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

J A N U A R Y 1 - 31, 1984

1984
Jan. 1 UME iP 02 33 16.8 C
Hokkaido, Japan region
(h = 80 km).

" 1 UPP iP 09 14 37.5 C
ipP 09 16 02.4
iS 09 23 37
micr sec
P Z' 7.9 1.6
KIR iP 09 13 58.1
i 09 14 02.5
micr sec
i Z' 3.0 0.7
Mx Z 16 15
UME iP 09 14 13.4 C
i 09 14 17.4
Near s. coast of southern
Honshu, Japan (h = 370 km).
m = 7.2 (UPP,KIR).

" 1 UPP iP 21 01 15.8
micr sec
P Z' 0.1 0.8
KIR iP 21 01 21.7
UME iP 21 01 12.6
Afghanistan-USSR border
region (h = 150 km).

" 2 UPP iP 00 46 59.7 C
micr sec
P Z' 0.3 0.9
KIR iP 00 47 08.2 C
micr sec
P Z' 0.4 1.2
UME iP 00 46 58.1 C
Hindu Kush region (h = 210 km).
m = 5.8 (UPP,KIR).

1984
Jan. 2 UPP eP 07 12 16
Greece (h = 10 km).

" 3 UME iP 15 42 35.1
Hokkaido, Japan region
(h = 160 km).

" 3 KIR iP 22 28 06.1

" 3 UPP iP 22 33 46.4
KIR iP 22 33 55.1 C
micr sec
P Z' 0.1 1.0
UME iP 22 33 44.8 C
Hindu Kush region (h = 200 km).

" 3 KIR ePKPl 23 15 15
UME iPKPl 23 15 24.3
Cook Strait, New Zealand
(h = 80 km).

" 4 UPP iP 00 21 40.2
KIR iP 00 22 48.8
UME iP 00 22 13.2
Mediterranean Sea (h = 30 km).

" 4 KIR iP 02 55 27.0
micr sec
P Z' 0.1 1.0
UME iP 02 55 32.5
Halmahera (h = 45 km).

" 4 KIR iP 06 28 00.4
Southern Sumatera (h = 90 km).

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

1984
Jan. 4 UPP iPKPl 19 27 19.1
UME iPKPl 19 27 06.6 C
i 19 27 11.4
Kermadec Islands (h = 45 km).

" 4 UME iP 20 42 08.9
Bonin Islands region
(h = 510 km).

" 4 UPP iP 22 51 39.7
micr sec
P Z' 0.5 1.0
UME iP 22 51 13.9

" 5 UPP iP 03 20 33.4
UME iP 03 20 07.8
Kuril Islands (h = 45 km).

" 5 UME iP 11 04 38.7
Mindanao, Philippine Islands
(h = 180 km).

" 5 UME eP 12 44 55
Southern Italy (h = 10 km).

" 5 UME iP 14 59 07.5
Kuril Islands (h = N).

" 5 UME i(P) 15 42 19.9

" 5 UPP iP 20 42 03.3
UME iP 20 42 01.9
ipP 20 42 47.1
Hindu Kush (h = 210 km).

" 5 UPP iP 21 52 44.1
micr sec
P Z' 0.1 1.0
UME iP 21 52 17.4
Andreanof Islands, Aleutian
Is. (h = 55 km).

" 5 UPP iP 23 43 35.1 C
ipP 23 43 38.5
micr sec
P Z' 0.1 1.0
UME iP 23 43 18.9 C
ipP 23 43 22.3
Gansu Province, China,
h = 10 km (UPP,UME).

" 6 UME eP 01 15 38
Kuril Islands (h = N).

" 6 UME iPKP 19 00 01.4
Solomon Islands (h = 45 km).

1984
Jan. 6 UME iP 23 05 41.2
i 23 05 52.8
Mongolia (h = N).

" 7 UPP iP 03 02 21.5
UME iP 03 03 08.5
Albania (h = 10 km).

" 7 UPP iP 03 51 53.0
micr sec
P Z' 0.1 0.6
UME iP 03 51 35.2 D
Southwestern Ryukyu Islands
(h = 120 km).

" 7 UPP iPn 09 09 42.2 D
i 09 09 48.9
iSn 09 10 48.7
UME iSn 09 12 04.0
iSgl 09 13 02.5
UDD iPn 09 09 19.7
iSn 09 10 10.6
DEL iPn 09 09 10.3
i 09 09 17.3
iSn 09 09 51.9
MYV eSn 09 11 04
North Sea, near 57°N, 7 1/2°E.
Origin time = 09 08 11.
M_L(UPP) = 3.4 (0.01) 2.

" 7 UME iP 14 11 20.8
Northern Xinjiang, China
(h = N).

" 8 UME iP 01 10 17.8
Mexico-Guatemala border
region (h = 190 km).

" 8 UPP iP 15 37 51
iPP 15 41 54
iS 15 49 08
micr sec
Mx Z 25 17
UME iP 15 37 38.2
Sulawesi (h = N).

" 9 UME iP 06 08 14.9

" 9 UPP eP 07 31 14
UME iP 07 30 59.9
Mindanao, Philippine Islands
(h = 80 km).

" 9 UME iP 12 55 12.9

" 9 UME i(P) 19 45 22.5

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

1984
Jan. 9 UME iSgl 21 49 24.8
Northwestern USSR, 64.9°N, 34.9°E.
Origin time = 21 46 05.
M_L(UPP) = 2.5 (0.05) 2.
Solution from Finnish station readings.

" 9 UME iPKP 22 34 39.7
Vanuatu Islands (h = 220 km).

" 10 KIR iSKP1 05 34 48.0
UME iPKP 05 32 24.8
iSKP1 05 35 00.5
Fiji Islands region (h = 590 km).

" 10 KIR iSg1 11 17 38.1

UME iSg1 11 17 23.3

MYV eSg1 11 18 33
Norrbotten, Sweden, 65.5°N, 22.6°E.
Origin time = 11 16 23.
M_L(UPP) = 2.2 (0.17) 2.
By combination with Finnish station readings.

" 10 UPP eP 12 17 01
Yugoslavia (h = 10 km).

" 11 KIR eP 00 38 06
North of Svalbard (h = 10 km).

" 11 UPP iP 18 51 19.8
KIR iP 18 52 07.4
Zaire Republic (h = 10 km).

" 12 UPP iP 03 49 51.0
UME iP 03 50 27.8
Southern Greece (h = 50 km).

" 13 KIR iP 01 15 47.7
micr sec
P Z' 0.1 1.0
Volcano Islands region (h = 50 km).

" 13 KIR iP 20 46 24.4
Hindu Kush region (h = 140 km).

1984
Jan. 14 UPP iP 02 37 24.3
KIR iP 02 36 50.7
South of Honshu, Japan (h = 420 km).

" 14 UPP iP 22 20 20.9
KIR iP 22 21 29.6 C
UME iP 22 20 54.3
Crete (h = 60 km).

" 15 KIR eP 03 55 47
Pakistan (h = 10 km).

" 15 UPP iP 07 21 20.6
KIR iP 07 20 26.8
UME iP 07 20 55.1
Kodiak Island region (h = N).

" 15 KIR iP 07 21 42.2 C
micr sec
P Z' 0.1 1.0

" 15 UPP iP 12 12 44.0
KIR iP 12 12 39.4
UME iP 12 12 37.2 C
Burma (h = 60 km).

" 15 UPP iP 12 39 08.8
micr sec
P Z' 0.1 0.9
KIR iP 12 38 14.4
micr sec
P Z' 0.2 1.0
UME iP 12 38 42.4
Kodiak Island region (h = N).
m = 6.0 (UPP,KIR).

" 15 UME iP 22 24 56.7
Tajik SSR (h = 10 km).

" 16 UPP iP 01 33 43.1
UME iP 01 34 21.4
Greece (h = 10 km).

" 16 UPP
micr sec
Mx Z 6.4 30
UME iPKP 12 46 34.3
Easter Island region (h = 10 km).

" 16 UPP iP 17 00 20.1
KIR iP 16 59 02.0
UME iP 16 59 43.2
Jan Mayen Island region (h = 10 km).

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

1984
Jan. 16 KIR iPn 21 23 50.7
i 21 24 01.2
iSgl 21 24 26.2

UME iSgl 21 25 51.0

MYV eSgl 21 26 00
Lofoten region, Norway, near 68 1/2°N, 14°E.
Origin time = 21 23 08.
M_L(UPP) = 3.0 (0.04) 3.
Felt.

" 17 UPP iPdiff 02 22 22.2
KIR iPdiff 02 22 11.9 C
UME iPP 02 26 17.9
Bali Sea (h = 300 km).

" 17 UME i 09 12 59.1
iSgl 09 13 16.5
Central Finland, 66.0°N, 28.4°E.
Origin time = 09 11 09.
M_L(UPP) = 2.6 (0.29) 2.
Felt.
By combination with Finnish station readings.

" 17 UPP iP 11 25 08.8
micr sec
P Z' 0.1 1.1
UME iP 11 24 46.9 C
Near east coast of Honshu, Japan (h = 40 km).

" 17 UPP iP 15 43 24.6 C
ipP 15 43 37.0
micr sec
P Z' 0.5 1.5
UME iP 15 43 02.8 C
ipP 15 43 13.4
Near east coast of Honshu, Japan.
h = 45 km (UPP,UME).

" 17 UME iPdiff 16 32 41.5
Near coast of northern Peru (h = 20 km).

" 17 UME iP 20 01 09.0

" 17 UME iSKP1 20 10 52.5
South of Fiji Islands (h = 590 km).

1984
Jan. 17 UPP iP 20 13 22.1
i 20 13 27.7
micr sec
P Z' 0.1 1.0
UME iP 20 13 10.3 C

" 17 UPP iP 20 25 04.2
UME iP 20 24 47.6

" 17 UME iP 21 50 30.4

" 18 UDD iSgl 05 39 31.9
Värmland, Sweden, 59.5°N, 13.6°E.
Origin time= 05 39 14.
M_L(UPP) = 1.6 1.
By combination with SKI network readings.

" 18 UPP iP 14 16 40.0
micr sec
P Z' 0.1 1.0
Mx Z 6.0 13
KIR iP 14 17 00.2
micr sec
P Z' 0.2 1.0
Mx Z 3.1 16
UME iP 14 16 44.5
i 14 16 50.5
iS 14 23 30
Pakistan (h = 10 km).
m = 5.9, M = 5.6 (UPP,KIR).

" 18 UME iP 15 06 08.2
Greece (h = 10 km).

" 19 UME eP 09 27 13
Turkey-USSR border region (h = N).

" 19 KIR iP 11 23 58.6
UME iP 11 24 07.8
Taiwan region (h = 35 km).

" 19 UPP iPKP1 16 34 00.4
iSKP1 16 37 15.7
KIR e(PKP) 16 33 44
iPKP 16 33 55.6
iSKP1 16 36 53.4
micr sec
PKP Z' 0.1 1.0
UME i(PKP) 16 33 51.1
iPKP 16 34 01.5
iSKP1 16 37 04.4
South of Fiji Islands (h = 330 km).

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

1984
Jan. 19 UPP micr sec
Mx Z 4.1 20
KIR iPdiff 16 48 15.8
micr sec
Mx Z 0.8 15
UME iPdiff 16 48 25.3
Caroline Islands region
(h = 30 km).
M = 5.7 (UPP,KIR).

" 19 UPP iP 19 33 09.8
i 19 33 12.9
UME iP 19 33 09.0
i 19 33 11.1
Hindu Kush region (h = N).

" 20 UPP iPKP 00 07 14.9
KIR ePKP 00 07 29
UME iPKP 00 07 21.9
i 00 07 23.8
i 00 07 29.8
Southwestern Atlantic Ocean
(h = 10 km).

" 20 UPP iP 01 41 25.2 C
micr sec
P Z' 0.1 1.0
KIR iP 01 40 54.9 C
micr sec
P Z' 0.1 1.0
UME iP 01 41 04.1 C
USSR-Mongolia border region
(h = N).
m = 5.6 (UPP,KIR).

" 20 UPP iPKP 04 11 16.7
iSKP1 04 14 07.3
KIR ePKP 04 11 08
iSKP1 04 13 41.7
UME iPKP 04 11 13.9
i 04 11 29.3
iSKP1 04 13 54.2
Fiji Islands region
(h = 530 km).

" 20 UPP iP 07 27 49.6
iS 07 30 07.9
micr sec
P Z' 0.1 1.4
KIR iP 07 29 12.8
micr sec
P Z' 0.1 1.0
UME iP 07 28 30.2
i 07 28 35.8
iS 07 32 31.5
Romania (h = 140 km).

1984
Jan. 20 KIR iPg1 11 54 09.9
iSg1 11 54 36.5
UME iSg1 11 54 53.2
Norrbotten, Sweden,
66.2°N, 22.6°E.
Origin time = 11 53 34.
M_L(UPP) = 2.4 (0.12) 3.
By combination with Finnish
station readings.

" 20 KIR iPKP 12 23 17.9
Fiji Islands region
(h = 330 km).

" 20 UME iP 13 09 08.8
Andaman Islands region
(h = 40 km).

" 20 UME eP 13 59 30
i 13 59 44.7
Andaman Islands region
(h = 35 km).

" 20 UPP iP 15 04 05.3
KIR i 15 04 04.1
UME iP 15 03 54.1
i 15 04 03.1
India-China border region
(h = 30 km).

" 20 UME iP 16 12 41.0
Andaman Islands region
(h = 40 km).

" 20 UME ipP 17 48 01.3
Andaman Islands region
(h = 40 km).

" 20 UPP epP 17 52 18
i 17 52 22.3
UME iP 17 51 58.5
Philippine Islands region
(h = 20 km).

" 21 UPP iP 20 47 21.2
micr sec
P Z' 0.1 1.1
KIR iP 20 46 54.5
micr sec
P Z' 0.3 1.4
UME iP 20 47 05.2
South of Mariana Islands
(h = 45 km).
m = 6.3 (UPP,KIR).

" 21 UPP eP 20 57 23
UME iP 20 57 10.0
Tibet (h = N).

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

1984
Jan. 22 KIR ePgl 17 09 59
UME ePn 17 10 37
MYV iPn 17 10 28.6
Norwegian Sea, near 72°N, 5°E.
Origin time = 17 08 05.
Solution from NORSAR bulletin.

" 22 UME iP 17 25 24.0
Near s. coast of southern Honshu (h = 450 km).

" 22 KIR eP 17 45 19
UME i 17 46 12.5
North of Svalbard (h = 10 km).

" 23 UME iP 05 52 10.6
Central California (h = 5 km).

" 23 UME iP 06 10 58.7
North Atlantic Ocean (h = N).

" 23 UPP iP 07 46 38.0
i 07 46 48.5
micr sec
Mx Z 10.3 13
KIR iP 07 46 06.0 C
i 07 46 16.7
micr sec
P Z' 0.2 1.3
Mx Z 6.1 16
UME iP 07 46 19.0 C
i 07 46 26.5
Ryukyu Islands (h = 45 km).
M = 6.2 (UPP,KIR).

" 23 KIR iP 09 37 46.8
UME iP 09 38 01.7 C
South of Honshu, Japan (h = N).

" 23 UPP iP 14 47 47.4
KIR iP 14 48 48.9
Turkey (h = 80 km).

" 23 UPP iP 22 16 50.0
KIR iP 22 15 56.2
micr sec
P Z' 0.1 1.0
UME iP 22 16 23.0
i 22 16 45.2
Fox Islands, Aleutian Islands (h = 100 km).

" 24 UPP iP 16 35 06.5
i 16 35 19.3
KIR iP 16 34 49.4
UME iP 16 34 55.0
Luzon, Philippine Islands (h = 25 km).

1984
Jan. 24 UPP iP 16 40 02.5
UME iP 16 39 49.5
Luzon, Philippine Islands (h = 20 km).

" 24 KIR iPKP 23 26 03.8
ipPKP 23 26 31.2
micr sec
PKP Z' 0.4 1.8
UME iPKP 23 25 56.7
ipPKP 23 26 28.4
South Sandwich Islands region.
h = 120 km (KIR,UME).

" 25 KIR eP 03 14 48
UME iP 03 14 36.7
Afghanistan-USSR border region (h = 60 km).

" 25 UPP iP 09 46 03.4
micr sec
P Z' 0.1 0.9
KIR iP 09 45 20.0
micr sec
P Z' 0.1 1.0
UME iP 09 45 39.1 C
Hokkaido, Japan region (h = 70 km).
m = 5.9 (UPP,KIR).

" 25 KIR iP 11 45 51.0
UME iP 11 45 41.3
Afghanistan-USSR border region (h = N).

" 25 UPP iP 23 59 23.1
KIR iP 23 59 22.2
UME iP 23 59 17.5
Nepal (h = N).

" 26 UPP iPKP 18 12 58.3
KIR ePKP 18 13 15
UME iPKP 18 13 07.8
South Sandwich Islands region (h = N).

" 26 UPP iP 22 58 47.4
KIR iP 22 58 34.2
UME iP 22 58 38.1
Celebes Sea (h = 620 km).

" 27 UPP iPKP1 02 01 34.3
KIR iPKP1 02 01 35.7
UME iPKP1 02 01 32.4
West of Macquarie Island (h = 10 km).

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

1984
Jan. 27 UPP iP 13 09 07.6
i 13 09 09.3
ipP 13 09 45.3
isP 13 10 03.4
iS 13 15 08
micr sec
i Z' 1.7 1.0
Mx Z 5.7 14
KIR iP 13 09 15.1
i 13 09 17.6
micr sec
i Z' 1.0 1.0
Mx Z 6.6 10
UME iP 13 09 05.1
i 13 09 06.2
ipP 13 09 43.2
iS 13 14 59
Afghanistan-USSR border region.
h = 180 km (UPP,UME).
m = 6.5, M = 5.8 (UPP,KIR).
Double P, small and large.
M not corrected for focal depth.

" 27 UPP iPKPl 16 38 45.9
South of Fiji Islands (h = 90 km).

" 27 UPP iP 21 54 40.5
KIR iP 21 53 55.9
micr sec
P Z' 0.1 1.0
UME iP 21 54 15.6
i 21 54 29.0
Off coast of Hokkaido, Japan (h = 40 km).

" 28 UPP iP 00 56 53.5
KIR iP 00 57 04.4
i 00 57 06.6
micr sec
i Z' 0.1 1.0
UME iP 00 56 52.3
i 00 56 54.3
i 00 58 28.4
Hindu Kush region (h = N).

" 28 UPP i(P) 01 46 06.4

" 28 UME iP 03 22 09.6
Hokkaido, Japan region (h = 100 km).

" 28 KIR iP 14 47 24.7 C
micr sec
P Z' 0.3 1.7
North of Svalbard (h = 10 km).

1984
Jan. 28 KIR iP 15 07 02.4

" 28 KIR iP 16 10 53.0
micr sec
P Z' 0.1 1.0
North of Svalbard (h = 10 km).

" 28 KIR eP 19 35 59
i 19 36 11.7
UME iP 19 36 09.9
i 19 36 22.4
i 19 36 31.6
Guerrero, Mexico (h = 70 km).

" 28 UPP iP 22 57 01.2
iS 23 04 28
micr sec
Mx Z 3.4 17
KIR eP 22 57 39
i 22 57 42.0
micr sec
P Z' 0.1 1.0
UME iP 22 57 17.0
i 22 57 19.5
iS 23 05 02
Eastern Gulf of Aden (h = 10 km).

" 28 UME iP 23 05 29.4
Costa Rica (h = 40 km).

" 29 UPP iP 01 27 09.6
KIR iP 01 27 17.6
UME iP 01 27 07.1
Afghanistan-USSR border region (h = 90 km).

" 29 UPP iPKPl 10 33 10.1
i 10 33 14.5
KIR iPKPl 10 32 50.3
UME iPKPl 10 32 58.6 C
Kermadec Islands region (h = 40 km).

" 29 KIR iP 11 50 57.5
Tajik-Xinjiang border region (h =N).

" 29 UPP iP 16 17 57.4
micr sec
P Z' 0.2 1.1
KIR iP 16 16 40.5
i 16 16 50.8
micr sec
P Z' 0.5 1.4
UME iP 16 17 19.9 D
i 16 17 21.2
Jan Mayen Island region (h = 10 km).

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

1984

Jan.	30	UPP	iP	06 03 39.7	
		KIR	eP	06 04 18	
			i	06 04 40.7	
		UME	iP	06 03 51.0	C
		Eastern Caucasus (h = N).			
"	30	UPP	iP	12 56 20.7	
		UME	iP	12 56 07.0	
			i	12 56 15.9	
		Philippine Islands region (h = N).			
"	30	UME	iP	16 16 46.7	
			i	16 16 52.4	
		Greenland Sea (h = 20 km).			
"	31	UME	iP	00 03 42.7	

September 10, 1985

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SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

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

U P P S A L A, K I R U N A, 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	(MYV)	62°56.5'N,	14°20.8'E; h = 345 m

F E B R U A R Y 1 - 29, 1984

1984 Feb. 1 UME eP 06 21 55
Andaman Islands region
(h = N).

" 1 UPP iP 07 38 05.2 D
iPcP 07 38 34.6
ipP 07 40 02.2
iS 07 45 54.6
iScS 07 46 58.1
micr sec
P Z' 3.3 1.1
UME iP 07 37 39.7 D
ipP 07 39 35.9
iS 07 45 02
iScS 07 46 29
i(P'P') 08 06 31.0
iP'P' 08 07 00.8
Sea of Okhotsk.
h = 610 km (UPP,UME).
(P'P') denotes an early
PKPPKP arrival.

" 1 UPP iP 14 29 58.4
i 14 29 59.4
iPP 14 31 42
iS 14 36 18
micr sec
i Z' 1.4 1.1
Mx Z 14 11
KIR iP 14 32 21.7
i 14 32 23.1
i 14 33 11.3
i 14 34 16.9
micr sec
Mx Z 20 11
UME iP 14 29 57.1
i 14 29 58.3
i 14 30 34.0
Afghanistan (h = N).
M = 6.3 (UPP,KIR).

1984 Feb. 1 UME iP 16 14 22.6
Ascension Island region
(h = 10 km).

" 2 UPP iSgl 03 32 54.1
i 03 32 55.9
UME iSgl 03 34 55.9
UDD iSgl 03 33 08.8
MYV iSgl 03 33 19.8
Gästrikland-Hälsningland,
Sweden, 61.0°N, 16.6°E.
Origin time = 03 32 16.
M_L (UPP) = 2.1 (0.20) 2.
Felt.
By combination with SKI
network readings.

" 2 KIR iP 14 22 54.2
Tajik SSR (h = N).

" 2 KIR iP 14 48 12.3
UME iP 14 48 03.3
Tajik SSR (h = N).

" 2 KIR iP 15 07 48.5
Kirghiz SSR (h = N).

" 2 UPP iP 15 22 31.5
KIR iP 15 22 33.3 C
micr sec
P Z' 0.1 0.7
UME iP 15 22 26.1 C
Kirghiz SSR (h = N).

" 2 UPP iP 17 44 8.6
i 17 44 22.3
UME iP 17 44 8.6
Afghanistan (h = 40 km).

" 3 UPP iPKP1 00 39 53.0
i 00 39 57.6
UME iPKP1 00 39 41.1

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

1984
Feb. 3 UPP iP 05 03 34.1
KIR iP 05 03 06.4
UME iP 05 03 18.4
Mariana Islands region
(h = 50 km).

" 3 UME iPKP 08 48 28.6
Near coast of Central Chile
(h = 45 km).

" 3 UME iPKP 14 43 11.9
Fiji Islands region
(h = 580 km).

" 3 UPP eP 18 20 07
UME iP 18 20 07.2
Afghanistan (h = N).

" 3 UME iPKP 19 24 24.8
Santa Cruz Islands
(h = 60 km).

" 3 UPP iP 21 13 08.5
UME iP 21 12 55.6

" 4 UPP iPKP1 20 29 03.1
iPKP2 20 29 07.2
UME iPKP1 20 28 52.0
Kermadec Islands (h = 45 km).

" 5 UPP iP 00 25 30.8
KIR iP 00 26 36.1
micr sec
P Z' 0.1 1.5
UME iP 00 26 00.7
Turkey (h = 10 km).

" 5 UME iP 10 14 10.6

" 5 UPP iP 18 51 19.4 C
micr sec
P Z' 0.2 1.0
KIR iP 18 50 24.8 C
micr sec
P Z' 0.2 0.7
UME iP 18 50 50.3 C
Near east coast of Kamchatka
(h = N).
m = 6.2 (UPP,KIR).

" 6 UPP iPKP1 03 32 30.4
UME iPKP1 03 32 20.8
South of Kermade Islands
(h = 50 km).

" 6 KIR iP 11 09 11.8
Near east coast of Kamchatka
(h = N).

1984
Feb. 6 UPP iP 14 51 00.7 C
micr sec
P Z' 0.1 0.7
KIR iP 14 50 14.1
micr sec
P Z' 0.1 0.8
UME iP 14 50 35.1
Kuril Islands (h = 100 km).
m = 5.8 (UPP,KIR).

" 7 UPP iPKP1 05 32 10.7
South of Fiji Islands
(h = 350 km).

" 7 KIR iSn 16 26 04.3
Central Finland, 65.9°N,
28.3°E.
Origin time = 16 24 26.
Solution from Finnish
station readings.

" 7 UPP iPKP 21 52 17.8
micr sec
Mx Z 97 21
KIR iPKP 21 52 04.3
micr sec
Mx Z 178 21
UME iPKP 21 52 10.4
i 21 52 20.7
Solomon Islands (h = 20 km).
M = 7.6 (UPP,KIR).

" 8 UME iPKP 00 58 36.6
Solomon Islands (h = 25 km).

" 8 UPP iP 03 12 45.5
KIR iP 03 12 13.7
UME iP 03 12 27.6

" 8 UME iP 05 33 42.5

" 8 UME iP 07 14 59.3
i 07 15 15.2

" 10 UPP iP 16 45 06.4
i 16 45 18.0

" 10 UPP iP 17 03 48.1
iS 17 14 09
micr sec
Mx Z 15 18
KIR iP 17 03 19.7
micr sec
Mx Z 6.1 16
UME iP 17 03 37.0
iS 17 13 44
Gulf of California (h = 10 km).
M = 6.3 (UPP,KIR).

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

1984
Feb. 10 UPP iP 20 00 49.7
ipP 20 01 05.1
KIR iP 20 00 14.6
ipP 20 00 29.4
UME iP 20 00 29.3
ipP 20 00 44.6
Near s. coast of southern Honshu.
h = 55 km (UPP,KIR,UME).

" 11 UPP iP 00 04 08.1
UME iP 00 03 47.1

" 11 UPP iP 08 07 40.7
i 08 07 41.4
iS 08 11 37
micr sec
i Z' 0.6 1.5
Mx Z 9.2 10
KIR iP 08 08 55.1
micr sec
P Z' 0.4 1.6
Mx Z 4.0 10
UME iP 08 08 17.4
i 08 08 33.6
iS 08 12 45
Greece (h = 30 km).
m = 5.9, M = 5.5 (UPP,KIR).

" 11 UPP iP 08 17 43.7
Turkey (h = 80 km).

" 11 UPP iP 08 45 09.7
KIR iP 08 45 19.7
UME iP 08 45 08.8
Pakistan (h = N).

" 11 UPP iP 10 20 22.7
UME eP 10 20 15
Tibet (h = N).

" 11 UPP iP 13 48 59.8
British Columbia (h = 20 km).

" 11 UPP iP 14 09 11.7
KIR iP 14 09 23.8
UME iP 14 09 21.2
Windward Islands (h = 60 km).

" 11 UPP eP 22 24 34
Greece (h = 10 km).

" 11 UPP iP 23 53 18.1
Greece (h = 10 km).

" 12 UPP iP 00 07 38.5
KIR iP 00 07 07.4
UME iP 00 07 20.2
i 00 07 31.1
Ryukyu Islands (h = 55 km).

1984
Feb. 12 UPP iP 06 46 24.7
UME iP 06 46 19.6
Southern Xinjiang, China (h = 110 km).

" 12 UPP iP 09 38 31.2
UME eP 09 38 08
Off east coast of Honshu, Japan (h = 45 km).

" 12 UPP iP 13 48 29.1
Afghanistan (h = N).

" 12 UPP iP 19 12 28.2
UME iP 19 13 06.8
Romania (h = 130 km).

" 12 KIR iP 20 14 20.7
Mindanao, Philippine Islands (h = 70 km).

" 12 UPP iP 23 45 53.6
UME eP 23 46 09
i 23 46 18.7
Arabian Sea (h = 10 km).

" 13 UPP iP 05 00 11.6
i 05 00 13.2
micr sec
i Z' 0.4 0.8
KIR iP 04 59 46.9
i 04 59 48.4
UME iP 04 59 55.4
i 04 59 57.4
Taiwan region (h = 270 km).

" 13 UPP iP 08 44 43.1
UME iP 08 44 21.2
ipP 08 45 53.4
Sea of Japan (h = 400 km).

" 13 UPP iP 09 51 55.4
i 09 52 00.7
micr sec
P Z' 0.1 1.0
UME iP 09 51 34.1 D
i 09 51 40.5
Near s. coast of Honshu, Japan (h = 120 km).

" 13 UPP iPKPl 09 57 39.6
South of Fiji Islands (h = 660 km).

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

1984					
Feb.	13	UPP	iP		17 04 28.9
					micr sec
			P	Z'	0.1 1.0
		UME	iP		17 04 07.3 C
			i		17 04 15.8
		Near s. coast of Honshu, Japan (h = 45 km).			
"	13	UPP	iP		18 16 28.2
		South of Alaska (h = N).			
"	14	UPP	iSn		10 45 31.3
			i		10 46 14.7
		UME	iSn		10 45 43.3
		UDD	iPn		10 43 41.2
			iSn		10 44 42.4
			iSgl		10 45 02.4
		DEL	iPn		10 44 11.7
			iSn		10 45 37.2
		South Norwegian Sea, near 62 1/4°N, 3°E.			
		Origin time = 10 42 16.			
		M_L(UPP) = 3.2 1.			
"	14	UME	iP		16 52 58.5
		Honshu, Japan (h = 160 km).			
"	14	UPP	iP		23 18 14.3
		UME	iP		23 17 55.9
		South of Honshu, Japan (h = 410 km).			
"	15	UPP	iP		04 58 12.0
		UME	iP		04 58 23.6
		Carlsberg Ridge (h = 10 km).			
"	15	UME	iP		05 39 38.2
		Tajik SSR (h = N).			
"	15	UPP	iP		10 56 54.2
		Southeastern Uzbek SSR. (h = 20 km).			
"	15	UME	iP		13 49 12.2
		Kuril Islands (h = 40 km).			
"	15	UPP	iP		15 52 07.3
"	15	UPP	iP		15 52 31.9
"	15	UPP	iP		17 11 48.8
		KIR	iP		17 11 14.0
		UME	iP		17 11 34.1
		Southern Nevada.			
		Underground explosion.			

1984					
Feb.	15	UPP	iP		22 04 18.5
			ipP		22 04 23.1
		KIR	iP		22 04 23.2
			ipP		22 04 28.8
					micr sec
			P	Z'	0.1 1.0
		UME	iP		22 04 14.2
			ipP		22 04 19.1
		Tajik SSR.			
		h = 20 km (UPP,KIR,UME).			
"	16	UPP	iP		00 26 53.8
		KIR	iP		00 26 57.8
					micr sec
			P	Z'	0.1 0.7
		UME	iP		00 26 48.9
			ipP		00 26 53.9
		Tajik SSR.			
		h = 20 km (UME).			
"	16	KIR	iPn		06 12 50.1
		Greenland Sea, near 75°N, 17 1/2°E.			
		Origin time = 06 11 07.			
		Solution from Finnish station readings.			
"	16	UPP	iP		13 52 51.0
		KIR	iP		13 52 16.0
					micr sec
			P	Z'	0.1 1.0
		UME	iP		13 52 31.0
		Near s. coast of Honshu, Japan (h = 350 km).			
"	16	UPP	iP		14 46 08.6
"	16	UPP	iP		15 06 18.0
"	16	UPP	iP		17 26 04.5 C
			i		17 26 05.5
			ipP		17 26 51.8
					micr sec
			P	Z'	1.5 0.8
			Mx	Z	21 25
		KIR	iP		17 26 13.5 C
					micr sec
			Mx	Z	32 22
		UME	iP		17 26 02.8 C
			i		17 26 03.9
			ipP		17 26 49.0
		Hindu Kush.			
		h = 220 km (UPP,UME).			
		M = 6.1 (UPP,KIR).			
		Double P, small and large, about 1 s apart.			
		M uncorrected for focal depth.			

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

1984
Feb. 17 UPP iP 02 32 47.1
KIR iP 02 32 16.1
UME iP 02 32 29.1 D
Bonin Islands region
(h = 510 km).

" 17 UPP iP 02 46 56.7
micr sec
P Z' 0.1 1.1
KIR iP 02 46 39.2
UME iP 02 46 41.0
i 02 46 44.0
Qinghai Province, China
(h = 10 km).

" 17 UPP iPKP1 10 52 04.7
UME iPKP1 10 51 55.1
Kermadec Islands (h = 50 km).

" 17 UPP iP 16 46 18.8
KIR iP 16 46 03.8
micr sec
P Z' 0.2 1.2
UME iP 16 46 08.7 C
Banda Sea (h = 160 km).

" 17 UME iP 20 42 22.7
Kuril Islands (h = N).

" 17 UPP Mx 21 23
micr sec
Mx Z 14 25
KIR Mx 21 23
micr sec
Mx Z 7.7 16
Revilla Gigedo Islands
region (h = 10 km).
M = 6.3 (UPP,KIR).

" 17 UME iP 21 25 16.7
Aegean Sea (h = 15 km).

" 17 KIR eP 22 09 30
UME iP 22 09 51.1
Kuril Islands (h = N).

" 17 UME iPKP 22 54 15.6
Loyalty Islands region
(h = 40 km).

" 17 UPP iP 23 13 38.3
micr sec
Mx Z 5.6 8
KIR iP 23 13 43.2
micr sec
Mx Z 8.6 9
UME iP 23 13 34.6
Tajik SSR (h = 15 km).

1984
Feb. 17 UPP iP 23 14 53.6
ipP 23 15 00.8
KIR iP 23 14 57.6
ipP 23 15 03.3
micr sec
P Z' 0.1 0.7
UME iP 23 14 49.7
ipP 23 14 55.3
Tajik SSR.
h = 20 km (UPP,KIR,UME).

" 17 UPP iP 23 34 08.5
ipP 23 34 13.9
micr sec
P Z' 0.1 1.3
KIR iP 23 34 12.0 C
micr sec
P Z' 0.2 1.0
UME iP 23 34 03.8
ipP 23 34 09.2
iS 23 39 53
Tajik SSR.
h = 20 km (UPP,UME).
m = 5.6 (UPP,KIR).

" 18 UPP iP 05 30 51.7
KIR iP 05 31 30.8
UME iP 05 31 07.4
i 05 31 12.7
Eastern Gulf of Aden
(h = 10 km).

" 18 UPP iP 16 40 12.7
KIR iP 16 41 19.1
UME iP 16 40 44.0
Crete (h = 25 km).

" 18 UPP iP 16 52 00.1
KIR iP 16 52 08.3
UME iP 16 51 58.4

" 18 UME iSKP1 18 47 17.2
Fiji Islands region
(h = 610 km).

" 18 KIR iP 19 43 19.2
UME iP 19 43 10.8
Tajik SSR (h = 15 km).

" 19 UPP iP 03 51 49.0
UME iP 03 52 29.6
Greece (h = 25 km).

" 19 UPP iP 04 04 00.0 C
micr sec
P Z' 0.6 0.7
KIR iP 04 03 44.7 C
UME iP 04 03 45.2 C
Eastern Kazakh SSR.
Underground explosion.

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

1984
Feb. 19 UPP iP 09 40 09.3
UME iP 09 40 00.7
Burma-India border region
(h = 45 km).

" 19 UPP iP 15 55 28.9
KIR iP 15 55 32.3
UME iP 15 55 24.9
i 15 55 33.8
Nepal-India border region
(h = 20 km).

" 20 UPP iP 01 21 08.2

" 20 UME eP 04 12 47
Tajik SSR (h = 10 km).

" 20 KIR iP 18 37 25.6 C
micr sec
P Z' 0.1 1.0
UME iP 18 38 06.3
North of Severnaya Zemlya
(h = 10 km).

" 20 UME iP 22 48 59.1
Near coast of Chiapas,
Mexico (h = 80 km).

" 20 UME iP 23 08 18.9
Talaud Islands (h = 190 km).

" 21 UME iP 08 27 50.5

" 21 KIR iP 08 43 22.2
UME iP 08 43 30.6
i 08 43 34.2

" 21 UPP iP 12 03 15.0
KIR iP 12 02 36.4
UME iP 12 02 54.6 C
Near east coast of Honshu,
Japan (h = 90 km).

" 22 UPP iP 05 50 54.8
iS 05 55 55
micr sec
Mx Z 23 19
KIR iP 05 51 23.1
micr sec
Mx Z 14 13
UME eP 05 51 02
i 05 51 08.5
iS 05 56 11
Turkmen SSR (h = N).
M = 5.9 (UPP,KIR).

1984
Feb. 22 UME iP 06 53 42.0

" 22 KIR eP 15 33 44
UME iP 15 34 00.4
Near s. coast of Honshu,
Japan (h = 15 km).

" 22 UPP i(P) 18 29 36.3

" 22 KIR eP 18 34 09
UME iP 18 34 25.9
Iceland (h = 10 km).

" 22 KIR iP 20 24 38.5
UME eP 20 24 50
Molucca Passage (h = 45 km).

" 23 UPP iP 15 29 54.3
micr sec
Mx Z 1.6 12
KIR iP 15 30 03.5
UME iP 15 29 52.4
Southeastern Uzbek SSR
(h = N).

" 23 UPP iP 22 26 55.1
UME iP 22 27 48.1
Poland (h = 10 km).

" 24 UPP eP 00 40 47
KIR iP 00 40 29.0
UME iP 00 40 36.5
Mindanao, Philippine Islands
(h = 70 km).

" 24 UME iP 03 14 11.7
North of Svalbard (h = 10 km).

" 24 UPP iPKPl 05 16 44.8 C
Kermadec Islands region
(h = N).

" 24 UPP iP 11 23 01.6
KIR iP 11 22 07.7
Rat Islands, Aleutian Islands
(h = 50 km).

" 24 UPP iP 12 58 51.4 D
ipP 12 59 36.9
micr sec
P Z' 0.3 1.0
KIR iP 12 59 00.1 D
i 12 59 09.7
micr sec
P Z' 0.5 1.0
(cont.)

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

1984
Feb. 24 (cont.)
UME iP 12 58 50.0 D
i 12 58 57.4
ipP 12 59 35.4
i 12 59 59.1
Hindu Kush region.
h = 220 km (UPP,KIR).
m = 5.9 (UPP,KIR).

" 24 UPP iSKP1 21 43 45.4
UME iPKP 21 40 13.8
i 21 41 00.4
iSKP1 21 43 38.1
Loyalty Islands region
(h = 90 km).

" 25 UPP iPKP1 00 22 37.6
UME iPKP1 00 22 25.2
Kermadec Islands region
(h = N).
Late arrivals, about 10 s,
in comparison to the NEIS
solution.

" 25 UME iP 05 09 05.9
Near east coast of Honshu,
Japan (h = 70 km).

" 25 UPP iP 05 49 10.6 D
micr sec
P Z' 0.1 0.8
UME iP 05 49 50.4
i 05 49 57.5
Greece (h = 30 km).

" 25 UPP i(PKP) 15 47 51.7
i 15 50 28.5
iSKP1 15 51 15.3
UME iPKP 15 47 57.4
iSKP1 15 51 01.9
Tonga Islands (h = 260 km).
(PKP) denotes an early PKIKP
arrival.

" 26 UPP iPKP1 01 50 57.2
South of Fiji Islands
(h = 220 km).

" 26 UPP iPdiff 08 32 11.1
Near coast of Peru
(h = 110 km).

" 26 UME iP 08 47 54.5

" 26 UPP iP 19 09 10.9
UME iP 19 08 47.3
Off east coast of Honshu,
Japan (h = 30 km).

1984
Feb. 26 UPP iSgl 23 15 01.2
Uppland, Sweden,
60.2°N, 17.9°E.
Origin time = 23 14 49.
Solution from SKI network
readings.
Probably rockburst.

" 27 UPP eP 02 37 36

" 27 UPP iP 11 29 14.1
UME iP 11 28 48.5
Kuril Islands (h = 140 km).

" 27 UPP iP 18 18 41.6 C
i 18 18 48.4
micr sec
P Z' 0.2 1.4
Mx Z 5.5 16
UME iP 18 18 27.7 C
i 18 18 34.7
Philippine Islands region
(h = 35 km).

" 28 UME iPKP 00 24 07.8
Solomon Islands (h = N).

" 28 UPP iP 18 16 54.4
UME iP 18 17 35.2
Greece (h = 10 km).

" 28 UPP eP 08 53 16
Dodecanese Islands
(h = 160 km).

" 29 UPP iP 00 14 36.5
Ryukyu Islands (h = 120 km).

" 29 UPP iP 10 08 55.1
Southern Iran (h = 40 km).

" 29 UPP iP 14 34 04.2
UME iP 14 34 01.3
i 14 34 10.4
Southern Sumatera (h = 100 km).

" 29 UME iP 20 18 22.6
Crete (h = 35 km).

October 22, 1985

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Won Young Kim
Klaus Meyer
Elizabeth Shah

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,	14°20.8'E; h = 345 m

M A R C H 1 - 31, 1984

1984 Mar. 1
UDD iPg1 04 03 32.9
iSg1 04 03 54.2
Southeastern Norway, near 61°N, 11°E.
Origin time = 04 03 04.
M_L(UPP) = 2.1 1.
Solution from NORSAR bulletin.

" 1
UPP iP 09 13 46.0
UME iP 09 14 18.3
Crete (h = 90 km).

" 1
UPP iP 17 56 49.2 C
micr sec
P Z' 0.2 0.9
KIR iP 17 56 15.2 C
micr sec
P Z' 0.2 0.9
UME iP 17 56 34.4 C
Southern Nevada.
m = 6.2.
Underground explosion.

" 1
UPP iP 21 32 33.6
i 21 32 38.2
micr sec
i Z' 0.1 1.2
KIR iP 21 33 10.1
UME iP 21 32 46.2
i 21 32 50.8
Southern Iran (h = N).

" 2
UPP i 00 19 30.1
iPKP1 00 19 33.3
iPKP 00 19 38.3
KIR iPKP 00 19 23.9
(cont.)

1984 Mar. 2
(cont.)
UME i 00 19 24.2
iPKP 00 19 30.7
Fiji Islands region (h = 230 km).

" 2
UPP i 02 27 37.9
iSg1 02 27 40.8
KIR iSg1 02 27 38.4
UME iPg1 02 25 41.3 D
i 02 25 41.3
iSg1 02 25 43.8
UDD i 02 28 00.5
iSg1 02 28 07.4
DEL e 02 29 40
iSg1 02 29 45.0
MYR iPn 02 26 20.4
iPg1 02 26 26.8
iSn 02 27 56.4
iSg1 02 27 07.4
Gulf of Bothnia, 63.7°N, 21.1°E.
Origin time = 02 25 31.
M_L(UPP) = 2.9 (0.13) 6.
Felt.

" 2
UDD iRg 02 43 10.8
Dalarna, Sweden, 60.4°N, 14.1°E.
Origin time = 02 42 57.
Near-surface event, probably earthquake.
Solution from SKI network readings.

" 2
UPP eP 04 35 55
UME eP 04 36 17
Southwestern USSR (h = N).

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

1984
Mar. 2 KIR iP 08 41 03.5
UME eP 08 40 58
Southern Xinjiang, China
(h = N).

" 2 UPP iP 15 55 23.7
KIR eP 15 56 40
i 15 56 42.2
UME iP 15 56 03.4
Greece (h = 10 km).

" 3 UME iP 08 36 55.0
Yugoslavia (h = 10 km).

" 3 UPP iP 14 15 09.7 D
i 14 15 33.7
KIR iP 14 15 25.0
UME iP 14 14 45.0
Kuril Islands (h = 60 km).

" 4 UPP iP 10 06 46.1
iS 10 10 59
micr sec
P Z' 0.2 0.9
Mx Z 4.1 11
KIR iP 10 07 25.8
micr sec
P Z' 0.1 0.9
Mx Z 2.9 8
UME iP 10 06 58.8
iS 10 11 31
Eastern Caucasus (h = N).
m = 5.6 (UPP,KIR).

" 4 UPP iP 14 56 19.2
KIR iP 14 56 57.0
UME iP 14 56 31.2
Eastern Caucasus (h = N).

" 4 UME iP 16 37 45.6
Eastern Caucasus (h = N).

" 4 UPP iPKP1 18 22 28.2
KIR ePKP 18 22 18
UME iPKP1 18 22 17.8
South of Fiji Islands
(h = 140 km).

" 4 UPP iP 19 29 57.2
iS 19 34 11
micr sec
P Z' 0.5 1.7
Mx Z 8.1 11
KIR iP 19 30 36.7
(cont.)

1984
Mar. 4 (cont.)
KIR
micr sec
P Z' 0.2 1.2
Mx Z 3.3 8
UME iP 19 30 10.9
Eastern Caucasus (h = N).
m = 5.9 (UPP,KIR).

" 5 UPP iPKP1 02 27 16.1
iPKP2 02 27 31.6
KIR iPKP1 02 26 59.1
iPKP2 02 27 03.3
UME iPKP1 02 27 06.9
iPKP2 02 27 17.3
North Island, New Zealand
(h = 20 km).

" 5 UPP iP 03 45 47.7 D
i 03 45 50.2
iS 03 55 16.0
iScS 03 55 46.5
micr sec
P Z' 4.2 1.3
Mx Z 19.2 16
KIR iP 03 45 31.5 D
micr sec
Mx Z 7.8 12
UME iP 03 45 36.9 D
Mindanao, Philippine Islands
(h = 650 km).
Double P, small and large.
M = 6.5 (UPP,KIR).

" 5 UPP iP 07 09 32.6
micr sec
P Z' 0.2 1.2
KIR iP 07 08 40.4
micr sec
P Z' 0.1 0.7
UME iP 07 09 05.0
Kuril Islands region (h = N).
m = 6.2 (UPP,KIR).

" 5 UPP iP 11 12 18.6
iS 11 21 37.8
micr sec
P Z' 0.1 0.5
KIR iP 11 11 46.6
micr sec
P Z' 0.1 0.5
UME iP 11 11 59.6
Bonin Islands region
(h = 460 km).
m = 5.4 (UPP,KIR).

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

1984
Mar. 5 UPP iP 21 37 01.4 C
micr sec
P Z' 0.2 0.6
KIR iP 21 36 55.1
micr sec
P Z' 0.1 0.9
UME iP 21 36 53.6
Burma-India border region
(h = 70 km).
m = 6.2 (UPP,KIR).

" 6 UPP iPKP1 00 44 31.0 D
i 00 44 34.1
micr sec
PKP1 Z' 0.2 0.8
KIR iPKP1 00 44 08.0
iPKP 00 44 14.2
UME iPKP1 00 44 18.9 D
iPKP 00 44 20.4
i 00 44 25.1
Kermadec Islands (h = 290 km).

" 6 UPP iP 02 28 36.1 C
i 02 30 15.5
iS 02 37 52.7
micr sec
P Z' 3.4 1.2
Mx Z 75.2 16
KIR iP 02 28 03.6 C
micr sec
P Z' 0.9 1.1
Mx Z 62.9 17
UME iP 02 28 17.6 C
i 02 28 54.6
South of Honshu, Japan
(h = 460 km).
m = 6.5, M = 7.1 (UPP,KIR).

" 6 UPP iP 03 29 12.0
KIR iP 03 28 56.0
UME iP 03 29 01.3
Talaud Islands (h = 190 km).

" 6 UPP iP 15 06 07.5
micr sec
P Z' 0.6 1.5
KIR iP 15 05 24.4
micr sec
P Z' 0.4 1.5
UME iP 15 05 43.5
Hokkaido, Japan region
(h = 100 km).
m = 6.2 (UPP,KIR).

" 7 UPP iP 02 46 03.8 C
(cont.)

1984
Mar. 7 (cont.)
UPP iPP 02 47 22.0
micr sec
P Z' 0.6 0.8
KIR iP 02 45 47.1 C
micr sec
P Z' 0.7 0.7
UME iP 02 45 48.6 C
Eastern Kazakh, SSR.
Underground explosion.
m = 6.2 (UPP,KIR).

" 7 UPP iP 09 48 30.1
i 09 48 50.2
KIR iP 09 48 39.0
i 09 49 06.2
UME iP 09 48 28.3
i 09 48 55.6
Hindu Kush region (h = 70 km).

" 7 UPP iP 14 40 57.8
UME iP 14 40 39.4
South of Honshu, Japan
(h = 450 km).

" 7 UME iP 16 53 24.5
i 16 53 32.2
Near west coast of Honshu,
Japan (h = N).

" 8 UPP iPKP1 01 00 39.7
i 01 00 56.7
KIR iPKP 01 00 20.6
iPKP1 01 00 22.6
UME iPKP 01 00 25.5
iPKP1 01 00 30.8
i 01 00 38.8
North Island, New Zealand
(h = 90 km).

" 8 UME iP 23 27 30.3
i 23 27 33.3
Eastern Caucasus (h = N).

" 9 UPP iP 05 10 47.7
micr sec
P Z' 0.1 1.0
Mx Z 0.9 17
KIR iP 05 10 27.3
micr sec
P Z' 0.1 0.9
UME iP 05 10 33.8
i 05 10 44.7
Philippine Islands region
(h = 20 km).
m = 5.9 (UPP,KIR).

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

1984
Mar. 9 UME iP 07 39 40.3
Carribbean Sea (h = 10 km).

" 9 UME eP 10 10 14
Azores Islands region
(h = 10 km).

" 9 UPP eP 15 47 39
KIR eP 15 48 10
UME iP 15 47 58.8
Azores Islands region
(h = 10 km).

" 9 UPP eP 19 15 10
i 19 15 13.1
UME eP 19 15 28
i 19 15 30.3
Azores Islands region
(h = 10 km).

" 10 UPP iP 00 22 56.3
micr sec
P Z' 0.1 0.8
KIR iP 00 22 22.9
UME iP 00 22 37.0
i 00 23 02.8
South of Honshu, Japan
(h = 420 km).

" 10 UPP eP 02 28 05
KIR iP 02 28 00.0
UME iP 02 29 02.4
Sunda Strait (h = 80 km).

" 10 UME iP 05 49 13.4
Southern Sumatera
(h = 90 km).

" 10 UPP eP 09 15 23
iPP 09 18 32.3
iS 09 25 56
micr sec
Mx Z 2.2 20
KIR iP 09 15 21.5
i 09 15 39.9
micr sec
P Z' 0.3 1.2
Mx Z 2.1 16
UME iP 09 15 19.9
i 09 15 38.8
Java (h = 50 km).
M = 5.7 (UPP,KIR).

" 10 UPP i 11 59 11.6
iS 12 02 38.0
Southwestern USSR (h = N).

1984
Mar. 10 UPP iP 15 31 20.2
KIR iP 15 31 41.8
i 15 31 50.5
UME iP 15 31 28.9
i 15 31 37.7
Chagos Archipelago region
(h = 10 km).

" 10 UPP iP 16 49 59.8
KIR eP 16 49 26
UME iP 16 49 40.7
Bonin Islands region
(h = 45 km).

" 10 UPP iP 23 54 00.9
UME iP 23 53 41.1
South of Honshu, Japan
(h = 40 km).

" 11 UPP iP 02 06 10.6
Near east coast of Kamchatka
(h = 70 km).

" 11 KIR iPg1 03 10 38.7
iSg1 03 11 08.5
UME iSg1 03 12 16.8
MYV iSg1 03 12 25.0
Off coast of northern Norway,
near 67 3/4°N, 14 1/2°E.
Origin time = 03 09 58.
M_L(UPP) = 2.6 (0.06) 2.
Felt.

" 11 KIR iPg1 03 36 54.3
iSg1 03 37 26.9
UME iPn 03 37 07.6
iSn 03 37 56.1
iSg1 03 38 13.1
MYV iPg1 03 37 15.4
iSg1 03 38 05.4
Northern Norway, near
67 3/4°N, 13 1/2°E.
Origin time = 03 36 09.
M_L(UPP) = 2.9 (0.03) 2.
Felt.

" 11 UPP iP 21 24 36.9
i 21 24 38.8
Greece-Albania border region
(h = 50 km).

" 11 UME iP 22 27 43.5
Honshu, Japan (h = 180 km).

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

1984						
Mar.	11	UPP	iP		22 32 58.0	D
					micr	sec
			P	Z'	0.1	1.0
		KIR	iP		22 32 20.1	D
					micr	sec
			P	Z'	0.2	1.0
		UME	iP		22 32 36.4	D
		Sea of Japan (h = 350 km).				
		m = 5.7 (UPP,KIR).				
"	11	UPP	iP		23 32 59.7	
		Greece-Albania border region				
		(h = 35 km).				
"	12	UPP	iP		00 03 16.3	
			i		00 03 19.9	
					micr	sec
			i	Z'	0.1	1.0
		KIR	i		00 04 05.4	
		UME	eP		00 03 34	
			i		00 03 36.2	
			i		00 03 40.8	
			iS		00 07 54	
		Western Caucasus (h = 10 km).				
"	12	UPP	iP		02 34 36.7	
			i		02 34 38.7	
		UME	eP		02 35 15	
		Greece-Albania border region				
		(h = 60 km).				
"	12	UPP	iP		02 46 41.0	
		KIR	iP		02 46 11.8	
		UME	iP		02 46 24.2	
			i		02 46 32.5	
		Volcano Islands region				
		(h = 190 km).				
"	12	UPP	iP		10 01 38.3	
		KIR	iP		10 01 22.3	
					micr	sec
			P	Z'	0.1	1.0
		UME	iP		10 01 27.8	
		Talaud Islands (h = 120 km).				
"	12	UPP	iPKP1		11 09 12.6	
			iSKP1		11 12 04.7	
		KIR	iPKP		11 09 03.5	
		UME	iPKP		11 09 08.7	
			i		11 09 12.2	
			iSKP1		11 11 53.7	
			iSS		11 29 18	
		South of Fiji Islands				
		(h = 550 km).				
1984						
Mar.	12	UME	i		12 19 17.4	
			i		12 19 21.1	
			i(Rg)		12 19 48.6	
"	12	UPP	iP		20 03 21.8	
		KIR	i		20 04 25.1	
		UME	iP		20 03 35.2	
		Eastern Caucasus (h = N).				
"	12	UME	iP		22 06 29.3	
		Kuril Islands (h = N).				
"	12	UME	iP		23 40 52.7	
			i		23 40 56.8	
		Eastern Greenland (h = 10 km).				
"	13	KIR	iP		08 06 48.9	
			i		08 06 54.1	
		UME	i		08 06 41.7	
			i		08 06 54.6	
		Tajik SSR (h = 20 km).				
"	13	UPP	eP		09 10 46	
		KIR	iP		09 10 51.8	
		UME	iP		09 10 42.8	
		Tajik SSR (h = 10 km).				
"	13	UME	iP		09 11 01.1	
		Tajik SSR (h = 15 km).				
"	13	UPP	iP		20 40 29.1	C
					micr	sec
			P	Z'	0.1	1.0
			Mx	Z	1.8	22
		KIR	iP		20 41 38.4	
					micr	sec
			P	Z'	0.1	0.5
		UME	iP		20 41 03.0	
		Crete (h = 30 km).				
		m = 5.8 (UPP,KIR).				
"	14	UPP	iP		00 52 16.1	
			ipP		00 52 31.6	
			iS		01 03 05	
					micr	sec
			P	Z'	0.1	1.0
			Mx	Z	1.2	22
		KIR	iP		00 52 04.1	
			ipP		00 52 19.0	
					micr	sec
			P	Z'	0.1	0.8
		UME	iP		00 52 07.5	
			ipP		00 52 21.6	
			iSKS		01 02 29	

(cont.)

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

1984
Mar. 14 (cont.)
UME iS 01 02 50
Kalimantan.
h = 50 km (UPP,KIR,UME).
m = 6.1 (UPP,KIR).

" 14 UPP iP 01 41 21.1
KIR iP 01 41 23.3
UME iP 01 41 17.0
Nepal (h = 40 km).

" 14 UPP i 11 54 42.7
i 11 54 45.3
i 11 54 48.7
iSKP1 11 57 34.7
KIR e 11 54 37
iPKP 11 54 39.5
iSKP1 11 57 10.7
UME i 11 54 34.7
i 11 54 39.4
iPKP 11 54 47.1
iSKP1 11 57 24.3
Fiji Islands region
(h = 570 km).

" 14 UPP iP 15 41 04.6
UME iP 15 40 59.5
Kashmir-Tibet border region
(h = N).

" 14 UME eP 20 42 14
Southern Alaska (h = 70 km).

" 15 UPP iP 03 35 32.0
UME iP 03 35 28.8
Sunda Strait (h = 70 km).

" 15 UPP iP 08 22 01.8
UME eP 08 22 48
Taiwan region (h = 25 km).

" 15 UPP eP 19 06 11
UME iP 19 06 47.2
Tunisia (h = 30 km).

" 15 UPP iP 21 11 22.5
KIR iP 21 10 54.7
UME iP 21 11 06.3
Mariana Islands region
(h = 320 km).

" 15 UME iSg1 22 38 52.7
Gulf of Bothnia, Finland,
62.5°N, 21.2°E.
(cont.)

1984
Mar. 15 (cont.)
Origin time = 22 38 07.
M_L(UPP) = 1.6 1.
By combination with Finnish
station readings.

" 16 UPP eP 00 57 19
UME iP 00 56 56.5
Near east coast of Honshu,
Japan (h = 50 km).

" 16 UPP iP 17 21 46.7 C
ipP 17 21 58.8
micr sec
P Z' 0.1 0.7
KIR iP 17 21 02.4
micr sec
P Z' 0.1 1.0
UME iP 17 21 22.4 C
Hokkaido, Japan region
(h = 50 km).
m = 6.0 (UPP,KIR).

" 16 UPP iP 21 48 07.4
i 21 48 14.5
KIR eP 21 47 42
i 21 47 56.6
UME iP 21 47 51.6
Southwestern Ryukyu Islands
(h = N).

" 17 UPP 00 09
micr sec
Mx Z 1.2 22
Vanuatu Islands.

" 17 UPP iSg1 00 10 12.0
UME iSg1 00 12 05.8
UDD iPg1 00 09 34.0
iSg1 00 09 47.9
MYV eSg1 00 11 14
Värmland-Närke-Västergötland,
Sweden, 59.0°N, 14.3°E.
Origin time = 00 09 15.
M_L(UPP) = 2.1 (0.11) 2.

" 17 UPP iP 03 55 44.4 D
i 03 55 56.9
micr sec
P Z' 0.1 0.8
Mx Z 0.5 12
KIR iP 03 55 18.8
i 03 55 33.8
micr sec
P Z' 0.1 1.0
(cont.)

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

1984
Mar. 17 (cont.)

	UME	iP		03 55 27.8
		i		03 55 38.9

Southwestern Ryukyu Islands
(h = 30 km).
m = 5.7 (UPP,KIR).

" 17	UPP	iP			12 35 36.3
	KIR	iP			12 35 59.8
		i			12 36 08.4
				micr	sec
		P	Z'	0.2	1.0
	UME	iP			12 35 43.3

Near coast of Pakistan
(h = N).

" 17	KIR	eP		15 29 22
	UME	iP		15 29 26.8
		i		15 31 23.9
		i		15 31 31.9
		i		15 31 35.3

Celebes Sea (h = 550 km).

" 18	KIR	eP		00 06 38.8
	UME	iP		00 06 28.8

Afghanistan-USSR border
region (h = 180 km).

" 18	KIR	iP		02 07 15.7
	UME	iP		02 07 55.5

" 18	KIR	iP		04 25 47.2
	UME	iP		04 26 31.7

" 18	UPP	iP			08 00 02.3
		ipP			08 00 08.5
		i			08 00 13.4
				micr	sec
		pP	Z'	0.1	0.9
		Mx	Z	1.1	17
	KIR	iP			07 59 42.1
		ipP			07 59 47.8
				micr	sec
		pP	Z'	0.1	0.9
	UME	iP			07 59 49.0
		ipP			07 59 54.5
		i			08 00 00.5

Philippine Islands region.
h = 20 km (UPP,KIR,UME).
m = 5.7 (UPP,KIR).

" 18	UPP	i		08 13 13.2
		iPKP		08 13 14.9
	KIR	iPKP		08 13 06.7
	UME	i		08 13 03.8

(cont.)

1984
Mar. 18 (cont.)

	UME	iPKP		08 13 12.1
		iSKP1		08 16 19.2

Fiji Islands region
(h = 290 km).

" 18	UPP	iP		14 56 33.4
	KIR	eP		14 56 11.4
	UME	iP		14 56 18.8

Taiwan region (h = N).

" 18	UME	iP		15 03 08.0

Hokkaido, Japan region
(h = 70 km).

" 18	UPP	Mx		15 38
				micr sec
		Mx	Z	0.5 10
	UME	eP		15 32 38
		i		15 32 40.3

Yugoslavia (h = 10 km).

" 18	UME	iP		16 30 37.3

" 18	UPP	eP		23 50 57
	KIR	iP		23 50 20.3
	UME	iP		23 50 35.8

Sea of Japan (h = 350 km).

" 18	KIR	iP		01 47 03.6
	UME	eP		01 46 59

Southern Xinjiang, China
(h = 50 km).

" 19	UPP	iP			03 16 47.9
				micr	sec
		P	Z'	0.1	1.0
		Mx	Z	1.7	14
	KIR	iP			03 16 19.4
				micr	sec
		Mx	Z	0.7	13
	UME	iP			03 16 30.9

Ryukyu Islands (h = 40 km).
M = 5.4 (UPP,KIR).

" 19	UPP	iP		12 43 43.5
	KIR	iP		12 43 04.3
	UME	iP		12 43 21.5

Off east coast of Honshu,
Japan (h = 10 km).

" 19	UPP	e(PKP)		20 18 42
	KIR	iPKP		20 18 11.9
		i		20 18 15.0
	UME	iPKP1		20 18 21.9

(cont.)

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

1984							
Mar.	19	(cont.)					
		UME	i		20 18 28.8		
		South of Kermadec Islands					
		(h = N).					
"	19	UPP	iP		20 35 24.5	C	
			iPP		20 36 33		
			iS		20 40 51		
					micr	sec	
			P	Z'	2.5	1.0	
			Mx	Z	251	16	
		KIR	iP		20 35 39.4	C	
					micr	sec	
			Mx	Z	259	12	
		UME	iP		20 35 25.8	C	
			iS		20 40 48		
		Uzbek SSR (h = 15 km).					
		M = 7.2 (UPP,KIR).					
"	19	UPP	iP		21 00 46.3		
			ipP		21 00 48.5		
					micr	sec	
			pP	Z'	0.1	0.8	
		UME	iP		21 00 48.8		
			ipP		21 00 50.3		
		Uzbek SSR (h = 10 km).					
"	19	UPP	eP		21 10 34		
			ipP		21 10 38.0		
					micr	sec	
			pP		0.1	1.0	
		Uzbek SSR (h = 10 km).					
"	19	UPP	iP		21 28 08.5		
			ipP		21 28 11.2		
					micr	sec	
			pP	Z'	0.1	0.9	
		UME	i		21 28 09.0		
		Uzbek SSR (h = 10 km).					
"	19	UPP	iP		21 37 09.3		
		Uzbek SSR (h = 10 km).					
"	19	UPP	iP		21 47 34.5		
		UME	iP		21 47 34.6		
		Uzbek SSR (h = 10 km).					
"	19	UPP	iP		22 10 39.0		
		Uzbek SSR (h = 10 km).					
"	20	UPP	iP		01 50 26.0		
		KIR	iP		01 50 41.6		
		UME	iP		01 50 28.3		
			i		01 50 33.7		
		Uzbek SSR (h = 10 km).					
1984							
Mar.	20	UPP	iP		02 05 51.5		
		KIR	eP		02 06 06		
		UME	iP		02 05 50.8		
		Uzbek SSR (h = 10 km).					
"	20	UPP	iP		02 59 06.0		
					micr	sec	
			P	Z'	0.1	1.2	
		KIR	iP		02 58 30.8		
					micr	sec	
			P	Z'	0.1	1.0	
		UME	iP		02 58 45.9		
			i		02 58 57.6		
		Southeast of Shikoku, Japan					
		(h = 20 km).					
		m = 5.8 (UPP,KIR).					
"	20	UPP	iP		03 56 44.9		
		UME	iP		03 56 45.8		
		Uzbek SSR (h = 10 km).					
"	20	UPP	iP		06 35 26.5		
			i		06 35 30.8		
					micr	sec	
			i		0.1	1.0	
			Mx	Z	2.4	15	
		KIR	eP		06 35 42		
			i		06 35 45.5		
					micr	sec	
			i	Z'	0.2	1.5	
			Mx	Z	1.9	11	
		UME	eP		06 35 28		
		Uzbek SSR (h = 10 km).					
		m = 5.7, M = 5.1 (UPP,KIR).					
"	20	UPP	iP		07 26 43.3		
		UME	iP		07 26 33.8		
		Minahassa Peninsula					
		(h = 130 km).					
"	20	UPP	iPKP		08 53 11.3		
		UME	iPKP		08 53 03.6		
		Vanuatu Islands (h = 50 km).					
"	20	UPP	eP		11 25 56		
		KIR	eP		11 26 12		
		UME	iP		11 25 56.6		
		Uzbek SSR (h = 10 km).					
"	20	UPP	iP		12 33 40.9		
		KIR	iP		12 34 15.8		
		UME	iP		12 33 53.7		
		Southern Iran (h = N).					

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

1984
Mar. 20 KIR iP 17 30 19.2
UME iP 17 30 09.6
i 17 30 11.5
North Atlantic Ridge
(h = 10 km).

" 20 UPP iP 18 02 00.5
KIR iP 18 02 09.7
UME iP 18 01 59.1
Hindu Kush region (h = 190 km).

" 20 UPP iP 19 44 49.8
UME iP 19 44 29.4
Near east coast of Honshu,
Japan (h = 40 km).

" 20 UME iPKP 20 08 41.4
Vanuatu Islands (h = 220 km).

" 20 UPP iP 22 51 09.2
UME iP 22 51 08.7
Uzbek SSR (h = 10 km).

" 21 UPP iP 01 16 00.2 D
i 01 20 31.0
micr sec
P Z' 0.3 1.0
KIR iP 01 18 14.3 D
micr sec
P Z' 0.3 1.4
UME iP 01 17 38.6 D
Southern Italy (h = 280 km).
m = 5.6 (UPP,KIR).

" 21 UPP iP 01 39 39.8
UME i(P) 01 40 19.8
Romania (h = 160 km).

" 21 UPP iP 02 55 06.1 C
micr sec
P Z' 0.1 0.7
Mx Z 9.1 26
KIR iP 02 54 15.7 C
micr sec
P Z' 0.2 1.2
Mx Z 3.4 17
UME iP 02 54 39.3 C
iS 03 03 58
Kuril Islands (h = 40 km).
m = 5.9, M = 5.8 (UPP,KIR).

" 21 UPP eP 03 02 15
KIR eP 03 01 31
UME iP 03 01 50.1
Hokkaido, Japan region
(h = 50 km).

1984
Mar. 21 UPP iP 03 53 15.2
UME iP 03 53 15.9
Uzbek SSR (h = N).

" 21 UPP iP 08 46 32.6
micr sec
Mx Z' 1.3 19
KIR iP 08 46 40.7
UME iPKP 08 46 35.5
Mid-Indian Rise (h = 10 km).

" 21 UPP iP 09 35 38.8
KIR eP 09 35 47
UME iP 09 35 37.2
Hindu Kush region
(h = 180 km).

" 21 UPP Mx 11 28
micr sec
Mx Z 1.2 22
Tonga Islands (h = N).

" 21 UME iP 13 36 30.1
Uzbek SSR (h = N).

" 21 KIR iPKP 13 52 51.8
Vanuatu Islands (h = 230 km).

" 21 UPP iPKP1 14 17 17.5
iPKP 14 17 19.9
KIR iPKP 14 17 09.2
iSKP1 14 19 49.7
UME iPKP 14 17 14.5
iSKP1 14 20 00.5
South of Fiji Islands
(h = 510 km).

" 21 UPP iPKP 17 23 58.8
KIR iPKP 17 23 44.9 D
micr sec
PKP Z' 0.1 1.0
UME iPKP 17 23 50.8 D
Vanuatu Islands (h = 30 km).

" 21 UPP iP 17 59 27.5
KIR iP 18 00 03.1
UME iP 17 59 40.8
i 17 59 46.1
Southern Iran (h = N).

" 21 UPP iP 18 19 33.6
KIR iP 18 20 09.0
micr sec
P Z' 0.1 0.6
UME iP 18 19 46.7
Southern Iran (h = N).

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

1984 Mar. 21 UPP iP 18 33 58.6
KIR iP 18 34 34.2
UME iP 18 34 11.7
Southern Iran (h = N).

" 21 UME iPKP 18 39 48.3
Fiji Islands (h = 10 km).

" 21 UPP iP 18 48 41.9
KIR iP 18 49 17.5
UME iP 18 48 55.1
Southern Iran (h = N).

" 21 UPP iP 23 16 32.0 C
KIR iP 23 16 25.2 C
micr sec
P Z' 0.1 0.9
UME iP 23 16 23.8 C
Eastern India (h = N).

" 21 UPP iP 23 44 51.7
micr sec
P Z' 0.1 0.8
KIR iP 23 43 58.6
UME iP 23 44 24.7
Rat Islands, Aleutian Islands
(h = 80 km).

" 22 UPP iP 00 29 50.0 C
KIR iP 00 30 25.5 C
UME iP 00 30 03.0 C
Southern Iran (h = N).

" 22 UPP eP 04 14 13
UME iP 04 14 38.9
North of Ascension Islands
(h = 10 km).

" 22 UPP iP 05 47 50.9
i 05 48 14.3
KIR i 05 48 13.9
UME eP 05 47 47
i 05 48 09.9
Andaman Islands region
(h = 100 km).

" 22 UPP iPKP1 08 04 11.5
i 08 04 13.8
micr sec
PKP1 Z' 0.1 0.8
KIR iPKP 08 03 54.4
UME iPKP1 08 03 59.0
iPKP 08 03 59.9
Kermadec Islands (h = 240 km).

1984 Mar. 22 UME iPKP 14 32 23.4
Samoa Islands region
(h = 40 km).

" 22 UPP eP 14 47 05
UME iP 14 47 06.0
Uzbek SSR (h = 40 km).

" 22 KIR iP 21 35 05.0
i 21 35 12.9
UME iP 21 34 51.9
Hindu Kush region
(h = 200 km).

" 22 UPP iP 22 21 39.5 C
i 22 22 33.4
i 22 23 01.5
iS 22 27 33
micr sec
P Z' 0.1 0.7
KIR iP 22 21 48.1 C
i 22 21 51.6
micr sec
P Z' 0.1 0.7
UME iP 22 21 37.8 C
iS 22 27 30
Afghanistan-USSR border
region (h = 250 km).
m = 5.3 (UPP,KIR).

" 23 UPP iP 08 48 08.6
i 08 48 50.5
KIR iP 08 47 12.8
UME iP 08 47 41.0
i 08 48 10.4
Alaska Peninsula (h = 120 km).

" 23 UPP iP 11 05 11.0
i 11 05 12.6
KIR iP 11 05 27.0
UME iP 11 05 12.0
i 11 05 13.7
Uzbek SSR (h = N).

" 23 KIR iPg1 13 17 15.3
iSg1 13 17 42.2
UME iSg1 13 17 57.9
Norrbotten, Sweden, 66.0°N,
22.8°E.
Origin time = 13 16 39.
M_L(UPP) = 2.3 (0.41) 2.
By combination with Finnish
station readings.

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

1984
Mar. 23 UPP iP 20 15 23.8
KIR eP 20 15 51
i 20 15 53.5
UME iP 20 15 31.2
Iran-USSR border region
(h = N).

" 23 UPP iPKP 20 50 47.2
micr sec
Mx Z 2.6 21
KIR iPKP 20 50 31.7
micr sec
Mx Z 2.1 21
UME iPKP 20 50 39.2
i 20 50 48.1
Tonga Islands (h = 45 km).
M = 5.9 (UPP,KIR).

" 23 UPP iP 21 11 05.4
i 21 11 08.1
KIR eP 21 11 21
i 21 11 22.9
UME iP 21 11 06.0
i 21 11 09.0
Uzbek SSR (h = N).

" 23 UPP iP 21 53 11.5
KIR iP 21 53 06.6
UME iP 21 53 11.5
Costa Rica (h = 80 km).

" 24 UPP iP 01 12 58.5
micr sec
P Z' 0.1 1.0
KIR iP 01 12 07.7
UME iP 01 12 31.4
Eastern USSR (h = N).

" 24 UPP iP 09 55 01.8
i 09 55 13.5
iS 10 04 01
micr sec
P Z' 0.1 0.9
i Z' 0.3 0.9
Mx Z 346 19
KIR iP 09 54 16.8
i 09 54 27.2
micr sec
P Z' 0.1 0.7
i Z' 0.5 1.0
Mx Z 278 19
Kuril Islands (h = 45 km).
Double P, small and large,
in average 11 seconds apart.
m = 6.5, M = 7.6 (UPP,KIR).

1984
Mar. 24 UPP iP 10 53 27.0 C
KIR iP 10 52 41.7
Kuril Islands (h = 50 km).

" 24 UPP iP 11 00 09.1
KIR eP 10 59 21
Kuril Islands (h = N).

" 24 UPP iP 11 19 51.5
KIR iP 11 19 04.6
Kuril Islands (h = N).

" 24 KIR eP 12 07 31
UME iP 12 06 55.7
Turkey (h = 10 km).

" 24 UPP iP 13 03 08.1
i 13 03 22.1
KIR eP 13 02 22
UME iP 13 02 43.4
Kuril Islands (h = 50 km).

" 24 UPP eP 16 53 22
KIR iP 16 52 25.2
UME iP 16 52 54.6
Southern Alaska (h = 70 km).

" 24 UPP iP 18 33 21.2
KIR iP 18 32 36.6
UME iP 18 32 55.3
Kuril Islands (h = 45 km).

" 24 UPP iP 19 07 24.8
UME iP 19 06 59.6
Kuril Islands (h = N).

" 24 UPP iP 21 15 37.5
micr sec
P Z' 0.1 1.0
KIR iP 21 14 44.1
micr sec
P Z' 0.2 1.4
UME iP 21 15 11.2
Fox Islands, Aleutian Islands
(h = 30 km).
m = 5.8 (UPP,KIR).

" 24 UME iP 22 07 19.9
i 22 07 22.1
Mexico-Guatemala border
region (h = 60 km).

" 24 UPP iP 22 25 41.2
UME iP 22 25 15.5
Kuril Islands (h = N).

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

1984
Mar. 24 UPP iP 22 54 34.4
KIR iP 22 53 41.2
UME iP 22 54 08.0
Fox Islands, Aleutian Islands
(h = N).

" 24 UPP iP 23 00 54.7
KIR iP 23 00 00.1
UME iP 23 00 28.0
Fox Islands, Aleutian Islands
(h = N).

" 24 UPP iPKP1 23 08 40.9
iPKP 23 08 46.9
KIR iPKP 23 08 32.8
UME iPKP 23 08 33.9
i 23 08 40.7
Fiji Islands region
(h = 600 km).

" 25 KIR iP 03 34 38.1
UME iP 03 35 26.5
Greenland Sea (h = 10 km).

" 25 UPP iPKP 05 07 16.5
UME iPKP 05 07 01.7
Kermadec Islands (h = N).

" 25 UPP iP 07 59 37.5
UME iP 07 59 23.4
Luzon, Philippine Islands
(h = 60 km).

" 25 UPP iP 13 50 17.5
KIR eP 13 48 48
Greenland Sea (h = 10 km).

" 25 UPP iP 14 31 41.8
KIR iP 14 31 55.7
UME iP 14 31 42.0
Uzbek SSR (h = N).

" 25 UME iP 17 20 11.0
South of Honshu, Japan
(h = N).

" 25 UPP iP 19 10 57.2
i 19 11 10.1
micr sec
P Z' 0.1 1.2
KIR iP 19 10 17.4 C
i 19 10 30.2
UME iP 19 10 35.1 C
i 19 10 43.4
(cont.)

1984
Mar. 25 (cont.)
UME i 19 10 47.2
Near east coast of Honshu,
Japan (h = 60 km).

" 25 KIR iP 20 24 55.2
UME iP 20 24 38.7
Uzbek SSR (h = N).

" 26 UME iPKP 02 30 28.4
Fiji Islands region
(h = 550 km).

" 26 UME iP 02 49 18.9
Kuril Islands (h = N).

" 26 KIR iP 09 49 34.6
UME iP 09 49 40.8
Mindanao, Philippine Islands
(h = 90 km).

" 26 KIR iP 20 18 56.1
UME iP 20 19 20.5
Kuril Islands region
(h = 40 km).

" 26 UPP iP 23 22 47.8
micr sec
P Z' 0.2 1.2
Mx Z 1.9 20
KIR iP 23 21 52.2
micr sec
P Z 0.4 1.7
Mx Z 1.0 14
UME iP 23 22 18.4
i 23 23 13.0
Near east coast of Kamchatka
(h = 30 km).
m = 6.2, M = 5.2 (UPP,KIR).

" 27 UPP iP 01 26 33.2
KIR eP 01 27 10
UME iP 01 26 45.7
Eastern Caucasus (h = N).

" 27 KIR iPKP 03 22 10.0
UME iPKP 03 21 15.3
Kermadec Islands region
(h = N).

" 27 UDD iSg1 05 49 46.5
DEL iSg1 05 49 42.3
Västergötland, Sweden, 58.2°N,
13.5°E.
Origin time = 05 48 47.
M_L(UPP) = 1.9 1.
Solution from SKI network
readings.

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

1984
Mar. 27 UPP iP 13 37 57.0
i 13 38 09.5
micr sec
P Z' 0.1 1.0
KIR iP 13 37 10.5
micr sec
P Z 0.2 1.0
UME iP 13 37 32.1
i 13 37 43.4
Kuril Islands region
(h = 40 km).
m = 6.0 (UPP,KIR).

" 27 KIR eP 18 04 10
UME iP 18 04 33.8
Vancouver Island region
(h = 10 km).

" 27 UPP iP 18 13 02.7
KIR iP 18 12 09.5
UME iP 18 12 36.0
Fox Islands, Aleutian Islands
(h = 35 km).

" 27 UPP Mx 18 16
micr sec
Mx Z 0.9 21
Near N. Coast of Papua New
Guinea (h = 28 km).

" 27 KIR iPKP 18 25 55.7
UME iPKP 18 26 02.6
iSKP1 18 28 39.7
Fiji Islands region
(h = 590 km).

" 27 UPP Mx 21 14
micr sec
Mx Z 19 19
KIR iP 20 20 48.8
micr sec
Mx Z 14 21
UME ePKP 20 25 00
Near N. coast of Papua New
Guinea (h = 30 km).
M = 6.6 (UPP,KIR).

" 27 UPP iP 23 28 11.9 C
KIR iP 23 27 27.2 C
micr sec
P Z' 0.1 0.8
UME iP 23 27 46.9 C
Hokkaido, Japan region
(h = 110 km).

1984
Mar. 28 UPP iP 09 23 05.5
i 09 23 08.0
micr sec
i Z' 0.1 0.8
Mx Z 14.9 16
KIR iP 09 22 41.0
micr sec
P Z' 0.1 0.8
Mx Z 3.4 14
Taiwan region (h = 45 km).
m = 5.8, M = 6.1 (UPP,KIR).

" 28 UPP iP 16 20 46.4
KIR iP 16 21 47.1
UME iP 16 21 12.7
Cyprus (h = 35 km).

" 29 UPP iP 00 10 47.0
UME iP 00 11 21.6
i 00 11 33.1
Turkey (h = 10 km).

" 29 UPP iP 00 40 57.6
KIR iP 00 40 10.6
UME iP 00 40 32.5
Kuril Islands (h = 70 km).

" 29 UPP iP 05 26 06.5 C
iPn 05 27 11.6
iPP 05 27 24.9
micr sec
P Z' 1.5 1.0
KIR iP 05 25 50.1 C
i 05 26 29.6
i 05 26 53.7
micr sec
P Z' 1.4 0.8
UME iP 05 25 51.1 C
Eastern Kazakh SSR.
Underground explosion.
m = 6.9 (UPP,KIR).

" 29 UPP Mx 15 01
micr sec
Mx Z 1.1 20
KIR Mx 14 59
micr sec
Mx Z 1.4 20
Near N. coast of West Irian.
M = 5.5 (UPP,KIR).

" 29 UPP iP 17 44 39.4
KIR iP 17 43 54.1
UME iP 17 44 08.7
Kuril Islands (h = 40 km).

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

1984 Mar.	29	UPP	iP	20 36 22.5	
		KIR	iP	20 35 39.4	
		Hokkaido, Japan region (h = 70 km).			
"	29	UPP	iP	21 42 26.0	
		KIR	iP	21 43 28.2	
				micr sec	
			P Z'	0.1 0.8	
		UME	iP	21 42 54.7	
		Arab Republic of Egypt (h = 10 km).			
"	29	UPP	iP	21 55 02.9	
		KIR	iP	21 54 47.5	
				micr sec	
			P Z'	0.4 2.0	
		UME	iP	21 54 50.9	
		Minahassa Peninsula (h = 180 km).			
"	29	UPP	iP	22 12 36.3	
			i	22 12 47.9	
		KIR	iP	22 11 50.7	
				micr sec	
			P Z'	0.1 0.8	
		UME	iP	22 12 11.2	
		Kuril Islands region (h = 45 km).			
"	29	KIR	iP	22 14 54.5	
		UME	iP	22 14 39.8	
		Uzbek SSR (h = N).			
"	29	UPP	iP	23 14 25.7	
				micr sec	
			P Z'	0.1 0.9	
		KIR	iP	23 13 33.3	
		UME	iP	23 13 58.8	
		Rat Islands, Aleutian Islands (h = N).			
"	30	UPP	iP	00 31 12.1	
				micr sec	
			P Z'	0.2 1.6	
		KIR	iP	00 30 26.4	
				micr sec	
			P Z'	0.1 1.0	
		UME	iP	00 30 47.1	
		Kuril Islands region (h = 50 km). m = 5.8 (UPP,KIR).			
"	30	UPP	eP	01 51 07	
		KIR	iP	01 51 22.1	
		Uzbek SSR (h = N).			
1984 Mar.	30	UPP	iP	03 22 55.1	
		KIR	iP	03 23 30.9	
		UME	iP	03 23 08.1	
		Southern Iran (h = N).			
"	30	UPP	iP	06 23 31.6	
		KIR	iP	06 23 26.1	
		UME	iP	06 23 22.4	
		Southern Xinjiang, China (h = 55 km).			
"	30	UPP	iP	08 10 55.7	
			i	08 11 05.6	
				micr sec	
			P Z'	0.1 1.0	
		KIR	iP	08 11 05.7	
			i	08 11 16.6	
				micr sec	
			P Z'	0.2 1.1	
		UME	iP	08 11 04.5	
			i	08 11 16.7	
			i	08 11 25.9	
		Leeward Islands (h = 25 km). m = 6.0 (UPP,KIR).			
"	30	KIR	iP	09 13 36.5	
		UME	iP	09 13 34.0	
		Southern Sumatera (h = 110 km).			
"	30	UME	iP	10 20 24.8	
		Albania (h = 20 km).			
"	30	UPP	iP	11 16 37.4	
		KIR	iP	11 16 41.2	
			i	11 16 45.8	
		Tajik SSR (h = N).			
"	30	UPP	iP	14 32 17.7	
		KIR	eP	14 32 34	
		UME	iP	14 32 18.1	
		Uzbek SSR (h = N).			
"	30	UPP	iPKP	16 58 23.3	
			i	16 58 41.7	
		Kermadec Islands region (h = N).			
"	30	KIR	iPKP	16 59 36.9	
			i	16 59 39.4	
		South Shetland Islands (h = 60 km).			
"	30	UPP	iP	22 16 33.9	
		KIR	iP	22 15 41.2	
		UME	iP	22 16 06.5	
		Rat Islands, Aleutian Islands (h = 55 km).			

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

1984

Mar.	31	UPP	iP	03 37 23.4
			i	03 37 26.6
		UME	iP	03 38 00.1
			i	03 38 01.8
		Algeria (h = 10 km).		
"	31	UPP	iP	04 51 00.3
		Algeria (h = 10 km).		
"	31	UPP	iP	05 09 59.8
		KIR	iP	05 08 05.5
		UME	iP	05 08 32.3
		Rat Islands, Aleutian Islands (h = 55 km).		
"	31	UPP	eP	07 52 41
		UME	iP	07 52 31.7
		Celebes Sea (h = 490 km).		
"	31	UPP	iP	18 28 29.2
		KIR	iP	18 27 15.7
		Jan Mayen Island region (h = 10 km).		

November 1985

Torild van Eck
Conny Holmqvist
Won Young Kim
Siv Petterson

SEISMOLOGICAL DEPARTMENT
BOX 12019
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	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

A P R I L 1 - 30, 1984

1984
Apr. 1 UME iP 09 54 37.9
Uzbek SSR (h = N).

" 1 UPP iP 10 11 59.0
micr sec
P Z' 0.2 1.5
KIR iP 10 11 45.5 D
micr sec
P Z' 0.2 1.0
UME iP 10 11 49.1 D
Banda Sea (h = 600 km).
m = 6.5 (UPP,KIR).

" 1 UME iP 15 56 28.3
Romania (h = 160 km).

" 1 UPP iPKPl 18 16 00.4
UME iPKP 18 15 56.2
iSKPl 18 18 41.8
South of Fiji Islands
(h = 520 km).

" 1 KIR iPKP 21 47 08.2
i 21 47 17.4
iSKP 21 50 47.2
UME iPKP 21 47 14.0
i 21 47 24.2
iSKP 21 50 54.0
Vanuatu Islands (h = N).

" 2 KIR iP 00 34 25.3
Kuril Islands (h = 45 km).

" 2 UPP iP 03 44 27.3
KIR iP 03 44 06.2
UME iP 03 44 13.0
Philippine Islands region
(h = N).

1984
Apr. 2 UPP iP 05 07 36.0
i 05 07 40.2
i 05 07 50.4
micr sec
i Z' 0.1 1.1
Mx Z 2.4 15
KIR i(P) 05 07 57.4
micr sec
Mx Z 0.9 11
UME iP 05 07 38.2
i 05 07 42.8
Pakistan (h = N).
M = 5.2 (UPP,KIR).

" 2 UPP iP 09 22 25.8 C
i 09 22 37.9
KIR eP 09 21 46
UME iP 09 22 03.9 C
i 09 22 16.0
Near east coast of Honshu,
Japan (h = 55 km).

" 2 UPP iP 14 00 31.4
KIR iP 13 59 44.9
UME iP 14 00 06.1
Kuril Islands (h = 40 km).

" 2 UME iP 19 16 57.4
Andaman Islands region
(h = N).

" 2 UPP iP 20 15 19.0
KIR eP 20 14 33
UME iP 20 14 53.6
Sakhalin Island (h = N).

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

1984
Apr. 2 UPP iP 22 52 54.1
UME iP 22 52 28.5
Kuril Islands (h = N).

" 3 UPP iPKP 03 28 34.6
iSKP 03 31 45.2
micr sec
PKP Z' 0.1 1.0
KIR iPKP 03 28 20.7
micr sec
PKP Z' 0.1 1.0
UME iPKP 03 28 27.1
Vanuatu Islands (h = 160 km).

" 3 UME iP 03 29 13.6
Near east coast of Honshu, Japan (h = 60 km).

" 3 UDD iSgl 09 43 40.4
Västergötland, Sweden, 58.6°N, 13.1°E.
Origin time = 09 42 54.
Solution from SKI network readings.

" 3 KIR iPKPl 18 29 54.7
UME iPKPl 18 29 53.8
West of Macquarie Island (h = 10 km).

" 3 KIR iPKPl 18 50 56.0
i 18 51 04.1
UME iPKPl 18 50 55.2
i 18 51 03.2
West of Macquarie Island (h = 10 km).

" 3 KIR iP 20 36 20.4
UME iP 20 36 26.7
Halmahera (h = 90 km).

" 3 UME iPKP 22 21 33.4
West of Macquarie Island (h = 10 km).

" 3 UME iPKP 22 54 51.3
i 22 54 58.0
i 22 55 04.0
West of Macquarie Island (h = 10 km).

" 4 KIR iP 10 18 01.1
Near east coast of Kamchatka (h = N).

1984
Apr. 4 KIR eP 21 19 51.0
i 21 20 17.9
UME eP 21 20 51

" 5 UPP iP 02 04 24.9
micr sec
Mx Z 0.9 22
UME iP 02 04 30.0
Virgin Islands (h = N).

" 5 UPP iP 03 13 39.9
micr sec
Mx Z 2.2 23
KIR Mx 03 55
micr sec
Mx Z 1.0 17
UME eP 03 13 47
Chargos Archipelago region (h = 10 km).
M = 5.4 (UPP,KIR).

" 5 UME iPKP 06 43 56.1
Vanuatu Islands (h = 40 km).

" 5 UME iP 06 54 24.9
i 06 54 39.3

" 5 UME iP 09 42 29.0
Near east coast of Kamchatka (h = N).

" 5 UDD iSgl 09 12 46.7
DEL iPgl 09 10 38.2
iSgl 09 10 55.0
Off coast of southern Sweden, 55.2°N, 13.2°E.
Origin time = 09 10 15.
M_L(UPP) = 2.8 (0.14) 2.
By combination with SKI network readings.

" 5 UME iP 09 36 24.9

" 5 UPP eP 11 55 41
i 11 53 42.0
UME iP 11 52 52.1
Svalbard region (h = 10 km).

" 5 UPP eP 12 23 29
UME iP 12 22 41.9
Svalbard region (h = 10 km).

" 6 UPP iPKP 00 44 24.1
UME iPKP 00 44 20.7
i 00 44 23.4
Tonga Islands (h = 120 km).

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

1984
Apr. 6 UPP iP 01 20 17.1
i 01 22 59.9
micr sec
P Z' 0.1 1.1
UME iP 01 19 55.5
i 01 19 56.4
Honshu, Japan (h = 190 km).

" 6 UPP iP 03 06 59.2
i 03 06 59.8
UME iP 03 06 45.5
i 03 06 46.4
i 03 07 14.2
Luzon, Philippine Islands
(h = 110 km).

" 6 UME iP 04 13 47.4

" 6 UPP iPKP 04 33 27.5
micr sec
Mx Z 2.7 20
KIR Mx 05 51
micr sec
Mx Z 1.0 17
UME iPKP 04 33 13.8
West of Macquarie Island
(h = 10 km).
M = 5.9 (UPP,KIR).

" 6 UPP eP 14 53 15
UME iP 14 53 15.6
Uzbek SSR (h = N).

" 6 UPP eP 22 18 33
UME eP 22 18 56
i 22 18 58.0
Turkey (h = 10 km).

" 6 UPP iPKP 23 27 16.2
i 23 27 20.8
iSKP 23 30 38.3
iPKS 23 30 51
i 23 31 34
micr sec
Mx Z 4.0 21
KIR iPKP 23 27 04.5
i 23 27 08.1
micr sec
Mx Z 3.1 21
UME iPKP 23 27 10.1
i 23 27 14.8
iSKP 23 30 22.1
iPKS 23 30 38.1
i 23 31 32.7
Vanuatu Islands (h = 180 km).
M = 6.1 (UPP,KIR).
M not corrected for focal depth.

1984
Apr. 7 UPP iP 06 39 23.3
KIR iP 06 39 12.0
UME iP 06 39 13.6
Burma-China border region
(h = N).

" 7 UPP iP 12 42 23.0 C
iPcP 12 43 05.0 C
micr sec
P Z' 0.1 1.2
KIR iP 12 41 27.8 C
UME iP 12 41 53.8
iPcP 12 42 48.5 C
Near east coast of Kamchatka
(h = N).

" 7 KIR iPgl 13 43 52.3
iSgl 13 44 20.7
UME iSgl 13 44 41.4
Finland-Sweden border region,
66.2°N, 24.3°E.
Origin time = 13 43 16.
M_L (UPP) = 2.5 (0.16) 3.
Felt.
By combination with Finnish
station readings.

" 7 UME iP 18 04 09.0

" 7 UPP iP 22 19 15.5 C
KIR iP 22 18 30.5
UME iP 22 18 50.8 C
Kuril Islands (h = 50 km).

" 8 UME eP 00 10 49
Banda Sea (h = N).

" 8 UPP iP 10 32 48.6 C
i 10 33 00.8
KIR iP 10 32 10.2
UME iP 10 32 26.9 C
i 10 32 40.8
Near east coast of Honshu,
Japan (h = 55 km).

" 8 UPP iP 15 07 11.4
KIR eP 15 07 11
UME eP 15 07 07
Northern Sumatera (h = 15 km).

" 8 UPP iPKP 19 23 03.6

" 8 UPP eP 21 01 55
micr sec
Mx Z 0.9 9
UME eP 21 02 45
Yugoslavia (h = 10 km).

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

1984
Apr. 8 UPP iP 22 02 59.0
UME iP 22 03 55.3
Andaman Islands region
(h = N).

" 8 UPP iP 23 20 59.6
UME iP 23 20 41.4
Bonin Islands region
(h = 500 km).

" 9 UPP iP 09 50 33.0
UME iP 09 50 33.0
Costa Rica (h = 50 km).

" 9 UPP eP 13 02 19
KIR iP 13 02 16.1
UME iP 13 02 20.1
Panama-Costa Rica border
region (h = 55 km).

" 9 UPP eP 15 19 02
i 15 19 03.0
KIR eP 15 18 50
i 15 18 52.9
UME eP 15 18 59
i 15 19 00.4
Near coast of Chiapas,
Mexico (h = N).

" 9 UPP iP 23 19 54.1
KIR iP 23 19 47.5
UME iP 23 19 52.8
Caribbean Sea (h = 10 km).

" 10 KIR iPKP 00 23 31.8
UME iPKP 00 23 37.8

" 10 UPP iP 08 19 41.2
i 08 19 43.3
KIR iP 08 20 31.7
UME iP 08 20 03.9
Ethiopia (h = 10 km).

" 10 UPP iP 14 23 50.0
KIR iP 14 23 33.9
i 14 23 48.7
UME iP 14 23 40.4
Mindanao, Philippine Islands
(h = 45 km).

" 10 UPP iP 17 41 48.0
micr sec
Mx Z 0.1 1.0
KIR iP 17 42 13.5
UME iP 17 42 05.9
North Atlantic Ridge
(h = 10 km).

1984
Apr. 10 UPP iP 20 36 22.6
KIR eP 20 36 23
i 20 36 32.0
UME iP 20 36 19.7
Andaman Islands region
(h = N).

" 11 UPP iP 08 23 56.2
UME iP 08 23 50.0
Kashmir-Tibet border region
(h = 50 km).

" 11 UPP iP 14 03 04.0
KIR iP 14 03 05.4
UME iP 14 03 01.2
Northern Sumatera (h = 80 km).

" 11 UPP iP 15 17 19.9 C
micr sec
P Z' 0.1 0.9
KIR iP 15 17 04.1
micr sec
P Z' 0.1 1.0
UME iP 15 17 09.2
Negros, Philippine Islands
(h = N).
m = 6.0 (UPP,KIR).

" 12 UPP iP 14 33 57.2
KIR eP 14 33 02
Southeastern Alaska
(h = 15 km).

" 12 UPP iP 16 23 21.8
UME iP 16 22 23.5
Pakistan (h = N).

" 12 UPP iPKP 16 32 34.1
micr sec
PKP Z' 0.1 1.3
KIR iPKP 16 32 21.2
iPKP1 16 32 25.3
UME iPKP 16 31 29.5
iPKP1 16 31 32.9
North Island, New Zealand
(h = 80 km).

" 13 UPP iP 06 33 24.3
i 06 33 32.7
micr sec
P Z' 0.2 1.4
UME iP 06 33 21.3
i 06 33 28.6
Andaman Islands region
(h = 25 km).

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

1984
Apr. 13 UPP iP 10 01 43.0
i 10 01 45.7
i 10 01 49.5
i 10 01 57.7
micr sec
i Z' 0.2 1.2
KIR eP 10 01 42
i 10 01 52.7
UME iP 10 01 39.7
i 10 01 47.6
Andaman Islands region
(h = 25 km).

" 13 UPP iP 12 39 49.9
KIR iP 12 39 26.8
Taiwan region (h = N).

" 13 KIR iP 13 01 23.3
UME iP 13 01 44.1
Kuril Islands (h = N).

" 14 UPP iP 06 14 03.9
Hokkaido, Japan region
(h = 40 km).

" 14 UPP iPKP 08 28 07.0
UME iPKP 08 28 00.6
Vanuatu Islands (h = 70 km).

" 14 UPP iP 19 52 03.8
KIR iP 19 52 08.3
UME iP 19 52 02.0
Bay of Bengal (h = N).

" 14 UPP iP 20 11 06.9
KIR iP 20 10 50.5
UME iP 20 10 56.7
Molucca Passage (h = 50 km).

" 14 UPP iP 21 08 15.6
KIR iP 21 08 18.6
UME iP 21 08 19.9
Northern Colombia
(h = 170 km).

" 15 UPP iP 03 24 04.5 C
iPn 03 25 10.6
micr sec
P Z' 0.3 1.0
KIR iP 03 23 49.1 C
micr sec
P Z' 0.5 0.8
UME iP 03 23 49.5 C
Eastern Kazakh SSR.
Underground explosion.
m = 6.3 (UPP,KIR).

1984
Apr. 15 UPP iP 05 05 42.1
i 05 05 47.4
micr sec
P Z' 0.1 0.9
KIR iP 05 05 41.9
i 05 05 50.9
micr sec
P Z' 0.1 0.8
UME iP 05 05 36.3
Tibet (h = N).
m = 5.7 (UPP,KIR).

" 15 UPP iP 07 43 52.5
micr sec
P Z' 0.2 1.3
KIR iP 07 43 13.9
micr sec
P Z' 0.1 0.5
UME iP 07 43 30.5
E. USSR-N.E. China border
region (h = 540 km).
m = 5.4 (UPP,KIR).

" 15 UPP iP 21 58 03.9
i 21 58 13.5
micr sec
i Z' 0.2 1.2
KIR iP 21 58 20.6
i 21 58 30.1
micr sec
i Z' 0.1 1.4
UME iP 21 58 06.9
i 21 58 16.0
Pakistan (h = 20 km).

" 16 UME iP 01 06 50.7
Off east coast of Honshu,
Japan (h = 35 km).

" 16 DEL iSgl 01 47 51.5
Sjaelland, Denmark,
55.6°N, 12.2°E.
Origin time = 01 47 14.
Solution from SKI network
readings.

" 16 UME iP 02 53 02.4

" 16 UPP eP 18 01 20
KIR iP 18 02 20.1
Cyprus (h = N).

" 16 UPP iP 20 34 25.4
KIR iP 20 34 06.8
UME iP 20 34 12.8
Luzon, Philippine Islands
(h = 60 km).

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

1984
Apr. 16 KIR iSgl 21 21 44.8
UME iSgl 21 21 23.8
Northern Gulf of Bothnia, Sweden, 65.4°N, 22.7°E.
Origin time = 21 20 25.
M_L(UPP) = 2.5 1.
By combination with Finnish station readings.

" 17 UPP iP 14 30 07.2
KIR iP 14 29 53.7
micr sec
P Z' 0.2 1.1
UME iP 14 29 58.4
Banda Sea (h = 450 km).

" 17 UPP iPKP 20 02 36.9
UME iPKP 20 02 29.6
Vanuatu Islands (h = 50 km).

" 17 UPP iP 20 35 26.0
KIR iP 20 35 00.8
UME iP 20 35 10.0
Taiwan region (h = 240 km).

" 18 UPP eP 01 46 01
i 01 46 09.6
KIR iP 01 45 34.9
i 01 45 53.7
Taiwan region (h = 25 km).

" 18 UPP iPKP 03 15 26.5 C
i 03 15 53.5
micr sec
PKP Z' 0.1 0.7
KIR iPKP 03 15 41.4
UME iPKP 03 15 34.6 C
i 03 16 01.7
South Sandwich Islands region (h = 100 km).

" 18 UPP iP 04 44 22.2
Greece (h = 10 km).

" 18 UPP iP 07 06 44.5
micr sec
P Z' 0.1 1.0
KIR iP 07 06 51.5
micr sec
P Z' 0.1 1.0
UME iP 07 06 17.8
Fox Islands, Aleutian Islands (h = N).

" 18 UPP iPKP 07 08 16.1
micr sec
PKP Z' 0.1 1.0
(cont.)

1984
Apr. 18 (cont).
KIR iPKP 07 08 00.5
micr sec
PKP Z' 0.1 1.0
UME iPKP 07 08 07.3
iPKS 07 11 31.9
i 07 12 13.5
Tonga Islands (h = 150 km).

" 18 UPP iP 09 03 13.4
KIR iP 09 02 31.9
UME iP 09 02 50.7
Near east coast of Honshu, Japan (h = 60 km).

" 18 UPP eP 13 01 30
UME iP 13 01 47.2
Republic of South Africa (h = 5 km).

" 18 KIR iP 18 40 50.0
UME iP 18 41 41.9
Svalbard region (h = 10 km).

" 18 UPP iP 18 56 58.8
UME iP 18 56 34.7
Kodiak Islands region (h = N).

" 18 UPP eP 19 41 21
KIR iP 19 40 25.0
UME iP 19 40 54.4
Southern Alaska (h = 100 km).

" 18 UPP iPKP 19 42 09.7
UME iPKP 19 42 12.7
i 19 45 42.1
South of Australia (h = 10 km).

" 18 UPP iP 23 30 18.9
UME iP 23 30 00.3
Off coast of Oregon (h = 10 km).

" 19 UPP iP 03 00 37.7 C
micr sec
P Z' 1.1 0.9
KIR iP 03 00 46.5 C
micr sec
P Z' 1.6 1.0
UME iP 03 00 36.0 C
Hindu Kush region (h = 200 km).
m = 6.4 (UPP,KIR).

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

1984
Apr. 19 UPP iP 03 47 49.0
micr sec
P Z' 0.1 1.0
KIR iP 03 47 06.0
UME iP 03 47 25.7
Near east coast of Honshu, Japan (h = 50 km).

" 19 UPP eP 06 47 58
KIR iP 06 47 15.3
UME iP 06 47 34.2
Near east coast of Honshu, Japan (h = 60 km).

" 19 UPP eP 17 40 51
KIR iP 17 40 25.5
UME eP 17 40 33
Taiwan region (h = 25 km).

" 19 UPP iP 20 45 32.0
KIR iP 20 45 15.7
UME iP 20 45 21.4
Mindanao, Philippine Islands (h = 650 km).

" 19 UPP eP 21 24 14
KIR iP 21 24 28.6
UME iP 21 24 15.7
Uzbek SSR (h = N).

" 20 UPP iP 06 40 44.3 D
iPcP 06 41 14.3
ipP 06 42 43.1
iS 06 48 31.7
iScS 06 49 35.9
micr sec
P Z' 3.0 1.1
Mx Z 4.3 16
KIR iP 06 39 56.9 D
ipP 06 41 51.7
micr sec
P Z' 5.3 1.4
Mx Z 2.1 10
UME iP 06 40 18.8 D
iPcP 06 40 57.8
ipP 06 42 13.3
iS 06 47 44.4
iScS 06 49 07.9
Sea of Okhotsk.
h = 630 km (UPP,KIR,UME).
m = 6.6, M = 5.7 (UPP,KIR).
M not corrected for focal depth. Rather unusual surface waves for such a deep event.

1984
Apr. 20 UPP iP 09 30 27.8
UME iP 09 30 31.6
Near north coast of Colombia (h = 40 km).

" 20 UPP iP 10 08 44.9
KIR iP 10 08 28.3
i 10 08 54.4
micr sec
P Z' 0.1 0.9
UME iP 10 08 33.4
i 10 09 00.0
Mindanao, Philippine Islands (h = 110 km).

" 20 KIR iP 14 27 28.9
Dodecanese Islands (h = 90 km).

" 20 UPP iP 14 53 19.3
UME iP 14 52 52.0
Kuril Islands region (h = 50 km).

" 20 UDD i 16 57 26.9
iRg 16 57 28.5
Värmland, Sweden.
Near-surface event.

" 21 UPP iP 01 30 28.9
KIR iP 01 30 34.8
Dodecanese Islands (h = 45 km).

" 21 UPP iP 04 16 01.2
KIR iP 04 15 16.1
UME iP 04 15 36.4
Kuril Islands (h = N).

" 21 UPP iP 04 41 58.3
KIR iP 04 41 38.8
i 04 41 48.6
UME iP 04 41 45.6
Luzon, Philippine Islands (h = 35 km).

" 21 UPP iP 07 38 46.4
KIR eP 07 39 57
UME eP 07 39 23
Mediterranean Sea (h = 40 km).

" 21 UPP iP 11 36 16.5
KIR iP 11 36 14.6
Andaman Islands region (h = N).

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

1984
Apr. 21 UPP ePKP 12 55 29
UME iPKP 12 55 21.6
Samoa Islands region
(h = 70 km).

" 21 UPP iP 21 24 36.7
i 21 24 40.4
micr sec
i Z' 0.1 0.6
KIR iP 21 24 47.4
i 21 24 53.9
UME iP 21 24 36.1
i 21 24 39.5
Hindu Kush region (h = 35 km).

" 22 UPP iP 02 53 29.6 C
i 02 53 32.7
micr sec
i Z' 0.1 0.7
KIR eP 02 57 40
i 02 53 42.6
UME iP 02 53 28.5 C
i 02 53 31.6
Hindu Kush region (h = 60 km).

" 22 UPP iPKPl 03 51 16.9
iPKP 03 51 19.8
iSKP 03 54 03.4
micr sec
SKP Z' 0.4 1.5
KIR iPKP 03 51 08.9
iSKP 03 53 41.6
micr sec
PKP Z' 0.2 1.2
SKP Z' 0.6 1.7
UME iPKP 02 52 14.8
iSKP 02 54 52.7
Fiji Islands region
(h = 590 km).

" 22 UPP iP 06 25 15.2
i 06 25 18.5
iS 06 34 07
micr sec
i Z' 0.1 0.7
KIR eP 06 25 57
i 06 26 01.9
micr sec
i Z' 0.4 1.8
UME iP 06 25 39.2
Central Mid-Atlantic Ridge
(h = 10 km).
m = 6.1 (UPP,KIR).

" 22 UPP iP 13 47 19.0
KIR eP 13 47 51
i 13 47 54.9
UME iP 13 47 30.7
Southern Iran (h = 25 km).

1984
Apr. 22 UPP iP 17 24 50.5
KIR iP 17 24 33.0
micr sec
P Z' 0.1 1.0
Mindanao, Philippine Islands
(h = 35 km).

" 23 UPP ePKP 00 15 50
KIR ePKP 00 15 31
South of Kermadec Islands
(h = N).

" 23 UPP iP 08 59 33.9 C
micr sec
P Z' 0.1 1.0
KIR iP 08 58 48.0 C
micr sec
P Z' 0.1 0.8
Kuril Islands region
(h = 80 km).
m = 5.7 (UPP,KIR).

" 23 UPP iP 12 16 33.9
KIR iP 12 17 45.4
Dodecanese Islands (h = 25 km).

" 23 UPP iP 21 34 02.7 C
micr sec
P Z' 0.3 0.9
KIR iP 21 34 12.0 C
micr sec
P Z' 0.8 1.2
UME iP 21 34 01.2 C
Hindu Kush region (h = 210 km).
m = 5.9 (UPP,KIR).

" 23 UPP iP 21 50 34.5 C
iPcP 21 51 02.8
ipP 21 52 04.7
iS 21 58 43.0
iScS 21 59 46.4
micr sec
P Z' 0.7 0.7
KIR iP 21 49 48.4 C
iPcP 21 50 34.0
iS 21 57 17.0
micr sec
P Z' 1.2 0.9
UME iP 21 50 09.3 C
iPcP 21 50 47.1
ipP 21 51 38.4
iS 21 57 55.0
iScS 21 59 16.2
Northwest of Kuril Islands
(h = 410 km).
m = 6.4 (UPP,KIR).

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

1984 Apr.	23	UPP	eP		22 18 38	
		UME	iP		22 19 06.4	
"	23	UPP	iP		22 40 51.5	
			ipP		22 40 56.7	
					micr	sec
			pP	Z'	0.4	1.0
			Mx	Z	5.7	17
		KIR	iP		22 40 41.7	
			ipP		22 40 46.2	
					micr	sec
			pP	Z'	0.7	1.4
			Mx	Z	6.5	18
		UME	iP		22 40 42.5	
			ipP		22 40 47.7	
		Burma-China border region.				
		h = 15 km (UPP,KIR,UME).				
		m = 6.5, M = 5.9 (UPP,KIR).				
"	23	UPP	iP		22 45 00.8	
"	23	UPP	iP		22 49 15.8	
"	24	UPP	iP		01 03 37.9	
		KIR	iP		01 03 27.0	
		UME	iP		01 03 27.0	
		Burma-China border region				
		(h = N).				
"	24	UPP	iP		03 45 03.1	
					micr	sec
			P	Z'	0.1	1.0
		KIR	iP		03 44 54.4	
		UME	iP		03 44 55.9	
		Burma-China border region				
		(h = N).				
"	24	UPP	iP		04 22 41.0	
			iPcP		04 23 11.0	
			ipP		04 24 15.5	
			iScS		04 31 55.0	
			iP'P'		04 52 04.9	
					micr	sec
			P	Z'	5.1	1.1
			Mx	Z	17	22
		KIR	iP		04 22 03.3	
					micr	sec
			P	Z'	2.8	0.7
			Mx	Z	12	19
		UME	iP		04 22 21.4	
			i		04 22 22.2	
			iS		04 31 18.2	
		South of Honshu, Japan				
		(h = 400 km).				
		m = 7.0, M = 6.3 (UPP,KIR).				
		M not corrected for focal				
		depth.				
1984 Apr.	24	UPP	eP		08 27 25	
			i		08 31 16.3	
		KIR	eP		08 27 10	
		UME	iP		08 27 21.9	
		Iceland region (h = 10 km).				
"	24	UPP	eP		09 37 45	
			i		09 37 50.3	
		Greenland Sea (h = 10 km).				
"	24	UPP	iP		21 27 14.8	
			iS		21 37 14	
					micr	sec
			P	Z'	0.1	1.0
			Mx	Z	11	21
		KIR	eP		21 26 40	
			i		21 26 41.8	
					micr	sec
			i	Z'	0.2	1.4
			Mx	Z	10	22
		UME	iP		21 27 00.6	
			i		21 27 05.8	
			iS		21 36 44	
		Central California (h = 10 km).				
		m = 5.9, M = 6.1 (UPP,KIR).				
"	25	UPP	iP		01 16 01.4	C
			iPn		01 17 01.2	
					micr	sec
			P	Z'	1.5	1.0
			Mx	Z	1.3	10
		KIR	iP		01 15 44.7	C
					micr	sec
			P	Z'	1.6	0.7
		UME	iP		01 15 46.1	C
		Eastern Kazakh SSR (h = 0 km).				
		m = 6.9 (UPP,KIR).				
		Underground explosion.				
"	25	UPP	iPKP		04 37 57.7	
			i		04 38 06.3	
			iSKP		04 41 00.5	
		KIR	iPKP		04 37 49.5	
		UME	iPKP		04 37 49.7	
			i		04 37 58.4	
			iSKP		04 40 47.0	
			iPKS		04 41 24.2	
		Fiji Islands region				
		(h = 420 km).				
"	25	UPP	iP		14 34 45.2	
					micr	sec
			Mx	Z	2.2	14
		KIR	iP		14 33 14.7	
			i		14 33 23.9	
					micr	sec
			P	Z'	0.1	0.9
			Mx	Z	1.5	16

(cont.)

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

1984
Apr. 25 (cont.)
UME iP 14 34 01.5
i 14 34 06.8
Norwegian Sea (h = 10 km).
M = 4.1 (UPP,KIR).

" 25 UPP iP 15 08 50.7
i 15 09 17.5
micr sec
P Z' 0.1 1.0
KIR eP 15 08 42
UME iP 15 08 42.1
i 15 09 08.8
Burma-India border region
(h = 110 km).

" 25 UPP iP 15 24 39.7
UME iP 15 24 24.6
Southwestern Ryukyu Islands
(h = N).

" 25 UPP iP 15 41 37.8
i 15 41 42.5
KIR eP 15 41 15
UME eP 15 41 23
Luzon, Philippine Islands
(h = N).

" 26 UPP iP 00 33 59.5
KIR eP 00 35 06
Turkey (h = 10 km).

" 26 UME iP 02 27 25.3

" 26 UPP iP 10 23 14.2
i 10 23 22.6
iS 10 33 05
micr sec
P Z' 0.2 1.0
KIR iP 10 23 35.2
i 10 23 43.8
micr sec
P Z' 0.4 1.0
UME iP 10 23 22.0
i 10 27 30.6
Chagos Archipelago region
(h = 10 km).
m = 6.3 (UPP,KIR).

" 26 UPP eP 10 52 17
micr sec
P Z' 0.1 1.0
KIR iP 10 52 14.2
micr sec
P Z' 0.1 0.7
Java (h = 80 km).
m = 6.3 (UPP,KIR).

1984
Apr. 26 KIR iP 11 58 31.8
Minahassa Peninsula
(h = 140 km).

" 26 UPP iP 22 41 15.1
KIR iP 22 41 53.9
UME iP 22 41 26.0
i 22 41 33.1
Eastern Caucasus (h = N).

" 27 UPP eP 02 37 05
KIR iP 02 38 12.9
UME iP 02 37 37.7
Crete (h =45 km).

" 27 UPP iP 03 03 00.2

" 27 UPP eP 06 54 13
UME iP 06 53 51.4
Near east coast of Honshu,
Japan (h = 55 km).

" 27 KIR iP 12 39 14.5
UME iP 12 39 42.1
Fox Islands, Aleutian Islands
(h = N).

" 27 UME iPgl 19 53 00.7
iSgl 19 52 26.2
UDD iSgl 19 54 16.5
MYV iPgl 19 52 40.6
iSgl 19 52 51.0
Jämtland, Sweden, 63.5°N,
15.7°E.
Origin time = 19 52 26.
M_L (UPP) = 2.5 1.
Felt.

" 27 UPP iP 23 25 39.8
Tibet (h = N).

" 28 UPP iP 10 16 50.2 C
micr sec
P Z' 0.1 1.0
KIR iP 10 15 56.7 C
i 10 16 10.0
micr sec
P Z' 0.2 1.0
UME iP 10 16 23.6 C
i 10 16 35.5
Fox Islands, Aleutian Islands
(h = N).
m = 6.0 (UPP,KIR).

" 28 UPP iP 14 58 33.2
KIR iP 14 59 04.9
UME iP 14 58 44.4

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

1984
Apr. 28 UPP iP 23 40 44.6
KIR iP 23 40 59.2
UME iP 23 40 45.3
Uzbek SSR (h = N).

" 29 UPP iP 05 06 56.7
i 05 07 01.6
iS 05 10 09
micr sec
P Z' 0.1 0.9
i Z' 0.7 1.5
Mx Z 22 12
KIR iP 05 08 24.2
i 05 08 27.7
micr sec
P Z' 0.1 0.9
i Z' 0.7 1.1
Mx Z 7.0 11
UME iP 05 07 44.8
i 05 07 46.5
iS 05 11 36
Central Italy (h = 10 km).
m = 5.9, M = 5.6 (UPP, KIR).

" 29 KIR iP 14 38 06.9
UME iP 14 38 20.5
Ryukyu Islands (h = 50 km).

" 29 UPP eP 17 00 43
i 17 00 44.9
Samar, Philippine Islands
(h = N).

" 29 UPP iPKP 17 39 10.3
KIR ePKP 17 38 59
UME iPKP 17 39 03.6
Tonga Islands (h = 240 km).

" 29 UME iPKP 22 53 03.5
i 22 53 13.6
Vanuatu Islands (h = N).

" 29 UPP eP 23 27 49
UME iP 23 27 45.7
Afghanistan-USSR border
region (h = 100 km).

" 30 UPP ePKP 00 01 31
KIR ePKP 00 01 17
UME iPKP 00 01 24.2
Vanuatu Islands (h = N).

" 30 UPP eP 05 46 34
KIR iP 05 47 40.3
Eastern Mediterranean Sea
(h = N).

1984
Apr. 30 DEL iSgl 08 55 37.4
Off coast of southern Sweden,
56.3°N, 12.3°E.
Origin time = 08 55 09.
Solution from SKI network
readings.

" 30 DEL iSgl 08 58 01.5
Off coast of southern Sweden,
56.3°N, 12.3°E.
Origin time = 08 57 33.
Solution from SKI network
readings.

" 30 UPP iP 15 46 06.6
KIR iP 15 46 20.2
UME iP 15 46 06.9
Uzbek SSR (h = N).

" 30 UPP iP 20 59 38.4
KIR iP 21 00 46.9
Crete (h = 60 km).

" 30 UPP eP 21 08 54
KIR iP 21 10 20.1
Central Italy (h = 5 km).

" 30 UPP eP 22 43 48
i 22 43 50.0
KIR iP 22 45 17.4
i 22 45 19.5
micr sec
i Z' 0.2 1.5
Central Italy (h = 10 km).

October 5, 1985

Conny Holmqvist
Myung Soon Jun
Won Young Kim
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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	(MYV)	62°56.5'N,	14°20.8'E; h = 345 m

M A Y 1 - 31, 1984

1984
May 1 UPP iP 01 27 12.5 C
micr sec
P Z' 0.1 1.0
KIR iP 01 26 32.6 C
micr sec
P Z' 0.1 1.0
Near east coast of Honshu, Japan (h = 60 km).
m = 5.7 (UPP,KIR).

" 1 UPP Mx 05 14
micr sec
Mx Z 0.9 17
KIR Mx 05 07
micr sec
Mx Z 1.6 21
East Papua New Guinea region (h = N).
M = 5.5 (UPP,KIR).

" 1 UPP iP 09 51 50.2
i 09 52 03.8
i 09 52 12.8
KIR iP 09 51 30.2
Luzon, Philippine Islands (h = N).

" 1 KIR iP 16 10 20.6
UME iP 16 10 10.4 C
Afghanistan - USSR border region (h = 240 km).

" 1 UPP iP 19 16 48.7 C
micr sec
P Z' 0.1 1.0
(cont.)

1984
May 1 (cont.)
KIR iP 19 16 14.4 C
micr sec
P Z' 0.2 1.9
UME iP 19 16 34.2 C
Southern Nevada.
m = 6.0 (UPP,KIR).
Underground explosion.

" 1 UME iP 22 10 29.4

" 2 KIR iP 03 11 16.0
UME iP 03 11 56.1
i 03 11 59.5

" 2 UPP iP 03 26 29.1
KIR iP 03 27 43.2
UME iP 03 27 08.6
Greece (h = 10 km).

" 2 UPP eP 04 14 05
KIR iP 04 13 48.3
UME eP 04 13 54
Molucca Passage (h = 60 km).

" 2 UPP iP 09 11 04.1
UME iP 09 11 02.9
Hindu Kush region (h = 60 km).

" 2 UPP iPKP1 12 23 30.2
i 12 23 33.3
i 12 33 50.1
UME iPKP1 12 23 18.9
South of Kermadec Islands (h = N).

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

1984
May 2 UDD iSn 13 17 18.6
Southern Norway, near 58°N, 6°E.
Origin time = 13 15 13.
Solution from NORSAR bulletin.
Probably explosion.

" 2 KIR eP 17 51 49
UME iP 17 51 13.8
Creta (h = 60 km).

" 2 UPP eP 19 09 33
KIR eP 19 08 43
UME eP 19 09 10
Off coast southeastern Alaska (h = 10 km).

" 2 UPP eP 22 52 14
UME iP 22 52 29.4
i 22 52 42.1

" 3 KIR iP 01 53 12.9
UME iP 01 53 18.2

" 3 KIR iP 10 30 40.4
UME iP 10 30 45.0
Molucca Passage (h = 60 km).

" 3 UDD iSg1 10 57 11.6
Southwestern Norway, near 62°N, 6°E.
Origin time = 10 55 08.
Solution from NORSAR bulletin.

" 3 UPP iP 12 42 24.0
micr sec
P Z' 0.1 0.9
KIR iP 12 42 19.0
i 12 42 27.0
micr sec
P Z' 0.1 1.0
UME iP 12 42 19.3
i 12 45 05.3
Java (h = 90 km).
m = 6.3 (UPP,KIR).

" 3 KIR iP 13 21 55.2 C
UME iP 13 22 00.9
Molucca Passage (h = 50 km).

" 3 KIR iP 13 26 51.4
Northern India (h = N).

1984
May 3 UPP Mx 13 57
micr sec
Mx Z 1.4 20
KIR iPn 13 51 30.6
i 13 51 39.2
iSn 13 52 47.9
micr sec
Mx Z 1.2 14
UME iPn 13 52 21.3
Greenland Sea (h = 10 km).
M = 3.9 (UPP,KIR).

" 3 KIR ePn 19 47 05
UME iPn 19 47 53.4
Greenland Sea (h = 10 km).

" 3 UPP Mx 24 06
micr sec
Mx Z 0.9 17
KIR eP 23 50 37
i 23 50 46.6
North Atlantic Ridge (h = 10 km).

" 4 UPP ePKP1 00 44 19
i 00 44 22.9
KIR ePKP1 00 44 16
i 00 44 21.0
UME iPKP1 00 44 16.1
West of Macquarie Island (h = 10 km).

" 4 KIR eP 01 50 30
UME iP 01 51 12.6
Greenland Sea (h = 10 km).

" 4 UPP iPn 02 03 23.3
i 02 03 39.8
micr sec
Mx Z 0.9 17
KIR iPn 02 01 46.0
i 02 01 58.0
micr sec
Mx Z 0.9 13
UME iPn 02 02 35.5
i 02 02 38.1
Greenland Sea (h = 10 km).
M = 3.8 (UPP,KIR).

" 4 UPP iPn 02 24 33.1
micr sec
Mx Z 2.1 16
KIR iPn 02 22 55.9
iSn 02 24 12.9
(cont.)

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

1984
May 4 (cont.)

KIR			micr sec
	Mx	Z	1.7 14
UME	iPn		02 23 45.1
	i		02 23 48.3
	iSn		02 25 37.8

Greenland Sea (h = 10 km).
M = 4.1 (UPP,KIR).

" 4

UME	iP		03 11 28.4

Probably the same area as for the event on May 3, 13:51 (KIR).

" 4

KIR	ePn		03 43 29
UME	iPn		03 44 24.5

Probably the same area as for the event on May 3, 13:51 (KIR).

" 4

UPP	iP		10 45 42.9

" 4

KIR	iP		17 23 40.7
UME	iP		17 23 56.0 C

Near s. coast of southern Honshu (h = 30 km).

" 4

UPP	eP		18 08 30

" 4

UPP	iP		18 45 10.5

" 4

UPP	iP		21 40 08.8
	i		21 40 12.0
UME	iP		21 40 41.9

Turkey (h = 10 km).

" 4

KIR	eP		23 12 30
UME	eP		23 12 59

Southern Alaska (h = 90 km).

" 5

UME	iP		05 53 28.0

" 6

UME	iP		04 53 13.2

" 6

UPP	iP		08 31 46.5
KIR	eP		08 30 53

Near east coast of Kamchatka (h = N).

" 6

UPP	iP		09 16 53.0
	i		09 16 57.5
			micr sec
	i	Z'	1.1 2.0
	Mx	Z	13 16

(cont.)

1984
May 4 (cont.)

KIR	iP		09 18 05.6
			micr sec
	P	Z'	0.2 1.3
	Mx	Z	3.3 11
UME	iP		09 17 29.0
	iS		09 21 59

Aegean Sea (h = 10 km).
m = 5.9, M = 5.4 (UPP,KIR).

" 6

UPP	iP		15 29 32.0 C
	i		15 29 40.0
	i		15 29 46.3
			micr sec
	P	Z'	0.1 0.9
	i	Z'	0.4 1.0
	Mx	Z	6.8 20
KIR	iP		15 29 26.1
	i		15 29 32.2
	i		15 29 41.1
			micr sec
	P	Z'	0.2 1.0
	i	Z'	0.6 1.5
UME	iP		15 29 24.8 C
	i		15 29 33.5
	i		15 29 38.9

Burma-India border region (h = N).
m = 6.5 (UPP,KIR).

" 6

UPP	iP		20 05 43.4
	iP'P'		20 33 59.1
			micr sec
	P	Z'	0.1 0.8
KIR	iP		20 04 50.3 C
	i		20 05 05.5
UME	eP		20 05 17
	i		20 05 32.2
	iP'P'		20 34 08.1

Andreanof Islands (h = 60 km).

" 7

KIR	iP		06 21 54.4
UME	iP		06 21 20.5

Turkey (h = 100 km).

" 7

UME	iP		09 10 27.4

Near east coast of Honshu, Japan (h = 60 km).

" 7

UPP	iP		16 03 48.4
	i		16 03 55.0
KIR	i		16 04 17.0
UME	i		16 04 09.7

North Atlantic Ridge (h = 10 km).

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

1984
May 7 UPP iP 17 53 56.2
iS 17 57 23
micr sec
P Z' 0.9 1.6
Mx Z 69 13
KIR iP 17 55 19.8
micr sec
P Z' 0.2 1.0
Mx Z 20 12
UME eP 17 54 40
i 17 54 43.4
iS 17 58 43
Southern Italy (h = 10 km).
m = 5.7, M = 6.0 (UPP,KIR).

" 7 UPP eP 18 11 28
UME iP 18 12 16.0
Southern Italy (h = 10 km).

" 8 UPP iPKP1 03 56 57.2
micr sec
PKP1 Z' 0.2 1.1
Mx Z 4.3 24
KIR iPKP1 03 56 36.9
i 03 56 42.7
micr sec
Mx Z 2.3 22
UME iPKP1 03 56 46.1
i 03 56 56.2
Kermadec Islands (h = N).
M = 6.1 (UPP,KIR).

" 8 UME iP 05 09 17.9
Greece (h = 10 km).

" 8 UPP eP 08 29 11
KIR iP 08 28 14.3
Near east coast of
Kamchatka (h = 90 km).

" 8 UPP ePKP1 12 11 58
UME ePKP1 12 11 43
Kermadec Islands (h = N).

" 8 UPP iP 19 46 10.9
KIR iP 19 46 34.2
Mid-Indian Rise (h = 10 km).

" 8 KIR iP 20 32 05.9
UME iP 20 32 18.2 C
Volcano Islands region
(h = 270 km).

" 9 UPP iP 04 21 44.4
ipP 04 22 04.8
(cont.)

1984
May 9 (cont.)
KIR iP 04 21 40.0
ipP 04 21 59.0
UME iP 04 21 38.0
ipP 04 21 58.4
Burma.
h = 70 km (UPP,KIR,UME).

" 9 UME iP 09 55 32.6

" 9 UME iP 11 07 17.3
Poland (h = 10 km).

" 9 UPP iP 12 05 43.2
KIR iP 12 04 47.7
micr sec
P Z' 0.1 1.0
UME iP 12 05 14.3
Komandorsky Islands region
(h = N).

" 10 KIR iPKP 00 14 48.9
UME iPKP 00 14 46.5
Chile-Argentina border region
(h = 110 km).

" 10 UME iPKP1 11 51 53.7
Kermadec Islands (h = N).

" 10 UPP iP 16 09 19.1
micr sec
Mx Z 1.3 23
Near coast of Oaxaca, Mexico
(h = 35 km).

" 11 KIR iP 03 21 20.4
UME iP 03 21 13.1
Tajik-Xinjiang border region
(h = 40 km).

" 11 UPP iP 10 05 26.1
KIR iP 10 05 56.4
UME iP 10 05 35.4
Iran (h = N).

" 11 UPP iP 10 46 02.7
iS 10 49 33
micr sec
P Z' 0.2 1.1
Mx Z 16 11
KIR iP 10 47 26.2
i 10 47 29.4
micr sec
i Z' 0.1 1.1
Mx Z 5.8 10
(cont.)

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

1984
May 11 (cont.)
UME iP 10 46 49.3 D
iS 10 50 54
Southern Italy (h = 15 km).
m = 5.8, M = 5.5 (UPP,KIR).

" 11 UPP iP 10 54 20.7
UME iP 10 55 05.3
Southern Italy (h = 10 km).

" 11 UPP iP 11 30 30.7
UME iP 11 31 14.7
Southern Italy (h = 20 km).

" 11 UPP iP 11 53 43.0
KIR iP 11 53 52.8
UME iP 11 53 42.4
Pakistan (h = 40 km).

" 11 UPP iP 13 19 10.4
i 13 19 12.6
micr sec
Mx Z 0.6 14
KIR eP 13 20 33
UME iP 13 19 56.3
i 13 19 58.3
Southern Italy (h = 15 km).

" 11 UPP eP 13 43 16
UME eP 13 44 01
Southern Italy (h = 10 km).

" 11 UPP iP 15 23 00.3
KIR iP 15 22 42.8
UME iP 15 22 48.2
Luzon, Philippine Islands
(h = 45 km).

" 11 UPP iP 16 43 33.6
micr sec
Mx Z 2.1 13
KIR iP 16 44 57.2
micr sec
Mx Z 0.8 10
UME iP 16 44 17.6
Southern Italy (h = 10 km).

" 12 UPP iP 00 19 39.5
KIR iP 00 18 44.4
UME iP 00 19 10.6
Near east coast of Kamchatka
(h = N).

" 12 UPP iP 13 51 06.8
Mindoro, Philippine Islands
(h = 120 km).

1984
May 12 UPP iPKP 17 50 26.6
Tuamotu Archipelago region.
Underground explosion.

" 12 UPP iPKP1 19 08 41.0
Kermadec Islands region
(h = N).

" 12 UPP iP 21 35 20.3
Southwestern Ryukyu Islands
(h = 110 km).

" 12 UPP iP 22 33 14.1
i 22 33 45.3
KIR iP 22 32 23.4
Kuril Islands (h = 250 km).

" 13 UME iP 00 25 10.9 D
Southern Honshu (h = 350 km).

" 13 UPP eP 11 26 02
UME eP 11 26 46
Southern Italy (h = 10 km).

" 13 UPP iP 12 49 51.6
i 12 49 54.3
i 12 49 56.8
iS 12 52 58
micr sec
i Z' 0.1 1.1
i Z' 0.5 1.5
Mx Z 17 12
KIR iP 12 51 17.6
micr sec
P Z' 0.3 1.5
Mx Z 14 14
UME iP 12 50 37.7 C
i 12 50 42.7
iS 12 54 28
Adriatic Sea (h = 30 km).
m = 5.6, M = 5.6 (UPP,KIR).

" 13 UPP iPKP1 15 12 27.4 C
micr sec
PKP1 Z' 0.1 0.9
KIR iPKP1 15 12 07.5
UME iPKP1 15 12 17.4 C
i 15 12 32.3
South of Kermadec Islands
(h = N).

" 13 UME iP 21 30 14.6
i 21 30 20.0
Adriatic Sea (h = N).

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

1984
May 13 UPP eP 22 52 10
UME iP 22 52 54.4
i 22 52 59.0
Adriatic Sea (h = N).

" 14 UME iP 01 30 25.7 C
i 01 30 30.4
Adriatic Sea (h = N).

" 14 UPP iP 02 34 01.8
UME iP 02 34 45.2 C
i 02 34 50.7
Adriatic Sea (h = N).

" 14 UPP iP 04 00 41.1
UME iP 04 01 25.1 C
i 04 01 30.4
Adriatic Sea (h = N).

" 14 UME iP 04 48 49.6
i 04 48 54.9
Adriatic Sea (h = N).

" 14 KIR iSg1 08 32 53.4
UME iSn 08 32 53.3
iSg1 08 33 08.7
North-central Finland,
65.9°N, 28.5°E.
Origin time = 08 31 02.
M_L(UPP) = 2.5 (0.11) 3.
By combination with Finnish
station readings.

" 14 UPP iP 09 51 20.5
UME iP 09 51 46.1
North of Ascension Island
(h = 10 km).

" 14 UPP eP 14 19 10

" 14 UME eP 18 23 15
(Greece (h = 10 km).

" 14 UPP iP 19 18 20.7
i 19 21 10.5
KIR iP 19 19 47.2
UME iP 19 19 02.4
Romania (h = 55 km).

" 15 UDD iSg1 13 25 57.0
i 13 26 05.2
Southern Norway, near 59°N,
7°E.
Origin time = 13 23 59.
M_L(UPP) = 2.5 1.
Solution from NORSAR bulletin.
Probably explosion.

1984
May 15 UME iP 01 28 06.5

" 15 UME eP 14 18 25
Near coast of Nicaragua
(h = 70 km).

" 15 UME eP 15 17 44
Yugoslavia (h = km).

" 15 UPP iP 15 25 57.0
KIR iP 15 25 06.4
UME iP 15 25 29.9
Kuril Islands (h = 280 km).

" 15 UPP eP 15 36 25
KIR iP 15 36 13.3
micr sec
P Z' 0.1 1.0
UME iP 15 36 16.4
Minahassa Peninsula
(h = 45 km).

" 15 UPP iP 22 37 50.3
i 22 38 05.3
micr sec
Mx Z' 0.1 0.9
Mx Z 1.7 21
KIR iP 22 37 31.8 C
micr sec
P Z' 0.1 1.0
UME iP 22 37 38.5 C
Philippine Islands region
(h = 60 km).
m = 6.1 (UPP,KIR).

" 15 KIR iP 22 59 03.7
UME iP 22 58 27.7
Aegean Sea (h = 10 km).

" 16 KIR iP 00 05 50.8

" 17 UPP iP 08 00 33.4
iS 08 04 21
micr sec
P Z' 0.3 1.4
Mx Z 2.0 15
KIR iP 07 58 59.8
micr sec
P Z' 0.9 2.0
Mx Z 2.7 12
UME iP 07 59 49.1
iS 08 02 56
Greenland Sea (h = 10 km).
m = 6.0, M = 4.6 (UPP,KIR).

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

1984					
May	17	UPP	iPKP	09 40 59.8	
			iSKP1	09 44 22.7	
				micr sec	
			Mx Z	5.7 22	
		KIR	iPKP	09 40 45.4	
			i	09 40 49.4	
				micr sec	
			i Z'	0.1 1.0	
			Mx Z	1.9 23	
		UME	iPKP	09 40 52.0	
			i	09 40 55.4	
		Vanuatu Islands (h = 25 km).			
		M = 6.0 (UPP,KIR).			
"	17	UPP	iP	14 17 16.5	
		KIR	iP	14 16 48.3	
		UME	eP	14 17 00	
		Mariana Islands (h = 50 km).			
"	17	UPP	iP	14 18 33.8	
			i	14 18 39.4	
		UME	iP	14 18 22.1	
			i	14 18 22.8	
"	17	UME	iPKP	16 53 54.2	
		Vanuatu Islands (h = 50 km).			
"	17	UPP	i	17 07 47.1	
		UME	ePdiff	17 07 49	
			i	17 08 02.4	
		Atlantic - Indian Rise (h = 10 km).			
"	17	UPP	eP	19 59 09	
		KIR	eP	19 59 08	
		UME	iP	19 59 10.1	
		Northern Colombia (h = N).			
"	17	UPP	iP	20 13 54.5	
		UME	iP	20 13 26.5	
			i	20 13 44.5	
		Rat Islands, Aleutian Islands (h = N).			
"	17	UPP	iP	20 18 46.2	
		KIR	iP	20 17 53.7	
			i	20 18 02.4	
		UME	iP	20 18 19.5	
			i	20 18 28.6	
		Rat Islands, Aleutian Islands (h = N).			
"	18	UME	iP	03 02 15.9 C	
			i	03 02 21.5	
		Adriatic Sea (h = 10 km).			

1984					
May	18	UPP	iP	04 38 05.2 C	
				micr sec	
			P Z'	0.2 1.0	
		KIR	iP	04 38 06.0 C	
				micr sec	
			P Z'	0.1 1.0	
		UME	iP	04 38 00.7 C	
		Nepal (h = N).			
		m = 5.9 (UPP,KIR).			
"	18	UPP	iP	10 07 59.1	
		KIR	iP	10 07 57.4	
		UME	iP	10 07 52.8	
		Southern Xinjiang, China (h = N).			
"	18	UPP	iPKP1	12 14 00.0	
		UME	iSKP1	12 16 44.3	
		South of Fiji Islands (h = 520 km).			
"	18	UME	iP	17 13 45.6	
		Near coast of Nicaragua (h = 70 km).			
"	18	UPP	iP	23 02 09.9	
		KIR	iP	23 01 55.9	
		UME	iP	23 02 00.5 C	
		Minahassa Peninsula (h = 120 km).			
"	19	UPP	iPKP1	04 20 47.5	
		UME	iPKP1	04 20 54.1	
		Antarctica (h = N).			
"	19	UPP	iP	05 19 18.6	
		UME	iP	05 19 27.3	
		Mid-Indian Rise (h = 10 km).			
"	19	UPP	iP	08 49 43.9	
			i	08 49 44.9	
		KIR	iP	08 51 08.0	
		UME	iP	08 50 27.9 C	
			i	08 50 33.8	
		Adriatic Sea (h = 10 km).			
"	19	UME	iP	09 07 26.8	
			i	09 07 32.5	
		Adriatic Sea (h = 10 km).			
"	19	UME	iP	09 09 53.2	
			i	09 09 58.8	

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

1984
May 19 UPP iSg1 10 23 47.1
KIR iPn 10 20 38.6
iPg1 10 20 46.7
iSn 10 21 22.5
iSg1 10 21 34.0
UME iSn 10 21 31.0
iSg1 10 21 46.3
UDD iSn 10 23 26.5
iSg1 10 24 12.3
DEL eSg1 10 25 53
MYV eSn 10 22 31
North-central Finland,
65.9°N, 28.5°E.
Origin time = 10 19 39.
M_L(UPP) = 2.8 (0.32) 4.
By combination with Finnish
station readings.

" 19 UME ePKP1 10 41 16
Antarctica (h = N).

" 19 UPP iP 10 56 16.6
UME iP 10 56 59.9 C
i 10 57 05.8
Adriatic Sea (h = 10 km).

" 20 UPP iPKP1 07 41 13.8
KIR iPKP 07 41 04.6
UME iPKP1 07 43 57.2
South of Fiji Islands
(h = 530 km).

" 20 UPP iP 12 59 25.5
KIR iP 12 59 00.8
i 12 59 06.4
UME iP 12 59 09.4
Taiwan region (h = 10 km).

" 20 UPP eP 18 36 19
KIR eP 18 36 00
Taiwan (h = 15 km).

" 20 UPP iPKP1 20 17 52.0
iSKP1 20 20 42.3
KIR iSKP1 20 20 19.7
UME iPKP 20 17 52.7
iSKP1 20 20 31.5
South of Fiji Islands
(h = 570 km).

" 20 UPP eP 21 01 44
Romania (h = 55 km).

" 20 UPP iPKP 22 24 33.1
KIR iPKP 22 24 18.7
UME iPKP 22 24 24.6
Vanuatu Islands (h = 130 km).

1984
May 21 UPP iP 02 04 25.3
KIR iP 02 04 08.8
UME iP 02 04 14.3
Molucca Passage (h = N).

" 21 UPP iPKP1 08 26 10.7
UME iPKP1 08 25 54.8
i 08 26 08.6
Kermadec Islands (h = N).

" 21 UPP iP 10 09 24.6
micr sec
P Z' 0.1 1.0
KIR iP 10 09 21.3 C
micr sec
P Z' 0.1 1.2
UME iP 10 09 18.2 C
India-Bangladesh border region
(h = N).
m = 5.9 (UPP,KIR).

" 21 UPP iP 15 48 54.1 C
micr sec
P Z' 0.1 0.9
KIR iP 15 48 24.9 C
micr sec
P Z' 0.1 1.0
UME iP 15 48 36.0 C
Eastern China (h = 20 km).
m = 5.9 (UPP,KIR).

" 21 UPP iP 15 50 01.4 C
i 15 50 03.8
iS 15 59 05
micr sec
i Z' 0.1 0.9
KIR iP 15 49 32.2 C
i 15 49 34.6
micr sec
i Z' 0.2 1.3
UME iP 15 49 43.4 C
i 15 49 45.7
Eastern China (h = 20 km).
m = 6.0 (UPP,KIR).

" 21 UPP iP 22 20 36.7
ipP 22 22 29.2
KIR iP 22 20 05.1 C
UME iP 22 20 18.6 C
epP 22 22 08
Bonin Islands region.
h = 510 km (UPP,UME).

" 21 UPP iP 22 26 33.4
UME iP 22 26 13.1
South of Honshu, Japan (h = N).

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

1984 May	21	KIR	iP	22 58 32.2	
		UME	iP	22 58 37.9	
		Molucca Passage (h = 40 km).			
"	21	UME	ipP	23 57 37.9	
		Taiwan region (h = N).			
"	22	UPP	iPdiff	02 35 28.3	
		KIR	iPdiff	02 35 09.2	C
		UME	iPdiff	02 35 16.1	
		West Irian region (h = 70 km).			
"	22	UPP	iP	14 02 17.6	C
			iS	14 06 32.5	
				micr sec	
			P Z'	0.1 0.5	
		KIR	iP	14 03 28.6	C
		UME	iP	14 02 52.0	C
		Mediterranean Sea (h = 50 km).			
		m = 6.3 (UPP,KIR).			
"	23	UPP	iP	02 09 36.0	
		UME	eP	02 09 29	
"	23	UPP	iP	03 22 42.2	
			i	03 22 48.1	
		KIR	iP	03 22 48.9	
		UME	iP	03 22 40.0	
			i	03 22 54.6	
		Kashmir-India border region			
		(h = 60 km).			
"	23	UPP	iPKP	05 36 28	
			iPKP2	05 37 05.3	
		KIR	iPKP	05 36 24.4	
			iPKP1	05 36 38.1	
			iPKP2	05 36 51.2	
		UME	iPKP	05 36 28.8	
			iPKP2	05 36 56.4	
		North of Macquarie Island			
		(h = 10 km).			
"	23	UPP	iP	07 59 44.1	
			i	07 59 58.5	
		KIR	iP	07 59 20.6	
		Norther China (h = N).			
"	23	KIR	iP	18 43 14.5	
		UME	iP	18 43 29.6	
			i	18 43 44.2	
"	24	UPP	eP	00 11 05	
		KIR	iP	00 11 43.6	
		UME	iP	00 11 19.4	
			i	00 11 27.8	
		Eastern Gulf of Aden			
		(h = 10 km).			
1984 May	24	UPP	eP	11 38 35	
		Greece-Albania border region			
		(h = 10 km).			
"	24	UPP	iP	12 22 29.8	
"	24	KIR	iP	20 00 38.9	
		UME	iP	19 59 53.5	
		Austria (h = 10 km).			
"	25	UME	iP	00 21 43.1	
			i	00 21 45.8	
"	25	UPP	iPKP1	02 52 25.9	C
			iPKP2	02 52 30.3	
		KIR	iPKP1	02 52 06.9	
		UME	iPKP1	02 52 14.0	
			iPKP2	02 52 17.8	
		Kermadec Islands (h = 60 km).			
"	25	UPP	iPKP1	08 17 29.7	
			iPKP2	08 17 36.0	
		KIR	ePKP1	08 17 11	
		UME	iPKP1	08 17 17.3	
		Kermadec Islands (h = N).			
"	25	UPP	iP	11 41 50.1	
		UME	iP	11 42 17.6	
"	25	UPP	iSg1	13 22 04.7	
		KIR	iPn	13 18 59.5	
			iPg1	13 19 08.3	
			iSg1	13 19 52.6	
		UME	iSn	13 19 52.4	
			iSg1	13 20 07.3	
		UDD	iSn	13 21 45.8	
			iSg1	13 22 34.2	
		DEL	eSg1	13 24 09	
		MYR	iPn	13 19 43.0	
			iSn	13 20 57.6	
		North-central Finland,			
		65.9°N, 28.5°E.			
		Origin time = 13 18 01.			
		M_L(UPP) = 3.2 (0.27) 5.			
		By combination with Finnish			
		station readings.			
"	25	KIR	ePKP	13 39 32	
			i	13 39 40.5	
		UME	iPKP	13 39 32.4	
		Off coast of southern Chile			
		(h = 30 km).			
"	25	UPP	iPKP1	19 22 52.7	
		South of Fiji Islands			
		(h = 510 km).			

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

1984
May 25 UPP iPKP 22 08 47.1
i 22 08 56.3
KIR iPKP 22 09 02.3
i 22 09 11.0
iSKP1 22 12 29.6
UME iPKP 22 08 53.9
i 22 09 03.9
iSKP1 22 12 15.7
South Sandwich Islands region
(h = N).

" 26 UPP Mx 01 31
micr sec
Mx Z 7.2 21
KIR ePKP 00 13 54
micr sec
Mx Z 3.4 17
South Pacific Cordillera
(h = 10 km).
M = 6.4 (UPP,KIR).

" 26 UPP eP 00 31 34
UME iP 00 31 14.0
i 00 31 36.6
South of Honshu, Japan
(h = 40 km).

" 26 UPP iP 03 20 10.3 C
iPn 03 21 16.3
micr sec
P Z' 1.6 0.9
Mx Z 1.7 9
KIR iP 03 19 53.8 C
micr sec
P Z' 1.4 0.9
Mx Z 0.6 10
UME iP 03 19 55.0 C
i 03 20 01.5
Eastern Kazakh SSR.
m = 6.9, M = 4.9 (UPP,KIR).
Underground explosion.

" 26 UPP iPKP 04 17 33.0
micr sec
Mx Z 9.5 28
KIR iPKP 04 17 43.1
micr sec
Mx Z 2.4 20
UME iPKP 04 17 33.4
Prince Edward Islands region
(h = 10 km).
M = 6.0 (UPP,KIR).

" 26 UPP iP 09 12 59.8
KIR iP 09 12 39.9
(cont.)

1984
May 26 (cont.)
UME iP 09 12 45.6
Luzon, Philippine Islands
(h = 15 km).

" 26 UPP eP 12 31 36
KIR eP 12 32 56
UME iP 12 32 17.1
Sicily (h = N).

" 26 UPP Mx 14 32
micr sec
Mx Z 0.8 20
Prince Edward Islands region
(h = 10 km).

" 26 KIR iP 16 02 50.2
i 16 02 54.9
UME iP 16 02 27.4

" 26 UPP iSn 20 37 37.3
i 20 38 18.1
iSg1 20 38 24.8
KIR iPn 20 35 17.4
iPg1 20 35 26.0
iSg1 20 36 10.1
UME iPn 20 35 21.8
iSn 20 36 10.3
iSg1 20 36 25.5
UDD iSn 20 38 03.4
DEL iSg1 20 40 26.2
MYR iPn 20 35 59.2
iSn 20 37 15.0
North-central Finland,
65.9°N, 28.5°E.
Origin time = 20 34 19.
M_L(UPP) = 3.3 (0.26) 3.
By combination with Finnish
station readings.

" 26 UPP eSg1 22 41 38
UDD iPn 22 39 18.1
iSg1 22 40 34.1
Off coast of southwestern
Norway, near 61°N, 4°E.
Origin time = 22 38 01.
M_L(UPP) = 2.4 1.
Solution from NORSAR bulletin.

" 26 UPP ePKP 23 01 46
micr sec
Mx Z 8.7 28
KIR iPKP 23 01 31.7
i 23 01 38.0
UME iPKP 23 01 40.1
Santa Cruz Islands region
(h = 25 km).

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

1984
May 26 KIR iPKP 23 19 34.8
UME iPKP 23 19 41.0
Santa Cruz Islands region
(h = 40 km).

" 26 UME iP 23 30 37.1

" 26 UPP iPKP 23 38 45.8
UME iPKP 23 38 37.0
East Papua New Guinea region
(h = 55 km).

" 27 UPP iP 03 10 53.7

" 27 UPP iP 03 51 12.2
i 03 51 16.8
micr sec
i Z' 0.2 1.4
Mx Z 9.3 14
KIR iP 03 50 42.3
i 03 50 47.1
micr sec
i Z' 0.1 1.4
UME iP 03 50 53.8
i 03 50 58.9
Ryukyu Islands (h = 15 km).
m = 5.9 (UPP,KIR).

" 28 UPP iSKP1 18 10 03.6
KIR iPKP 18 06 24.5
Vanuatu Islands (h = N).

" 29 UPP iP 04 48 20.2 D
iS 04 58 22
micr sec
P Z' 0.1 0.7
Mx Z 0.7 18
KIR iP 04 48 20.7 D
i 04 48 36.5
micr sec
P Z' 0.5 1.0
UME iP 04 48 16.5
i 04 48 31.7
iS 04 58 17
Northern Sumatera (h = 70 km).
m = 6.1 (UPP,KIR).

" 29 KIR iPg1 09 18 38.0
iSn 09 19 12.8
iSg1 09 19 22.2
UME iSn 09 19 22.2
iSg1 09 19 37.7
North-central Finland,
65.9°N, 28.5°E.
Origin time = 09 17 31.
(cont.)

1984
May 29 (cont.)
M_L(UPP) = 2.6 1.
By combination with Finnish
station readings.

" 29 KIR iSg1 09 30 41.7
North-central Finland,
65.9°N, 28.5°E.
Origin time = 09 28 50.
By combination with Finnish
station readings.

" 29 KIR iPg1 13 13 08.7
iSg1 13 13 52.6
UME iSn 13 13 52.6
iSg1 13 14 08.0
North-central Finland,
65.9°N, 28.5°E.
Origin time = 13 12 01.
M_L(UPP) = 2.7 1.
By combination with Finnish
station readings.

" 29 KIR iP 15 29 34.3
UME iP 15 30 01.6
Aleutian Islands region
(h = N).

" 29 UPP Mx 19 59
micr sec
Mx Z 1.2 18
KIR Mx 20 00
micr sec
Mx Z 0.9 16
West Irian region (h = N).
M = 5.5 (UPP,KIR).

" 29 UPP iP 20 29 19.2
KIR iP 20 28 44.3
i 20 28 48.4
UME iP 20 29 04.1
i 20 29 08.7
Wyoming (h = 20 km).

" 29 UME i 23 03 53.8
South of Fiji Islands
(h = 180 km).

" 29 UME eP 23 09 41
Near east coast of Honshu,
Japan (h = 80 km).

" 29 UPP Mx 23 12
micr sec
Mx Z 1.5 19
(cont.)

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

1984
May 29 (cont.)

KIR	Mx		23 10	
			micr	sec
	Mx	Z	1.1	18

West Irian region
(h = 25 km).
M = 5.5 (UPP,KIR).

" 30

KIR	iPg1		00 29 25.3
	iSg1		00 29 37.1
UME	iPg1		00 30 15.9
	iSg1		00 31 01.3

Norrbotten, Sweden 67.3°N,
22.1°E.
Origin time = 00 29 12.
M_L(UPP) = 2.4 1.
By combination with Finnish
station readings.

" 30

UPP	iP		00 51 08.1	
	i		00 51 13.1	
			micr	sec
	i	Z'	0.1	1.0
	Mx	Z	0.7	13
KIR	iP		00 50 33.2	
	i		00 50 38.1	
			micr	sec
	i	Z'	0.1	1.0
	Mx	Z	0.7	13
UME	iP		00 50 46.8	
	i		00 50 52.5	

Near s. coast of southern
Honshu (h = 25 km).
m = 5.9, M = 5.1 (UPP,KIR).

" 30

UPP	iP		01 00 58.2
KIR	iP		01 00 30.7
UME	iP		01 00 39.3

Mongolia (h = N).

" 30

KIR	eP		01 01 50
UME	iP		01 02 06.1

Near s. coast of southern
Honshu (h = 20 km).

" 30

UPP	iP		01 14 23.5
KIR	eP		01 13 48
UME	iP		01 14 02.8

Near s. coast of southern
Honshu (h = 10 km).

" 30

UPP	iPdiff		08 04 16.5
	iPP		08 08 06.8
	i		08 08 10.6
	iPKKP		08 18 23.7

(cont.)

1984
May 30 (cont.)

KIR	iPdiff		08 03 55.1
	i(PP)		08 06 54.9
	i(PP)		08 07 54.4
	iPP		08 07 58.5
UME	iPdiff		08 04 03.1
	i(PP)		08 07 57.1
	iPP		08 08 00.2

New Britain region (h = 170 km).

" 30

UPP	iP		12 52 17.6
KIR	iP		12 51 26.4

Rat Islands, Aleutian Islands
(h = 40 km).

" 30

UPP	iP		13 08 59.8
KIR	iP		13 08 08.3
UME	iP		13 08 33.9

Rat Islands, Aleutian Islands
(h = 40 km).

" 30

UME	iP		20 38 34.3

" 30

UPP	iP		22 24 12.4
KIR	iP		22 24 21.7
UME	eP		22 24 11

Hindu Kush region (h = 140 km).

" 30

UPP	eP		22 36 48
KIR	iP		22 36 46.5
UME	eP		22 36 38

Nepal (h = N).

" 31

UPP	eP		03 05 19
UME	eP		03 04 54

Kuril Islands (h = N).

" 31

UPP	iPKP1		08 50 39.4	C
KIR	iPKP		08 50 30.4	
UME	i(PKP)		08 50 31.8	
	iPKP		08 50 37.7	

South of Fiji Islands
(h = 190 km).

" 31

KIR	iP		08 53 40.7
UME	iP		08 53 56.8

" 31

UME	iP		10 30 56.6

" 31

UPP	iP		10 54 16.3

" 31

UPP	iP		13 15 48.8	C
			micr	sec
	P	Z'	0.2	1.1

(cont.)

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

1984						
May	31	(cont.)				
		KIR	iP		13 15 14.6	C
					micr	sec
			P	Z'	0.1	0.9
		UME	iP		13 15 34.0	C
		Southern Nevada.				
		m = 6.1 (UPP,KIR).				
		Underground explosion.				
"	31	UPP	iP		13 52 22.9	
		UME	iP		13 52 01.9	
		Near east coast of Honshu,				
		Japan (h = 55 km).				
"	31	UPP	eP		15 25 16	
		KIR	iP		15 24 38.3	
		UME	iP		15 24 54.3	
		Near east coast of Honshu,				
		Japan (h = 55 km).				
"	31	UPP	iP		21 54 39.3	
		KIR	iP		21 53 45.0	C
					micr	sec
			P	Z'	0.1	0.9
		UME	iP		21 54 11.4	
		Near Islands, Aleutian Islands				
		(h = N).				

January 30, 1986

Ingrid Båth
Conny Holmqvist
Ota Kulhánek
Klaus Meyer

SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

SEISMOLOGISKA AVDELNINGEN
BOX 12019
750 12 UPPSALA

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

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1984 June	1	UPP	iP	04 56 05.7	C
			eS	05 00 11	
		KIR	iP	04 57 19.5	
		UME	iP	04 56 46.0	
		Southern Greece (h = 55 km).			
"	1	UPP	iP	06 05 06.8	D
				micr sec	
			P Z'	0.1 1.0	
		KIR	iP	06 04 12.6	D
		UME	iP	06 04 38.1	D
		Near east coast of Kamchatka (h = 100 km).			
"	1	UME	iP	10 42 34.8	
		Near coast of Chiapas, Mexico (h = N).			
"	1	UME	iP	11 25 34.1	
		Ascensian Island region (h = 190 km).			
"	1	UPP	iP	12 23 46.2	
		KIR	iP	12 22 59.5	
		UME	iP	12 23 20.9	
		Kuril Islands (h = 35 km).			
"	1	UPP	iP	12 36 21.3	
				micr sec	
			P Z'	0.1 0.9	
		KIR	eP	12 37 00	
		UME	iP	12 36 35.6	
		Iran (h = N).			
1984 June	1	UPP	iP	15 55 26.3	
		KIR	iP	15 55 21.9	
		UME	eP	15 55 17	
		Southern Xinjiang, China (h = N).			
"	1	UME	iP	16 20 48.4	
"	1	UME	iP	17 23 28.6	
"	1	UME	iP	21 15 32.9	
"	1	UPP	iP	21 29 41.7	
			ipP	21 29 48.0	
		KIR	iP	21 30 02.3	C
			ipP	21 30 08.8	
				micr sec	
			P Z'	0.2 0.9	
		UME	iP	21 29 49.3	C
			ipP	21 29 55.8	
		Chagos archipelago region. h = 20 km (UPP,KIR,UME).			
"	1	KIR	iP	22 33 35.0	
		Tajik-Xinjiang border region (h = N).			
"	1	KIR	iP	23 29 49.1	
		Southern Sumatera (h = N).			
"	1	UME	iP	23 44 30.6	
"	2	UPP	iPKP1	04 05 21.8	
		(cont.)			

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

1984
June 2 (cont.)

UPP	iPKP2		04 05 28.4	
			micr	sec
	PKP2	Z'	0.1	1.0
KIR	iPKP1		04 05 00.2	
			micr	sec
	PKP1	Z'	0.1	1.5
UME	iPKP1		04 05 11.1	C

South of Kermadec Islands (h = N).

" 2

KIR	iP		09 03 03.9	
UME	iP		09 03 57.2	C

" 2

UPP	iP		10 39 49.6	C
	i		10 40 12.7	
	i		10 40 21.8	
			micr	sec
	P	Z'	0.1	0.8
KIR	iP		10 39 57.1	C
			micr	sec
	P	Z'	0.1	1.0
UME	iP		10 39 46.9	C

Afghanistan-USSR border region (h = 110 km).
m = 5.6 (UPP,KIR).

" 2

KIR	ePKP		12 46 13

South Island, New Zealand (h = N).

" 2

UPP	iPKP1		13 01 19.7
	i		13 01 23.9
KIR	ePKP		13 01 03
UME	iPKP		13 01 07.7
	i		13 01 13.2

Kermadec Islands region (h = 370 km).

" 2

UPP	iP		20 47 56.3

" 3

UPP	iP		02 34 34.3	
			micr	sec
	Mx	Z	0.9	17
KIR	iP		02 34 11.6	
UME	iP		02 34 19.1	

Taiwan region (h = 55 km).

" 3

UPP	iP		03 46 44.0
UME	iP		03 46 23.0

" 3

UME	iP		05 34 12.6

" 3

KIR	eP		11 22 03

Halmahera (h = N).

1984
June 3

UPP	iSg1		13 07 17.0
UME	iPg1		13 06 09.0
	iSg1		13 06 25.9
	iSn		13 06 29.9
UDD	iSn		13 07 25.3
	iSg1		13 07 35.5
MYV	iPg1		13 06 18.2
	iSg1		13 06 42.2

Off coast of Ångermanland, Sweden, 62.8°N, 18.3°E.
Origin time = 13 05 46.
M_L(UPP) = 2.4 1.
By combination with Finnish station readings.

" 3

KIR	iP		13 19 36.6

" 3

UPP	iPKP1		16 21 12.8
KIR	iPKP1		16 20 51.9
UME	iPKP1		16 21 00.4

South of Kermadec Islands (h = N).

" 3

UPP	iP		16 41 19.7
KIR	iP		16 40 45.3 D
UME	iP		16 40 59.7 D

Southeast of Shikoku, Japan (h = 440 km).

" 3

UPP	iP		18 10 57.1
KIR	iP		18 10 02.9
UME	iP		18 10 28.0

Near east coast of Kamchatka (h = N).

" 3

KIR	iP		23 23 57.5

" 4

UME	iP		02 12 00.4

" 4

UPP	iP		02 19 04.7	
KIR	iP		02 19 04.0	C
UME	iP		02 19 01.6	C

Southern Sumatera (h = 81 km).

" 4

UPP	iP		04 46 40.9	
	ipP		04 47 02.8	
KIR	iP		04 46 25.5	
	i		04 46 42.0	
	ipP		04 46 47.2	
			micr	sec
	P	Z'	0.1	1.2
UME	iP		04 46 35.7	
	i		04 46 51.5	
	ipP		04 46 58.1	

Central Mexico.
h = 80 km (UPP,KIR,UME).

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

1984
June 4 KIR iP 05 11 55.8
UME iP 05 11 45.9
Pakistan (h =N).

" 4 UME iP 05 32 42.0
Bonin Islands region
(h = 490 km).

" 4 UME iP 05 51 14.7

" 4 KIR iP 06 17 28.3
UME iP 06 17 45.7
Hokkaido, Japan region
(h = 50 km).

" 4 UPP iP 15 34 41.7
Luzon, Philippine Islands
(h = 190 km).

" 4 UPP iP 17 30 56.9
KIR iP 17 30 03.5
UME iP 17 30 30.6
Fox Islands, Aleutian Islands
(h = N).

" 4 UPP iP 18 45 43.3 D
iPcP 18 46 14.7
iS 18 53 33.7
micr sec
P Z' 0.3 0.7
KIR iP 18 44 53.9 D
micr sec
P Z' 0.4 0.5
UME iP 18 45 16.9 D
Sea of Okkotsk (h = 50 km).
m = 6.0 (UPP,KIR).

" 4 UPP iP 21 15 29.7

" 4 UPP eP 21 23 15
KIR iP 21 22 35.8
UME iP 21 22 52.2
Near east coast of Honshu,
Japan (h = 50 km).

" 4 UPP iP 21 36 38.7 C
ipP 21 36 49.5
micr sec
P Z' 0.2 1.2
Mx Z 1.5 16
KIR iP 21 36 19.9 C
ipP 21 36 30.3
micr sec
P Z' 0.2 1.0
Mx Z 0.9 16
UME iP 21 36 26.9 C
(cont.)

1984
June 4 (cont.)
UME iS 21 46 47
Luzon, Philippine Islands.
h = 35 km (UPP,KIR).
m = 6.2, M = 5.4 (UPP,KIR).

" 5 UPP iP 01 54 41.8
KIR iP 01 53 47.6
UME iP 01 54 15.6
Alaska peninsula (h = 90 km).

" 5 UPP iP 04 29 02.7
ipP 04 29 10.4
KIR iP 04 29 05.8
UME iP 04 29 07.5
ipP 04 29 14.6
Northern Peru.
h = 25 km (UPP,UME).

" 5 KIR iP 11 23 08.6
Greenland Sea (h = 10 km).

" 5 UPP iPKP 15 54 26.0
KIR iPKP 15 54 13.2
UME iPKP 15 54 18.4
Solomon Islands (h = 70 km).

" 6 KIR iP 05 40 58.8 C
UME iP 05 40 51.5
Kirghiz SSR (h = N).

" 6 UPP micr sec
Mx Z 3.6 22
KIR eP 05 52 07
micr sec
Mx Z 1.5 18
Banda Sea (h = N).
M = 5.8 (UPP,KIR).

" 6 UME iPKP 11 16 19.8
Solomon Islands (h = 70 km).

" 6 KIR iP 19 38 47.7
Northern Sumatera (h = N).

" 6 KIR iP 19 49 29.6
Halmahera (h = 160 km).

" 7 UPP iP 09 22 41
micr sec
Mx Z 5.6 19
KIR micr sec
Mx Z 3.4 18
UME iP 09 21 59.0
eTSg 09 28 26
Greenland Sea (h = 10 km).
Very clear T-phase at UME.

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

1984
June 7 UPP iP 14 36 35.5

" 7 UPP iPg1 14 59 27.2
iSg1 14 59 44.0
i 14 59 48.1
iRg 14 59 51.9
UDD iPg1 14 59 15.3
iSg1 14 59 24.5
iRg 14 59 29.3
Rockburst at the Grängesberg iron ore mine, Dalarna, Sweden, 60.1°N, 15.0°E.
Felt.

" 8 UPP iP 01 54 26.0
iSKS 02 05 05
iS 02 05 33
micr sec
P Z' 0.1 0.9
Mx Z 9.5 20
KIR iP 01 54 24.1
i 01 54 30.9
micr sec
P Z' 0.4 1.6
Mx Z 3.8 20
UME iP 01 54 23.0
i 01 54 28.9
iS 02 05 26
Southern Sumatera (h = N).
m = 6.4, M = 6.1 (UPP,KIR).
Double P, small and large, in average 6.3 s apart.
The second arrival, when interpreted as pP, provides a focal depth of 20 km.

" 10 UPP iPKP 01 47 23.7
South of Fiji Islands (h = 440 km).

" 10 UPP eP 09 06 36
KIR iP 09 07 31.7
Crete (h = 45 km).

" 10 UPP iP 15 04 27.8

" 10 UPP iP 22 36 46.7
KIR iP 22 36 30.0
UME iP 22 36 35.0
Mindanao, Philippine Islands (h = 230 km).

" 11 UPP iPKP 02 24 09.4
iPP 02 25 09.0
iPKKP 02 35 00
i 02 35 18
micr sec
PP Z' 0.2 1.5
Mx Z 6.6 25
(cont.)

1984
June 11 (cont.)
KIR ePKP 02 24 15
iPP 02 25 36.0
i 02 34 32.4
micr sec
PP Z' 0.2 1.4
UME iPKP 02 24 14.9
i 02 24 34.4
Near coast of central Chile (h = 45 km).
m = 6.5 (UPP,KIR).
m - estimate has been done from PP-readings.

" 11 UPP iP 09 58 35.5
KIR iP 09 58 00.9
UME iP 09 58 14.4
Volcano Islands region (h = N).

" 11 UME iP 10 44 37.8
Volcano Islands region (h = N).

" 11 UPP iP 11 27 12.5
Andreanof Islands, Aleutian Is. (h = 180 km).

" 11 UDD iSg1 16 04 10.2
Norwegian Sea, near 60°N, 3°E.
Origin time = 16 01 27.
Solution from NORSAR bulletin.

" 11 UPP iP 18 52 01.7
i 18 52 11.1
iS 19 02 16
UME iP 18 52 09.9
Mid-Indian Rise (h = 10 km).
Late arrivals when compared with NEIS solution.

" 11 UPP eP 22 34 58
i 22 35 04.7
KIR eP 22 34 24
UME iP 22 34 36.8
i 22 34 48.1
Volcano Islands region (h = N).

" 12 KIR iP 22 57 32.4
UME iP 22 57 45.7
Volcano Islands region (h = N).

" 12 UPP iP 08 56 49.7

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

1984
June 12 UPP iP 09 19 02.3
KIR iP 09 18 34.5
UME iP 09 18 44.3
Ryukyu Islands (h = 30 km).

" 12 UPP iP 11 20 02.7
micr sec
P Z' 0.1 1.1
KIR iP 11 19 09.0
i 11 19 11.6
micr sec
i Z' 0.2 1.0
UME iP 11 19 36.0
Fox Islands, Aleutian Islands
(h = 45 km).
m = 6.0 (UPP,KIR).

" 12 KIR iP 12 12 42.0
Kuril Islands (h = 50 km).

" 12 UPP iP 17 22 51.9
i 17 22 57.6
micr sec
i Z' 0.1 1.1
KIR iP 17 22 21.4
micr sec
P Z' 0.1 1.2
UME iP 17 22 37.7 C
i 17 22 43.6
South of Honshu, Japan
(h = 30 km).
m = 5.7 (UPP,KIR).

" 12 KIR iP 23 21 20.7
UME eP 23 21 22
Venezuela (h = 35 km).

" 13 UPP iP 02 41 15.0
i 02 41 22.0
iS 02 51 07
micr sec
i Z' 0.1 1.1
Mx Z 4.1 20
KIR iP 02 40 40.2
i 02 40 46.8
micr sec
i Z' 0.2 1.2
Mx Z 1.4 15
UME iP 02 40 55.9
i 02 41 02.1
iS 02 50 29
South of Hounshu, Japan
(h = 40 km).
m = 5.9, M = 5.6 (UPP,KIR).
Double P, small and large,
in average 6.9 s apart.
The second arrival, when
interpreted as pP, gives
a focal depth of 25 km.

1984
June 13 KIR iP 04 14 26.1
South of Honshu, Japan
(h = 45 km).

" 13 UPP iP 13 40 08.3
i 13 40 21.7
KIR iP 13 40 18.8 C
UME eP 13 40 14
Of w. coast of northern
Sumatera (h = 45 km).

" 13 UPP iP 16 12 36.4
KIR iP 16 11 07.1
micr sec
P Z' 0.1 1.0
UME eP 16 11 56
i 16 11 57.6
North of Svalbard (h = 10 km).

" 13 UPP iPg1 18 40 05.7
Local near-surface event.

" 14 KIR iP 00 18 33.1
UME iP 00 18 59.2
Fox Islands, Aleutian
Islands (h = N).

" 14 KIR iP 10 16 45.9
UME iP 10 16 43.0
Venezuela (h = 10 km).

" 14 UPP iP 14 04 22.6 C
i 14 04 28.7
KIR iP 14 04 05.5
Qinghai Province, China
(h = N).

" 14 UPP iP 14 54 41.9

" 14 KIR iP 15 23 55.3

" 14 KIR iP 14 39 21.9
Eastern Greenland (h = 10 km).

" 15 UPP iP 04 37 52.5 C
i 04 38 31.6
ipP 04 38 37.9
micr sec
P Z' 0.2 1.0
KIR iP 04 36 59.6 C
ipP 04 37 44.0
micr sec
P Z' 0.1 0.9
UME iP 04 37 25.9
iPcP 04 38 00.8
ipP 04 38 10.2
Andreanof Islands, Aleutian Is.
h = 200 km (UPP,KIR,UME).
m = 5.7 (UPP,KIR).

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

1984					
June	15	KIR	ipP	05 49 23.9	
		Samar, Philippine Islands (h = 55 km).			
"	15	KIR	i(PKP)	11 31 34.6	
		Tonga Islands (h = 270 km).			
"	15	UPP	i(PKP)	14 40 58.5	
			iPKP	14 41 09.0	
			iPP	14 43 48.1	
			i	14 53 41.2	
				micr sec	
			PKP Z'	0.3 1.4	
			Mx Z	1.4 20	
		KIR	i(PKP)	14 40 46.7	
			iPKP	14 40 57.0	
			iPP	14 42 56.8	
			i	14 54 13.2	
				micr sec	
			PKP Z'	0.4 1.3	
			Mx Z	0.9 16	
		UME	i(PKP)	14 40 47.2	
			iPKP	14 41 05.1	
			iPP	14 43 20.3	
			iSKP1	14 44 07.1	
		Tonga Islands (h = 250 km).			
		M = 5.7 (UPP,KIR).			
		M not corrected for focal depth.			
"	15	UPP	iP	16 16 54.0	
		KIR	iP	16 16 52.2	
		UME	iP	16 16 48.7 D	
		Bay of Bengal (h = N).			
"	15	UPP	eP	18 56 52	
		KIR	iP	18 57 12.6	
		UME	iP	18 56 56.4	
		Iran-USSR border region (h = N).			
"	15	UPP	iP	23 08 18.0	
		KIR	iP	23 09 28.2	
		UME	iP	23 08 55.1	
		Algeria (h = 10 km).			
"	16	KIR	iPKP	01 47 29.1	
		UME	ePKP	01 47 35	
		Vanuatu Islands (h = N).			
"	16	UPP	iP	03 53 29.7	
		KIR	iP	03 54 32.9	
		UME	eP	03 54 59	
		Turkey (h = 10 km).			
"	16	KIR	iP	11 40 04.3	
		Kuril Islands (h = 80 km).			

1984					
June	16	UPP	iP	13 07 11.5	
		KIR	eP	13 06 24	
		UME	iP	13 06 45.8	
		Kuril Islands (h = 60 km).			
"	16	UPP	iP	13 44 42.7	
				micr sec	
			P Z'	0.1 0.6	
		KIR	eP	13 44 54	
		UME	iP	13 44 42.1 C	
		Afghanistan (h = N).			
"	16	UPP	iP	14 52 02.1	
"	16	UPP	iP	15 04 38.8	
		Afghanistan (h = N).			
"	16	UPP	iP	15 48 45.1	
		KIR	eP	15 48 49	
		UME	eP	15 48 41	
		Northern Sumatera (h = 55 km).			
"	16	UPP	iP	16 26 54.9	
			iS	16 31 25	
				micr sec	
			P Z'	0.1 1.2	
		KIR	iP	16 28 04.4	
				micr sec	
			P Z'	0.1 1.0	
		UME	iP	16 27 28.5	
			i	16 27 37.4	
		Mediterranean Sea (h = N).			
		m = 5.5 (UPP,KIR).			
"	16	UPP	iP	17 26 58.8	
"	16	KIR	iPKP	18 03 15.7 C	
		Tuamotu Archipelago region.			
		Underground explosion.			
"	16	UPP	iP	22 48 16.7	
		UME	eP	22 48 04	
"	17	UPP	iP	00 09 03.3	
		KIR	iP	00 10 12.2	
		UME	iP	00 09 36.2	
		Crete (h = 45 km).			
"	17	UPP	iP	07 40 10.6	
			i	07 40 51.9	
		KIR	iP	07 40 19.5	
		UME	iP	07 40 08.8	
		Hindu Kush region (h = 190 km).			
"	17	UPP	iP	07 52 52.0	
			i	07 53 01.0	
		(cont.)			

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

1984
June 17 (cont.)

UPP	iS		07 56 48		
			micr	sec	
	i	Z'	0.3	1.5	
	Mx	Z	3.1	9	
KIR	iP		07 54 03.9		
	i		07 54 09.2		
			micr	sec	
	P	Z'	0.1	1.0	
	i	Z'	0.1	1.0	
	Mx	Z	2.1	11	
UME	iP		07 53 27.1		
	i		07 54 16.7		
UDD	iS		07 57 51		

Aegean Sea (h = 25 km).
m = 5.6, M = 5.1 (UPP,KIR).

" 17 UPP iP 08 20 53.8
Near east coast of Kamchatka (h = N).

" 17 UME iP 14 03 58.3

" 17 UPP iP 16 37 49.2
KIR eP 16 36 56
UME iP 16 37 22.3
i 16 37 36.4
Andreanof Islands, Aleutian Is. (h = N).

" 17 UME iP 19 56 48.9

" 17 UME iP 20 45 39.3
Fox Islands, Aleutian Islands (h = N).

" 17 UPP iP 22 41 45.1
Pakistan (h = N).

" 17 UME iP 23 44 50.9
Near coast of Chiapas, Mexico (h = N).

" 18 UPP iP 00 28 48.3 C
i 00 29 01.8
KIR iP 00 27 55.0 C
UME iP 00 28 21.3 C
i 00 28 34.4
i 00 55.9
Andreanof Islands, Aleutian Is. (h = N).

" 18 UPP iP 05 09 34.0
Southwestern Ryukyu Islands (h = 55 km).

1984
June 18 UPP iP 08 10 02.8 C

			micr	sec	
	P	Z'	0.1	1.0	

KIR iP 08 10 03.0 C
i 08 10 08.3

			micr	sec	
	P	Z'	0.3	0.7	

UME iP 08 09 59.2 C
i 08 10 14.1
Southern Sumatera (h = 80 km).
m = 6.2 (UPP,KIR).

" 18 UPP iP 11 01 00.3
KIR iP 11 01 47.2
UME iP 11 01 22.4
i 11 01 26.7
Zaire Republic (h = 10 km).

" 18 UPP iP 11 33 22.3
i 11 44 35

" 18 UPP iSKS 11 44 33

			micr	sec	
	Mx	Z	2.3	21	
KIR			micr	sec	
	Mx	Z	1.1	18	

UME iSKS 11 44 41
Southern Peru (h = 120 km).
M = 5.6 (UPP,KIR).
M not corrected for focal depth.

" 18 UPP iP 13 17 10.0 C
KIR iP 13 16 16.0 C
UME iP 13 16 41.4
Off east coast of Kamchatka (h = 45 km).

" 18 UPP iP 15 55 20.2
KIR iP 15 55 28.6 C
i 15 56 56.7
UME iP 15 55 18.3 C
Hindu Kush region (h = 210 km).

" 18 UPP iP 16 47 12.6

" 18 UPP iP 23 07 03.8
North Atlantic ridge (h = 10 km).

" 19 UPP iP 00 04 34.3
KIR iP 00 05 41.5
Mediterranean Sea (h = N).

" 19 UPP iP 05 03 06.5
KIR iP 05 03 07.9 C
Northern Sumatera (h = 40 km).

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

1984
June 19 UME iP 16 30 08.9
Near coast of Nicaragua
(h = 80 km).

" 19 UPP iP 18 16 56.9
KIR iP 18 16 08.3
Kuril Islands (h = 50 km).

" 19 UPP iP 19 08 44.9
iS 19 19 37
micr sec
P Z' 0.1 1.3
KIR iP 19 08 26.8
micr sec
P Z' 0.2 1.4
UME iP 19 08 33.1
Samar, Philippine Islands
(h = 40 km).
m = 6.1 (UPP,KIR).

" 19 UPP iP 23 14 43.3
KIR iP 23 14 24.5
i 23 14 35.3
UME eP 23 14 35
i 23 14 42.0
Samar, Philippine Islands
(h = N).

" 20 UPP iP 07 46 17.2
Samar, Philippine Islands
(h = 45 km).

" 20 UPP iP 15 34 34.1
Dodecanese Islands
(h = 170 km).

" 20 UPP iP 19 40 14.0
Southern California
(h = 10 km).

" 20 UPP iP 20 26 18.7

" 20 UPP iP 21 36 25.5
KIR iP 21 36 29.6
UME iP 21 36 21.3
Kirghiz SSR (h = N).

" 20 UPP eP 21 53 01

" 20 UPP iP 22 27 22.8
Hokkaido, Japan region
(h = 70 km).

" 21 UPP iP 10 49 00.3
i 10 49 03.6
iS 10 53 20
(cont.)

1984
June 21 (cont.)
UPP micr sec
P Z' 0.1 1.0
i Z' 2.2 1.4
Mx Z 31 11
KIR iP 10 50 09.2
i 10 50 13.2
micr sec
i Z' 0.9 0.7
Mx Z 18 13
UME iP 10 49 34.4
i 10 49 37.5
iS 10 54 37
Crete (h = 40 km).
m = 6.7, M = 6.1 (UPP,KIR).
Double P, small and large,
in average 3.3 s apart.

" 21 UPP iP 11 18 56.6
KIR iP 11 20 04.8
UME iP 11 19 30.4
Crete (h = 45 km).

" 21 KIR iP 16 57 36.2
Tajik SSR (h = 160 km).

" 21 UPP iP 17 40 54.8 C
micr sec
P Z' 0.2 1.0
KIR iP 17 40 10.9 C
micr sec
P Z' 0.1 1.0
UME iP 17 40 30.9 C
Hokkaido, Japan region
(h = 100 km).
m = 5.9 (UPP,KIR).

" 22 UPP eSn 05 42 29
KIR iPn 05 38 34.6
iSn 05 39 35.8
i 05 39 44.7
UME iPn 05 39 26.4
iSn 05 41 03.8
UDD iPn 05 40 11.4
iSn 05 42 23.6
MYV iPn 05 39 32.0
iSn 05 41 16.0
i 05 41 33.0
Norwegian Sea, near 72 1/2°N,
12 1/2°E.
Origin time = 05 37 11.

" 22 UME iP 06 33 27.8 C

" 22 UPP iP 08 31 46.3
KIR iP 08 31 32.3
Molucca Passage (h = 55 km).

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

1984 June 22
UPP iP 12 39 54.7
UME iP 12 39 43.7
Mindanao, Philippine Islands (h = 630 km).

" 22
UPP iPKP 16 14 19.2
i 16 14 28.6
micr sec
i Z' 0.1 1.0
Mx Z 3.3 20
KIR
micr sec
Mx Z 1.9 20
UME iPKP 16 14 27.3
i 16 14 37.2
Southwestern Atlantic Ocean (h = 10 km).
M = 6.0 (UPP,KIR).

" 22
UPP iP 16 24 34.9

" 22
UPP iP 23 07 09.1
South of Alaska (h = N).

" 23
UPP iP 00 41 33.9
Southern Italy (h = 25 km).

" 23
UPP iP 13 58 39.8
KIR iP 13 58 09.8
micr sec
P Z' 0.1 0.7
UME iP 13 58 23.3
i 13 58 34.6
Volcano Islands region (h = N).

" 23
UME iP 20 35 00.9
Bonin Islands region (h = 45 km).

" 23
KIR iP 23 04 33.3
UME eP 23 04 42
Taiwan region (h = 10 km).

" 24
UPP eP 03 15 47

" 24
UPP iSg1 05 37 02.0
UDD i 05 36 10.0
iPg1 05 36 11.6
iSg1 05 36 27.3
Lake Vänern, Sweden, 58.8°N, 13.3°E.
Origin time = 05 35 50.
M_L(UPP) = 2.4 1.
By combination with SKI network readings.

1984 June 24
KIR iP 07 29 40.9

" 24
UPP iP 11 28 41.4
i 11 28 52.4
iPP 11 31 35
iS 11 38 08
micr sec
P Z' 0.2 1.5
i Z' 0.2 1.0
Mx Z 79 21
KIR iP 11 28 44.5
iPP 11 31 37.8
micr sec
P Z' 0.5 1.8
Mx Z 33 22
UME iP 11 28 45.7
iS 11 38 11
Dominican Republic region (h = 25 km).
m = 6.1, M = 6.9 (UPP,KIR).

" 24
UPP iPKP2 13 50 05.8
micr sec
Mx Z 4.4 28
KIR iPKP1 13 49 31.3
micr sec
Mx Z 1.7 22
UME iPKP1 13 49 37.5
South Island, New Zealand (h = 5 km).
M = 6.0 (UPP,KIR).

" 24
KIR iP 14 37 34.4
Spain (h = 15 km).

" 24
KIR iP 18 30 21.3
UME iP 18 30 24.1
Dominican Republic region (h = 30 km).

" 24
UPP iP 21 44 02.4
i 21 44 03.8
eS 21 52 59
micr sec
P 0.2 1.3
Mx Z 7.2 21
KIR iP 21 43 15.0
micr sec
P Z' 0.3 1.5
Mx Z 3.5 22
UME iP 21 43 40.5
iS 21 52 13
Queen Charlotte Islands region (h = 10 km).
m = 6.1, M = 5.7 (UPP,KIR).

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

1984						
June	24	UME	iP		22 07 43.4	
		Southern Italy (h = 40 km).				
"	24	KIR	iP		23 50 46.3	
		Samar, Philippine Islands				
		(h = N).				
"	25	UPP	iP		02 15 39.8	
		Western Arabian Peninsula				
		(h = 10 km).				
"	25	KIR	iPKP		04 38 12.5	
		Solomon Islands (h = N).				
"	25	UPP	iPKP1		07 17 27.6	C
		KIR	ePKP		07 16 59	
		UME	iPKP1		07 17 15.6	
		Kermadec Islands (h = 130 km).				
"	25	UME	iP		16 28 08.8	
		Near east coast of Honshu,				
		Japan (h = 60 km).				
"	25	KIR	iPKP		17 16 19.8	
		Fiji Islands region				
		(h = 570 km).				
"	25	UPP	iP		18 56 38.3	
			i		18 56 51.1	
		KIR	iP		18 56 40.2	
		UME	iP		18 56 42.7	
			i		18 56 45.0	
		Dominican Republic region				
		(h = 30 km).				
"	26	KIR	eP		01 25 16	
		UME	iP		01 25 22.9	
		Halmahera (h = 50 km).				
"	26	KIR	eP		01 43 49	
		Near s. coast of Honshu,				
		Japan (h = 45 km).				
"	26	UPP	iP		09 21 43.4	
		UME	iP		09 21 15.3	
"	26	KIR	iP		12 46 56.1	
		Central Alaska (h = 120 km).				
"	26	UPP	iP		14 05 04.6	
"	26	UPP	iP		14 53 26.4	
		KIR	eP		14 54 45	
		UME	i		14 54 17.0	
		Greece (h = 10 km).				

1984						
June	26	UPP	iP1		19 52 58.7	
			iP2		19 53 01.4	
			iS		19 56 55.9	
					micr	sec
			Mx	Z	1.9	9
		KIR	iP2		19 54 12.0	
					micr	sec
			Mx	Z	0.7	11
		UME	iP2		19 53 37.5	
			iS		19 58 11	
		Aegean Sea (h = 15 km).				
		M = 4.8 (UPP,KIR).				
"	27	UPP	iP		02 16 09.3	
			i		02 16 29.0	
		KIR	iP		02 15 22.7	
		UME	iP		02 15 45.1	
		Hokkaido, Japan region				
		(h = 70 km).				
"	27	UPP	eP		02 59 21	
					micr	sec
			Mx	Z	0.8	15
		KIR	iP		02 58 20.3	
					micr	sec
			Mx	Z	1.2	14
		UME	iP		02 58 53.3	
			i		02 59 05.7	
		Jan Mayen Island region				
		(h = 10 km).				
"	27	UPP	iP		03 08 18.4	
					micr	sec
			P	Z'	0.2	1.5
			Mx	Z	2.6	16
		KIR	iP		03 07 17.7	
					micr	sec
			Mx	Z	2.5	14
		UME	iP		03 07 50.6	
			i		03 07 56.0	
			i		03 08 01.2	
		Jan Mayen Island region				
		(h = 10 km).				
"	27	KIR	ipP		05 40 08.1	
		Molucca Passage (h = N).				
"	27	UPP	eP		12 45 22	
		UME	iP		12 45 19.8	
		Southern Sumatera (h = 70 km).				
"	27	KIR	eP		16 19 52	
		Southern Sumatera (h = 70 km).				
"	27	UPP	iP		16 29 53.9	
			eS		16 34 18	
		KIR	eP		16 31 03	C
		(cont.)				

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

1984
June 27 (cont.)
UME iP 16 30 24.3
i 16 30 26.3
Mediterranean Sea (h = 35 km).

" 27 UME iP 17 30 42.2
Near east coast of Honshu, Japan (h = 60 km).

" 27 UME iP 18 22 06.7
Turkey (h = 10 km).

" 27 UME iP 21 12 19.9
Mindanao, Philippine Islands (h = 55 km).

" 27 UME eP 22 02 09
i 22 02 12.1
Carlsberg Ridge (h = 10 km).

" 28 KIR iPKP1 02 11 35.8
UME iPKP1 02 11 43.9
North Island, New Zealand (h = 70 km).

" 28 UPP iP 12 15 00.3
KIR iP 12 14 31.4
UME iP 12 14 42.6
Ryukyu Islands (h = 55 km).

" 28 UPP iP 20 04 47.9
micr sec
Mx Z 3.6 26
KIR eP 20 04 32
micr sec
Mx Z 1.0 18
UME eP 20 04 38
i 20 04 39.7
Molucca Passage (h = 60 km).
M = 5.6 (UPP,KIR).
M not corrected for focal depth.

" 29 UPP eP 00 39 36
i 00 39 44.4
KIR iP 00 39 19.8
UME eP 00 39 25
Molucca Passage (h = 50 km).

" 29 UPP iP 04 01 54.1
KIR eP 04 02 27
UME eP 04 02 05

" 29 UPP iP 06 56 26.6
Rat Islands, Aleutian Islands (h = 70 km).

1984
June 29 UME iPKP 10 57 54.5
Vanuatu Islands region (h = 50 km).

" 29 UPP iSg1 13 45 13.4
UDD iSg1 13 44 08.2
MYV eSg1 13 44 28.0
Off coast of southwestern Norway, near 61°N, 3°E.
Origin time = 13 41 27.
By combination with Norwegian station readings.

" 29 KIR iPKP 15 45 34.3
Santa Cruz Islands region (h = 660 km).

" 29 UPP eP 15 48 12

" 29 UPP iP 16 43 24.6
i 16 46 26.7
micr sec
Mx Z 1.1 12
KIR iP 16 44 31.8
micr sec
Mx Z 0.6 12
UME iP 16 43 52.0
Crete (h = 50 km).
M = 4.6 (UPP,KIR).

" 29 UPP iP 17 56 49.9
KIR eP 17 56 11
UME iP 17 56 28.2 C
i 17 56 30.2
Honshu, Japan (h = 70 km).

" 29 KIR iP 20 01 46.2
N.W. Iran-USSR border region (h = N).

" 29 UME iP 20 38 58.0
Mid-Indian Rise (h = 10 km).

" 29 UPP iP 22 44 05.6
Taiwan region (h = N).

" 30 KIR eP 02 58 56
UME iP 02 58 44.4
Chagos Archipelago region (h = 10 km).

" 30 UPP
micr sec
Mx Z 1.4 21
KIR
micr sec
Mx Z 1.3 19
UME iPKP2 11 58 10.7
South Pacific Cordillera (h = 10 km).
M = 6.0 (UPP,KIR).

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

1984						
June	30	KIR	iP		12 00	44.0
"	30	KIR	iP		17 08	34.8
		Southern Xinjiang, China				
		(h = N).				
"	30	UPP	iP		20 38	52.0
			i		20 39	11.2
			i		20 49	45
					micr	sec
			Mx	Z	3.1	14
		KIR	iP		20 38	19.7
			e		20 38	34
					micr	sec
			Mx	Z	1.7	14
		UME	iP		20 38	32.9
			i		20 38	52.3
		Southeast of Shikoku, Japan				
		(h = N).				
		M = 5.7 (UPP,KIR).				

March 11, 1986

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

U P P S A L A, K I R U N A, 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	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

J U L Y 1 - 31, 1984

1984
July 1 UPP iP 07 51 28.3
i 07 55 01
micr sec
Mx Z 0.5 8
UME iP 07 52 12.5
Southern Italy (h = 10 km).

" 1 UPP iP 10 19 45.2 C
ipP 10 20 29.9
iPP 10 21 21.1
micr sec
P Z' 1.5 0.9
UME iP 10 19 43.8 C
ipP 10 20 26.0
iPP 10 21 23.6
Hindu Kush region.
h = 210 km (UPP,UME).

" 1 UPP iPKP 21 19 25.7
UME iPKP 21 19 20.5
Tonga Islands (h = 240 km).

" 2 UPP iP 01 54 05.5
ipP 01 54 07.1
micr sec
P Z' 0.1 1.1
UME ipP 01 54 33.5
Arab Republic of Egypt
(h = 10 km).

" 2 UPP iP 05 03 29.8 C
ipP 05 03 40.7
iPP 05 07 04.4
iSKS 05 13 58
micr sec
P Z' 0.2 1.3
Mx Z 7.7 25
(cont.)

1984
July 2 (cont.)
UME iP 05 03 24.6 C
ipP 05 03 34.8
i 05 03 31.7
iPP 05 06 50.3
iSKS 05 13 52
Near coast of Guerrero, Mexico.
h = 35 km (UPP,UME).

" 2 UPP iP 07 54 11.4
iS 07 58 33
micr sec
P Z' 0.1 1.2
KIR iP 07 55 20.6
ipP 07 55 31.1
micr sec
P Z' 0.1 1.2
UME iP 07 54 45.1
ipP 07 54 54.7
iPP 07 55 43.4
i 07 57 45.7
Mediterranean Sea.
h = 40 km (KIR,UME).
m = 5.4 (UPP,KIR).

" 2 UPP iP 09 39 58.6
KIR iP 09 40 30.8
UME iP 09 40 09.2
i 09 40 19.9
Caspian Sea (h = N).

" 2 UPP iP 09 41 47.2
micr sec
P Z' 0.1 1.1
KIR iP 09 42 55.4
UME iP 09 42 21.7
Mediterranean Sea (h = 25 km).

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

1984 July	2	UPP	iP	09 46 12.6	
		KIR	iP	09 47 02.2	
		UME	iP	09 46 32.3	
"	2	UPP	iPKP2	14 44 59.9	
		KIR	iPKP	14 45 20.6	
			iPKP2	14 45 50.8	
		UME	iPKP2	14 45 53.7	
		Macquarie Islands region (h = 10 km).			
"	2	UPP	eP	14 52 16	
		KIR	eP	14 52 05	
			i	14 52 07.2	
		UME	iP	14 52 17.0	
"	2	UPP	iP	20 25 21.4	
		KIR	eP	20 26 30	
		UME	eP	20 25 49	
"	2	UPP	iP	21 39 50.2	
		KIR	iP	21 38 55.8	
				micr sec	
			P Z'	0.1 0.8	
		UME	iP	21 39 23.9	
		Kodiak Island region (h = N).			
"	3	UPP	iP	01 05 49.0	
			iS	01 11 53	
				micr sec	
			P Z'		
			Mx Z	4.3 12	
		KIR	iP	01 06 00.1	
				micr sec	
			Mx Z	2.7 10	
		UME	iP	01 05 48.4	
		Hindu Kush region (h = 55 km). M = 5.5 (UPP,KIR). M not corrected for focal depth.			
"	3	UPP	iP	04 35 51.3	
		KIR	eP	04 35 05	
		UME	eP	04 35 25	
		Kuril Islands (h = 140 km).			
"	3	UPP	eP	06 20 11	
		KIR	iP	06 21 22.3	
		UME	eP	06 20 47	
		Mediterranean Sea (h = 40 km).			
"	3	UPP	iP	11 53 29.0	
		KIR	iP	11 54 38.2	
		UME	iP	11 54 02.5	
		Mediterranean Sea (h = 35 km).			
1984 July	3	UPP	i(PKP)	14 00 09	
			iPKP	14 00 17.8	
			iSKP1	14 03 05.4	
		KIR	i(PKP)	13 59 55.8	
			iPKP	14 00 06.1 C	
				micr sec	
			PKP Z'	0.2 1.2	
		UME	i(PKP)	14 00 01.4	
			iPKP	14 00 12.4	
			i	14 02 42.4	
			iSKP1	14 02 53.6	
		Fiji Islands region (h = 530 km).			
"	3	UPP	eP	14 08 13	
		KIR	eP	14 08 05	
"	3	UPP	eP	14 25 02	
		KIR	iP	14 25 27.5	
"	3	UPP	iPKP	14 50 47.3	
		KIR	iPKP	14 50 33.1	
				micr sec	
			PKP Z'	0.1 0.7	
		UME	iPKP	14 50 39.4	
		Vanuatu Islands (h = 210 km).			
"	3	UPP	iP	18 13 33.2	
			iS	18 17 56	
				micr sec	
			P Z'	0.2 1.5	
			Mx Z	0.7 13	
		UME	iP	18 14 06.2	
			iS	18 18 56	
		Mediterranean Sea (h = 25 km). m = 5.7 (UPP,KIR).			
"	3	UPP	iP	19 21 14.6	
"	3	UPP	iP	19 45 15.2	
		KIR	iP	19 45 04.6	
		Flores Sea (h = 580 km).			
"	3	KIR	eP	19 54 20	
			i	19 54 28.6	
		UME	iP	19 55 04.6	
"	3	UME	iP	21 23 49.5	
"	3	UPP	iP	22 22 40.2 C	
			i	22 22 43.5	
			ipP	22 22 49.1	
				micr sec	
			P Z'	0.1 0.8	
		(cont.)			

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

1984
July 3 (cont.)

KIR	iP		22 21 45.0	C
	i		22 21 48.6	
	ipP		22 21 52.4	
			micr sec	
	P	Z'	0.1 0.6	
UME	iP		22 22 11.3	C
	i		22 22 14.8	

Near east coast of Kamchatka.
h = 30 km (UPP,KIR).
M = 6.0 (UPP,KIR).

" 3 UPP iPKP 23 44 20.8
South of Fiji Islands
(h = 500 km).

" 4

KIR	iPKP		14 11 49.1
UME	iPKP		14 11 55.3

Santa Cruz Islands
(h = 130 km).

" 4

UPP	iP		16 22 43.5
			micr sec
	P	Z'	0.1 1.0
KIR	iP		16 21 55.3
UME	iP		16 22 17.6

Kuril Islands (h = N).

" 4

UPP	iP		21 30 50.2
			micr sec
	P	Z'	0.1 1.0
KIR	eP		21 31 36
UME	eP		21 31 09

Western Caucasus (h = N).

" 5

UPP	eP		03 11 29
KIR	eP		03 12 36
UME	eP		03 11 58

Crimea region (h = N).

" 5

UPP	iP		04 48 43.4
	iS		04 53 07
KIR	eP		04 49 51
UME	iP		04 49 15.3

Mediterranian Sea
(h = 35 km).

" 5

UPP	iPdiff		05 36 46
	iPP		05 41 39
	i		05 51 17
			micr sec
	Mx	Z	15 23
KIR	ePKP		05 40 17
			micr sec
	Mx	Z	14 24
UME	ePKP		05 40 23

Solomon Islands (h = N).
M = 6.6 (UPP,KIR).

1984
July 5

UPP	eP		07 29 09
KIR	eP		07 28 58

West Irian region (h = N).

" 5 KIR ePKP 17 13 01
Fiji Islands region
(h = 610 km).

" 5

UPP	iP		20 57 30.5
			micr sec
	P	Z'	0.1 1.0
KIR	iP		20 57 29.0
UME	iP		20 57 26.1

Andaman Islands region
(h = N).

" 5

UPP	iP		20 59 38.8
	ipP		20 59 45.9
			micr sec
	P	Z'	0.1 0.9
	Mx	Z	0.7 18
KIR	iP		20 59 38.8
	i		20 59 40.2
	ipP		20 59 45.2
			micr sec
	Mx	Z	1.4 20
UME	iP		20 59 33.9
	i		20 59 36.4
	ipP		20 59 42.0

Andaman Islands region.
h = 25 km (UPP,KIR,UME).
M = 5.2 (UPP,KIR).

" 5

UPP	iP		21 11 44.0
	ipP		21 11 50.0
			micr sec
	P	Z'	0.1 1.2
KIR	iP		21 11 41.7
	ipP		21 11 50.6
UME	iP		21 11 39.0
	ipP		21 11 45.9

Andaman Island region.
h = 20 km (UPP,KIR,UME).

" 6

UPP	iP		04 14 56.4
	ipP		04 15 00.6
			micr sec
	Mx	Z	1.0 11
KIR	iP		04 15 21.1
	ipP		04 15 25.2
	iPP		04 16 54.1
			micr sec
	Mx	Z	1.5 14
UME	iP		04 15 02.3
	ipP		04 16 05.8

Iran.
h = 15 km (UPP,KIR,UME).
M = 4.9 (UPP,KIR).

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

1984 July	6	UPP	iP		06 59 11.2	
		KIR	iP		06 59 32.1	
		UME	iP		06 59 16.1	
		Pakistan (h = N).				
"	6	UME	iP		08 44 24.5	
"	6	UPP	iPKP		22 34 01.3	
		KIR	iPKP		22 33 48.5	
		South of Fiji Islands (h = 540 km).				
"	6	UPP	iP		22 36 14.1	
		KIR	eP		22 37 23	
		UME	iP		22 36 41.7	
		Mediterranean Sea (h = N).				
"	7	UPP	iPKP		16 06 01.8	
		KIR	iPKP		16 06 13.6	
			i		16 06 16.8	
		UME	ePKP		16 06 07	
			i		16 06 08.9	
		South Sandwich Islands region (h = 100 km).				
"	7	KIR	iP		23 25 00.0	
"	8	UPP	iP		02 01 17.2	
		UME	iP		02 01 12.0	
		Andaman Islands region (h = N).				
"	8	UPP	iP		02 24 03.3	
					micr	sec
			P	Z'	0.1	1.0
		UME	iP		02 23 59.5	C
		Andaman Islands region (h = N).				
"	8	UME	iP		02 31 01.7	
			i		02 31 08.1	
			i		02 31 15.0	
		Andaman Islands region (h = N).				
"	8	UPP	iP		02 38 19.3	
			ipP		02 38 25.9	
		UME	iP		02 38 15.3	
			ipP		02 38 21.8	
		Andaman Islands region. h = 20 km (UPP,UME).				
"	8	UPP	iP		02 41 18.1	
		KIR	eP		02 41 18	
		UME	iP		02 41 13.2	
			i		02 41 21.6	
		Northern Sumatera (h = 110 km).				
1984 July	8	UPP	iP		03 10 36.3	
			ipP		03 10 42.8	
		KIR	eP		03 10 35	
			ipP		03 10 42.3	
		UME	iP		03 10 32.5	
			ipP		03 10 38.4	
		Andaman Islands region. h = 20 km (UPP,KIR,UME).				
"	8	UPP	iP		03 18 37.2	
		KIR	iP		03 18 37.6	
		UME	iP		03 18 27.0	
			i		03 18 33.5	
"	8	UPP	iP		03 34 44.7	
		KIR	eP		03 34 42	
		UME	iP		03 34 33.6	
			ipP		03 34 40.4	
		Andaman Islands region (h = N).				
"	8	UPP	iP		03 51 29.5	
		UME	iP		03 51 19.3	
			i		03 51 25.9	
		Andaman Islands region (h = N).				
"	8	UPP	iP		04 06 56.2	
					micr	sec
			P	Z'	0.1	1.0
		KIR	iP		04 06 56.1	
		UME	iP		04 06 45.0	
			i		04 06 51.1	
"	8	UPP	iP		04 32 15.7	
			ipP		04 32 22.1	
		KIR	iP		04 32 15.4	
			ipP		04 32 22.2	
		UME	iP		04 32 12.7	C
			ipP		04 32 18.6	
		Andaman Islands region. h = 20 km (UPP,KIR,UME).				
"	8	UPP	iP		05 01 17.1	
		UME	iP		05 01 45.6	
"	8	UPP	iP		05 37 47.6	
			ipP		05 37 53.8	
					micr	sec
			P	Z'	0.1	1.0
		KIR	iP		05 37 48.0	
			ipP		05 37 53.7	
		UME	iP		05 37 44.3	C
			ipP		05 37 50.2	
		Andaman Islands region. h = 20 km (UPP,KIR,UME).				

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

1984
July 8 UPP iP 06 06 25.6
UME iP 06 06 21.8
Andaman Islands region
(h = N).

" 8 KIR iSn 06 39 32.0
iSgl 06 39 41.3
UME iSn 06 39 40.5
iSgl 06 39 53.6
North-central Finland,
65.9°N, 28.5°E.
Origin time = 06 37 49.
M_L (UPP) = 2.4 1.
By combination with Finnish
station readings.

" 8 UPP iP 08 12 09.2
ipP 08 12 14.4
KIR iP 08 12 10.1
UME iP 08 12 04.7
ipP 08 12 10.4
Andaman Islands region.
h = 20 km (UPP,UME).

" 8 UPP iP 08 12 59.6
micr sec
P Z' 0.1 1.0
UME iP 08 12 55.8
Andaman Islands region
(h = N).

" 8 UPP iP 08 25 32.8
ipP 08 25 39.1
UME iP 08 25 29.7
ipP 08 25 35.2
Andaman Islands region.
h = 20 km (UPP,UME).

" 8 UPP iP 08 42 11.8
ipP 08 42 18.4
KIR iP 08 42 12.6
ipP 08 42 19.2
UME iP 08 42 08.8
ipP 08 42 14.9
Andaman Islands region.
h = 20 km (UPP,KIR,UME).

" 8 UPP iP 09 16 36.3
ipP 09 16 42.3
KIR iP 09 16 35.8
ipP 09 16 41.7
UME iP 09 16 31.7
ipP 09 16 38.7
Andaman Islands region.
h = 20 km (UPP,KIR,UME).

" 8 KIR eP 10 06 34
UME iP 10 06 16.1
Carlsberg Ridge (h = 10 km).

1984
July 8 UPP iP 11 54 24.7
ipP 11 54 31.7
KIR iP 11 54 24.0
ipP 11 54 32.0
UME iP 11 54 20.9
ipP 11 54 27.9
Andaman Islands region.
h = 25 km (UPP,KIR,UME).

" 8 UPP iP 12 13 56.7
ipP 12 14 06.5
KIR eP 12 13 56
ipP 12 14 03.5
UME eP 12 13 53
epP 12 14 01
Andaman Islands region.
h = 30 km (UPP,KIR,UME).

" 8 UPP iP 12 47 56.7
ipP 12 48 03.9
micr sec
P Z' 1.0 1.0
KIR iP 12 47 55.8
ipP 12 48 04.4
UME iP 12 48 52.1
ipP 12 49 00.6
Andaman Islands region.
h = 25 km (UPP,KIR,UME).

" 8 UPP iP 13 13 30.4
ipP 13 13 37.9
KIR eP 13 13 31
UME iP 13 13 25.6
ipP 13 13 34.2
Andaman Islands region.
h = 25 km (UPP,UME).

" 8 UPP eP 13 44 24.
ipP 13 44 30.0
KIR iP 13 44 22.4
ipP 13 44 30.1
UME iP 13 44 17.5
ipP 13 44 26.1
Andaman Islands region.
h = 25 km (UPP,KIR,UME).

" 8 UPP iP 14 11 50.5
UME iP 14 11 46.6
i 14 11 52.7

" 8 UPP iP 14 34 36.2
ipP 14 34 42.4
KIR eP 14 34 37
ipP 14 34 42.3
UME iP 14 34 32.2
ipP 14 34 38.4
Andaman Islands region.
h = 20 km (UPP,KIR,UME).

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

1984
July 8 UPP iP 14 44 10.6
ipP 14 44 24.9
iS' 14 54 45
micr sec
P Z' 0.1 1.2
Mx Z 1.6 17
KIR iP 14 43 43.6
i 14 43 47.1
ipP 14 43 57.9
micr sec
i Z' 0.1 1.0
Mx Z 1.5 16
UME iP 14 43 55.2
ipP 14 44 09.3
Mariana Islands.
h = 50 km (UPP,KIR,UME).
m = 6.0, M = 5.6 (UPP,KIR).
M not corrected for focal depth.

" 8 UPP iP 15 02 13.5
i 15 02 20.3
KIR iP 15 02 14.6
i 15 02 20.4
UME iP 15 02 09.5
i 15 02 16.4

" 8 UPP iP 15 25 39.9
ipP 15 25 45.8
micr sec
P Z' 0.1 1.0
KIR iP 15 25 39.5
ipP 15 25 46.3
micr sec
P Z' 0.1 1.0
UME iP 15 25 35.2
ipP 15 25 42.3
Andaman Islands region.
h = 20 km (UPP,KIR,UME).
m = 5.8 (UPP,KIR).

" 8 UPP iP 15 26 53.6
i 15 27 02.4
UME iP 15 27 39.3

" 8 UPP iP 16 00 33.3
KIR iP 16 00 33.3
UME iP 16 00 23.4
i 16 00 29.7

" 8 UPP iP 16 13 15.1
ipP 16 13 21.2
KIR iP 16 13 15.4
ipP 16 13 21.8
UME iP 16 13 11.4 C
ipP 16 13 18.2
Andaman Islands region.
h = 20 km (UPP,KIR,UME).

1984
July 8 UPP iP 16 33 05.4
ipP 16 33 12.6
KIR iP 16 33 06.0
ipP 16 33 12.8
UME iP 16 33 02.5
ipP 16 33 08.9
Andaman Islands region.
h = 25 km (UPP,KIR,UME).

" 8 UPP iP 17 34 20.7
ipP 17 34 27.5
micr sec
Mx Z 0.9 21
KIR eP 17 34 21
ipP 17 34 27.7
micr sec
Mx Z 1.3 19
UME iP 17 34 17.4
ipP 17 34 23.9
Andaman Islands region.
h = 20 km (UPP,KIR,UME).
M = 5.2 (UPP,KIR).

" 8 UME iP 17 45 47.1

" 8 UPP iP 18 21 23.0
ipP 18 21 29.3
KIR iP 18 21 23.9 C
ipP 18 21 29.6
UME iP 18 21 18.8
ipP 18 21 25.6
Andaman Islands region.
h = 20 km (UPP,KIR,UME).

" 8 UPP iP 18 48 53.3
KIR eP 18 48 54
UME iP 18 48 50.0
Andaman Islands reigon
(h = N).

" 8 KIR iP 19 21 23.3
UME iP 19 20 01.7

" 8 KIR iP 20 16 55.4
UME iP 20 16 52.2

" 8 UPP iP 20 35 42.6
ipP 20 35 48.8
KIR iP 20 35 43.4
ipP 20 35 49.5
UME iP 20 35 39.6
ipP 20 35 45.2
i 20 35 50.0
Andaman Islands region.
h = 20 km (UPP,KIR,UME).

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

1984 July	8	UPP	iP		21 10 53.1	
			ipP		21 10 59.2	
		UME	iP		21 10 46.0	
			i		21 10 49.3	
			ipP		21 10 53.6	
		Andaman Islands region.				
		h = 25 km (UPP,UME).				
"	8	UPP	iP		22 07 50.2	
			ipP		22 07 55.9	
		KIR	iP		22 07 50.3	
			ipP		22 07 56.5	
		UME	iP		22 07 46.5	
			ipP		22 07 52.2	
			i		22 07 57.0	
		Andaman Islands region.				
		h = 20 km (UPP,KIR,UME).				
"	8	UPP	iP		22 40 56.6	
			ipP		22 41 00.5	
		UME	iP		22 40 51.6	
		Andaman Islands region				
		(h = N).				
"	9	UPP	iP		00 02 14.1	
		UME	iP		00 02 14.5	
		Uzbek SSR (h = N).				
"	9	UPP	iP		00 35 11.9	
			ipP		00 35 18.1	
		KIR	iP		00 35 12.0	
			ipP		00 35 17.7	
		UME	iP		00 35 07.8	
			ipP		00 35 13.9	
		Andaman Islands region.				
		h = 20 km (UPP,KIR,UME).				
"	9	UPP	iP		01 15 11.0	
			ipP		01 15 21.3	
		UME	eP		01 15 07	
			ipP		01 15 17.6	
		Andaman Islands region.				
		h = 35 km (UPP,UME).				
"	9	UPP	iP		01 55 16.1	
		KIR	iP		01 55 16.5	
			ipP		01 55 23.0	
		UME	iP		01 55 12.4	
			ipP		01 55 19.0	
		Andaman Islands region.				
		h = 20 km (KIR,UME).				
"	9	UPP	iP		05 42 30.7	
			ipP		05 42 37.6	
					micr sec	
			P	Z'	0.1 1.0	
		(cont.)				

1984 July	9	(cont.)				
		KIR	iP		05 42 30.8	
			ipP		05 42 37.5	
					micr sec	
			P	Z'	0.2 1.4	
		UME	iP		05 42 27.1	
			ipP		05 42 33.4	
		Andaman Islands region.				
		h = 20 km (UPP,KIR,UME).				
		m = 5.9 (UPP,KIR).				
"	9	UPP	iP		07 52 27.5	
			ipP		07 52 33.1	
		KIR	iP		07 52 28.3	
			ipP		07 52 33.4	
		UME	iP		07 52 23.3	
			ipP		07 52 29.3	
		Andaman Islands region.				
		h = 20 km (UPP,KIR,UME).				
"	9	UPP	iP		12 03 48.5	
			ipP		12 03 53.7	
		KIR	iP		12 03 48.7	
			ipP		12 03 53.6	
		UME	iP		12 03 44.7	
			ipP		12 03 49.7	
		Andaman Islands region.				
		h = 15 km (UPP,KIR,UME).				
"	9	UPP	iP		13 02 35.2	
		UME	iP		13 02 31.2	
"	9	UPP	iP		13 51 49.0	
		UME	iP		13 51 44.5	
		Andaman Islands region				
		(h = N).				
"	9	UPP	iP		15 05 55.8	
"	9	UPP	iP		16 37 12.9	
		UME	iP		16 37 11.4	C
		Andaman Islands region				
		(h = N).				
"	9	KIR	iPKP		18 45 47.3	
		UME	iPKP		18 45 54.0	
		Santa Cruz Islands region				
		(h = 670 km).				
"	9	UPP	iP		18 48 24.7	
"	9	UPP	iP		19 01 36.5	
			iS		19 05 16	
					micr sec	
			P	Z'	0.05 0.7	
			Mx	Z	3.8 9	
		(cont.)				

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

1984
July 9 (cont.)

KIR	iP		19 02 54.4
		micr	sec
	P	Z'	0.1 0.9
	Mx	Z	1.7 9
UME	iP		19 02 17.2
	iS		19 06 30

Greece (h = 10 km).
m = 5.3 (UPP,KIR).

" 9

UPP	iP		21 05 55.8
UME	iP		21 05 52.6

Andaman Islands region
(h = N).

" 9

UPP	iP		23 31 37.5
	ipP		23 33 36.2
		micr	sec
	P	Z'	0.1 1.0
	Mx	Z	4.9 25
KIR	iP		23 31 31.7
	ipP		23 33 31.4
		micr	sec
	Mx	Z	4.3 20
UME	iP		23 31 32.0
	ipP		23 33 30.6

Java Sea.
h = 550 km (UPP,KIR,UME).
M = 6.0 (UPP,KIR).
M not corrected for focal depth.

" 10

UPP	iP		00 31 48.7
	ipP		00 31 55.1
KIR	eP		00 31 49
UME	eP		00 31 46
	ipP		00 31 51.3

Andaman Islands region.
h = 20 km (UPP,UME).

" 10

UPP	eP		06 48 56
	ipP		06 48 59.3
UME	iP		06 48 51.5
	ipP		06 48 55.4

Andaman Islands region.
h = 15 km (UPP,UME).

" 10

UPP	eP		08 58 35
	i		08 58 50.5
KIR	iP		08 58 34.9
	i		08 58 51.3
UME	iP		08 58 31.0
	i		08 58 47.8

" 10

UPP	eP		09 36 07
	ipP		09 36 14.2

(cont.)

1984
July 10 (cont.)

KIR	eP		09 36 01
UME	iP		09 36 03.4
	ipP		09 36 10.3

Andaman Islands region.
h = 25 km (UPP,UME).

" 10

UPP	ipP		10 36 24.3
UME	iP		10 36 14.1
	ipP		10 36 20.8

Andaman Islands region
(h = N).

" 10

UPP	iP		11 29 03.0
	ipP		11 29 08.9
KIR	iP		11 29 03.6
	ipP		11 29 09.1
UME	iP		11 28 59.8
	ipP		11 29 05.4

Andaman Islands region.
h = 20 km (UPP,KIR,UME).

" 10

UPP	iP		16 30 56.3
		micr	sec
	P	Z'	0.1 1.0
KIR	iP		16 30 22.2
	ipP		16 31 29.9
		micr	sec
	P	Z'	0.1 1.0
UME	iP		16 30 36.4

South of Honshu, Japan
(h = 320 km).
m = 5.5 (UPP,KIR).

" 10

UPP	iP		16 58 24.8
	ipP		16 58 30.4
	iS		17 07 46
		micr	sec
	P	Z'	0.1 1.0
	Mx	Z	2.6 21
KIR	iP		16 58 24.7
	ipP		16 58 30.7
	i		16 58 34.9
		micr	sec
	P	Z'	0.1 1.0
	Mx	Z	1.4 20
UME	iP		16 58 20.9
	ipP		16 58 27.1

Andaman Islands region.
h = 20 km (UPP,KIR,UME).
m = 5.8, M = 5.4 (UPP,KIR).

" 10

UPP	iP		21 08 20.1
	ipP		21 08 26.0
KIR	iP		21 08 22.1
	ipP		21 08 26.5
	i		21 08 30.8

(cont.)

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

1984
July 10 (cont.)

UME	iP		21 08 17.2	
	ipP		21 08 22.2	

Andaman Islands region.
h = 15 km (UPP,KIR,UME).

" 10

KIR	iP		22 26 43.2	
UME	iP		22 26 39.5	
	ipP		22 26 45.0	

Andaman Islands region
(h = N).

" 10

UPP	iP		23 08 14.6	
	ipP		23 08 20.8	
			micr	sec
	P	Z'	0.1	1.0
KIR	iP		23 08 15.1	
	ipP		23 08 21.0	
			micr	sec
	P	Z'	0.1	1.0
UME	iP		23 08 11.3	
	ipP		23 08 17.4	

Andaman Islands region.
h = 20 km (UPP,KIR,UME).
m = 5.8 (UPP,KIR).

" 11

KIR	eP		02 13 56	
UME	iP		02 13 53.2	

Andaman Islands region
(h = N).

" 11

UPP	iP		02 38 29.6	
KIR	eP		02 38 29	
UME	iP		02 38 26.0	

Andaman Islands region
(h = N).

" 11

UPP	iP		02 42 02.2	

" 11

UPP	iP		02 54 00.5	
	i		02 54 09.0	
	ipP		02 54 17.1	
			micr	sec
	Mx	Z	1.7	18
KIR	iP		02 53 37.7	
	i		02 53 44.5	
			micr	sec
	Mx	Z	1.7	19
UME	iP		02 53 46.4	
	i		02 53 54.2	
	ipP		02 54 03.6	

West Caroline Islands.
h = 60 km (UPP,UME).
M = 5.6 (UPP,KIR).
M not corrected for focal depth.

" 11

UPP	iP		03 20 21.7	

Greece-Albania border region
(h = 10 km).

1984
July 11

UPP	iP		03 31 45.4	
	ipP		03 31 54.6	
			micr	sec
	P	Z'	0.1	1.0
KIR	iP		03 31 05.4	
	ipP		03 31 14.6	
UME	iP		03 31 23.1	

Off east coast of Honshu, Japan.
h = 30 km (UPP,KIR).

" 11

UPP	eP		03 51 20	
KIR	iP		03 51 18.3	
	ipP		03 51 25.0	
UME	iP		03 51 13.7	
	ipP		03 51 21.4	

Andaman Islands region.
h = 25 km (KIR,UME).

" 11

UPP	iP		04 07 17.2	
	ipP		04 07 23.3	
KIR	iP		04 07 17.8	
	ipP		04 07 24.0	
UME	iP		04 07 13.7	
	ipP		04 07 20.3	

Andaman Islands region.
h = 20 km (UPP,KIR,UME).

" 11

KIR	iP		05 20 41.8	
	ipP		05 20 48.4	
UME	eP		05 20 37	
	ipP		05 20 43.5	

Andaman Islands region.
h = 20 km (KIR,UME).

" 11

UPP	iP		05 53 35.3	
			micr	sec
	P	Z'	0.3	1.2
	Mx	Z	2.0	21
KIR	iP		05 53 18.7	C
			micr	sec
	P	Z'	0.5	1.2
	Mx	Z	1.9	20
UME	iP		05 53 24.2	
	iSKS		06 03 54	

Mindanao, Philippine Islands
(h = 55 km).
m = 6.7, M = 5.6 (UPP,KIR).
M not corrected for focal depth.

" 11

UPP	eP		06 33 26	
KIR	iP		06 33 25.8	
UME	iP		06 33 21.4	

Andaman Islands region
(h = N).

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

1984 July	11	UPP	iPKP		06 41 46.7	
		KIR	iPKP		06 41 38.6	
		UME	iPKP		06 41 44.9	
		Fiji Islands region (h = 470 km).				
"	11	UPP	iP		08 02 13.7	
			ipP		08 02 20.1	
		KIR	iP		08 02 14.4	
			ipP		08 02 20.3	
		UME	iP		08 02 10.3	
			ipP		08 02 17.1	
		Andaman Islands region. h = 20 km (UPP,KIR,UME).				
"	11	UPP	eP		08 30 47	
		KIR	iP		08 30 48.2	
			ipP		08 30 54.8	
		UME	iP		08 30 44.0	
		Andaman Islands region (h = N).				
"	11	UPP	iP		13 33 13.3	
					micr	sec
			Mx	Z	1.6	20
		KIR	iP		13 33 13.2	
			ipP		13 33 19.3	
					micr	sec
			P	Z'	0.1	1.0
			Mx	Z	1.4	20
		UME	iP		13 33 09.5	
			ipP		13 33 14.8	
		Andaman Islands region. h = 20 km (KIR,UME). M = 5.3 (UPP,KIR). M not corrected for focal depth.				
"	11	UPP	iP		16 30 06.7	
		KIR	iP		16 30 06.3	
			ipP		16 30 11.4	
		UME	ipP		16 30 07.2	
		Andaman Islands region (h = N).				
"	11	UPP	eP		19 56 11	
			ipP		19 56 20.5	
			i		19 56 26.7	
		KIR	eP		19 56 05	
			ipP		19 56 13.5	
			i		19 56 20.2	
		UME	iP		19 56 06.2	
		Andaman Islands region. h = 30 km (UPP,KIR).				
1984 July	12	KIR	eP		03 51 58	
		UME	iP		03 52 25.5	
		Near Islands, Aleutian Islands (h = N).				
"	12	UPP	iP		05 22 01.9	
		KIR	iP		05 21 09.0	
		UME	iP		05 21 34.9	
		Near Islands, Aleutian Islands (h = N).				
"	12	UPP	iP		07 53 01.4	
		UME	iP		07 53 47.3	
			ipP		07 53 51.8	
		Greece-Albania border region (h = 10 km).				
"	12	UPP	eP		11 27 44	
			ipP		11 27 50.9	
		KIR	eP		11 27 45	
			ipP		11 27 53.1	
			i		11 27 56.9	
		UME	eP		11 27 41	
			ipP		11 27 48.2	
		Andaman Islands region. h = 25 km (UPP,KIR,UME).				
"	12	UPP	eP		06 20 06	
		KIR	iP		06 19 45.8	
		Halmahera (h = 240 km).				
"	13	UME	iP		17 39 26.8	
"	14	UPP	iP		01 16 09.1	C
					micr	sec
			P	Z'	1.4	0.7
			Mx	Z	2.0	10
		KIR	iP		01 15 52.3	C
			i		01 16 20.5	
			i		01 16 52.1	
					micr	sec
			P	Z'	3.5	0.7
			Mx	Z	0.7	8
		UME	iP		01 15 53.5	C
			i		01 16 09.1	
			i		01 16 30.8	
		Eastern Kazakh, SSR. m = 7.2, M = 5.0 (UPP,KIR). Underground explosion.				
"	14	UPP	iP		03 02 37.8	
		KIR	iP		03 02 43.1	
		UME	iP		03 02 37.1	
		Hindu Kush region (h = 90 km).				

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

1984
July 14 KIR iP 06 02 53.7
Crete (h = 55 km).

" 14 UPP iSgl 06 36 45.3
UDD iPgl 06 35 43.7
iSgl 06 35 49.1
i 06 35 52.1
DEL iSgl 06 37 18.3
i 06 37 22.8
MYV iSgl 06 37 15.8
Värmland, Sweden, 59.7°N, 13.2°E.
Origin time = 06 35 37.
M_L(UPP) = 2.0 1.

" 14 UPP iP 09 48 38.0
KIR iP 09 48 37.6
UME iP 09 48 31.8
Andaman Islands region (h = N).

" 14 UPP eP 10 45 18
KIR eP 10 45 21
UME iP 10 45 16.4
Andaman Islands region (h = N).

" 14 UPP iSgl 12 04 59.9
KIR iPgl 12 00 36.4
i 12 00 39.5
iSgl 12 01 10.8
UME iPgl 12 01 40.0
iSgl 12 03 03.5
UDD iSgl 12 04 55.0
MYV i 12 02 43.2
eSgl 12 03 24
Off coast of northwestern Norway, near 70°N, 16 1/2°E.
Origin time = 11 59 48.
M_L(UPP) = 3.4 (0.23) 4.

" 14 KIR iP 12 15 19.1
Halmahera (h = 160 km).

" 14 UPP iPKP1 19 09 01.8 C
iPKP2 19 09 06.0
KIR ePKP1 19 08 40
UME iPKP1 19 08 49.8 C
iPKP2 19 08 53.2
Kermadec Islands (h = 55 km).

" 14 UPP iP 21 16 34.1
ipP 21 16 57.5
KIR iP 21 16 18.1
ipP 21 16 39.9
(cont.)

1984
July 14 (cont.)
UME iP 21 16 27.8
i 21 16 44.8
i 21 17 43.2
Guerrero, Mexico.
h = 80 km (UPP,KIR).

" 15 KIR iP 05 50 47.7
UME iP 05 51 04.7

" 15 UPP iP 06 15 32.9 C
ipP 06 15 43.8
micr sec
P Z' 0.1 0.5
KIR iP 06 14 39.8 C
ipP 06 14 49.9
micr sec
P Z' 0.1 1.0
UME iP 06 15 05.1 C
ipP 06 15 16.2
Near Islands, Aleutian Islands.
h = 35 km (UPP,KIR,UME).
m = 6.1 (UPP,KIR).

" 15 UPP eP 10 07 14
KIR eP 10 08 29
UME eP 10 07 50
Tyrrhenian Sea (h = 340 km).

" 15 UPP iP 12 17 53.8
KIR iP 12 17 52.3
UME iP 12 17 49.0
Andaman Islands region (h = N).

" 15 UPP iP 12 39 56.2
ipP 12 40 02.6
e 12 44 17
KIR iP 12 41 05.7
UME iP 12 40 29.3
Mediterranean Sea (h = 40 km).

" 15 UPP iP 13 28 34.5
i 13 28 40.5
KIR iP 13 28 34.9
i 13 28 41.2
UME iP 13 28 36.8

" 15 UPP eP 14 58 43
ipP 14 58 50.8
KIR iP 14 58 19.8
Taiwan region (h = 35 km).

" 15 UME eP 15 26 04

" 15 KIR iP 21 12 45.4
Off coast of Jalisco, Mexico (h = N).

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

1984
July 15 UPP iP 21 24 03.4 C
ipP 21 24 09.4
KIR iP 21 24 03.6
UME iP 21 23 59.3
ipP 21 24 05.4
Andaman Islands region.
h = 20 km (UPP,UME).

" 16 UPP iP 00 21 16.4 C
ipP 00 21 28.2
micr sec
P Z' 0.1 1.0
KIR iP 00 20 23.3
ipP 00 20 35.6
micr sec
P Z' 0.1 0.8
UME iP 00 20 50.0 C
ipP 00 21 02.3
i 00 21 26.8
Fox Islands, Aleutian Islands.
h = 40 km (UPP,KIR,UME).
m = 5.9 (UPP,KIR).

" 16 UPP iP 11 34 03.4

" 16 UPP iP 11 34 26.0
UME iP 11 34 22.5

" 16 UPP eP 12 47 32
KIR eP 12 47 48
UME eP 12 48 12

" 16 UPP Mx 14 02
micr sec
Mx Z 3.1 18
KIR Mx 13 58
micr sec
Mx Z 1.4 20
South Pacific Cordillera
(h = 10 km).
M = 6.1 (UPP,KIR).

" 16 UPP iP 15 30 47.4
UME iP 15 30 19.8
i 15 30 27.8
Kuril Islands (h = 50 km).

" 16 UPP eP 20 05 32
i 20 05 43.6
KIR iP 20 06 41.6
Crete (h = N).

" 17 KIR eP 03 45 37
UME eP 03 45 23
Tajik, SSR (h = N).

1984
July 17 UPP iP 06 39 29.6
KIR eP 06 39 24
ipP 06 39 30.2
UME iP 06 39 26.2
ipP 06 39 33.2
Andaman Islands region.
h = 20 km (KIR,UME).

" 17 KIR eP 06 41 27
i 06 41 33.1
UME iP 06 41 23.7
i 06 41 30.1

" 17 UME iP 06 53 33.4
i 06 53 39.1

" 17 UPP iP 07 20 44.6
ipP 07 20 51.2
KIR eP 07 20 43
UME iP 07 20 40.5
ipP 07 20 47.2
Andaman Islands region.
h = 20 km (UPP,UME).

" 17 UME iP 08 42 38.7
i 08 42 55.9

" 17 UPP iPKP 14 32 54.1
micr sec
Mx Z 1.0 19
KIR iPKP 14 33 09.5
i 14 36 16.2
micr sec
PKP Z' 0.3 1.3
Mx Z 1.4 20
UME ePKP 14 33 02
i 14 36 23.9
South Sandwich Islands region
(h = 130 km).
M = 5.6 (UPP,KIR).
M not corrected for focal depth.

" 17 KIR iP 21 54 40.8 D
i 21 54 49.0
micr sec
P Z' 0.1 1.1
UME iP 21 55 32.6
Greenland Sea (h = 10 km).

" 17 UPP eP 22 38 09
KIR iP 22 39 17.1
Crete (h = N).

" 18 KIR eP 03 56 08
Sumbawa Islands region
(h = N).

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

1984
July 18 UPP eP 07 00 36
UME iP 07 00 08.3
Kuril Islands (h = N).

" 18 UPP iP 09 50 59.2

" 18 UPP iP 09 52 55.1
KIR iP 09 52 01.7
UME eP 09 52 25
Near Islands, Aleutian Islands
(h = 40 km).

" 18 KIR iPKPl 15 47 06.0
UME iPKPl 15 47 15.2
North Islands, New Zealand
(h = 210 km).

" 19 UPP iP 05 33 32.8
iS 05 42 49
micr sec
Mx Z 1.0 18
KIR iP 05 34 18.7
micr sec
Mx Z 1.3 19
UME iP 05 33 57.8
Ascension Islands region
(h = 10 km).
M = 5.2 (UPP,KIR).

" 19 UPP iP 06 59 25.9
iS 07 01 51.5
micr sec
P Z' 0.1 0.8
Mx Z 2.4 13
KIR iP 07 00 33.8 C
i 07 00 42.3
micr sec
P Z' 0.2 0.8
Mx Z 0.9 11
UME iP 07 00 05.2 C
i 07 00 09.3
i 07 00 18.0
iS 07 03 04
United Kingdom (h = 15 km).
M = 4.4 (UPP,KIR).
Note that the surface-wave magnitude has here been determined by making use of the Prague-Moscow formula of 1962 in spite of the fact that epicentral distances to UPP and KIR are only 14° and 19°, respectively.

" 19 KIR iP 07 14 40.7
UME iP 07 14 21.1

1984
July 19 UPP iP 16 13 27.6
UME iP 16 13 02.2
i 16 13 12.1

" 19 UPP iP 16 27 47.7
ipP 16 27 52.5
KIR iP 16 27 47.3
ipP 16 27 52.6
UME iP 16 27 42.9
ipP 16 27 48.4
Andaman Islands region.
h = 15 km (UPP,KIR,UME).

" 19 UME iPKP 17 05 35.9
Solomon Islands (h = 80 km).

" 19 UPP iP 23 36 56.7 C
iS 23 46 35
micr sec
P Z' 1.2 1.2
Mx Z 4.5 22
KIR iP 23 36 26.0 C
micr sec
P Z' 0.9 1.6
Mx Z 2.5 15
UME iP 23 36 37.8
iS 23 45 59
Ryukyu Islands (h = 45 km).
m = 6.6, M = 5.7 (UPP,KIR).

" 20 UPP iP 07 03 34.7
UME iP 07 03 01.1

" 20 UPP iPKPl 14 13 55.4
KIR iPKP 14 13 46.5
UME i(PKP) 14 13 42.7
iPKP 14 13 54.1
Fiji Islands region
(h = 570 km).

" 20 UPP iP 16 48 44.5
ipP 16 48 49.2
KIR eP 16 48 45
UME iP 16 48 40.7
ipP 16 48 46.2
Andaman Islands region.
h = 15 km (UPP,UME).

" 20 UPP iP 17 11 15.2
KIR iP 17 10 56.6
UME iP 17 11 03.3
Samar, Philippine Islands
(h = 80 km).

" 20 UPP iP 20 18 06.2
KIR iP 20 18 06.8
UME iP 20 18 02.6
Andaman Islands region
(h = N).

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

1984
July 21 KIR iP 02 31 43.3
South of Java (h = N).

" 21 UPP iP 03 04 48.5
micr sec
P Z' 0.4 0.6
Mx Z 1.0 6
KIR iP 03 05 03.8 C
i 03 05 46.5
micr sec
P Z' 0.4 0.9
Mx Z 0.5 7
UME iP 03 04 46.1 C
i 03 04 50.6
European USSR.
m = 5.9 (UPP,KIR).
Underground explosion.

" 21 UPP iP 03 09 48.3
micr sec
P Z' 0.2 0.6
Mx Z 1.2 6
KIR iP 03 10 03.3
micr sec
P Z' 0.4 1.0
Mx Z 0.5 8
UME iP 03 09 45.7
European USSR.
m = 5.8 (UPP,KIR).
Underground explosion.

" 21 UPP iP 03 14 48.5
micr sec
P Z' 0.3 0.6
Mx Z 1.7 9
KIR iP 03 15 03.8 C
micr sec
P Z' 0.4 0.9
Mx Z 0.6 9
UME iP 03 14 46.1
European USSR.
m = 5.9 (UPP,KIR).
Underground explosion.

" 21 KIR iP 08 02 20.8
Kuril Islands (h = 60 km).

" 21 KIR iP 20 18 35.0
UME iP 20 18 38.2
Talaud Islands (h = N).

" 21 UPP iP 23 10 20.3
UME iP 23 10 03.9
Northeast of Taiwan
(h = 130 km).

1984
July 22 UME iP 03 56 11.7

" 22 UME iP 17 34 59.4

" 23 UPP eP 00 11 10
KIR eP 00 10 16
UME iP 00 10 42.3
Kuril Islands (h = 55 km).

" 23 UPP iP 01 34 35.0
KIR eP 01 34 34
UME iP 01 34 30.5
Andaman Islands region
(h = 20 km).

" 23 UPP iP 02 19 07.7
micr sec
P Z' 0.1 0.9
KIR iP 02 19 07.7
micr sec
P Z' 0.2 1.4
UME iP 02 19 04.0 C
ipP 02 19 10.0
Andaman Islands region
(h = 20 km).
m = 5.9 (UPP,KIR).

" 23 KIR eP 02 27 21
UME eP 02 27 03

" 23 UPP iPKP1 04 51 18.3 D
KIR iPKP1 04 50 57.2 D
UME iPKP1 04 51 06.2 D
Kermadec Islands (h = 60 km).

" 23 UPP iPKP1 05 17 31.1
iPKP2 05 17 36.0
KIR iPKP1 05 17 10.2 D
UME iPKP1 05 17 19.8 D
Kermadec Islands region
(h = 340 km).

" 23 UPP iPKP 06 24 46.0
KIR ePKP 06 24 35
UME iPKP 06 24 39.2
Solomon Islands (h = 55 km).

" 23 UPP iP 06 35 07.9
KIR iP 06 35 28.7
UME eP 06 34 47

" 23 UPP iP 07 21 12.9
KIR eP 07 21 49
UME iP 07 21 26.1
Southern Iran (h = 35 km).

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

1984 July 23
UPP iP 15 24 03.5
micr sec
P Z' 0.1 1.0
KIR iP 15 23 12.8
UME iP 15 23 37.0
Kuril Islands (h = 80 km).

" 23
UPP iP 16 17 13.0
iSKS 16 27 46
micr sec
Mx Z 6.3 23
KIR iP 16 16 58.1
micr sec
P Z' 0.2 1.0
Mx Z 3.4 18
UME iP 16 17 03.6
iSKS 16 27 36
iS 16 28 14
Molucca Passage (h = 25 km).
M = 6.0 (UPP,KIR).

" 23
UPP iP 17 27 42.6
KIR eP 17 27 28
UME iP 17 27 33.9
Molucca Passage (h = 65 km).

" 23
UPP iP 19 51 53.8

" 24
UME iP 02 54 15.6

" 24
UPP iP 04 06 27.1

" 24
UPP ipP 12 03 57.3
KIR ipP 12 04 03.4
Peru-Brazil border region
(h = 130 km).

" 24
UPP iP 14 55 17.2
KIR iP 14 56 30.1
UME iP 14 55 55.2
Greece (h = 30 km).

" 24
UPP iSgl 19 52 16.4
UDD i 19 50 53.8
iSgl 19 51 13.2
DEL iSgl 19 51 51.8
MYV iSn 19 51 46.0
iSgl 19 52 05.0
Southern Norway, near
59 1/4°N, 7°E.
Origin time = 19 49 26.
M_L(UPP) = 2.5 1.
By combination with Norwegian
station readings.

1984 July 24
UPP iP 20 12 58.6
UME iP 20 12 37.4
Off east coast of Honshu,
Japan (h = N).

" 24
UPP eP 22 46 34
UME iP 22 46 21.5
Hokkaido, Japan region
(h = 100 km).

" 25
KIR eP 05 08 33
i 05 08 35.7
Central Alaska (h = 70 km).

" 25
KIR iPKP 08 09 06.3
UME ePKP 08 08 54
South Sandwich Islands region
(h = N).

" 25
UPP iP 09 36 09.1
ipP 09 36 13.7
KIR iP 09 36 06.5
UME iP 09 36 02.1
ipP 09 36 06.3
Southern Xinjiang, China.
h = 15 km (UPP,UME).

" 25
KIR iP 10 11 14.6
UME iP 10 11 27.8
Volcano Islands region
(h = N).

" 25
KIR ePKP 13 28 25
UME iPKP 13 28 32.4
Vanuatu Islands (h = 40 km).

" 25
UPP iP 15 41 48.3
KIR iP 15 41 13.8 C
micr sec
P Z' 0.1 1.0
UME iP 15 41 33.5 C
Southern Nevada.
Underground explosion.

" 25
KIR iP 17 28 07.1
Molucca Passage (h = N).

" 25
UPP iP 17 36 54.7
KIR iP 17 36 37.9
UME iP 17 36 43.9
Molucca Passage (h = 35 km).

" 25
UPP iP 19 48 25.5
i 19 48 33.4
micr sec
Mx Z 1.6 23
(cont.)

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

1984
July 25 (cont.)

KIR	iP		19 48 09.2	
			micr	sec
	Mx	Z	1.4	17
UME	iP		19 48 14.6	
	i		19 48 20.9	
	iSKS		19 58 50	

Molucca Passage (h = 45 km).
M = 5.5 (UPP,KIR).

" 25

UPP	iP		23 39 31.6	
	ipP		23 39 46.6	
KIR	iP		23 38 37.2	C
			micr	sec
	P	Z'	0.1	0.8
UME	iP		23 39 05.2	C

Alaska Peninsula (h = N).

" 25

UPP	iPKPl		23 40 23.3
KIR	iPKP		23 40 12.5
	iSKPl		23 42 55.2
UME	iSKPl		23 43 06.4

South of Fiji Islands
(h = 510 km).

" 26

UPP	iP		00 34 25.4

" 26

UPP	iP		05 03 43.1	
UME	iP		05 03 21.3	C
	ipP		05 03 36.1	

Honshu, Japan (h = 65 km).

" 27

UPP	iP		13 01 39.7	
	iS		13 10 10	
			micr	sec
	P	Z'	0.3	1.2
	Mx	Z	1.9	20
UME	iP		13 01 11.3	C
	iS		13 09 17	

Off east coast of Kamchatka
(h = N).
m = 6.4, M = 5.2 (UPP,KIR).

" 27

UPP	iP		16 08 57.3	
	ipP		16 09 11.3	
	iS		16 18 02	
	iP'P'		16 36 59.9	
			micr	sec
	P	Z'	0.2	1.1
	Mx	Z	0.9	17
UME	iP		16 08 30.2	
	ipP		16 08 44.5	
	iS		16 17 11	
	iP'P'		16 37 05.8	

Andreanof Is., Aleutian Is.
h = 55 km (UPP,KIR,UME).
m = 6.1, M = 5.1 (UPP,KIR).
M not corrected for focal depth.

1984
July 27

UPP	iP		19 10 01.4	C
UME	iP		19 09 48.8	

Luzon, Philippine Islands
(h = 170 km).

" 27

UPP	iSn		22 44 31.5
	iSgl		22 45 09.1
UME	iPn		22 42 39.1
	iSn		22 43 27.2
	iSgl		22 43 46.0
UDD	iPn		22 43 07.3
	i		22 43 16.2
	iSn		22 44 14.7
	iSgl		22 44 49.5
DEL	eSgl		22 46 41
MYV	iPn		22 42 29.4
	iSgl		22 43 22.2

Coast of northern Norway,
near 66 1/4°N, 12°E.
Origin time = 22 41 33.
M_L (UPP) = 3.5 (0.16) 8.
Felt.

" 28

UPP	iP		04 45 35.4	
	ipP		04 46 25.2	
UME	iP		04 45 33.4	C
	ipP		04 46 23.1	

Hindu Kush region.
h = 240 km (UPP,KIR,UME).

" 28

UPP	eP		16 36 47
UME	eP		16 36 06

Norwegian Sea (h = 10 km).

" 28

UPP	eP		16 52 13
UME	iP		16 51 32.6
	ipP		16 51 34.5

Norwegian Sea (h = 10 km).

" 28

UME	iP		16 59 00.9

Norwegian Sea (h = 10 km).

" 28

UPP	iP		21 11 42.3
UME	iP		21 11 16.1

" 28

UPP	eP		22 29 17
UME	eP		22 28 26
	i		22 28 34.9

" 29

UPP	iP		02 03 20.3	
			micr	sec
	Mx	Z	2.9	10
UME	iP		02 03 54.2	
	ipP		02 04 02.2	
	iS		02 08 04	

Aegean Sea (h = 20 km).
M = 4.9 (UPP,KIR).

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

1984
July 29 UPP iP 02 25 46.3
micr sec
Mx Z 3.0 10
KIR micr sec
Mx Z 1.8 11
UME iP 02 26 23.8
i 02 26 27.0
iS 03 30 36
Aegean Sea (h = 10 km).
M = 5.0 (UPP,KIR).

" 29 UPP iP 07 09 00.5
ipP 07 09 06.4
UME iP 07 08 56.8
ipP 07 09 02.6
i 07 09 07.2
Andaman Islands region.
h = 20 km (UPP,KIR,UME).

" 29 UPP iP 09 52 55.4
micr sec
Mx Z 2.0 11
KIR micr sec
Mx Z 0.6 10
UME iP 09 53 33.3
i 09 53 40.7
iS 09 57 46
Aegean Sea (h = 15 km).
M = 4.7 (UPP,KIR).

" 29 UME iP 10 58 59.8

" 29 UME iP 17 26 01.2
Northwestern Kashmir
(h = N).

" 29 UME iP 22 15 27.5
Fox Islands, Aleutian Is.
(h = N).

" 29 UPP iP 22 26 58.2
micr sec
Mx Z 0.9 10
UME iP 22 27 34.4
iS 22 31 59
Aegean Sea (h = 25 km).
M = 4.5 (UPP,KIR).

" 30 UME iP 03 00 33.5

" 30 UME iP 04 40 41.6

" 30 UPP iP 12 20 33.8
micr sec
Mx Z 5.3 16
KIR micr sec
Mx Z 4.8 17
(cont.)

1984
July 30 (cont.)
UME iP 12 20 03.1
Jan Mayen Islands region
(h = 10 km).
M = 4.8 (UPP,KIR).
Note that the surface-wave
magnitude has here been
determined by making use of
the Prague-Moscow formula
of 1962 in spite of the fact
that the respective epicentral
distances to UPP and KIR are
only 17° and 12°.

" 30 UPP iP 17 23 21.4

" 30 UPP iP 17 29 56.4
UME eP 17 29 55
Afghanistan (h = N).

" 30 UPP iP 21 25 08.4
UME iP 21 24 41.7
Rat Islands, Aleutian Is.
(h = 140 km).

" 30 UPP eP 21 45 38
UME eP 21 45 37
Near coast of Guatemala
(h = 65 km).

" 30 UPP iP 22 14 13.1
UME iP 22 13 46.4 C
Fox Islands, Aleutian Is.
(h = N).

" 31 UPP iP 02 38 54.9
UME iP 02 39 08.4
Iran (h = N).

" 31 UPP iP 12 16 51.3
ipP 12 16 55.2
micr sec
Mx Z 1.9 20
UME iP 12 16 58.1
North Atlantic Ocean
(h = 10 km).
M = 4.7 (UPP,KIR).

" 31 UPP iP 12 26 34.5
UME iP 12 26 40.1
North Atlantic Ocean
(h = 10 km).

" 31 UPP iP 12 27 31.4
UME iP 12 27 36.2

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

1984
July 31 UPP iP 12 31 57.4
i 12 32 01.1
UME iP 12 32 04.7
i 12 32 07.4
North Atlantic Ocean.
h = 10 km (UPP,UME).

" 31 UPP eP 18 28 11
East of Severnaya Zemlya
(h = 10 km).

" 31 UPP iP 21 24 41.6

" 31 UME iPKP 22 14 35.1
Santa Cruz Islands
(h = 220 km).

" 31 UPP iP 22 30 11.8
UME iP 22 30 34.7
Zaire Republic (h = 10 km).

March 26, 1986

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

U P P S A L A, K I R U N A, 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	(MYV)	62°56.5'N,	14°20.8'E; h = 345 m

A U G U S T 1 - 31, 1984

Aug. 1 UPP iP 01 15 14.9
KIR iP 01 14 44.5
UME iP 01 14 56.3 D
Bonin Islands region
(h = 450 km).

" 1 UPP iP 07 22 47.6
KIR eP 07 22 21
UME iP 07 22 31.2
Mariana Islands (h = 190 km).

" 1 UME iP 14 46 10.9
i 14 46 17.0
Andaman Islands region
(h = N).

" 1 UME iP 15 44 30.9
i 15 44 36.7
Andaman Islands region
(h = N).

" 1 UME eP 17 41 26
Andrenaof Islands, Aleutian
Is. (h = N).

" 2 UPP eSg1 01 16 03
UDD iSg1 01 14 57.5
Norwegian Sea, near 60°N,
2°E.
Origin time = 01 11 50.
M_L (UPP) = 2.5 1.
By combination with Norwegian
station readings.

" 2 UPP iPKP1 05 18 58.0 C
KIR iPKP 05 18 48.9
UME ePKP1 05 18 47
South of Fiji Islands
(h = 570 km).

Aug. 2 UPP i(P) 18 20 08.8

" 2 UME iSn 18 55 12.8
North-central Finland, 65.9°N,
28.6°E.
Origin time = 18 53 20.
By combination with Finnish
station readings.

" 2 UPP i(P) 20 24 15.4

" 2 UPP iP 22 57 13.8
Southern Iran (h = N).

" 3 UPP iP 01 14 40.9
UME iP 01 14 42.5
North Atlantic Ocean
(h = 10 km).

" 3 UPP eP 01 25 01
UME iP 01 25 05.3
North Atlantic Ocean
(h = 10 km).

" 3 UPP iP 01 26 31.1
micr sec
Mx Z 2.9 21
KIR micr sec
Mx Z 1.6 15
UME iP 01 26 34.6
iS 01 31 01
North Atlantic Ocean
(h = 10 km).
M = 4.8 (UPP,KIR).

" 3 UPP eP 04 12 16
UME eP 04 12 20
North Atlantic Ocean
(h = 10 km).

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

1984
Aug. 3 UPP eP 09 56 11
UME iP 09 55 54.4
Mariana Islands (h = 45 km).

" 3 UPP iPKP1 14 39 25.8
UME i(PKP) 14 39 12.8
iPKP 14 39 22.5
iSKP1 14 42 02.4
South of Fiji Islands
(h = 590 km).

" 3 UPP iP 14 43 42.0
micr sec
Mx Z 3.4 21
KIR micr sec
Mx Z 1.6 15
UME iP 14 43 38.6
iS 14 54 06
Near coast of Chiapas,
Mexico (h = 35 km).
M = 5.7 (UPP,KIR).

" 3 UME iP 20 54 54.7

" 3 UPP iP 21 00 18.8
micr sec
Mx Z 0.8 19
KIR micr sec
Mx Z 0.8 15
UME iP 21 00 21.7
North Atlantic Ocean
(h = 10 km).
M = 4.4 (UPP,KIR).

" 3 KIR iSn 22 34 36.9
iSg1 22 34 48.2
UME iSn 22 34 47.2
iSg1 22 35 02.0
North-central Finland,
65.9°N, 28.6°E.
Origin time = 22 32 54.
By combination with Finnish
station readings.

" 3 UPP iSg1 22 46 14.7
KIR iPn 22 43 06.7
iPg1 22 43 15.3
iSn 22 43 50.5
iSg1 22 44 03.7
UME iSn 22 43 59.2
i 22 44 01.3
iSg1 22 44 15.8
UDD iSn 22 45 54.2
iSg1 22 46 45.8
North-central Finland,
65.9°N, 28.5°E.
Origin time = 22 32 54.
By combination with Finnish
station readings

1984
Aug. 3 (cont.)
By combination with Finnish
station readings.
Felt.

" 3 KIR iSn 23 08 05.4
iSg1 23 08 16.1
UME iSn 23 08 13.9
i 23 08 14.8
iSg1 23 08 30.2
North-central Finland
65.9°N, 28.6°E.
Origin time = 23 06 22.
By combination with Finnish
station readings.

" 4 UPP iP 03 05 44.5
Ionian Sea (h = 10 km).

" 4 UME iSn 05 06 00.8
North-central Finland,
65.9°N, 28.6°E.
Origin time = 05 04 09.
By combination with Finnish
station readings.

" 4 KIR iSg1 07 39 19.0
North-central Finland,
65.9°N, 28.6°E.
Origin time = 07 37 24.
M_L (UPP) = 2.3 1.
By combination with Finnish
station readings.

" 4 UPP iP 09 22 24.8
i 09 22 41.9
micr sec
Mx Z 1.1 20
KIR micr sec
Mx Z 0.7 14
UME iP 09 21 55.3
Komandorsky Islands region
(h = N).
M = 5.0 (UPP,KIR).

" 4 UPP iSg1 11 05 02.5
UDD iSg1 11 04 04.8
Norwegian Sea, near 62°N,
3°E.
Origin time = 11 01 21.
Solution from Norwegian
station readings.

" 4 UPP iP 12 24 43.8
UME iP 12 24 23.8
South of Honshu, Japan
(h = 70 km).

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

1984
Aug. 4 UPP iPKP1 15 19 22.3
iPKP2 15 19 30.9
UME iPKP 15 19 10.7
iPKP1 15 19 12.2
South of Kermadec Islands
(h = N).

" 4 UME iP 16 09 18.6
Near west coast of Honshu,
Japan (h = 25 km).

" 4 UME iP 21 57 26.5
Near coast of norhtern
California (h = 5 km).

" 5 UPP iP 01 18 01.3
UME iP 01 17 53.7
Burma-India border region
(h = 80 km).

" 6 UPP iP 08 39 38.4
Kyushu, Japan (h = 15 km).

" 6 UPP iP 08 41 30.9
KIR iP 08 40 57.8
Kyushu, Japan (h = 20 km).

" 6 UPP iP 08 49 22.8
KIR iP 08 49 16.8
Tibet (h = N).

" 6 UPP iP 11 22 04.5
micr sec
P Z' 0.1 1.0
Mx Z 0.6 12
KIR iP 11 22 34.3
micr sec
P Z' 0.3 1.0
Mx Z 1.5 13
Iran (h = N).
m = 5.8, M = 4.9 (UPP,KIR).

" 6 UPP iP 12 14 57.9
iPP 12 19 06.4
iSKS 12 25 11
micr sec
P Z' 0.1 1.0
Mx Z 34 20
KIR iP 12 14 44.2
iPP 12 18 42.3
micr sec
P Z' 0.6 1.5
Mx Z 27 17
UME iP 12 14 49
iSKS 12 24 55
Minahessa Peninsula
(h = 240 km).
(cont.)

1984
Aug. 6 (cont.)
m = 6.6, M = 6.9 (UPP,KIR).
M not corrected for focal
depth.

" 6 KIR iP 16 22 48.1

" 6 UPP iP 19 18 05.6 C
iS 19 27 29
micr sec
P Z' 0.4 1.2
Mx Z 120 24
KIR iP 19 17 32.2 C
iS 19 26 27.1
iP'P' 19 45 49.9
micr sec
P Z' 0.4 1.0
Mx Z 96 16
UME iP 19 17 46.1 C
iS 19 26 53.1
iP'P' 19 45 46.2
Kyushu, Japan (h = 45 km).
m = 6.4, M = 7.2 (UPP,KIR).

" 6 UPP iP 21 55 46.5
KIR iP 21 55 14.9
UME eP 21 55 28
Ryukyu Islands region (h = N).

" 6 UPP i(P) 22 34 36.2

" 7 UPP iP 06 48 18.6
KIR iP 06 47 24.6
UME iP 06 47 51.2
Andreanof Islands, Aleutian
Is. (h = 55 km).

" 7 UPP iP 09 26 25.1
KIR eP 09 27 43
Romania (h = 170 km).

" 8 UPP iPKP 07 15 17.2
KIR iPKP 07 15 03.1
Vanuatu Islands (h = 200 km).

" 8 KIR iSg1 14 09 49.3
North-central Finland,
65.8°N, 29.1°E.
Origin time = 14 07 46.
By combination with Finnish
station readings.

" 8 UPP iP 14 31 35.5
KIR eP 14 30 49
Kuril Islands region (h = N).

" 8 UPP iP 22 21 42.2
UME iP 22 21 30.6

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

1984
Aug. 9 KIR eP 01 31 18
UME eP 01 31 09
Tajik-Xinjiang border region (h = N).

" 9 UPP iP 18 11 03.5
UME iP 18 10 41.4
Near east coast of Honshu, Japan (h = N).

" 9 UPP iP 19 32 28.9
KIR iP 19 31 41.3
UME iP 19 32 02.8
Kuril Islands (h = N).

" 9 UME eP 20 24 39
Southern Greece (h = 10 km).

" 10 UPP iP 11 34 48.8
UME iP 11 35 09.7
South Atlantic Ridge (h = 10 km).

" 10 UPP iP 19 37 41.5
micr sec
P Z' 0.1 1.0
Mx Z 1.4 15
KIR iP 19 37 08.7
micr sec
Mx Z 1.9 15
UME iP 19 37 22.0
Kyushu, Japan (h = N).
M = 5.5 (UPP,KIR).

" 10 KIR eP 23 40 31
North Atlantic Ridge (h = 10 km).

" 11 UPP
micr sec
Mx Z 3.2 23
KIR ePKP 01 39 13
micr sec
Mx Z 2.6 23
UME iPKP 01 39 17.0
New Britain region (h = 40 km).
M = 5.8 (UPP,KIR).

" 11 UPP iSg1 07 00 48.3
KIR iPg1 06 57 17.5
iSn 06 57 44.6
iSg1 06 57 48.8
UME iPn 06 57 49.2
iPg1 06 57 54.9
iSn 06 58 38.7
iSg1 06 58 58.1
UDD iSg1 07 00 37.5
(cont.)

1984
Aug. 11 MYV iSg1 06 59 09.6
Coast of northern Norway, near 68°N, 14°E.
Origin time = 06 56 32.
M_L(UPP) = 3.1 (0.35) 3.

" 11 UPP iP 12 08 36.7 C
ipP 12 09 10.6
micr sec
P Z' 0.1 0.9
KIR iP 12 08 37.5 C
micr sec
P Z' 0.2 1.0
UME iP 12 08 33.7
Northern Sumatera.
h = 130 km (UPP).
m = 5.7 (UPP,KIR).

" 11 KIR eP 13 26 39
Northern Colombia (h = 170 km).

" 11 KIR eP 16 40 20
N.W. Iran-USSR border region (h =10 km).

" 11 UPP iP 19 04 03.6 C
i 19 04 06.3
iS 19 07 13.0
micr sec
P Z' 0.1 0.5
i Z' 0.2 0.6
KIR iP 19 03 14.9
micr sec
P Z' 0.4 0.5
UME iP 19 03 26.9
Ural Mountains region.
Underground explosion.

" 12 UPP eP 00 14 01
KIR iP 00 14 35.1
UME iP 00 14 48.7
Volcano Islands region (h = N).

" 12 UPP iP 00 35 47.5
KIR eP 00 34 56
Vancouver Island region (h = N).

" 12 KIR iP 03 34 23.6
UME iP 03 34 36.8
Volcano Islands region (h = N).

" 12 KIR iP 10 46 51.1
UME iP 10 47 04.3
Volcano Islands region (h = N).

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

1984						
Aug.	12	UPP	iP		17 03 32.8	
					micr	sec
			P	Z'	0.2	1.2
			Mx	Z	1.3	14
		KIR	iP		17 03 12.4	
					micr	sec
			P	Z'	0.1	1.0
			Mx	Z	1.4	12
		UME	iP		17 03 19.3	
		Luzon, Philippine Islands (h = 15 km). m = 5.9, M = 5.5 (UPP,KIR).				
"	13	UDD	i		00 25 14.4	
			iSg1		00 25 44.2	
		Norwegian Sea, near 61°N, 4°E. Origin time = 00 23 02. Solution from Norwegian station readings.				
"	13	UPP	iP		16 25 10.3	
		KIR	iP		16 25 10.5	
		UME	iP		16 25 06.7	
		Andaman Islands region (h = N).				
"	13	KIR	iP		16 26 15.9	
		UME	iP		16 26 11.2	
"	13	UPP	iP		19 34 35.9	
		KIR	iP		19 34 36.2	
		UME	iP		19 34 32.7	
		Andaman Islands region (h = N).				
"	14	UPP	iP		01 12 02.9	
			i		01 12 06.6	
					micr	sec
			i	Z'	0.1	1.0
			Mx	Z	2.7	20
		KIR	iP		01 11 04.9	
			i		01 11 09.5	
					micr	sec
			i	Z'	0.2	1.0
			Mx	Z	1.8	16
		UME	iP		01 11 33.4	
			iS		01 19 14	
		Southern Alaska. h = 15 km (UPP,KIR). m = 5.9, M = 5.3 (UPP,KIR).				
"	14	UPP	iP		01 38 20.0	
		KIR	iP		01 38 51.1	
		UME	iP		01 38 29.4	
		Iran (h = N).				

1984						
Aug.	14	UPP	iP		11 52 35.4	
					micr	sec
			Mx	Z	3.6	16
		KIR	iP		11 52 50.4	
					micr	sec
			Mx	Z	1.2	14
		UME	iP		11 52 36.4	
		Uzbek SSR (h = 10 km). M = 5.1 (UPP,KIR).				
"	14	UPP	iP		18 41 43.8	
					micr	sec
			Mx	Z	2.8	15
		KIR	iP		18 41 13.6	
					micr	sec
			Mx	Z	2.1	17
		UME	iP		18 41 26.4	
		Kyushu, Japan (h = 20 km). M = 5.6 (UPP,KIR).				
"	14	UME	iPKP1		22 11 39.3	
		Kermadec Islands region (h = 60 km).				
"	15	UPP	iP		02 08 23.8	
		KIR	iP		02 08 53.5	
		UME	iP		02 08 33.7	
		Iran (h = N).				
"	15	KIR	iP		05 39 14.5	
		UME	iP		05 39 05.6	
		Southwestern Kashmir (h = N).				
"	15	KIR	iP		13 31 33.1	
		Minahassa Peninsula (h = 110 km).				
"	16	UME	iP		02 11 39.7	
		Near east coast of Honshu, Japan (h = 30 km).				
"	16	UPP	iP		02 32 33.3	
		KIR	eP		02 31 59	
		UME	iP		02 32 12.5	
		South of Honshu, Japan (h = 40 km).				
"	16	KIR	iP		03 21 48.4	
		Caribbean Sea (h = 10 km).				
"	16	KIR	iP		23 50 51.6	
		UME	iP		23 51 39.9	
		Norwegian Sea (h = 10 km).				
"	17	KIR	iP		01 10 22.3	

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

1984
Aug. 17 KIR eP 03 00 07
Tajik SSR (h = 55 km).

" 17 UPP iP 07 29 23.8
KIR eP 07 29 05
Leyte, Philippine Islands
(h = 100 km).

" 17 KIR ipP 08 31 46.6
El Salvador (h = 150 km).

" 17 KIR eP 10 11 05
South of Alaska (h = N).

" 17 KIR iPKP1 19 01 38.8
UME iPKP1 19 01 46.8
North Island, New Zealand
(h = 60 km).

" 17 UPP iP 21 27 48.3
UME iP 21 28 27.2
Greece (h = 10 km).

" 18 KIR iP 09 27 20.9
Mindano, Philippine Islands
(h = 90 km).

" 18 UME iP 11 41 23.8
United Kingdom (h = 10 km).

" 18 UPP iPKP 13 48 43.3
KIR iPKP 13 48 58.4 C
South Sandwich Islands region
(h = 120 km).

" 18 KIR iP 17 41 59.9
East of Severnaya Zemlya
(h = 10 km).

" 18 UPP iP 20 03 03.6
KIR iP 20 02 46.5
Mindanao, Philippine Islands
(h = 110 km).

" 19 KIR iP 00 20 20.3
South of Java (h = N).

" 19 KIR iP 11 44 26.0
South of Java (h = N).

" 20 UPP iP 01 25 11.4
ipP 01 25 33.1
KIR iP 01 24 52.4
micr sec
P Z' 0.1 1.0
UME iP 01 24 59.5
Samar, Philippine Islands
(h = 90 km).

1984
Aug. 20 UPP iP 14 00 25.7
KIR iP 13 59 53.4
UME iP 14 00 07.1
South of Honshu, Japan
(h = 420 km).

" 20 UPP iP 18 56 14.0
KIR iP 18 55 53.8
Taiwan (h = 30 km).

" 20 UPP iP 23 41 17.8
KIR iP 23 41 28.2
UME iP 23 41 26.6
Near coast of Venuzuela
(h = 20 km).

" 21 UPP iP 00 07 00.1
KIR iP 00 07 10.1
micr sec
P Z' 0.2 1.3
UME iP 00 07 08.5
Near coast of Venezuela
(h = 10 km).

" 22 UPP iP 03 49 45.1
KIR iP 03 49 14.3
UME iP 03 49 27.4
Bonin Islands region
(h = 530 km).

" 22 UPP iP 09 57 34.5
KIR iP 09 56 57.3
micr sec
P Z' 0.1 1.0
UME iP 09 57 17.9
Western Idaho (h = 10 km).

" 22 UME iPKP 09 25 44.4
i 09 26 28.1
New Britain region
(h = 160 km).

" 22 UPP iP 18 08 24.9 C
micr sec
P Z' 0.1 0.5
KIR iP 18 08 34.9 C
micr sec
P Z' 0.3 0.8
UME iP 18 08 24.5 C
Hindu Kush (h = 140 km).
m = 5.9 (UPP,KIR).

" 22 UPP Mx 19 01
micr sec
Mx Z 3.0 22
KIR Mx 19 04
micr sec
Mx Z 3.4 19
(cont.)

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

1984
Aug. 22 (cont.)
Near coast of Nicaragua
(h = 60 km).
M = 5.8 (UPP,KIR).
M not corrected for focal
depth.

" 22 KIR iP 19 31 39.0
Luzon, Philippine Islands
(h = 50 km).

" 22 UPP iP 23 39 18.0
KIR iP 23 38 27.7
UME iP 23 38 52.8
Kuril Islands (h = 130 km).

" 23 UPP Mx 00 47
micr sec
Mx Z 1.2 18
KIR Mx 00 44
micr sec
Mx Z 1.2 16
Near coast of Nicaragua
(h = 60 km).
M = 5.4 (UPP,KIR).
M not corrected for focal
depth.

" 23 UPP eP 20 01 55
micr sec
Mx Z 8.3 24
KIR iP 20 01 50.8
micr sec
Mx Z 4.3 16
UME iP 20 01 59.9
iS 20 12 28
Near coast of Nicaragua
(h = 55 km).
M = 6.0 (UPP,KIR).
M not corrected for focal
depth.

" 23 UPP iPKP1 23 34 45.8 D
KIR e(PKP) 23 34 24
iPKP 23 34 33.4
UME iPKP1 23 34 31.7
Kermadec Islands region
(h = 430 km).

" 24 UPP iP 06 08 27.7
KIR iP 06 09 25.7
UME iP 06 08 53.4
Dead Sea region (h = 25 km).

" 25 UPP iP 19 05 33.5
i 19 05 44.3
(cont.)

1984
Aug. 25 (cont.)
UPP micr sec
P Z' 0.1 0.7
i Z' 0.1 0.7
KIR iP 19 04 56.4 C
micr sec
P Z' 0.3 1.4
UME iP 19 05 07.6
Western Siberia.
m = 5.6 (UPP,KIR).
Underground explosion.

" 25 UPP iSg1 19 43 23.5
KIR iPg1 19 39 20.7 D
iSg1 19 39 25.3
UME iPg1 19 40 24.9
iSg1 19 41 17.0
UDD iSg1 19 43 28.3
MYV iPg1 19 40 49.2
iSg1 19 42 00.0
Lapland, Sweden, 67.9°N,
19.5°E.
Origin time = 19 39 14.
M_L(UPP) = 3.1 (0.18) 5.
Felt.

" 25 UPP iSg1 20 11 35.5
UDD iSg1 20 10 32.9
Southwestern Norway, near
61°N, 6°E.
Origin time = 20 08 35.
Solution from Norwegian
station readings.

" 25 UPP iP 20 48 59.2
micr sec
P Z' 0.1 1.0
KIR iP 20 49 43.6
micr sec
P Z' 0.1 1.0
UME iP 20 49 21.0
Tanzania (h = 10 km).
m = 5.9 (UPP,KIR).

" 25 KIR iPg1 21 35 37.2
iSg1 21 35 41.8
UME iSg1 21 37 34.4
Lapland, Sweden, 67.9°N,
19.5°E.
Origin time = 21 35 31.
M_L(UPP) = 2.6 1.
Felt.

" 26 UPP iP 03 34 29.9
KIR iP 03 32 55.3
UME iP 03 33 44.2

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

1984
Aug. 26 UPP iP 05 14 54.7
micr sec
Mx Z 0.9 22
KIR iP 05 14 41.9
UME iP 05 14 50.8
Near coast of Vaxaca, Mexico
(h = 45 km).

" 26 UPP iPKP1 05 19 08.1
iSKP1 05 21 58.1
iSKKP 05 30 22.5
KIR i(PKP) 05 18 50.3
iPKP 05 18 59.9
iSKP1 05 21 33.1
UME i(PKP) 05 18 56.1
iPKP 05 19 05.1
iSKP1 05 21 46.9
South of Fiji Islands
(h = 560 km).

" 26 UME iP 17 27 16.7
Zaire Republic (h = 10 km).

" 27 UPP eP 06 53 54
eS 07 04 15
micr sec
Mx Z 2.4 18
KIR iP 06 53 56.3
micr sec
Mx Z 1.2 16
UME iP 06 53 50.9
iS 07 04 13
Northern Sumatera
(h = 35 km).
M = 5.6 (UPP,KIR).

" 27 UPP iP 07 39 24.1
KIR iP 07 39 24.1
UME iP 07 39 21.3
Northern Sumatera
(h = 40 km).

" 28 UPP iP 03 04 26.3
KIR eP 03 04 01
UME eP 03 04 01
Ural Mountains region.
Underground explosion.

" 28 UPP iP 03 09 27.1
KIR eP 03 09 03
UME eP 03 09 02
Ural Mountains region.
Underground explosion.

" 28 UPP Mx 11 05
micr sec
Mx Z 1.9 23
(cont.)

1984
Aug. 28 (cont.)
KIR Mx 11 03
micr sec
Mx Z 1.6 21
Northern Easter I. Cardillera
(h = 10 km).
M = 5.6 (UPP,KIR).

" 28 UPP iP 17 32 04.4
Qinghai Province, China
(h = N).

" 28 UPP iP 19 16 13.9 C
ipP 19 16 32.4
iS 19 26 12
micr sec
P Z' 0.8 1.0
Mx Z 4.1 20
KIR iP 19 15 44.7 C
micr sec
P Z' 0.5 1.0
Mx Z 0.9 13
UME iP 19 14 56.1 C
Ryukyu Islands (h = 60 km).
m = 6.5, M = 5.5 (UPP,KIR).
M not corrected for focal
depth.

" 28 UDD iSg1 19 42 20.4

" 29 UPP iP 11 51 12.2

" 29 UPP iP 14 23 43.6
micr sec
P Z' 0.1 0.9
KIR iP 14 23 18.7
UME iP 14 23 28.1
Taiwan region (h = 140 km).

" 29 KIR iP 23 18 25.3
UME iP 23 18 37.6
Volcano Islands region
(h = 150 km).

" 30 UPP iP 12 39 15.4
iS 12 47 54
KIR iP 12 38 25.8
UME iP 12 38 51.5
Queen Charlotte Islands
region (h = 10 km).

" 30 UPP iPKP 16 25 56.2
iPKP1 16 26 03.2
micr sec
PKP Z' 0.3 1.5
PKP1 Z' 0.7 0.9
(cont.)

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

1984
Aug. 30 KIR iPKP1 16 25 41.6
i 16 25 48.3
micr sec
PKP1 Z' 0.3 1.6
i Z' 0.3 1.0
UME iPKP1 16 25 50.5
South of Kermadec Islands
(h = N).

" 31 KIR iP 04 55 33.3
micr sec
P Z' 0.4 1.6
UME iP 04 55 40.7
Near coast of Nicaragua
(h = 40 km).

" 31 KIR iP 13 23 55.7
UME iP 13 24 25.7
Northern Yukon Territory,
Canada (h = N).

" 31 UPP micr sec
Mx Z 7.7 21
KIR iPKP 16 01 13.5
micr sec
PKP Z' 0.1 1.0
Mx Z 5.7 20
UME iPKP 16 01 19.0
Vanuatu Islands region
(h = 30 km).
M = 6.4 (UPP,KIR).

" 31 UPP iP 19 58 33.6
iS 20 08 50
micr sec
Mx Z 3.6 22
KIR iP 19 58 22.0
i 19 58 24.1
ipP 19 58 52.0
micr sec
i Z' 0.7 1.6
UME iP 19 58 31.3
iS 20 08 46
Chiapas, Mexico (h = 120 km).

" 31 UPP iP 21 07 02.6
micr sec
P Z' 0.2 1.4
KIR iP 21 07 34.8
micr sec
P Z' 0.2 1.4
UME eP 21 07 22
Central Mid-Atlantic Ridge
(h = 10 km).
m = 6.0 (UPP,KIR).

April 8, 1986

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SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

SEISMOLOGISKA AVDELNINGEN
BOX 12019
750 12 UPPSALA

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

S E P T E M B E R 1 - 30, 1984

1984					
Sep.	1	UPP	iP	13 02 08.8	
		Kuril Islands (h = N).			
"	1	UPP	iP	17 16 56.6	
				micr	sec
			P Z'	0.1	0.8
			Mx Z	5.4	17
		KIR	iP	17 16 11.8	
				micr	sec
			Mx Z	3.1	16
		UME	iP	17 16 31.5	
			iS	17 25 13	
		Kuril Islands (h = 25 km).			
		M = 5.8 (UPP,KIR).			
"	1	UPP	iP	17 55 33.3	
		KIR	iP	17 54 47.3	
		UME	iP	17 55 07.8	
		Kuril Islands (h = 10 km).			
"	1	UPP	iP	19 07 41.7	
		UME	iP	19 07 16.9	
		Kuril Islands (h =N).			
"	1	UPP	iPKP	21 34 33.6	
			iSKP1	21 37 31.4	
		KIR	iPKP	21 34 24.9	
			iSKP1	21 37 04.4	
		UME	i(PKP)	21 34 25.2	
			iPKP	21 34 32.4	
			iSKP1	21 37 18.6	
		Fiji Islands region			
		(h = 480 km).			
"	1	UPP	iP	23 06 41.4	
		KIR	iP	23 05 50.8	
		UME	iP	23 06 15.3	
		Unimak Islands region (h = N).			

1984					
Sep.	1	UPP	iP	23 23 34.8	
			ipP	23 24 15.0	
		KIR	iP	23 23 22.3	C
			ipP	23 24 01.0	
				micr	sec
			P Z'	0.1	1.0
		UME	iP	23 23 30.5	
			ipP	23 24 10.4	
		Chiapas, Mexico.			
		h = 160 km (UPP,KIR,UME).			
"	1	UPP	ipP	23 50 46.7	
		KIR	iP	23 50 30.5	
		UME	iP	23 50 33.2	
			ipP	23 50 51.2	
		Dominican Republic region.			
		h = 70 km (UME).			
"	2	UPP	iP	04 30 31.3	
		KIR	iP	04 29 38.0	
		UME	iP	04 30 03.4	
		Off east coast of Kamchatka			
		(h = 60 km).			
"	2	UPP	iP	18 39 18.1	
		KIR	iP	18 38 48.6	
		UME	iP	18 39 00.5	
		Ryukyu Islands (h = N).			
"	3	KIR	epP	08 29 00	
		UME	iP	08 29 03.8	
		South of Honshu, Japan			
		(h = 30 km).			
"	3	UPP	iPKP1	12 08 07.2	
			iPKP2	12 08 10.9	
		KIR	iPKP1	12 07 46.1	
		UME	iPKP1	12 07 55.0	C
		Kermadec Islands (h = N).			
"	3	KIR	iP	17 11 48.6	
		Northern Colombia (h = 180 km).			

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

1984
Sep. 4 UPP iP 01 10 40.3
Greece-Albania border region
(h = 55 km).

" 4 UPP iP 05 32 14.6
KIR iP 05 31 56.0
Southern Xinjiang, China
(h = N).

" 4 KIR iP 05 56 10.8
UME iP 05 56 19.8
Near west coast of Honshu,
Japan (h = 30 km).

" 4 KIR eP 13 19 37
Southwestern Ryukyu Islands
(h = 70 km).

" 5 KIR iP 03 36 47.6
i 03 36 56.3
UME iP 03 37 05.8
i 03 37 14.6
Off east coast of Honshu,
Japan (h = 30 km).

" 5 KIR iPKP1 08 36 16.5
iSKP1 08 38 46.0
UME iPKP 08 36 17.2
iSKP1 08 38 57.3
Fiji Islands region
(h = 620 km).

" 5 KIR eP 14 42 29
Afghanistan-USSR border
region (h = N).

" 5 UPP iP 23 54 00.6
UME eP 23 53 34
Kuril Islands (h = N).

" 6 UPP Mx 09 43
micr sec
Mx Z 1.3 10
KIR Mx 09 48
micr sec
Mx Z 0.8 12
Yugoslavia (h = 10 km).
M = 4.5 (UPP,KIR).

" 6 UPP Mx 21 19
micr sec
Mx Z 0.7 17
KIR Mx 21 19
micr sec
Mx Z 1.4 15
Gulf of California
(h = 10 km).
M = 5.3 (UPP,KIR).

1984
Sep. 6 KIR iP 22 29 30.4
UME iP 22 29 07.5
Southern Iran (h = N).

" 7 UPP iP 00 48 36.4
iS 00 51 45
micr sec
Mx Z 8.5 14
KIR iP 00 50 02.7
micr sec
P Z' 0.5 1.9
Mx Z 4.3 16
UME iP 00 49 21.0
iS 00 53 10
Yugoslavia (h = 15 km).
M = 5.1 (UPP,KIR).

" 7 UPP iP 11 17 56.1
KIR eP 11 18 31
Southern Iran (h = N).

" 7 UPP Mx 16 23
micr sec
Mx Z 2.4 25
KIR Mx 16 28
micr sec
Mx Z 1.4 17
Southeast India rise
(h = 10 km).
M = 5.8 (UPP,KIR).

" 7 UPP iPKP1 19 50 30.9
iPKP2 19 50 35.0
UME iPKP1 19 50 19.4
Kermadec Islands (h = N).

" 8 UPP iP 01 10 20.4
KIR iP 01 09 46.4
UME iP 01 10 05.8
Wyoming (h = 20 km).

" 8 UPP iP 06 27 45.2
KIR iP 06 27 07.4
micr sec
P Z' 0.1 1.0
UME iP 06 27 28.9
Western Idaho (h = 10 km).

" 8 UPP ePKP2 23 18 34
Kermadec Islands (h = 60 km).

" 8 KIR iP 23 49 13.4
Bonin Islands region
(h = 60 km).

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

1984
Sep. 9 UPP iPKP2 02 49 50.5
KIR ePKP1 02 49 22
UME iPKP1 02 49 31.6
South of Kermade Islands
(h = N).

" 9 KIR iP 03 05 45.9
UME iP 03 05 46.9
Eastern Kazakh SSR.
Underground explosion.

" 9 UDD iSg1 06 42 39.5
Southwestern Norway, near
61°N, 6°E.
Origin time = 06 40 42
Solution from Norwegian
station readings.

" 9 UPP iPKP 07 18 17.7
UME iPKP 07 18 08.3
South of Kermadec Islands
(h = 50 km).

" 9 KIR iP 12 24 12.4

" 9 KIR iP 13 13 27.3
micr sec
P Z' 0.1 0.8
Mx Z 2.2 15
KIR iP 13 14 06.3 D
micr sec
P Z' 0.3 1.5
Mx Z 0.9 13
UME iP 13 13 50.6 D
Azores Island region
(h = 10 km).
m = 5.6, M = 5.0 (UPP,KIR).

" 9 UPP iPKP1 18 45 22.2
i 18 45 30.4
UME iPKP1 18 45 12.2
South of Kermade Islands
(h = 80 km).

" 9 UPP iPKP1 20 26 46.7
South of Fiji Islands
(h = N).

" 10 UME iPKP1 01 17 54.4
South of Kermade Islands
(h = 70 km).

" 10 UPP iPKP2 02 17 16.5
KIR iPKP1 02 16 48.0
UME iPKP2 02 16 59.4
South of Kermadec Islands
(h = N).

1984
Sep. 10 UME iPKP1 02 49 14.9
South of Kermadec Islands
(h = N).

" 10 UPP iP 03 25 57.1
i 03 25 58.6
i 03 26 05.3
iS 03 35 38
micr sec
i Z' 0.6 1.3
Mx Z 24 17
KIR iP 03 25 17.0
i 03 25 19.4
iP'P' 03 53 30.7
micr sec
i Z' 1.0 2.0
Mx Z 29 15
UME iP 03 25 41.0
iS 03 35 00
Off coast of northern
California (h = 10 km).
m = 6.6, M = 6.7 (UPP,KIR).

" 10 KIR iP 05 26 36.8
Kashmir-Xinjiang border region
(h = 55 km).

" 10 UPP iP 21 23 43.1
KIR iP 21 24 13.9
Southern Iran (h = N).

" 11 KIR iP 00 03 39.0
Off coast of northern
California (h = 10 km).

" 11 UPP iPKP 07 35 32.1
iSKP1 07 38 44.4
KIR iPKP 07 35 17.8
micr sec
PKP Z' 0.2 1.0
UME iPKP 07 35 23.6
Vanuatu Islands (h = 130 km).

" 11 KIR i(P) 21 14 07.1

" 12 UPP iP 18 08 44.5
KIR iP 18 09 11.6 C
micr sec
P Z' 0.1 0.9
Southern Iran (h = N).

" 12 KIR iP 22 09 14.2
East Central Pacific Ocean
(h = 10 km).

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

1984
Sep. 13 UPP Mx 08 29
micr sec
Mx Z 1.8 19
KIR Mx 08 30
micr sec
Mx Z 1.1 15
Near coast of Nicaragua
(h = 55 km).
M = 5.5 (UPP,KIR).
M not corrected for focal
depth.

" 13 KIR iP 11 33 32.1 C

" 13 KIR iP 14 09 43.7
UME iP 14 09 58.2
Bonin Islands region
(h = 25 km).

" 13 KIR iP 14 11 14.8
UME iP 14 11 34.6
Southern Nevada.
Underground explosion.

" 13 UME iP 21 30 47.3

" 13 UME iP 23 36 46.7

" 14 UPP iP 00 00 18.5
i 00 00 23.9
iS 00 09 42
micr sec
P Z' 0.3 1.2
Mx Z 24 18
KIR iP 23 59 40.3
micr sec
P Z' 1.5 2.5
Mx Z 23 16
UME iP 03 59 56.3
iS 00 09 02
Honshu, Japan (h = 10 km).
m = 6.4, M = 6.6 (UPP,KIR).

" 14 UME iP 00 26 59.9

" 14 KIR iP 03 14 13.3
Mindanao, Philippine Islands
(h = 45 km).

" 14 UME iPKP1 07 28 46.2
South of Kermadec Islands
(h = N).

" 14 UPP ePKP2 09 58 36
UME iPKP1 09 58 10.5
South of Kermadec Islands
(h = N).

1984
Sep. 14 UPP iP 22 25 59.2
iS 22 35 22
micr sec
P Z' 0.1 1.0
Mx Z 3.0 16
KIR iP 22 25 21.9
micr sec
Mx Z 2.7 15
UME iP 22 25 38.2 C
iS 22 34 45
Honshu, Japan (h = 10 km).
M = 5.7 (UPP,KIR).

" 14 UPP iP 22 50 39.8
KIR iP 22 50 03.5
UME iP 22 50 18.9
Honshu, Japan (h = 10 km).

" 15 UPP iPKP1 11 17 49.3
KIR iPKP 11 17 48.0
UME iPKP 11 17 49.5
Fiji Islands region
(h = 600 km).

" 15 UME iP 19 21 15.3

" 15 KIR iP 20 04 46.6
UME iP 20 05 00.1
East Central Pacific Ocean
(h = 10 km).

" 15 UME iP 23 24 43.5
Caribbean Sea (h = 10 km).

" 16 UPP iP 00 38 49.9
KIR iP 00 38 34.0 C
micr sec
P Z' 0.1 1.0
UME iP 00 38 39.5
Talaud Islands (h = 180 km).

" 16 UPP ipP 01 36 30.1
KIR eP 01 36 13
Burma-India border region
(h = 40 km).

" 16 UME iP 03 14 32.1

" 16 UPP IPKP1 07 27 34.8
micr sec
Mx Z 1.3 16
KIR ePKP 07 27 19
UME iPKP1 07 27 22.7
South of Kermadec Islands
(h = 10 km).

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

1984 Sep. 16 KIR iPdiff 10 36 16.2
ipP 10 38 31.7
UME i 10 39 25.2
Bali Sea.
h = 650 km (KIR).

" 16 UPP iP 13 22 00.0
UME iP 13 21 43.1
Southwestern Ryukyu Islands
(h = 110 km).

" 16 UPP iP 13 36 36.8
UME iP 13 36 18.7

" 16 UME iP 14 12 30.5

" 16 UPP iPKP1 15 13 43.7
UME iPKP1 15 13 33.1
South of Kermadec Islands
(h = 10 km).

" 16 UPP iP 17 52 47.5
KIR iP 17 52 56.5 C
UME iP 17 52 46.0
Hindu Kush region (h = 200 km).

" 16 UPP iPKP1 22 46 07.7
UME ePKP 22 46 02
South of Tonga Islands
(h = N).

" 16 UPP iP 23 09 49.2
UME iP 23 09 31.8
Ryukyu Islands region
(h = 10 km).

" 17 UME iP 00 46 26.6

" 17 UPP iP 06 54 29.2
iS 07 05 05
iSS 07 10 44
micr sec
Mx Z 2.6 19
KIR eP 06 54 54
micr sec
Mx Z 1.5 18
UME eP 06 54 39
iS 07 05 23
iSS 07 11 03
Mascarene Islands region
(h = 10 km).
M = 5.6 (UPP,KIR).

" 17 UME iP 08 59 14.4

" 17 UPP iPKP 09 28 39.5
iPKP2 09 28 45.8
(cont.)

1984 Sep. 17 (cont.)
UPP micr sec
Mx Z 8.1 22
KIR ePKP 09 28 22
micr sec
Mx Z 3.8 19
UME iPKP 09 28 28.0
South of Kermadec Islands
(h = 10 km).
M = 6.4 (UPP,KIR).

" 17 UME iP 09 55 47.4

" 17 UME iPKP1 10 58 11.5
South of Kermadec Islands
(h = 10 km).

" 17 UME iP 11 48 35.0

" 17 KIR iP 13 17 03.4
UME iP 13 17 51.1
Chagos Archipelago region
(h = 10 km).

" 17 UME iP 15 18 39.9

" 17 UME iP 19 20 31.2

" 17 UME iP 20 41 45.9

" 17 UPP iP 21 06 59.1
KIR iP 21 06 27.5
UME iP 21 06 36.5
Central USSR.
Underground explosion.

" 18 UME iP 00 06 09.1

" 18 UME iPKP1 03 34 54.2
South of Kermadec Islands
(h = N).

" 18 UPP iSg1 03 51 05.7
UDD iSg1 03 50 03.9
Southern Norway, near 60°N,
7°E.
Origin time = 03 48 18.
M_L(UPP) = 2.3 1.
By combination with Norwegian
station readings.

" 18 UME eP 03 58 51

" 18 KIR iPKP 04 29 44.1
Fiji Islands region
(h = 610 km).

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

1984
Sep. 18 KIR iP 05 48 22.8
UME iP 05 48 40.2
Honshu, Japan (h = 120 km).

" 18 UPP iP 13 31 19.6
iS 13 35 42
micr sec
P Z' 0.1 1.0
Mx Z 4.8 18
KIR iP 13 32 07.2
micr sec
P Z' 0.1 1.0
Mx Z 3.9 12
UME iP 13 31 38.0
iS 13 36 12
Turkey (h = 10 km).
m = 5.5, M = 5.2 (UPP,KIR).

" 18 UPP iP 17 14 25.3 D
iS 17 24 03
micr sec
P Z' 1.6 1.0
Mx Z 94 18
KIR iP 17 13 48.1 D
micr sec
P 1.1 1.0
Mx Z 56 18
UME iP 17 14 04.6 D
iS 17 23 18
Off east coast of Honshu
(h = 50 km).
m = 6.9, M = 7.0 (UPP,KIR).

" 18 UME iP 21 31 34.1
i 21 31 44.5
South of Honshu, Japan
(h = N).

" 19 KIR iP 00 34 17.8
Chagos Archipelago region
(h = 10 km).

" 19 KIR iP 00 37 07.5

" 19 UPP iP 01 32 37.6 D
iS 01 42 16
micr sec
P Z' 0.2 1.2
Mx Z 6.1 17
KIR iP 01 32 00.4 D
micr sec
P Z' 0.1 1.4
Mx Z 4.6 16
UME iP 01 32 16.9 D
iS 01 41 38
Off east coast of Honshu,
Japan (h = 45 km).
m = 5.8, M = 5.9 (UPP,KIR).

1984
Sep. 19 UPP iPKP1 04 09 58.0
KIR ePKP 04 09 40
UME iPKP1 04 09 47.7
South of Kermadec Islands
(h = N).

" 19 UPP iPKP1 04 52 42.5
micr sec
Mx Z 2.7 22
KIR ePKP 04 52 24
micr sec
Mx Z 1.0 17
UME iPKP1 04 52 31.8
South of Kermadec Island
(h = N).
M = 5.9 (UPP,KIR).

" 19 UME iP 08 30 24.7
Off east coast of Honshu,
Japan (h = 45 km).

" 19 KIR iP 08 44 00.6
Central Mid-Atlantic Ridge
(h = 10 km).

" 19 KIR iP 08 52 25.9
UME iP 08 52 39.4
Bonin Islands region
(h = 450 km).

" 19 UPP iPKP2 20 43 23.1
UME iPKP1 20 43 04.6
Kermadec Islands region
(h = N).

" 19 UME iP 23 21 17.3
Off east coast of Honshu,
Japan (h = 30 km).

" 20 UPP iP 04 27 26.4
KIR iP 04 26 31.5 C
micr sec
P Z' 0.2 1.0
UME iP 04 27 00.0 C
Southern Alaska (h = 20 km).

" 20 KIR iP 04 37 10.1
micr sec
P Z' 0.1 1.0
Southern Alaska (h = 25 km).

" 20 UME iP 09 53 34.4

" 20 UPP iPKP1 13 02 57.0
South of Fiji Islands
(h = 490 km).

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

1984
Sep. 20 UPP iP 17 08 08.7
iS 17 17 47
micr sec
Mx Z 5.8 12
KIR iP 17 07 31.0
micr sec
Mx Z 3.7 14
UME iP 17 07 47.1
iS 17 17 07
Off east coast of Honshu
(h = 30 km).
M = 6.0 (UPP,KIR).

" 20 UPP iP 19 32 33.0
micr sec
P Z' 0.1 1.0
KIR iP 19 32 05.3
micr sec
P Z' 0.4 1.0
UME iP 19 32 17.2
Mariana Islands region
(h = 45 km).
m = 6.4 (UPP,KIR).

" 20 UPP iP 22 05 38.7
iS 22 15 17
micr sec
P Z' 0.1 0.7
Mx Z 7.7 13
KIR iP 22 04 59.3
micr sec
Mx Z 6.1 16
UME iP 22 05 17.4
iS 22 14 38
Off east coast of Honshu,
Japan (h = 35 km).
M = 6.1 (UPP,KIR).

" 20 UPP iP 23 26 17.9
i 23 26 32.5
KIR iP 23 25 40.5
UME iP 23 25 57.0
Off east coast of Honshu,
Japan (h = 40 km).

" 20 UME iP 23 50 44.9
Off east coast of Honshu,
Japan (h = 50 km).

" 21 UPP iSKP1 03 55 34.7
Vanuatu Islands (h = 160 km).

" 21 UPP iPKP2 06 41 35.2
Kermadec Islands (h = N).

" 21 UME iPKP 09 37 11.5
Santa Cruz Islands
(h = 150 km).

1984
Sep. 21 UPP iP 09 41 35.4
i 09 41 37.3
iS 09 51 14
micr sec
i Z' 0.2 1.0
Mx Z 6.5 14
KIR iP 09 40 58.4
micr sec
P Z' 0.3 1.3
Mx Z 2.7 12
UME iP 09 41 14.5 D
iS 09 50 34
Off east coast of Honshu,
Japan (h = 40 km).
m = 6.1, M = 5.9 (UPP,KIR).

" 21 UME iP 10 44 03.4

" 21 UME iPKP1 17 06 32.8
North Island, New Zealand
(h = 150 km).

" 21 UPP ePKP1 19 03 21
UME iPKP1 19 03 09.3
South of Kermadec Islands
(h = N).

" 22 UME iPKP1 03 21 47.8
South of Kermadec Islands
(h = 120 km).

" 22 UPP iP 03 26 39.9 C
micr sec
P Z' 0.1 0.9
KIR iP 03 26 49.1 C
micr sec
P Z' 0.2 0.6
UME iP 03 26 38.6 C
Hindu Kush region (h = 210 km).
m = 5.6 (UPP,KIR).

" 22 UPP iP 09 20 33.5
eS 09 23 50
KIR eP 09 20 28
UME iP 09 20 25.8
Eastern India (h = N).

" 22 UPP iPKP1 10 35 02.5
KIR iPKP 10 34 43.5
UME iPKP1 10 34 51.9
South of Kermadec Islands
(h = N).

" 22 UPP iPKP1 12 03 03.4
KIR ePKP1 12 02 43
UME iPKP1 12 02 52.9 C
South of Kermadec Islands
(h = N).

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

1984
Sep. 22 UPP iP 18 23 48.2
iS 18 34 14
iScS 18 34 50
micr sec
P Z' 0.1 1.0
Mx Z 2.5 23
KIR iP 18 23 21.2 C
micr sec
P Z' 0.8 2.0
Mx Z 1.9 23
UME iP 18 23 32.6 C
iS 18 33 55
iScS 18 34 23
Mariana Islands (h = 100 km).
m = 6.4, M = 5.6 (UPP,KIR).
M not corrected for focal depth.

" 22 UPP iP 21 31 07.2
i 21 31 09.0
iS 21 41 09
micr sec
i Z' 0.1 1.0
Mx Z 4.5 16
KIR iP 21 30 46.5
i 21 30 49.0
micr sec
i Z' 0.1 1.0
Mx Z 1.3 13
UME iP 21 30 53.7
i 21 30 55.6
iS 21 40 43
Luzon, Philippine Islands (h = 45 km).
m = 5.8, M = 5.7 (UPP,KIR).

" 22 UPP iPKP1 22 04 00.9
micr sec
Mx Z 7.0 24
KIR ePKP1 22 03 43
UME iPKP1 22 03 51.4
South of Kermadec Islands (h = 45 km).
M = 6.2 (UPP,KIR).

" 23 UME iPKP1 00 00 04.3
South of Kermadec Islands (h = N).

" 23 UPP iP 12 13 03.3
KIR iP 12 12 26.5
UME iP 12 12 41.8
Sea of Japan (h = 350 km).

" 23 UPP iP 17 17 25.1
i 17 17 26.0
i 17 17 35.0
(cont.)

1984
Sep. 23 (cont.)
UPP i 17 17 54.6
iS 17 26 33
micr sec
i Z' 0.2 0.9
Mx Z 4.4 23
KIR iP 17 16 31.7 C
i 17 16 32.5
micr sec
i Z' 0.8 0.8
Mx Z 2.1 19
UME iP 17 16 57.5
Fox Islands, Aleutian Islands (h = N).
m = 6.5, M = 5.5 (UPP,KIR).

" 23 UPP iP 22 44 18.2
KIR iP 22 45 24.8 C
micr sec
P Z' 0.1 0.6
UME iP 22 44 50.2
Crete (h = 50 km).

" 23 KIR iP 23 19 34.7
Near east coast of Honshu, Japan (h = 60 km).

" 24 KIR iSg1 03 34 14.8
UME iPg1 03 33 40.6
i 03 33 42.5
iSg1 03 34 08.1
MYV iSg1 03 35 24.0
Norrbotten, Sweden, 65.7°N, 22.6°E.
Origin time = 03 33 03.
M_L (UPP) = 2.6 (0.30) 3.

" 24 UPP iPKP1 15 12 06.3
UME iPKP1 15 11 55.1
South of Kermadec Islands (h = 40 km).

" 24 UPP ePKP1 15 25 28
UME iPKP1 15 25 17.5
Kermadec Islands region (h = N).

" 24 UPP iPKP1 15 30 10.1
UME iPKP1 15 29 59.2
South of Kermadec Islands (h = N).

" 24 UPP iP 16 15 26.1
KIR iP 16 14 36.9
Kuril Islands region (h = 45 km).

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

1984					
Sep.	24	UME	iP		19 44 43.8
"	24	UPP	iP		23 29 17.3
					micr sec
			P	Z'	0.1 1.0
		KIR	iP		23 28 40.4
		UME	iP		23 28 56.6 D
		Off east coast of Honshu, Japan (h = 45 km).			
"	25	KIR	ePKP		03 25 22
		UME	iPKP		03 25 30.6
		South of Fiji Islands (h = 580 km).			
"	25	UME	iP		04 50 44.8
		Off east coast of Honshu, Japan (h = N).			
"	25	KIR	iP		12 52 57.0
		UME	iP		12 53 10.1
		Volcano Islands (h = 150 km).			
"	26	UPP	iP		01 51 56.2
					micr sec
			Mx	Z	1.4 17
		KIR	iP		01 51 38.3
			ipP		01 51 47.2
					micr sec
			P	Z'	0.1 1.0
			Mx	Z	0.8 15
		UME	iP		01 51 44.4
			ipP		01 51 51.2
		Luzon, Philippine Islands. h = 30 km (KIR,UME). M = 5.4 (UPP,KIR).			
"	26	UPP	iPKP1		11 52 15.5
		KIR	iPKP		11 52 06.1
		South of Fiji Islands (h = 520 km).			
"	26	KIR	iP		11 54 47.6
		UME	iP		11 54 58.5
"	26	KIR	iP		22 35 38.8
		Mariana Islands (h = 35 km).			
"	27	UPP	iP		11 40 37.3
		KIR	iP		11 40 52.1
		Uzbek SSR (h = N).			
"	27	KIR	iP		16 15 27.9
		Western Iran (h = N).			
"	27	i(P)			21 18 30.7
1984					
Sep.	27	KIR	i(P)		21 45 43.4
"	28	UPP	iPKP1		00 23 08.2
			i		00 35 12
			iSS		00 45 02
					micr sec
			Mx	Z	36 21
		KIR	i(PKP)		00 22 51.3
			iPKP		00 22 54.8
			iSKP1		00 25 33.2
					micr sec
			PKP	Z'	1.8 2.7
			Mx	Z	9.4 19
		UME	iPKP1		00 22 57.4
		South of Tonga Islands (h = 20 km). M = 6.9 (UPP,KIR).			
"	28	UME	iPKP1		02 22 50.6
		Kermadec Islands region (h = N).			
"	28	UPP	iPKP1		03 22 24.5
		KIR	i(PKP)		03 22 06.9
			iPKP		03 22 18.4
			iSKP1		03 25 09.9
		UME	i(PKP)		03 22 14.4
			iPKP		03 22 19.3
			iSKP1		03 25 22.7
		Fiji Islands region (h = 360 km).			
"	28	UPP	iPKP1		06 13 23.2
		Kermadec Islands region (h = N).			
"	28	UPP	iSg1		08 02 30.2
		KIR	iSg1		08 04 06.4
		UME	iPg1		08 01 45.5
			iSg1		08 02 10.4
		MYV	iPg1		08 01 42.4
			iSg1		08 02 04.2
		Off coast of Medelpad, Sweden, 62.3°N, 17.8°E. Origin time = 08 01 13. M_L(UPP) 2.3 (0.41) 2.			
"	28	UPP	iPP		11 02 34.1
					micr sec
			Mx	Z	2.6 19
		KIR	ePKP		10 59 48
			iPP		11 02 14.7
					micr sec
			Mx	Z	3.1 21
		UME	ePP		11 02 31
		Easter Island region (h = 10 km). M = 6.0 (UPP,KIR).			

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

1984
Sep. 28 UPP iP 12 20 01.6 C
micr sec
P Z' 0.2 0.9
KIR iP 12 20 10.1 C
micr sec
P Z' 0.2 0.6
UME iP 12 20 00.0 C
Hindu Kush region
(h = 220 km).
m = 5.8 (UPP,KIR).

" 28 KIR iP 15 54 46.1
East Central Pacific Ocean
(h = 10 km).

" 28 UPP iP 19 57 11.7
KIR iP 19 58 26.8
UME iP 19 57 49.1
Greece (h = 10 km).

" 28 KIR eP 21 47 22
Tibet (h = 55 km).

" 29 KIR iP 02 27 42.0
Off w. coast of northern
Sumatera (h = 40 km).

" 29 UPP iP 10 38 33.8
KIR iP 10 37 57.2
UME iP 10 38 12.8
Near east coast of Honshu,
Japan (h = 70 km).

" 29 KIR eP 11 45 15
Mindanao, Philippine Islands
(h = 45 km).

" 29 KIR iP 14 28 13.6
Southern Alaska (h = 60 km).

" 30 UPP iP 19 29 57.3
KIR iP 19 29 31.7
UME iP 19 29 41.3
Ryukyu Islands region
(h = N).

" 30 KIR iP 21 44 43.3
Peru-Brazil border region
(h = 160 km).

" 30 UPP iP 21 45 39.7
UME iP 21 45 24.1
i 21 45 32.5
India-Bangladesh border
region (h = N).

1984
Sep. 30 UPP Mx 21 55
micr sec
Mx Z 2.8 23
KIR Mx 21 57
micr sec
Mx Z 1.9 20
New Britain region (h = 80 km).
M = 5.8 (UPP,KIR).
M not corrected for focal
depth.

" 30 UPP iP 23 35 53.3
iS 23 39 13
micr sec
Mx Z 1.8 10
KIR iP 23 35 35.1
micr sec
P Z 0.3 1.5
Mx Z 2.2 14
UME iP 23 35 47.9
Iceland (h = 10 km).

April 23, 1986

Conny Holmqvist
Ota Kulhánek
Klaus Meyer
Yueping Zhou

SEISMOLOGICAL DEPARTMENT
BOX 12019
S-750 12 UPPSALA
SWEDEN

SEISMOLOGISKA AVDELNINGEN
BOX 12019
Z50 12 UPPSALA

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

O C T O B E R 1 - 31, 1984

1984						
Oct.	1	UPP	e		09 39 10	
		KIR	eP		09 38 26	
			i		09 38 42.8	
		UME	iP		09 38 36.9	
			i		09 38 49.0	
		Near east coast of Honshu, Japan (h = 70 km).				
"	1	UPP	iPKP1		09 50 14.9	
		KIR	iPKP1		09 49 53.3	
		UME	iPKP1		09 50 04.6	
		South of Kermadec Islands (h = N).				
"	1	UPP	iPKP2		12 23 26.7	
			i		12 23 37.7	
		UME	iPKP1		12 23 21.6	
			i		12 23 29.1	
		Kermadec Islands (h = 220 km).				
"	2	UPP			micr sec	
			Mx		3.8 23	
		KIR	iPKP		01 56 13.1	
					micr sec	
			PKP	Z'	0.1 1.1	
			Mx	Z	1.9 20	
		UME	iPKP		01 56 20.4 C	
		Vanuatu Islands (h = 5 km). M = 6.0 (UPP,KIR).				
"	2	UPP	iP		02 32 11.2	
		KIR	eP		02 32 32	
		UME	iP		02 32 16.9	
			i		02 32 20.4	
		Pakistan (h = N).				
"	2	UPP	iP		03 28 10.2	
					micr sec	
			P	Z'	0.1 0.8	
		(cont.)				
1984						
Oct.	2	(cont.)				
		KIR	iP		03 28 32.1	
					micr sec	
			Mx	Z	1.7 14	
		UME	iP		03 28 15.9	
		Pakistan (h = 5 km).				
"	2	UPP	iP		04 54 23.3 C	
					micr sec	
			P	Z'	0.2 1.0	
			Mx	Z	3.2 11	
		KIR	iP		04 53 54.7 C	
			i		04 54 04.9	
					micr sec	
			P	Z'	0.2 1.0	
			Mx	Z	1.1 13	
		UME	iP		04 54 05.7 C	
			i		04 54 14.4	
		Ryukyu Islands (h = 30 km). m = 6.1, M = 5.7 (UPP,KIR).				
"	2	UPP	eP		05 32 06	
		Ryukyu Islands (h = N).				
"	2	UPP	iPKP1		06 40 16.9	
			iPKP2		06 40 21.0	
		UME	iPKP1		06 40 04.5	
		Kermadec Islands region (h = 360 km).				
"	2	KIR	ePKP		20 00 49	
		Vanuatu Islands (h = 25 km).				
"	3	KIR	eP		00 23 09	
		UME	iP		00 23 24.7	
		Honshu, Japan (h = 15 km).				

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

1984
Oct. 3 UPP iP 06 08 24.9
micr sec
P Z' 0.1 0.6
KIR iP 06 08 09.6 C
micr sec
P Z' 0.1 1.0
UME iP 06 08 11.3
Southern Xinjiang, China.
m = 5.8 (UPP,KIR).
Underground explosion.

" 3 KIR eP 21 57 31
i 21 57 36.7
Southwest of Sumatera
(h = N).

" 4 UPP iP 00 10 10.8
i 00 10 16.0
KIR iP 00 10 58.0
UME iP 00 11 07.0 C
i 00 11 16.5

" 4 KIR iPKP1 00 43 57.1
UME ePKP 00 43 52
iPKP1 00 43 56.9
West of Macquarie Island
(h = 10 km).

" 4 UPP iP 03 09 05.8
ipP 03 09 25.2
KIR iP 03 08 32.3
ipP 03 08 51.1
UME iP 03 08 46.5
ipP 03 09 05.8
South of Honshu, Japan.
h = 70 km (UPP,KIR,UME).

" 4 UME iP 04 31 50.5
Off east coast of Honshu,
Japan (h = 30 km).

" 4 UPP iPKP1 10 01 20.1
South of Fiji Islands
(h = 90 km).

" 4 UPP iP 10 20 05.9 C
eS 10 24 03
micr sec
P Z' 0.2 0.7
Mx Z 1.6 12
KIR iP 10 21 19.2
micr sec
Mx Z 0.6 12
UME iP 10 20 43.6
i 10 20 46.3
i 10 20 57.9
Ionian Sea (h = 40 km).
M = 4.6 (UPP,KIR).

1984
Oct. 4 UPP iP 16 45 56.0
micr sec
Mx Z 11 20
KIR iP 16 45 45.2
i 16 45 56.8
micr sec
Mx Z 6.0 19
UME iP 16 45 52.9
iPP 16 50 01.8
Sumbawa Island region
(h = 35 km).
M = 6.3 (UPP,KIR).

" 4 UPP Mx 19 31
micr sec
Mx Z 1.0 13
KIR Mx 19 33
micr sec
Mx Z 0.8 15
North Atlantic ridge
(h = 10 km).
M = 4.6 (UPP,KIR).

" 4 UPP iP 22 34 03.8
i 22 34 09.4
KIR iP 22 34 02.3
i 22 34 06.5
micr sec
Mx Z 1.1 15
UME iP 22 33 59.8
i 22 34 03.9
South Burma (h = 20 km).

" 5 UPP iP 02 53 39.1
KIR iP 02 53 19.4
i 02 53 28.6
UME iP 02 53 25.5
Philippine Islands region
(h = 30 km).

" 5 UPP iP 03 35 42.5
KIR iP 03 35 13.4
Ryukyu Islands (h = 35 km).

" 5 UME iP 04 43 47.9

" 5 KIR iP 10 01 28.6 D
micr sec
P 0.1 1.0
UME iP 10 01 42.4 D
East Central Pacific Ocean
(h = 10 km).

" 5 UPP iP 10 42 19.8 D
micr sec
P Z' 0.1 1.0
(cont.)

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

1984
Oct. 5 (cont.)

KIR iP 10 42 31.2 D
micr sec
P Z' 0.3 1.0
UME iP 10 42 28.5 D
Windward Islands (h = 60 km).
m = 5.9 (UPP,KIR).

" 5 UPP iP 15 57 19.7
KIR iP 15 56 26.4
Andreanof Islands, Aleutian Is. (h = 70 km).

" 5 UPP iP 17 18 27.2
KIR eP 17 17 56
UME eP 17 18 09
i 17 18 12.7
Volcano Islands region (h = N).

" 5 KIR iPKP 19 27 41.3
UME iPKP 19 27 48.6
New Britain region (h = 55 km).

" 5 UPP iP 21 03 36.1
iS 21 07 26
micr sec
P Z' 0.1 1.0
Mx Z 5.8 11
KIR iP 21 04 49.1
micr sec
Mx Z 3.0 11
UME iP 21 04 12.5
iS 21 08 35
Aegean Sea (h = 10 km).
M = 5.2 (UPP,KIR).

" 6 UPP iP 02 10 29.5
KIR iP 02 09 54.2 D
UME iP 02 10 09.6 D
South of Honshu, Japan (h = 220 km).

" 6 UPP Mx 04 08
micr sec
Mx Z 2.7 22
KIR Mx 04 06
micr sec
Mx Z 1.6 21
Samoa Islands region (h =N).
M = 5.8 (UPP,KIR).

" 6 UME eP 04 56 54
Hindu Kush region (h = 160 km).

1984
Oct. 6 UPP iSg1 05 28 11.9
UDD iSg1 05 27 05.5
Southwestern Norway, near 59 1/4°N, 6 1/2°E.
Origin time = 05 25 15.
M_L (UPP) = 2.4 1.
By combination with Norwegian station readings.

" 7 UDD iSg1 07 21 21.3
Southern Norway, near 60°N, 7°E.
Origin time = 07 18 54.
Solution from NORSAR bulletin.

" 8 UPP iP 13 01 11.5
KIR iP 13 00 37.1
UME iP 13 00 51.6
South of Honshu, Japan (h = 360 km).

" 9 UPP eP 02 17 24
Southern Greece (h = 55 km).

" 9 UPP ePKP2 03 01 13
UME iPKP1 03 00 50.0
i 03 00 53.0
South of Kermadec Islands (h = N).

" 9 UPP iP 04 35 44.4
iS 04 39 53
micr sec
P Z' 0.1 1.0
Mx Z 3.5 9
KIR iP 04 36 58.0
micr sec
P Z' 0.1 1.1
Mx Z 1.8 11
UME iP 04 36 21.8
iS 04 41 00
Southern Greece (h = 25 km).
m = 5.4, M = 5.1 (UPP,KIR).

" 9 UPP eP 08 17 18
KIR iP 08 18 28.2
UME iP 08 17 55.5
Southern Greece (h = 45 km).

" 9 UPP iP 10 04 42.5
micr sec
P Z' 0.1 1.0
KIR iP 10 04 09.6
UME iP 10 04 23.9
South of Honshu, Japan (h = 420 km).

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

1984

Oct.	9	KIR	iP		23 14 41.6	
		UME	iP		23 14 55.0	
		Golf of California				
		(h = 10 km).				
"	10	UME	iPKP1		12 37 43.1	
		Keramdec Islands region				
		(h = N).				
"	10	UPP	iPKP1		16 48 18.2	
		UME	iPKP1		16 48 07.3	
			i		16 49 54.0	
		Kermadec Islands region				
		(h =N).				
		The second phase at Umeå				
		(UME) may indicate a new				
		event.				
"	10	UPP	iPKP1		19 24 01.2	
			ipPKP		19 26 42.6	
			i		19 26 52.5	
		KIR	iPKP		19 23 54.4	
			ipPKP		19 26 18.0	
		UME	i(PKP)		19 23 48.0	
			iPKP		19 24 01.8	
			ipPKP		19 26 30.1	
			i		19 26 34.7	
		Fiji Islands region				
		(h = 680 km).				
"	10	UPP	iP		21 16 16.6	
		Southern Greece (h = 100 km).				
"	10	UPP	i(P)		23 55 43.6	
"	11	UME	iPKP1		05 10 56.4	
		South of Kermadec Islands				
		(h = N).				
"	11	UPP	iPKP1		08 41 08.1	
			iPKP2		08 41 17.3	
		KIR	iPKP1		08 40 49.0	
		UME	iPKP1		08 40 58.7	
		South of Kermadec Islands				
		(h = 140 km).				
"	11	UPP	iSg1		10 48 52.4	
		UDD	iSg1		10 47 48.4	
"	11	UME	iP		13 21 15.9	
		Near east coast of Honshu,				
		Japan (h = 55 km).				
"	12	UPP	ePKP1		01 10 33	
		UME	iPKP1		01 10 21.4	D
			i		01 10 32.9	
		South of Kermadec Islands				
		(h = N).				

1984

Oct.	12	UPP	iP		10 00 11.1	D
		KIR	iP		09 59 22.6	D
					micr sec	
			P	Z'	0.1 0.9	
		UME	iP		09 59 45.0	D
		Sea of Okhotsk (h = 500 km).				
"	12	UPP	Mx		19 36	
					micr sec	
			Mx	Z	10 24	
		KIR	Mx		19 33	
					micr sec	
			Mx	Z	5.8 23	
		Fiji Islands (h = 15 km).				
		M = 6.4 (UPP,KIR).				
"	13	UPP	Mx		06 45	
					micr sec	
			Mx	Z	11 24	
		KIR	Mx		06 43	
					micr sec	
			Mx	Z	3.3 20	
		Fiji Islands (h = 10 km).				
		M = 6.3 (UPP,KIR).				
"	13	UPP	iP		12 02 37.6	
		KIR	iP		12 02 15.8	
		Taiwan region (h = 70 km).				
"	13	UPP	iP		17 31 03.2	
			iS		17 41 30	
					micr sec	
			Mx	Z	8.1 20	
		KIR	iP		17 30 49.1	
					mic sec	
			P	Z'	0.6 2.0	
			Mx	Z	3.1 16	
		UME	iP		17 30 57.6	
		Near coast of Oaxaca, Mexico				
		(h = 30 km).				
		M = 6.0 (UPP,KIR).				
"	13	UPP	iP		18 53 47.8	
		KIR	iP		18 52 55.2	
		UME	iP		18 53 22.2	
		Unimak Island region				
		(h = N).				
"	14	UPP	iP		03 29 28.1	C
					micr sec	
			P	Z'	0.3 1.1	
		KIR	iP		03 28 40.1	C
					micr sec	
			P	Z'	0.4 1.5	
		UME	iP		03 29 02.4	C
		Kuril Islands (h = N).				
		m = 6.2 (UPP,KIR).				

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

1984
Oct. 14 KIR iP 08 46 58.0
UME iP 08 46 54.1
Northern Sumatera
(h = 40 km).

" 15 UPP iP 05 55 31.1
KIR iP 05 54 37.5
UME iP 05 55 03.8
Fox Islands, Aleutian
Islands (h = N).

" 15 UPP i(PKP) 10 40 01.2
iPKP 10 40 13.4
iSKP 10 42 44.1
micr sec
Mx Z 11 18
KIR e(PKP) 10 39 46
iPKP 10 39 58.7
ipPKP 10 40 33.0
iSKP 10 42 31.4
micr sec
Mx Z 3.4 17
UME i(PKP) 10 39 54.4
i(PKP) 10 39 58.4
iPKP 10 40 05.4
ipPKP 10 40 39.4
Tonga Islands.
h = 130 km (KIR,UME).
M = 6.4 (UPP,KIR).
M not corrected for focal
depth.

" 16 UPP iP 19 03 46.9
Afghanistan-USSR border
region (h = 70 km).

" 17 UPP iP 09 21 28.3
i 09 22 01.2
UME iP 09 21 02.3
Kuril Islands (h = 200 km).

" 18 UPP iP 09 51 39.5
i 09 51 41.8
micr sec
i Z' 0.4 1.5
KIR iP 09 52 27.0
UME iP 09 51 59.2
Turkey (h = 60 km).

" 18 UPP iP 15 41 19.2
KIR iP 15 40 46.9
UME iP 15 41 05.9
Wyoming (h = N).

" 18 UPP iP 21 53 54.7
KIR iP 21 53 23.9
(cont.)

1984
Oct. 18 UME iP 21 53 36.8
Bonin Islands region
(h = 510 km).

" 19 UPP eP 06 48 13
Hindu Kush region (h = N).

" 19 UPP iPKP 14 56 58.2
KIR e(PKP) 14 56 40
iPKP 14 56 42.2
UME iPKP 14 56 48.6
Tonga Islands (h = 120 km).

" 19 UPP iPKP1 17 19 50.7
iPKP2 17 20 03.4
KIR iPKP1 17 19 32.0
UME iPKP1 17 19 41.4
East of North Island, N.Z.
(h = N).

" 19 UPP iP 17 58 29.7
KIR iP 17 58 14.7
UME iP 17 58 19.1
Molucca Passage (h = 80 km).

" 19 UPP iPKP1 20 19 38.6
KIR ePKP1 20 19 19
Kermadec Islands (h = N).

" 19 UPP iP 23 12 47.9
KIR iP 23 12 33.0
UME iP 23 12 42.4
Near coast of Guerrero,
Mexico (h = 35 km).

" 20 UPP eP 03 32 07
KIR eP 03 31 19
Kuril Islands (h = N).

" 20 UPP iPKP1 05 10 34.1
iPKP2 05 10 45.4
KIR iPKP1 05 10 15.7
i 05 10 24.8
UME iPKP1 05 10 26.0
East of North Island, N.Z.
(h = N).

" 20 KIR iP 15 51 49.1
Fox Islands, Aleutian
Islands (h = N).

" 20 UPP iPKP1 21 40 25.9
KIR iPKP 21 40 17.5
iSKP1 21 42 51.6
Fiji Islands region
(h = 580 km).

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

1984
Oct. 21 KIR i 04 03 57.3
UME iP 04 03 29.7
Ascension Islands region
(h = 10 km).

" 21 UPP iP 18 09 45.3
KIR iP 18 10 31.9
Turkey (h = 30 km).

" 21 KIR eP 19 03 08
i 19 03 16.1
UME iP 19 03 48.6
i 19 03 57.0
North of Severnaya Zemlya
(h = 10 km).

" 22 UPP iPKP1 15 46 44.5
iPKP2 15 46 49.3
UME iPKP1 15 46 31.2
Kermadec Islands region
(h = N).

" 22 UME iPKP1 18 21 32.5
South of Kermadec Islands
(h = N).

" 22 UPP iP 18 28 44.6
UME iP 18 29 23.2
Tyrrhenian Sea (h = 380 km).

" 23 UPP i(P) 05 35 59.4

" 23 UPP iP 08 15 05.4
KIR iP 08 14 10.1
Komandorsky Islands region
(h = N).

" 23 UPP iP 08 50 44.3
KIR iP 08 50 36.1
Kazakh-Xinjiang border
region (h = N).

" 23 UPP iP 21 38 29.3

" 23 UPP iP 22 15 09.4
UME iP 22 15 06.3
Afghanistan (h = N).

" 23 UPP iP 22 42 09.5
KIR iP 22 41 42.8
UME iP 22 41 51.2
Mariana Islands (h = 120 km).

" 24 UPP iPKP1 02 47 33.1
UME iPKP 02 47 26.8
iSKP1 02 50 18.7
South of Fiji Islands
(h = 480 km).

1984
Oct. 24 UME iPKP1 10 10 52.3
Kermadec Islands region
(h = N).

" 24 UME iP 12 35 43.5
i 12 35 53.9

" 25 UPP iP 06 34 25.5
i 06 34 27.4
micr sec
P Z' 0.7 0.7
UME iP 06 33 32.9 C
Novaya Zemlya.
Underground explosion.

" 25 UPP ipP 07 09 33.4
UME iP 07 08 58.5
i 07 09 08.4
Near east coast of Honshu,
Japan (h = 60 km).

" 25 UPP iP 09 54 20.3
iS 09 58 30
UME iP 09 54 56.8
Southern Greece (h = 45 km).

" 25 UPP iP 12 48 10.5
Andreanof Islands, Aleutian
Is. (h = 55 km).

" 25 UPP iP 14 42 58.9
iS 14 46 39.4
micr sec
Mx Z 1.8 9
KIR micr sec
Mx Z 1.1 8
UME iP 14 43 39.2
iS 14 47 58
Greece (h = N).

" 26 UPP iP 07 56 20.4 D
micr sec
P Z' 0.1 0.9
UME iP 07 56 40.9 D
Zambia (h = 10 km).
m = 5.8 (UPP,KIR).

" 26 UPP iP 09 02 56.2
iS 09 13 31
micr sec
Mx Z 9.2 20
KIR micr sec
Mx Z 3.8 19
UME iP 09 02 45.6
iS 09 13 15
Molucca Passage (h = 55 km).
M = 6.1 (UPP,KIR).
M not corrected for focal depth.

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

1984
Oct. 26 UPP iP 15 13 18.4
Turkey (h = 60 km).

" 26 UPP iP 20 29 47.6 C
iPP 20 31 17.4
iS 20 35 46
micr sec
P Z' 0.4 1.2
Mx Z 51 12
KIR micr sec
Mx Z 28 10
UME iP 20 29 43.8 C
iS 20 35 38
Tajik SSR (h = N).
M = 6.5 (UPP,KIR).

" 26 UPP iP 22 31 32.5
Afghanistan-USSR border
region (h = N).

" 27 UPP iP 01 57 08.1 C
micr sec
P Z' 1.2 0.7
UME iP 01 56 52.6 C
Eastern Kazakh SSR.
Underground explosion.

" 27 UPP iP 06 04 54.7
micr sec
P Z' 0.2 0.8
UME iP 06 05 01.9
Southwestern USSR.
Underground explosion.

" 27 UPP iP 06 09 54.7
micr sec
P Z' 0.1 0.8
UME iP 06 10 02.5
Southwestern USSR.
Underground explosion.

" 27 UPP iP 10 07 59.5
KIR iP 10 08 24.2
UME iP 10 08 09.5
Mid-Indian Rise (h = 10 km).

" 27 UPP iP 11 23 11.1 C
i 11 23 24.5
micr sec
P Z' 0.1 1.0
KIR iP 11 22 30.9 C
i 11 22 44.7
UME iP 11 22 48.7 C
i 11 23 02.0
Near east coast of Honshu,
Japan.
h = 50 km (UPP,KIR,UME).

1984
Oct. 27 KIR iP 18 42 27.9
UME iP 18 42 42.5 C
South of Honshu, Japan
(h = 70 km).

" 28 UPP iP 02 48 23.9
KIR iP 02 47 11.0
micr sec
P Z' 0.1 1.0
UME iP 02 47 48.8
Jan Mayen Island region
(h = 10 km).

" 29 UPP iP 09 37 30.5
micr sec
Mx Z 1.6 15
KIR iP 09 37 04.2
UME iP 09 37 13.7 C
Southwestern Ryukyu Islands
(h = 45 km).

" 29 UPP iP 15 59 44.0
KIR iP 15 59 18.1
UME iP 15 59 27.8
Southwestern Ryukyu Islands
(h = 40 km).

" 29 UPP iP 23 15 41.7
micr sec
P Z' 0.1 1.0
KIR iP 23 14 48.3
micr sec
P Z' 0.1 1.0
UME iP 23 15 13.8
Rat Islands, Aleutian
Islands (h = 40 km).
m = 5.9 (UPP,KIR).

" 29 UPP iP 23 31 04.4
iS 23 41 56
micr sec
P Z' 0.1 1.0
Mx Z 9.8 17
KIR iP 23 30 47.9
i 23 31 08.5
micr sec
P Z' 0.4 1.0
Mx Z 4.7 15
UME iP 23 30 53.0
i 23 31 14.7
iSKS 23 41 11
Mindanao, Philippine Islands
(h = 150 km).
m = 6.4, M = 6.2 (UPP,KIR).
M not corrected for focal
depth.

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

1984

Oct.	29	UME	iPg1	23 49 22.6	
			iSg1	23 49 26.9	
		MYV	iSg1	23 50 34.0	
		Västerbotten, Sweden 63.6°N, 19.7°E.			
		Origin time = 23 49 17.			
		By combination with Finnish station readings.			
"	30	UPP	iPKP	01 24 55.9	
			iSKP1	01 27 35.1	
		KIR	e(PKP)	01 24 33	
			iPKP	01 24 40.0	
			iPP	01 26 43.9	
		UME	i(PKP)	01 24 43.4	
			iPKP	01 24 46.3	
			ipPKP	01 25 27.5	
		Tonga Islands (h = 140 km).			
"	30	UPP	iP	14 44 04.3	
		KIR	iP	14 45 18.2	
		UME	iP	14 44 43.0 D	
		Southern Italy (h = 270 km).			
"	30	UPP	iP	16 26 31.7	
		UME	iP	16 26 10.4	
		Near east coast of Honshu, Japan (h = 70 km).			
"	30	UPP	iPKP2	17 40 26.5	
		UME	iPKP1	17 40 06.7	
		Kermadec Islands region (h = N).			
"	30	UPP	iPKP1	20 53 25.9	
		UME	iPKP1	20 53 16.1 C	
		Kermadec Islands region (h = N).			
"	31	UPP	iP	04 51 01.0	
				micr sec	
			P Z'	0.1 0.9	
		KIR	iP	04 50 07.2	
		UME	iP	04 50 31.9	
		Rat Island, Aleutian Islands (h = 55 km).			

June 6, 1986

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

U P P S A L A, K I R U N A, 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	(MYV)	62°56.5'N,	14°20.8'E;	h = 345 m

N O V E M B E R 1 - 30, 1984

1984					
Nov.	1	UPP	iP		04 59 40.9 C
			ipP		04 59 44.5
			i		04 59 48.4
			iS		05 08 39.3
				micr	sec
			P	Z' 0.1	1.0
			pP	Z' 1.9	1.5
			Mx	Z 183.0	21
		KIR	iP		05 00 10.2
			ipP		05 00 13.0
			i		05 00 17.6
				micr	sec
			P	Z' 0.2	1.3
			pP	Z' 1.5	2.0
			Mx	Z 60.8	21
		UME	iP		04 59 58.9
			ipP		05 00 02.2
			i		05 00 06.5
			iS		05 09 02
		Central Mid-Atlantic Ridge.			
		h = 10 km (UPP,KIR,UME).			
		m = 6.8, M = 7.1 (UPP,KIR).			
"	1	UPP	i(PKP)		09 46 30.1
			iPKP		09 46 34.2
		KIR	e(PKP)		09 46 22
			iPKP		09 46 24.5
		UME	i(PKP)		09 46 24.1
			iPKP		09 46 31.3
		Tonga Islands (h = 220 km).			
"	1	UME	iP		11 44 36.6
"	1	UPP	iP		18 54 01.0
			iS		19 02 24.3
			iP'P'		19 23 10.4
		(cont.)			

1984					
Nov.	1	(cont.)			
		UPP		micr	sec
			P	Z' 0.5	1.4
			Mx	Z 33.9	20
		KIR	iP		18 53 05.7
				micr	sec
			P	Z' 0.4	1.4
			Mx	Z 17.8	21
		UME	iP		18 53 32.1
			iS		19 01 30
		Off east coast of Kamchatka			
		(h = 50 km).			
		m = 6.3, M = 6.4 (UPP,KIR).			
"	2	UPP	iP		04 00 40.4
		KIR	iP		04 00 31.4
		UME	iP		04 00 38.2
		El Salvador (h = 70 km).			
"	2	UPP	iP		05 03 13.3
		KIR	iP		05 02 55.8
		UME	iP		05 03 01.6
		Mindanao, Philippine Islands			
		(h = 30 km).			
"	2	UPP	iP		06 46 37.9
		KIR	iP		06 46 20.2
		UME	iP		06 46 25.3
		Mindanao, Philippine Islands			
		(h = 25 km).			
"	2	UDD	iSg1		13 03 30.5
		Off coast of southwestern			
		Norway, near 62°N, 4°E.			
		Origin time = 13 00 56.			
		M_L (UPP) = 2.4 1.			
		By combination with Norwegian			
		station readings.			
		Probably earthquake.			

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

1984
Nov. 2 UPP iP 17 01 09.1
KIR eP 17 00 26
UME iP 17 00 44.0
Hokkaido, Japan region
(h = 100 km).

" 3 UDD iSg1 00 42 11.0
Off coast of southwestern
Norway, near 61 3/4°N,
4 1/2°E.
Origin time = 00 39 41.
By combination with Norwegian
station readings.
Probably earthquake.

" 3 UME iP 16 01 43.5
Honshu, Japan (h = 110 km).

" 3 KIR iP 23 03 53.0
UME iP 23 04 43.2
North of Svalbard
(h = 10 km).

" 4 UME iPKP1 01 49 46.3
South of Kermadec Islands
(h = 35 km).

" 4 UPP iP 13 26 35.9
KIR iP 13 26 39.2
UME iP 13 26 40.7
Northern Colombia
(h = 160 km).

" 4 UPP iP 17 46 18.1
KIR iP 17 46 43.6
North Atlantic Ridge
(h = 10 km).

" 5 UPP iP 04 29 26.9
iS 04 38 56
UME iP 04 29 43.1
iS 04 39 49
Ascension Island region
(h = 10 km).
M = 5.5 (UPP,KIR).

" 5 UPP iP 06 13 50.3
iPP 06 15 19.5
UME iP 06 13 48.1
Afghanistan-USSR border
region (h = N).

" 6 UPP iP 08 11 44.1
iSKS 08 22 09
iS 08 22 31
micr sec
P Z' 0.4 1.6
(cont.)

1984
Nov. 6 (cont.)
UPP Mx Z 4.7 24
KIR iP 08 12 05.1 C
micr sec
P Z' 0.4 1.8
Mx Z 1.7 22
UME iP 08 11 52.1 C
iS 08 22 49
Mid-Indian Rise (h = 10 km).
m = 6.4, M = 5.7 (UPP,KIR).

" 6 UPP iPKP 10 03 14.3
UME iPKP 10 03 11.3
Tonga Islands (h = 230 km).

" 6 UPP iP 15 22 24.7

" 7 UPP iSg1 11 15 41.8
UDD iSg1 11 14 32.8
DEL iSg1 11 15 15.8
Southern Norway, near 59 1/2°N,
6 1/2°E.
Origin time = 11 12 39.
M_L (UPP) = 2.3 1.
By combination with Norwegian
station readings.
Felt.

" 8 UPP iP 13 12 57.9
iS 13 21 52
micr sec
Mx Z 2.4 22
KIR iP 13 12 03.1
UME iP 13 12 30.5
iS 13 21 01
Fox Islands, Aleutian Islands
(h = N).

" 8 UPP iPKP1 13 36 31.1
iPKP2 13 36 37.4
KIR ePKP1 13 36 10
UME iPKP1 13 36 20.0
i 13 36 28.3
South of Kermadec Islands
(h = N).

" 8 UPP iPKP1 13 42 21.5
UME iPKP1 13 42 11.4
South of Kermadec Islands
(h = N).

" 9 UPP i(P) 09 14 48.7

" 9 UME iPKP1 16 29 52.6
South of Kermadec Islands
(h = N).

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

1984
Nov. 10 UME iP 01 51 11.4
Near s. coast of Honshu, Japan (h = 110 km).

" 10 UPP iPKP1 04 44 20.2
UME iPKP 04 44 21.9
Fiji Islands region (h = 580 km).

" 10 UME iPdiff 06 34 53.6
Banda Sea (h = 160 km).

" 10 UME iP 08 41 44.9
Near east coast of Honshu, Japan (h = 60 km).

" 10 UPP iP 08 45 22.6
micr sec
P Z' 0.1 1.0
Mx Z 4.1 19
KIR
micr sec
Mx Z 1.1 10
UME iP 08 45 18.6
Iceland region (h = 10 km).
M = 4.8 (UPP,KIR).

" 10 UPP iPKP2 15 14 08.2
UME iPKP2 15 13 55.8
South of Kermadec Islands (h = N).

" 11 UPP iP 00 54 18.8
UME iP 00 53 59.5
Bonin Islands region (h = N).

" 11 UPP iP 09 49 27.1
UME iP 09 49 27.8
Uzbek SSR (h = N).

" 11 UPP iP 23 20 19.6
micr sec
Mx Z 1.1 20
Leyte, Philippine Islands (h = 30 km).

" 12 UPP iP 01 19 18.6
micr sec
Mx Z 1.6 23
Leyte, Philippine Islands (h = 35 km).

" 12 UPP iPKP1 11 10 18.1
South of Fiji Islands (h = 520 km).

1984
Nov. 12 UPP iPKP1 12 23 27.3
UME iPKP 12 23 23.9
South of Fiji Islands (h = 560 km).

" 12 KIR iPn 21 14 41.3
iSn 21 15 40.0
UME iPn 21 15 24.6
iSn 21 16 54.8
UDD iPn 21 15 59.4
Norwegian Sea (h = 10 km).

" 12 KIR iP 23 16 10.9
UME iP 23 16 19.0

" 13 KIR iP 06 48 10.9 C
UME iP 06 48 03.9
Tajik-Xinjiang border region (h = N).

" 14 UPP iP 06 02 20.6 D
micr sec
P Z' 0.7 1.4
KIR iP 06 02 02.6 D
ipP 06 02 32.1
micr sec
P Z' 0.5 1.0
UME iP 06 02 07.4 D
Luzon, Philippine Islands (h = 120 km).
m = 6.2 (UPP,KIR).

" 14 UPP iP 10 06 55.6
Turkey (h = 70 km).

" 15 UPP i(PKP) 03 05 23.5
iPKP 03 05 33.1
iSKP1 03 08 55.5
micr sec
PKP Z' 0.4 1.4
Mx Z 24.4 25
KIR i(PKP) 03 05 15.4
iPKP 03 05 18.4
iSKP1 03 08 31.7
micr sec
PKP Z' 0.7 1.5
Mx Z 77 19
UME i(PKP) 03 05 16.3
iPKP 03 05 24.7
iSKP1 03 08 43.7
Loyalty Islands region (h = 110 km).
M = 6.7 (UPP,KIR).

" 15 UPP iP 03 34 15.1
KIR iP 03 35 11.0
Turkey (h = 40 km).

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

1984
Nov. 15 UPP iPKP1 06 11 08.2
i 06 11 09.3
iSKP1 06 14 19.2
KIR iPKP 06 11 02.1
iSKP1 06 13 54.1
UME i(PKP) 06 11 01.4
iPKP 06 11 08.3
iSKP1 06 14 06.2
Fiji Islands region
(h = 350 km).

" 15 UDD eSg1 12 18 33
Southwestern coast of Norway,
near 60°N, 5°E.
Origin time = 12 16 13.
M_L (UPP) = 2.3 1.
By combination with Norwegian
station readings.
Probably earthquake.

" 15 UDD eSg1 12 19 05
Southwestern coast of Norway,
near 60°N, 5°E.
Origin time = 12 16 45.
M_L (UPP) = 2.5 1.
By combination with Norwegian
station readings.
Probably earthquake.

" 15 UPP i(P) 20 04 30.9

" 16 UPP iPKP1 04 50 59.9
iPKP2 04 51 04.6
KIR iPKP1 04 51 36.9
iPKP 04 51 45.4
UME iPKP1 04 50 48.3
Kermadec Islands region
(h = 300 km).

" 16 KIR iPKP 04 12 17.6
UME iPKP 04 12 25.9
iSKP1 04 15 00.4
Fiji Islands region
(h = 610 km).

" 17 UPP iP 07 02 02.6 C
i 07 02 10.9
micr sec
P Z' 0.6 1.5
i Z' 1.8 1.5
Mx Z 147.6 18
KIR iP 07 02 03.8 C
i 07 02 11.8
micr sec
P Z' 1.2 1.3
i Z' 2.4 1.3
Mx Z 104.0 16
(cont.)

1984
Nov. 17 (cont.)
UME iP 07 02 00.3
i 07 02 08.3
Northern Sumatera (h = N).
m = 7.2, M = 7.4 (UPP,KIR).

" 17 UPP eP 07 39 45
KIR iP 07 39 43.0
UME iP 07 39 41.0
Northern Sumatera (h = N).

" 17 KIR iP 09 12 08.7
Central Alaska (h = 5 km).

" 17 UPP iP 10 31 50.7
micr sec
P Z' 0.3 1.3
Mx Z 9.2 18
KIR iP 10 31 01.7
micr sec
P Z' 0.1 1.0
Mx Z 4.6 16
UME iP 10 31 24.0
Kuril Islands (h = 45 km).
m = 6.0, M = 5.9 (UPP,KIR).

" 17 UPP iP 11 23 09.9
micr sec
P Z' 0.2 1.2
Mx Z 3.4 18
KIR iP 11 22 21.0
micr sec
Mx Z 1.5 16
UME iP 11 22 45.0
Kuril Islands (h = 55 km).
M = 5.5 (UPP,KIR).

" 17 UPP iPKP1 12 04 39.4
UME iPKP1 12 04 28.9
South of Kermadec Islands
(h = 160 km).

" 17 UPP iP 12 05 33.7
UME iP 12 05 17.4

" 17 UPP i(PKP) 14 04 09.9
i(PKP) 14 04 11.4
iPKP 14 04 19.4
i 14 06 08.7
iSKP1 14 07 12.4
iSKP2 14 07 21.5
micr sec
Mx Z 3.2 23
KIR i(PKP) 14 03 57.8
iPKP 14 04 05.5
iSKP1 14 06 46.6
(cont.)

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

1984
Nov. 17 (cont.)

KIR			micr	sec
	Mx	Z	0.7	14
UME	i(PKP)		14 03	59.7
	iPKP		14 04	09.6
	iSKP1		14 06	59.4

Fiji Islands region
(h = 450 km).
M = 5.8 (UPP,KIR).
Large SKP1 phases.

" 17

KIR	iPg1		17 45	22.9
	i		17 45	24.7
	iSg1		17 45	46.7
UME	iSg1		17 47	09.3

Northwestern Norway, 67.9°N, 15.7°E.
Origin time = 17 44 52.
M_L(UPP) = 2.9 (0.01) 3.
By combination with Finnish station readings.

" 17

UPP	iP		18 38	34.5	D
			micr	sec	
	P	Z'	0.3	0.8	
KIR	iP		18 38	02.6	D
			micr	sec	
	P	Z'	0.3	0.8	
UME	iP		18 38	16.5	D

Bonin Islands region
(h = 450 km).
m = 6.0 (UPP,KIR).

" 17

UPP	Mx		19 59	
			micr	sec
	Mx	Z	1.2	18
KIR	iP		19 12	08.6
			micr	sec
	P	Z'	0.2	1.5
UME	iP		19 12	14.1

West Caroline Islands
(h = N).

" 17

KIR	iP	19 32	53.5
UME	iP	19 33	03.2

West Caroline Islands
(h = N).

" 17

UPP	Mx		00 07	
			micr	sec
	Mx	Z	2.4	20
KIR	Mx		00 01	
			micr	sec
	Mx	Z	1.9	23

Tonga Islands (h = N).
M = 5.9 (UPP,KIR).

1984
Nov. 18

UPP	iP		14 52	15.2 D

Greenland-Albania border region (h = N).

" 18

UPP	iP	23 12	12.2
KIR	iP	23 12	14.8

Northern Colombia (h = 150 km).

" 19

UPP	iP		04 21	39.9
	iS		04 31	04
			micr	sec
	P	Z'	0.2	1.0
	Mx	Z	2.3	19
KIR	iP		04 20	47.0
			micr	sec
	Mx	Z	1.9	18
UME	iP		04 21	13.0

Rat Islands, Aleutian Islands (h = 40 km).
M = 5.4 (UPP,KIR).

" 19

UPP	iP		12 17	32.3
			micr	sec
	P	Z'	0.2	0.9
	Mx	Z	3.0	22
KIR	iP		12 16	39.2
UME	iP		12 17	05.4

Andreanof Islands, Aleutian Is. (h = 60 km).

" 19

UPP	iP	19 57	02.4
UME	iP	19 56	40.4 D

Near east coast of Honshu, Japan (h = 55 km).

" 19

UPP	iP	23 20	28.2
UME	iP	23 20	08.3

South of Honshu, Japan
(h = 70 km).

" 20

UPP	iP		08 28	10.9
	iSKS		08 38	30
	iS		08 39	05
			micr	sec
	P	Z'	0.6	1.0
	Mx	Z	151.0	19
KIR	iP		08 27	55.0 D
			micr	sec
	P	Z'	1.2	1.0
	Mx	Z	59.1	20
UME	iP		08 28	00.1 D

Mindanao, Philippine Islands
(h = 200 km).
m = 6.7, M = 7.3 (UPP,KIR).

" 20

KIR	iP	11 44	18.9

Mindanao, Philippine Islands
(h = 210 km).

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

1984
Nov. 20 UPP iP 19 21 27.8

" 21 UPP iP 08 04 30.1
KIR iP 08 04 22.3
Burma (h = N).

" 21 UPP Mx 15 45
micr sec
Mx Z 10.7 24
KIR Mx 15 40
micr sec
Mx Z 7.1 24
Vanuatu Islands region
(h = 23 km).
M = 6.4 (UPP,KIR).

" 21 UPP Mx 19 30
micr sec
Mx Z 6.7 24
KIR Mx 19 24
micr sec
Mx Z 5.4 25
Vanuatu Islands region
(h = 24 km).
M = 6.2 (UPP,KIR).

" 22 UPP Mx 01 44
micr sec
Mx Z 2.2 23
KIR Mx 01 49
micr sec
Mx Z 1.4 20
South Atlantic Ridge
(h = 10 km).
M = 5.6 (UPP,KIR).

" 22 UPP iP 14 01 16.5
micr sec
P Z' 0.1 1.0
KIR iP 14 00 14.5 C
micr sec
P Z' 0.1 1.1
UME iP 14 00 43.6
Eastern Siberia (h = N).
m = 5.6 (UPP,KIR).

" 22 UPP e(PKP) 17 25 31
i(PKP) 17 25 35.5
iPKP 17 25 42.1
iSKP1 17 28 21.4
KIR iPKP 17 25 32.1
iSKP1 17 27 52.0
UME i(PKP) 17 25 29.1
i(PKP) 17 25 34.4
iPKP 17 25 38.9
iSKP1 17 28 09.0
Fiji Islands region
(h = 650 km).

1984
Nov. 22 KIR iP 20 10 44.6
Mariana Islands (h = 80 km).

" 23 UPP iPKP1 03 16 33.6 C
South of Fiji Islands
(h = 160 km).

" 23 KIR iP 04 59 09.8
Southwest of Sumatera (h = N).

" 23 UPP Mx 05 57
micr sec
Mx Z 45.0 24
KIR Mx 05 52
micr sec
Mx Z 41.2 25
Vanuatu Islands region
(h = N).
M = 7.1 (UPP,KIR).

" 23 Upp Mx 08 53
micr sec
Mx Z 4.1 18
KIR Mx 08 49
micr sec
Mx Z 2.7 15
California-Nevada border region
(h = 15 km).
M = 5.8 (UPP,KIR).

" 23 UPP iP 09 55 14.6
i 09 55 20.5
KIR eP 09 54 50
Northern China (h = N).

" 23 KIR iP 18 19 41.4
California-Nevada border
region (h = 15 km).

" 23 KIR iP 21 42 00.2
Philippine Islands region
(h = 30 km).

" 24 UPP iPKP1 17 36 08.2
South of Fiji Islands
(h = 530 km).

" 25 UPP iP 01 33 11.2
KIR iP 01 32 16.3
Near east coast of Kamchatka
(h = N).

" 25 UPP iP 07 59 01.1
i 07 59 02.5
KIR iP 07 59 09.9
UME iP 07 58 58.8
i 07 58 59.1
Afghanistan-USSR border region
(h = 70 km).

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

1984
Nov. 25 KIR iP 17 22 20.0
Southern Xinjiang, China
(h = N).

" 26 UPP iPKP2 17 51 12.1
UME iPKP1 17 50 56.0
i 17 50 59.2
Kermadec Islands region
(h = 50 km).

" 27 UPP iPKP1 14 00 37.7
Kermadec Islands region
(h = 80 km).

" 27 UPP iP 23 47 09.8
micr sec
P Z' 0.2 1.5
KIR iP 23 46 53.5
Mindanao, Philippine Islands
(h = 10 km).

" 28 KIR eP 08 55 05
Mariana Islands (h = 10 km).

" 28 UPP iP 10 39 43.4 C
i 10 39 46.7
i 10 39 50.4
micr sec
P Z' 0.1 0.7
i Z' 0.2 0.8
i Z' 0.7 1.0
KIR iP 10 39 33.2
i 10 39 36.9
micr sec
i Z' 0.6 1.5
UME iP 10 39 34.9
Burma (h = 20 km).
m = 6.6 (UPP,KIR).

" 28 UPP iP 19 45 21.2
Burma-India border region
(h = N).

" 29 UME iP 14 42 20.8

" 30 UPP i(P) 06 01 41.7

" 30 UPP iPKP1 10 03 42.0
South of Fiji Islands
(h = 600 km).

" 30 UPP iP 10 31 05.1
UME iP 10 30 49.0
Taiwan region (h = 70 km).

" 30 UPP iP 14 27 52.3
i 14 27 57.7
(cont.)

1984
Nov. 30 (cont.)
KIR iP 14 27 37.8
i 14 27 43.0
UME iP 14 27 47.5
i 14 27 52.5
Near coast of Guerrero,
Mexico (h = N).

" 30 UPP iP 21 20 56.0
iPP 21 24 02.9
KIR iP 21 20 34.4
Philippine Islands region
(h = 130 km).

June 23, 1986

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

D E C E M B E R 1 - 31, 1984

1984 Dec. 1 UPP iP 02 34 58.9
i 02 35 04.5
KIR iP 02 35 12.8
UME iP 02 35 02.5
Afghanistan-USSR border region (h = 230 km).

" 1 UPP iP 09 03 44.7
micr sec
P Z' 0.1 0.9
KIR iP 09 03 53.2
UME iP 09 03 42.7
Hindu Kush region (h = 210 km).

" 1 UPP iP 09 49 47.5
UME iP 09 50 11.2
South Atlantic Ocean (h = 10 km).

" 2 UPP iP 03 26 04.6 C
micr sec
P Z' 0.9 0.9
KIR iP 03 25 48.0 C
micr sec
P Z' 0.8 0.8
UME iP 03 25 48.7 C
Eastern Kazakh SSR.
Underground explosion
m = 6.6 (UPP,KIR).

" 2 UPP iP 06 22 50.4
micr sec
Mx Z 11.5 19
KIR iP 06 22 27.2
micr sec
Mx Z 6.9 15
UME iP 06 22 40.9
(cont.)

1984 Dec. 2 (cont.)
East Central Pacific Ocean (h = 10 km).
M = 6.3 (UPP,KIR).

" 2 UPP iP 08 44 52.8
micr sec
P Z' 0.1 0.9
KIR iP 08 43 53.9
micr sec
P Z' 0.1 1.0
Eastern Siberia (h = N).
m = 5.6 (UPP,KIR).

" 2 UME iPKP1 16 27 08.3
South of Kermadec Islands (h = N).

" 3 UPP iP 04 19 31.7
i 04 19 33.5
iS 04 28 26
micr sec
P Z' 1.5 1.5
Mx Z 27.1 20
KIR iP 04 18 45.4
i 04 18 47.1
micr sec
P Z' 1.1 1.5
UME iP 04 19 06.2
i 04 19 07.9
iS 04 27 37
Kuril Islands (h = 65 km).
m = 6.7 (UPP,KIR).
Multiple P, small and large, in average 1.7 s apart.

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

1984
Dec. 3 UPP iP 04 27 56.8
i 04 28 28.5
micr sec
P Z' 0.1 0.9
UME eP 04 27 43
Burma-India border region
(h = N).

" 3 UME iP 06 04 26.6
Fox Islands, Aleutian Islands
(h = N).

" 3 KIR iP 07 44 38.8
micr sec
P Z' 0.1 0.9
UME iP 07 44 10.7
Turkey (h = 35 km).

" 4 UPP iP 07 55 52.5 D
ipP 07 56 25.6
micr sec
P Z' 0.2 0.8
KIR iP 07 55 23.1 D
ipP 07 55 55.1
micr sec
P Z' 0.5 1.0
UME iP 07 55 36.0 D
ipP 07 56 07.7
Volcano Islands region.
h = 120 km (UPP,KIR,UME).
m = 6.1 (UPP,KIR).

" 5 UPP iP 11 50 18.4
micr sec
P Z' 0.1 0.7
Greece-Albania border region
(h = 10 km).

" 5 UPP iPKP 12 18 19.9
iPKP1 12 18 22.2
Kermadec Islands region
(h = 110 km).

" 5 UPP iP 13 50 06.7
ipP 13 50 10.9
North of Ascension Islands
(h = 10 km).

" 5 UPP iP 19 59 09.6
KIR iP 19 58 31.1
UME iP 19 59 48.0

" 6 KIR iPKP 04 04 53.4
South Sandwich Island region
(h = 100 km).

" 6 UPP iPn 20 04 19.0
iSn 20 05 22.4
(cont.)

1984
Dec. 6 (cont.)
UPP iSg1 20 05 56.9
KIR iSg1 20 08 57.9
UME iSn 20 06 36.0
iSg1 20 07 29.8
UDD iPg1 20 04 03.2
iSg1 20 05 04.0
DEL iPn 20 03 52.2
iSn 20 04 44.3
MYV iPn 20 04 26.0
iSn 20 05 36.0
iSg1 20 06 08.2
Off coast of southern Norway,
near 57 3/4°N, 6 1/2°E.
Origin time = 20 02 51.
M_L (UPP) = 3.6 (0.30) 7.

" 6 UPP iP 23 57 09.6
micr sec
P Z' 0.1 0.8
KIR iP 23 56 40.1
micr sec
P Z' 0.1 1.0
UME iP 23 56 53.5
Mariana Islands (h = 60 km).
m = 6.0 (UPP,KIR).

" 7 UPP iP 00 14 04.8
Greece (h = 10 km).

" 7 UPP iP 04 31 00.3
KIR iP 04 30 58.5
Northern Sumatera (h = 120 km).

" 7 KIR iP 05 03 34.6
UME iP 05 03 38.6
Molucca Passage (h = 35 km).

" 7 UPP iP 10 29 59.3
ipP 10 30 03.1
iS 10 38 46
micr sec
Mx Z 5.6 19
KIR iP 10 30 44.0
ipP 10 30 48.2
micr sec
Mx Z 4.3 20
UME iP 10 30 24.1
ipP 10 30 28.2
iS 10 39 35
North of Ascension Islands.
h = 15 km (UPP,KIR,UME).
M = 5.8 (UPP,KIR).

" 7 KIR iP 16 38 02.0
UME iP 16 38 28.8
Fox Islands, Aleutian Islands
(h = N).

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

1984
Dec. 8 UPP iP 10 42 40.0
i 10 43 20.0
micr sec
P Z' 0.1 0.9
KIR iP 10 42 49.0
micr sec
P Z' 0.2 1.0
UME iP 10 42 38.7
Hindu Kush region
(h = 170 km).

" 8 UPP iP 12 35 46.1
KIR iP 12 36 25.8
UME iP 12 36 09.1
Central Mid-Atlantic Ridge
(h = 10 km).

" 8 UPP iP 15 07 01.2
KIR iP 15 06 45.0
UME iP 15 06 50.3
Mindanao, Philippine Islands
(h = 190 km).

" 8 KIR iP 18 39 14.4
UME iP 18 39 24.2
Philippine Islands region
(h = N).

" 9 UPP iP 19 51 48.2
micr sec
P Z' 0.2 1.5
KIR iP 19 51 14.5
UME iP 19 51 33.6
Southern Nevada.
Underground explosion.

" 9 UME iP 22 15 04.2
Lake Baikal region (h = N).

" 10 UME iP 03 44 55.1
East Central Pacific Ocean
(h = 10 km).

" 11 UPP iP 23 00 22.6
ipP 23 00 28.2
micr sec
P Z' 0.1 0.9
KIR ipP 22 59 52.6
UME ipP 23 00 09.0
Bonin Islands region
(h = 15 km).

" 11 UPP iS 23 48 19
UME iS 23 48 43
Norhtern Chile (h = 90 km).

1984
Dec. 12 KIR iP 21 58 15.7
UME iP 21 59 07.0
Greenland Sea (h = 10 km).

" 12 UPP iP 23 11 57.6
KIR iP 23 11 23.5
UME iP 23 11 38.6
South of Honshu, Japan
(h = 80 km).

" 12 UPP iP 23 19 51.7 C
KIR iP 23 19 48.7 C
micr sec
P Z' 0.2 0.8
UME iP 23 19 47.4 C
Java (h = 80 km).

" 13 UPP iP 01 44 55.9
UME iP 01 44 18.9
Eastern Greenland (h = 10 km).

" 13 UPP iP 04 53 09.4

" 13 KIR iP 18 39 54.3
i 18 39 56.0
Svalbard region (h = 10 km).

" 13 KIR eP 20 29 40
Southern Sumatera (h = 30 km).

" 13 UPP iP 21 32 36.3

" 14 UPP iP 01 13 02.8

" 14 UPP iP 14 44 19.0
UME iP 14 44 27.5
Chagos Archipelago region
(h = 10 km).

" 14 UPP iPKP2 15 49 59.1
i 15 50 02.1
Keramdec Islands (h = N).

" 14 UPP iP 21 58 28.4
KIR iP 21 58 27.5
Southern Sumatra (h = 20 km).

" 15 UPP iP 09 05 56.9
KIR iP 09 07 13.6
UME iP 09 06 36.1
Greece (h = 20 km).

" 15 UPP iP 11 02 52.2
KIR iP 11 02 57.6
UME iP 11 02 46.6
Northern India (h = N).

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

1984
Dec. 15 UPP iP 14 56 48.0
KIR iP 14 56 14.3
UME iP 14 56 33.6
Southern Nevada.
Underground explosion.

" 16 UPP iP 04 02 00.3 C
micr sec
P Z' 1.3 0.8
Mx Z 1.5 9
KIR iP 04 01 43.9 C
micr sec
P Z' 1.7 0.5
Mx Z 0.6 9
UME iP 04 01 44.9 C
Eastern Kazakh SSR.
Underground explosion.
m = 7.0 (UPP,KIR).

" 16 KIR iP 11 48 43.6
Philippine Islands region
(h = 70 km).

" 16 UPP iSg1 13 13 52.5
KIR iPg1 13 10 37.4
iSg1 13 11 10.3
UME iSn 13 11 48.7
iSg1 13 12 06.1
UDD iSg1 13 13 45.7
MYV iSg1 13 12 11.0
Off coast of northwestern
Norway, near 67 1/2°N, 14°E.
Origin time = 13 09 53.
M_L(UPP) = 2.9 (0.06) 3.

" 16 UPP iP 13 32 06.9
KIR iP 13 31 43.4
UME iP 13 31 52.2
Philippine Islands region
(h = 150 km).

" 16 KIR iP 20 06 14.2

" 17 UPP iP 07 26 33.1
KIR iP 07 25 40.0
UME iP 07 26 04.0
Off east coast of Kamchatka
(h = N).

" 17 UPP iP 15 01 14.0
KIR iP 15 00 36.2
UME iP 15 00 53.0
Near east coast of Honshu,
Japan (h = N).

" 17 UPP iP 21 02 16.4
KIR iP 21 02 02.7
(cont.)

1984
Dec. 17 UME iP 21 02 07.1
Minahassa Peninsula
(h = 140 km).

" 17 UPP iP 21 20 25.4
micr sec
P Z' 0.1 0.8
KIR iP 21 19 39.4
UME iP 21 20 01.1
ipP 21 20 09.5
Kuril Islands (h = 30 km).

" 17 UPP iP 23 41 22.1
i 23 41 25.8
micr sec
i Z' 0.3 0.9
Mx Z 10.9 18
KIR iP 23 40 35.6
i 23 40 39.5
micr sec
Mx Z 5.1 17
UME iP 23 40 57.1
i 23 41 00.5
Kuril Islands (h = 30 km).
M = 6.0 (UPP,KIR).

" 18 UPP iP 00 07 58.7
micr sec
P Z' 0.4 1.0
Mx Z 15.7 18
KIR iP 00 07 13.0
micr sec
P Z' 0.1 1.0
Mx Z 6.7 16
UME iP 00 07 34.2
Kuril Islands (h = N).
m = 6.2, M = 6.1 (UPP,KIR).

" 18 UPP iP 03 53 11.5
micr sec
P Z' 0.1 0.9
KIR eP 03 52 25
UME iP 03 52 46.3
Kuril Islands (h = N).

" 18 KIR iP 04 29 28.5
UME iP 04 29 46.2
Near west coast of Honshu,
Japan (h = 15 km).

" 18 UPP iP 07 06 32.7
Pakistan (h = N).

" 18 KIR iP 10 39 32.8
Kuril Islands (h = 45 km).

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

1984
Dec. 18 UPP iP 10 43 17.6
KIR iP 10 42 31.4
UME iP 10 42 52.3
Kuril Islands (h = N).

" 18 UPP eP 14 48 49
UME iP 14 48 22.4
Near west coast of Honshu, Japan (h = 25 km).

" 18 KIR iP 17 10 08.6
Mindanao, Philippine Islands (h = 140 km).

" 18 UPP iP 17 43 46.2
micr sec
0.1 0.8
KIR iP 17 43 00.8
UME iP 17 43 21.4
Kuril Islands (h = N).

" 18 UPP iP 17 47 27.5
ipP 17 47 34.2
micr sec
P Z' 0.1 0.9
KIR eP 17 46 41
UME iP 17 47 01.8
ipP 17 46 08.6
Kuril Islands.
h = 25 km (UPP,UME).

" 18 UPP iP 18 03 45.6
micr sec
P Z' 0.1 0.9
KIR eP 18 03 00
UME iP 18 03 21.4
Kuril Islands (h = N).

" 18 UPP iP 19 46 51.7
ipP 19 47 04.7
KIR iP 19 46 12.7
ipP 19 46 25.9
UME iP 19 46 30.1
ipP 19 46 42.5
Near east coast of Honshu, Japan.
h = 50 km (UPP,KIR,UME).

" 19 UPP iP 19 18 43.9
Kuril Islands (h = 30 km).

" 19 UPP iP 00 27 57.6
micr sec
P Z' 0.1 1.0
KIR iP 00 27 10.6
UME iP 00 27 32.7
Kuril Islands (h = 50 km).

1984
Dec. 19 UPP iP 01 00 02.6
micr sec
P Z' 0.1 1.0
UME iP 00 59 36.9
Kuril Islands (h = 50 km).

" 19 UPP ePKP2 05 59 31
UME iPKP1 05 59 10.9
South Kermadec Islands (h = N).

" 19 UPP eP 06 08 23
KIR iP 06 08 09.1
Southern Xinjiang, China (h = 45 km).

" 19 UPP iP 09 02 37.9
KIR iP 09 02 25.5
UME iP 09 02 35.6
Near coast of Oaxaca, Mexico (h = 65 km).

" 19 UPP iP 12 44 34.5
micr sec
P Z' 0.1 1.0
KIR iP 12 44 41.9
micr sec
P Z' 0.1 0.5

" 20 UPP iP 11 24 59.8
micr sec
P Z' 0.2 1.4
KIR iP 11 25 09.5
micr sec
P Z' 0.1 0.6
UME iP 11 24 59.3
Hindu Kush region (h = 160 km).
m = 5.6 (UPP,KIR).

" 21 KIR eP 03 36 46
UME iP 03 36 31.9
Mid-Indian rise (h = 10 km).

" 21 UPP iP 04 55 35.9
KIR iP 04 55 45.4
UME iP 04 55 32.7
Hindu Kush region (h = 200 km).

" 22 KIR iP 00 10 05.3
micr sec
P Z' 0.1 1.0
UME iP 00 10 27.7
Sakhalin Islands (h = N).

" 22 KIR iP 05 29 51.8
Philippine Islands region (h = N).

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

1984 Dec. 22
UPP iP 16 12 49.3 C
ipP 16 12 58.2
KIR iP 16 13 24.9 C
micr sec
P Z' 0.1 0.6
UME iP 16 13 02.3 C
ipP 16 13 11.9
Southern Iran.
h = 35 km (UPP,UME).

" 23
UPP iPKP 01 35 23.7
South of Fiji Islands
(h = 570 km).

" 23
UPP iP 09 01 48.5
KIR iP 09 01 10.8
UME iP 09 01 27.2
Honshu, Japan (h = 260 km).

" 23
UPP iP 16 15 32.8 C
micr sec
P Z' 0.1 0.8
KIR iP 16 14 55.1 C
micr sec
P Z' 0.1 0.9
UME iP 16 15 11.8 C
Off east coast of Honshu,
Japan (h = 40 km).

" 23
KIR iPg1 19 53 53.1
iSg1 19 54 23.1
UME iPg1 19 53 44.5
iSg1 19 54 11.2
MYV iSg1 19 55 25.0
Norrbotten, Sweden, 65.6°N,
22.3°E.
Origin time = 19 53 10.
M_L (UPP) = 2.7 1.

" 24
UME iPKP 05 09 54.9

" 25
UDD iSg1 20 06 39.0
Off coast of southwestern
Norway, near 61 3/4°N, 4°E.
Origin time = 20 04 08.
M_L (UPP) = 2.4 1.
By combination with Norwegian
station readings.
Felt.

" 26
UPP iPKP 09 56 51.2
micr sec
PKP Z' 0.1 0.9
KIR ePKP 09 57 06
UME iPKP 09 56 59.7
South of Sandwich Islands
region (h = N).

1984 Dec. 26
UME iPKP 11 23 54.6
South of Kermadec region
(h = N).

" 27
KIR iPKP 03 44 12.9
Fiji Islands region (h = 600 km).

" 28
UME iP 01 02 21.5
Arabian Sea (h = 10 km).

" 28
UPP iP 03 57 07.8
micr sec
P Z' 1.7 0.9
KIR iP 03 56 51.9
micr sec
P Z' 3.2 0.4
UME iP 03 56 52.8
Eastern Kazakh SSR.
Underground explosion.
m = 7.2

" 28
UPP iP 04 27 18.9
KIR iP 04 26 27.3
Rat Islands, Aleutian Islands
(h = N).

" 28
UPP iP 10 48 05.9 C
i 10 48 11.2
i 10 48 17.5
iS 10 56 21
micr sec
P Z' 0.5 1.1
Mx Z 111 17
KIR i(P) 10 47 07.3 C
iP 10 47 10.1
i 10 47 15.7
i 10 47 21.2
micr sec
(P) Z' 0.5 1.0
Mx Z 83 16
UME iP 10 47 36.4 C
i 10 47 42.1
i 10 47 48.3
iS 10 55 28
Near east coast of Kamchatka
(h = N).
m = 6.5, M = 7.0 (UPP,KIR).

" 28
UPP iP 11 17 18.5
UME iP 11 17 20.2

" 28
UME iPKP1 11 36 40.7
Off E. coast of N. Islands,
N.Z. (h = N).

" 28
UME iPKP1 13 25 19.4
iPKP2 13 25 25.4
(cont.)

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

1984 Dec.	28	(cont.)			
		Off E. coast of N. Island, N.Z. (h = N).			
"	28	UPP	iPKP1	14 18 07.0	
			iPKP2	14 18 21.6	
		KIR	iPKP	14 17 49.3	
		UME	iPKP1	14 17 58.0	
		Off E. coast of N. Island, N.Z. (h = N).			
"	28	UPP	iPKP1	16 18 11.5	
			iSKP1	16 21 01.3	
		KIR	ePKP	16 18 02	
			iSKP1	16 20 39.3	
		UME	iPKP	16 18 05.8	
			iSKP1	16 20 50.8	
		South of Fiji Islands (h = 550 km).			
"	28	KIR	iPKP	18 39 51.0	
		UME	iPKP1	18 40 00.1	
			iPKP2	18 40 07.6	
		Off E. coast of N. Island, N.Z. (h = 25 km).			
"	29	UPP	iP	01 18 38.1	
				micr sec	
			P Z'	0.3 1.6	
		KIR	iP	01 18 13.4	
				micr sec	
			P Z'	0.2 1.1	
		UME	iP	01 18 22.7	
		Taiwan region (h = 90 km). m = 5.9 (UPP,KIR).			
"	29	KIR	iP	11 05 17.0	
		Southern Iran (h = N).			
"	29	UPP	iP	11 09 50.4	
"	29	UME	ePKP1	18 52 55	
		Off E. coast of N. Island, N.Z. (h = N).			
"	30	UME	iPKP1	11 25 46.1	
		Off E. coast of N. Island, N.Z. (h = N).			
"	30	UME	iPKP1	15 26 30.9	
			iPKP2	15 26 36.7	
		Off E. coast of N. Island, N.Z. (h = 25 km).			
"	30	UME	iPKP1	20 46 06.6	
			iPKP2	20 46 14.0	
		Off E. coast of N. Island, N.Z. (h = 45 km).			
1984 Dec.	30	UPP	ePKP1	21 19 54	
			ePKP2	21 20 02	
		KIR	iPKP1	21 19 35.1	
		UME	iPKP1	21 19 40.4	
			iPKP2	21 19 48.0	
		Off E. coast of N. Island, N.Z. (h = 35 km).			
"	30	KIR	iPKP1	21 48 11.8	
			iPKP2	21 48 14.8	
		UME	iPKP1	21 48 20.9	
			iPKP2	21 48 28.0	
		Off E. coast of N. Island, N.Z. (h = 45 km).			
"	30	UME	iPKP1	21 56 04.7	
			iPKP2	21 56 12.5	
		Off E. coast of N. Island, N.Z. (h = 40 km).			
"	30	UPP	iPKP1	21 56 48.2	
			iPKP2	21 57 05.2	
				micr sec	
			Mx Z	27.1 22	
		KIR	iPKP	21 56 31.1	
			iPKP1	21 56 33.7	
			iPKP2	21 56 37.7	
		UME	ePKP	21 56 36	
			iPKP1	21 56 39.3	
			iPKP2	21 56 46.2	
		Off E. coast of N. Island, N.Z. (h = 40 km).			
"	30	UME	iP	23 00 08.6	
"	30	UPP	i	23 39 11.7	
			eSn	23 39 23	
		UDD	iSn	23 38 27.0	
			iSg1	23 38 41.1	
		Southern Norway, near 59°N, 7°E.			
		Origin time = 23 36 54.			
		M_L(UPP) = 2.5 1.			
		By combination with Finnish and Norwegian station readings.			
		Felt.			
"	30	UPP	iP	23 43 54.2	
			i	23 43 56.6	
		KIR	iP	23 43 50.9	
			ipP	23 43 56.7	
		UME	iP	23 43 47.5	
		India-Bangladesh border region (h = 25 km).			
"	31	UME	iPKP	05 20 47.1	
		Keramdec Islands region (h = N).			

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

1984
Dec. 31 UME iPKP1 06 11 36.7
Off E. coast of N. Island,
N.Z. (h = 15 km).

" 31 UPP iP 12 36 26.0
Ionian Sea (h = 10 km).

June 25, 1986

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