33 48.9
Western Caucasus (h = N).

" 17 KIR iPKP 11 12 25.4
UME iPKP 11 12 32.1
Fiji Islands region (h = 560 km).

" 17 UME iP 12 59 36.9
South of Panama (h = N).

" 17 KIR iP 14 15 38.7
UME iP 14 15 41.1
South of Panama (h = 30 km).

" 17 UPP iP 15 04 51.9
ipP 15 05 00.1
KIR iP 15 04 54.6
ipP 15 05 04.6
micr sec
pP Z' 0.1 0.8
UME iP 15 04 56.2
ipP 15 05 03.9
Colombia.
h = 30 km (UPP,KIR,UME).

" 17 UME iP 15 53 57.9
South of Mariana Islands (h = 70 km).

" 17 UPP eP 18 44 53
i 18 44 59.3
UME iP 18 44 31.3
Ionian Sea (h = 55 km).

1982
Jan. 17 KIR iP 19 03 50.0
Mindanao, Philippine Islands (h = 90 km).

" 17 UPP iP 19 49 36.1
UME iP 19 49 14.7 C
Near east coast of Honshu, Japan (h = 70 km).

" 17 UME iP 20 59 04.9
i 20 59 26.7
Hokkaido, Japan region (h = 70 km).

" 17 UME iP 23 15 08.4
Near east coast of Honshu, Japan (h = 60 km).

" 18 UPP iPKP 04 42 47.5
iSKP1 04 46 13.6
i 04 46 19.5
KIR iPKP 04 42 33.7
i 04 42 38.1
UME iPKP 04 42 40.2
i 04 42 44.6
iSKP1 04 46 08.3
Vanuatu Islands (h = 45 km).

" 18 UPP iP 19 32 00.5
ipP 19 32 03.8
iS 19 35 44
micr sec
pP Z' 1.3 1.5
KIR eP 19 33 15
ipP 19 33 18.0
iS 19 38 03
micr sec
pP Z' 0.6 1.6
Mx Z 97 13
UME iP 19 32 38.2
ipP 19 32 41.3
iS 19 36 54
Aegean Sea.
h = 10 km (UPP,KIR,UME).
m = 6.1 (UPP,KIR),
M = 7.2 (UPP).
M determined from Wiechert records.

" 18 UME iP 20 02 59.0

" 18 UPP iP 20 04 44.1
UME iP 20 05 22.0
Aegean Sea (h = 10 km).

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

1982
Jan. 18 KIR iP 20 06 36.0
UME iP 20 06 09.3

" 18 UME iP 20 13 27.8
Aegean Sea (h = 10 km).

" 18 UPP eP 20 36 43
i 20 37 20.2
UME iP 20 37 15.8
i 20 37 21.3
Aegean Sea (h = 15 km).

" 18 UPP iP 21 31 47.9
KIR eP 21 31 48
UME iP 21 31 45.6
Nicobar Islands region
(h = N).

" 18 UPP iP 21 37 13.7
KIR eP 21 37 09
UME iP 21 37 07.4
Burma (h = N).

" 18 UME iP 22 47 02.1
Fox Islands. Aleutian
Islands (h = 70 km).

" 18 UPP iPKP 23 02 54.5
UME iPKP 23 02 48.7
New Ireland region
(h = 220 km).

" 18 UPP iP 23 45 16.5
UME iP 23 45 51.2
i 23 45 55.4
Aegean Sea (h = 10 km).

" 19 UPP iP 01 27 02.7
KIR iP 01 27 03.9
UME iP 01 26 59.2
Nicobar Islands region
(h = N).

" 19 UPP eP 04 19 11
UME eP 04 19 25
North Atlantic Ridge
(h = 10 km).

" 19 UPP iP 12 23 00.4
micr sec
Mx Z 2.4 10
UME iP 12 23 36.1
ipP 12 23 39.2
Aegean Sea (h = 10 km).

1982
Jan. 19 UPP iP 16 22 36.4
micr sec
Mx Z 2.3 8
UME iP 16 23 13.4
ipP 16 23 17.4
Aegean Sea (h = 15 km).

" 19 UPP iP 18 44 26.5
Jordan-Syria region
(h = 10 km).

" 19 KIR iP 20 32 25.3
Mindanao, Philippine Islands
(h = 80 km).

" 20 UPP iP 04 37 05.0
iS 04 46 48
micr sec
P Z' 0.2 0.9
Mx Z 19 20
KIR iP 04 37 07.0
micr sec
P Z' 0.2 1.1
Mx Z 15 18
UME iP 04 37 03.0
iS 04 46 44
Nicobar Islands region
(h = 20 km).
m = 6.1, M = 6.4 (UPP,KIR).

" 20 UPP iP 05 12 03.0
KIR iP 05 12 03.0
UME iP 05 11 58.0
Nicobar Islands region
(h = N).

" 20 UPP iP 05 25 16.7
micr sec
P Z' 0.1 0.9
KIR iP 05 25 17.8
micr sec
P Z' 0.1 0.8
UME iP 05 25 12.5
Nicobar Islands region
(h = N).
m = 5.9 (UPP,KIR).

" 20 UPP iP 07 21 08.6 C
iS 07 30 51.2
micr sec
P Z' 0.2 1.0
Mx Z 22 20
KIR iP 07 21 09.7 C
micr sec
P Z' 0.5 1.4
Mx Z 12 16
(cont.)

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

1982 Jan. 20 (cont.)

UME iP 07 21 05.6 C
iS 07 30 48.4
Nicobar Islands region
(h = 25 km).
m = 6.2, M = 6.4 (UPP,KIR).

" 20 UPP iP 08 31 22.4
UME eP 08 31 37
Eastern Caucasus (h = N).

" 20 UPP iP 09 41 06.6 C
i 09 41 12.4
micr sec
P Z' 0.6 1.4
KIR iP 09 40 12.2 C
micr sec
P Z' 0.3 1.0
UME iP 09 40 37.5 C
i 09 40 45.5
Off east coast of Kamchatka
(h = 25 km).
m = 6.4 (UPP,KIR).

" 20 UPP iP 11 10 36.5 D
micr sec
P Z' 0.1 1.0
KIR iP 11 09 42.9 D
micr sec
P Z' 0.1 1.0
UME iP 11 10 08.1 D
Off east coast of Kamchatka
(h = 30 km).
m = 5.9 (UPP,KIR).

" 20 UPP ePKP1 13 01 07
UME iPKP 13 01 01.0
Tonga Islands region (h = N).

" 20 UPP iP 22 23 31.6
KIR iP 22 23 32.9
UME iP 22 23 29.0 C
Nicobar Islands region
(h = N).

" 20 UME iP 23 28 38.7
Nicobar Islands region
(h = N).

" 21 UME iP 02 43 54.6
Andaman Islands region
(h = N).

1982 Jan. 21 UPP iP 03 44 10.7
UME iP 03 44 23.5
North Atlantic Ridge
(h = 10 km).

" 21 UME iP 04 11 48.0
North Atlantic Ridge
(h = 10 km).

" 21 UPP iP 09 34 02.8
KIR iP 09 33 40.7
UME iP 09 33 48.1
Taiwan region (h = 20 km).

" 21 UPP iSn 13 01 21.0
KIR iPn 12 58 35.0
iPg1 12 58 43.4
iSg1 12 59 32.9
UME iPn 12 59 05.9
iSn 13 00 08.8
iSg1 13 00 37.3
UDD iSn 13 01 18.9
MYR iPn 12 59 01.4
i 13 00 17.5
Norwegian Sea,
near 68 1/4°N, 10 1/2°E.
Origin time = 12 57 40.
M_L (UPP) = 3.6 (0.12) 6.

" 21 UME iP 17 29 26.9
Near east coast of Honshu,
Japan (h = 50 km).

" 21 UPP iP 22 06 30.4
KIR eP 22 05 58
UME iP 22 06 14.7
Hawaii (h = 10 km).

" 21 UPP iP 23 14 54.9
KIR iP 23 13 38.9
UME iP 23 13 43.5
Molucca Passage (h = 60 km).

" 21 KIR iP 23 28 45.6
Luzon, Philippine Islands
(h = 50 km).

" 21 UME eP 23 50 31
Iran (h = N).

" 22 UME iP 00 47 10.2

" 22 KIR ePKP 01 29 15
Santa Cruz Islands
(h = 60 km).

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

1982						
Jan.	22	UPP	iP		04 23 41.3	
		KIR	iP		04 23 22.0	
		UME	iP		04 23 29.5	
		Luzon, Philippine Islands				
		(h = 80 km).				
"	22	UPP	iP		04 39 29.8	
					micr	sec
			P	Z'	0.2	0.8
			Mx	Z	5.6	14
		KIR	iP		04 39 22.9	
					micr	sec
			P	Z'	0.2	1.1
			Mx	Z	3.1	13
		UME	iP		04 39 21.3	
		Tibet (h = N).				
		m = 6.1, M = 5.7 (UPP,KIR).				
"	22	UPP	iPKP		08 51 31.8	
		KIR	iPKP		08 51 15.7	
		UME	iPKP		08 51 22.7	
		Vanuatu Islands (h = 200 km).				
"	22	UME	iP		13 38 41.9	
"	22	UPP	iP		16 17 48.1	
		KIR	iP		16 17 30.3	
			ipP		16 17 50.4	
		UME	iP		16 17 36.2	
			i		16 17 51.2	
		Mindanao, Philippine Islands				
		(h = 70 km).				
"	22	KIR	eP		18 36 30	
		UME	eP		18 36 25	
		Nicobar Islands region				
		(h = N).				
"	22	KIR	iP		18 47 10.2	
		Kuril Islands (h = N).				
"	23	UME	iPKP		04 33 41.5	
			i		04 33 47.7	
		D'Entrecasteaux Islands				
		region (h = 25 km).				
"	23	UPP	iP		10 48 36.2	
"	23	UPP	iP		11 55 42.7	
			i		11 55 55.1	
"	23	UPP	iP		12 39 10.8	
"	23	UME	iP		12 59 29.7	
			i		12 59 36.8	
		Mariana Islands region				
		(h = N).				

1982						
Jan.	23	UPP	iP		13 01 30.1	C
					micr	sec
			P	Z'	0.1	1.4
		KIR	iP		13 01 02.0	C
					micr	sec
			P	Z'	0.1	1.2
		UME	iP		13 01 13.7	C
			i		13 01 20.3	
		Mariana Islands region				
		(h = N).				
		m = 5.9 (UPP,KIR).				
"	23	UPP	iP		14 22 29.0	
			ipP		14 22 35.1	
			iS		14 32 12	
					micr	sec
			pP	Z'	0.1	1.1
			Mx	Z	21	12
		KIR	iP		14 22 01.1	
			i		14 22 09.5	
			iS		14 31 23.9	
					micr	sec
			P	Z'	0.1	1.1
			Mx	Z	14	12
		UME	iP		14 22 13.5	
			iS		14 31 47	
		Taiwan (h = 15 km).				
		m = 5.8, M = 6.6 (UPP,KIR).				
"	23	UPP	iP		17 46 26.5	
			iS		17 53 39.7	
					micr	sec
			P	Z'	1.6	1.1
			Mx	Z	127	17
		KIR	iP		17 46 26.0	
			iS		17 53 39.5	
					micr	sec
			P	Z'	0.8	1.1
			Mx	Z	41	13
		UME	iP		17 46 20.8	
			iS		17 53 29	
		Tibet (h = N).				
		m = 6.8, M = 6.9 (UPP,KIR).				
"	23	UPP	iP		17 56 58.8	
					micr	sec
			P	Z'	0.1	0.9
		KIR	iP		17 56 59.4	
					micr	sec
			P	Z'	0.1	0.9
		UME	iP		17 56 53.3	D
		Tibet (h = N).				
		m = 5.8 (UPP,KIR).				
"	23	UME	iP		18 05 55.8	
		North Atlantic Ridge				
		(h = 10 km).				

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

1982							
Jan.	23	UPP	iP		18 28 42.5		
					micr	sec	
			P	Z'	0.1	0.9	
		KIR	iP		18 28 42.6		
		UME	iP		18 28 36.8		
		Tibet (h = 45 km).					
"	23	UPP	iP		19 26 06.3		
		KIR	iP		19 26 07.0		
		UME	iP		19 26 00.5		
		Tibet (h = N).					
"	23	UPP	eP		19 37 14		
"	23	UPP	iP		20 01 06.1		
					micr	sec	
			P	Z'	0.1	1.0	
		KIR	iP		20 01 06.0		
					micr	sec	
			P	Z'	0.1	1.1	
		UME	iP		20 00 58.8		
		Tibet (h = N).					
		m = 5.8 (UPP,KIR).					
"	23	UPP	iP		20 52 17.8		
		KIR	iP		20 52 17.9		
		UME	iP		20 52 12.0		
		Tibet (h = N).					
"	23	UME	iPKP		22 23 53.3		
		South of Fiji Islands					
		(h = 610 km).					
"	23	UME	iP		23 03 25.4		
			e		23 03 34		
		Aegean Sea (h = 10 km).					
"	23	UPP	iP		23 45 38.3		
					micr	sec	
			P	Z'	0.1	1.5	
		UME	eP		23 46 01		
"	24	UPP	eP		02 09 05		
		UME	eP		02 09 22		
		Turkey-USSR border region					
		(h = N).					
"	24	UPP	iP		03 40 51.6		
		KIR	iP		03 40 51.5		
		UME	iP		03 40 47.5		
		Tibet (h = N).					
"	24	UPP	eP		03 55 03		
			i		03 55 06.1		
		KIR	eP		03 55 06		
		UME	eP		03 54 58		
		Tibet (h = N).					

1982							
Jan.	24	UPP	iP		06 21 33.5		C
			i		06 21 37.9		
			iS		06 32 06		
					micr	sec	
			P	Z'	0.2	1.3	
			i	Z'	0.2	0.7	
			Mx	Z	24	17	
		KIR	iP		06 21 14.4		C
			i		06 21 21.8		
			iS		06 31 28		
					micr	sec	
			P	Z'	0.5	1.7	
			i	Z'	1.8	1.7	
			Mx	Z	15	16	
		UME	iP		06 21 21.1		C
			ipP		06 21 31.8		
			iS		06 31 41		
		Luzon, Philippine Islands					
		(h = 35 km).					
		m = 6.6, M = 6.6 (UPP,KIR).					
"	24	UPP	iP		07 22 46.9		
"	24	UPP	iP		10 12 31.4		
		KIR	iP		10 12 32.3		
		UME	iP		10 12 25.7		
		Tibet (h = N).					
"	24	UPP	iP		11 46 09.6		C
			ipP		11 46 37.9		
					micr	sec	
			P	Z'	0.1	0.7	
		KIR	iP		11 46 04.1		C
			ipP		11 46 32.2		
					micr	sec	
			P	Z'	0.1	0.7	
		UME	iP		11 46 02.7		C
			ipP		11 46 30.3		
		Burma.					
		h = 110 km (UPP,KIR,UME).					
		m = 5.8 (UPP,KIR).					
"	24	UPP	iP		13 41 35.1		
		UME	iP		13 41 32.2		
			i		13 41 36.7		
		Nicobar Islands region					
		(h = N).					
"	24	UPP	iP		17 36 46.5		
		UME	iP		17 36 40.7		
		Tibet (h = N).					
"	24	UPP	iP		23 55 37.4		
		UME	iP		23 55 45.3		
"	25	UME	iP		00 09 47.5		

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

1982 Jan.	25	UPP	iPKP1		05 37 02.0	
		UME	iPKP1		05 36 44.7	
"	25	UPP	iP		05 40 21.4	
			i		05 40 25.1	
			iS		05 49 10.8	
			iScS		05 50 13.9	
			iP'P'		06 08 42.6	
					micr sec	
			P	Z'	0.2 1.0	
			i	Z'	0.5 1.3	
			Mx	Z	3.8 20	
		KIR	iP		05 39 27.9	
			ipP		05 39 44.7	
					micr sec	
			P	Z'	0.5 1.0	
		UME	iP		05 39 54.9	
			i		05 40 03.3	
			iPcP		05 40 32.8	
			iS		05 48 21.6	
			iScS		05 49 43.2	
		Fox Islands, Aleutian Islands (h = 60 km). m = 6.4 (UPP,KIR).				
"	25	UPP	iP		10 39 03.1	
		KIR	iP		10 39 02.5	
		UME	iP		10 38 58.8	
		Nicobar Islands region (h = N).				
"	25	UPP	iP		17 35 15.1 C	
					micr sec	
			P	Z'	0.1 0.8	
		KIR	iP		17 35 14.9 C	
		UME	iP		17 35 09.4 C	
		Tibet (h = N).				
"	25	UPP	i(P)		20 52 36.7	
"	25	UME	iP		23 57 46.4	
		Mariana Islands region (h = 10 km).				
"	26	UME	iP		03 48 04.0	
		Gulf of California (h = 10 km).				
"	26	KIR	iP		09 12 56.2	
		UME	iP		09 13 44.1	
		Norwegian Sea (h = 10 km).				
"	26	UME	iP		09 57 55.1	
		Northeastern China (h = N).				
1982 Jan.	26	KIR	iPKP		13 41 20.2	
		UME	iPKP		13 41 24.1	
			i		13 42 10.7	
		East Papua, New Guinea region (h = 170 km).				
"	26	UPP	iP		15 35 32.7	
		KIR	iP		15 33 58.3	
			iTPg		15 39 10.8	
			iTSg		15 39 39.0	
		UME	iP		15 34 45.2	
			iTSg		15 41 26.6	
		Greenland Sea (h = 10 km).				
"	26	KIR	iP		17 41 07.1	
			iS		17 42 23.9	
			iTSg		17 46 34.9	
		UME	iP		17 41 54.1	
			iTSg		17 48 44.2	
		Greenland Sea (h = 10 km).				
"	26	UPP	iP		18 51 40.1	
		Luzon, Philippine Islands (h = 55 km).				
"	26	KIR	iP		19 06 45.7	
			iS		19 08 02.5	
			iTPg		19 11 52.0	
			iTSg		19 12 30.1	
		UME	iP		19 07 32.8	
			i		19 09 23.8	
			iTSg		19 14 19.4	
		Greenland Sea (h = 10 km).				
"	27	KIR	iP		05 09 50.1	
			iTPg		05 14 53.5	
			iTSg		05 15 21.2	
		UME	eP		05 10 38	
		Greenland Sea (h = 10 km).				
"	27	UME	iP		13 03 54.1	
		Near east coast of Honshu, Japan (h = N).				
"	27	UPP	iP		14 37 45.3	
		UME	iP		14 37 03.7	
		North of Svalbard (h = 10 km).				
"	28	UPP	eP		00 09 45	
		UME	iP		00 09 29.0	
		Volcano Islands region (h = 60 km).				
"	28	UPP	iSKP1		04 26 57.6	
		UME	iPKP		04 24 12.3	

(cont.)

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

1982 Jan. 28 (cont.)
UME iSKP1 04 26 44.5
Fiji Islands region
(h = 620 km).

" 28 UPP iP 07 28 12.4
India-Bangladesh border
region (h = N).

" 28 UME iP 09 26 44.5
South of Honshu, Japan
(h = N).

" 28 KIR iP 13 19 38.5
UME eP 13 19 54
i 13 25 37.5
Lake Baikal region (h = N).

" 28 UPP iP 14 30 25.1 C
iPP 14 33 22.2
micr sec
P Z' 0.1 1.0
KIR iP 14 29 50.1 C
UME iP 14 30 05.1 C
South of Honshu, Japan
(h = 30 km).

" 28 UPP iP 16 11 48.9 C
i 16 12 06.7
micr sec
P Z' 0.4 1.3
KIR iP 16 11 14.7 C
micr sec
P Z' 0.4 1.5
UME iP 16 11 34.2 C
Southern Nevada.
m = 6.4 (UPP,KIR).
Underground explosion.

" 29 UPP iP 00 11 45.6
iPcP 00 12 14.9
micr sec
P Z' 0.1 0.6
KIR iP 00 10 58.3
micr sec
P Z' 0.2 0.9
UME iP 00 11 19.7
Sea of Okhotsk (h = 540 km).
m = 5.5 (UPP,KIR).

" 29 UPP iRg 00 14 17.6
Dannemora rockburst.

" 29 UME iP 01 22 34.5
Arabian Sea (h = 10 km).

1982 Jan. 29 KIR iP 11 33 02.8
UME iP 11 33 08.7
Philippine Islands region
(h = 70 km).

" 29 UPP iP 22 41 36.9
ipP 22 41 43.6
iS 22 49 22
micr sec
P Z' 0.2 1.5
pP Z' 0.6 1.7
Mx Z 8.3 21
KIR iP 22 41 56.5
ipP 22 42 03.9
micr sec
P Z' 0.3 1.6
pP Z' 0.4 1.5
Mx Z 1.4 20
UME iP 22 41 50.0
ipP 22 41 56.0
i 22 42 04.0
iS 22 49 50
North Atlantic Ridge.
h = 20 km (UPP,KIR,UME).
m = 6.3, M = 5.5 (UPP,KIR).

" 29 UME iP 22 51 04.7

" 29 UME iP 22 56 39.5

" 30 UPP iP 02 46 17.5
ipP 02 46 30.4
iS 02 55 25
micr sec
P Z' 0.2 1.2
Mx Z 7.3 24
KIR iP 02 46 26.3 C
ipP 02 46 39.2
micr sec
P Z' 0.6 1.5
UME iP 02 46 25.5 C
ipP 02 46 39.8
iS 02 55 41
Leeward Islands.
h = 50 km (UPP,KIR,UME).
m = 6.3 (UPP,KIR).

" 30 UPP iP 08 26 09.0
UME iP 08 25 48.7
South of Honshu, Japan
(h = 350 km).

" 30 UPP iP 11 52 55.1 C
micr sec
P Z' 0.1 1.0
(cont.)

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

1982
Jan. 30 (cont.)
KIR iP 11 52 35.0 C
UME iP 11 52 41.7 C
Luzon, Philippine Islands
(h = 35 km).

" 31 UME iP 02 31 51.0
Luzon, Philippine Islands
(h = 80 km).

" 31 UPP iSg1 03 43 35.3
KIR iPg1 03 39 16.2
iSg1 03 39 32.3
UME iPg1 03 40 20.7
iSn 03 41 04.5
iSg1 03 41 25.5
UDD iSg1 03 43 46.6
MYR iSn 03 41 45.6
iSg1 03 42 23.0
Norway-Finland border region,
68.7°N, 23.2°E.
Origin time = 03 38 51.
M_L(UPP) = 3.1 (0.15) 6.
Felt.
By combination with Finnish
station readings.

" 31 UME iP 03 56 11.1
ipP 03 56 36.1
Hokkaido, Japan region
(h = 100 km).

" 31 UPP iPKP1 08 55 59.1
UME i(PKP) 08 55 48.0
iPKP 08 55 54.0
South of Fiji Islands
(h = 500 km).

" 31 UPP eP 12 53 56
Greece (h = 60 km).

" 31 UPP eP 16 05 08.5
i 16 05 36.7
KIR iP 16 03 27.2
UME iP 16 04 16.6
i 16 04 21.1
Svalbard region (h = 25 km).

" 31 UPP eP 16 57 28
KIR iP 16 57 46.0
UME iP 16 57 33.3
India-Pakistan border region
(h = N).

October 28, 1983

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SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

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S-750 12 UPPSALA
SWEDEN

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

U P P S A L A, K I R U N A, U M E Å, U D D E H O L M, D E L A R Y and M Y R V I K E N

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

F E B R U A R Y 1 - 28, 1982

1982 Feb.	1	KIR	eP	03 55 03	
		UME	iP	03 55 03.3	C
		Iceland region (h = 10 km).			
"	1	KIR	iP	08 03 59.9	
		Mindanao, Philippine Islands (h = 140 km).			
"	1	KIR	iP	15 08 04.9	
		UME	iP	15 07 55.7	
		Afghanistan-USSR border region (h = 90 km).			
"	1	UPP	iP	17 55 49.3	
				micr sec	
			Mx Z	1.5 22	
		KIR	iP	17 56 18.3	
		UME	iP	17 56 07.7	
		Azores Islands region (h = 10 km).			
"	1	UME	iP	19 30 36.7	
"	1	UME	iP	19 50 37.5	
"	2	UPP	iP	00 42 28.7	
		Luzon, Philippine Islands (h = 40 km).			
"	2	UPP	iPKPl	01 12 07.4	
			i	01 12 16.1	
		UME	iPKPl	01 11 54.6	
			i	01 12 01.9	
		Kermadec Islands (h = N).			
"	2	UME	iP	09 41 02.1	
		Gulf of California (h = 10 km).			
1982 Feb.	2	UPP	iPKP	19 01 06.5	
		UME	iPKP	19 01 14.4	
		South Sandwich Islands region (h = 120 km).			
"	3	UPP	iP	04 15 22.1	
		UME	iP	04 14 56.8	
		Kuril Islands (h = 120 km).			
"	3	UPP	iP	06 25 36.0	
		KIR	iP	06 24 53.1	
		UME	iP	06 25 11.5	
		Hokkaido, Japan region (h = 80 km).			
"	3	KIR	iPgl	07 09 10.3	
			iSgl	07 09 29.0	
			i	07 09 32.3	
		UME	iSgl	07 10 44.0	
		UDD	iSgl	07 13 13.1	
		MYR	iSn	07 11 16.9	
			iSgl	07 11 48.4	
		Northwestern Finland, 67.3°N, 24.0°E. Origin time = 07 08 43. M_L (UPP) = 2.7 (0.15) 4. Felt.			
"	3	UME	iSKPl	08 33 13.1	
		Fiji Islands region (h = 520 km).			
"	3	UPP	iP	20 53 26.4	D
			ipP	20 54 45.5	
			iS	21 02 11.8	
				micr sec	
			P Z'	0.1 0.9	
		KIR	iP	20 52 49.1	D
		(cont.)			

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

1982
Feb. 3 (cont.)
UME iP 20 53 05.3 D
ipP 20 54 23.5
iS 21 01 31.7
Sea of Japan.
h = 350 km (UPP,UME).

" 3 UPP iP 21 51 29.4
KIR iP 21 50 39.9
UME iP 21 51 02.9
i 21 51 07.0
Northwest of Kuril Islands
(h = 290 km).

" 4 KIR ipP 02 08 05.9
UME ipP 02 08 02.2
Southwest of Sumatera
(h = 30 km).

" 4 UPP iP 06 15 47.5
UME iP 06 15 42.1
Tibet (h = N).

" 5 UPP iP 13 42 59.0
KIR iP 13 42 27.3 C
UME iP 13 42 40.9 C
Bonin Islands region
(h = 470 km).

" 5 UPP iPKP2 18 11 55.1
i 18 12 05.7
KIR iPKP1 18 11 20.7 D
i 18 11 32.5
micr sec
PKP1 Z' 0.1 0.8
UME iPKP1 18 11 27.7
iPKP2 18 11 39.7
North Island, New Zealand
(h = 60 km).

" 5 UPP iP 21 43 41.2
UME iP 21 43 57.1
Western Iran (h = N).

" 6 UPP iP 06 16 50.3
KIR iP 06 16 22.0
UME iP 06 16 33.7
Mariana Islands (h = 240 km).

" 6 UPP iP 12 13 44.0
UME iP 12 13 25.4
Off coast of northern
California (h = 5 km).

" 7 UPP iSg1 01 39 32.4
UDD iSg1 01 38 30.9
MYR iSg1 01 38 38.0
Southern Norway.

1982
Feb. 7 UPP iP 06 18 07.1
KIR eP 06 17 14
i 06 17 18.7
UME iP 06 17 43.1
i 06 17 55.9
Andreanof Islands, Aleutian
Isl. (h = 60 km).

" 7 UME iPKP 09 12 09.6
iSKP1 09 14 52.5
South of Fiji Islands
(h = 540 km).

" 7 UPP eP 09 39 54
KIR iP 09 39 03.7
UME eP 09 39 27
i 09 39 48.8
Rat Islands, Aleutian Isl.
(h = 45 km).

" 7 UME eP 19 30 31
Gulf of California
(h = 10 km).

" 7 UPP iP 19 59 20.3
UME iP 19 59 59.8
Greece (h = 10 km).

" 7 UPP iP 20 53 23.4
Southern Greece (h = 10 km).

" 8 UPP ePKP1 00 12 29
KIR iPKP 00 12 24.6
UME ePKP 00 12 30
iSKP1 00 15 05.5
Fiji Islands region
(h = 420 km).

" 8 UPP eP 05 18 19
i 05 18 27.9
KIR eP 05 17 58
i 05 18 06.0
UME eP 05 18 05
Philippine Islands region
(h = 40 km).

" 8 UME iP 09 06 38.0
i 09 06 45.2
Yugoslavia (h = 10 km).

" 8 UPP iPKP1 12 23 48.8 C
ipPKP1 12 24 52.8
KIR ePKP 12 23 37
UME ePKP1 12 23 37
Kermadec Islands region.
h = 240 km (UPP).

" 9 UPP iP 02 49 03.5
UME iP 02 49 41.3
Aegean Sea (h = 20 km).

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

1982
Feb. 9 UPP iPKPl 12 04 03.1 C
UME i(PKP) 12 04 48.7
iPKP 12 04 56.6
South of Fiji Islands
(h = 500 km).

" 9 UPP iPKPl 17 18 43.6
Kermadec Islands region
(h = N).

" 9 UPP iPgl 22 15 54.1
i 22 15 59.6
iRg 22 16 00.3
Dannemora, Uppland, Sweden,
60.1°N, 17.5°E.
Rockburst at the iron ore
mines.

" 10 UPP iP 01 23 42.9 C
i 01 23 50.7
ipP 01 24 18.1
micr sec
P Z' 0.2 1.0
KIR iP 01 22 47.8 C
micr sec
P Z' 0.1 0.9
UME iP 01 23 13.9 C
i 01 23 22.9
Kamchatka.
h = 140 km (UPP).
m = 5.8 (UPP,KIR).

" 10 UPP iP 12 05 30.1
KIR iP 12 05 09.8
UME iP 12 05 16.2
i 12 05 21.7
Philippine Islands region
(h = 30 km).

" 10 UPP iP 16 24 20.8
KIR iP 16 23 37.0
UME iP 16 23 56.6
Hokkaido, Japan region
(h = 120 km).

" 10 UME iP 19 11 55.2
North Atlantic Ridge
(h = 10 km).

" 10 UME eP 20 06 36
Leeward Islands (h = 50 km).

" 10 UPP iPP 20 56 18.5
iPKKP 21 07 40.6
micr sec
Mx Z 6.8 27
(cont.)

1982
Feb. 10 (cont.)
KIR iPP 20 56 39.2
iPKKP 21 07 14.7
UME iPP 20 56 36.8
iPKKP 21 07 16.4
Juyjuy Province, Argentina
(h = 200 km).

" 10 UPP iP 23 57 27.1
UME iP 23 57 03.2

" 11 UPP iP 02 21 33.3
UME iP 02 22 19.3
Albania (h = N).

" 11 UPP iP 02 41 43.6
KIR iP 02 42 51.8
UME iP 02 42 17.8
Crete (h = 45 km).

" 11 UPP iRg 12 54 18.2
Dannemora rockburst.

" 12 UPP iP 15 06 48.7
i 15 07 09.3
micr sec
P Z' 0.1 1.0
KIR iP 15 06 14.6
UME iP 15 06 34.0
Southern Nevada.
Underground explosion.

" 12 UPP iP 15 36 47.8 C
micr sec
P Z' 0.1 0.9
KIR iP 15 36 13.9
i 15 36 31.4
micr sec
P Z' 0.1 1.0
UME iP 15 36 33.3
Southern Nevada.
m = 5.9 (UPP,KIR).
Underground explosion.

" 12 UME iP 16 10 25.4
Burma (h = 120 km).

" 12 UPP iP 18 08 15.9 C
i 18 09 31.8
KIR iP 18 08 24.8 C
UME iP 18 08 14.5 C
Hindu Kush region
(h = 230 km).

" 12 UPP iP 19 24 41.4
iS 19 27 39.0
UME iP 19 25 32.1
iS 19 29 30.4
Poland (h = 10 km).

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

1982
Feb. 12 UME eP 21 28 54
Hokkaido, Japan region
(h = 120 km).

" 13 UPP iPgl 13 56 05.7
iSgl 13 56 29.3
UME iSgl 13 56 55.3
UDD iPgl 13 56 09.0
iSgl 13 56 36.5
MYR iPgl 13 56 02.0
iSgl 13 56 22.8
Hälsingland, Sweden,
61.6°N, 16.5°E.
Origin time = 13 55 33.
M_L(UPP) = 2.1 1.

" 13 UME iP 15 32 31.5
South of Honshu, Japan
(h = 130 km).

" 13 UPP iP 20 08 06.8
i 20 08 08.2
ipP 20 08 26.6
iS 20 17 55.6
KIR iP 20 08 08.5
i 20 08 10.2
micr sec
i Z' 0.1 0.8
UME iP 20 08 04.4
ipP 20 08 24.0
Northern Sumatera.
h = 70 km (UPP,UME).

" 13 KIR i(PKP) 23 42 44.0
iPKP 23 42 53.3
iSKPl 23 45 32.2
UME i(PKP) 23 42 50.1
iPKP 23 42 58.8
iSKPl 23 45 42.6
South of Fiji Islands
(h = 510 km).

" 14 UPP iPKPl 00 05 34.9
KIR ePKPl 00 05 14
UME iPKPl 00 05 23.0
Kermadec Islands (h = 50 km).

" 14 KIR iP 05 19 53.2
UME iP 05 19 59.8
Halmahera (h = 90 km).

" 14 KIR iPKP 05 29 53.6
UME e(PKP) 05 29 53
iPKP 05 30 01.0
Fiji Islands region
(h = 340 km).

1982
Feb. 14 UPP iP 08 58 13.8
KIR eP 08 57 19
i 08 57 26
UME eP 08 57 47
Near east coast of
Kamchatka (h = 20 km).

" 14 UPP iP 14 48 13.5
KIR iP 14 47 39.8
micr sec
P Z' 0.1 1.0
UME iP 14 47 53.6
North Korea (h = 55 km).

" 14 UME iP 19 49 25.9

" 15 UME iP 04 32 12.5

" 15 UDD iSgl 06 56 45.4
MYR iPgl 06 56 00.7
iSgl 06 56 24.6
Hälsingland, Sweden,
61.6°N, 17.3°E.
Origin time = 06 55 28.
By combination with SKI
station readings.

" 15 DEL iSgl 14 11 31.0
Zealand, Denmark,
55.9°N, 12.3°E.
Origin time = 14 10 55.
Solution from SKI station
readings.

" 15 UPP iP 19 47 50.0
KIR iP 19 47 25.4
UME iP 19 47 34.0
Southwestern Ryukyu Islands
(h = 35 km).

" 15 UPP eP 23 13 08
UME iP 23 12 40.2
Kuril Islands (h = 45 km).

" 16 UPP eP 17 42 56
KIR eP 17 42 27
UME iP 17 42 35.3
South of Mariana Islands
(h = 45 km).

" 17 UPP iP 07 32 45.4
KIR iP 07 31 52.9
UME iP 07 32 17.4
Off east coast of Kamchatka
(h = N).

" 17 UME iP 15 14 11.2
Turkey (h = 10 km).

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

1982
Feb. 17 UPP iP 17 05 41.1
UME eP 17 05 26
Taiwan (h = 35 km).

" 18 UME iP 01 20 51.9
Hindu Kush region (h = 190 km).

" 18 UME iP 06 38 36.6

" 19 UPP iP 04 03 05.8 C
iPn 04 04 11.8
iPP 04 04 24.3
KIR iP 04 02 50.3
micr sec
i Z' 0.2 0.5
UME iP 04 02 50.9 C
i 04 03 38.2
i 04 03 52.5
Eastern Kazakh SSR.
Underground explosion.

" 19 UPP iP 09 45 07.9
KIR iP 09 44 50.3
Mindanao, Philippine Islands
(h = 110 km).

" 19 UME iP 17 18 45.0
South of Honshu, Japan
(h = N).

" 19 UPP iP 20 26 45.7
i 20 26 58.9
UME iP 20 26 21.4
Hokkaido, Japan region
(h = 45 km).

" 19 UPP iP 20 57 48.8
i 20 58 01.7
UME iP 20 57 24.8
Hokkaido, Japan region
(h = 45 km).

" 20 UME iP 07 42 10.5

" 20 UPP iP 08 03 20.3
i 08 03 23.3
UME iP 08 03 58.6
Greece (h = 10 km).

" 20 UPP iP 09 36 17.0
KIR iP 09 36 05.3
Yunnan Province, China
(h = 35 km).

" 20 UME iP 10 32 17.7

" 20 UPP e 13 45 58
(cont.)

1982
Feb. 20 (cont.)
UPP micr sec
Mx Z 34.8 23
KIR micr sec
Mx Z 104.4 22
UME ePKP 13 45 42
i 13 45 47.0
Santa Cruz Islands
(h = 35 km).
M = 7.2 (UPP,KIR).

" 20 UPP eP 14 19 41
Ryukyu Islands (h = 45 km).

" 20 KIR iPKP 16 46 42.0
UME iPKP 16 46 44.5
Fiji Islands region
(h = 610 km).

" 20 UPP iP 19 30 06.4 C
ipP 19 30 12.0
iS 19 39 49
micr sec
P Z' 0.6 1.2
pP Z' 2.0 1.6
Mx Z 38.4 19
KIR iP 19 29 29.4 C
iS 19 38 42
micr sec
P Z' 1.4 1.9
Mx Z 38.3 19
UME iP 19 29 45.3 C
ipP 19 29 50.1
iS 19 39 05
South of Honshu, Japan.
h = 20 km (UPP,UME).
m = 6.8, M = 6.7 (UPP,KIR).

" 20 UME iP 19 41 58.3

" 20 UPP iP 21 31 39.4
i 21 31 44.1
KIR eP 21 32 19
UME iP 21 31 58.2
Iran (h = N).

" 20 UME iP 22 03 27.9
Gulf of California
(h = 10 km).

" 21 UPP iP 00 43 22.8
UME iP 00 43 02.1
Off east coast of Honshu,
Japan (h = 40 km).

" 21 UPP iP 06 16 18.7
UME iP 06 16 06.1
Luzon, Philippine Islands
(h = N).

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

1982
Feb. 21 UPP iP 09 38 30.2
KIR eP 09 38 31
UME iP 09 38 25.4
Southwest of Sumatera
(h = 25 km).

" 21 UPP iPKPl 14 37 02.2
South of Fiji Islands
(h = 510 km).

" 21 UPP iP 23 00 19.2
UME iP 23 00 06.6
Luzon, Philippine Islands
(h = N).

" 22 UPP iPKPl 01 04 29.4
UME iPKPl 01 04 18.5
Kermadec Islands region
(h = 100 km).

" 22 UPP iP 03 41 48.9 D
micr sec
P Z' 0.1 1.0
KIR iP 03 41 05
micr sec
P Z' 0.1 0.7
UME iP 03 41 24.5 D
Hokkaido, Japan region
(h = 160 km).
m = 5.7 (UPP,KIR).

" 22 UPP iP 12 51 10.0
UME iP 12 50 59.5 C
Halmahera (h = 150 km).

" 22 UPP iP 15 14 57.1
micr sec
P Z' 0.1 0.7
KIR iP 15 14 20 D
micr sec
P Z' 0.1 1.0
UME iP 15 14 35.6 D
Off east coast of Honshu,
Japan (h = 15 km).
m = 5.9 (UPP,KIR).

" 22 UME iP 15 23 16.1
Off east coast of Honshu,
Japan (h = 15 km).

" 22 UPP iP 18 07 55.7 C
micr sec
P Z' 0.1 0.8
KIR iP 18 08 02 C
micr sec
P Z' 0.1 0.9
UME iP 18 07 52.9 C
Northwestern Kashmir (h = N).
m = 5.7 (UPP,KIR).

1982
Feb. 22 UME iP 21 31 27.6 C
Near east coast of Honshu,
Japan (h = 50 km).

" 23 UPP iP 03 21 20.9
UME iP 03 20 59.9
South of Honshu, Japan
(h = 100 km).

" 23 UME e(P) 09 30 25

" 23 UME iP 10 56 31.9
South of Honshu, Japan
(h = 60 km).

" 23 UPP iPKPl 16 27 14.5 C
UME iPKPl 16 27 05.2
South of Kermadec Islands
(h = N).

" 24 UPP iP 04 34 50.1
micr sec
P Z' 0.1 1.2
Mx Z 4.1 18
KIR iP 04 34 51
micr sec
P Z' 0.2 1.1
UME iP 04 34 46.8
Northern Sumatera (h = 50 km).
m = 5.8 (UPP,KIR).

" 24 UPP iP 09 52 05.4
UME iP 09 51 44.6
Off east coast of Honshu,
Japan (h = 55 km).

" 25 UPP iP 00 50 35.4
KIR iP 00 50 14.8
UME iP 00 50 20.9
Near southeastern coast of
China (h = 10 km).

" 25 UPP eP 04 01 57
i 04 02 08.4
Eastern Caucasus (h = N).

" 25 UME eP 05 48 49

" 25 UME iP 19 09 58.1

" 25 UPP eP 20 21 09
KIR iP 20 21 37.9
UME iP 20 21 17.5
Southern Iran (h = N).

" 25 UPP iP 23 37 58.2
KIR iP 23 38 27.9
UME iP 23 38 08.4
Southern Iran (h = N).

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

1982
Feb. 25 UME iP 23 59 42.3
Iran (h = N).

" 26 UPP iP 00 15 47.8
ipP 00 16 00.6
UME iP 00 15 40.8
ipP 00 15 54.2
India-East Pakistan border region.
h = 60 km (UPP,UME).

" 26 UPP iP 07 26 54.1
KIR iP 07 25 57.8
micr sec
P Z' 0.1 1.0
UME iP 07 26 27.2
Southern Alaska (h = 130 km).

" 26 UME iP 20 00 57.7
Volcano Islands region
(h = 160 km).

" 27 UME ipP 01 26 55.7
South of Honshu, Japan
(h = N).

" 27 UPP eP 12 27 49
ipP 12 28 05.5
KIR iP 12 26 53.3
ipP 12 27 09.4
UME iP 12 27 22.1
ipP 12 27 38.0
Central Alaska.
h = 60 km (UPP,KIR,UME).

" 27 UME iPKP 16 07 54.0
Tonga Islands (h = 230 km).

" 27 UPP iP 16 29 23.6
iS 16 39 39.3
i 16 39 49.6
micr sec
P Z' 0.5 1.3
Mx Z 4.3 24
KIR iP 16 28 54.9
ipP 16 29 28.6
iS 16 38 53.9
micr sec
P Z' 1.0 1.5
Mx Z 2.9 22
UME iP 16 29 06.9 C
iS 16 39 15.5
Volcano Islands region.
h = 130 km (KIR).
m = 6.4, M = 5.7 (UPP,KIR).

1982
Feb. 27 UPP iP 19 29 53.9 C
i 19 29 57.2
micr sec
P Z' 0.1 0.6
KIR iP 19 30 01.8 C
micr sec
P Z' 0.1 0.5
UME iP 19 29 51.8 C
i 19 29 58.0
Afghanistan-USSR border region (h = 290 km).
m = 5.4 (UPP,KIR).

" 28 UPP iP 09 06 38.4
iPcP 09 07 04.9
micr sec
P Z' 0.1 0.9
KIR iP 09 05 45.4
iPcP 09 06 30.7
UME iP 09 06 11.5
iPcP 09 06 46.5
Andreanof Islands, Aleutian Islands (h = 55 km).

" 28 UPP iP 13 05 39.5
UME iP 13 06 22.0
Albania (h = 10 km).

" 28 UPP iP 14 39 35.8
KIR eP 14 39 18
Luzon, Philippine Islands
(h = N).

" 28 UPP iP 16 08 33.0

" 28 UPP iPKPl 17 19 43.9
i 17 19 58.8
UME ePKP 17 19 45
i 17 19 55.1
Tonga Islands (h = 35 km).

" 28 UPP iPP 18 10 44.0
South of Sumbawa Islands
(h = 15 km).

" 28 UPP iP 23 15 59.9 D
KIR iP 23 16 06.4
UME iP 23 15 56.7 D
Afghanistan-USSR border region (h = 120 km).

November 17, 1983

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SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

SEISMOLOGICAL DEPARTMENT
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S-750 12 UPPSALA
SWEDEN

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

U P P S A L A, K I R U N A, U M E Å, U D D E H O L M,

D E L A R Y and M Y R V I K E N

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

M A R C H 1 - 31, 1982

1982 Mar. 1
KIR iP 13 43 50.3
North of Svalbard (h = 10 km).

" 2
UPP iP 00 52 44.2
Szechwan Province, China
(h = N).

" 2
UPP eP 08 41 20
Rumania (h = 130 km).

" 4
UPP iP 06 03 55.4
UME iP 06 03 29.9
Northwest of Kuril Islands
(h = 370 km).

" 4
UPP micr sec
Mx Z 7.7 19
KIR micr sec
Mx Z 3.8 23
UME iPKP 09 31 02.6
Loyalty Islands region
(h = 45 km).
M = 6.3 (UPP,KIR).

" 4
UPP iP 11 53 40.1
KIR iP 11 53 31.0
UME iP 11 53 37.9
i 11 53 52.9
El Salvador (h = 80 km).

" 4
KIR iP 13 24 04.3
UME iP 13 24 21.3
i 13 24 31.6
Near east coast of Honshu,
Japan (h = 50 km).

1982 Mar. 4
UPP iRg 16 56 31.3
Dannemora, Uppland, Sweden,
60.1°N, 17.5°E.
Rockburst at the iron ore
mine.

" 5
UPP iPKP1 22 03 18.3
iPKP2 22 03 24.7
micr sec
PKP1 Z' 0.3 1.0
PKP2 Z' 0.3 0.9
KIR iPKP1 22 02 55.4
UME iPKP1 22 03 06.9
Kermadec Islands region
(h = 200 km).

" 6
UME iP 09 04 42.1
Black Sea (h = 10 km).

" 6
UPP iP 10 28 04.1
i 10 28 14.4
KIR iP 10 27 30.9
UME iP 10 27 43.9
Kyushu, Japan (h = 35 km).

" 6
UPP iPKP1 11 16 42.2
UME iPKP1 11 16 32.1
Kermadec Islands region
(h = N).

" 6
UPP iP 13 36 01.0
UME iP 13 35 44.4

" 6
UPP iP 23 26 00.0 C
i 23 28 42.5
(cont.)

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

1982
Mar. 6 (cont.)

UPP micr sec
P Z' 0.2 0.9
KIR iP 23 25 20.5 C
micr sec
P Z' 0.1 0.9
UME iP 23 25 37.9 C
Near east coast of Honshu, Japan (h = 70 km).
m = 5.9 (UPP,KIR).

" 7 UPP iP 00 42 54.5
KIR iP 00 42 56.1
UME iP 00 42 51.1
Andaman Islands region (h = N).

" 7 UPP iPKPl 12 31 24.0
UME iPKPl 12 31 13.1
Kermadec Islands region (h = 230 km).

" 7 UPP iP 12 31 31.1 D
ipP 12 32 47.8
micr sec
P Z' 0.4 0.9
KIR iP 12 31 36.1 D
micr sec
P Z' 0.4 1.2
UME iP 12 31 27.2 D
Tadzhik SSR.
h = 110 km (UPP).
m = 6.2 (UPP,KIR).

" 7 UPP iP 14 20 19.7 C
micr sec
P Z' 0.1 1.0
KIR iP 14 20 19.7 C
micr sec
P Z' 0.1 0.9
UME iP 14 20 16.3 C
Northern Sumatera (h = 120 km).
m = 5.6 (UPP,KIR).

" 7 UPP iPKPl 16 01 26.8
i 16 01 35.1
i 16 01 45.4
micr sec
PKPl Z' 0.1 1.0
KIR iPKP 16 01 13.8
UME iPKP 16 01 21.2
South of Tonga Islands (h = 35 km).

" 7 UPP iRg 17 07 35.8
Dannemora rockburst.

1982
Mar. 7 UPP iRg 19 29 55.5
Dannemora rockburst.

" 8 UME iP 06 59 55.1
Near east coast of Honshu, Japan (h = 60 km).

" 8 UME iP 07 59 33.3
i 07 59 40.3
Kyushu, Japan (h = N).

" 8 UPP iRg 09 02 21.3
Dannemora rockburst.

" 8 UPP iP 09 47 45.0
i 09 47 58.0
KIR iP 09 48 20.5
UME iP 09 47 56.2
i 09 48 12.6
Caspian Sea (h = N).

" 8 UPP iRg 12 51 29.3
Dannemora rockburst.

" 8 UPP iRg 12 56 28.6
Dannemora rockburst.

" 8 UPP iRg 12 57 30.6
Dannemora rockburst.

" 8 UPP iRg 13 02 40.9
Dannemora rockburst.

" 8 UPP iRg 13 02 47.5
Dannemora rockburst.

" 8 UPP iP 14 30 39.5
KIR eP 14 30 08
UME iP 14 30 29.4
Kyushu, Japan (h = 60 km).

" 8 UPP iP 14 58 37.6

" 8 UPP iP 15 05 54.5

" 8 UPP iP 15 26 56.0
micr sec
P Z' 0.2 1.0
KIR iP 15 26 02.1
micr sec
P Z' 0.1 1.0
UME iP 15 26 27.3
Off east coast of Kamchatka (h = N).
m = 6.0 (UPP,KIR).

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

1982
Mar. 8 UPP iPKPl 22 31 38.0
Kermadec Islands region
(h = N).

" 8 UPP iRg 23 02 32.4
Dannemora rockburst.

" 9 UPP iPKPl 03 21 03.2
South of Fiji Islands
(h = 480 km).

" 9 UPP iRg 04 55 39.0
Dannemora rockburst.

" 9 UPP iPgl 17 10 27.7
iSgl 17 10 31.5
iRg 17 10 34.1
UDD iSgl 17 11 26.9
iRg 17 11 38.5
Dannemora rockburst.

" 9 UPP iRg 17 11 26.9
Dannemora rockburst.

" 9 UPP iRg 18 36 48.5
Dannemora rockburst.

" 9 UPP iRg 19 46 33.5
Dannemora rockburst.

" 9 UPP iP 23 16 07.5
UME iP 23 16 47.0
Greece-Albania border region
(h = 10 km).

" 10 UPP iRg 05 06 16.1
Dannemora rockburst.

" 10 KIR iP 14 08 13.3
Crete (h = 90 km).

" 10 UPP iPKP 22 17 23.0 C

		micr	sec
PKP	Z'	0.2	1.0
Mx	Z	5.4	20

KIR iPKP 22 17 38.2 C
ipPKP 22 18 04.9

		micr	sec
PKP	Z'	0.4	0.8
Mx	Z	5.5	19

UME iPKP 22 17 31.4
ipPKP 22 18 01.1
iPKKP 22 27 11.7
South Sandwich Islands region.
h = 110 km (UPP,UME).
M = 6.3 (UPP,KIR).
M not corrected for focal depth.

1982
Mar. 10 UPP iPKPl 22 55 14.1
KIR iPKPl 22 55 10.4
UME iPKPl 22 55 12.3
South of Australia (h = 10 km).

" 11 UME iP 04 07 16.0
South of Honshu, Japan
(h = 50 km).

" 11 UPP iP 10 46 26.3

		micr	sec
Mx	Z	17	25

KIR iP 10 46 18.0

		micr	sec
Mx	Z	5.7	18

UME eP 10 46 20
Sumbawa Island region
(h = N).
M = 6.4 (UPP,KIR).

" 11 UME iP 23 50 06.3
Norwegian Sea (h = 10 km).

" 12 UPP iRg 01 22 01.9
Dannemora rockburst.

" 12 UPP iRg 01 54 39.7
Dannemora rockburst.

" 12 UME iP 04 44 57.4
Lake Tanganyika region
(h = 10 km).

" 12 UPP iRg 04 47 29.0
Dannemora rockburst.

" 12 UPP iP 05 40 23.6

		micr	sec
P	Z'	0.2	0.9
Mx	Z	5.6	18

KIR iP 05 40 05.8

		micr	sec
P	Z'	0.4	1.5

UME iP 05 40 11.4
Luzon, Philippine Islands
(h = 10 km).
m = 6.3 (UPP,KIR).

" 12 UPP iP 06 19 28.5
UME iP 06 19 16.9
Luzon, Philippine Islands
(h = 10 km).

" 12 UPP iRg 07 47 34.8
Dannemora rockburst.

" 12 UPP iRg 07 50 50.9
Dannemora rockburst.

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

1982
Mar. 12 UPP iRg 07 51 03.2
Dannemora rockburst.

" 12 UPP iRg 08 59 18.0
Dannemora rockburst.

" 12 KIR iPKP 10 52 48.5
Fiji Islands region
(h = 610 km).

" 12 UME iP 17 34 30.7
Philippine Islands region
(h = 50 km).

" 12 UPP iRg 21 51 04.1
Dannemora rockburst.

" 13 UME iP 12 44 31.7
South of Honshu, Japan
(h = 35 km).

" 13 UPP iRg 13 41 56.6
Dannemora rockburst.

" 13 KIR iP 14 22 52.0

" 13 UPP iPKPl 19 18 31.4
i 19 18 45.8
UME iPKPl 19 18 20.4
Kermadec Islands (h = N).

" 13 UPP iRg 21 25 00.2
Dannemora rockburst.

" 14 UPP iRg 02 17 09.8
Dannemora rockburst.

" 14 UME iP 17 34 48.1
i 17 34 58.6

" 14 UME iP 17 35 51.7
i 17 36 03.3

" 14 UME iP 22 14 24.2

" 15 KIR iP 08 15 26.3
i 08 15 33.4
UME eP 08 15 34
Philippine Islands region
(h = 10 km).

" 15 UPP iSgl 13 58 16.1
UDD iPgl 13 57 14.6 C
iSgl 13 57 17.3
DEL iSgl 13 59 01.4
cont.)

1982
Mar. 15 (cont.)
MYR iSgl 13 58 43.3
Värmland, Sweden,
60.0°N, 13.3°E.
Origin time = 13 57 11.
Felt.

" 15 KIR iP 15 03 17.4
UME iP 15 03 43.9
South of Alaska (h = N).

" 15 UPP iP 16 30 18.4
KIR iP 16 29 51.6
UME iP 16 30 01.8
Northeast of Taiwan
(h = 220 km).

" 16 UPP iPKP 00 39 33.5
KIR ePKP 00 39 20
UME iPKP 00 39 27.1
Gilbert Islands region
(h = 35 km).

" 16 UPP iP 06 53 41.9
KIR iP 06 53 29.8
UME iP 06 53 39.1
Near coast of Chiapas,
Mexico (h = 70 km).

" 16 UPP iP 08 17 45.7
KIR iP 08 17 45.9
UME iP 08 17 48.8
South of Panama (h = N).

" 16 UPP iLg2 14 00 05.5
KIR iP 13 57 17.1
UME iP 13 56 32.3
Yugoslavia (h = 15 km).

" 16 UPP iRg 14 39 31.9
UDD iSgl 14 40 26.3
Near-surface event, probably
Dannemora rockburst.

" 17 UPP iSn 22 36 29.5
i 22 36 42.6
iSgl 22 37 13.3
KIR i 22 37 32.5
UME iPn 22 35 14.9
iSn 22 36 41.7
UDD iPn 22 34 39.7
iSn 22 35 42.4
i 22 36 01.0
iSgl 22 36 13.0
DEL iSn 22 36 37.0
(cont.)

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

1982 Mar.	17	(cont.)			
		DEL	iSgl	22 37 29.0	
		MYR	iPn	22 34 40.1	
			i	22 35 55.5	
		Norwegian Sea, near 62 1/4°N, 2 1/2°E. Origin time = 22 33 14. M_L(UPP) = 3.3 (0.17) 5.			
"	18	UPP	iPKPl	00 28 36.9	
		UME	iPKPl	00 28 21.2	
"	18	UPP	iP	05 05 50.9	
		KIR	iP	05 05 51.4	
				micr sec	
			P Z'	0.1 1.0	
		UME	iP	05 05 48.8	
		Southern Sumatera (h = 30 km).			
"	18	UME	iP	16 02 10.9	
		Near east coast of Honshu, Japan (h = 70 km).			
"	19	KIR	e(Pn)	00 54 16	
			iPn	00 54 27.5	
			i	00 54 35.6	
			iSn	00 55 54.7	
			i	00 56 09.6	
		UME	iPn	00 54 22.8	
			iSn	00 55 58.5	
		MYR	iPn	00 53 51.3	
			iSn	00 55 04.5	
		Norwegian Sea, approximate location 65°N, 1°W. Origin time = 00 52 10.			
"	20	UPP	iP	04 16 59.1	
		KIR	iP	04 17 36.4	
		UME	iP	04 17 13.5	
		Southern Iran (h = 45 km).			
"	20	UPP	iP	11 25 12.7	
		KIR	iP	11 24 52.3	
		UME	iP	11 24 55.8	
			i	11 25 06.9	
		Northern Sinkiang Prov., China (h = 30 km).			
"	20	UPP	iP	22 46 14.5	
		KIR	iP	22 45 31.0	
		UME	iP	22 45 50.4	
		Hokkaido, Japan region (h = 35 km).			
"	21	UPP	iP	01 11 05.2	
			i	01 11 10.6	
		(cont.)			

1982 Mar.	21	(cont.)			
		KIR	iP	01 10 46.5	
		UME	iP	01 10 52.9	
		Luzon, Philippine Islands (h = 25 km).			
"	21	UPP	iP	02 43 06.6	
			i	02 43 09.2	
			iS	02 52 05	
			iP'P'	03 11 19.4	
				micr sec	
			P Z'	0.1 1.0	
			i Z'	4.8 1.3	
			Mx Z	128 14	
		KIR	iP	02 42 23.2	
			i	02 42 25.7	
			iS	02 50 45.9	
			iP'P'	03 11 35.5	
				micr sec	
			P Z'	0.1 0.8	
			i Z'	1.9 1.2	
			Mx Z	156 16	
		UME	iP	02 42 41.6	
			i	02 42 45.1	
			iS	02 51 21.9	
			iP'P'	03 11 29.0	
		Hokkaido, Japan region (h = 45 km). m = 7.2, M = 7.3 (UPP,KIR). Double P, small and large, 2.8 s apart.			
"	21	UPP	iP	03 07 26.5	
		UME	iP	03 07 02.3	
		Hokkaido, Japan region.			
"	21	KIR	iP	03 22 09.8	
		UME	iP	03 22 29.0	
		Hokkaido, Japan region (h = 55 km).			
"	21	KIR	iP	03 22 51.6	
		UME	iP	03 23 10.3	
		Hokkaido, Japan region (h = N).			
"	21	UPP	iP	03 25 31.1	
		KIR	iP	03 24 46.9	
		UME	iP	03 25 06.2	
		Hokkaido, Japan region (h = N).			
"	21	UPP	ePKPl	04 25 09	
		Kermadec Islands region (h = N).			

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

1982						
Mar.	21	UPP	iP		06 31 20.6	
		KIR	iP		06 30 38.2	
		UME	iP		06 30 56.9	
		Hokkaido, Japan region				
		(h = 45 km).				
"	21	UPP	iP		09 48 34.4	
			i		09 48 39.0	
			iS		09 52 10	
					micr	sec
			i	Z'	0.1	0.8
			Mx	Z	6.7	11
		KIR	eP		09 49 54	
			i		09 49 57.7	
					micr	sec
			Mx	Z	3.5	11
		UME	iP		09 49 18.1	
			i		09 49 23.8	
			iS		09 53 30	
		Southern Italy (h = 30 km).				
		M = 5.3 (UPP,KIR).				
"	21	UPP	iP		10 33 35.4	C
			iS		10 42 34	
					micr	sec
			P	Z'	0.3	1.0
			Mx	Z	3.4	15
		KIR	iP		10 32 52.4	C
					micr	sec
			P	Z'	0.2	1.0
			Mx	Z	4.4	17
		UME	iP		10 33 11.4	C
			iS		10 41 46	
		Hokkaido, Japan region				
		(h = 20 km).				
		m = 6.3, M = 5.7 (UPP,KIR).				
"	21	UPP	i(PKP)		13 53 53.9	
			iPKP		13 54 00.2	
		KIR	e(PKP)		13 53 40	
			iPKP		13 53 43.0	
					micr	sec
			PKP	Z'	0.2	1.5
		UME	e(PKP)		13 53 43	
			iPKP		13 53 55.6	
		Tonga Islands (h = 200 km).				
"	21	UME	iP		16 14 19.7	
		South Atlantic Ocean				
		(h = 10 km).				
"	21	UME	iP		19 10 24.8	
		Hokkaido, Japan region				
		(h = 60 km).				
"	22	UPP	iP		00 16 32.7	
1982						
Mar.	22	UPP	iP		06 23 32.7	
"	22	UME	iP		08 37 52.7	
		Near west coast of Honshu,				
		Japan (h = 200 km).				
"	22	UPP	iP		08 50 53.2	
		KIR	iP		08 50 54.2	C
					micr	sec
			P	Z'	0.3	1.5
		UME	iP		08 50 51.0	
		Northern Sumatera (h = 40 km).				
"	22	UME	iPKP		09 04 41.0	
		Gilbert Islands region				
		(h = 30 km).				
"	22	UPP	iP		10 12 51.7	
					micr	sec
			P	Z'	0.1	1.0
			Mx	Z	1.3	19
		KIR	iP		10 13 02.7	
					micr	sec
			P	Z'	0.1	1.0
			Mx	Z	0.7	14
		UME	iP		10 13 00.5	
		North Atlantic Ridge				
		(h = 10 km).				
		m = 5.6, M = 4.5 (UPP,KIR).				
"	22	UPP	iP		13 12 27.3	
		UME	iP		13 12 05.0	
		Hokkaido, Japan region				
		(h = 40 km).				
"	22	UPP	i(P)		13 53 32.3	
"	22	UPP	iP		17 29 45.2	
		UME	iP		17 29 20.7	
		Hokkaido, Japan region				
		(h = 40 km).				
"	22	UPP	iPP		17 32 46.5	
		KIR	iP		17 28 49.7	
		South of Java (h = 35 km).				
"	22	UPP	iPKP1		21 02 47.5	
			i		21 02 53.7	
		UME	iPKP1		21 02 36.8	
"	22	UPP	iP		23 17 29.8	
		UME	iP		23 18 10.7	
		Albania (h = 10 km).				
"	23	UPP	eP		10 01 45	
		Turkey (h = 10 km).				

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

1982
Mar. 23 UME iP 10 06 39.6
Southern Iran (h = N).

" 23 UPP iP 10 55 08.6
i 10 55 12.9
UME iP 10 55 37.7
Red Sea (h = N).

" 23 UPP eP 15 16 08
Turkey (h = 10 km).

" 23 UPP iP 17 54 28.1
UME iP 17 54 04.0
Hokkaido, Japan region
(h = 30 km).

" 23 UPP iP 23 40 10.3
UME iP 23 39 45.9
Hokkaido, Japan region
(h = 35 km).

" 23 UPP iPKP 23 49 03.1
UME iPKP 23 48 46.6
i 23 48 52.3

" 24 UPP eP 02 19 52
UME iP 02 19 47.0

" 24 UPP iP 12 12 00.3
KIR iP 12 11 17.0
UME iP 12 11 36.0 C
Hokkaido, Japan region
(h = 30 km).

" 24 UPP iP 14 18 05.5 C
i 14 18 24.5
micr sec
P Z' 0.1 1.5
KIR iP 14 18 22.6
micr sec
P Z' 0.2 1.6
UME iP 14 18 09.0
Pakistan (h = N).
m = 5.7 (UPP,KIR).

" 24 KIR iSgl 14 57 03.8
Northern Finland,
66.8°N, 27.2°E.
Origin time = 14 55 40.
M_L(UPP) = 2.5 1.
By combination with Finnish
station readings.

" 24 UPP iP 19 06 30.8
i 19 06 41.4
(cont.)

1982
Mar. 24 (cont.)
UPP micr sec
P Z' 0.2 1.1
KIR iP 19 04 47.6
micr sec
P Z' 0.1 1.2
UME iP 19 06 06.6
Hokkaido, Japan region
(h = N).
m = 6.0 (UPP,KIR).

" 25 UPP ePKP 05 24 37
micr sec
Mx Z 9.0 22
KIR micr sec
Mx Z 2.3 22
UME ePKP 05 24 42
South Atlantic Ocean
(h = 10 km).
M = 6.0 (UPP,KIR).

" 25 UPP iP 17 55 36.0
Greece (h = 40 km).

" 26 UPP iP 02 06 06.3
KIR iP 02 05 22.0
UME iP 02 05 40.2
Hokkaido, Japan region
(h = 25 km).

" 26 UPP iP 02 40 07.6
KIR iP 02 39 24.0
UME iP 02 39 43.4
Hokkaido, Japan region
(h = 30 km).

" 26 UME iP 05 10 16.4
Banda Sea (h = 180 km).

" 26 UPP iP 07 49 08.1
UME iP 07 48 53.1
Taiwan region (h = 90 km).

" 26 UPP iP 07 59 05.6
Northern Sinkiang Prov.,
China (h = N).

" 26 UPP iP 13 54 15.4
Union of South Africa
(h = N).

" 26 UPP iP 18 54 14.2
KIR iP 18 53 30.8
UME iP 18 53 49.3
Hokkaido, Japan region
(h = N).

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

1982
Mar. 27 UPP iP 00 31 03.7
iS 00 40 31
micr sec
P Z' 0.1 0.9
Mx Z 2.4 25
KIR iP 00 30 25.7
micr sec
P Z' 0.1 1.0
UME iP 00 30 41.6
iS 00 39 58
Near east coast of Honshu, Japan (h = 25 km).
m = 5.9 (UPP,KIR).

" 27 UME iP 01 04 45.2
Off east coast of Honshu, Japan (h = N).

" 27 UPP eP 02 06 59
KIR iP 02 06 02.7
UME eP 02 06 26
Near east coast of Kamchatka (h = 80 km).

" 27 UPP iP 02 20 30.7
UME iP 02 20 08.2
Near east coast of Honshu, Japan (h = 50 km).

" 27 UPP Mx 15 01
micr sec
Mx Z 5.4 20
Solomon Islands (h = 70 km).

" 27 UPP iP 20 02 52.4 C
i 20 02 56.1
iS 20 07 32
micr sec
P Z' 0.1 1.0
i Z' 0.7 1.5
KIR iP 20 03 39.3
micr sec
P Z' 0.1 1.0
UME iP 20 03 10.1
iS 20 08 07
Turkey (h = N).
m = 5.9 (UPP,KIR).

" 28 UPP eP 02 26 21
UME eP 02 25 59
Hokkaido, Japan region (h = N).

" 28 UPP iP 02 39 48.1
UME iP 02 39 23.1
Hokkaido, Japan region (h = 30 km).

1982
Mar. 28 UPP iPKP 04 12 10.0 C
iPKP1 04 12 14.8
iPKP2 04 12 19.3
micr sec
Mx Z 8.8 23
KIR iPKP1 04 11 52.7
UME iPKP1 04 12 03.0
Kermadec Islands region (h = 80 km).

" 28 UPP iPKP1 08 18 52.5
iPKP2 08 18 58.9
UME iPKP1 08 18 42.1
Kermadec Islands region (h = 370 km).

" 28 UME iP 12 32 23.1

" 28 UPP iPKP 12 33 22.3
KIR iPKP 12 33 08.1
micr sec
PKP Z' 0.1 1.0
UME iPKP 12 33 14.4
New Hebrides Islands (h = 200 km).

" 28 UPP iP 23 38 40.1
UME iP 23 38 44.7
Near coast of Peru (h = 100 km).

" 29 UPP iP 03 28 46.4
KIR iP 03 28 00.1
UME iP 03 28 20.6
Sea of Okhotsk (h = 300 km).

" 29 UME iP 09 31 28.2

" 29 UPP Mx 11 45
micr sec
Mx Z 5.6 18
Near north coast of New Guinea (h = 20 km).

" 29 UPP iP 12 16 51.9
UME iP 12 16 28.8
Near east coast of Honshu, Japan (h = 50 km).

" 29 UPP Mx 13 36
micr sec
Mx Z 7.4 21
Fiji Islands region (h = N).

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

1982

Mar.	29	UPP	iP	21 47 08.2	C
		KIR	iP	21 46 54.8	C
				micr sec	
			P Z'	0.4 1.3	
		UME	iP	21 46 59.0	C
		Northern Celebes (h = 190 km).			
"	30	UPP	iP	02 21 24.8	
		UME	iP	02 22 04.1	
		Sicily (h = 220 km).			
"	30	UPP	iP	07 26 32.5	C
				micr sec	
			P Z'	0.1 1.0	
		KIR	iP	07 25 49.0	C
		UME	iP	07 26 08.2	
		Hokkaido, Japan region (h = 30 km).			
"	30	UPP	iP	13 30 21.5	
		KIR	iP	13 30 14.4	
		UME	iP	13 30 12.8	
		Burma (h = 35 km).			
"	30	UME	iP	20 09 16.3	
		Hokkaido, Japan region (h = 45 km).			
"	31	UPP	iP	00 51 37.4	
				micr sec	
			P Z'	0.2 0.8	
		KIR	iP	00 52 52.4	
		UME	iP	00 52 16.4	
		Greece (h = 35 km).			

December 12, 1983

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SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

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

U P P S A L A, K I R U N A, U M E A, U D D E H O L M, D E L A R Y and M Y R V I K E N

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

A P R I L 1 - 30, 1982

1982 Apr.	1	UPP	iP	08 39 45.2
"	1	UPP	iPKPl	11 01 05.6
		KIR	i(PKP)	11 00 14.2
		UME	i(PKP)	10 59 54.8
		South of Fiji Islands (h = 120 km).		
"	1	UPP	iP	13 07 02.7
		UME	iP	13 06 41.2
		Off east coast of Honshu, Japan (h = 45 km).		
"	1	UPP	iP	14 44 53.4
		Southern Greece (h = 10 km).		
"	2	UME	iP	03 31 38.2
"	2	UPP	iP	07 08 48.9
		UME	iP	07 08 29.8
"	2	UDD	iSgl	08 31 40.3
		Dalsland, Sweden, 59.0°N, 12.7°E. Origin time = 08 31 04. Solution from SKI network readings.		
"	2	UPP	iP	17 38 40.2
		UME	iP	17 38 15.3
"	2	UPP	iP	21 28 04.0
		UME	iP	21 27 45.5
		Bonin Islands region (h = 430 km).		
1982 Apr.	3	KIR	iPKP	01 09 43.7
			ipPKP	01 09 52.8
		UME	iPKP	01 09 50.7
			ipPKP	01 09 59.3
		Vanuatu Islands (h = N).		
"	3	KIR	iPKP	03 37 35.6 D
		UME	iPKP	03 37 41.9
		Vanuatu Islands (h = 130 km).		
"	3	UPP	iP	08 06 21.2
		KIR	iP	08 06 16.0
		UME	iP	08 06 14.4 D
		Burma (h = 90 km).		
"	3	UME	iP	09 19 44.7
"	3	UME	eP	10 06 09
"	3	KIR	iP	10 33 43.3
		Kirgiz-Sinkiang border region (h = N).		
"	3	UME	iP	21 54 12.5
		Hokkaido, Japan region (h = 70 km).		
"	3	UPP	iP	22 53 15.3
		UME	iP	22 52 47.6
"	4	UPP	iP	04 38 42.7
"	5	UPP	iPKPl	00 50 41.8
		UME	iSKPl	00 53 24.3 C
		South of Fiji Islands (h = 520 km).		

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

1982
Apr. 5 UPP iP 02 29 30.8
micr sec
P Z' 0.1 0.7
KIR iP 02 29 22.5
i 02 29 38.7
UME iP 02 29 23.7
Sikkim (h = N).

" 5 UPP iP 02 55 50.7
i 02 55 54.0
micr sec
i Z' 0.1 1.1
KIR iP 02 55 49.8
i 02 55 53.5
micr sec
i Z' 0.2 1.5
UME iP 02 55 44.1
Nicobar Islands region
(h = N).
m = 5.8 (UPP,KIR).
Double P, small and large,
3.4 s apart.

" 5 UPP eP 05 41 40
KIR eP 05 41 36
Nicobar Islands region
(h = N).

" 5 UME iPKP 09 26 59.7
Vanuatu Islands (h = N).

" 5 UPP iP 22 43 50.7
Nicobar Islands region
(h = N).

" 5 UPP iP 23 57 17.5

" 6 UPP iP 05 55 09.5
Burma-India border region
(h = 100 km).

" 6 UPP iP 16 02 31.8
KIR eP 16 02 26
UME iP 16 02 28.4 D
Near coast of Chiapas,
Mexico (h = 60 km).

" 6 UPP iP 20 09 33.9
i 20 10 09.9
iSKS 20 19 58
micr sec
P Z' 0.5 2.3
Mx Z 37 22
KIR iP 20 09 23.5
i 20 10 05.7
iS 20 19 49
(cont.)

1982
Apr. 6 (cont.)
KIR
micr sec
P Z' 1.0 2.4
Mx Z 17 18
UME iP 20 09 31.2 C
eS 20 19 56
Near coast of Chipas,
Mexico (h = 70 km).
m = 6.3, M = 6.7 (UPP,KIR).
M uncorrected for focal depth.

" 7 UPP iP 02 43 15.3
KIR iP 02 42 37.7
UME iP 02 42 52.3
Near east coast of Honshu,
Japan (h = 55 km).

" 7 UPP iP 03 35 37.9 D
KIR iP 03 35 04.1
UME iP 03 35 18.1 D
South of Honshu, Japan
(h = 330 km).

" 7 UPP iP 13 46 18.0 C
KIR iP 13 45 51.2
Mariana Islands (h = 180 km).

" 7 UPP iSn 18 10 55.2
iSgl 18 11 24.1
UME iSn 18 11 56.4
iSgl 18 12 30.2
UDD i 18 09 43.3
iSn 18 10 08.6
iSgl 18 10 21.2
DEL iPn 18 09 51.8
i 18 10 55.6
iSgl 18 11 05.1
MYR iPgl 18 10 10.5
iSn 18 10 45.0
i 18 11 06.2
iSgl 18 11 13.9
Southwestern Norway,
59.6°N, 7.1°E.
Origin time = 18 08 41.
M_L (UPP) = 3.2 (0.18) 7.
Felt.
By combination with Bergen
and Kongsberg readings.

" 7 UPP iP 19 33 36.7
KIR iP 19 33 31.3
UME iP 19 33 35.2 C
Costa Rica (h = 70 km).

" 8 UPP iP 00 22 40.3

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

1982
Apr. 8 UPP iP 02 51 46.9 C
micr sec
P Z' 0.2 0.7
KIR iP 02 51 50.5 C
micr sec
P Z' 0.2 0.5
UME iP 02 51 43.8 C
Bay of Bengal (h = 25 km).
m = 6.5 (UPP,KIR).

" 8 UPP iP 04 50 25.1
UME eP 04 51 05
i 04 51 08
Greece (h = 10 km).

" 8 UPP ePKP 09 13 40
UME iPKP 09 13 24.7

" 8 UPP iPKPl 11 59 48.8
UME iPKP 11 59 48.3
Tonga Islands (h = 40 km).

" 8 UPP iP 21 46 05.2
micr sec
P Z' 0.1 1.0
KIR iP 21 46 07.1
micr sec
P Z' 0.1 1.0
UME iP 21 46 03.2
Nicobar Islands region
(h = N).
m = 5.8 (UPP,KIR).

" 9 UPP i 03 08 25.4
micr sec
i Z' 0.1 1.0
KIR iPn 03 07 01
UME iP 03 07 43.9 C
Norwegian Sea (h = 10 km).

" 9 UPP iP 12 02 35.2 D
micr sec
P Z' 0.2 1.0
KIR eP 12 02 07
i 12 02 08.2
micr sec
i Z' 0.1 0.9
UME iP 12 02 18.3
i 12 02 18.9
Ryukyu Islands (h = 130 km).
m = 5.7 (UPP,KIR).

" 9 UPP iP 12 10 29.1
KIR iP 12 09 55.8
UME iP 12 10 10.4
Bonin Islands region
(h = 55 km).

1982
Apr. 9 UME eP 23 52 20
Hokkaido, Japan region
(h = 70 km).

" 10 UPP iP 04 55 28.2
eS 04 59 15
micr sec
P Z' 0.1 1.2
Mx Z 4.3 8
KIR iP 04 56 44.1
micr sec
P Z' 0.1 1.4
Mx Z 3.3 10
UME iP 04 56 07.4 C
iS 05 00 28
Aegean Sea (h = 25 km).
m = 5.2 (UPP,KIR).

" 10 UME iP 07 14 01.8 C
South Indian Ocean
(h = 10 km).

" 10 KIR iP 09 58 21.0
i 09 58 27.7
UME eP 09 58 12
Central Mid-Atlantic Ridge
(h = 10 km).

" 10 UPP eP 11 42 46
i 11 43 09.9
iS 11 46 38
micr sec
P Z' 0.1 1.3
Mx Z 1.1 5
KIR eP 11 44 03
micr sec
Mx Z 0.8 5
UME iP 11 43 25.5
i 11 43 36.6
iS 11 47 53
Aegean Sea (h = 10 km).

" 10 UPP iP 16 37 47.5
iS 16 47 49
micr sec
P Z' 0.1 1.1
Mx Z 8.1 22
KIR iP 16 37 43.1
iS 16 47 38
micr sec
P Z' 0.9 2.1
Mx Z 4.0 16
UME iP 16 37 45.9
iS 16 47 50
Caribbean Sea (h = 10 km).
m = 6.1, M = 6.0 (UPP,KIR).

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

1982
Apr. 10 UPP iPKP1 21 43 40.4
KIR ePKP 21 43 30
iSKP1 21 46 41.8
UME iPKP 21 43 36.3
iSKP1 21 46 53.2
Fiji Islands region
(h = 160 km).

" 11 UPP iP 19 27 19.6
micr sec
P Z' 0.1 0.8
KIR iP 19 27 28.5 C
micr sec
P Z' 0.1 0.7
UME iP 19 27 17.4 C
Hindu Kush region
(h = 200 km).
m = 5.4 (UPP,KIR).

" 12 UPP iPKP1 00 54 24.8
i 00 54 27.2
iPKP2 00 54 29.3
micr sec
PKP2 Z' 0.4 0.8
Mx Z 6.0 24
KIR iPKP1 00 54 05.9
micr sec
Mx Z 2.1 19
UME iPKP1 00 54 14.8 C
i 00 54 21.5
Kermadec Islands (h = 35 km).
M = 6.2 (UPP,KIR).

" 12 UPP iPKP 01 13 18.0
UME iPKP 01 13 02.0

" 12 UPP iP 01 44 03.2 C
ipP 01 44 12.4
micr sec
P Z' 0.3 1.0
KIR iP 01 43 15.3
ipP 01 43 24.0
micr sec
P Z' 0.1 1.0
pP Z' 0.3 1.5
UME iP 01 43 37.1 C
ipP 01 43 47.2
Kuril Islands region.
h = 30 km (UPP,KIR,UME).
m = 6.3 (UPP,KIR).

" 12 UPP iP 02 05 18.1
UME iP 02 04 52.8
i 02 05 03.0
Kuril Islands (h = N).

1982
Apr. 12 UPP iP 07 00 05.3
KIR eP 06 59 23
UME eP 06 59 40
Hokkaido, Japan region
(h = 70 km).

" 12 UPP iP 11 44 46.4
KIR iP 11 44 30.2
UME iP 11 44 36.1
Halmahera (h = 240 km).

" 12 UME iP 16 05 06.6

" 12 UPP eP 22 00 54
KIR eP 22 00 11
UME iP 22 00 29.5
Hokkaido, Japan region
(h = N).

" 12 UME iP 22 05 54.5
e 22 06 04
Hokkaido, Japan region
(h = N).

" 13 UPP i 02 17 56.8
UME iP 02 18 07.7
Crete (h = 35 km).

" 13 UPP iP 06 17 30.9

" 13 UPP eP 09 44 59
micr sec
Mx Z 1.3 23
KIR eP 09 44 33
micr sec
Mx Z 0.8 18
UME iP 09 44 42.7
South of Mariana Isalands
(h = 70 km).
M = 5.3 (UPP,KIR).
M uncorrected for focal depth.

" 13 UME iP 11 39 56.0
Republic of South Africa
(h = 5 km).

" 13 UPP i(P) 13 08 12.5

" 13 UPP iPKP 13 45 43.6
UME iPKP 13 45 50.6
South Sandwich Islands region
(h = N).

" 13 UPP iPKP 17 45 31.5
UME i(PKP) 17 44 58.7
South of Fiji Islands
(h = 520 km).

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

1982
Apr. 13 UME iPKPl 18 38 49.2
i 18 38 55.6
Kermadec Islands region
(h = 120 km).

" 14 UME i(P) 03 04 06.2

" 14 UME iPKP 04 03 40.0
Solomon Islands (h = 100 km).

" 14 UPP iP 06 46 47.4
i 06 46 52.6
micr sec
Mx Z 0.6 16
KIR iP 06 46 24.1
i 06 46 29.9
UME iP 06 46 31.0
i 06 46 36.4
Northern China (h = 35 km).
Double P, small and large,
in average 5.4 s apart. The
second onset when interpreted
as pP provides a focal depth
of 20 km.

" 14 UPP iPKP 09 49 40.2
UME iPKP 09 49 33.1
Gilbert Islands region
(h = N).

" 14 UPP iP 17 45 00.2
UME eP 17 44 57
Nicobar Islands region
(h = 240 km).

" 14 KIR iPKP 20 20 56.3
UME iPKP 20 21 02.5
Vanuatu Islands (h = 130 km).

" 14 UME iP 23 05 40.0
Near s. coast of Honshu,
Japan (h = 80 km).

" 15 UME iP 02 55 49.8

" 15 UPP iPKP 09 07 22.5
South of Fiji Islands
(h = 670 km).

" 15 UPP iPKPl 09 11 12.4
UME iPKPl 09 11 01.4
i 09 11 09.4
Kermadec Islands (h = 50 km).

" 15 UPP iP 09 23 20.4
KIR iP 09 22 33.1
(cont.)

1982
Apr. 15 (cont.)
KIR ipP 09 23 19.6
micr sec
P Z' 0.1 0.9
UME iP 09 22 55.7
ipP 09 23 41.5
Kuril Islands.
h = 210 km (KIR,UME).

" 15 UPP iP 15 04 33.1
micr sec
P Z' 0.1 0.9
KIR iP 15 04 31.8
micr sec
P Z' 0.2 0.9
UME iP 15 04 29.6
Southern Sumatera
(h = 70 km).
m = 6.3 (UPP,KIR).

" 15 UPP iRg 15 14 30.4
UDD iRg 15 14 22.2
South-central Sweden.
Near-surface event.

" 15 UPP iP 15 36 30.2

" 15 UME iP 16 22 59.6
Tajik SSR (h = N).

" 15 UPP iP 16 31 56.9 C
micr sec
P Z' 0.1 0.6
KIR iP 16 31 03.1 C
micr sec
P Z' 0.2 1.4
UME iP 16 31 31.0 C
Alaska Peninsula (h = 60 km).
m = 6.0 (UPP,KIR).

" 15 UPP iP 19 29 13.6
Greece (h = 10 km).

" 15 UPP iP 22 26 26.5
KIR iP 22 26 07.7
i 22 26 35.8
UME iP 22 26 17.6
Talaud Islands (h = 110 km).

" 16 UME iP 07 42 19.0
Southern Honshu, Japan
(h = 280 km).

" 16 UME iP 08 28 18.9
Banda Sea (h = 150 km).

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

1982
Apr. 16 UPP iP 08 32 22.9
KIR iP 08 32 09.7

" 16 KIR eP 10 56 35
Near east coast of Honshu, Japan (h = 60 km).

" 16 KIR iPKP 14 23 53.7
i 14 24 06.8
UME i(PKP) 14 23 53.0
iPKP 14 24 00.4
Samoa Islands region (h = N).

" 16 UPP iP 18 19 15.0
Off coast of Peru (h = 25 km).

" 16 UPP eP 19 33 19
KIR iP 19 32 49.5 D
micr sec
P Z' 0.1 0.8
UME iP 19 33 02.0
Mariana Islands region (h = 300 km).

" 16 UPP iP 20 35 33.2
UME iP 20 35 36.9

" 16 KIR iP 23 53 16.8
UME iP 23 53 35.4 D
Hokkaido, Japan region (h = 170 km).

" 17 UPP iP 02 49 26.9
KIR eP 02 50 05
UME iP 02 49 41.0
Southern Iran (h = N).

" 17 KIR iP 03 38 39.9
UME iP 03 38 43.5
North Atlantic Ocean (h = 10 km).

" 17 UPP eP 04 36 02
Greece-Albania border region (h = 10 km).

" 17 UPP iP 09 33 04.2 D
i 09 33 09.5
i 09 33 16.8
iS 09 43 05
micr sec
P Z' 0.7 1.0
Mx Z 41 15
KIR micr sec
Mx Z 16 13
(cont.)

1982
Apr. 17 (cont.)
UME iP 09 32 50.2 D
i 09 33 02.0
iS 09 42 34
Philippine Islands region (h = 10 km).
M = 6.8 (UPP,KIR).

" 17 UPP iP 10 06 44.4
Philippine Islands region (h = N).

" 17 UPP iPKP 13 15 18.8
Gilbert Islands region (h = N).

" 17 UPP iP 18 29 14.9
micr sec
P Z' 0.2 1.2
UME iP 18 29 00.9 C
Philippine Islands region (h = 35 km).

" 17 UPP iP 18 46 51.2
UME iP 18 46 26.2
Kuril Islands (h = N).

" 17 UME iPdiff 19 00 00.1
Banda Sea (h = 80 km).

" 17 UPP iP 20 47 06.2
i 20 47 13.3
micr sec
P Z' 0.3 1.3
UME iP 20 46 37.2
i 20 46 44.2
Kamchatka (h = 160 km).

" 17 UPP eP 20 51 33
UME iP 20 51 14.8 C

" 17 UPP iP 22 51 52.6
micr sec
P Z' 0.1 1.5
UME iP 22 51 31.0
Off east coast of Honshu, Japan (h = 45 km).

" 17 UPP eP 23 35 26
UME iP 23 35 07.7
Kyushu, Japan (h = 45 km).

" 18 UPP iP 00 20 35.2
UME iP 00 20 19.7
i 00 20 32.2
Near east coast of Honshu, Japan (h = 70 km).

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

1982
Apr. 18 UPP iP 09 09 19.2
iS 09 19 23
micr sec
P Z' 0.1 1.0
Mx Z 3.4 17
KIR iP 09 08 45.0 C
i 09 08 55.3
iPP 09 11 20.3
eS 09 18 17
micr sec
P Z' 0.2 1.0
Mx Z 2.1 16
UME iP 09 08 59.8 C
i 09 09 10.8
iPP 09 11 40.7
iS 09 18 47
Bonin Islands region
(h = 20 km).
m = 6.0, M = 5.7 (UPP,KIR).

" 18 UPP iPKP 09 42 16.9
UME iPKP 09 42 09.2
Gilbert Islands region
(h = 25 km).

" 18 UPP eP 10 54 43
epP 10 55 02
iS 11 05 23
micr sec
Mx Z 3.0 30
KIR iP 10 54 37.2
ipP 10 54 54.4
micr sec
Mx Z 2.1 24
UME iP 10 54 44.9
ipP 10 55 01.7
iS 11 05 05
Guatemala.
h = 60 km (UPP,KIR,UME).
M = 5.5 (UPP,KIR).
M uncorrected for focal
depth.

" 18 UME iP 11 47 23.9 C
Near s. coast of Honshu,
Japan (h = 430 km).
Late arrival when compared
with the NEIS solution.

" 18 UPP ePKP 11 50 11
iPP 11 52 51.5
micr sec
PKP Z' 0.3 1.7
Mx Z 5.6 30
KIR ePKP 11 50 09
i 11 50 11.9
micr sec
i Z' 0.3 1.5
Mx Z 3.1 28
(cont.)

1982
Apr. 18 (cont.)
UME ePKP 11 50 12
i 11 50 14.8
iPP 11 52 44.3
Easter Island region
(h = 10 km).
M = 6.0 (UPP,KIR).

" 18 UME iP 13 38 33.4
Near east coast of Honshu,
Japan (h = N).

" 18 UME eP 16 12 23
Near coast of Michoacan,
Mexico (h = N).

" 18 UME eP 17 05 42
Philippine Islands region
(h = N).

" 18 KIR iP 18 30 52.3
UME eP 18 31 00
Mindanao, Philippine Islands
(h = 100 km).

" 18 UPP iP 23 23 01.3
KIR iP 23 24 07.5
UME iP 23 23 33.4
Dodecanese Islands
(h = 160 km).

" 18 KIR iP 23 30 26.1
UME iP 23 30 13.3 C

" 19 UPP iP 02 36 59.9
KIR iP 02 36 21.7
UME iP 02 36 38.1
Honshu, Japan (h = 70 km).

" 19 UPP eP 04 37 46
micr sec
Mx Z 3.3 13
KIR iP 04 38 58.0
i 04 38 59.6
UME iP 04 38 22.1
iS 04 43 01
Aegean Sea (h = 10 km).

" 19 UME iPKP 05 22 45.5
i 05 22 53.7
Gilbert Islands region
(h = N).

" 19 UPP iPKPl 08 14 09.7
i 08 15 40.4
micr sec
PKPl Z' 0.2 1.0
KIR ePKP 08 13 57
i 08 14 45.3
(cont.)

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

1982
Apr. 19 (cont.)
UME iPKPl 08 13 58.7
South of Fiji Islands
(h = 350 km).

" 19 UPP iP 09 34 02.2
KIR iP 09 33 29.7
UME iP 09 33 44.1 C
Bonin Islands region
(h = 370 km).

" 19 UPP iPn 09 51 07.1
iSn 09 52 21.8
iSgl 09 52 59.2
KIR iPn 09 51 37.9
iSn 09 53 19.6
i 09 54 09.8
iSgl 09 54 18.3
UME iPn 09 51 25.6
iSn 09 52 41.7
iSgl 09 53 24.6
UDD iPn 09 50 39.4
i 09 50 47.1
iSn 09 51 33.3
iSgl 09 51 57.9
DEL iPn 09 51 10.8
iSgl 09 53 10.2
Off west coast of southern
Norway, 61.7°N, 4.1°E.
Origin time = 09 49 27.
M_L(UPP) = 4.1 (0.19) 9.
Felt.
By combination with Bergen
and Kongsberg readings.

" 19 KIR iP 11 55 17.7
UME iP 11 55 23.3
Talaud Islands (h = 170 km).

" 19 KIR iP 12 23 45.5
UME iP 12 23 50.2

" 19 UPP iP 14 38 09.5
KIR iP 14 37 35.7
UME iP 14 37 51.2
Bonin Islands region
(h = N).

" 19 UPP iP 14 54 21.8
i 14 54 35.3
i 15 04 20
micr sec
P Z' 0.4 1.1
i Z' 0.5 1.0
Mx Z 21 14
KIR iP 14 54 00.5
i 14 54 14.0
(cont.)

1982
Apr. 19 (cont.)
KIR i 15 03 43
micr sec
P Z' 0.2 1.1
i Z' 0.2 1.0
Mx Z 7.9 13
UME iP 14 54 07.6
i 14 54 21.4
i 15 04 53
Philippine Islands region
(h = 0 km).
m = 6.3, M = 6.5 (UPP,KIR).
Double P, small and large,
in average 13.8 s apart.
The second onset, when
interpreted as pP, provides
a focal depth of 50 km.

" 19 KIR iP 17 40 18.5
UME eP 17 40 14
Off w. coast of northern
Sumatera (h = 55 km).

" 19 UME iP 18 41 17.5

" 19 KIR iP 22 23 59.0
UME iP 22 23 50.7
i 22 24 24.5
Tajik-Sinkiang border region
(h = 110 km).

" 20 UME iP 00 09 06.5

" 20 UME iP 07 14 42.6
Near east coast of Honshu,
Japan (h = N).

" 20 UPP iRg 11 38 27.8
UDD iSgl 11 38 43.2
East-central Sweden.
Near-surface event.

" 20 UPP iSn 13 21 59.3
iSgl 13 22 27.2
KIR iSgl 13 25 05.1
UME iSgl 13 23 39.8
UDD iPn 13 20 27.3
i 13 20 34.9
iSn 13 21 08.1
iSgl 13 21 28.0
DEL iPn 13 20 44.9
i 13 20 48.4
iPgl 13 20 57.8
iSn 13 21 38.1
iSgl 13 22 00.6
MYR iPn 13 20 51.5
(cont.)

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

1982
Apr. 20 (cont.)
MYR iPgl 13 21 05.9
iSgl 13 22 18.8
Southwestern Norway,
59.2°N, 6.4°E.
Origin time = 13 19 31.
M_L(UPP) = 3.7 (0.17) 9.
Felt.
By combination with Bergen and Kongsberg readings.

" 20 UME iP 17 04 55.0
Near east coast of Honshu, Japan (h = N).

" 20 UPP micr sec
Mx Z 1.4 13
KIR iP 18 38 21.0
UME iP 18 37 48.4
iS 18 42 25
Aegean Sea (h = 10 km).

" 20 UPP iP 19 35 51.1
i 19 36 06.4
iS 19 40 10
micr sec
P Z' 0.1 0.9
Mx Z 1.0 15
KIR iP 19 36 59.5
micr sec
P Z' 0.1 0.8
Mx Z 0.9 16
UME eP 19 36 23
eS 19 41 33
Crete (h = N).
m = 5.7, M = 4.6 (UPP,KIR).

" 21 UPP iP 12 04 39.1
KIR iP 12 04 38.0
i 12 04 46.7
UME iP 12 04 35.9
Southern Sumatera (h = N).

" 21 KIR eP 12 19 17
UME iP 12 19 18.6
i 12 19 20.9
Banda Sea (h = 80 km).

" 21 KIR iP 13 46 51.6
Iraq (h = 55 km).

" 21 UPP iP 15 44 01.0
KIR iP 15 44 46.7
Iraq (h = 60 km).

" 21 UPP iP 22 32 11.9
KIR iP 22 31 28.4
(cont.)

1982
Apr. 21 (cont.)
UME iP 22 31 48.0
Hokkaido, Japan region (h = 100 km).

" 22 UPP iP 06 18 52.9
UME iP 06 18 50.4
Afghanistan,USSR border region (h = N).

" 22 UPP iP 09 32 31.9
UME iP 09 32 07.6
Hokkaido, Japan region (h = 230 km).

" 22 UPP iPKP 10 15 04.1
UME iPKP 10 14 55.3
Gilbert Islands region (h = 30 km).

" 22 UPP iP 10 53 15.1
Hokkaido, Japan region (h = N).

" 22 UPP iP 12 46 41.3
KIR iP 12 46 12.7
UME iP 12 46 25.2
Mariana Islands (h = 610 km).

" 22 UPP iP 16 49 28.3
micr sec
P Z' 0.1 1.0
KIR iP 16 49 17.7
UME iP 16 49 18.2
India-China border region (h = N).

" 22 UPP iP 17 08 19.8
KIR iP 17 08 02.6
UME iP 17 08 08.1
Mindoro, Philippine Islands (h = 45 km).

" 22 UPP iPKPl 18 51 34.1
UME iPKPl 18 51 21.7 C
Kermadec Islands (h = 100 km).

" 23 KIR iP 10 11 37.6
UME iP 10 11 29.0
Tajik SSR (h = N).

" 23 UPP iP 14 53 18.0
KIR iP 14 52 23.7
UME iP 14 52 52.3
Southeastern Alaska (h = 10 km).

" 23 UME iP 18 43 32.6

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

1982
Apr. 23 UPP iPKP 22 21 36.5
KIR iPKP 22 21 22.9
UME iPKP 22 21 29.7
Vanuatu Islands
(h = 120 km).

" 23 UPP iP 23 29 20.7 C
i 23 29 22.2
ipP 23 29 38.0
micr sec
i Z' 0.4 0.9
Mx Z 1.2 18
KIR iP 23 28 28.0
i 23 28 28.9
ipP 23 28 45.1
micr sec
i Z' 0.2 1.0
Mx Z 1.1 18
UME iP 23 28 54.2
i 23 28 55.2
ipP 23 29 11.1
Andreanof Islands,
Aleutian Is.
h = 70 km (UPP,KIR,UME).
m = 6.3, M = 5.2 (UPP,KIR).
M uncorrected for focal depth.
Double P, small and large, in
average 1.1 s apart.

" 24 UPP iP 02 14 36.2
ipP 02 14 58.7
i 02 15 10.7
KIR eP 02 14 29
ipP 02 14 50.8
UME iP 02 14 27.9
ipP 02 14 49.4
India-China border region.
h = 90 km (UPP,KIR,UME).

" 24 UME iP 04 02 52.1
Mindoro, Philippine Islands
(h = N).

" 24 UME iPKP 06 29 40.1
Gilbert Islands region
(h = 30 km).

" 24 UPP iP 18 09 37.5
KIR eP 18 10 27
UME eP 18 09 59
Turkey (h = 10 km).

" 24 UPP iPKP 19 45 16.0
UME iPKP 19 45 03.8
i 19 45 18.1

1982
Apr. 24 UPP iRg 21 05 50.9
UDD iRg 21 05 31.0
Dalecarlia, Sweden,
60.1°N, 15.0°E.
Mine collapse at Grängesberg
iron ore mine.

" 25 UPP iP 03 30 35.5 C
iPn 03 31 09.5
iPP 03 31 22.2
micr sec
P Z' 2.1 0.9
KIR iP 03 29 47.0 C
i 03 30 26.9
iPn 03 30 46.8
micr sec
P Z' 2.7 0.9
UME iP 03 29 48.1 C
i 03 30 32.1
iPP 03 31 04.5
i 03 31 55.6
Eastern Kazakh SSR.
m = 7.1 (UPP,KIR).
Underground explosion.

" 25 UPP eP 04 37 04
UME iP 04 36 39.0
Hokkaido, Japan region
(h = 60 km).

" 25 UPP iPKP 10 23 18.1
iSKP1 10 26 29.8
iPKS 10 26 40.6
KIR iPKP 10 23 03.9
UME iPKP 10 23 10.5
Vanuatu Islands (h = 120 km).

" 25 UPP iP 15 12 34.1
KIR iP 15 13 14.8
Western Iran (h = N).

" 25 UPP iP 18 16 48.5 C
micr sec
P Z' 0.1 1.0
KIR iP 18 16 13.9
micr sec
P Z' 0.1 1.0
UME iP 18 16 33.8 C
Southern Nevada.
m = 5.9 (UPP,KIR).
Underground explosion.

" 25 KIR iP 22 44 41.4
North Atlantic Ridge
(h = N).

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

1982
Apr. 26 UPP iP 06 29 26.9
i 06 29 36.6
KIR iP 06 30 40.5
UME iP 06 30 05.7
i 06 30 11.8
Southern Greece (h = 10 km).

" 26 UPP iP 09 37 31.5
Southern Greece (h = N).

" 27 UPP iP 00 26 39.8
UME iP 00 26 35.1
Honduras (h = 35 km).

" 27 UPP iP 02 46 45.4
KIR eP 02 45 57
UME iP 02 46 19.5
Kuril Islands region
(h = N).

" 27 UPP iP 02 54 33.5
micr sec
P Z' 0.1 1.0
KIR iP 02 53 45.5
UME iP 02 54 08.2 C
Kuril Islands (h = N).

" 27 UPP eP 03 10 36
UME iP 03 10 11.8
Kuril Islands (h = N).

" 27 UME iP 03 27 52.6
Honduras (h = 35 km).

" 27 UME iP 05 06 11.2
Honduras (h =N).

" 27 KIR iPKP 11 23 42.3
UME iPKP 11 23 09.6
South of Sandwich Islands
region (h = N).

" 27 KIR iP 12 03 18.9
Flares Island region
(h = N).

" 28 UME iP 16 19 34.8
i 16 19 43.0
Near coast of Chiapas,
Mexico (h = 35 km).

" 28 UPP iP 17 00 37.6
Southern Greece (h = 10 km).

1982
Apr. 29 KIR iP 00 04 58.3
Mindanao, Philippine
Islands (h = 60 km).

" 29 UPP iPKPl 03 47 36.1
micr sec
PKPl Z' 0.1 1.0
KIR ePKP 03 47 24
UME iPKP 03 47 24.2
i 03 51 00.3
South of Fiji Islands
(h = 140 km).

" 29 UPP i 07 32 54.7
iRg 07 32 58.3
UDD iSgl 07 33 51.7
East-central Sweden.
Near-surface event.

" 29 UPP iP 16 32 59.1
i 16 33 24.7
KIR iP 16 33 29.5 C
UME iP 16 33 05.4 C
Eastern Caucasus (h = N).

" 29 MYR iPgl 19 12 11.5
iSgl 19 12 14.7
Jämtland, Sweden,
63.0°N, 14.8°E.
Origin time = 19 12 07.
Near-surface event.
Explosion? Felt.

" 29 UPP iP 20 31 49.8
KIR iP 20 32 29.1
UME iP 20 32 08.3
Northwest of Madagascar
(h = 10 km).

" 30 UPP iP 03 28 45.7
KIR iP 03 28 16.0
UME iP 03 28 29.7
Volcano Islands region
(h = 120 km).

" 30 UPP iPKP 08 05 27.5
iSKPl 08 08 34.2
KIR iPKP 08 05 43.2
iSKPl 08 08 50.3
UME i(PKP) 08 05 22.4
iPKP 08 05 35.9
iPP 08 07 25.4
South Sandwich Islands region
(h = 110 km).

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

1982				
Apr.	30	UPP	eP	19 25 38
		UME	eP	19 26 21
		Southern Greece (h = 10 km).		
"	30	UPP	iP	19 28 58.5
			i	19 29 03.8
		UME	eP	19 29 37
		Southern Greece (h = 10 km).		

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December 20, 1983

SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

SEISMOLOGICAL DEPARTMENT
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S-750 12 UPPSALA
SWEDEN

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

U P P S A L A, K I R U N A, U M E Å, U D D E H O L M, D E L A R Y and M Y R V I K E N

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

M A Y 1 - 31, 1982

1982 May 1 UPP iP 02 20 23.8
UME iP 02 20 21.3
Guatemala (h = N).

" 1 UME iPKP 05 42 28.8
Fiji Islands region
(h = 60 km)

" 1 UPP iPKP2 08 01 26.3
KIR iPKP1 08 01 07.4
UME iPKP1 08 01 09.2
Kermadec Islands region
(h = N).

" 1 UME iP 08 03 16.0

" 1 UME iP 08 16 05.2

" 1 UPP iPKP1 09 03 20.0
UME iPKP1 09 03 07.3
Kermadec Islands (h = N).

" 1 UPP iPKP2 09 06 12.0
UME iPKP1 09 05 54.0
Kermadec Islands region
(h = N).

" 1 UPP iPKP1 10 31 27
UME iPKP1 10 31 14.7
Kermadec Islands (h = N).

" 1 UPP iPKP1 10 47 31.4
micr sec
PKP1 Z' 0.1 1.0
KIR iPKP 10 47 19.8
UME iPKP1 10 47 21.8
Kermadec Islands (h = N).

1982 May 1 UME iP 16 05 21.2
Albania (h = 15 km).

" 1 UPP iP 17 50 40.4
micr sec
P Z' 0.1 1.2
KIR iP 17 50 52.2
micr sec
P Z' 0.1 0.9
UME iP 17 50 39.9
Pakistan (h = N).
m = 5.7 (UPP,KIR).

" 1 UPP ePKP 18 05 58
KIR iPKP 18 05 43.6
UME iPKP 18 05 49.6
i 18 06 04.6
Vanuatu Islands (h = N).

" 1 UPP i(P) 18 09 21.2

" 1 KIR iP 21 43 45.2
Philippine Islands region
(h = 45 km).

" 1 KIR iP 22 41 27.6
Mindanao, Philippine Islands
(h = 110 km).

" 2 UME iP 03 32 39.2
Albania (h = 10 km).

" 2 UPP iPKP 06 06 56.6
UME iPKP 06 06 45.1
i 06 06 49.8
i 06 07 00.5

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

1982
May 2 UPP iP 07 19 14.5 D
micr sec
P Z' 0.1 0.9
Mx Z 1.6 23
KIR iP 07 19 41.3 D
micr sec
P Z' 0.1 0.9
Mx Z 2.3 22
UME iP 07 19 31.6 D
iS 07 25 02
North Atlantic Ridge
(h = 10 km).
m = 5.7, M = 4.8 (UPP,KIR).

" 2 UME iP 11 00 15.4

" 2 UPP iPKP1 11 39 18.7
i 11 39 23.8
micr sec
PKP1 Z' 0.1 0.9
i Z' 0.4 1.0
Mx Z 8.7 19
UME iPKP1 11 39 06.6
i 11 39 12.6
Kermadec Islands
(h = 25 km).
M = 6.6 (UPP,KIR).

" 2 UPP iPKP 12 37 18.7
UME iPKP 12 37 06.1

" 2 UPP iPKP1 13 09 59.1
Kermadec Islands (h = N).

" 2 UPP iPKP1 13 45 20.7
iPKP2 13 45 23.3
micr sec
PKP1 Z' 0.1 1.0
UME iPKP1 13 45 08.4
Kermadec Islands (h = N).

" 2 UPP iP 13 54 46.4

" 2 UPP iPKP2 14 36 33.0
UME iPKP1 14 36 17.1
Kermadec Islands region
(h = N).

" 2 UPP iPKP 14 58 00.3
KIR iPKP 14 57 46.7
Santa Cruz Islands
(h = 200 km).

" 2 UPP iP 15 46 00.5
KIR iP 15 45 06.0
i 15 45 11.0
Southeastern Alaska
(h = 15 km).

1982
May 2 UPP iPKP1 16 39 52.4
Kermadec Islands region
(h = N).

" 2 KIR iP 17 09 34.0
UME iP 17 10 02.4
Southeastern Alaska
(h = 15 km).

" 2 KIR iP 17 22 44.9
UME iP 17 23 13.5
Southeastern Alaska
(h = 15 km).

" 2 KIR iP 18 07 16.4
UME iP 18 07 42.3
Fox Islands, Aleutian Is.
(h = 35 km).

" 2 UPP iPKP1 19 04 50.9
micr sec
PKP1 Z' 0.1 1.1
UME iPKP1 19 04 38.2
Kermadec Islands (h = N).

" 3 KIR iP 01 10 49.9
UME iP 01 10 59.9
South of Mariana Islands
(h = N).

" 3 UPP iP 04 15 31.4
ipP 04 15 39.7
KIR iP 04 16 10.8
ipP 04 16 20.4
i 04 17 09.3
UME iP 04 15 44.7
ipP 04 15 55.3
Eastern Caucasus.
h = 35 km (UPP,KIR,UME).

" 3 UPP iPKP1 05 49 00.2
KIR iPKP 05 48 42.3
Kermadec Islands (h = N).

" 3 KIR iP 08 24 18.5

" 3 UPP iP 10 24 16.9
KIR iP 10 23 21.5
i 10 23 25.5
micr sec
P Z' 0.1 1.0
i Z' 0.1 1.0
UME iP 10 23 50.6
Southeastern Alaska
(h = 10 km).

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

1982
May 3 KIR iP 10 38 15.9
Southeastern Alaska
(h = 15 km).

" 3 KIR iP 15 26 34.4
Southeastern Alaska
(h = 15 km).

" 3 KIR iP 16 35 20.9 C
micr sec
P Z' 0.1 0.9
UME iP 16 35 20.4
Java (h = 80 km).

" 3 UPP iP 16 54 33.9
Southern Sumatera (h = N).

" 4 UPP iP 14 12 46.8
Southern Greece (h = 10 km).

" 4 KIR iSgl 14 46 48.9
Norrbotten, Sweden,
65.7°N, 22.0°E.
Origin time = 14 45 41.
M_L(UPP) = 1.9 1.
By combination with Finnish
station readings.

" 4 UME iP 20 39 28.3
Near s. coast of Honshu,
Japan (h = 360 km).

" 5 UME iP 02 09 07.1
Hokkaido, Japan region
(h = 55 km).

" 5 UPP iP 04 55 55.1
KIR iP 04 54 37.4
i 04 54 41.9
micr sec
i Z' 0.1 0.9
UME iP 04 55 20.2
Eastern Greenland (h = N).

" 5 UPP eP 07 10 43
UME iP 07 10 26.9
Northeast of Taiwan
(h = 200 km).

" 5 UPP iP 15 42 19.6
Mindoro, Philippine Islands
(h = 130 km).

" 5 MYR iPgl 18 12 00.0
iSgl 18 12 03.6
Jämtland, Sweden,
63.0°N, 14.8°E.
Origin time = 18 11 55.
Near-surface event. Explosion?
Felt.
Cf the event on Apr. 29, 19 12.

1982
May 5 UPP iP 19 59 47.0
i 19 59 54.3
KIR eP 19 58 48
i 19 58 54.5
UME iP 19 59 21.0
Southern Alaska (h = 60 km).

" 5 UPP iP 22 58 18.4
i 22 58 23.3
KIR iP 22 59 30.2
i 22 59 37.7
UME iP 22 58 55.8
Southern Greece (h = 10 km).

" 5 UPP eP 23 22 21
i 23 22 25.4
micr sec
i Z' 0.2 1.5
KIR iP 23 21 48.8
i 23 21 54.7
UME iP 23 22 02.1
i 23 22 05.7
Kyushu, Japan (h = N).

" 5 UPP eP 23 39 54
KIR iP 23 39 36.9
Mindoro, Philippine Islands
(h = 130 km).

" 6 KIR iP 03 27 00.5
UME iP 03 27 09.3
Taiwan region (h = 100 km).

" 6 UPP eP 15 03 56

" 6 UPP iP 15 49 41.4
ipP 15 49 51.1
iPP 15 51 13.1
iS 15 55 35
micr sec
P Z' 0.1 1.1
pP Z' 0.2 1.0
Mx Z 19 14
KIR iP 15 49 45.7
ipP 15 49 55.2
micr sec
P Z' 0.1 0.9
pP Z' 0.4 0.9
Mx Z 7.4 11
UME iP 15 49 37.3
ipP 15 49 46.5
iS 15 55 29
Tajik SSR.
h = 35 km (UPP,KIR,UME).
m = 6.1, M = 6.0 (UPP,KIR).

" 7 UPP iP 00 54 27.9
Andreanof Islands, Aleutian Is.
(h = 100 km).

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

1982
May 7 UPP iP 05 49 46.7
KIR iP 05 49 33.4
micr sec
p Z' 0.1 1.2
UME iP 05 49 37.3 C
Minihassa Peninsula
(h = 90 km).

" 7 UPP iP 07 52 38.8
Kashmir-India border region
(h = N).

" 7 UPP iPKP 05 57 31.5
micr sec
PKP Z' 0.1 0.8
M Z 26 21
KIR ePKP 05 57 48
i 05 57 52.5
micr sec
i Z' 0.4 1.4
Mx Z 15 20
UME iPKP 05 57 39.6
i 05 57 46.3
Southwestern Atlantic Ocean
(h = 10 km).
M = 6.8 (UPP,KIR).

" 7 UME iPgl 11 38 04.1
iSgl 11 38 27.7
Norrbotten, Sweden,
65.5°N, 21.3°E.
Origin time = 11 37 32.
M_L (UPP) = 2.1 (0.03) 2.
By combination with Finnish
station readings.

" 7 KIR iPKP 16 13 26.8
UME iPKPl 16 13 30.6
Kermadec Islands region
(h = 290 km).

" 7 KIR iP 17 25 57.3
UME iP 17 26 12.1
South of Honshu, Japan
(h = N).

" 7 UPP iP 18 28 49.3 C
micr sec
P Z' 0.2 1.0
KIR iP 18 28 14.8 C
micr sec
P Z' 0.1 0.9
UME iP 18 28 34.4 C
Southern Nevada.
m = 6.1 (UPP,KIR).
Underground explosion.

1982
May 8 UPP iP 01 10 46.1
KIR iP 01 09 52.9 C
UME iP 01 10 18.9
Rat Islands, Aleutian Islands
(h = N).

" 8 UPP iP 14 54 18.4
KIR iP 14 53 35.9
UME iP 14 53 55.0
Hokkaido, Japan region
(h = 110 km).

" 8 UPP iP 16 44 36.3
micr sec
P Z' 0.1 0.9
Mx Z 3.6 18
KIR iP 16 43 29.5 C
iS 16 45 27.1
micr sec
Mx Z 1.2 16
UME iP 16 44 04.6
iS 16 46 14.1
Jan Mayen Island region
(h = 10 km).

" 8 UPP iP 22 59 12.8
KIR eP 22 58 35
UME iP 22 58 51.5
Near east coast of Honshu,
Japan (h = 60 km).

" 9 KIR eP 03 59 59
Fox Islands, Aleutian Islands
(h = 35 km).

" 9 KIR eP 04 50 29
i 04 50 40.2
UME iP 04 50 12.9
North of Ascension Island
(h = 10 km).

" 9 UME iP 05 27 20.9
Afghanistan-USSR border region
(h = 80 km).

" 9 KIR iSgl 06 20 26.3

" 9 KIR eP 07 40 28
Philippine Islands region
(h = 25 km).

" 9 UPP iPKP 08 56 57.5
UME iPKP 08 56 41.1

" 9 UPP ipP 16 18 47.1
KIR iP 16 18 43.2
(cont.)

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

1982
May 9 (cont.)
UME iP 16 18 32.7
ipP 16 18 43.4
Tajik SSR (h = N).

" 9 UPP eP 19 40 44
KIR eP 19 40 52
UME iP 19 40 51.9
i 19 41 11.0
Leeward Islands (h = N).

" 9 KIR iP 20 23 07.7
Mariana Islands (h = 590 km).

" 10 UPP iP 01 37 34.3 C
micr sec
P Z' 0.1 0.9
KIR iP 01 37 43.2 C
micr sec
P Z' 0.1 1.1
UME iP 01 37 41.8 C
i 01 38 01.8
Near coast of Venezuela
(h = 100 km).
m = 5.6 (UPP,KIR).

" 10 UME iPKP 03 23 27.2

" 10 UME iP 04 16 29.4
Eastern Sea of Japan
(h = 50 km).

" 10 KIR iP 14 17 11.7 C
UME iP 14 17 14.2
Banda Sea (h = 570 km).

" 10 UME iP 16 49 06.9

" 10 UPP iP 17 01 01.7

" 10 UPP iP 19 30 35.3
ipP 19 30 41.5
KIR ipP 19 30 06.2
UME ipP 19 30 20.5
Near s. coast of southern
Honshu (h = 20 km).

" 10 UDD iSgl 21 18 55.9
MYR iSgl 21 19 25.2
Off west coast of southern
Norway, 60.0°N, 4.6°E.
Origin time = 21 16 37.
M_L(UPP) = 2.4 1.

1982
May 10 UDD iSgl 21 27 24.9
MYR iSgl 21 27 54.6
Same location as the preceding
event.
Origin time = 21 25 06.
M_L(UPP) = 2.3 1.

" 10 UPP iP 23 08 37.9
KIR iP 23 07 16.9
i 23 07 25.7
iS 23 08 40.1
UME iP 23 08 00.1
i 23 10 24.5
Norwegian Sea (h = 10 km).

" 11 UPP iP 11 49 05.1 C
KIR iP 11 48 16.8
UME iP 11 48 39.4 C
Kuril Islands (h = 35 km).

" 11 KIR eP 21 01 00
UME iP 21 01 03.0
Banda Sea (h = N).

" 12 UME iP 03 48 24.6
South of Honshu, Japan
(h = 140 km).

" 12 UPP iPKPl 10 21 58.8
i 10 22 00.1
i 10 22 09.5
iSKPl 10 24 51.4
iSKKP 10 33 08.2
KIR i(PKP) 10 21 40.7
iPKP 10 21 48.6
iSKPl 10 24 29.2
UME i(PKP) 10 21 46.4
i 10 21 48.5
iPKP 10 21 53.6
i 10 23 11.2
iSKPl 10 24 39.2
iSKKP 10 33 21.8
South of Fiji Islands
(h = 530 km).

" 12 UPP iPKPl 13 01 29.2
iPKP2 13 01 33.0
KIR ePKPl 13 01 09
UME iPKPl 13 01 17.2
i 13 01 21.6
Kermadec Islands (h = 50 km).

" 12 UPP ePKPl 13 10 44
iPKP2 13 10 48.3
UME iPKPl 13 10 31.8
i 13 10 36.7
Kermadec Islands (h = N).

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

1982					
May	13	UPP	iPKP	10 49 31.4	
		UME	iPKP	10 49 26.0	
"	13	UME	iP	20 58 18.1	
"	13	UPP	iP	21 48 55.1	
		KIR	iP	21 48 05.8	
		UME	iP	21 48 28.5	
		Northwest of Kuril Islands			
		(h = 270 km).			
"	14	KIR	iP	03 47 22.0	
		Near east coast of Kamchatka			
		(h = 120 km).			
"	14	UPP	iPKP1	12 16 57.6	
			i	12 17 02.3	
			iPKP2	12 17 08.3	
			i	12 17 19.1	
				micr sec	
			PKP2 Z'	0.1 0.9	
			i Z'	0.1 0.6	
		KIR	iPKP1	12 16 38.0	
			i	12 16 48.5	
		UME	ePKP	12 16 44	
			iPKP1	12 16 47.5	
			i	12 16 57.9	
		East of north Island, N.Z.			
		(h = 35 km).			
"	14	KIR	eP	12 50 50	
		UME	iP	12 50 39.9	
			i	12 51 07.1	
		Afghanistan-USSR border region			
		(h = 60 km).			
"	14	UPP	iP	14 02 28.8 C	
		KIR	iP	14 02 09.6	
		UME	iP	14 02 16.4	
			i	14 02 17.8	
		Philippine Islands region			
		(h = 20 km).			
"	14	UPP	iP	14 27 40.4	
		KIR	eP	14 28 13	
		UME	iP	14 27 55.2	
		Arabian Sea (h = 10 km).			
"	14	UPP	iP	14 33 18.1 C	
		KIR	eP	14 33 54	
			i	14 34 00.8	
		UME	iP	14 33 32.5	
			i	14 34 19.2	
		Arabian Sea (h = 10 km).			

1982					
May	14	UPP	iP	14 52 11.3	
			i	14 52 17.4	
				micr sec	
			Mx Z	2.4 20	
		KIR		micr sec	
			Mx Z	1.5 14	
		UME	iP	14 52 28.5	
			i	14 52 41.1	
		Arabian Sea (h = 10 km).			
		M = 5.3 (UPP,KIR).			
"	14	UPP	iP	18 04 49.5	
		UME	iP	18 04 46.7	
		Tajik SSR (h = N).			
"	14	UME	iP	18 50 42.2	
"	14	UPP	iPKP1	23 18 09.8	
		South of Kermadec Islands			
		(h = N).			
"	15	UPP	iRg	06 24 11.2	
		UDD	iSg1	06 25 07.7	
		East-central Sweden.			
		Near-surface event.			
"	15	UPP	ePKP2	06 46 36	
		KIR	iPKP1	06 46 07.3	
		East of North Island, N.Z.			
		(h = N).			
"	15	UPP	iP	17 10 49.4 C	
			i	17 11 02.7	
				micr sec	
			P Z'	0.1 1.0	
		KIR	iP	17 10 31.6	
			i	17 10 43.4	
				micr sec	
			P Z'	0.1 0.9	
		UME	iP	17 10 37.0	
			i	17 10 48.7	
		Luzon, Philippine Islands			
		(h = 70 km).			
		m = 5.7 (UPP,KIR).			
"	15	KIR	eP	17 43 22	
		UME	iP	17 43 00.0	
			i	17 43 05.7	
		Iran (h = 30 km).			
"	15	UPP	i	18 59 52.4	
			iS	19 08 44.2	
				micr sec	
			Mx Z	5.7 20	
		(cont.)			

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

1982 May	15	(cont.)			
		KIR	iP		18 59 00.8
					micr sec
			Mx	Z	9.4 19
		UME	i		18 59 30.5
			iS		19 08 02
		Vancouver Island region			
		(h = 10 km).			
		M = 5.9 (UPP,KIR).			
"	15	KIR	iP		22 07 39.7
		UME	iP		22 06 58.8
		Yugoslavia (h = 10 km).			
"	16	UME	iP		02 17 19.9
"	16	UPP	iP		04 06 53.5
		KIR	eP		04 08 12
		UME	iP		04 07 31.1
"	16	UPP	iP		04 57 41.8
		KIR	iP		04 57 06.5
		UME	iP		04 57 21.4
		South of Honshu, Japan			
		(h = 220 km).			
"	16	UPP	iPKP1		06 09 20.7
		UME	iPKP		06 09 18.5
		Fiji Islands region			
		(h = 210 km).			
"	16	UPP	iP		07 55 31.0
			i		07 55 36.2
		UME	iP		07 56 11.4
			i		07 56 19.1
		Greece-Albania border region			
		(h = 10 km).			
"	16	UPP	iP		08 13 14.2
			i		08 13 17.1
		KIR	iP		08 13 25.6
		UME	iP		08 13 13.8
			i		08 13 19.0
		Hindu Kush region (h = N).			
"	16	UPP	iP		22 37 59.8
"	17	UME	iPKP		02 58 50.0
		Southern Pacific Ocean			
		(h = 10 km).			
"	17	UME	iPKP		07 31 32.7
		Gilbert Islands region			
		(h = 25 km).			
1982 May	17	UPP	iPKP2		13 14 27.6
		KIR	iPKP1		13 13 57.0
			i		13 14 08.5
		UME	iPKP2		13 14 07.4
		East of North Island, N.Z.			
		(h = N).			
"	17	UPP	iP		20 07 32.8
			i		20 07 36.1
		KIR	eP		20 07 08
					micr sec
			P	Z'	0.1 1.0
		UME	iP		20 07 22.9
			i		20 07 30.2
		Gulf of California (h = 10 km).			
"	17	UPP	iP		20 43 25.8
		KIR	iP		20 42 53.7
		UME	iP		20 43 07.4
		Bonin Islands region			
		(h = 530 km).			
"	17	UPP	iP		23 28 04.7
		KIR	iP		23 27 57.1
		UME	iP		23 27 56.5
		Burma-India border region			
		(h = 70 km).			
"	18	UPP	iRg		14 28 32.7
		UDD	iRg		14 28 26.1
		South-central Sweden.			
		Near-surface event.			
"	18	UPP	iP		17 45 16.6
		KIR	iP		17 45 16.0
		UME	iP		17 45 13.9 C
		Southern Sumatera (h = 80 km).			
"	18	UPP	iP		23 30 55.0
		KIR	iP		23 31 03.2
		UME	iP		23 30 52.7
		Hindu Kush region (h = 220 km).			
"	19	UPP	eP		00 00 45
					micr sec
			Mx	Z	0.7 14
		KIR	iP		00 00 49.1
		UME	iP		00 00 50.9
		North Atlantic Ocean			
		(h = 10 km).			
"	19	UPP	iP		13 38 18.7
		KIR	iP		13 39 04.9
		UME	iP		13 38 35.8
		Turkey (h = N).			

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

1982					
May	19	UPP	iP	16 41 40.9	
		KIR	iP	16 41 36.7	D
		UME	iP	16 41 32.7	
		Southern Sinkiang Prov., China (h = 150 km).			
"	19	KIR	ePKP	18 36 15	
		UME	iPKP	18 36 20.3	
			iSKPl	18 39 36.1	
		Vanuatu Islands (h = 150 km).			
"	19	UPP	iP	21 25 04.3	
		KIR	iP	21 24 47.1	
		UME	iP	21 24 52.5	
		Mindoro, Philippine Islands (h = 160 km).			
"	20	UME	iP	02 48 03.8	
		Turkey (h = 10 km).			
"	20	UPP	iP	03 33 39.4	
			i	03 33 48.3	
		KIR	iP	03 34 38.9	
			i	03 34 54.0	
		UME	iP	03 34 06.9	
			i	03 34 20.7	
		Cyprus (h = 60 km).			
"	20	UME	iP	03 37 07.8	
"	20	UME	iP	12 23 53.7	
		Ecuador (h = 170 km).			
"	20	UPP	iPKP	21 48 30.5	
			iSKPl	21 52 01.4	
				micr	sec
			Mx Z	1.9	20
		KIR	iPKP	21 48 17.4	
			iPP	21 50 19.8	
				micr	sec
			PKP Z'	0.1	1.1
		UME	iPKP	21 48 23.7	
			i	21 48 34.0	
			iSKPl	21 51 49.1	
		Loyalty Islands (h = 40 km).			
"	20	KIR	iPKP	21 59 11.3	
		UME	iPKP	21 59 18.4	
		Tonga Islands (h = 230 km).			
"	20	UPP	ePKPl	23 15 30	
				micr	sec
			Mx Z	0.7	18
		KIR	ePKP	23 15 21	
		UME	iPKP	23 15 22.2	
			i	23 15 32.2	
		Norfolk Islands region (h = N).			

1982					
May	21	UME	iP	08 26 50.2	
		Near east coast of Honshu, Japan (h = 70 km).			
"	21	UPP	iPKP	20 34 43.7	
		UME	iPKP	20 34 17.5	
			i	20 34 37.4	
		Solomon Islands (h = 90 km).			
"	21	UPP	iP	23 37 39.6	
		UME	iP	23 37 26.6	
			ipP	23 37 38.3	
		Samar, Philippine Islands (h = 40 km).			
"	22	UPP	iP	01 46 36.1	C
			i	01 46 46.1	
				micr	sec
			P Z'	0.1	1.0
			Mx Z	0.7	14
		UME	iP	01 46 12.1	C
			i	01 46 23.5	
		Hokkaido, Japan region (h = 50 km).			
"	22	UPP	iPKP	03 04 30.4	
			i	03 04 37.0	
		UME	iPKP	03 04 20.1	
"	22	UME	iP	03 11 17.1	
"	22	UPP	iP	04 07 43.9	
		UME	iP	04 08 23.2	
		Pyrenees (h = 20 km).			
"	22	UME	iP	06 09 30.9	
			i	06 09 41.3	
"	22	UPP	iP	06 11 12.1	
		UME	iP	06 10 48.3	
		Hokkaido, Japan region (h = N).			
"	22	UPP	iP	08 08 42.5	
		UME	iP	08 08 21.7	
		Off east coast of Honshu, Japan (h = 55 km).			
"	22	UPP	iP	09 04 47.1	D
			i	09 04 53.9	
				micr	sec
			P Z'	0.4	1.6
		UME	iP	09 04 44.4	D
			i	09 04 51.0	
		Nicobar Islands region. h = 20 km (UPP,KIR).			

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

1982
May 22 UPP iP 09 12 45.2
ipP 09 13 03.2
UME iP 09 12 37.3
i 09 12 57.1
Burma-India border region
(h = 80 km).

" 22 UPP iP 09 30 46.9
UME iP 09 30 25.5
Off east coast of Honshu,
Japan (h = N).

" 22 UPP iP 13 42 45.3
UME iP 13 42 24.0 C
Near east coast of Honshu,
Japan (h = 25 km).

" 22 UPP iP 21 08 47.4
UME iP 21 09 20.9

" 22 UPP iP 21 58 15.2

" 23 UPP iP 00 49 42.9
UME iP 00 49 18.7
Hokkaido, Japan region
(h = N).

" 23 UPP iP 02 56 55.9
South Atlantic Ridge
(h = 10 km).

" 23 UPP iPKP 07 05 15.3
UME iPKP 07 05 22.4
South Sandwich Islands region
(h = 120 km).

" 23 UME iP 11 02 50.1
Near east coast of Honshu,
Japan (h = 110 km).

" 23 UPP iP 13 53 58.5 C
micr sec
P Z' 0.1 1.0
UME iP 13 53 45.6
Luzon Philippine Islands
(h = 30 km).

" 23 UPP eP 19 02 10
Carlsberg Ridge (h = 10 km).

" 23 UPP iP 19 03 02.0
UME eP 19 03 21
Carlsberg Ridge (h = 10 km).

" 23 UPP iPKP 21 51 26.4
micr sec
Mx Z 3.3 24
UME iPKP 21 51 13.9
Gilbert Islands region
(h = 30 km).

1982
May 23 UPP eP 22 42 36
UME iP 22 42 18.8
Mariana Islands (h = 70 km).

" 24 UME iP 01 58 14.4
Ascension Island region
(h = 10 km).
P 12 s delayed when related
to NEIS solution.

" 24 UPP iP 02 24 48.7
Carlsberg Ridge (h = 10 km).

" 24 DEL iSn 03 11 45.0
Northeastern North Sea,
56.8°N, 8.2°E.
Origin time = 03 10 21.
Solution from SKI network
readings.

" 24 UPP iP 07 36 17.6 C
micr sec
P Z' 0.1 1.0
Mx Z 4.7 23
UME iP 07 35 50.8 C
Kuril Islands (h = 30 km).

" 24 UPP iPKP1 12 43 55.6
iPKP2 12 44 00.4
micr sec
PKP1 Z' 0.1 1.0
PKP2 Z' 0.1 0.9
KIR ePKP1 12 43 33
UME iPKP1 12 43 43.8
Kermadec Islands region
(h = 370 km).

" 24 UPP iSg1 17 43 59.5
UME iSg1 17 44 30.1
i 17 44 36.7
UDD iPg1 17 42 58.3
iSg1 17 43 19.5
Dalarna, Sweden,
61.6°N, 13.1°E.
Origin time = 17 42 32.
M_L(UPP) = 2.2 (0.05) 2.

" 24 UPP iPKP 20 44 16.8
UME iPKP 20 44 01.3

" 24 UPP iP 23 32 35.8
Northern Colombia (h = 180 km).

" 25 UPP iP 08 11 26.8
KIR iP 08 12 09.7 D
micr sec
P Z' 0.1 0.8
UME iP 08 11 42.8
i 08 12 18.8
Western Caucasus (h = N).

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

1982
May 25 UPP iPKP 18 59 04.8
KIR iPKP 18 58 50.7
UME iPKP 18 59 56.0
Santa Cruz Islands
(h = 220 km).

" 25 UPP iP 23 14 04.8
KIR iP 23 14 14.9
UME iP 23 14 03.4 C
Hindu Kush region
(h = 100 km).

" 26 UPP iP 03 25 03.3 D
micr sec
P Z' 0.1 0.9
KIR iP 03 24 26.1 D
micr sec
P Z' 0.1 1.0
UME iP 03 24 43.3 D
i 03 24 57.1
South of Honshu, Japan
(h = 30 km).
m = 5.8 (UPP,KIR).

" 26 UME iP 08 21 46.0
Mariana Islands (h = 140 km).

" 26 KIR iP 15 12 08.7
UME iP 15 12 24.7 D
South of Honshu, Japan
(h = N).

" 26 UPP iP 20 06 06.7
KIR iP 20 05 24.4
UME iP 20 05 43.0
Hokkaido, Japan region
(h = 50 km).

" 26 UPP iP 23 18 03.3
ipP 23 18 13.7
KIR iP 23 17 43.8
ipP 23 17 54.5
UME iP 23 17 50.3
ipP 23 18 00.9
Luzon, Philippine Islands.
h = 45 km (UPP,KIR,UME).

" 27 UME iP 09 20 52.8
Off east coast of Honshu,
Japan (h = N).

" 27 UME iP 11 45 34.2
Off east coast of Honshu,
Japan (h = N).

" 27 UPP iP 17 14 48.6
KIR iP 17 15 58.4
Mediterranean Sea (h = N).

1982
May 27 UPP iPKP1 22 06 18.8
iSKP1 22 09 06.0
KIR iPKP 22 06 11.4
iSKP1 22 08 41.7
UME iPKP 22 06 12.0
iSKP1 22 08 54.0
Fiji Islands region
(h = 600 km).

" 28 UPP iP 01 06 53.6
UME iP 01 06 54.2 C
Pakistan (h = N).

" 28 UPP iPKP1 06 53 54.2
KIR iPKP 06 53 48.4
UME ePKP 06 53 50
Fiji Islands region
(h = 620 km).

" 29 UPP eP 11 37 19
KIR iP 11 37 08.7
India-China border region
(h = N).

" 29 UPP iP 12 32 02.3 C
iS 12 40 50
micr sec
P Z' 0.5 1.1
KIR iP 12 31 18.7 C
micr sec
P Z' 0.5 1.0
UME iP 12 31 37.9
Hokkaido, Japan region
(h = 80 km).
m = 6.4 (UPP,KIR).

" 29 UPP iP 14 27 33.1
micr sec
Mx Z 1.3 16
KIR iP 14 28 18.3
Turkey (h = 10 km).

" 30 UPP ePKP 01 39 48
KIR iPKP 01 39 32.2
UME iPKP 01 39 40.4

" 30 UPP iPKP 01 43 46.7
KIR iPKP 01 43 35.8
UME iPKP 01 43 40.6
New Britain region
(h = 70 km).

" 30 UME iP 07 27 09.5

" 31 UPP iP 10 31 34.6
i 10 31 36.9
(cont.)

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

1982

May	31	(cont.)				
		UPP	ipP		10 31	45.5
			iS		10 40	10.1
					micr	sec
			i	Z'	0.6	1.4
			Mx	Z	32	17
		UME	iP		10 31	06.3
			ipP		10 31	16.4
			iS		10 39	14
		Komandorsky Islands region.				
		h = 40 km(UPP,UME).				
"	31	UPP	iP		15 32	23.9
			iSKS		15 42	59
					micr	sec
			P	Z'	0.1	1.0
			Mx	Z	13	20
		UME	iP		15 32	09.6
		West Caroline Islands (h = N).				
"	31	UPP	iP		20 24	25.2
			iSKS		20 33	28
			iS		20 33	38
					micr	sec
			P	Z'	0.2	0.9
			Mx	Z	18	18
		UME	iP		20 24	02.8
			ipP		20 24	15.1
		Near east coast of Honshu,				
		Japan (h = 50 km).				

January 25, 1984

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SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

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SWEDEN

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

U P P S A L A, K I R U N A, U M E Å, U D D E H O L M,

D E L A R Y and M Y R V I K E N

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 = 160 m
Uddeholm	(UDD)	60°05.4'N,	13°36.4'E; h = 240 m
Delary	(DEL)	56°28.2'N,	12°52.2'E; h = 150 m
Myrviken	(MYR)	62°56.5'N,	14°20.8'E; h = 345 m

J U N E 1 - 30, 1982

1982					
June	1	UME	iP		00 09 19.5
"	1	UPP	eP		02 59 31
					micr sec
			Mx	Z	1.7 18
		UME	eP		02 59 25
			i		02 59 40.4
		Burma-India border region			
		(h = 70 km).			
"	1	UPP	iPKP		04 33 13.7
			i		04 35 09.7
					micr sec
			PKP	Z'	0.1 1.5
			Mx	Z	20 10
		UME	iPKP		04 33 19.5
		Off coast of southern Chile			
		(h = N).			
"	1	UPP	eP		06 23 15
			i		06 23 18.7
					micr sec
			i	Z'	0.1 0.9
		UME	iP		06 23 06.3
		Burma-China border region			
		(h = N).			
"	1	UPP	iP		09 36 54.2
		UME	iP		09 37 16.4
			i		09 37 24.0
		South Atlantic Ridge			
		(h = 10 km).			
"	1	UPP	iP		10 25 25.2
		UME	iP		10 25 22.1
		Southern Sumatera (h = 80 km).			

1982					
June	1	UPP	iP		12 25 18.8
		UME	iP		12 25 33.7
		Western Iran (h = N).			
"	1	UPP	iP		13 46 53.4
		UME	iP		13 46 35.9
		Volcano Islands (h = 160 km).			
"	1	UPP	iP		19 22 45.4
		Northern Colombia			
		(h = 160 km).			
"	2	UME	iP		02 23 17.3
"	2	UME	iP		04 17 27.6
		Dominican Republic region			
		(h = 140 km).			
"	2	UPP	eP		05 46 22
			i		05 46 25.0
					micr sec
			Mx	Z	1.4 9
		UME	iP		05 47 08.0
			iS		05 51 00
		Yugoslavia (h = 10 km).			
"	2	UPP	iP		06 40 40.1
"	2	UME	iP		09 36 01.6
		Southern Italy (h = 290 km).			
"	2	UPP	iPKP		10 03 17.8
			i		10 03 24.0
		UME	iPKP		10 03 07.4
"	2	UME	iP		10 13 16.8
		Alma-Ata region (h = N).			

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

1982
June 2 UPP e(PKP) 12 56 45
iPP 12 59 38.8
iSKP1 13 00 30.0
micr sec
Mx Z 5.1 18
UME e(PKP) 12 56 37
iPKP 12 56 48.4
iSKP1 13 00 16.4
Tonga Islands region
(h = N).

" 2 UPP iP 18 00 21.0
UME iP 18 00 03.2

" 3 UPP eP 03 49 45
UME iP 03 49 33
i 03 49 46.4
Mindanao, Philippine Islands
(h = 70 km).

" 3 KIR iPKP 10 34 50.2
UME iPKP 10 34 54.7
Santa Cruz Islands (h = N).

" 3 UPP iSg1 11 55 06.0
KIR iSg1 11 54 33.1
UME iSg1 11 54 01.2
UDD iSg1 11 54 50.4
DEL eSg1 11 56 41
MYR iPg1 11 52 55.6
iSg1 11 53 20.9
Central Norway, 64.8°N,
13.0°E.
Origin time = 11 52 21.
M_L (UPP) = 2.9 (0.12) 6.

" 3 MYR iPg1 14 54 42.1
iSg1 14 54 45.5
iRg 14 54 47.6
Jämtland, Sweden, 63.0°N,
14.8°E.
Origin time = 14 54 37.
Near-surface event.
Explosion?
Felt.
Cf the events on Apr. 29,
19 12 and May 5, 18 11.

" 3 UPP iP 17 35 07.5
micr sec
P Z' 0.1 1.0
Mx Z 0.8 20
KIR iP 17 34 14.1
micr sec
P Z' 0.1 0.7
Mx Z 0.5 14
(cont.)

1982
June 3 (cont.)
UME iP 17 34 41.2
Fox Islands, Aleutian Is.
(h = N).
m = 5.9, M = 4.9 (UPP,KIR).

" 4 UPP iP 00 24 41.9

" 4 UPP iPKP2 02 17 38.4
KIR iPKP1 02 17 05.5
UME iPKP1 02 17 14.4
Off e. coast of N. Island,
N.Z. (h = N).

" 4 UPP iP 03 11 58.8 C
i 03 12 41.9
iS 03 20 54
iP'P' 03 40 08.6
micr sec
P Z' 0.3 0.9
Mx Z 4.1 20
KIR iP 03 11 05.4 C
iP'P' 03 40 32.5
micr sec
P Z' 0.2 0.6
UME iP 03 11 31.7 C
iS 03 20 04
iP'P' 03 40 19.1
Andreanof Islands, Aleutian Is.
(h = 60 km).
m = 6.3 (UPP,KIR).

" 4 KIR iP 06 38 42.3
UME iP 06 39 09.7
Fox Islands, Aleutian Is.
(h = N).

" 4 KIR iP 07 15 49.6
Taiwan region (h = 110 km).

" 4 KIR iP 09 36 00.1
UME iP 09 36 27.2
Fox Islands, Aleutian Is.
(h = N).

" 4 UPP iP 10 46 53.2
i 10 47 36.0
iS 10 48 39.1
iSg1 10 49 30.8
UME iP 10 47 45.1
iS 10 48 24.1
Poland (h = 10 km).

" 4 UME iP 11 49 28.0
Fox Islands, Aleutian Is.
(h = N).

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

1982
June 4 UPP iP 13 00 17.3
KIR iP 13 00 23.8
UME iP 13 00 50.8
i 13 01 01.9
Fox Islands, Aleutian Is.
(h = N).

" 4 KIR iPg1 13 29 34.0
iSg1 13 29 38.8
Swedish Lapland, 67.8°N, 19.7°E.
Origin time = 13 29 29.
M_L (UPP) = 2.6 1.
By combination with Finnish station readings.

" 4 UPP iP 15 34 17.4
iPP 15 38 21.0
iSKS 15 44 17
iS 15 44 56
micr sec
P Z' 0.1 1.0
Mx Z 0.9 17
KIR iP 15 34 01.6
micr sec
P Z' 0.2 1.0
Mx Z 0.4 12
UME iP 15 34 06.4
i 15 35 28.5
iSKS 15 44 05
iS 15 44 38
Celebes Sea (h = 330 km).
m = 6.0, M = 5.2 (UPP,KIR).
M uncorrected for focal depth.

" 4 UPP iP 16 09 15.3
KIR iP 16 08 22.1
UME iP 16 08 48.5
Fox Islands, Aleutian Is.
(h = N).

" 4 UME iP 16 18 09.8

" 4 UPP iP 19 34 40.8
i 19 34 41.9
micr sec
P Z' 0.1 0.6
KIR iP 19 33 54.3
micr sec
P Z' 0.2 1.0
UME iP 19 34 16.2
Kuril Islands (h = N).
m = 6.1 (UPP,KIR).

" 5 UPP micr sec
Mx Z 0.5 18
(cont.)

1982
June 5 (cont.)
UME iPKP 01 36 05.4
Off coast of southern Chile
(h = N).

" 5 UPP iP 03 18 12.8
KIR iP 03 17 27.3
UME iP 03 17 47.8
Northwest of Kuril Islands
(h = 410 km).

" 5 UPP iP 05 38 22.0

" 6 UPP iP 01 24 56.7 C
micr sec
P Z' 0.1 1.0
KIR iP 01 24 03.1 C
micr sec
P Z' 0.1 0.8
UME eP 01 24 31 C
Fox Islands, Aleutian Islands
(h = N).
m = 5.9 (UPP,KIR).

" 6 UPP iP 10 28 24.5
i 10 28 33.7
iS 10 34 52
micr sec
P Z' 0.1 1.0
KIR iP 10 28 50.0
i 10 28 59.2
micr sec
P Z' 0.1 1.1
Mx Z 7.5 22
UME iP 10 28 41.5
iS 10 35 20
North Atlantic Ridge
(h = 10 km).
m = 5.6 (UPP,KIR).

" 7 UPP iP 00 36 39.9
KIR iP 00 37 45.8
Dodecanese Islands
(h = 10 km).

" 7 KIR ePKP2 00 44 47
West of Macquarie Island
(h = 10 km).

" 7 UPP iP 05 49 25.4
KIR iP 05 48 28.2
micr sec
P Z' 0.1 0.9
Kamchatka (h = N).

" 7 UPP iP 07 05 23.1 C
i 07 05 26.3
iPP 07 08 48
(cont.)

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

1982
June 7 (cont.)

UPP	iSKS		07 15 55	
			micr	sec
	i	Z'	0.1	1.0
	Mx	Z	39	19
KIR	iP		07 05 08.6	
	iPP		07 08 30.5	
	iS		07 15 48	
			micr	sec
	P	Z'	0.2	1.2
	Mx	Z	23	17
UME	iP		07 05 18.5	
	ipP		07 05 30.9	
	iPP		07 08 45.3	

Near coast of Guerrero, Mexico (h = 40 km).
m = 6.2, M = 6.8 (UPP,KIR).

" 7

UPP	iP		11 12 28.5	
	i		11 12 35.0	
	iPP		11 15 52	
	iSKS		11 22 57	
			micr	sec
	i	Z'	0.6	1.5
	Mx	Z	83	25
KIR	iP		11 12 12.8	
	i		11 12 20.9	
	i		11 12 58.4	
	iPP		11 15 33.6	
	iSKS		11 22 54	
			micr	sec
	P	Z'	0.1	1.0
	i	Z'	0.3	1.1
	Mx	Z	53	22
UME	iP		11 12 23.2	
	i		11 12 25.5	
	i(PP)		11 15 46.3	

Near east coast of Guerrero, Mexico (h = 35 km).
m = 6.6, M = 7.0 (UPP,KIR).

" 7

UPP	iP		11 39 28.7	C
			micr	sec
	P	Z'	0.1	1.0
KIR	iP		11 38 34.3	C
UME	iP		11 39 00.1	

Near east coast of Kamchatka (h = N).

" 8

UME	iP		16 15 11.6	

Honshu, Japan (h = 110 km).

" 8

UPP			micr	sec
	Mx	Z	1.5	19

Southeast Indian Rise (h = 10 km).

1982
June 8

UPP	ePKP1		21 40 49	
	i		21 41 00.8	

Kermadec Islands region (h = N).

" 9

UPP	iPKP		03 27 09.7	
	iPKKP		03 37 55	
			micr	sec
	Mx	Z	5.1	23
KIR	ePKP		03 26 57	
			micr	sec
	Mx	Z	6.4	23
UME	iPKP		03 27 01.1	

New Britain region (h = 80 km).
M = 6.1 (UPP,KIR).
M uncorrected for focal depth.

" 9

UPP	iP		04 18 20.4	
	i		04 18 23.8	
UME	iP		04 18 52.3	

Turkey (h = 10 km).

" 9

UPP			micr	sec
	Mx	Z	0.7	17

Southeast Indian Rise (h = 10 km)

" 9

UPP	iP		11 43 32.9	
UME	iP		11 43 27.7	

Near coast of Guerrero, Mexico (h = N).

" 9

UPP	iP		19 42 44.6	C
	i		19 42 54.9	
KIR	iP		19 43 58.9	
UME	iP		19 43 22.5	

Greece (h = 25 km).

" 9

UPP	iP		20 38 26.6	
	i		20 39 05.0	
UME	iP		20 38 09.7	

Northeast of Taiwan (h = 140 km).

" 10

UPP	eP		02 25 58	
	i		02 26 09.1	
	iS		02 35 48	
			micr	sec
	Mx	Z	0.4	15
UME	iP		02 25 34.2	
	iS		02 35 10	

South of Honshu, Japan (h = N).

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

1982							
June	10	UPP	iP		09 40 37.9		
					micr	sec	
			Mx	Z	0.4	14	
		KIR			micr	sec	
			Mx	Z	0.6	16	
		UME	iP		09 40 40.9		
		North Atlantic Ocean					
		(h = 10 km).					
		M = 4.2 (UPP,KIR).					
"	10	UPP	iP		21 36 42.7		
		KIR	iP		21 36 42.9		
		UME	iP		21 36 40.0		
		Tibet (h = N).					
"	11	UPP	e(PKP)		00 57 06		
			ipPKP		00 57 53.2		
			iPP		01 00 01.2		
			iSKP1		01 00 30.8		
			iPKS		01 00 50.9		
			i		01 01 24.1		
					micr	sec	
			(PKP)	Z'	0.1	1.0	
			Mx	Z	6.5	26	
		KIR	iPKP		00 57 02.7		
			ipPKP		00 57 37.9		
					micr	sec	
			PKP	Z'	0.2	1.1	
			Mx	Z	6.3	21	
		UME	e(PKP)		00 56 57		
			iPKP		00 57 07.8		
			ipPKP		00 57 44.7		
			iSKP1		01 00 30.3		
			iPKS		01 00 37.5		
			i		01 01 11.1		
		Tonga Islands.					
		h = 130 km (UPP,KIR,UME).					
		M = 6.3 (UPP,KIR).					
		M uncorrected for focal depth.					
"	11	UPP	iP		01 33 11.2		
			i		01 33 16.3		
"	11	UPP	iP		11 47 49.1		
					micr	sec	
			P	Z'	0.1	1.4	
		KIR	iP		11 46 32.0		
			ipP		11 46 35.3		
					micr	sec	
			P	Z'	0.1	1.4	
			pP	Z'	0.2	1.4	
		UME	iP		11 47 12.5		
			iS		11 51 37		
		North of Severnaya Zemlya					
		(h = 10 km).					
		m = 5.4 (UPP,KIR).					

1982							
June	11	UPP	iP		11 48 47.2		
					micr	sec	
			P	Z'	0.1	1.1	
		KIR	iP		11 47 31.2		
					micr	sec	
			P	Z'	0.3	1.4	
		UME	iP		11 48 08.9		
		North of Severnaya Zemlya					
		(h = 10 km).					
		m = 5.5 (UPP,KIR).					
"	11	UPP	iP		11 55 54.1		
					micr	sec	
			P	Z'	0.1	1.3	
		KIR	iP		11 54 36.4		
					micr	sec	
			P	Z'	0.1	1.1	
		UME	iP		11 55 16.8		
		North of Severnaya Zemlya					
		(h = 10 km).					
		m = 5.3 (UPP,KIR).					
"	11	UPP	ePKP		12 32 27		
		UME	iPKP		12 32 09.0		
"	11	KIR	iP		12 50 19.4		
					micr	sec	
			P	Z'	0.1	1.0	
		UME	iP		12 51 01.5		
		North of Severnaya Zemlya					
		(h = 10 km).					
"	11	KIR	iP		13 47 35.0		
		North of Severnaya Zemlya					
		(h = 10 km).					
"	11	UPP	iS		21 50 24		
		KIR	iP		21 43 58.3		
		UME	iP		21 44 38.9		
			iS		21 49 13		
		North of Severnaya Zemlya					
		(h = 10 km).					
"	11	KIR	iP		22 08 45.3		
			i		22 08 53.3		
		Virgin Islands (h = 50 km).					
"	11	KIR	iP		23 39 58.9		
		North of Severnaya Zemlya					
		(h = 10 km).					
"	12	UPP	iP		00 21 08.8		
			iS		00 26 01		
					micr	sec	
			Mx	Z	2.6	10	
		KIR	iP		00 19 53.6		
					micr	sec	
			P	Z'	0.3	1.5	

(cont.)

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

1982 June	12	(cont.)				
			Mx	Z	2.8	10
		UME	iP		00 20 32.9	
			iS		00 24 55	
		North of Severnaya Zemlya (h = 10 km). M = 5.1 (UPP,KIR).				
"	12	UPP	iP		06 13 11.6	
			i		06 13 31.8	
			iS		06 22 23.2	
					micr	sec
			P	Z'	0.1	0.9
		KIR	iP		06 12 38.7	
					micr	sec
			P	Z'	0.1	0.7
		UME	iP		06 12 52.8	
			i		06 14 34.7	
		South of Honshu, Japan (h = 450 km). m = 5.5 (UPP,KIR).				
"	12	UPP	iP		07 13 57.3	
					micr	sec
			Mx	Z	0.9	14
		KIR	iP		07 15 03.6	
		UME	iS		07 19 20	
		Dodecanese Is. (h = 10 km).				
"	12	UPP	iP		07 24 57.7	
		Turkey (h = 10 km).				
"	12	UPP	eP		10 43 12	
		KIR	iP		10 44 18.8	
		Dodecanese Islands (h = 10 km).				
"	13	UME	iPKP		10 25 47.9	
		Vanuatu Islands (h = 200 km).				
"	13	UPP	iP		10 30 21.4	
		KIR	iP		10 29 51.6	
					micr	sec
			P	Z'	0.1	0.9
		UME	iP		10 30 03.9	
		Volcano Islands region (h = 80 km).				
"	13	UPP	iP		20 45 43.3	
		KIR	iP		20 44 49.1	
		UME	iP		20 45 14.5	
		Near east coast of Kamchatka (h = 55 km).				
"	13	UPP	iP		21 17 31.8	
		UME	iP		21 18 25.6	
		Poland (h = 10 km).				
1982 June	13	UPP			micr	sec
			Mx	Z	0.9	21
		KIR	ePKP		23 17 19	
		UME	iPKP		23 17 23.1	
		Fiji Islands region (h = N).				
"	14	KIR	iP		14 56 54.8	
		UME	iP		14 57 30.5	
			iS		14 59 38.8	
"	14	UPP	iP		15 41 21.5	
		UME	iP		15 41 31.2	
		Iran (h = N).				
"	14	UPP	iP		16 54 06.6	C
			i(PP)		16 57 39.5	
			eS		17 04 55	
					micr	sec
			P	Z'	0.2	0.8
			Mx	Z	0.9	23
		KIR	iP		16 54 05.8	C
			ipP		16 54 21.9	
			iPP		16 57 42.3	
					micr	sec
			P	Z'	1.0	0.9
		UME	iP		16 54 03.5	C
			iPP		16 57 45.1	
			iS		17 04 56.8	
		Southern Sumatera (h = 55 km). m = 6.9 (UPP,KIR).				
"	14	UPP	iP		19 42 31.7	
		KIR	iP		19 42 16.5	
		UME	iP		19 42 21.2	
		Mindanao, Philippine Islands (h = 25 km).				
"	14	UME	iP		22 55 12.1	
		Near coast of Guerrero, Mexico (h = 40 km).				
"	15	KIR	eP		03 24 03	
		UME	iP		03 24 17.7	
		Sea of Japan (h = 590 km).				
"	15	KIR	iP		08 25 31.6	
		South of Mariana Islands (h = 40 km).				
"	15	KIR	iP		15 04 26.0	
		Nortwest of Kuril Islands (h = 460 km).				
"	15	UPP	iP		17 37 05.6	
		KIR	eP		17 36 51	
		UME	iP		17 37 00.8	
		Near coast of Guerrero, Mexico (h = 40 km).				

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

1982 June	15	KIR	iP		18	39	32.1
		Mindanao, Philippine Islands (h = 180 km).					
"	15	UPP	iP		20	08	36.7
		KIR	iP		20	07	42.4
		UME	iP		20	08	09.0
		Andreanof Islands, Aleutian Is. (h = 50 km).					
"	15	UME	iP		21	03	36.5
		Near east coast of Honshu, Japan (h = 90 km).					
"	15	UPP	iP		23	34	31.0
			ipP		23	34	34.0
			i		23	34	46.1
			iS		23	42	40
					micr		sec
			P	Z'	0.2		0.9
			Mx	Z	3.5		12
		KIR	iP		23	34	16.3
			ipP		23	34	19.1
					micr		sec
			P	Z'	0.3		0.9
			Mx	Z	2.8		13
		UME	iP		23	34	18.8
			ipP		23	34	22.0
			iS		23	42	16
		Sichuan Province China. h = 10 km (UPP,KIR,UME). m = 6.3, M = 5.7 (UPP,KIR).					
"	16	UPP	iP		05	20	44.4
		KIR	iP		05	20	56.5
		UME	iP		05	21	18.6
		Kuril Islands (h = N).					
"	16	KIR	iP		06	41	33.0
		UME	iP		06	41	47.8
		Sea of Japan (h = 440 km).					
"	16	KIR	iPKP1		08	40	31.2
			iPKP2		08	40	39.4
		UME	iPKP1		08	40	38.9
		Off e. coast of N. Island, N.Z. (h = N).					
"	16	UME	iPKP1		11	29	13.1
			i		11	29	20.2
		Kermadec Islands region (h = N).					
"	16	UPP	iP		20	57	55.1
		KIR	eP		20	59	04
		Crete (h = 40 km).					
1982 June	17	UPP	iP		19	14	39.1
					micr		sec
			Mx	Z	1.1		20
		KIR	eP		19	13	59
					micr		sec
			Mx	Z	0.8		15
		UME	iP		19	14	16.6
		Off east coast of Honshu, Japan (h = 25 km).					
"	17	UPP			micr		sec
			Mx	Z	0.9		21
		Loyalty Islands region (h = 50 km).					
"	18	UME	iPKP1		00	28	30.2
		Off e. coast of N. Island, N.Z. (h = 250 km).					
"	18	KIR	iP		03	18	14.5
		UME	iP		03	17	59.5
		South Indian Ocean (h = 10 km).					
"	18	UPP			micr		sec
			Mx	Z	1.6		20
		KIR			micr		sec
			Mx	Z	1.1		18
		UME	iPKP		07	29	27.5
		Loyalty Islands region (h = 25 km).					
"	18	UPP	iP		17	55	20.1
		UME	iP		17	54	54.9
"	18	UPP	iP		19	09	21.7
		KIR	iP		19	08	30.5
		UME	iP		19	08	53.8
		Kuril Islands region (h = N).					
"	19	UPP	iPKP1		00	39	05.2
			iPKP2		00	39	10.4
		UME	iPKP1		00	38	53.0
		South of Kermadec Islands (h = N).					
"	19	UPP	iP		05	08	27.9
		KIR	iP		05	08	04.8
		UME	iP		05	08	12.8
		Taiwan region (h = 35 km).					
"	19	UPP	iP		06	34	34.0 C
			i		06	34	41.6
			iPP		06	38	02.4
			i		06	44	14
			iS		06	44	52

(cont.)

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

1982
June 19 (cont.)

UPP	iPKKP	06 52 27.2	
	iP'P'	07 00 28.9	
		micr	sec
	P Z'	0.3	1.0
	i Z'	0.5	1.0
	Mx Z	311	24
KIR	iP	06 34 25.4	C
	i	06 34 35.6	
	iPP	06 37 42.1	
	iPKKP	06 52 32.9	
	iP'P'	07 00 27.0	
		micr	sec
	P Z'	0.4	1.0
	i Z'	1.6	1.6
UME	iP	06 34 32.5	C
	i	06 34 33.9	
	iPP	06 37 57.2	
	iS	06 44 53.2	
	iPKKP	06 52 27.1	
	iP'P'	07 00 26.7	

El Salvador (h = 80 km).
m = 6.7 (UPP,KIR).

" 19 UME iPKP 08 29 37.9

" 19

UPP	iSKP1	19 10 02.3	
KIR	iPKP	19 07 07.5	
	iSKP1	19 09 38.8	
UME	iPKP	19 07 14.8	
	iSKP1	19 09 50.9	

Fiji Islands region
(h = 610 km).

" 19

UPP	iP	20 37 38.8	
		micr	sec
	Mx Z	0.5	12
KIR	iP	20 37 15.8	
UME	iP	20 37 24.7	

Taiwan region (h = 25 km).

" 19

UPP	iP	20 50 18.5
KIR	iP	20 49 55.3
UME	iP	20 50 03.4

Taiwan region (h = 20 km).

" 19 KIR iPKP 23 05 02.0
UME iPKP 23 05 07.6
Vanuatu Islands (h = N).

" 20 UPP iP 03 18 11.5

" 20 KIR iP 03 57 41.1

" 20

UPP	iS	07 45 48	
KIR	iP	07 39 05.5	
UME	iP	07 38 59.2	
	iS	07 46 20	

(cont.)

1982
June 20 (cont.)
North Atlantic Ridge
(h = 10 km).

" 20

UPP	iP	08 38 01.7	
	iS	08 45 04	
		micr	sec
	Mx Z	1.3	23
KIR	iP	08 38 21.6	
UME	iP	08 38 15.1	
	iS	08 45 33	

North Atlantic Ridge
(h = 10 km).

" 20

UPP		micr	sec
	Mx Z	0.4	10

Aegean Sea (h = 10 km).

" 20

UPP	eP	15 39 19	
UME	eP	15 39 36	

Eastern India (h = N).

" 20 KIR iP 21 53 12.5
Iran-Iraq border region
(h = N).

" 21

UPP	iP	00 04 51.0	
KIR	iP	00 05 25.6	
UME	iP	00 05 08.3	D

Mozambique Channel
(h = 10 km).

" 21

KIR	iP	00 34 42.3
UME	iP	00 34 57.5

Southern Honshu, Japan
(h = N).

" 21

UPP	iP	04 23 00.5
KIR	iP	04 24 15.1
UME	iP	04 23 40.2

Sicily (h = 300 km).

" 21 UME iP 04 36 37.5

" 21

UPP	iP	05 43 08.9
KIR	iP	05 43 00.4
UME	iP	05 43 08.0

El Salvador (h = 60 km).

" 21

KIR	iP	13 17 47.6
UME	iP	13 18 05.8

Eastern Sea of Japan
(h = 230 km).

" 21

UPP	iP	16 08 29.5
KIR	iP	16 07 54.3
UME	iP	16 08 23.5

Near s. coast of southern
Honshu, (h = 55 km).

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

1982 June	21	UPP	iP		17 54 54.1
		KIR	iP		17 55 03.6
		UME	iP		17 54 53.0
		Hindu Kush region (h = 220 km).			
"	21	KIR	ePKP		19 34 39
		Santa Cruz Islands region (h = 50 km).			
"	21	UME	iP		20 20 29.0
"	22	UME	iP		02 25 26.1
			i		02 25 41.2
"	22	UME	iP		02 35 12.6
"	22	UPP	iP		03 09 29.4 D
			i		03 09 45.8
			iS		03 13 34
				micr	sec
			P	Z' 0.1	0.9
			Mx	Z 15	16
		KIR	iP		03 10 41.9
			iS		03 14 44.3
				micr	sec
			P	Z' 0.2	0.9
			Mx	Z 2.5	11
		UME	iP		03 10 05.1
			i		03 10 26.6
			iS		03 14 37
		Southern Greece (h = 40 km). m = 5.6, M = 5.4 (UPP,KIR).			
"	22	UPP	iP		04 32 02.2
			i(PP)		04 36 27.7
			iSKS		04 41 55
			iS		04 43 12
				micr	sec
			P	Z' 0.1	1.0
			Mx	Z 38	20
		KIR	iP		04 31 47.2
			iPP		04 36 15.6
				micr	sec
			P	Z' 0.3	1.0
			Mx	Z 14	17
		UME	iP		04 31 50.8
			i		04 32 34.3
			i(PP)		04 36 11.0
			iSKS		04 41 47
		Banda Sea (h = 450 km). m = 6.6, M = 6.8 (UPP,KIR). M uncorrected for focal depth.			
"	22	KIR	eP		05 30 28
"	22	UPP	iP		07 16 07.8
		(cont.)			

1982 June	22	(cont.)			
		KIR	iP		07 15 14.1
		UME	iP		07 15 40.6
			ipP		07 16 06.7
		Fox Islands, Aleutian Is. (h = 90 km).			
"	22	UPP			micr sec
			Mx	Z	1.3 24
		KIR	iP		15 09 37.8
					micr sec
			Mx	Z	0.6 16
		UME	iP		15 09 43.0
			iSKS		15 20 21
			iS		15 21 15
		Ceram (h = 25 km). M = 5.3 (UPP,KIR).			
"	22	UPP	iP		19 55 04.8
		KIR	eP		19 56 12
		UME	iP		19 55 45.0
		Pyrenees (h = 10 km).			
"	23	UPP	iP		02 03 09.3 D
			ipP		02 04 58.3
			iS		02 12 25.5
				micr	sec
			P	Z' 0.2	0.5
		KIR	iP		02 02 37.2 D
				micr	sec
			P	Z' 0.2	0.8
		UME	iP		02 02 50.9 D
			ipP		02 04 39.0
			iS		02 11 50.6
		South of Honshu. h = 510 km (UPP,UME). m = 5.6 (UPP,KIR).			
"	23	UPP	iPKP1		09 21 31.8
			i		09 21 35.0
		UME	iPKP1		09 21 19.3
		Kermadec Islands (h = 230 km).			
"	23	UPP	iP		10 10 11.6
		KIR	iP		10 09 54.1
		Mindoro, Philippine Islands (h = 220 km).			
"	23	UPP	iPKP1		13 42 19.4
		KIR	iPKP		13 42 11.6
		UME	iPKP		13 42 18.8
		Fiji Islands region (h = 620 km).			
"	23	KIR	iP		16 39 38.2
"	23	UPP	iP		23 36 16.7 D
		KIR	iP		23 36 01.9 D
		(cont.)			

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

1982
June 23 (cont.)
UME iP 23 36 06.8 D
Celebes Sea (h = 340 km).

" 24 UPP iP 03 13 15.0
i 03 14 59.3
micr sec
Mx Z 0.6 16
KIR eP 03 13 25
micr sec
Mx Z 0.3 10
UME eP 03 13 15
Afghanistan (h = N).
M = 4.6 (UPP,KIR).

" 24 UPP micr sec
Mx Z 0.5 19
North Atlantic Ocean
(h = 10 km).

" 24 UPP micr sec
Mx Z 1.3 24
KIR micr sec
Mx Z 0.6 16
South Atlantic Ridge
(h = 10 km).
M = 5.4 (UPP,KIR).

" 24 UPP iSg1 10 32 34.2
KIR iPn 10 28 49.3
i 10 29 46.1
iSg1 10 29 47.7
UME iPn 10 29 15.9
iSn 10 30 20.8
iSg1 10 30 48.7
UDD iSg1 10 32 14.7
Norwegian Sea, near
68°N, 10½°E.
Origin time = 10 27 52.
M_L(UPP) = 3.1 (0.19) 6.

" 24 KIR iP 14 13 18.0
UME iP 14 13 44.5
Fox Islands, Aleutian Is.
(h = 40 km).

" 24 UPP iP 14 26 48.6 C
KIR iP 14 26 14.5
micr sec
P Z' 0.1 0.9
UME iP 14 26 33.9 C
Southern Nevada.
Underground explosion.

" 24 UPP iPKP 23 03 40.9
i 23 03 44.5
UME iPKP 23 03 28.5

" 25 UME eP 00 49 35

1982
June 25 UPP iP 01 43 30.5
UME iP 01 43 30.2
Hindu Kush region
(h = 100 km).

" 25 UPP iP 02 10 00.0
KIR iP 02 09 44.4
UME iP 02 09 45.2
Eastern Kazakh SSR.
Underground explosion.

" 25 UPP eP 10 37 08
iSKS 10 47 37
micr sec
Mx Z 4.1 20
KIR iP 10 37 03.8
micr sec
Mx Z 3.1 17
UME iP 10 37 01.4
iS 10 48 07
Southwest of Sumatera
(h = 35 km).
M = 5.9 (UPP,KIR).

" 25 UME iP 16 58 05.4
Aegean Sea (h = 35 km).

" 27 UME iP 01 23 08.3
Caribbean Sea (h = 10 km).

" 27 UPP iP 15 36 11.0
KIR iP 15 35 40.3
UME iP 15 35 52.0
Southeast of Shikoku, Japan
(h = 40 km).

" 27 UPP iPKP 16 37 15.2
iPKP2 16 37 57.5
iPP 16 41 31.8
micr sec
PKP Z' 0.1 1.6
PKP2 Z' 0.3 1.4
Mx Z 4.1 20
KIR iPKP 16 37 17.4
iPKP2 16 37 47.7
iPP 16 41 26.9
micr sec
PKP2 Z' 0.4 1.6
UME iPKP 16 37 15.4
iPKP2 16 37 51.1
iPP 16 41 33.5
Macquarie Islands region
(h = 10 km)

" 27 UPP iP 23 17 05.6
KIR iP 23 16 45.9
UME iP 23 16 57.7
Phillippine Islands region
(h = N).

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

1982						
June	27	UME	iP		23 44 39.6	
"	28	UME	iP		00 01 00.6	
"	28	UME	iP		03 48 21.2	
"	28	UME	iP		03 53 40.1	
"	28	UPP	eS		09 39 23	
					micr	sec
			Mx	Z	1.1	17
		KIR	iP		09 36 09.3	
		UME	iS		09 40 37	
		Turkey (h = 10 km).				
"	28	UPP	eP		10 00 21	
			i		10 01 56.0	
			iS		10 02 28.0	
					micr	sec
			Mx	Z	0.7	10
		KIR	eP		10 01 48	
		UME	iP		10 00 59.4	
			iS		10 03 46.0	
		Germany (h = 10 km).				
"	28	KIR	iP		11 10 13.0	
		UME	iP		11 10 02.6	
		Pakistan (h = 90 km).				
"	28	UPP	iP		17 08 06.6	
		KIR	iP		17 07 22.9	
					micr	sec
			P	Z'	0.1	1.0
		UME	iP		17 07 41.9	
		Kuril Islands (h = N).				
"	28	UPP	iP		19 35 20.8	
		KIR	iP		19 35 17.2	
			i		19 35 19.9	
		UME	iP		19 35 14.6	
		Southern Sinkiang Prov., China (h = N).				
"	29	UPP	iP		02 27 43.6 D	
					micr	sec
			P	Z'	0.1	0.9
		KIR	iP		02 26 59.6	
		UME	iP		02 27 19.6 D	
		Hokkaido, Japan region (h = 50 km).				
"	29	KIR	iP		07 02 18.9	
		Andreanof Islands, Aleutian Is. (h = 50 km).				
1982						
June	29	UPP	eS		07 07 12	
					micr	sec
			Mx	Z	1.0	15
		KIR	iP		07 04 59.8	
		UME	iS		07 08 12	
			i		07 08 28	
		Dodecanese Islands (h = 10 km).				
"	29	KIR	iP		22 48 50.4	
		UME	iP		22 49 00.2	
		Vera Cruz, Mexico (h = 25 km).				
"	30	UPP	iP		02 08 39	
			iS		02 17 38	
					micr	sec
			Mx	Z	241	22
		KIR	iP		02 07 50.7 C	
			i(PP)		02 10 07.3	
			iS		02 16 24	
			iP'P'		02 37 11.0	
					micr	sec
			P	Z'	2.0	1.1
			Mx	Z	103	19
		UME	iP		02 08 13.1 C	
			iS		02 16 50	
			i		02 36 46.9	
		Kuril Islands region (h = N). M = 7.3 (UPP,KIR).				
"	30	KIR	iP		16 25 04.2	
"	30	UPP	iSg1		17 17 18.0	
		UME	iSg1		17 19 25.9	
		UDD	iSg1		17 17 23.5	
			i		17 17 26.8	
		DEL	iPg1		17 15 30.1	
			iSg1		17 15 43.8	
		MYR	iSg1		17 18 49.5	
		Baltic Sea, south of Blekinge Sweden. 55.9°N, 15.4°E. Origin time = 17 15 12. M_L(UPP) = 2.8 (0.28) 4.				
"	30	UME	iP		18 40 14.4	
		Near east coast of Honshu, Japan (h = 80 km).				
"	30	UME	iP		22 32 26.5	
			i		22 32 39.6	
"	30	UPP	iP		23 43 02.4	
		UME	iP		23 42 59.9	
		Off w. coast of northern Sumatera (h = 50 km).				

SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

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

U P P S A L A, K I R U N A, U M E Å, U D D E H O L M,

D E L A R Y and M Y R V I K E N

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

J U L Y 1 - 31, 1982

1982 July 1

UPP	iP		05 52 48.8	
	i		05 53 01.6	
	iS		05 54 54.5	
			micr	sec
	Mx	Z	1.1	1.0
UME	iP		05 53 36.7	
	iS		05 56 22.7	

Southwestern USSR (h = 15 km).

" 1

UPP	iP		07 52 48.4	C
	ipP		07 53 00.5	
	iS		08 01 41	
	iP'P'		08 20 59.4	
			micr	sec
	P	Z'	8.4	1.7
	Mx	Z	2.5	23
KIR			micr	sec
	P	Z'	1.5	1.0
UME	iP		07 52 21.8	
	ipP		07 52 35.9	
	iS		08 00 52	
	iP'P'		08 21 15.6	

Andreanof Islands, Aleutian Is.
h = 50 km (UPP,UME).
m = 7.3 (UPP,KIR).

" 1

UPP	eP		10 51 02
UME	iP		10 50 59.9

Hindu Kush region (h = 80 km).

" 1

UME	iP		14 02 52.2

South of Honshu, Japan (h = 35 km).

" 2

UPP	iP		02 25 29.8

India-China border region (h = N).

1982 July 2

UPP	iP		05 04 25.5	

Northern Sumatera (h = 70 km).

" 2

UPP	iP		07 11 10.0	C
	ipP		07 12 04.7	
	iPP		07 12 45.6	
	iS		07 17 04	
			micr	sec
	P	Z'	0.5	0.9
KIR	iP		07 11 18.1	C
	ipP		07 12 12.9	
	iPP		07 12 57.9	
			micr	sec
	P	Z'	0.4	0.9
UME	iP		07 11 08.2	C
	iPP		07 12 42.1	
	iS		07 17 00	
	iSS		07 20 04	

Afghanistan-USSR border region.
h = 270 km (UPP,KIR).
m = 5.8 (UPP,KIR).

" 2

UPP	iP		09 21 18.3
KIR	iP		09 21 00.7
UME	iP		09 21 08.8

Mindanao, Philippine Islands (h = 110 km).

" 2

UPP	iP		12 12 14.6	
	iS		12 22 51	
			micr	sec
	Mx	Z	1.5	22
KIR	iP		12 12 06.5	
			micr	sec
	Mx	Z	1.4	17
UME	iP		12 12 13.4	
	iS		12 22 43	

El Salvador (h = 60 km).
M = 5.4 (UPP,KIR).
M uncorrected for focal depth.

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

1982 July	2	KIR	iP	17 44 54.9	
		UME	iP	17 45 03.6	
"	2	UME	iP	18 53 37.6	
"	3	UME	i(P)	03 09 25.2	
"	3	UPP	iP	08 24 03.8	
		KIR	iP	08 23 50.7	
		UME	iP	08 23 56.3	
		Yunnan Province, China (h = N).			
"	3	UPP	iP	14 48 55.9	C
		KIR	iP	14 48 26.6	C
				micr sec	
			P Z'	0.1 0.9	
		UME	iP	14 48 39.2	C
		Volcano Islands region (h = 165 km).			
"	3	UPP	iP	17 19 32.7	
		KIR	iP	17 18 39.5	
		UME	iP	17 19 05.7	
		Andreanof Islands, Aleutian Is. (h = 60 km).			
"	3	UPP	iP	20 55 36.0	C
				micr sec	
			P Z'	0.1 0.7	
		KIR	iP	20 54 49.1	C
		UME	iP	20 55 11.0	C
		Kuril Islands region (h = N).			
"	3	UPP	iP	23 31 47.0	
		KIR	iP	23 32 34.7	
		UME	iP	23 32 10.6	
		Lake Tanganyika region (h = 10 km).			
"	4	UPP	iP	01 24 11.5	C
			iPn	01 25 13.8	
			iPP	01 25 30.3	
				micr sec	
			P Z'	1.4 0.8	
		KIR	iP	01 23 55.3	C
				micr sec	
			P Z'	1.0 0.7	
		UME	iP	01 23 56.2	C
			i	01 24 16.0	
			i	01 24 38.8	
		Eastern Kazakh SSR. Underground explosion. m = 6.8 (UPP,KIR).			

1982 July	4	UPP	iP	01 31 16.8	D
			ipP	01 33 09.6	
			iPP	01 34 06.8	
			isP	01 34 23.6	
			iS	01 40 29.2	
			iPKKP	01 50 00.6	
			isS	01 43 52	
				micr sec	
			P Z'	1.9 0.6	
			Mx Z	5.6 18	
		KIR	iP	01 30 46.2	D
			iS	01 39 32.1	
			iP'P'	01 58 05.8	
				micr sec	
			P Z'	1.7 0.7	
			Mx Z	4.6 16	
		UME	iP	01 30 58.7	D
			ipP	01 32 54.7	
			iS	01 39 55.8	
			ePKKP	01 50 09	
		East of Ryukyu Islands. h = 550 km (UPP,UME). m = 6.7, M = 6.0 (UPP,KIR). M uncorrected for focal depth.			
"	4	UPP	iP	02 32 53.1	
		KIR	iP	02 33 37.6	
		UME	iP	02 33 12.7	
		Lake Tanganyika region (h = 10 km).			
"	4	UPP	iP	06 28 31.1	
			i	06 28 36.3	
				micr sec	
			P Z'	0.1 0.9	
		KIR	iP	06 28 34.8	C
			i	06 28 39.9	
				micr sec	
			P Z'	0.2 0.8	
		UME	iP	06 28 36.0	C
			i	06 28 41.5	
		Northern Colombia. h = 15 km (UPP,KIR,UME). m = 6.2 (UPP,KIR).			
"	4	UPP	i	10 27 24.2	
		KIR	iP	10 27 23.0	
		UME	iP	10 27 21.0	
		Southern Sumatera (h = 70 km).			
"	4	KIR	iP	16 02 07.6	
			i	16 02 34.1	
"	4	UPP	iP	18 45 04.1	
		(cont.)			

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

1982
July 4 (cont.)

UPP	i	18 45 08.7		
	i	18 45 18.5		
	eS	18 53 40		
		micr	sec	
	Mx Z	1.9	20	
KIR	iP	18 45 05.7		
	i	18 45 14.8		
	i	18 45 19.4		
UME	iP	18 44 59.2		
	i	18 45 13.0		
	iS	18 53 33		

Bay of Bengal (h = N).

" 4

KIR	iP	19 16 10.9	
UME	iP	19 16 32.4	C

Kuril Islands (h = N).

" 5

UPP	iP	09 08 18.5		C
		micr	sec	
	P Z'	0.4	0.7	
KIR		micr	sec	
	P Z'	0.3	0.8	
UME	iP	09 07 59.6		C

Kyushu, Japan (h = 120 km).
m = 6.2 (UPP,KIR).

" 5

UME	iPKP1	10 54 57.4
	i	10 55 06.5

Kermadec Islands region
(h = 120 km).

" 5

KIR	iP	12 08 51.0

Halmahera (h = 130 km).

" 5

KIR	iS	13 58 58.1

Svalbard, 77.6°N, 24.4°E.
Origin time = 13 54 51.
Solution from Helsinki
regional bulletin.

" 5

UME	iP	19 02 00.2

South of Honshu, Japan
(h = 40 km).

" 5

UPP	iPKP1	21 40 36.6	
	iSKP1	21 43 24.9	
		micr	sec
	PKP1 Z'	0.1	0.9
KIR	iPKP	21 40 29.4	
	iSKP1	21 43 01.4	
UME	iPKP	21 40 31.3	
	i	21 40 36.9	
	iSKP1	21 43 13.5	

Fiji Islands region
(h = 620 km).

1982
July 5

UPP	ipP	22 28 45.5	
KIR	iP	22 28 34.2	C
UME	iP	22 28 29.4	
	i	22 28 38.4	
	i	22 28 45.3	

Andaman Islands region
(h = N).

" 6

UPP	iP	06 23 36.0	C
	ipP	06 23 41.6	
KIR	iP	06 23 32.0	
	ipP	06 23 37.7	
UME	iP	06 23 28.7	
	ipP	06 23 34.7	

India-Bangladesh border
region.
h = 20 km (UPP,KIR,UME).

" 6

UPP	iP	15 05 48.4		C
	i	15 06 35.8		
		micr	sec	
	P Z'	0.1	0.8	
KIR	iP	15 05 30.6		
	i	15 06 21.6		
		micr	sec	
	P Z'	0.1	0.9	
UME	iP	15 05 36.6		C
	i	15 06 10.3		

Luzon, Philippine Islands
(h = 150 km).
m = 5.6 (UPP,KIR).

" 6

UPP	iP	15 14 56.9
	ipP	15 15 06.7
KIR	iP	15 14 40.1
	ipP	15 14 50.0
UME	iP	15 14 46.2
	ipP	15 14 55.8

Halmahera.
h = 30 km (UPP,KIR,UME).

" 6

UPP	iP	15 54 23.7

Halmahera (h = 60 km).

" 6

UPP	iP	17 43 14.4
	i	17 43 41.6
KIR	iP	17 42 20.2
UME	iP	17 42 48.7

Southern Alaska (h = 70 km).

" 7

UPP	eP	02 05 20
KIR	eP	02 05 14
UME	iP	02 05 18.8
	i	02 05 52.3

Near coast of Nicaragua
(h = 70 km).

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

1982 July 7

UPP	iPKP		11 02 59.2	
	i		11 03 29.3	
	iPKP2		11 03 33.4	
	iPP		11 07 09.9	
			micr	sec
	PKP	Z'	0.2	1.5
	PKP2	Z'	0.8	1.5
KIR	iPKP		11 02 54.4	
	iPKP1		11 03 05.2	
	iPKP2		11 03 19.8	
	iPP		11 07 02.4	
			micr	sec
	PKP	Z'	0.2	1.5
	PKP1	Z'	0.3	1.5
	PKP2	Z'	0.5	1.5
	Mx	Z	22.4	23
UME	iPKP		11 02 56.7	
	iPKP1		11 03 07.3	
	iPKP2		11 03 25.1	

North of Macquarie Island (h = 10 km).

" 7

UPP	ePKP2		12 37 26
KIR	iPKP1		12 37 00.4
UME	iPKP1		12 37 01.4
	i		12 37 28.2

North of Macquarie Island (h = 10 km).

" 7 UPP iS 13 52 32.0
North Sea (h = 10 km).

" 7

UPP	iSg1		15 31 31.1
UDD	eSg1		15 30 30
DEL	eSg1		15 31 08
MYR	eSg1		15 31 19

Southwestern Norway, near 59°N, 7°E.
Origin time = 15 28 40.
M_L(UPP) = 2.2 1.
By combination with Kongsberg and NORSAR readings.

" 7 UME iP 17 25 01.1

" 7

UPP	iP		18 44 07.0
KIR	iP		18 43 23.7
UME	iP		18 43 43.0

Hokkaido, Japan region (h = 70 km).

" 8 KIR iP 04 31 08.0
North Atlantic Ridge (h = 10 km).

1982 July 8

KIR iP 08 20 01.1
Mariana Islands region (h = N).

" 8

UPP	eP		10 40 15
KIR	eP		10 41 24
UME	iP		10 40 47.1

Aegean Sea (h = 10 km).

" 8 UME iP 10 56 05.7

" 8 UPP iP 11 37 56.9

" 9

UPP	iP		02 34 55.2
KIR	iP		02 34 02.5
UME	iP		02 34 28.1

Andreanof Islands, Aleutian Is. (h = 40 km).

" 9

KIR	iP		02 56 57.4
UME	iP		02 57 07.6

South of Mariana Islands (h = N).

" 9

UPP	iP		08 09 24.3	C
	ipP		08 09 31.0	
	iPP		08 11 16.9	
			micr	sec
	P	Z'	0.1	0.7
KIR	iP		08 09 26.3	C
	iPP		08 11 11.6	
			micr	sec
	P	Z'	0.1	0.5
UME	iP		08 09 19.6	C
	ipP		08 09 25.8	

Kashmir-Sinkiang border region.
h = 25 km (UPP,UME).
m = 5.8 (UPP,KIR).

" 9

UPP	iP		17 08 23.7
KIR	iP		17 07 52.1
UME	iP		17 08 05.9

Volcano Islands region (h = N).

" 9

UPP	iPKP		17 21 10.1
UME	iPKP		17 21 05.9

Tonga Islands (h = 55 km).

" 9

UPP	iP		17 21 47.0
UME	iP		17 21 36.5

Mindanao, Philippine Islands (h = N).

" 10

UPP	iP		03 04 53.7
KIR	iP		03 04 29.5

(cont.)

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

1982 July 10 (cont.)

	UME	iP	03 04 38.1

Southwestern Ryukyu Islands
(h = N).

" 10

UPP	ePKP1	12 24 34
KIR	iPKP1	12 24 37.5
	iPKP2	12 24 50.1
UME	iPKP1	12 24 36.6

West of Macquarie Island
(h = 10 km).

" 10

UME	iP	13 20 45.8

Banda Sea (h = 170 km).

" 10

UPP	iP	20 44 39.7
KIR	eP	20 44 20
UME	iP	20 44 25.8

Qinghai Province, China
(h = N).

" 10

UPP	iP	22 55 32.4

Mindanao, Philippine Islands
(h = 55 km).

" 11

UPP	eP	10 49 51
KIR	iP	10 50 13.4
UME	iP	10 50 07.3

North Atlantic Ridge
(h = 10 km).

" 11

UPP	iP	13 27 33.8	C
	ipP	13 27 39.1	
	iPP	13 29 11.0	
	iS	13 33 52.2	
		micr sec	
	P Z'	0.1 0.8	
KIR	iP	13 28 06.6	C
	ipP	13 28 11.9	
	iPP	13 30 03.7	
		micr sec	
	P Z'	0.1 0.8	
UME	iP	13 27 45.4	C
	ipP	13 27 50.7	

Southern Iran.
h = 20 km (UPP,KIR,UME).
m = 5.7 (UPP,KIR).

" 11

UPP	iP	18 14 53.3

Baja California (h = 10 km).

" 11

KIR	eSg1	19 43 35
UME	iSg1	19 43 37.9
UDD	eSg1	19 46 10

(cont.)

1982 July 11 (cont.)

Norrbotten, Sweden,
65.8°N, 23.1°E.
Origin time = 19 42 29.
M_L(UPP) = 2.1 1.
By combination with Finnish station readings.

" 11

KIR	iP	22 27 50.3

Eastern Gulf of Aden
(h = 10 km).

" 12

UPP	eP	14 50 43
KIR	iP	14 51 56.1
UME	iP	14 51 19.2

Turkey (h = 30 km).

" 12

UPP	iP	17 48 44.9

Crete (h = 40 km).

" 12

KIR	iP	17 58 50.5

Taiwan region (h = 45 km).

" 12

UPP	iP	23 06 36.4

Mariana Islands region
(h = 25 km).

" 13

UPP	iP	08 57 02.2
KIR	eP	08 56 28
UME	iP	08 56 41.8
	i	08 57 15.0
	i	08 57 44.0

South of Honshu, Japan
(h = 340 km).

" 13

UPP	iPKP	14 43 17.6	
	i	14 43 23.1	
UME	iPKP	14 43 06.5	D

" 13

UPP	iP	15 26 49.6
UME	iP	15 26 27.9

Off east coast of Honshu,
Japan (h = 35 km).

" 13

UPP	iSg1	16 54 47.4
UME	eSg1	16 55 49
UDD	iPg1	16 52 56.1
	iSg1	16 53 45.9
DEL	eSg1	16 54 15
MYR	iSg1	16 54 31.5

Southwestern Norway,
near 59°N. 7°E.
Origin time = 16 51 54.
M_L(UPP) = 2.3 1.
By combination with Kongsberg and NORSAR readings.

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

1982					
July	13	UPP	iP	17 18 18.7	
		KIR	iP	17 18 02.2	C
		UME	iP	17 18 09.1	
			i	17 19 03.0	
		Mindanao Phillipine Islands			
		(h = 160 km).			
"	13	UPP	iP	22 13 07.3	
		Qinghai Province, China			
		(h = N).			
"	14	UPP	iP	00 58 40.0	
			iS	01 01 17.4	
		Poland (h = 10 km).			
"	14	KIR	iP	07 33 00.3	
		Luzon, Philippine Islands			
		(h = 55 km).			
"	14	UPP	iP	10 52 24.7	C
			i	10 52 53.3	
		KIR	iP	10 51 39.3	C
		UME	iP	10 51 59.8	C
			i	10 53 17.1	
		Hokkaido, Japan region			
		(h = 330 km).			
"	14	KIR	iP	11 23 47.2	
		Alaska (h = 15 km).			
"	14	UPP	iP	12 25 38.3	
			ipP	12 26 13.5	
		KIR	iP	12 24 40.7	
			ipP	12 25 17.3	
		UME	iP	12 25 11.1	
			ipP	12 25 46.6	
		Southern Alaska.			
		h = 160 km (UPP,KIR,UME).			
"	15	UPP	iPKP	02 32 39.4	
		KIR	iPKP	02 32 25.0	
		UME	iPKP	02 32 31.7	
		Gilbert Islands region			
		(h = N).			
"	15	UPP	iP	07 45 28.5	
		KIR	iP	07 45 07.5	
		Philippine Islands region			
		(h = 40 km).			
"	15	UPP	iPKP1	08 09 47.0	
		UME	iPKP	08 09 43.9	
		South of Fiji Islands			
		(h = 130 km).			
"	15	UPP	iP	17 20 52.9	
			iS	17 24 55.5	
		(cont.)			

1982					
July	15	(cont.)			
		UPP		micr	sec
			Mx Z	2.8	14
		KIR	iP	17 22 06.8	
			i	17 22 15.8	
				micr	sec
			Mx Z	2.4	16
		UME	iP	17 21 30.3	
			i	17 21 46.4	
			eS	17 26 04	
		Ionian Sea (h = 30 km).			
		M = 4.9 (UPP,KIR).			
"	15	UPP	iPKP1	19 34 36.1	
		KIR	iPKP	19 34 28.5	
		UME	iPKP	19 34 34.4	
		Fiji Islands region			
		(h = 530 km).			
"	16	UPP	iPKP	03 18 55.6	
		UME	iPKP	03 19 03.7	
		South Sandwich Islands region			
		(h = N).			
"	16	UDD	iSg1	05 59 08.5	
		Västergötland, Sweden,			
		58.1°N, 13.8°E.			
		Origin time = 05 58 06.			
		Solution from SKI network readings.			
"	16	KIR	iP	07 26 15.9	
		UME	iP	07 26 04.5	
		Azores Islands region			
		(h = 10 km).			
"	16	UPP	iP	07 26 56.2	
			i	07 27 18.3	
				micr	sec
			Mx Z	1.4	20
		KIR	iP	07 26 51.5	
				micr	sec
			Mx Z	0.8	15
		UME	iP	07 26 59.5	
		North Atlantic Ocean			
		(h = 10 km).			
		M = 4.4 (UPP,KIR).			
"	16	UPP	iPKP1	14 51 58.3	
		KIR	iPKP	14 51 52.2	
		UME	iPKP	14 51 58.6	C
		Fiji Islands region			
		(h = 550 km).			
"	16	UPP	iPKP1	15 02 47.3	
			i	15 02 51.1	
		KIR	ePKP1	15 02 26	
		UME	iPKP1	15 02 35.1	
		Kermadec Islands (h = N).			

UPP = Uppsala, KIR = Kiruna, UME = UMEÅ, UDD = Uddeholm, DEL = Delary, MYR = Myrviken

1982
July 16 KIR eP 16 24 51
UME iP 16 25 04.3

" 16 KIR iPKP 22 49 17.4
Banda Sea (h = 370 km).

" 17 UPP iP 02 13 54.8
ipP 02 14 16.4
KIR iP 02 13 02.6
ipP 02 13 24.0
UME iP 02 13 24.9
Aleutian Islands region.
h = 90 km (UPP,KIR).

" 17 UPP iP 05 25 10.5
KIR iP 05 25 09.6
UME eP 05 25 06
Northern Sumatera
(h = 80 km).

" 17 UME iPKP 06 59 09.5
Solomon Islands (h = 100 km).

" 17 UPP iP 14 57 00.3
KIR eP 14 56 25
UME iP 14 56 39.4
Southern Honshu, Japan
(h = 370 km).

" 17 UPP iP 18 29 42.0
KIR eP 18 30 53
Greece (h = 25 km).

" 17 UPP iPKP 18 50 59.9
UME iPKP 18 50 52.3
Gilbert Islands region
(h = N).

" 17 UPP ePKP 22 21 30
micr sec
Mx Z 6.8 20
KIR ePKP 22 21 12
i 22 21 17.2
UME iPKP 22 21 21.6
Vanuatu Islands region
(h = 35 km).

" 17 UPP iP 22 36 30.4
KIR iP 22 36 33.4
Northern Colombia
(h = 160 km).

" 18 UPP iP 13 46 43.2
iS 13 50 30
micr sec
Mz Z 1.5 11
KIR iP 13 47 55.7
micr sec
(cont.)

1982
July 18 (cont.)
KIR Mx Z 0.7 14
Aegean Sea (h = 10 km).
M = 4.6 (UPP,KIR).

" 18 UPP eP 15 55 22
KIR iP 15 55 39.8
India (h = N).

" 18 UPP iP 17 58 27.6
i 17 58 40.9
KIR iP 17 57 33.6
UME eP 17 58 03
Fox Islands, Aleutian Islands
(h = N).

" 18 UME iP 22 59 10.1
Off east coast of Honshu,
Japan (h = N).

" 18 UPP iP 23 55 43.3
UME iP 23 55 41.5
Hindu Kush region (h = 280 km).

" 19 UPP iP 05 07 03.1
KIR iP 05 06 25.4
UME iP 05 06 41.9
Near s. coast of Honshu,
Japan (h = 80 km).

" 19 KIR iP 07 26 33.6 C
UME iP 07 26 06.6
Iran-Iraq border region
(h = 50 km).

" 19 UPP iP 09 03 37.1
iPP 09 03 42.7
iS 09 06 10.5
iLg1 09 07 55.4
KIR iP 09 03 08.6 C
iPP 09 03 18.8
iS 09 05 22.9
iLg1 09 06 34.6
UME iP 09 03 06.2
iPP 09 03 18.0
iS 09 05 17.6
iLg1 09 06 43.1
European USSR (h = 0).

" 19 UPP iP 17 33 27.6
KIR iP 17 32 34.1
micr sec
P Z' 0.1 1.1
UME iP 17 33 01.0
Fox Islands, Aleutian Islands
(h = N).

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

1982 July 20 KIR iP 05 06 50.1
Baffin Bay (h = 10 km).

" 20 UPP iP 14 37 35.9
KIR iP 14 36 42.4
micr sec
P Z' 0.1 0.9
UME iP 14 37 09.3 C
Fox Islands, Aleutian Islands
(h = N).

" 20 UPP iP 15 22 07.6
micr sec
P Z' 0.1 1.0
KIR eP 15 21 11
UME iP 15 21 38.7
Near east coast of Kamchatka
(h = 30 km).

" 20 KIR iP 16 10 18.1
UME iP 16 10 22.9
Banda Sea (h = 150 km).

" 20 UPP iP 20 10 44.9
i 20 10 55.1
KIR iP 20 09 50.8 C
UME iP 20 10 16.8
Near Islands, Aleutian
Islands (h = 45 km).

" 20 UPP iPKP2 22 51 20.6
KIR iPKP1 22 51 14.3
i 22 51 23.3
UME ePKP1 22 51 21
West of Macquarie Island
(h = 10 km).

" 21 UPP iSg1 05 02 04.0
KIR iSg1 05 03 36.5
UME iPg1 05 01 00.3
iSg1 05 01 53.3
i 05 01 57.4
iRg 05 02 14.6
UDD eSn 05 02 33
iSg1 05 02 58.2
DEL iSg1 05 03 46.1
Southern Finland, 60.9°N,
26.2°E.
Origin time = 04 59 47.
M_L(UPP) = 2.9 (0.18) 5.
Near-surface event.
Felt.
By combination with Finnish
station readings.

" 21 UPP iP 14 24 30.8
Greece (h = 10 km)

1982 July 21 UPP iP 17 06 42.8
KIR iP 17 06 15.6
UME iP 17 06 27.2
Mariana Islands (h = 60 km).

" 21 KIR iP 21 34 30.1
UME iP 21 34 47.0
Near east coast of Honshu,
Japan (h = 80 km).

" 21 UPP iP 23 48 14.9
i 23 48 25.7
KIR iP 23 47 21.3
i 23 47 31.1
micr sec
P Z' 0.1 0.9
UME iP 23 47 48.6
i 23 47 56.4
South of Alaska (h = N).

" 21 KIR iP 23 58 56.0
South of Alaska (h = N).

" 22 UPP iP 09 02 07.6
Vancouver Island region
(h = 10 km).

" 22 UPP iP 11 09 26.0
KIR iP 11 08 46.6
UME iP 11 09 03.8
Near east coast of Honshu,
Japan (h = 55 km).

" 22 UPP iP 12 43 20.1
KIR eP 12 44 31
Aegean Sea (h = 10 km).

" 22 UPP iP 14 44 58.1
KIR iP 14 44 04.8
UME iP 14 44 32.1
Fox Islands, Aleutian Islands
(h = N).

" 22 UME iP 16 16 27.7
Near east coast of Honshu,
Japan (h = N).

" 22 UPP iP 17 44 05.0 C
micr sec
P Z' 0.1 1.0
Mx Z 0.9 16
KIR eP 17 43 26
micr sec
P Z' 0.1 0.8
Mx Z 1.2 14
UME iP 17 43 43.3 C
Near east coast of Honshu,
Japan (h = 30 km).
m = 5.9, M = 5.3 (UPP,KIR).

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

1982
July 22 UME iPKP2 18 05 26.9
North of Macquarie Island
(h = 10 km).

" 22 UPP iP 18 17 40.1
KIR iP 18 17 17.0
Taiwan region (h = 120 km).

" 22 UPP iP 18 28 49.9
KIR iP 18 28 10.8
UME iP 18 28 28.8
Near east coast of Honshu,
Japan (h = N).

" 22 UPP iP 20 35 41.6
KIR iP 20 35 02.6
UME iP 20 35 19.8
Near east coast of Honshu,
Japan (h = 55 km).

" 23 UPP iP 00 43 34.7
KIR eP 00 44 43
UME iP 00 44 10.5
Aegean Sea (h = 25 km).

" 23 UPP iP 03 04 31.5
i 03 04 37.0
iS 03 13 36
micr sec
Mx Z 1.5 19
KIR iP 03 05 08.8
micr sec
Mx Z 0.9 20
UME iP 03 04 53.9
iS 03 14 19
Central Mid-Atlantic Ridge
(h = 10 km).
M = 5.3 (UPP,KIR).

" 23 UPP iP 04 56 55.0
KIR iP 04 56 36.4
Luzon, Philippine Islands
(h = 60 km).

" 23 UPP iP 11 36 34.4
KIR iP 11 35 54.3
UME iP 11 36 12.4
i 11 36 20.4
Near east coast of Honshu,
Japan (h = 30 km).

" 23 UME iP 13 29 31.7
Near east coast of Honshu,
Japan (h = N).

" 23 UPP iP 14 35 24.9
i 14 35 31.0
(cont.)

1982
July 23 (cont.)
UPP ipP 14 35 33.3
isP 14 35 36.8
iPP 14 38 11.0
iS 14 44 59
micr sec
P Z' 2.9 1.5
Mx Z 185.1 15
KIR iP 14 34 46.0
i 14 34 52.0
ipP 14 34 54.3
isP 14 34 58.3
iPP 14 37 21.3
micr sec
P Z' 1.4 1.3
Mx Z 169.9 15
UME iP 14 35 02.9 C
i 14 35 08.9
ipP 14 35 11.4
isP 14 35 14.9
iS 14 44 25
Near east coast of Honshu,
Japan.
h = 30 km (UPP,KIR).
m = 7.0, M = 7.5 (UPP,KIR).

" 23 UPP iP 14 41 18.7
KIR iP 14 40 40.5
UME iP 14 40 58.2
Honshu, Japan.

" 23 UPP iP 14 47 49.8
KIR iP 14 47 10.5
UME iP 14 47 27.7
i 14 47 37.7
Honshu, Japan.

" 23 UPP iP 14 51 38.4
UME iP 14 51 16.9
Honshu, Japan.

" 23 UPP iP 15 02 17.3
KIR iP 15 01 38.5
UME iP 15 01 55.4
Near east coast of Honshu,
Japan (h = N).

" 23 KIR iP 15 06 53.1
UME iP 15 06 10.7
Near east coast of Honshu,
Japan (h = N).

" 23 UPP iP 15 16 38.5
KIR iP 15 15 59.6
UME iP 15 16 16.9 C
Near east coast of Honshu,
Japan (h = 50 km).

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

1982 July 23 UME iP 15 40 39.1
Near east coast of Honshu, Japan (h = N).

" 23 UPP iP 15 49 37.8
KIR iP 15 48 58.9
UME iP 15 49 16.3 C
Near east coast of Honshu, Japan (h = 60 km).

" 23 UME iP 17 08 29.6
Near east coast of Honshu, Japan (h = N).

" 23 UPP iP 18 05 35.4 C
iS 18 15 06
iSS 18 19 56
micr sec
P Z' 0.3 1.2
Mx Z 16.0 16
KIR iP 18 04 56.4 C
micr sec
P Z' 0.2 1.4
Mx Z 15.9 16
UME iP 18 05 13.7 C
iS 18 14 24
Near east coast of Honshu, Japan (h = 30 km).
m = 6.1, M = 6.4 (UPP,KIR).

" 23 UME iP 18 14 20.2
Near east coast of Honshu, Japan (h = N).

" 23 UME iP 23 30 00.4
i 23 30 10.2

" 24 UME iP 00 13 13.9
Near east coast of Honshu, Japan (h = N).

" 24 UPP iPKP1 04 54 57.8
iPKP2 04 55 04.2
micr sec
PKP2 Z' 0.1 0.8
KIR ePKP1 04 54 35
iPKP 04 54 40.1
UME iPKP1 04 54 46.9
Kermadec Islands region (h = 430 km).

" 24 UPP eP 05 20 47
KIR iP 05 20 08.2 C
UME iP 05 20 25.8 C
Near east coast of Honshu, Japan (h = 40 km).

1982 July 24 UPP iP 10 01 07.1
KIR iP 10 00 25.7
UME iP 10 01 44.8 C
Near east coast of Honshu, Japan (h = 50 km).

" 24 KIR iP 21 41 13.6
UME iP 21 41 31.1
Near east coast of Honshu, Japan (h = N).

" 25 UME iP 03 51 00.7

" 25 KIR iP 04 59 12.2
UME iP 04 59 29.2 C
Near east coast of Honshu, Japan (h = 50 km).

" 25 UPP
micr sec
Mx Z 3.8 16
KIR iP 08 12 19.1 C
i 08 12 21.1
micr sec
P Z' 0.1 1.0
UME iP 08 12 35.7 C
i 08 12 38.4
iS 08 21 46
iSS 08 26 03
Near east coast of Honshu, Japan (h = 45 km).

" 25 KIR iP 08 40 42.4
UME iP 08 40 22.4

" 25 KIR iP 09 21 34.4
ipP 09 21 45.9
UME iP 09 21 51.7 C
ipP 09 22 01.8
Off east coast of Honshu, Japan.
h = 40 km (KIR,UME).

" 25 KIR iP 09 25 05.9
UME iP 09 25 23.3 C
ipP 09 25 33.3
Near east coast of Honshu, Japan (h = N).

" 25 UME iP 15 27 23.5
Near east coast of Honshu, Japan (h = N).

" 25 KIR iP 16 31 21.1
UME iP 16 31 34.6

" 25 KIR iPKP 18 21 14.9
(cont.)

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

1982
July 25 (cont.)
UME iPKP 18 21 21.7
Tuamotu Archipelago region
(h = 0).

" 26 KIR eP 10 47 27
i 10 47 50.2
UME iP 10 47 33.7
i 10 47 56.6
El Salvador (h = 70 km).

" 26 UME eP 13 16 59
Off coast of Oregon
(h = 10 km).

" 27 UPP iP 04 18 47.8
UME iP 04 19 34.5
Albania (h = 20 km).

" 27 UPP iP 05 02 12.3
ipP 05 02 19.4
KIR iP 05 02 31.7
ipP 05 02 37.9
UME iP 05 02 54.3
ipP 05 03 01.2
Off coast of Oregon.
h = 20 km (UPP,KIR,UME).

" 27 UPP i 06 28 29.4
KIR i 06 27 48.2
UME iP 06 28 05.6
i 06 28 10.6
Off coast of Oregon
(h = 10 km).

" 27 UPP eP 06 34 30
ipP 06 34 36.8
KIR eP 06 33 47
ipP 06 33 52.9
UME iP 06 34 08.7
ipP 06 34 15.7
Off coast of Oregon.
h = 20 km (UPP,KIR,UME).

" 27 UME iP 07 07 13.1
i 07 07 14.9
Honduras (h = N).

" 27 UME iP 10 28 29.6
i 10 28 34.5
Turkey (h = 10 km).

" 27 UPP iP 12 45 22.0
Andreanof Islands, Aleutian
Is. (h = 230 km).

1982
July 27 UPP micr sec
Mx Z 1.0 19
KIR micr sec
Mx Z 0.8 18
UME iSKS 19 58 25
North of Halmahera (h = 25 km).
M = 5.3 (UPP,KIR).

" 28 UPP iP 00 04 17.0
KIR eP 00 04 05
UME iP 00 03 59.7
i 00 04 05.1

" 28 UME iP 02 17 06.0
i 02 17 14.2

" 28 KIR iP 05 12 10.1
Fox Islands, Aleutian Islands
(h = N).

" 28 KIR iP 05 39 43.7
UME iP 05 40 11.0
Fox Islands, Aleutian Islands
(h = N).

" 28 UPP iPKP 05 45 48.2
UME iPKP 05 45 37.9

" 28 KIR iP 07 16 13.9
Kashmir-Tibet border region
(h = N).

" 28 UPP iP 09 55 40.6
KIR iP 09 54 47.3
UME iP 09 55 14.3
Fox Islands, Aleutian Islands
(h = N).

" 28 UME e(P) 10 55 57

" 28 UPP iP 12 27 34.8
KIR iP 12 27 01.7
UME iP 12 27 15.7
South of Honshu, Japan
(h = 420 km).

" 28 UPP iPKP 13 46 16.9
iPKP1 13 46 24.5
iPKP2 13 46 36.9
KIR iPKP1 13 46 22.8
iPKP2 13 46 35.7
UME iPKP1 13 46 24.3
West of Macquarie Island
(h = 10 km).

" 28 UME iP 14 11 31.2

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

1982 July	28	UME	iP	18 48 17.3	
		Aegean Sea (h = 10 km).			
"	28	UPP	iP	22 59 14.9	
		KIR	iP	22 58 36.0	
			ipP	22 58 46.4	
		UME	iP	22 58 52.8	C
			ipP	22 59 03.3	
		Near east coast of Honshu, Japan.			
		h = 35 km (KIR,UME).			
"	29	UPP	iPn	00 18 56.4	
			i	00 19 03.1	
			iSn	00 20 19.4	
			i	00 20 30.6	
			iSg1	00 21 05.7	
		KIR	iPn	00 19 37.1	
			eSn	00 21 32	
			i	00 21 19.7	
		UME	iPn	00 19 13.7	
			iSn	00 20 52.0	
			i	00 21 06.7	
			iSg1	00 21 49.1	
		UDD	iPn	00 18 26.6	
			i	00 18 34.6	
			iSn	00 19 28.2	
		DEL	iPn	00 18 48.8	
			i	00 19 03.6	
			iSn	00 20 07.7	
			iSg1	00 20 48.2	
		MYR	iPn	00 18 37.0	
			iSn	00 19 48.8	
		Off coast of southwestern Norway, near 60 3/4 ^{0}N, 2 ^{0}E.			
		Origin time = 00 17 01.			
		M_L (UPP) = 4.7 (0.17) 5.			
		Felt.			
"	29	UME	iP	09 59 35.4	
"	29	UME	iP	10 24 22.0	
		Mid-Indian Rise (h = 10 km).			
"	29	UME	iP	12 12 39.1	
		Mid-Indian Rise (h = 10 km).			
"	29	KIR	eP	20 16 15	
		UME	iP	20 16 34.4	
		Southern Nevada.			
		Underground explosion.			
"	29	UME	eP	22 14 16	
		Greece (h = 10 km).			
"	30	UME	eP	02 35 56	
		Albania (h = 10 km).			
1982 July	30	UME	ePKP	04 00 06	
		Tonga Islands (h = N).			
"	30	UME	iP	07 28 30.9	
"	30	KIR	iP	10 23 14.5	
		UME	iP	10 23 27.5	
		Volcano Islands region (h = 15 km).			
"	30	UME	iP	11 49 28.1	
"	30	UPP	iP	21 08 11.7	
		KIR	iP	21 07 32.2	
		UME	iP	21 07 47.1	
		Lake Baikal region (h = N).			
"	31	UPP	iP	06 40 07.6	C
			ipP	06 40 17.3	
			iS	06 49 00	
			eP'P'	07 08 22	
				micr sec	
			P Z'	1.1 1.0	
			Mx Z	16.4 23	
		KIR	iP	06 39 13.7	C
			iP'P'	07 08 52.5	
				micr sec	
			P Z'	1.7 1.5	
		UME	iP	06 39 40.1	C
			ipP	06 39 49.9	
			iPP	06 41 59	
			iS	06 43 34	
			iS	06 48 09	
			iP'P'	07 08 33.4	
		Rat Islands, Aleutian Islands.			
		h = 35 km (UPP,UME).			
		m = 6.9 (UPP,KIR).			
"	31	UPP	iPKP1	11 26 45.2	
		UME	iPKP1	11 26 34.6	
		Kermadec Islands (h = 190 km).			
"	31	UPP	eP	16 26 00	
		KIR	eP	16 24 39	
		UME	iP	16 25 28.7	
"	31	UPP	iP	21 19 27.7	
"	31	UME	iP	22 08 10.7	
		North Indian Ocean (h = N).			

Mars 22. 1984

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SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

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

U P P S A L A, K I R U N A, U M E Å, U D D E H O L M, D E L A R Y and M Y R V I K E N

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

A U G U S T 1 - 31, 1982

1982 Aug.	1	UME	iP		01 29 25.7	
"	1	UPP	iPn		02 27 08.6	
			i		02 27 14.7	
		KIR	iP		02 28 53.9	
		UME	iP		02 28 03.1	
		Poland (h = 10 km).				
"	1	UPP	iP		04 19 35.1	
		KIR	iP		04 19 15.8	
			i		04 19 18.0	
		UME	iP		04 19 22.0	
			i		04 19 23.5	
		Mindanao, Philippine Islands (h = 120 km).				
"	1	UME	iP		04 56 19.7	
			i		04 56 22.1	
		Near s. coast of Honshu, Japan (h = 80 km).				
"	2	KIR	iP		02 42 52.2	
		Central Alaska (h = 150 km).				
"	2	UPP	iP		04 31 52.1	
		KIR	iP		04 31 20.1	C
		UME	iP		04 31 33.9	
"	2	KIR	eP		16 37 48	
		UME	iP		16 38 05.7	
		Near east coast of Honshu, Japan (h = N).				
"	2	UME	iP		19 21 06.2	
"	3	UPP	iP		04 58 08.3	
					micr sec	
			Mx	Z	1.6 12	
		(cont.)				

1982 Aug.	3	(cont.)				
		KIR	iP		04 57 44.5	C
					micr sec	
			P	Z'	0.1 1.0	
			Mx	Z	1.0 12	
		UME	iP		04 57 49.8	C
		Mongolia (h = N).				
		M = 5.0 (UPP,KIR).				
"	3	UPP			micr sec	
			Mx	Z	2.7 17	
		KIR	iP		06 17 32.3	C
					micr sec	
			P	Z'	0.5 1.7	
			Mx	Z	2.3 18	
		UME	iP		06 17 44.5	C
		South of Mariana Islands (h = 45 km).				
		M = 5.8 (UPP,KIR).				
"	3	UPP	iP		08 57 01.1	
			i		08 57 02.6	
		KIR	iP		08 57 01.7	
		UME	iP		08 56 58.6	
		Northern Sumatera (h = 60 km). Arrival times at UPP coincide with those from a south of Mariana Islands event at 08 43 36.2. Separation difficult.				
"	3	UPP	iP		16 11 55.1	
		Ionian Sea (h = 10 km).				
"	3	UPP	iP		17 55 58.1	D
		Ionian Sea (h = 10 km).				
"	3	UPP	iP		21 26 25.2	
		Andaman Islands region (h = 150 km).				

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

1982
Aug. 4 KIR iP 09 02 26.4
Java (h = 80 km).

" 4 UPP iP 17 42 33.1 C
micr sec
P Z' 0.1 1.1
KIR iP 17 42 50.4
UME iP 17 42 36.5
Pakistan (h = N).

" 4 UPP iP 22 43 26.9
micr sec
P Z' 0.1 0.7
Mx Z 1.3 12
KIR eP 22 44 51
UME iP 22 44 09.5
Greece-Albania border
region (h = 10 km).

" 5 UPP iP 00 35 20.0
KIR iP 00 34 44.4
UME iP 00 34 58.6
Near east coast of Honshu,
Japan (h = 55 km).

" 5 UPP iP 06 01 40.2

" 5 UPP iP 07 59 17.1

" 5 UPP iP 11 10 24.2
Greece (h = 10 km).

" 5 UPP iP 12 06 25.4
Ionian Sea (h = 10 km).

" 5 UPP iP 14 11 48.6 C
micr sec
P Z' 0.1 0.8
KIR iP 14 11 14.8 C
micr sec
P Z' 0.2 1.0
UME iP 14 11 34.2 C
Nevada.
m = 6.1 (UPP,KIR).
Underground explosion.

" 5 UPP iPdiff 20 48 39
iPKP 20 51 55
iPP 20 53 56
iPKS 20 55 12
micr sec
PKP Z' 0.1 1.0
Mx Z 62.1 21
KIR iPKP 20 51 40.6
i 20 51 43.2
micr sec
i Z' 0.1 1.0
Mx Z 24.4 23
(cont.)

1982
Aug. 5 (cont.)
UME iPKP 20 51 44.9
i 20 51 50.5
Santa Cruz Islands
(h = 30 km).
M = 7.1 (UPP,KIR).

" 5 KIR iPKP 21 00 55.2
UME iPKP 21 01 00.6
Probably the same epicentral
location as the preceding
event.

" 5 KIR iP 21 10 42.2

" 6 UPP iP 01 41 53.7
KIR iP 01 41 10.0
UME iP 01 41 29.4
Hokkaido, Japan region
(h = N).

" 6 UPP iP 05 04 51.1
i 05 05 05.7
ipP 05 05 10.2
eP'P' 05 33 02
micr sec
Mx Z 1.0 24
KIR iP 05 03 58.2
ipP 05 04 15.8
UME iP 05 04 23.3
ipP 05 04 41.2
Andreanof Islands, Aleutian Is.
h = 70 km (UPP,KIR,UME).

" 6 UPP i 07 44 02.5
iSgl 07 44 16.0
KIR iSgl 07 46 19.4
UME eSn 07 44 25
iSgl 07 45 06.0
UDD iPn 07 42 18.7
iPgl 07 42 29.5
iSn 07 42 57.9
iSgl 07 43 16.4
DEL iPn 07 42 45.9
eSn 07 43 50
iSgl 07 44 21.6
Southwestern Norway,
60.6°N, 6.5°E.
Origin time = 07 41 26.
M_L(UPP) = 3.5 (0.15) 8.
Felt.
By combination with Bergen
readings.

" 6 UPP iP 13 57 38.1 C
i 13 57 45.8
i 13 57 50.9
micr sec
i Z' 0.1 1.1
(cont.)

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

1982
Aug. 6 KIR i 13 58 09.5
i 13 58 15.3
micr sec
i Z' 0.2 1.7
UME iP 13 57 47.6
i 13 57 55.4
i 13 58 00.9
Mid-Indian Rise (h = 10 km).
m = 5.9 (UPP,KIR).

" 6 UPP Mx 21 46
micr sec
Mx Z 1.5 22
KIR 21 50
micr sec
Mx Z 1.2 22
Flores Island region
(h = 45 km).
M = 5.5 (UPP,KIR).

" 7 KIR iP 08 46 31.2
UME eP 08 47 01
Southeastern Alaska
(h = 15 km).

" 7 UPP iP 13 28 48.3

" 7 UPP iP 13 43 54.0
micr sec
P Z' 0.1 0.9
Mx Z 1.3 14
KIR iP 13 43 24.4
UME iP 13 43 35.8
Ryukyu Islands (h = N).

" 7 UPP iP 15 11 30.5 C
KIR iP 15 11 38.8 C
UME iP 15 11 29.3
Afghanistan-USSR border
region (h = 140 km).

" 7 KIR iPKP1 16 01 05.3
iPKP2 16 01 11.6
North Island, New Zealand
(h = 140 km).

" 7 UPP Mx 19 36
micr sec
Mx Z 0.6 23
Samoa Islands region
(h = N).

" 7 UPP eP 20 03 13
i 20 03 23.3
micr sec
Mx Z 0.5 17
(cont.)

1982
Aug. 7 (cont.)
KIR iP 20 02 12.3
UME iP 20 02 43.1
Alaska (h = 15 km).

" 7 UPP iP 21 10 21.2
i(PP) 21 13 32.0
iPP 21 14 26
iSP 21 23 41
micr sec
PP Z' 0.2 1.1
Mx Z 8.0 21
KIR iP 21 10 14.2 C
micr sec
P Z' 0.1 1.0
UME iP 21 10 15.2
iPP 21 14 22.5
South of Bali Island (h = N).
m = 6.5 (UPP,KIR).
Body-wave magnitude at Uppsala
determined by making use of
the PP onset.

" 8 UPP iP 06 24 31.2 C
KIR iP 06 23 39.9 C
micr sec
P Z' 0.1 0.7
UME iP 06 24 04.6
Kamchatka (h = 140 km).

" 8 UPP iP 08 33 11.9
UME iP 08 33 52.1
Greece (h = 10 km).

" 8 UPP iP 09 59 59.6

" 8 UPP iP 10 02 11.5

" 8 UPP eP 14 21 53
KIR eP 14 21 01
Andreanof Islands, Aleutian Is.
(h = 70 km).

" 9 UPP iP 00 57 41 C
iS 01 07 15
micr sec
Mx Z 5.3 16
KIR eP 00 57 05
UME iP 00 57 21.5
iS 01 06 35
iSS 01 10 56
Near east coast of Honshu,
Japan (h = N).

" 9 KIR iP 02 07 11.3
UME iP 02 07 00.7
North Atlantic Ridge
(h = 10 km).

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

1982
Aug. 9 UPP iP 02 43 24.3
iS 02 52 54
micr sec
Mx Z 3.8 16
KIR iP 02 42 45.1
UME iP 02 43 00.7
i 02 43 08.5
iS 02 52 14
iSS 02 56 35
Off east coast of Honshu, Japan (h = N).

" 9 UPP micr sec
Mx Z 1.9 23
KIR iPKP 11 05 04.0
UME iPKP 11 05 10.5
Santa Cruz Islands (h = 35 km).

" 9 KIR iP 23 46 08.5
Vanuatu Islands (h = 230 km).

" 10 KIR iP 05 06 50.1
UME iP 05 07 08.1
Off east coast of Honshu, Japan (h = N).

" 10 UME iP 12 31 49.7
Tajik SSR (h = N).

" 10 KIR eP 18 04 36
Java (h = 80 km).

" 10 UPP iP 19 09 35.0
i 19 09 48.6
KIR iP 19 09 34.1
UME iP 19 09 31.4
Sunda Strait (h = 60 km).

" 11 KIR iP 06 18 31.9
UME iP 06 18 49.8
Off east coast of Honshu, Japan (h = N).

" 11 KIR iP 09 15 54.8
Central Mid-Atlantic Ridge (h = 10 km).
This arrival time almost coincides with that at KIR from the following event. Separation difficult.

" 11 UPP iP 09 16 53.8
KIR iP 09 16 12.3
UME iP 09 16 30.8
Off east coast of Honshu, Japan (h = 35 km).

1982
Aug. 11 KIR iP 10 56 18.1
Ceram (h = 20 km).

" 11 KIR iSKP1 20 52 53.9
South of Fiji Islands (h = 490 km).

" 12 UPP iPKP 02 31 52.3
micr sec
Mx Z 7.5 22
KIR i 02 31 41.9
micr sec
Mx Z 4.5 23
UME iPKP 02 31 41.5
New Ireland region (h = 45 km).
M = 6.2 (UPP,KIR).
Late arrivals when compared with NEIS solution.

" 12 UPP iP 04 44 33.6 C
KIR iP 04 43 55.7
micr sec
P Z' 0.1 1.0
UME iP 04 44 12.5 C
Near s. coast of Honshu, Japan (h = 35 km).

" 12 UPP iP 08 53 03.0
micr sec
Mx Z 3.0 17
KIR eP 08 53 33
micr sec
Mx Z 0.9 20
UME i 08 53 31.4
Central Mid-Atlantic Ridge (h = 10 km).
M = 5.4 (UPP,KIR).

" 12 KIR iP 10 08 01.2
South of Alaska (h = N).

" 12 KIR iP 10 47 27.8
Alma-Ata region (h = N).

" 12 UPP iP 11 47 33.8
KIR iP 11 46 52.0 C
UME iP 11 47 10.8
Off east coast of Honshu, Japan (h = N).

" 12 UPP iP 11 58 08.4 C
micr sec
P Z' 0.1 1.0
KIR iP 11 57 27.3 C
micr sec
P Z' 0.1 1.0
(cont.)

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

1982
Aug. 12 (cont.)
UME iP 11 57 46.1 C
Off east coast of Honshu, Japan (h = N).
m = 5.9 (UPP,KIR).

" 12 UPP iP 12 58 54.6
KIR iP 12 59 03.6
Hindu Kush region (h = 220 km).

" 12 KIR iP 14 46 50.6
Molucca Passage (h = 55 km).

" 12 UPP iP 18 59 22.2 C
KIR iP 18 59 28.6
UME iP 18 59 19.7
Northwestern Kashmir (h = 20 km).

" 13 KIR iPKP 00 49 57.7
South Sandwich Islands region (h = N).

" 13 UPP iP 21 26 25.8
ipP 21 26 36.9
micr sec
P Z' 0.1 1.0
KIR iP 21 25 47.6
ipP 21 25 59.0
micr sec
P Z' 0.1 1.0
UME iP 21 26 04.4 C
ipP 21 26 16.0
Near e. coast of Honshu, Japan.
h = 40 km (UPP,KIR,UME).
m = 5.8 (UPP,KIR).

" 13 UPP iP 23 50 37.6
KIR iP 23 50 57.1
UME i 23 50 18.9
Off east coast of Honshu, Japan (h = 30 km).

" 14 KIR iP 00 36 29.2 C
UME iP 00 36 48.1
Off east coast of Honshu, Japan (h = 30 km).

" 14 UPP iP 01 01 44.9
i 01 01 53.2
KIR iP 01 01 01.3
UME iP 01 01 21.6
Off east coast of Honshu, Japan (h = 30 km).

" 14 UPP eP 01 11 27
i 01 12 17.2
KIR iP 01 11 12.9
Mariana Islands (h = 160 km).

1982
Aug. 14 UPP i 02 29 47.3
KIR iP 02 28 45.3
i 02 28 57.2
Kuril Islands region (h = N).

" 14 UPP eP 03 23 41
KIR iP 03 23 40.5
micr sec
P Z' 0.1 1.2
UME iP 03 23 44.3 C
Near west coast of Colombia (h = 10 km).

" 14 KIR iP 14 41 43.7
e(PKP) 14 45 44
UME iPKP 14 46 00.0
i 14 46 27.0
Papua New Guinea (h = 110 km).

" 14 UME iP 20 33 40.7
Hokkaido, Japan region (h = 100 km).

" 15 KIR iP 07 38 46.5
Northern Colombia (h = 170 km).

" 15 KIR iP 15 15 37.2
micr sec
P Z' 0.1 1.2
Southern Italy (h = 10 km).

" 15 UPP iP 17 09 42.6
micr sec
P Z' 0.1 1.0
KIR iP 17 09 03.6
micr sec
P Z' 0.1 0.9
Near east coast of Honshu, Japan (h = 50 km).
m = 5.8 (UPP,KIR).

" 15 KIR iP 17 19 33.5
Ryukyu Islands (h = 60 km).

" 16 KIR iP 06 45 25.9
Guatemala (h = 80 km).

" 16 KIR iSKPl 07 41 59.8
Fiji Islands region (h = 600 km).

" 16 UPP iPKPl 15 41 24.7
i 15 41 36.1
KIR iPKP 15 41 06.2 C
Off e. coast of N. Island, N.Z. (h = 140 km).

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

1982
Aug. 16 UPP iP 21 09 18.5
micr sec
P Z' 0.1 0.8
KIR iP 21 08 24.4 D
Andreanof Islands, Aleutian Is.
(h = 50 km).

" 17 UPP iP 00 29 40.7
KIR eP 00 29 23
Molucca Passage (h = 90 km).

" 17 UPP iP 05 39 54.2
KIR iP 05 39 08.1
Kuril Islands (h = 50 km).

" 17 UPP iP 09 52 38.0 C
KIR eP 09 52 18 C
UME iP 09 52 25.4 C
Luzon, Philippine Islands
(h = N).

" 17 UPP i(P) 12 54 54.9

" 17 UPP iP 18 36 49.1
i 18 36 56.9
micr sec
Mx Z 2.0 17
KIR iP 18 36 45.4
micr sec
P Z' 0.1 1.5
Mx Z 1.2 16
UME iP 18 36 50.2
Costa Rica (h = 45 km).
M = 5.6 (UPP,KIR).

" 17 UPP iP 19 21 20.7
ipP 19 21 29.9
KIR iP 19 21 02.3
UME iP 19 21 08.6
ipP 19 21 17.3
Luzon, Philippine Islands.
h = 30 km (UPP,UME).

" 17 UPP iP 22 28 00.4 C
iS 22 32 22
micr sec
P Z' 9.9 2.0
Mx Z 75.5 18
KIR iP 22 29 08.6 C
iS 22 34 33.5
micr sec
P Z' 7.6 2.0
Mx Z 51.6 18
UME iP 22 28 32.8 C
iS 22 33 24
Mediterranean Sea (h = 30 km).
m = 7.2, M = 6.3 (UPP,KIR).

1982
Aug. 18 UPP eP 04 15 58

" 18 UPP iP 05 02 56.2
Taiwan region (h = N).

" 18 UPP i(P) 06 42 43.0

" 18 UPP iP 12 09 39.3
KIR eP 12 09 46 C
UME iP 12 09 33.9
Tajik SSR (h = N).

" 18 UPP iP 14 14 47.5
Greece-Albania border
region (h = 10 km).

" 18 UPP iP 18 10 56.0
KIR iP 18 10 52.5
Bhutan (h = 60 km).

" 18 KIR e 18 17 44
i 18 17 51.8
iSgl 18 18 15.8

" 18 UPP iP 20 39 46.1
ipP 20 39 56.8
micr sec
pP Z' 0.1 1.0
Mx Z 0.6 23
KIR iP 20 39 06.3
ipP 20 39 15.6
micr sec
pP Z' 0.1 1.0
Mx Z 0.7 13
UME iP 20 39 25.4
ipP 20 39 34.2
Off east coast of Honshu, Japan.
h = 30 km (UPP,KIR,UME).
m = 5.9, M = 5.0 (UPP,KIR).

" 18 KIR iP 21 01 20.3
UME iP 21 01 38.6
Off east coast of Honshu,
Japan (h = 40 km).

" 18 UPP iP 21 47 42.6
KIR iP 21 47 41.9 C
micr sec
P Z' 0.1 0.7
UME iP 21 47 39.7 C
Southern Sumatera (h = 80 km).

" 19 KIR iPKP 04 59 49.1
Vanuatu Islands (h = 40 km).

" 19 UPP i(P) 05 48 53.6

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

1982

Aug.	19	KIR	iP	14 56 31.7	
		UME	iP	14 56 57.6	
		Fox Islands, Aleutian Is. (h = N).			
"	19	UPP	iP	16 12 02.5	
			i	16 12 07.0	
			iPP	16 15 35.7	
			iSKS	16 22 28	
			iS	16 22 48	
				micr sec	
			p Z'	0.4 1.5	
		KIR	iP	16 11 59.5	C
			i	16 12 04.8	
			i	16 12 13.6	
			iPP	16 15 29.3	
				micr sec	
			P Z'	1.0 2.7	
			i Z'	0.9 1.5	
			i Z'	1.3 1.7	
			Mx Z	13.2 16	
		UME	iP	16 12 02.7	
			i	16 12 07.9	
			iPP	16 15 36.1	
			iSKS	16 22 33	
			iS	16 22 54	
		South of Panama (h = 10 km). m = 6.7 (UPP,KIR).			
"	19	UPP	iP	18 58 53.9	
		KIR	eP	18 58 35	C
		UME	iP	18 58 41.4	
		Luzon, Philippine Islands (h = 60 km).			
"	20	UPP	iPKP	03 41 25.5	
			i	03 41 36.4	
		Kermadec Islands region (h = N).			
"	20	UPP	i(P)	07 11 36.4	
"	20	UME	iP	11 48 55.9	
		Off e. coast of Honshu, Japan (h = 40 km).			
"	20	KIR	iP	12 16 46.3	
		Kuril Islands (h = N).			
"	20	UPP	iP	13 04 50.9	
			i	13 06 35.2	
		KIR	iP	13 05 48.9	
		Arab Republic of Egypt (h = 10 km).			

1984

Aug.	20	UPP	iP	13 59 58.2	
			i	14 00 35.9	
				micr sec	
			P Z'	0.1 1.0	
		KIR	iP	13 59 05.0	
		Near e. coast of Kamchatka (h = 140 km).			
"	20	UPP	iP	14 26 09.5	
		KIR	eP	14 26 23	
		Pakistan (h = N).			
"	20	KIR	iP	18 34 23.3	
		South of Mariana Islands (h = 50 km).			
"	20	KIR	eP	21 40 33	
		UME	iP	21 40 38.4	
		Near coast of Guatemala (h = 80 km).			
"	21	UME	iP	04 36 27.4	
		India-Bangladesh border region (h = N).			
"	21	KIR	iP	09 46 24.3	
		West Irian region (h = 30 km).			
"	21	UPP	iP	15 25 21.6	
"	21	UPP	iP	19 31 25.5	
				micr sec	
			P Z'	0.1 1.3	
		KIR	iP	19 30 31.9	
			i	19 30 41.5	
		UME	iP	19 30 59.2	
		Unimak Island region (h = 40 km).			
"	22	UPP	iPKP	04 01 53.9	
				micr sec	
			Mx Z	0.9 30	
		KIR	iPKP	04 01 40.0	
				micr sec	
			PKP Z'	0.1 0.6	
		UME	i(PKP)	04 01 38.1	
			iPKP	04 01 46.5	
			i	04 01 57.8	
		Vanuatu Islands (h = 35 km).			
"	22	KIR	iP	07 47 02.5	
		Hokkaido, Japan region (h = 20 km).			

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

1982						
Aug.	22	UPP	iP	09 10 23.4		
		Iran (h = 30 km).				
"	22	UPP	iP	09 33 03.2		
		UME	iP	09 33 43.6		
		Greece-Albania border region				
		(h = 25 km).				
"	22	KIR	iPn	09 41 25.4		
			iTPg	09 46 17.3		
			iTSg	09 46 52.8		
				micr	sec	
			Mx Z	1.1	16	
		UME	iP	09 42 12.4		
		Greenland Sea (h = 10 km).				
"	22	KIR	iPn	10 09 35.8		
			iTPg	10 14 25.4		
			iTSg	10 15 01.6		
		UME	iP	10 10 24.6		
		Greenland Sea (h = 10 km).				
"	22	UPP	iP	12 02 17.3		
"	22	UPP	iP	15 02 12.7		
		KIR	iP	15 01 54.1		
		Philippine Islands region				
		(h = N).				
"	22	UPP	eP	15 34 16		
		KIR	iP	15 33 21.1		
		Andreanof Islands,				
		Aleutian Is. (h = 60 km).				
"	22	UPP	iP	23 05 14.3		
		Greece-Albania border region				
		(h = 20 km).				
"	23	KIR	iP	02 49 44.1	C	
		UME	iP	02 49 44.5		
		Eastern Kazakh SSR.				
		Underground explosion.				
"	23	KIR	ePn	03 46 28		
			eTSg	03 51 45		
		UME	iPn	03 47 16.8		
		Norwegian Sea (h = 10 km).				
"	23	UPP	iP	04 10 48.8		
			ipP	04 10 58.6		
		KIR	iP	04 10 23.0		
			ipP	04 10 33.1		
		UME	iP	04 10 32.8		
		Southwestern Ryukyu Islands.				
		h = 35 km (UPP,KIR).				

1982						
Aug.	23	UPP	iP	06 01 24.4	C	
			ipP	06 01 44.7		
		KIR	eP	06 00 44	C	
			ipP	06 01 04.9		
		UME	iP	06 01 02.3	C	
			ipP	06 01 22.5		
		Near e. coast of Honshu, Japan.				
		h = 80 km (UPP,KIR,UME).				
"	23	UPP	iP	11 17 43.3		
"	23	UPP	iP	16 51 49.6	C	
			ipP	16 52 01.3		
			iPP	16 54 31.3		
			iS	17 01 15		
				micr	sec	
			P Z'	0.4	1.0	
			Mx Z	2.3	17	
		KIR	iP	16 51 10.6	C	
			ipP	16 51 22.2		
				micr	sec	
			P Z'	0.4	0.9	
			Mx Z	2.1	17	
		UME	iP	16 51 27.7	C	
			iS	17 00 37		
		Near e. coast of Honshu, Japan.				
		h = 40 km (UPP,KIR).				
		m = 6.4, M = 5.5 (UPP,KIR).				
"	23	UPP	iP	17 03 37.3		
"	23	KIR	eP	20 48 26		
		UME	iP	20 48 31.8		
		Banda Sea (h = 110 km).				
"	23	KIR	iP	22 51 17.3		
		UME	iP	22 50 54.1		
"	23	UPP	iP	22 57 52.2		
			i	22 57 59.0		
				micr	sec	
			P Z'	0.1	0.9	
		KIR	iP	22 57 17.1	C	
			i	22 57 34.4		
		UME	iP	22 57 32.6	C	
			i	22 57 52.3		
		South of Honshu, Japan				
		(h = 70 km).				
"	24	UPP	iP	04 20 04.2	C	
		KIR	iP	04 19 11.0	C	
				micr	sec	
			P Z'	0.2	1.0	
		UME	iP	04 19 38.2	C	
		Fox Islands, Aleutian Islands				
		(h = N).				

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

1982 Aug.	24	KIR	eP		05 33 30	
			i		05 33 31.6	
		Tajik-Sinkiang border region (h = 60 km).				
"	24	KIR	iP		08 59 20.4	
		Northern Sumatera (h = 90 km).				
"	24	UPP	i(P)		09 07 12.8	
"	24	KIR	iPKP		15 19 27.3	
		Fiji Islands region (h = 520 km).				
"	24	UPP			micr	sec
			Mx	Z	1.7	24
		KIR	iP		16 15 19.0	
					micr	sec
			Mx	Z	0.9	19
		West Irian region (h = N). M = 5.4 (UPP,KIR).				
"	24	KIR	iP		19 55 43.3	
		Kirghiz SSR (h = N).				
"	25	KIR	iP		15 14 23.4	
		Southeastern Alaska (h = 15 km).				
"	25	KIR	iP		16 13 03.2	
		UME	iP		16 13 26.8	
		Kuril Islands (h = N).				
"	26	UPP	iP		05 36 20.0	
					micr	sec
			Mx	Z	2.0	28
		KIR	iP		05 36 21.3 C	
					micr	sec
			P	Z'	0.1	1.0
		UME	iP		05 36 23.9 C	
		Near coast of Ecuador (h = 70 km).				
"	26	UPP	i(P)		11 18 31.8	
"	26	KIR	eP		18 24 33	
		Greece (h = 10 km).				
"	27	UPP	iP		10 02 51.6	
		KIR	iP		10 04 11.2	
		UME	iP		10 03 29.3	
		Bulgaria (h = N).				
"	27	UPP	iP		12 09 56.7	
		KIR	iP		12 09 03.6	
		Andreanof Islands, Aleutian Is. (h = 50 km).				
1982 Aug.	27	KIR	iP		13 08 35.7	
		Mariana Islands (h = 90 km).				
"	27	UPP	i(P)		16 25 47.5	
"	27	UPP	iPKP		23 05 30.6	
			i		23 05 38.6	
		UME	i(PKP)		23 05 19.1	
			iPKP		23 05 23.0	
		Kermadec Islands region (h = 280 km).				
"	28	UPP	Mx		00 37	
					micr	sec
			Mx	Z	1.2	22
		KIR	Mx		00 35	
					micr	sec
			Mx	Z	1.0	21
		Sulawesi (h = 55 km). M = 5.4 (UPP,KIR).				
"	28	UPP	iPKPl		04 48 41.2	
			i		04 48 50.3	
		KIR	ePKP		04 48 27	
		UME	iPKPl		04 48 28.2 C	
		Kermadec Islands (h = 140 km).				
"	28	UPP	iPKPl		05 01 16.9	
			i		05 01 32.1	
		UME	iPKPl		05 01 04.3	
		Kermadec Islands (h = N).				
"	28	KIR	iP		12 23 12.8	
		UME	iP		12 23 29.9	
		Near east coast of Honshu, Japan (h = 60 km).				
"	28	UPP	iP		19 00 19.6 C	
					micr	sec
			P	Z'	0.1	1.3
		KIR	iP		19 00 28.4 C	
					micr	sec
			P	Z'	0.1	1.2
		UME	iP		19 00 18.2 C	
		Hindu Kush region (h = 210 km). m = 5.2 (UPP,KIR).				
"	29	UPP	iP		13 30 46.2	
			iPP		13 34 48.4	
		KIR	iP		13 30 39.8	
			iPP		13 34 40.4	
					micr	sec
			P	Z'	0.1	0.8
		UME	iP		13 30 40.2	
			iPP		13 34 40.2	
		Java (h = 600 km).				

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

1982					
Aug.	29	KIR	iP	14 11 56.6	
		Java (h = 590 km).			
"	30	KIR	e	08 50 58	
		UME	iP	08 50 34.9	
			i	08 50 45.7	
		North of Ascension Islands			
		(h = 10 km).			
"	30	UPP	iP	11 31 06.3	
		KIR	eP	11 31 51	
		UME	i	11 31 35.4	
		North of Ascension Island			
		(h = 10 km).			
"	30	UPP	iP	13 40 48.5	
				micr sec	
			P Z'	0.1 1.0	
		KIR	iP	13 39 55.0 C	
				micr sec	
			P Z'	0.1 1.1	
		UME	iP	13 40 21.6 C	
		Alaska Peninsula (h = 35 km).			
		m = 5.9 (UPP,KIR).			
"	30	UPP	iP	17 16 21.2	
"	30	UPP	iP	23 24 03.5	
		KIR	iP	23 23 51.3	
		Burma (h = 35 km).			
"	31	UPP	iP	01 37 58.1 C	
			iPn	01 38 59.6	
				micr sec	
			P Z'	0.1 0.4	
		KIR	iP	01 37 42.0 C	
				micr sec	
			P Z'	0.3 0.5	
		UME	iP	01 37 42.8	
		Eastern Kazakh SSR.			
		m = 6.3 (UPP,KIR).			
		Underground explosion.			
"	31	UPP	eP	08 44 42	
		KIR	iP	08 45 15.0	
"	31	UPP	iP	10 52 52.5	
				micr sec	
			P Z'	0.1 0.8	
		KIR	iP	10 52 47.6	
		UME	iP	10 52 45.2	
		India-Bangladesh border			
		region (h = N).			

1982				
Aug.	31	UPP	iP	12 53 23.4
		KIR	iP	12 52 48.6
		South of Honshu, Japan		
		(h = 110 km).		

Torild van Eck
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May 4, 1984

SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

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SWEDEN

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

U P P S A L A, K I R U N A, U M E Å, U D D E H O L M,

D E L A R Y and M Y R V I K E N

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

S E P T E M B E R 1 - 30, 1982

1982
Sep. 1 UPP iPKP1 01 24 21.0
Kermadec Islands region
(h = 240 km).

" 1 KIR iP 05 27 04.5
Azores Islands region
(h = 10 km).

" 1 UPP iP 07 25 43.7
KIR iP 07 26 23.1
Western Iran (h = N).

" 2 UPP iP 10 11 11.0 C
KIR iP 10 11 20.3 C
micr sec
P Z' 0.1 0.5
UME iP 10 11 09.3 C
Hindu Kush region
(h = 210 km).

" 2 KIR iPKP1 16 18 37.3
UME iPKP1 16 18 44.8
iPKP2 16 18 55.7
North Island, New Zealand
(h = N).

" 3 UPP iP 01 43 02.0
i 01 43 04.1
iS 01 52 19
micr sec
i Z' 0.6 1.3
Mx Z 21 16
KIR iP 01 42 17.9
micr sec
P Z' 0.3 1.0
Mx Z 11 15
(cont.)

1982
Sep. 3 (cont.)
UME iP 01 42 37.1
i 01 42 39.2
iS 01 51 19
Kuril Islands region (h = N).
m = 6.4, M = 6.4 (UPP,KIR).

" 3 KIR iP 02 49 49.9
UME iP 02 50 16.2
Fox Islands, Aleutian Is.
(h = N).

" 3 UPP iP 03 51 15.0
i 03 51 29.2
micr sec
P Z' 0.3 1.2
Mx Z 10 17
KIR iP 03 50 30.5
micr sec
P Z' 0.1 1.0
Mx Z 5.6 14
UME iP 03 50 49.2
Kuril Islands region (h = N).
m = 6.0, M = 6.1 (UPP,KIR).

" 3 UPP iP 04 23 00.7 C
i 04 23 40.0
KIR iP 04 22 15.4
UME iP 04 22 36.0
i 04 23 14.9
Kuril Islands region (h = N).

" 3 KIR iP 07 36 41.2
Eastern Siberia (h = N).

" 3 KIR iP 08 16 58.6
UME iP 08 17 19.9
Kuril Islands region (h = N).

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

1982
Sep. 3 UPP iP 08 39 39.2
micr sec
P Z' 0.2 1.1
Mx Z 2.4 13
KIR iP 08 38 52.4
micr sec
P Z' 0.2 1.1
Mx Z 1.8 13
UME iP 08 39 13.1
Kuril Islands region (h = N).
m = 6.1, M = 5.6 (UPP,KIR).

" 3 UPP Mx 24 54
micr sec
Mx Z 5.9 19
KIR iPKP 23 58 40.0
micr sec
Mx Z 4.3 20
UME iPKP 23 58 47.8
Tonga Islands (h = N).
M = 6.3 (UPP,KIR).

" 4 UPP Mx 03 23
micr sec
Mx Z 5.1 20
Tonga Islands (h = N).

" 4 UPP iP 08 09 22.7
ipP 08 09 36.1
KIR iP 08 08 54.4
ipP 08 09 08.1
micr sec
P Z' 0.1 1.1
UME iP 08 09 06.4
ipP 08 09 19.9
Mariana Islands region.
h = 45 km (UPP,KIR,UME).

" 4 KIR iPKP 13 39 10.3
Santa Cruz Islands
(h = 210 km).

" 4 UPP iPKPl 13 50 44.8
micr sec
PKPl Z' 0.8 1.5
Mx Z 4.3 20
KIR ePKP 13 50 35
UME iPKP 13 50 40.0
South of Fiji Islands
(h = N).

" 4 UPP iP 15 55 25.6
KIR iP 15 56 40.0
UME iP 15 56 04.0
Greece (h = 10 km).

" 4 UPP iP 16 03 17.5
Greece (h = 10 km).

1982
Sep. 4 UPP iP 18 05 48.5 C
micr sec
P Z' 0.1 0.6
KIR iP 18 04 51.0 C
micr sec
P Z' 0.3 0.8
UME iP 18 05 15.1 C
Western Siberia.
m = 5.8 (UPP,KIR).
Underground explosion.

" 4 UPP eP 20 01 54
KIR iP 20 01 47.1
UME iP 20 01 46.2
Burma (h = N).

" 5 UPP iP 02 49 15.7
micr sec
Mx Z 1.3 19
KIR iP 02 49 05.8
UME iP 02 49 13.7
Guatemala (h = 60 km).

" 5 UPP iP 06 21 02.2
KIR iP 06 21 41.1
UME iP 06 21 16.2
Iran (h = N).

" 5 UPP iP 07 45 08.4
UME iP 07 44 48.4

" 5 DEL iSgl 09 29 26.1
Halland-Västergötland,
Sweden, 57.2°N, 12.9°E.
Origin time = 09 28 53.
M_L(UPP) = 1.9 1.
By combination with SKI
network readings.

" 5 UPP iP 11 40 51.7
KIR iP 11 41 32.0
UME iP 11 41 14.2
South Atlantic Ridge
(h = 10 km).

" 5 UPP iP 11 56 11.4
KIR iP 11 55 44.3
UME iP 11 55 54.9
Mariana Islands region
(h = 40 km).

" 5 UPP iP 12 20 42.3
KIR iP 12 20 14.5
UME iP 12 20 26.9
Mariana Islands region
(h = N).

" 5 UME iP 12 22 20.5

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

1982
Sep. 5 KIR iP 12 27 54.8
Mariana Islands region
(h = N).

" 5 UPP iSKPl 21 31 36.4
Vanuatu Islands (h = 230 km).

" 6 UPP iP 00 05 03.9
KIR iP 00 04 39.1
UME iP 00 04 48.6
Taiwan region (h = N).

" 6 UPP iP 01 22 57.9
KIR iP 01 22 39.0
UME iP 01 22 45.1
Luzon, Philippine Islands
(h = 20 km).

" 6 UPP iP 01 58 50.2 D
iS 02 08 36.0
i 02 28 50.3
micr sec
P Z' 4.6 1.0
Mx Z 15 20
KIR iP 01 22 16.7 D
i 02 29 10.7
micr sec
P Z' 4.9 1.0
Mx Z 8.3 16
UME iP 01 58 31.0 D
iS 02 07 59
i 02 29 00.7
South of Honshu, Japan
(h = 180 km).
m = 7.2, M = 6.3 (UPP,KIR).
M not corrected for focal
depth.

" 6 UPP iP 07 59 21.3 C
ipP 07 59 27.1
iS 08 07 53
micr sec
P Z' 0.1 1.0
Mx Z 2.9 21
KIR iP 07 58 27.1 C
ipP 07 58 32.9
micr sec
P Z' 0.2 1.0
Mx Z 3.3 20
UME iP 07 58 55.4 C
ipP 07 59 01.3
iS 08 07 04
Kodiak Island region.
h = 20 km (UPP,KIR,UME).
m = 6.0, M = 5.5 (UPP,KIR).

1982
Sep. 6 UPP iP 09 19 06.7
UME iP 09 18 44.9
Near e. coast of Honshu,
Japan (h = 60 km).

" 7 UPP iP 02 28 58.5
KIR iP 02 28 21.5
UME iP 02 28 37.2
Sea of Japan (h = 420 km).

" 7 UME iPKP 11 19 39.8
Loyalty Islands region
(h = N).

" 7 UPP iRg 15 53 24.6
UDD iRg 15 53 01.2
Grängesberg, Dalarna, Sweden,
60.1°N, 15.0°E.
Near-surface event, possibly
rockburst.

" 7 UPP iSgl 17 54 03.6
UDD iPgl 17 52 20.7
iSgl 17 53 04.6
DEL eSgl 17 53 39
MYR iSn 17 53 30.7
Southern Norway, near
59 1/4°N, 7°E.
Origin time = 17 51 19.
M_L(UPP) = 2.5 1.

" 8 UPP iP 02 49 02.1 D
micr sec
P Z' 0.3 0.8
KIR iP 02 48 31.3 D
micr sec
P Z' 0.3 0.7
UME iP 02 48 44.7 D
Bonin Islands region
(h = 440 km).
m = 6.0 (UPP,KIR).

" 8 UPP iP 18 06 28.0
KIR iP 18 06 01.9
Mongolia (h = N).

" 9 UPP iP 03 17 49.9
KIR iP 03 17 17.4
UME iP 03 17 31.2
South of Honshu, Japan
(h = 480 km).

" 9 UPP iP 15 55 40.2
ipP 15 55 52.3
micr sec
P Z' 0.2 1.4
(cont.)

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

1982
Sep. 9 (cont.)
KIR iP 15 55 12.2
ipP 15 55 24.9
micr sec
P Z' 0.1 1.2
UME iP 15 55 24.2
ipP 15 55 36.5
Mariana Islands region.
h = 40 km (UPP,KIR,UME).
m = 6.2 (UPP,KIR).

" 9 KIR eP 16 22 20
UME iP 16 22 32.1
Mariana Islands region
(h = N).

" 10 UPP iP 01 20 02.0
KIR iP 01 19 28.8
UME iP 01 19 42.7
South of Honshu, Japan
(h = 150 km).

" 10 UPP iP 06 31 43.5
Greece (h = 10 km).

" 10 UPP iP 06 34 40.4
Greece (h = 10 km).

" 10 UPP eP 10 30 56
KIR iP 10 29 59.4
UME iP 10 30 26.4
Near e. coast of Kamchatka
(h = N).

" 10 KIR iP 13 12 51.0
micr sec
P Z' 0.1 0.6
UME iP 13 13 39.7
Greenland Sea (h = 10 km).

" 10 UPP i(P) 18 54 55.1

" 11 UPP iPKPl 06 51 23.3
i 06 51 29.9
South of Fiji Islands
(h = N).

" 11 UPP ePKPl 07 17 26
South of Fiji Islands
(h = N).

" 11 KIR iP 21 42 29.0
Algeria (h = 10 km).

" 12 UPP iP 02 59 41.2
KIR iP 03 01 23.4
UME iP 03 00 32.1
Poland (h = 10 km).

1982
Sep. 12 KIR iPKP 07 40 45.7
Fiji Islands region
(h = 580 km).

" 12 UPP iPKPl 09 05 44.9
Kermadec Islands region
(h = N).

" 12 UPP iP 09 33 17.4
i 09 33 18.9
iS 09 42 21
micr sec
i Z' 0.1 0.6
Mx Z 5.4 23
KIR iP 09 32 24.3
i 09 32 25.7
micr sec
i Z' 0.4 1.2
Mx Z 4.6 18
UME iP 09 32 51.3
Fox Islands, Aleutian Is.
(h = N).
m = 6.2, M = 5.7 (UPP,KIR).

" 12 UME iP 09 39 06.2
Fox Islands, Aleutian Is.
(h = N).

" 12 UME iP 10 21 57.3
Fox Islands, Aleutian Is.
(h = N).

" 12 UPP iP 12 10 46.7
ipP 12 10 57.0
KIR iP 12 09 53.4
ipP 12 10 04.0
micr sec
P Z' 0.1 1.0
UME iP 12 10 20.2
ipP 12 10 30.6
Fox Islands, Aleutian Is.
h = 35 km (UPP,KIR,UME).

" 12 UPP iP 17 01 31.3
i 17 01 42.2
micr sec
P Z' 0.1 0.9
KIR iP 17 00 38.3
micr sec
P Z' 0.2 1.0
UME iP 17 01 05.3
Fox Islands, Aleutian Is.
(h = N).
m = 6.0 (UPP,KIR).

" 13 UPP iP 01 01 18.5
UME iP 01 00 52.1
Fox Islands, Aleutian Is.
(h = N).

UPP = Uppsala, KIR = Kiruna, UME = Umå, UDD = Uddeholm, DEL = Delary, MYR = Myrviken

1982
Sep. 13 KIR iP 01 39 32.5
Java (h = 60 km).

" 13 KIR iP 11 44 57.0
Fox Islands, Aleutian Is.
(h = N).

" 13 UME iP 17 02 37.5
Honshu, Japan (h = 60 km).

" 13 UPP iP 18 14 57.0
KIR iP 18 14 16.9
UME iP 18 14 34.6 C
Near e. coast of Honshu,
Japan (h = 60 km).

" 14 UPP iPKP 04 12 33.5
UME iPKP 04 12 25.0
Gilbert Islands region
(h = N).

" 14 UPP ePKPl 05 31 31
i 05 31 32.7
UME iPKPl 05 31 17.2
i 05 31 21.2
Kermadec Islands region
(h = N).

" 14 UME iPP 09 38 22.3
Buru (h = N).

" 14 UPP iP 11 47 51.2 D
i 11 48 18.4
micr sec
P Z' 0.1 1.0
KIR iP 11 47 08.3
micr sec
P Z' 0.1 0.9
UME iP 11 47 27.2 D
Hokkaido, Japan region
(h = 210 km).
m = 5.5 (UPP,KIR).

" 14 UPP iPKPl 13 01 58.2
i 13 02 05.5
i 13 02 17.9
micr sec
i Z' 0.1 0.8
UME iPKPl 13 01 48.0
Kermadec Islands region
(h = N).

" 14 UPP iPKPl 15 27 24.1
Kermadec Islands region
(h = N).

1982
Sep. 14 UPP Mx 19 23
micr sec
Mx Z 12 21
KIR Mx 19 24
micr sec
Mx Z 4.3 19
East Papua New Guinea region
(h = 35 km).
M = 6.3 (UPP,KIR).

" 14 UPP iP 21 30 00.5
KIR iP 21 30 44.0
UME eP 21 30 24
Ascension Island region
(h = 10 km).

" 14 UME iP 22 13 16.7

" 15 UPP iP 23 02 14.4
South of Honshu, Japan
(h = N).

" 15 UPP iP 20 36 34.2
KIR iP 20 36 44.0
UME iP 20 36 43.0
i 20 37 22.4
iPP 20 40 59.9
Peru (h = 130 km).

" 15 UPP iP 20 52 34.3
KIR iP 20 52 33.4
UME iP 20 52 34.6

" 16 UPP iP 02 31 57.8 D
i 02 32 43.0
micr sec
P Z' 0.1 0.8
KIR iP 02 31 24.5 D
micr sec
P Z' 0.1 0.8
UME iP 02 31 38.8 D
South of Honshu, Japan
(h = 370 km).
m = 5.6 (UPP,KIR).

" 16 UPP iP 06 57 01.7
KIR iP 06 56 08.5
UME iP 06 56 35.3
Fox Islands, Aleutian Is.
(h = N).

" 16 KIR iPKP 11 59 38.1
Gilbert Islands region
(h = N).

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

1982
Sep. 16 UPP iP 12 31 05.5
i 12 31 11.1
KIR eP 12 31 27
Carlsberg Ridge (h = 10 km).

" 16 UME iP 19 27 15.2

" 17 UPP ePKP 03 16 40
KIR iPKP 03 16 27.3
UME iPKP 03 16 33.5
Solomon Islands (h = 55 km).

" 17 KIR iP 03 22 15.9
Mariana Islands region
(h = 40 km).

" 17 UPP i 11 29 00.5
iSgl 11 29 15.4
KIR iPgl 11 25 41.7
iSgl 11 26 06.0
UME iPgl 11 26 28.6
iSn 11 27 04.6
iSgl 11 27 23.8
UDD iSgl 11 29 08.1
MYR iPgl 11 26 34.2
iSgl 11 27 39.4
Coast of Nordland, Norway,
67.8°N, 15.6°E.
Origin time = 11 25 09.
M_L(UPP) = 3.3 (0.25) 7.

" 17 UPP iPKPl 13 46 49.3
iSKPl 13 49 39.4
KIR iPKP 13 46 38.9
iSKPl 13 49 18.1
UME iPKP 13 46 42.9
iSKPl 13 49 29.0
South of Fiji Islands
(h = 550 km).

" 17 UPP iP 17 05 46.9
KIR iP 17 05 22.1
Southwestern Ryukyu Islands
(h = 70 km).

" 17 UPP iPKPl 20 40 19.8
South of Fiji Islands
(h = 470 km).

" 18 UPP iP 05 58 52.4
KIR iP 05 58 18.1
UME iP 05 58 29.5
South of Honshu, Japan
(h = 70 km).

1982
Sep. 18 UPP iP 18 31 07.4
KIR iP 18 30 29.0
UME iP 18 30 46.0
Near e. coast of Honshu,
Japan (h = 50 km).

" 18 UPP iPKPl 21 39 45.0
UME iPKPl 21 39 32.4
South of Fiji Islands
(h = 50 km).

" 18 UPP iPKPl 21 57 17.2
i 21 57 35.6
KIR iPKP 21 57 01.2
Kermadec Islands region
(h = N).

" 19 KIR eP 21 04 02
UME iP 21 04 12.1

" 20 UPP iP 01 27 41.9
i 01 28 18.4
micr sec
Mx Z 2.0 15
KIR iP 01 28 48.9
UME iP 01 28 14.2
ipP 01 28 23.9
Crete (h = 35 km).

" 20 UPP eP 01 34 59
UME iP 01 34 33.8

" 20 UPP iPKPl 13 17 19.5
i 13 17 27.2
micr sec
Mx Z 4.6 19
KIR iPKP 13 17 06.9
micr sec
Mx Z 1.7 17
UME iPKP 13 17 13.3
South of Tonga Islands
(h = N).
M = 6.1 (UPP,KIR).

" 20 UPP iPKP 13 39 30.0
i 13 39 40.5
Kermadec Islands region
(h = 45 km).

" 20 UPP iPKPl 13 52 53.3
South of Tonga Islands
(h = N).

" 20 UPP iPKPl 14 08 08.0
iPP 14 10 48.2
(cont.)

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

1982
Sep. 20 (cont.)
KIR iPKP 14 07 56.1
UME iPKP1 14 07 58.2
South of Tonga Islands
(h = N).

" 20 UPP iPKP 14 15 51.8
ePKP1 14 15 59
iPKP2 14 16 06.2
KIR iPKP1 14 16 00.1
iPKP2 14 16 05.9
UME iPKP1 14 15 59.6
iPKP2 14 16 05.1
West of Macquarie Island
(h = 10 km).

" 20 UPP iP 14 36 11.2

" 20 UPP iP 14 42 50.1

" 20 UPP iP 14 52 32.1

" 20 KIR iP 15 01 00.4

" 20 UPP iP 16 38 25.5
KIR iP 16 38 36.3
UME iP 16 38 34.8
Windward Islands (h = 5 km).

" 20 UPP iPKP1 17 24 38.1
micr sec
PKP1 Z' 0.2 0.7
UME iPKP1 17 24 27.4
South of Fiji Islands
(h = N).

" 20 UPP iP 17 27 12.5

" 20 UPP iP 17 29 59.2

" 20 UPP iP 17 32 42.9

" 20 KIR iPKP1 17 46 36.1
UME iPKP1 17 46 34.3
West of Macquarie Island
(h = 10 km).

" 20 UPP ePKP1 19 50 02
South of Fiji Islands
(h = N).

" 20 UPP iPKP1 19 52 20.2
UME iPKP1 19 52 10.5
Kermadec Islands region
(h = N).

1982
Sep. 21 UPP iPKP 01 47 11.3
micr sec
Mx Z 10 18
KIR iPKP 01 47 00.6
micr sec
Mx Z 1.9 18
UME iPKP 01 47 05.2
Dentrecasteaux Islands region
(h = 25 km).
M = 6.2 (UPP,KIR).

" 21 UPP iP 03 03 56.4
iPn 03 05 00.4
KIR iP 03 03 40.6 C
micr sec
P Z' 0.1 0.6
UME iP 03 03 41.2
Eastern Kazakh SSR.
Underground explosion.

" 21 UPP eP 05 44 34
KIR eP 05 45 16
UME iP 05 44 50.4
Western Caucasus (h = N).

" 21 UPP iP 12 34 41.1
KIR iP 12 34 16.3
Taiwan region (h = 130 km).

" 21 UPP iP 12 48 35.4
India-Bangladesh border
region (h = N).

" 21 UPP iP 19 56 44.8
micr sec
P Z' 0.1 0.9
KIR iP 19 57 52.0
micr sec
P 0.1 0.9
UME iP 19 57 16.9
Crete (h = 30 km).
m = 5.6 (UPP,KIR).

" 21 UME iP 22 12 19.4
Near e. coast of Honshu,
Japan (h = N).

" 22 UPP iP 12 08 55.5
KIR iP 12 09 03.8
Afghanistan-USSR border
region (h = 90 km).

" 22 UPP iP 15 42 46.9
Costa Rica (h = 40 km).

" 22 UPP iPKP1 21 45 28.2
South of Fiji Islands (h = N).

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

1982
Sep. 22 UPP iP 21 49 35.6
KIR iP 21 49 37.3
Southern Sinkiang Prov., China (h = N).

" 23 UPP iPKPl 02 59 37.1
South of Fiji Islands (h = N).

" 23 UPP iP 04 32 18.7
KIR iP 04 31 48.9
UME iP 04 32 00.7
Mariana Islands region (h = 320 km).

" 23 UME iP 16 11 34.1
Southern Nevada.
Underground explosion.

" 23 UME iP 17 11 34.9
Southern Nevada.
Underground explosion.

" 24 UPP iPKPl 00 19 12.9 C
South of Fiji Islands (h = N).

" 24 UPP ePKPl 00 27 27
UME iSKPl 00 30 08.3
South of Fiji Islands (h = 550 km).

" 24 UPP iP 07 52 15.1
KIR iP 07 51 40.7
UME iP 07 52 00.9
California-Nevada border region (h = 5 km).

" 24 UPP iP 19 11 11.6
KIR iP 19 10 42.9
UME iP 19 10 55.6
ipP 19 11 05.5
Mariana Islands region (h = 40 km).

" 24 UPP eP 20 00 34
KIR iP 20 00 20.4
UME iP 20 00 23.5
Minihassa Peninsula (h = 80 km).

" 24 UME iPKP 21 30 08.9
Gilbert Islands region (h = 30 km).

" 24 UPP iP 22 48 04.1
KIR eP 22 47 44
Mindanao, Philippine Islands (h = 70 km).

1982
Sep. 24 UPP eP 23 05 06
micr sec
Mx Z 3.3 20
KIR eP 23 04 49
micr sec
Mx Z 2.3 18
UME iP 23 04 58.1
iS 23 15 58
Mindanao, Philippine Islands (h = 45 km).
M = 5.8 (UPP,KIR).

" 25 UME iP 03 10 37.3

" 25 KIR iP 03 24 40.1
UME iP 03 24 38.2
Southern Sumatera (h = 60 km).

" 25 UPP iP 09 01 58.4
KIR iP 09 01 30.9
micr sec
P Z' 0.1 1.0
UME iP 09 01 42.6
Mariana Islands region (h = 55 km).

" 25 KIR iPKP 09 21 48.0
UME iPKP 09 21 54.3
Fiji Islands region (h = 540 km).

" 25 UPP iPKPl 13 36 10.0
South of Fiji Islands (h = 530 km).

" 25 UPP iPKP 16 22 59.2
KIR iPKP 16 22 44.9
UME iPKP 16 22 51.7
Santa Cruz Islands (h = 40 km).

" 25 UPP iP 18 06 36.0
i 18 07 14.5
iPn 18 07 31.9
KIR iP 18 05 47.0
UME iP 18 06 06.5
iPn 18 06 43.9
Central Siberia.
Underground explosion.

" 25 UPP iP 18 22 14.0
KIR iP 18 21 57.5
UME iP 18 22 02.8
Banda Sea (h = 120 km).

" 25 UME iP 22 16 29.8
Sea of Japan (h = 370 km).

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

1982
Sep. 26 UPP iP 01 20 10.7 C
i 01 20 21.7
micr sec
P Z' 0.1 0.9
KIR eP 01 19 19
i 01 19 22.8
ipP 01 19 32.6
micr sec
P Z' 0.1 0.8
UME iP 01 19 42.9
ipP 01 19 57.0
Kuril Islands region.
h = 50 km (KIR,UME).
m = 5.9 (UPP,KIR).

" 26 KIR iP 01 57 01.3
UME iP 01 57 13.4
Mariana Islands region
(h = 310 km).

" 26 UPP iP 04 57 19.6
ipP 04 57 48.5
KIR iP 04 56 32.1 C
micr sec
P Z' 0.1 0.6
UME iP 04 56 53.7 C
Kuril Islands (h = 110 km).

" 26 KIR iP 08 45 09.4 C
micr sec
P Z' 0.2 1.0
UME iP 08 45 15.1 C
Mindanao, Philippine Islands
(h = 190 km).

" 26 KIR iP 11 38 00.8
UME iP 11 37 56.6
Andaman Islands region
(h = N).

" 26 UPP iPgl 13 40 31.2 C
iSgl 13 40 41.1
UME iSgl 13 42 38.2
UDD ePgl 13 40 41
iSgl 13 40 59.3
DEL eSgl 13 42 03
Västmanland, Sweden,
59.6°N, 16.2°E.
Origin time = 13 40 18.
M_L(UPP) = 2.3 (0.24) 2.
Felt.

" 26 UME iPKP 14 19 34.0
Gilbert Islands region
(h = 25 km).

1982
Sep. 26 UME iP 19 23 20.3
Iceland region (h = 10 km).

" 27 UME iP 05 08 12.4

" 27 UPP eP 09 09 07
KIR iP 09 08 48.4
UME eP 09 08 55
Molucca Passage (h = 60 km).

" 27 KIR iP 11 22 27.8
UME iP 11 22 21.6
Andaman Islands region
(h = N).

" 27 KIR eP 12 45 15
UME iP 12 45 06.5
Tajik-Sinkiang border region
(h = N).

" 27 KIR iP 20 20 23.1
Jan Mayen Island region
(h = 10 km).

" 28 UPP iSgl 12 30 32.9
UME iSgl 12 31 42.8
UDD iPn 12 28 37.3
iPgl 12 38 45.2
iSgl 12 29 33.9
DEL iSn 12 29 48.9
iSgl 12 30 06.2
MYR iSgl 12 30 20.3
Southwestern Norway, near
59 1/2°N, 6 1/2°E.
Origin time = 12 27 39.
M_L(UPP) = 2.9 (0.21) 3.

" 28 UPP iP 13 43 21.8
ipP 13 43 30.9
iS 13 47 24
micr sec
Mx Z 11 14
KIR iP 13 44 35.6
micr sec
Mx Z 5.9 13
UME iP 13 44 02.0
ipP 13 44 11.2
iS 13 48 28
Ionian Sea.
h = 35 km (UPP,UME).
M = 5.5 (UPP,KIR).

" 28 UPP i(P) 14 14 26.8

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

1982
Sep. 28 UPP iPKPl 15 34 02.0
i 15 34 17.9
micr sec
Mx Z 6.0 20
KIR iPKP 15 33 51.3
micr sec
Mx Z 5.2 21
UME iPKP 15 33 52.1
i 15 34 10.2
South of Fiji Islands
(h = 40 km).
M = 6.3 (UPP,KIR).

" 28 UPP iP 22 55 38.6
KIR eP 22 55 10
UME iP 22 55 21.6
Mariana Islands region
(h = N).

" 29 UPP iP 04 00 39.3
ipP 04 00 44.4
KIR iP 04 00 31.1
ipP 04 00 35.8
micr sec
P Z' 0.1 1.5
UME iP 04 00 38.3
ipP 04 00 43.1
Guatemala.
h = 15 km (UPP,KIR,UME).

" 29 UPP iP 04 32 00.3 D
iPP 04 33 36.0
micr sec
P Z' 0.1 1.0
Mx Z 7.2 16
KIR iP 04 32 05.9 D
iPP 04 33 42.4
micr sec
P Z' 0.2 1.0
Mx Z 2.2 10
UME iP 04 31 56.9 D
i(PP) 04 33 27.0
Tajik SSR (h = 70 km).
m = 5.8, M = 5.5 (UPP,KIR).

" 29 UPP eP 06 01 18
KIR eP 06 01 26
UME iP 06 01 15.0
Tajik SSR (h = 60 km).

" 29 UPP iP 06 03 12.5 D
ipP 06 03 16.6
micr sec
P Z' 0.2 1.4
KIR iP 06 03 03.8 D
micr sec
P Z' 0.5 1.5
(cont.)

1982
Sep. 29 (cont.)
UME iP 06 03 11.0 D
ipP 06 03 15.2
Guatemala.
h = 15 km (UPP,UME).
m = 6.3 (UPP,KIR).

" 29 UME iP 09 41 46.4
Volcano Islands region
(h = 90 km).

" 29 UPP iP 20 14 03.4
UME iP 20 13 37.2
Kuril Islands (h = N).

" 29 UPP iPKP 21 05 34.5
UME iPKP 21 05 28.0
Solomon Islands (h = 60 km).

" 29 UPP iPKPl 22 18 09.8
UME iPKPl 22 17 58.7
Kermadec Islands (h = N).

" 30 UPP i 00 17 39.0
UME iP 00 18 16.5
Southern Italy (h = 10 km).

" 30 UPP ePKPl 02 47 06
Fiji Islands region
(h = 410 km).

" 30 UPP iP 05 52 17.5
KIR iP 05 52 21.4
UME iP 05 52 13.4
Tajik-Sinkiang border region
(h = 190 km).

" 30 KIR iP 13 46 17.6
UME iP 13 46 19.3
Virgin Islands (h = 55 km).

" 30 KIR iP 15 26 17.4
UME iP 15 26 08.2
Tajik SSR (h = N).

" 30 UPP iP 15 42 02.9
Southern Greece (h = 80 km).

June 4, 1984

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Conny Holmqvist
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Rutger Wahlström

SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

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

U P P S A L A, K I R U N A, U M E Å, U D D E H O L M,

D E L A R Y and M Y R V I K E N

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

O C T O B E R 1 - 31, 1982

1982 Oct. 1 UPP iP 05 46 40.5
micr sec
Mx Z 0.9 23
KIR iP 05 47 24.9
UME iP 05 47 04.1
North of Ascension Island
(h = 10 km).

" 1 KIR iP 12 18 06.5
Luzon, Philippine Islands
(h = 60 km).

" 1 UPP iP 14 41 04.2
KIR iP 14 40 31.0
Central California
(h = 10 km).

" 1 KIR eP 17 04 18
UME iP 17 04 35.5
Honshu, Japan (h = 150 km).

" 2 UME iP 00 40 17.0
Bonin Islands region
(h = 490 km).

" 2 KIR iP 04 48 02.9
UME iP 04 48 30.4
Unimak Island region
(h = N).

" 2 KIR iP 05 07 52.6
Sumbawa Island region
(h = 90 km).

" 2 UPP iPKP 08 45 16.8
iSKP1 08 48 26.4
(cont.)

1982 Oct. 2 (cont.)
KIR iPKP 08 45 03.6
micr sec
PKP Z' 0.1 0.8
UME iPKP 08 45 09.6
i 08 45 10.4
Vanuatu Islands (h = 150 km).

" 3 UPP iPKP 09 00 19.8
Gilbert Islands region
(h = N).

" 4 UPP iP 07 57 48.8
i 07 58 02.7
KIR iP 07 56 53.8
i 07 57 10.1
Andreanof Islands, Aleutian
Is. (h = 40 km).

" 4 UPP iP 09 05 39.2
KIR iP 09 05 20.7
Mindanao, Philippine Islands
(h = 90 km).

" 4 UPP iPKP1 16 00 50.8
KIR ePKP1 16 00 32
Kermadec Islands region
(h = 70 km).

" 4 KIR iPKP 22 29 03.0
Vanuatu Islands (h = 140 km).

" 5 UPP iPKP 04 28 08.3
Gilbert Islands region
(h = N).

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

1982
Oct. 5 UPP iPKS 09 37 06.2
micr sec
Mx Z 1.1 20
KIR iPKP 09 33 29.8
micr sec
Mx Z 0.9 20
UME iPKP 09 33 39.7
Vanuatu Islands (h = 20 km).
M = 5.5 (UPP,KIR).

" 5 KIR iPKP 10 29 56.0
Vanuatu Islands (h = 230 km).

" 5 UPP iPKP1 10 34 44.7
iPKP2 10 34 48.9
KIR ePKP1 10 34 24
UME iPKP1 10 34 32.7
Kermadec Islands (h = 55 km).

" 5 UPP iPKP 15 45 51.3
UME iPKP 15 45 35.2

" 5 UPP iP 19 46 45.3
KIR iP 19 45 04.3
i 19 45 07.0
micr sec
Mx Z 0.6 16
UME iP 19 45 59.5
Svalbard region (h = 10 km).

" 5 KIR iP 19 56 51.3
UME iP 19 57 06.1
Near s. coast of southern
Honshu (h = 390 km).

" 5 UPP iPKP1 20 36 25.8
iPKP2 20 36 30.0
KIR iPKP1 20 36 07.6
UME iPKP1 20 36 14.1
Kermadec Islands region
(h = 330 km).

" 5 UPP Mx 21 42
micr sec
Mx Z 1.3 24
KIR Mx 21 42
micr sec
Mx Z 0.9 19
Loyalty Islands region
(h = 40 km).
M = 5.6 (UPP,KIR).

" 5 UPP Mx 22 45
micr sec
Mx Z 1.1 21
KIR Mx 22 55
micr sec
Mx Z 0.7 17
(cont.)

1982
Oct. 5 (cont.)
South Atlantic Ridge.
M = 5.5 (UPP,KIR).

" 6 KIR iP 14 41 15.1
UME iP 14 41 06.5
Tajik SSR (h = 70 km).

" 6 UME iPKP 21 32 26.5
Loyalty Islands region
(h = N).

" 7 UPP iP 02 02 50.0
KIR iP 02 02 43.8
UME iP 02 02 42.6
Burma-India border region
(h = 90 km).

" 7 UDD iSgl 03 09 40.8
Bohuslän, Sweden,
58.3°N, 12.0°E.
Origin time = 03 08 40.
M_L(UPP) = 2.0 1.
By combination with SKI
network readings.

" 7 UPP iP 07 29 08.9
iPP 07 33 43.6
i 07 35 23.6
iSKS 07 38 58
iS 07 40 15
iSP 07 41 54.2
micr sec
Mx Z 4.9 20
KIR iP 07 28 55.5
ipP 07 30 49.7
i 07 32 14.9
iPP 07 33 15.6
iPKKP 07 44 56.0
micr sec
P Z' 0.2 1.1
Mx Z 5.7 20
UME iP 07 28 59.4
ipP 07 30 55.1
iPP 07 31 17.6
iSKS 07 38 48.9
iS 07 39 59
iPKKP 07 44 53.6
Banda Sea.
h = 520 km (KIR,UME).
M = 6.1 (UPP,KIR).
M uncorrected for focal depth.

" 7 UPP eP 10 19 06
KIR iP 10 20 12.4
Crete (h = 70 km).

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

1982
Oct. 7 UPP iP 11 13 21.8
micr sec
P Z' 0.1 0.9
KIR iP 11 12 47.7
UME iP 11 13 02.1
South of Honshu, Japan
(h = 390 km).

" 7 KIR eP 22 08 21
UME iP 22 08 37.4
South of Honshu, Japan
(h = N).

" 7 KIR iP 23 48 23.4
UME iP 23 48 12.5
Tajik SSR (h = N).

" 8 UPP iSg1 05 31 25.2
KIR ePn 05 29 48
iPg1 05 29 54.3
iSg1 05 30 38.3
UME iPg1 05 29 08.9 C
iSg1 05 29 18.0
UDD iSg1 05 31 44.2
MYR iPg1 05 29 53.0
iSg1 05 30 32.7
Västerbotten, Sweden,
64.5°N, 20.7°E.
Origin time = 05 28 56.
M_L (UPP) = 2.9 (0.23) 5.
Felt.

" 8 KIR iP 09 14 22.0
Southern Sumatera (h = 90 km).

" 8 KIR iP 13 45 14.9
micr sec
P Z' 0.1 1.0
UME iP 13 45 16.4
Yunnan Province, China
(h = N).

" 8 UPP iP 16 43 26.8 C
KIR iP 16 42 59.3
UME iP 16 43 10.0
Southwestern Ryukyu Islands
(h = 110 km).

" 8 UPP iP 17 29 33.4
South Atlantic Ridge
(h = 10 km).

" 8 UPP iP 19 06 50.2
KIR iP 19 06 57.3
UME iP 19 06 47.4
Afghanistan-USSR border
region (h = 80 km).

1982
Oct. 9 UPP iS 01 13 39
KIR
micr sec
Mx Z 0.2 12
UME iP 01 04 16.9
Off east coast of Honshu,
Japan (h = N).

" 9 UPP 13 00
Large explosion in the
Dannemora iron ore mine,
Uppland, Sweden, 60.1°N,
17.5°E, followed by several
rockbursts during the after-
noon and night.

" 9 UME iPKP 19 59 06.0
Gilbert Islands region
(h = N).

" 9 UME iP 21 15 06.5

" 10 UPP iP 05 07 56.2 C
KIR iP 05 07 04.8 C
UME iP 05 07 26.2 C
Central Siberia.
Underground explosion.

" 10 UPP iP 05 26 22.2
Luzon, Philippine Islands
(h = 15 km).

" 10 UPP iP 11 20 22.4
micr sec
Mx Z 1.4 20
KIR eP 11 19 25
micr sec
Mx Z 1.2 16
UME iP 11 20 04.4
Jan Mayen Island region
(h = 10 km).

" 10 UPP
micr sec
Mx Z 3.1 21
KIR eP 12 10 20
micr sec
Mx Z 1.2 16
UME iP 12 10 53.1
Jan Mayen Island region
(h = 10 km).

" 10 UDD iSg1 14 07 28.3
Värmland, Sweden,
59.3°N, 13.1°E.
Origin time = 14 07 02.
Solution from SKI network
readings.

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

1982
Oct. 10 UPP iP 17 34 18.8 C
iS 17 43 32
micr sec
P Z' 0.1 1.1
Mx Z 1.8 19
KIR iP 17 33 37.0 C
micr sec
P Z' 0.1 1.0
Mx Z 1.8 16
UME iP 17 33 55.5 C
ipP 17 34 04.5
Off east coast of Honshu, Japan (h = 30 km).
m = 5.8, M = 5.4 (UPP,KIR).

" 10 MYR iPgl 18 09 37.1
iSgl 18 10 01.8
Central Norway, near 63°N, 10°E.
Origin time = 18 09 04.
Felt.
By combination with NORSAR readings.

" 11 UPP iP 03 25 05.3
micr sec
Mx Z 2.0 15
KIR iP 03 26 11.4
micr sec
P Z' 0.1 0.6
UME eP 03 25 41
Dodecanese Islands (h = 80 km).

" 11 UPP iP 07 19 25.3
iS 07 22 50.2
micr sec
P Z' 0.4 0.6
KIR iP 07 17 54.4
iS 07 20 09.0
micr sec
P Z' 0.5 1.2
UME iP 07 18 32.3
iS 07 21 15.0
Novaya Zemlya.
Underground explosion.

" 11 UPP iPKP1 16 54 21.5
Kermadec Islands region (h = 45 km).

" 12 UPP iPKP1 03 31 07.3
South of Fiji Islands (h = 660 km).

" 12 KIR eP 04 57 19
Afghanistan-USSR border region (h = N).

1982
Oct. 12 UPP i(P) 16 41 03.3

" 12 UPP iP 24 00 08.1
UME iP 23 59 41.8
Kuril Islands (h = N).

" 13 UPP iPKP2 00 39 45.3
UME iPKP1 00 39 28.2
Kermadec Islands region (h = 80 km).

" 13 UPP eP 03 56 59
KIR eP 03 57 46
Turkey (h = N).

" 13 KIR iP 17 38 45.2
UME iP 17 38 48.7
Banda Sea (h = 160 km).

" 14 KIR eP 04 56 18
UME iP 04 56 45.0
Southern Alaska (h = 15 km).

" 14 UPP iP 13 47 17.3
KIR iP 13 48 15.0
Red Sea (h = 10 km).

" 14 UPP iP 21 51 41.9 C
KIR iP 21 51 10.9 C
micr sec
P Z' 0.1 0.6
UME iP 21 51 24.4 C
Bonin Islands region (h = 490 km).

" 14 UME iP 22 09 44.9
Sea of Japan (h = 430 km).

" 15 KIR iP 01 07 05.0
Mindanao, Philippine Islands (h = 90 km).

" 15 KIR eP 03 02 07
Soutern Iran (h = N).

" 15 UPP iP 03 11 17.5
i 03 11 22.6
KIR eP 03 11 38
UME iP 03 11 23.4
i 03 11 33.2
Mid-Indian Rise (h = 10 km).

" 15 KIR iP 11 10 28.2
UME iP 11 10 47.4
North Pacific Ocean (h = 5 km).

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

1982
Oct. 15 UPP iSgl 17 23 28.7
UDD i 17 22 30.4
iSgl 17 22 33.5
MYR iPgl 17 21 32.8
i 17 21 48.8
iSgl 17 22 25.2
Southwestern Norway, near 62°N, 6°E.
Origin time = 17 20 21.
M_L (UPP) = 2.8 1.
Felt.
By combination with Bergen readings.

" 16 UPP iP 03 14 22.7
KIR iP 03 13 44.7
UME iP 03 14 00.4
Near s. coast of Honshu, Japan (h = 120 km).

" 16 UPP iP 06 04 55.7 C
i 06 04 56.2
micr sec
i Z' 0.6 0.8
Mx Z 0.4 10
KIR iP 06 05 28.0 C
micr sec
P Z' 0.3 0.8
UME iP 06 05 05.0 C
Southwestern USSR.
m = 6.1 (UPP,KIR).
Underground explosion.

" 16 UPP iP 06 09 56.4 C
i 06 09 57.0
micr sec
i Z' 0.5 0.7
Mx Z 0.4 10
KIR iP 06 10 28.1 C
micr sec
P Z' 0.3 0.5
UME iP 06 10 05.2 C
Southwestern USSR.
m = 6.2 (UPP,KIR).
Underground explosion.

" 16 UPP eP 06 14 56
i 06 14 56.3
micr sec
i Z' 0.8 0.7
Mx Z 0.4 11
KIR iP 06 15 28.1 C
micr sec
P Z' 0.2 0.5
UME iP 06 15 05.2 C
Southwestern USSR.
m = 6.2 (UPP,KIR).
Underground explosion.

1982
Oct. 16 UPP iP 06 19 56.2 C
i 06 19 56.6
micr sec
i Z' 1.3 0.7
Mx Z 0.6 11
KIR iP 06 20 28.4 C
micr sec
P Z' 0.5 0.9
UME iP 06 20 04.3 C
Southwestern USSR.
m = 6.4.
Underground explosion.

" 16 KIR iP 08 54 27.3
UME iP 08 54 16.6
Afghanistan-USSR border region (h = 220 km).

" 16 UPP iP 19 01 24.1
i 19 01 37.3
KIR eP 19 02 47
UME iP 19 02 04.5
Romania (h = 140 km).

" 16 UPP eP 20 41 05

" 16 KIR iP 22 44 51.4
Jan Mayen Island region (h = 10 km).

" 17 UPP iP 04 54 10.2
KIR iP 04 55 40.1
UME iP 04 54 59.4
Central Italy (h = 20 km).

" 17 UPP iP 04 58 36.3
KIR iP 05 00 01.9
UME iP 04 59 20.6
Central Italy (h = 10 km).

" 17 UPP iP 05 12 00.6
Off coast of Oregon (h = 10 km).

" 17 UPP iP 06 49 39.1
KIR iP 06 51 07.7
micr sec
P Z' 0.1 1.0
UME iP 06 50 24.4
Central Italy (h = 15 km).

" 17 UPP iP 11 00 46.7
micr sec
P Z' 0.1 1.2
KIR iP 11 02 14.8
micr sec
P Z' 0.1 1.0
UME iP 11 01 34.7
Central Italy (h = 10 km).

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

1982					
Oct.	17	UPP	iP	18 22 48.3	
				micr	sec
			Mx Z	1.9	20
		KIR	iP	18 21 57.8	
		UME	iP	18 22 22.0	
		Kuril Islands (h = 45 km).			
"	18	UPP	ePn	02 59 00	
			iPgl	02 59 03.0	
			i	02 59 03.6	
			iSgl	02 59 43.1	
		KIR	iSgl	03 02 20.8	
		UME	iSgl	03 00 46.6	
		UDD	iPgl	02 58 28.4	
			iSgl	02 58 44.6	
		DEL	e	03 00 08	
			iSgl	03 00 20.5	
		Southeastern Norway, 60.6°N, 11.4°E. Origin time = 02 58 07. M_L(UPP) = 3.2 (0.23) 7. Felt.			
"	18	KIR	iPgl	14 41 59.8	
			iSgl	14 42 29.2	
		UME	iSn	14 43 24.6	
			iSgl	14 43 44.3	
		MYR	iSn	14 43 36.2	
			iSgl	14 43 54.1	
		Coast of Nordland, Norway, 67.9°N, 14.6°E. Origin time = 14 41 21. M_L(UPP) = 3.0 (0.17) 5.			
"	18	UME	iP	15 34 10.5	
		Central Italy (h = 20 km).			
"	18	UPP	iP	20 07 47.5	
"	19	UPP	iP	01 26 57.0	
		KIR	iP	01 28 22.8	
				micr	sec
			P Z'	0.1	1.0
		UME	iP	01 28 42.4	
		Central Italy (h = 10 km).			
"	19	KIR	iPKP	04 01 36.7	
		UME	iPKP	04 01 43.1	
		Tonga Islands (h = 290 km).			
"	19	UPP	iP	12 56 19.2	
		KIR	iP	12 55 45.7	
		Northeastern China (h = N).			
"	19	UPP	iPKP	16 38 02.1	
			i	16 49 51	
			i	16 55 49	
				micr	sec
			Mx Z	3.6	26
		(cont.)			

1982					
Oct.	19	(cont.)			
		KIR	iPKP	16 37 48.8	
				micr	sec
			Mx Z	1.9	20
		UME	iPKP	16 37 57.3	
		Solomon Islands (h = 40 km). M = 5.9 (UPP,KIR).			
"	19	KIR	iP	19 29 22.2	
		Gulf of Alaska (h = N).			
"	20	KIR	iP	05 46 31.3	
				micr	sec
			Mx Z	0.6	16
		Off east coast of Honshu, Japan (h = 40 km).			
"	20	KIR	iPgl	10 53 05.3	
			iSgl	10 53 34.2	
		UME	iSgl	10 54 49.3	
		MYR	iPn	10 53 41.7	
			iSn	10 54 40.1	
			iSgl	10 54 57.2	
		Coast of Nordland, Norway, 67.9°N, 14.6°E. Origin time = 10 52 26. M_L(UPP) = 3.2 (0.17) 5.			
"	20	KIR	iPKP	18 34 11.3	
		Bouvet Island region (h = 10 km).			
"	20	UPP	iPKPl	18 55 40.4	
		Norfolk Island region (h = 25 km).			
"	20	UME	iP	19 34 30.4	
		South of Honshu, Japan (h = 55 km).			
"	20	UPP	iP	20 13 45.7	
			iS	20 23 29	
				micr	sec
			Mx Z	12	13
		KIR	iP	20 13 20.0	
				micr	sec
			Mx Z	10	12
		UME	iP	20 13 32.9	
			iS	20 23 02	
		Taiwan (h = N). M = 6.4 (UPP,KIR).			
"	21	UME	iP	06 00 26.3	
		Ryukyu Islands (h = 50 km).			
"	21	UPP	i(P)	06 36 35.3	
"	21	KIR	eP	09 49 01	
		Kirgiz SSR (h = N).			

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

1982
Oct. 21 KIR iPKP 10 05 45.1
UME iPKP 10 05 49.8
Vanuatu Islands (h = 180 km).

" 21 UPP iP 11 21 18.1
KIR iP 11 20 24.6
UME iP 11 20 50.5
Near Islands, Aleutian Is.
(h = N).

" 21 KIR iP 11 25 12.3
UME iP 11 25 28.8
Near east c. of Honshu,
Japan (h = 50 km).

" 21 UPP iP 23 21 22.7
KIR iP 23 22 00.4
UME iP 23 21 36.3
Southern Iran (h = 35 km).

" 22 UPP iP 02 39 39.4
KIR iP 02 38 54.1
UME iP 02 39 14.6
Kuril Islands (h = 35 km).

" 22 UPP iP 10 30 30.0
UME iP 10 30 17.9
Leyte, Philippine Islands
(h = 45 km).

" 22 UME iP 13 37 56.4
Afghanistan-USSR border
region (h = N).

" 22 KIR iPg1 17 44 39.2
iSg1 17 44 53.7
UME iSg1 17 45 54.6
Swedish Lapland,
66.9°N, 20.3°E.
Origin time = 17 44 20.
M_L(UPP) = 2.4 (0.29) 3.

" 23 UPP iP 11 51 48.4
Kuril Islands (h = N).

" 23 UPP iPKP 15 22 53.0
UME iPKP 15 22 44.4

" 23 UPP iPKP1 23 51 51.4
South of Fiji Islands
(h = 410 km).

" 24 UME iPKP 04 30 44.9
East Papua New Guinea
region (h = 180 km).

" 24 UME iP 04 53 46.3
Gulf of Alaska (h = N).

1982
Oct. 24 UPP iPKP1 08 41 44.0
UME iPKP1 08 41 34.0
i 08 41 41.3
South of Kermadec Islands
(h = N).

" 24 UME iP 11 52 13.3
Mindanao, Philippine Islands
(h = N).

" 24 UPP iP 16 01 30.9
UME iP 16 01 09.0
Near east coast of Honshu,
Japan (h = 45 km).

" 24 UPP iP 17 27 34.7
micr sec
Mx Z 0.8 15
Ryukyu Islands (h = 50 km).

" 24 UPP iP 21 22 10.4
iS 21 26 04
KIR iP 21 20 35.6
UME iP 21 21 28.9
iS 21 24 37
Greenland Sea (h = 10 km).

" 24 UPP ePKP1 22 48 12
ePKP2 22 48 19
KIR iPKP1 22 48 06.9
iPKP2 22 48 15.6
UME iPKP2 22 48 16.7
West of Macquarie Island
(h = 10 km).

" 25 UPP iP 09 08 03.3
KIR iP 09 07 29.3
UME iP 09 07 43.3
Kyushu, Japan (h = 130 km).

" 25 UPP iP 13 58 34.6
KIR iP 13 57 40.2
UME iP 13 58 08.4
Alaska Peninsula (h = 70 km).

" 25 UPP iP 17 19 26.9
KIR iP 17 19 52.8
UME iP 17 19 37.1
i 17 19 43.5
Carlsberg Ridge (h = 10 km).

" 25 UPP iP 22 38 03.8
KIR iP 22 37 28.6
Central California
(h = 10 km).

" 25 UPP iP 23 45 36.8
UME iP 23 46 18.5
i 23 46 23.3
Greece (h = N).

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

1982
Oct. 26 KIR iP 07 37 52.4
UME iP 07 38 30.5
North of Severnaya Zemlya
(h = 10 km).

" 26 UPP iP 12 57 36.1
micr sec
P Z' 0.1 0.9
KIR iP 12 57 32.0
UME iP 12 57 31.3
Java (h = 150 km).

" 27 UME iPKP 02 10 49.6
South Sandwich Islands region
(h = N).

" 27 KIR iP 05 55 37.3
UME iP 05 55 59.1
Kuril Islands (h = N).

" 27 UPP iP 07 53 41.5
KIR iP 07 53 30.9
UME iP 07 53 38.1
eS 08 04 04
El Salvador (h = 70 km).

" 27 UPP iP 10 42 15.0
micr sec
P Z' 0.2 1.1
KIR iP 10 41 54.4
micr sec
P Z' 0.1 0.9
UME iP 10 42 02.1
Philippine Islands region
(h = 40 km).
m = 6.0 (UPP,KIR).

" 27 KIR iP 14 42 28.0
micr sec
P Z' 0.1 0.8
UME iP 14 42 54.3
Fox Islands, Aleutian Is.
(h = N).

" 27 UPP iP 15 47 38.4
micr sec
P Z' 0.1 1.0
KIR iP 15 47 24.9
micr sec
P Z' 0.1 1.0
Eastern China (h = N).

" 27 UPP iP 17 56 49.7
Hindu Kush region
(h = 40 km).

" 27 UME iPKP1 21 35 37.0
Kermadec Is. region (h = N).

1982
Oct. 28 UPP iP 03 39 15.2
KIR iP 03 38 38.5
UME iP 03 38 54.1 C
Sea of Japan (h = 370 km).

" 28 UPP e(P) 05 51 42
i 05 52 29.3

" 28 UPP iPKP 09 20 34.1
Gilbert Islands region
(h = N).

" 28 UME iP 12 41 39.0
Guatemala (h = 45 km).

" 28 KIR iP 12 57 52.0
UME iP 12 57 59.5
Near c. of Guatemala
(h = 50 km).

" 28 UPP iP 14 52 23.6
KIR iP 14 51 29.7
Fox Islands, Aleutian Is.
(h = N).

" 28 UPP iP 15 43 39.2
Java (h = 100 km).

" 29 UME iP 00 11 15.2

" 29 KIR iP 04 01 03.0
micr sec
P Z' 0.1 0.9
UME iP 04 01 08.6
Banda Sea (h = 170 km).

" 29 UPP iP 08 21 45.4
UME iP 08 22 28.9
Yugoslavia (h = 10 km).

" 31 UPP iP 03 00 25.6
i 03 00 31.2
micr sec
P Z' 0.1 1.0
KIR iP 03 00 27.9
UME iP 03 00 23.7
Northern Sumatera (h = 60 km).

" 31 UPP iP 06 15 38.4
ipP 06 16 04.0
UME eP 06 15 34
Guatemala (h = 100 km).

" 31 UPP iP 18 49 24.3
i 18 49 29.3
UME iP 18 49 15.5
i 18 49 21.7
Tibet (h = N).

June 14, 1984

Ronald Arvidsson, Conny Holmqvist, Sven-Olof Linder, Rutger Wahlström

SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

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

U P P S A L A, K I R U N A, U M E Å, U D D E H O L M,

D E L A R Y and M Y R V I K E N

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

N O V E M B E R 1 - 30, 1982

1982 Nov. 1 UPP iP 00 40 27.6
North Atlantic Ridge
(h = 10 km).

" 1 DEL iPg1 02 48 31.5
iSg1 02 48 47.6
Kattegat, Denmark, 56.3°N,
11.9°E.
Origin time = 02 48 12.
Solution from SKI network
readings.

" 1 UME iP 08 59 31.8
South of Honshu, Japan
(h = N).

" 1 UPP iP 23 24 51.2
Mediterranean Sea (h = 10 km).

" 1 UPP iPKP1 23 50 25.5
South of Fiji Islands
(h = 503 km).

" 3 UPP iPKP1 18 26 23.1
i 18 26 35.4
micr sec
PKP1 Z' 0.2 0.5
KIR iPKP 18 26 12.5
UME iPKP1 18 26 11.3
iPKP 18 26 16.7
iSKP1 18 29 08.6
South of Fiji Islands
(h = 490 km).

" 4 UPP iP 03 20 11.8
KIR iP 03 19 48.7
Taiwan region (h = 140 km).

1982 Nov. 4 UPP iP 09 40 53.5
KIR iP 09 40 08.2
UME iP 09 40 28.4
Kuril Islands (h = 40 km).

" 4 UPP iP 16 05 36.0
micr sec
P Z' 0.2 1.2
KIR iP 16 04 54.5
micr sec
P Z' 0.1 1.4
UME iP 16 05 12.9
Off east coast of Honshu,
Japan (h = N).
m = 5.8 (UPP,KIR).

" 4 KIR iPKP 19 07 59.7
UME iPKP 19 08 06.4
Vanuatu Islands (h = 130 km).

" 4 KIR iP 23 29 06.8
UME iP 23 29 28.9

" 5 KIR iP 05 05 35.1
Ceram (h = 110 km).

" 5 UPP iP 13 58 11.4
KIR iP 13 57 35.3
UME iP 13 57 50.4
South of Honshu, Japan
(h = 70 km).

" 5 UPP iP 21 30 09.3
KIR iP 21 31 31.8
UME iP 21 30 50.7
Romania (h = 160 km).

" 6 UPP iP 07 59 12.3
(cont.)

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

1982
Nov. 6 (cont.)
KIR iP 07 58 55.2
UME iP 07 58 59.7
Talaud Islands (h = 60 km).

" 6 UDD iSg1 16 04 07.0
Västergötland, Sweden, 58.9°N, 13.8°E.
Origin time = 16 03 31.
Solution from SKI network readings.

" 8 UPP iPKP 08 15 15.8
UME iPKP 08 15 10.1
South of Fiji Islands (h = 170 km).

" 8 UPP iP 08 16 15.7
UME iP 08 16 15.5
Hindu Kush region (h = 110 km).

" 8 KIR iPKP 10 03 10.2
South Sandwich Islands region (h = N).

" 8 KIR iP 12 47 52.2
UME iP 12 48 05.8
Iceland region (h = 10 km).
Onsets are 10-15 s late when related to the NEIS solution.

" 8 UME iP 16 42 04.0
Iceland region (h = 10 km).

" 8 UPP iP 16 50 29.3
micr sec
P Z' 0.1 1.0
KIR iP 16 49 34.7
micr sec
P Z' 0.1 1.0
Komandorsky Islands region (h = N).
m = 5.9 (UPP,KIR).

" 8 UPP iRg 17 53 35.1
UDD iSg1 17 54 26.2
Uppland, Sweden, 60.1°N, 17.5°E.
Rockburst at the Dannemora iron ore mine.

" 8 UPP iRg 17 53 56.1
Dannemora rockburst.

" 8 UPP iP 18 34 24.3
Greece (h = 10 km).

1982
Nov. 8 UPP iRg 18 39 40.1
Dannemora rockburst.

" 8 UPP iRg 18 46 50.8
Dannemora rockburst.

" 9 KIR iPKP 01 05 06.2
UME iPKP 01 05 13.9
Fiji Islands region (h = 550 km).

" 9 UPP iRg 01 14 01.8
Dannemora rockburst.

" 9 UPP iP 01 48 27.3
micr sec
P Z' 0.1 1.2
KIR iP 01 48 29.4
UME iP 01 48 25.5
Nicobar Islands region (h = N).

" 9 UPP iRg 02 26 39.8
Dannemora rockburst.

" 9 UME iP 16 23 12.5
South of Honshu, Japan (h = 490 km).

" 9 UPP iP 23 48 35.1
UME iP 23 48 13.3
ipP 23 48 37.9
Near east coast of Honshu, Japan (h = 110 km).

" 10 UPP iP 05 50 30.4
KIR iP 05 51 10.2
micr sec
P Z' 0.1 0.8
UME iP 05 50 47.7
Eastern Gulf of Aden (h = 10 km).

" 10 KIR iP 05 55 37.8
micr sec
P Z' 0.1 1.2
Eastern Gulf of Aden (h = 10 km).

" 10 UDD iSg1 07 22 29.4
Värmland, Sweden, 59.3°N, 13.1°E.
Origin time = 07 22 05.
Solution from SKI network readings.

" 10 UPP iP 07 47 25.5
(cont.)

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

1982
Nov. 10 (cont.)
KIR iP 07 46 39.2
UME iP 07 47 00.6
Kuril Islands (h = N).

" 10 KIR iP 11 36 52.0
Southern Iran (h = N).

" 10 UME iP 13 33 56.3
Near s. coast of Honshu, Japan (h = 350 km).

" 10 UPP iP 17 45 03.6

" 11 UPP iP 00 56 55.6
micr sec
P Z' 0.4 1.5
KIR iP 00 56 56.0
micr sec
P Z' 1.4 2.0
UME iP 00 56 52.7
iS 01 07 54
Southwest of Sumatera (h = N).
m = 6.8 (UPP,KIR).

" 11 UPP iP 02 06 38.0
micr sec
P Z' 0.1 0.8
KIR iP 02 05 53.0
UME iP 02 06 13.6
Kuril Islands (h = N).

" 11 UPP iP 02 12 16.3
KIR iP 02 11 30.3
UME iP 02 11 51.2
Kuril Islands (h = N).

" 11 UPP iP 02 49 55.4
KIR iP 02 50 35.4
Western Iran (h = N).

" 11 UPP iP 03 03 11.6
UME iP 03 02 46.7
Kuril Islands (h = N).

" 11 UME iP 03 24 46.6
Guatemala (h = 110 km).

" 11 UPP iP 04 25 36.8
UME iP 04 25 12.0
Kuril Islands (h = N).

" 11 UPP iP 04 26 52.9
UME iP 04 26 28.1
Kuril Islands (h = N).

1982
Nov. 11 UDD iSg1 11 24 42.2
Värmland, Sweden, 59.4°N, 12.6°E.
Origin time = 11 24 09.
M_L (UPP) = 2.1 1.
By combination with SKI network readings.

" 11 UPP iPKP1 21 40 58.8
Kermadec Islands region (h = N).

" 12 KIR iPKP 00 27 59.6
South Sandwich Islands region (h = N).

" 12 KIR iP 12 29 24.5
micr sec
P Z' 0.1 0.8
UME iP 12 29 27.1
Molucca Passage (h = 55 km).

" 12 UME iPKP 21 14 48.8
South Sandwich Islands region (h = 10 km).

" 12 UME iP 22 19 35.6
Kuril Islands region (h = N).

" 13 UME iPKP 01 40 11.3
Fiji Islands region (h = N).

" 13 KIR iP 04 57 29.3
UME iP 04 57 24.9
Off w. coast of northern Sumatera (h = 60 km).

" 13 KIR iP 18 35 54.1
South of Mariana Islands (h = 20 km).

" 13 KIR iP 18 41 18.3
micr sec
P Z' 0.1 0.9
UME iP 18 41 29.3
South of Mariana Islands (h = 15 km).

" 14 KIR iP 01 32 04.6
UME iP 01 32 14.3
Near coast of Chiapas, Mexico (h = 60 km).

" 14 KIR iP 04 28 57.7
Jan Mayen Island region (h = 10 km).

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

1982
Nov. 14 UPP iP 08 39 39.3 D
micr sec
P Z' 0.2 0.7
KIR iP 08 38 46.3 D
micr sec
P Z' 0.1 0.8
UME iP 08 39 11.5 D
Near east coast of Kamchatka
(h = 90 km).
m = 6.1 (UPP,KIR).

" 14 UPP iP 09 56 38.3
UME iP 09 56 31.3
Burma (h = 100 km).

" 14 UPP iP 16 38 02.4
KIR iP 16 37 53.2
i 16 38 04.9
Savu Sea (h = 50 km).

" 14 UPP eP 17 40 26
UME i 17 40 56.2
Central Mid-Atlantic Ridge
(h = 50 km).

" 14 UME iP 21 31 24.9
Hindu Kush region
(h = 90 km).

" 15 UME iP 02 43 53.1
Cyprus (h = 100 km).

" 15 UPP iP 08 10 53.1
KIR iP 08 10 26.4
UME iP 08 10 36.3
Northest of Taiwan
(h = 200 km).

" 15 UPP iP 15 37 02.8
KIR iP 15 36 31.8
UME iP 15 36 44.8
Bonin Islands region
(h = 520 km).

" 15 UDD iSg1 17 42 19.7
Värmland, Sweden, 59.4°N,
12.5°E.
Origin time = 17 41 47.
M_L (UPP) = 2.0 1.
By combination with SKI
network readings.

" 15 UPP iP 20 13 24.5
iS 20 18 03
KIR iP 20 14 33.0
micr sec
P Z' 0.2 1.5
(cont.)

1982
Nov. 15 (cont.)
UME iP 20 14 01.8
iS 20 18 59
Algeria (h = 10 km).

" 15 KIR iP 21 03 38.8
Chukchi Sea (h = 10 km).

" 16 UME iP 01 17 30.8

" 16 KIR iPKP 17 44 46.0
UME iPKP 17 44 53.7
Vanuatu Islands (h = 25 km).

" 16 UPP iP 23 45 42.0 C
i 23 45 44.1
i 23 45 57.3
iS 23 49 18
micr sec
i Z' 0.2 0.9
Mx Z 54 10
KIR iP 23 47 02.1 C
micr sec
P Z' 0.1 0-8
Mx Z 20 12
UME iP 23 46 25.4
Albania (h = 20 km).
m = 5.5, M = 6.1 (UPP,KIR).

" 17 UPP eP 00 42 16
KIR iP 00 43 34.6
UME iP 00 42 58.6
i 00 43 02.5
Albania (h = 10 km).

" 17 KIR iP 12 11 49.3
Fox Islands, Aleutian Islands
(h = N).

" 18 KIR iPKP 00 47 10.7
UME iPKP 00 47 05.0
Falkland Islands region
(h = 10 km).

" 18 UPP iP 06 12 33.8
Eastern India (h = N).

" 18 UPP i(P) 07 49 18.1

" 18 UPP iP 10 12 28.7
KIR iP 10 12 02.6
Southwestern Ryukyu Islands
(h = N).

" 18 UPP iP 15 10 46.6
iPP 15 14 31.3
iSKS 15 21 00
micr sec
P Z' 0.2 1.4
(cont.)

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

1982
Nov. 18 (cont.)

KIR	iP		15 10 50.9	
	ipP		15 11 37.4	
	iPP		15 14 38.7	
			micr	sec
	P	Z'	0.1	1.0
UME	iP		15 10 52.3	
	ipP		15 11 37.9	
	iPP		15 14 39.8	
	i		15 14 46.6	

Ecuador.
h = 190 km (KIR,UME).
m = 6.1 (UPP,KIR).

" 18 UME iP 20 56 59.7

" 18 UME iPKP 20 58 14.4
ipPKP 20 58 56.8
Cordoba Province, Argentina.
h = 170 km (UME).

" 19 KIR iP 03 15 08.5
UME iP 03 15 31.7
Kuril Islands (h = 160 km).

" 19

UPP	iP		04 41 02.4	
	ipP		04 41 11.2	
	iSKS		04 51 44	
	iS		04 52 37	
			micr	sec
	P	Z'	0.1	1.1
	pP	Z'	0.5	1.7
	Mx	Z	76	23
KIR	iP		04 41 07.1	
	ipP		04 41 15.4	
			micr	sec
	pP	Z'	0.2	1.5
UME	iP		04 41 10.3	
	ipP		04 41 17.3	
	iS		04 52 50	

Peru.
h = 25 km (UPP,KIR,UME).
m = 6.6 (UPP,KIR).

" 19 KIR iPKP 11 16 53.5
Falkland Islands region
(h = 10 km).

" 19 UME iP 16 19 52.5
Albania (h = 25 km).

" 19

UPP	iPKP		21 43 45.7
KIR	iPKP		21 43 31.4
UME	iPKP		21 43 38.2

Vanuatu Islands (h = 200 km).

1982
Nov. 20 KIR iSg1 05 23 50.1
Finnmark, Norway, 69.4°N,
24.8°E.
Origin time = 05 22 44.
M_L (UPP) = 2.5 1.
By combination with Finnish
station readings.

" 20

UPP	iP		07 41 46.4	
KIR	iP		07 42 59.5	
			micr	sec
	P	Z'	0.1	1.2
UME	iP		07 42 23.8	

Southern Greece (h = 40 km).

" 20

UPP	iP		08 06 37.7	C
	i		08 06 59.1	
	iPP		08 08 22.1	
	i		08 15 42	
	i		08 22 22	
			micr	sec
	P	Z'	0.5	1.0
KIR	iP		08 06 48.1	C
			micr	sec
	P	Z'	0.1	1.1
UME	iP		08 06 37.2	C
	i		08 06 50.1	

Afganistan (h = 25 km).
m = 5.9 (UPP,KIR).

" 21 KIR i(P) 06 14 19.8
UME i(P) 06 14 03.0

" 21

UPP	iP		14 56 48.3	
KIR	iP		14 55 55.1	
			micr	sec
	P	Z'	0.1	1.0
UME	iP		14 56 20.9	
	i		14 56 29.6	

Off east coast of Kamchatka
(h = N).

" 21 KIR iP 20 47 24.2
UME iP 20 47 43.3
Hokkaido, Japan region
(h = 35 km).

" 21

UPP	iP		23 37 26.9	
	i		23 37 41.4	
	iS		23 45 48	
			micr	sec
	P	Z'	0.5	1.5
	Mx	Z	53	16
KIR	iP		23 36 31.7	
			micr	sec
	P	Z'	0.1	1.0

(cont.)

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

1982
Nov. 21 (cont.)
UME iP 23 36 59.5
iS 23 44 56
Off east coast of Kamchatka
(h = 35 km).
m = 5.8 (UPP,KIR).

" 22 KIR iP 00 41 57.7
Tanimbar Islands region
(h = 60 km).

" 22 KIR iP 01 15 44.6
Southern Sinkiang Prov,
China (h = N).

" 22 UPP iPKP1 06 39 37.5
KIR iPKP1 06 39 13.9
UME iPKP1 06 39 25.1
South of Kermadec Islands
(h = N).

" 22 UPP iPKP1 23 27 48.5
KIR iPKP1 23 27 29.5
UME iPKP1 23 27 37.3
South of Kermadec Islands
region (h = N).

" 23 UME iP 01 59 08.2
Yugoslavia (h = 10 km).

" 23 KIR iP 06 58 42.1
Southern Sumatera (h = 80 km).

" 23 UME iPKP1 09 36 49.8
South of Kermadec Islands
(h = N).

" 23 UPP iP 19 42 25.7
KIR iP 19 42 33.9
micr sec
P Z' 0.1 0.9
UME iP 19 42 33.2
Leeward Islands (h = 100 km).

" 23 UME iPKP 23 07 04.9
iPKP1 23 07 10.5
South of Kermadec Islands
(h = 210 km).

" 24 UPP iP 10 35 49.6
iSKS 10 46 17
KIR iP 10 35 40.3
UME iP 10 35 48.0
iSKS 10 46 18
Off coast of Central America
(h = 30 km).

" 24 UME iP 19 30 42.5

1982
Nov. 25 UPP iP 04 45 16.7
KIR iP 04 45 36.3
Pakistan (h = N).

" 25 UPP iPKP2 14 13 53.7
UME iPKP1 14 13 38.4
Kermadec Islands region
(h = 110 km).

" 26 UPP iP 13 36 35.0 C
KIR iP 13 36 26.4
UME iP 13 36 26.0
Eastern India (h = N).

" 26 UME iP 23 15 40.2

" 27 UPP iPKP1 02 38 55.4
micr sec
PKP1 Z' 0.1 1.0
KIR ePKP1 02 38 36
UME iPKP1 02 38 45.6
South of Kermadec Islands
(h = 55 km).

" 27 UPP ePKP 02 43 34
UME iPKP 02 43 23.9

" 27 UPP ePKP 02 44 16
KIR ePKP 02 43 55
UME iPKP 02 44 04.0

" 27 UPP iP 10 05 07.1
i 10 05 08.4
iPcP 10 05 38.6
ipP 10 07 11.8
i 10 08 39.9
iS 10 12 48.9
iScS 10 13 55.1
isS 10 16 27
micr sec
i Z' 0.1 0.6
KIR iP 10 04 19.9
i 10 04 21.1
iPcP 10 05 10.2
iS 10 11 23.0
micr sec
i Z' 0.2 0.9
UME iP 10 04 41.7
i 10 04 42.9
iPcP 10 05 22.3
ipP 10 06 45.4
i 10 08 21.2
iS 10 12 04.2
iScS 10 13 26.6
iP'P' 10 33 35.9
Sea of Okkotsk.
h = 670 km (UPP,UME).
m = 5.3 (UPP,KIR).

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

1982
Nov. 27 UME iP 14 19 10.5
Afghanistan-USSR border region (h = 170 km).

" 27 UPP iRg 18 13 38.2
Dannemora rockburst.

" 27 UME iP 18 30 45.2
South of Panama (h = N).

" 27 KIR iP 18 32 45.4
Java (h = N).

" 27 UPP ePKP2 19 09 55
i 19 10 14.1
UME iPKP1 19 09 41.6
i 19 09 54.7
South of Kermadec Islands (h = N).

" 27 KIR iP 20 41 02.5
UME iP 20 41 20.1
Near east coast of Honshu, Japan (h = 30 km).

" 27 UPP iPKP2 22 35 56.4
UME iPKP1 22 35 39.6
Kermadec Islands region (h = N).

" 28 KIR iP 04 26 14.7
Mindanao, Philippine Islands (h = N).

" 28 UPP iP 09 51 11.3
ipP 09 51 25.0
micr sec
P Z' 0.1 1.0
KIR iP 09 50 50.7
micr sec
P Z' 0.1 1.0
UME iP 09 50 58.0
ipP 09 51 10.9
Philippine Islands region.
h = 45 km (UPP,UME).
m = 5.8 (UPP,KIR).

" 28 UME eP 18 29 18

" 28 UPP eP 19 56 21
KIR eP 19 55 36
UME iP 19 55 57.2
Kuril Islands (h = 180 km).

" 29 KIR iP 04 22 03.6
Burma (h = N).

1982
Nov. 29 KIR iP 06 43 27.6
Mindanao, Philippine Islands (h = N).

" 29 UPP iP 10 28 21.8
Ionian Sea (h = 10 km).

" 29 UPP iP 17 51 14.8
KIR iP 17 51 18.7
Off east coast of Kamchatka (h = N).

" 30 UPP iPKP1 02 35 00.6
KIR iPKP 02 34 54.3
UME iPKP1 02 34 54.4
Fiji Islands region (h = 540 km).

" 30 UPP iP 09 54 05.1
KIR iP 09 54 41.8
UME iP 09 54 16.4

" 30 UPP iPKP1 10 54 10.7
i 10 54 14.6
South of Fiji Islands (h = N).

" 30 UPP iPKP1 14 22 47.6
iPKP2 14 22 56.0
UME iPKP1 14 22 37.4
South of Kermadec Islands (h = 45 km).

" 30 UME iP 15 16 39.4

" 30 UME iP 17 01 21.5

" 30 UPP iPKP2 20 58 21.9
UME iPKP1 20 58 03.7
i 20 58 07.8
South of Kermadec Islands (h = N).

" 30 UPP iPKP2 22 14 19.9
UME iPKP1 22 14 04.6
South of Kermadec Islands (h = N).

" 30 UME iP 22 44 02.6

July 2, 1984

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SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

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S-750 12 UPPSALA
SWEDEN

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

U P P S A L A, K I R U N A, U M E Å, U D D E H O L M,

D E L A R Y and M Y R V I K E N

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

D E C E M B E R 1 - 31, 1982

1982
Dec. 2 UPP iP 03 31 17.4
KIR eP 03 32 02
UME iP 03 31 42.9
ipP 03 31 44.9
Central Mid-Atlantic Ridge
(h = 10 km)

" 2 UPP iP 09 54 52.0 C
micr sec
P Z' 0.3 1.4
KIR iP 09 53 58.3 C
iPcP 09 54 44.7
micr sec
P Z' 0.4 1.2
UME iP 09 54 25.6 C
Fox Islands, Aleutian
Islands (h = N).
m = 6.3 (UPP, KIR).

" 2 UPP iPKP1 21 50 36.2
UME iPKP1 21 50 26.0
South of Kermandec Islands
(h = N).

" 3 UPP iPKP 22 48 35.9
i 22 48 37.1
iSKKP 23 01 14.9
KIR iPKP 22 48 22.8
i 22 48 23.8
UME iPKP 22 48 29.1
i 22 49 27.1
Vanuatu Islands (h = 260 km).

" 4 UPP eP 04 33 26
KIR eP 04 33 32
UME iP 04 33 22.5
Tajik SSR (h = 120 km).

1982
Dec. 4 KIR iP 23 35 25.0
Volcano Islands region
(h = 90 km).

" 5 UME iP 03 02 11.4

" 5 UPP iP 03 44 10.3 C
iPn 03 45 16.3
iPP 03 45 30.0
micr sec
P Z' 1.2 0.7
KIR iP 03 43 53.8 C
i 03 44 11.5
micr sec
P Z' 2.1 0.5
UME iP 03 43 54.9 C
Eastern Kazakh SSR.
m = 7.1 (UPP, KIR).
Underground explosion.

" 5 UPP iPKP 06 07 10.3
micr sec
PKP Z' 0.1 0.9
KIR iPKP 06 06 58.2
micr sec
PKP Z' 0.1 0.6
Solomon Islands (h = 100 km).

" 5 KIR iP 12 18 52.8
UME iP 12 19 21.9
Southern Alaska (h = 90 km).

" 6 UPP iP 05 43 10.1
KIR iP 05 44 17.2
Crete (h = 35 km).

" 6 UME iP 12 49 27.5
Kodiak Island (h = N).

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

1982
Dec. 6 UME iP 14 14 38.2
Near east coast of Honshu, Japan (h = 15 km).

" 6 UDD iSg1 14 45 48.1
Off coast of southwestern Norway, near 60°N, 5°E.
Origin time = 14 43 33.
M_L(UPP) = 2.3 1.
By combination with Bergen and NORSAR readings.

" 8 UPP iP 06 28 49.3
ipP 06 28 54.3
KIR iP 06 29 32.4
ipP 06 29 36.4
UME iP 06 29 08.2
ipP 06 29 12.8
Western Gulf of Aden.
h = 15 km (UPP, KIR, UME).

" 8 UPP iPKP2 08 03 59.0
UME iPKP1 08 03 41.4
i 08 03 55.0
South of Kermadec Islands (h = N).

" 8 UPP iP 12 30 47.9

" 8 UPP eP 13 15 32
UME iP 13 15 23.8
Near coast of central Mexico (h = 10 km).

" 9 UPP iPKP 05 47 31.8
UME iPKP 05 47 23.3
Gilbert Islands region (h = N).

" 9 UPP i 08 38 43.9
UME iP 08 38 40.9
Panama (h = 10 km).

" 9 KIR ePKP 10 58 45
UME iPKP 10 58 51.0
Loyalty Islands (h = N).

" 9 UPP iP 19 09 26.9
KIR iP 19 09 36.8
UME iP 19 09 00.7
Kuril Islands (h = N).

" 9 UPP iP 19 30 24.7
Hokkaido, Japan region (h = 55 km).

1982
Dec. 9 UPP iPn 20 23 01.1
iSn 20 24 25.8
iSg2 20 25 19.8
KIR iPn 20 22 25.2
i 20 22 35.2
i 20 22 48.0
i 20 23 38.0
iSg2 20 23 52.4
UME iPn 20 22 34.1
i 20 22 54.2
i 20 23 54.0
iSg2 20 24 17.4
UDD iPn 20 22 47.6
iSn 20 23 58.8
iSg2 20 24 55.3
DEL i(P) 20 23 23.6
i 20 26 33.0
iLg2 20 26 47.6
MYR iPn 20 22 14.4
i 20 22 16.4
i 20 22 31.0
iSn 20 23 02.4
iSg2 20 23 26.0
Norwegian Sea, approximate location 66½°N, 8°E.
Origin time = 20 21 11.
By combination with Finnish station readings.

" 9 KIR eP 22 01 38
UME iP 22 01 27.7
Pakistan (h = 120 km).

" 9 UPP iP 22 37 13.6
KIR iP 22 38 01.7
UME eP 22 37 31
Turkey (h = 10 km).

" 10 KIR iP 00 43 32.9
UME iP 00 43 47.3
Shikoku, Japan (h = 55 km).

" 10 UPP iP 09 46 36.6
KIR iP 09 46 11.1
Northeast of Taiwan (h = 140 km).

" 10 UPP iPKP1 17 40 33.6
South of Fiji Islands (h = N).

" 11 KIR iP 10 31 03.2
Venezuela (h = 15 km).

" 11 UPP iP 21 05 50.6
KIR eP 21 05 47
Burma-India border region (h = 80 km).

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

1982					
Dec.	12	KIR	ePn		14 51 42
			i		14 52 52.4
		UME	iSg2		14 53 33.6
		UDD	iPn		14 52 03.7
			iSg2		14 54 04.2
		MYR	iPn		14 51 32.2
			i		14 52 08.8
		Norwegian Sea, same location as the event on Dec. 9, 20 21.			
		Origin time = 14 50 27.			
		By combination with Finnish station readings.			
"	13	KIR	iPKP1		03 10 20.0
		UME	iPKP1		03 10 14.5
		South Shetland Islands (h = N).			
"	13	UPP	eP		09 21 36
			ipP		09 21 37.6
			iS		09 28 47
			iSS		09 32 30
					micr sec
			pP	Z'	1.4 1.7
			Mx	Z	7.2 13
		KIR	iP		09 22 23.2
			i		09 22 27.4
					micr sec
			P	Z'	0.2 1.0
			i	Z'	1.4 2.0
			Mx	Z	5.4 14
		UME	iP		09 21 57.8
			i		09 22 01.8
			iS		09 29 24
		Western Arabian Peninsula (h = 5 km).			
		m = 6.6, M = 5.9 (UPP, KIR).			
"	13	UPP	iP		13 17 47.3
		Mediterranean Sea (h = N).			
"	14	UPP	iPKP		00 14 21.2
			i		00 14 27.1
		UME	iPKP		00 14 10.1
"	14	UME	iP		14 24 36.6
		Near coast of Guerrero, Mexico (h = 35 km).			
"	14	UPP	iP		19 28 49.2
			iS		19 32 44.4
					micr sec
			Mx	Z	4.0 10
		KIR	iP		19 30 02.4
					micr sec
			Mx	Z	2.5 11
		(cont.)			

1982					
Dec.	14	(cont.)			
		UME	iP		19 29 22.2
			iS		19 33 51
		Aegean Sea (h = 10 km).			
		M = 5.2 (UPP, KIR).			
"	14	UME	iP		20 50 35.1
		Guatemala (h = 55 km).			
"	15	KIR	iP		00 06 20.6
		Tibet-India border region (h = N).			
"	15	UPP	i		06 46 23.4
			iPg1		06 46 37.1
			iSn		06 47 27.9
			i		06 47 40.3
			iSg1		06 48 02.3
		KIR	iPn		06 46 41.6
			iSn		06 48 14.0
			iSg1		06 49 04.0
		UME	iPn		06 46 23.9
			i		06 46 34.1
			iSn		06 47 36.5
			i		06 47 51.5
			iSg1		06 48 14.6
		UDD	i		06 45 49.6
			iPg1		06 46 02.2
			iSn		06 46 41.3
			iSg1		06 47 01.6
		DEL	iPn		06 46 25.7
			i		06 47 42.9
			iSg1		06 48 32.3
		MYR	iPn		06 45 45.0
			i		06 45 49.0
			iPg1		06 45 56.4
			iSn		06 46 32.4
			iSg1		06 46 48.4
		Coast of Norway, near 62½°N, 5½°E.			
		Origin time = 06 44 42.			
		M_L(UPP) = 4.1 (0.10) 8.			
		Felt.			
"	15	KIR	iPKP		10 35 17.4
		Fiji Islands region (h = 650 km).			
"	15	KIR	iP		12 59 34.4
		UME	iP		12 59 37.8
		North Atlantic Ocean (h = 10 km).			
"	16	UPP	iP		00 48 23.3
			i		00 48 24.5
		(cont.)			

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

1982
Dec. 16 (cont.)

UPP	iPP		00 50 04	
	i		00 54 16	
			micr	sec
	i	Z'	0.8	1.1
	Mx	Z	148	14
KIR	iP		00 48 34.3	C
			micr	sec
	P	Z'	0.6	1.1
UME	iP		00 48 22.5	C
	iS		00 54 22	

Hindu Kush region
(h = 35 km).
m = 6.3 (UPP, KIR).

" 16

UPP	iP		09 07 57.8	
	ipP		09 08 14.6	
			micr	sec
	P	Z'	0.1	0.9
KIR	iP		09 07 58.5	
	ipP		09 08 15.6	
UME	iP		09 07 54.6	
	ipP		09 08 11.4	

Andaman Islands region
h = 65 km (UPP, KIR, UME).

" 16

KIR	iP		21 09 14.8	
	i		21 09 22.5	

Hindu Kush region (h = N).

" 17

UPP	iP		02 54 42.1	
	i		02 54 44.6	
	iS		03 04 17	
			micr	sec
	i	Z'	1.1	1.2
	Mx	Z	8.7	16
KIR	iP		02 54 17.5	
	i		02 54 20.1	
	iS		03 03 31.8	
			micr	sec
	P	Z'	0.2	0.9
	i	Z'	1.1	1.3
UME	iP		02 54 26.8	
	i		02 54 29.0	
	iS		03 03 48	

Taiwan region (h = 90 km).
m = 6.5 (UPP, KIR).

" 17

UPP	iP		05 55 16.5
KIR	eP		05 55 09

" 17

KIR	eP		06 57 51
UME	iP		06 57 27.3

Eastern Caucasus (h = N).

1982
Dec. 17

UPP	iPKP1		21 34 35.8

South of Fiji Islands
(h = N).

" 18

UPP	iP		00 54 49.7
	i		00 55 00.8
KIR	iP		00 54 32.0
	i		00 54 33.7
UME	iP		00 54 36.6

Molucca Passage (h = 50 km).

" 18

UPP	iPKP1		08 46 17.2

South of Fiji Islands
(h = 80 km).

" 18

UPP	iP		10 28 37.6

Northern Peru (h = N).

" 18

UME	iP		21 55 28.3

North Atlantic Ocean
(h = 10 km).

" 19

UPP	iPKP1		00 26 07.3	
	iPKP2		00 26 14.8	
			micr	sec
	PKP1	Z'	0.2	1.0
	PKP2	Z'	0.1	0.9
KIR	iPKP1		00 25 46.7	
	i		00 25 49.2	
UME	iPKP1		00 25 56.9	
	i		00 26 10.7	

South of Kermadec Islands
(h = 35 km).

" 19

UPP	iPKP1		00 53 37.0
KIR	iPKP1		00 53 18.1
UME	iPKP1		00 53 25.6
	i		00 53 45.2

South of Kermadec Islands
(h = N).

" 19

UME	iP		01 46 34.1

" 19

UPP	iPKP1		03 26 03.7
UME	iPKP1		03 25 53.3
	i		03 26 08.6

South of Kermadec Islands
(h = N).

" 19

UME	iP		05 22 25.1

" 19

KIR	iP		06 37 47.0

Southwest of Sumatera
(h = N).

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

1982
Dec. 19 UPP iPKP1 13 19 45.2
KIR iPKP 13 19 31.7
UME iPKP 13 19 40.4
South of Tonga Islands
(h = N).

" 19 UPP iPKP1 18 03 22.0
i 18 03 42.8
iSKP1 18 06 55.4
micr sec
Mx Z 113.8 20
KIR iPKP 18 03 14.5
i 18 03 27.1
i 18 06 03.6
i 18 07 08.7
micr sec
Mx Z 51.1 20
UME iPKP 18 03 18.6
i 18 06 30.5
South of Tonga Islands
(h = N).
M = 7.5 (UPP, KIR).

" 19 UPP iPKP1 18 52 41.9
KIR iPKP 18 52 38.8
UME iPKP 18 52 38.1
Tonga Islands region
(h = N).

" 19 KIR iP 19 48 51.0
UME iP 19 48 31.2
Iran (h = 40 km).

" 19 UPP iPKP1 21 07 31.2
Tonga Islands region
(h = 40 km).

" 19 UPP ePKP1 21 45 36
KIR iPKP 21 45 23.5
UME iPKP 21 45 32.9
Tonga Islands region
(h = N).

" 20 UPP iPKP 00 51 51.0 C
micr sec
PKP Z' 0.1 0.7
KIR iPKP 00 52 06.7
i 00 52 42.1
micr sec
PKP Z' 0.1 0.9
UME iPKP 00 51 58.7 C
South Sandwich Islands
region (h = 70 km).

" 20 UPP iP 01 01 49.3

1982
Dec. 20 UPP iPKP1 03 17 35.9
KIR iPKP 03 17 26.4
Tonga Islands region
(h = 30 km).

" 20 KIR ePKP 16 10 14
UME iPKP1 16 10 20.1
South of Kermadec Islands
(h = N).

" 20 KIR iPKP 18 05 25.1
Tonga Islands region
(h = N).

" 20 UPP iP 23 01 49.3
KIR iP 23 03 01.6
Aegean Sea (h = 15 km).

" 21 UPP iP 23 42 55.0
KIR iP 23 43 02.1
UME iP 23 42 52.2
Afghanistan-USSR border
region (h = 150 km).

" 22 KIR iP 09 55 07.3
UME iP 09 54 41.0
Eastern Caucasus (h = N).

" 22 KIR iP 15 46 42.1
micr sec
P Z' 0.1 1.0
North Atlantic Ridge
(h = 10 km).

" 22 KIR iPKP 15 50 45.8
iSKP1 15 53 22.9
UME iPKP 15 50 54.5
iSKP1 15 53 33.6
South of Fiji Islands
(h = 570 km).

" 23 KIR iPKP 00 29 47.1
South of Fiji Islands
(h = 50 km).

" 23 KIR iP 10 40 19.3
North Atlantic Ridge
(h = 10 km).

" 24 UME iP 04 02 28.7
Near coast of Oaxaca, Mexico
(h = 55 km).

" 24 UPP iPKP1 04 37 54.4
South of Fiji Islands
(h = N).

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

1982
Dec. 24 UPP iP 08 54 39.0
KIR iP 08 54 45.7
UME iP 08 54 36.2
Afghanistan-USSR border region (h = 140 km).

" 24 UPP iP 15 04 46.8
Kuril Islands (h = N).

" 24 UPP iP 18 21 22.9 C
i 18 21 23.7
micr sec
i Z' 0.1 0.7
KIR iP 18 20 37.2 C
UME iP 18 20 58.1 C
Kuril Islands (h = 55 km).

" 24 UPP iP 23 41 43.3 D
micr sec
P Z' 0.1 0.7
KIR iP 23 40 49.7
UME iP 23 41 15.7 D
Near Islands, Aleutian Islands (h = 70 km).

" 25 MYR eSG1 02 31 08
Härjedalen, Sweden, 62.2°N, 12.9°E.
Origin time = 02 30 31.
Solution from SKI network readings.

" 25 KIR iP 02 49 30.6
Near Islands, Aleutian Islands (h = N).

" 25 UPP iP 04 30 01.7
KIR iP 04 29 45.2
UME iP 04 29 46.3
Eastern Kazakh SSR.
Underground explosion.

" 25 UPP iP 08 21 45.0
UME iP 08 21 44.4
Hindu Kush region (h = 80 km).

" 25 UPP
micr sec
Mx Z 4.1 18
KIR iP 12 41 58.2
micr sec
Mx Z 1.9 18
Flores Island region (h = N).
M = 5.9 (UPP, KIR).

1982
Dec. 25 UPP iPKP1 18 42 23.7
UME iPKP 18 42 18.2
South of Fiji Islands (h = 180 km).

" 26 UPP iP 00 40 35.1
Kuril Islands (h = N).

" 26 UPP iP 03 42 11.9 C
iPn 03 43 13.9
iPP 03 43 29.5
micr sec
P Z' 0.6 0.8
KIR iP 03 41 55.2 C
iPn 03 42 51.6
micr sec
P Z' 0.6 0.7
UME iP 03 41 56.2 C
Eastern Kazakh SSR.
m = 6.6 (UPP, KIR).
Underground explosion.

" 26 KIR iP 04 42 55.1

" 26 UPP iP 05 36 06.6
KIR iP 05 36 22.8
UME iP 05 36 08.0
Turkmen SSR (h = N).

" 26 UME iP 16 15 09.9

" 26 UPP iP 16 31 13.4
KIR iP 16 30 33.9
UME iP 16 30 51.2
Near east coast of Honshu, Japan (h = 60 km).

" 27 UPP iP 01 44 56.1
i 01 46 34.1
micr sec
P Z' 0.1 0.8
KIR iP 01 44 28.0
micr sec
P Z' 0.2 0.6
UME iP 01 44 39.2
Mariana Islands (h = 600 km).
m = 5.9 (UPP, KIR).

" 27 UPP iP 07 19 08.4
KIR eP 07 18 30
UME eP 07 18 46
Near s. coast of Honshu, Japan (h = 25 km).

" 27 UPP iP 11 44 59.2
ipP 11 45 05.5
micr sec
pP Z' 0.1 1.0
(cont.)

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

1982
Dec. 27 (cont.)

KIR	i		11 44 29	
			micr	sec
	i	Z'	0.1	1.1
UME	iP		11 44 38.0	
	ipP		11 44 44.5	

South of Honshu, Japan.
h = 20 km (UPP, UME).
m = 5.8 (UPP, KIR).

" 27

UME	iP		13 59 47.6

South of Honshu, Japan
(h = N).

" 27

UME	iP		14 18 55.8

South of Honshu, Japan
(h = N).

" 27

UPP	iSg1		18 18 38.5	
	i		18 19 04.8	
UME	eSg1		18 18 34	
UDD	ePg1		18 16 32	
	iSg1		18 17 33.2	
DEL	eSg1		18 18 32	
MYR	ePn		18 16 30	

Off coast of Norway, near
$62\frac{1}{2}^{o}$N, 5^{o}E.
Origin time = 18 15 06.
By combination with Bergen
and Kongsberg readings.

" 27

UME	iP		23 13 30.4

South of Honshu, Japan
(h = N).

" 28

UPP	iP		01 35 29.0	D
			micr	sec
	P	Z'	0.1	1.0
KIR	iP		01 34 52.9	
UJE	iP		01 34 08.4	

South of Honshu, Japan
(h = 20 km).

" 28

UPP	iPKP1		01 42 04.8	
			micr	sec
	PKP1	Z'	0.1	0.8
UME	iSKP1		01 44 47.5	

South of Fiji Islands
(h = 520 km).

" 28

UPP	iP		02 04 12.6	C
			micr	sec
	P	Z'	0.1	1.2
KIR	eP		02 03 36	
UME	iP		02 03 51.6	C

South of Honshu, Japan
(h = 20 km).

1982
Dec. 28

UPP	iP		02 23 58.7	
			micr	sec
	P	Z'	0.1	0.9
UME	iP		02 23 36.8	

South of Honshu, Japan
(h = 15 km).

" 28

UME	eP		03 01 05

South of Honshu, Japan
(h = 15 km).

" 28

UME	iP		03 12 47.1

South of Honshu, Japan
(h = 10 km).

" 28

UME	iSKP1		04 08 53.7

South of Fiji Islands
(h = 520 km).

" 28

UPP	eP		06 49 23	
	ipP		06 49 29.9	
			micr	sec
	P	Z'	0.2	1.0
	pP	Z'	0.6	1.2
	Mx	Z	25.0	28
KIR	iP		06 48 46.5	
	ipP		06 48 53.8	
			micr	sec
	P	Z'	0.1	1.0
	pP	Z'	0.3	1.1
	Mx	Z	13.7	15
UME	iP		06 49 02.0	
	ipP		06 49 09.3	

South of Honshu, Japan.
h = 25 km (UPP, KIR, UME).
m = 6.4, M = 6.2 (UPP, KIR).

" 28

UPP	iP		07 41 04.1	
			micr	sec
	P	Z'	0.2	1.1
KIR	iP		07 40 53.3	
			micr	sec
	P	Z'	0.2	1.1
UME	iP		07 40 54.3	

Burma-China border region
(h = 30 km).
m = 6.1 (UPP, KIR).

" 28

UPP	iP		08 10 36.1	
			micr	sec
	P	Z'	0.1	1.0
KIR	iP		08 10 24.3	
			micr	sec
	P	Z'	0.1	0.5
UME	iP		08 10 25.7	

Yunnan Province, China
(h = 35 km).
m = 6.1 (UPP, KIR).

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

1982 Dec. 28 KIR iP 10 15 57.6
Mariana Islands (h = 220 km).

" 28 UPP iP 14 01 33.1 C
ipP 14 01 45.0
iS 14 11 33
micr sec
P Z' 0.7 1.2
Mx Z 12.9 15
KIR iP 14 01 12.9 C
ipP 14 01 24.1
micr sec
P Z' 0.8 1.5
UME iP 14 01 19.8 C
ipP 14 01 31.1
iS 14 11 06
Philippine Islands region.
h = 40 km (UPP, KIR, UME).
m = 6.5 (UPP, KIR).

" 28 UPP iP 14 09 33.3
KIR iP 14 09 12.7
UME iP 14 09 20.3
Philippine Islands region
(h = N).

" 28 UME iP 16 40 55.4
South of Honshu, Japan
(h = 20 km).

" 28 UPP eP 18 12 22
KIR iP 18 11 41.7
UME eP 18 12 00
South of Honshu, Japan
(h = N).

" 28 UPP iP 19 18 11.5
KIR iP 19 17 32.9
California-Nevada border
region (h = 20 km).

" 29 KIR iP 00 18 19.9
UME iP 00 18 12.5
Tibet-India border region
(h = N).

" 29 KIR iPKP 00 29 12.4
Fiji Islands region
(h = 420 km).

" 29 UPP iP 07 14 13.3
ipP 07 14 18.6
micr sec
pP Z' 0.2 1.3
KIR iP 07 13 37.4
ipP 07 13 42.5
micr sec
pP Z' 0.3 1.4
(cont.)

1982 Dec. 29 (cont.)
UME iP 07 13 52.3
ipP 07 13 57.7
South of Honshu, Japan.
h = 15 km (UPP, KIR, UME).
m = 6.2 (UPP, KIR).

" 29 UPP iP 12 29 26.9
ipP 12 29 34.0
micr sec
pP Z' 0.1 0.9
KIR iP 12 28 50.3
ipP 12 28 57.0
micr sec
pP Z' 0.1 0.9
UME iP 12 29 06.1 C
ipP 12 29 13.0
South of Honshu, Japan.
h = 25 km (UPP, KIR, UME).
m = 5.9 (UPP, KIR).

" 29 UPP iP 14 17 57.3
i 14 18 00.2
i 14 18 19.9
micr sec
i Z' 0.1 0.8
KIR iP 14 17 41.1
ipP 14 18 09.7
micr sec
P Z' 0.1 0.9
UME iP 14 17 45.5
ipP 14 18 13.3
Luzon, Philippine Islands.
h = 110 km (KIR, UME).
m = 5.7 (UPP, KIR).

" 29 KIR iP 15 25 58.7
UME iP 15 26 14.8
South of Honshu, Japan
(h = 20 km).

" 29 KIR iP 15 29 56.1
UME iP 15 29 44.3
Pakistan (h = N).

" 30 KIR iP 00 02 51.9 C
micr sec
P Z' 0.2 1.2
UME iP 00 02 26.0
Western Arabian Peninsula
(h = 5 km).

" 30 KIR iP 08 47 12.1
UME iP 08 47 09.5
Eastern India (h = 40 km).

" 30 UPP iP 12 16 42.4

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

1982

Dec.	30	UPP	iP		12 39 28.9	
		UME	iP		12 39 21.8	
		Eastern India (h = N).				
"	30	KIR	iP		13 02 13.5	
		UME	iP		13 02 13.6	
		Northern Xinjiang, China (h = N).				
"	30	UME	iP		20 29 36.2	
		South of Honshu, Japan (h = N).				
"	31	UPP	eP		09 41 34	
"	31	UPP	eP		10 09 45	
					micr	sec
			Mx	Z	3.8	13
		Ryukyu Islands (h = 25 km).				
"	31	UME	iPKP		14 00 32.8	
		Gilbert Islands region (h = 25 km).				
"	31	UPP	iP		14 56 25.5	
		KIR	iP		14 56 08.3	
		UME	iP		14 56 16.5	
		Mindanao, Philippine Islands (h = 110 km).				
"	31	UPP	iP		19 54 15.5	C
			ipP		19 54 23.6	
					micr	sec
			P	Z'	1.0	1.1
			Mx	Z	6.4	17
		KIR	iP		19 54 09.9	C
			ipP		19 54 18.2	
					micr	sec
			P	Z'	1.6	0.7
			Mx	Z	7.8	12
		UME	iP		19 54 06.4	C
		Alma-Ata region				
		h = 30 km (UPP, KIR).				
		m = 6.7, M = 5.7 (UPP, KIR).				
"	31	UME	iP		23 35 29.0	
		Near east coast of Honshu, Japan (h = 50 km).				

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