

!!!!!!! Notes for the user !!!!!!!

All bulletins and seismogram examples of the SZGRF Erlangen are available at the SZGRF-INTERNET-HOME PAGE >>> http://www.szgrf.uni-erlangen.de <<<

MONTHLY TELESEISMIC BULLETIN of SZGRF-ERLANGEN - May 1998

H. Aichele, K. Klinge, R. Hohl, U. Mundl

date	station	time	distance	phase	backazimut	comp	per[s]	ampl[nm]	magn
	SZGRF or NEIC-QED		LOCATION						

1998-05-01 D145.0

GRA1	00:23:20.6	e	PKPdf	Z					
GRA1	00:23:57.5	e	pPKPdf	Z					
GRA1	01:28:10.9	e	L	Z	T20.9	A401			MS5.2

1998-05-01

GRA1	00:31:47.9	e	PKPdf	Z					
NEIC: OT	00:11:10.6		32.7S	70.9W	dep	88km			
CHILE-ARGENTINA BORDER REGION									

1998-05-01

GRA1	03:08:26.8	e	PKPab	Z					
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1998-05-01 D 14.1

GRA1	04:03:29.1	e	P	Z					
GRA1	04:03:40.0	e	P1	Z					
GRA1	04:10:19.2	e	L	Z	T17.7	A3876			MS4.5
NEIC: OT	04:00:13.3		37.4N	20.8E	dep	33km			mb4.8
IONIAN SEA									

1998-05-01 D 85.2 AZ 51

GRA1	10:00:39.1	e	P	Z					mb4.6
BEAM	10:00:39.1				T1.1	A4			
GRA1	10:44:12.7	e	L	Z	T18.1	A102			MS4.3
SZGRF: OT	09:48:06.7		28.1N	129.7E	dep	33km			
RYUKYU ISLANDS									

1998-05-01 D 77.5 AZ359
GRA1 11:06:45.1 i P c Z mb4.9
ALIGN 11:06:45.1 T0.9 A9

1998-05-01 D 54.4
GRA1 11:58:36.5 e P Z
GRA1 12:20:19.8 e L Z T19.3 A110 MS3.9
NEIC: OT 11:49:03.9 .3N 16.8W dep 10km mb4.5
NORTH OF ASCENSION ISLAND

1998-05-01
GRA1 12:06:58.5 e PP Z
GRA1 13:06:38.7 e L Z T20.1 A97

1998-05-01 D 23.2 AZ104
GRA1 13:44:50.7 e P Z
BEAM 13:44:50.7 T1.3 A6
SZGRF: OT 13:39:46.9
TURKEY

1998-05-01 D 23.6 AZ 94
GRA1 15:19:06.3 e P Z mb3.7
BEAM 15:19:06.3 T0.9 A2
NEIC: OT 15:14:32.5 44.0N 39.5E dep 33km mb4.2
NORTHWESTERN CAUCASUS

1998-05-01 D 59.3
GRA1 17:28:20.0 e P c Z mb5.1
BEAM 17:28:20.0 T1.5 A31
GRA1 17:51:00.8 e L Z T20.7 A826 MS4.8

1998-05-02 D 83.8 AZ 92
GRA1 00:00:53.2 e P Z mb4.4
BEAM 00:00:53.2 T1.1 A3
SZGRF: OT 23:48:26.8
NORTHERN SUMATERA

1998-05-02
GRA1 01:18:07.9 e PKPdf Z

1998-05-02 D 85.3 AZ 58
GRA1 05:50:00.0 i P c Z mb5.1
ALIGN 05:50:00.0 T1.2 A15
SZGRF: OT 05:37:27.9 24.2N 123.8E dep 33km
SOUTHWESTERN RYUKYU ISLANDS

 1998-05-02 D 71.6 AZ 75
 GRA1 08:47:36.9 i P c Z mb5.4
 ALIGN 08:47:36.9 T0.9 A28
 GRA1 08:48:06.3 e pP Z
 GRA1 08:48:19.9 e sP Z
 GRA1 09:20:16.3 e L Z T21.1 A385 MS4.6
 SZGRF: OT 08:36:29.6 23.8N 100.1E dep119km
 YUNNAN PROVINCE, CHINA

1998-05-02 D 45.6 AZ231
 GRA1 19:24:11.7 e P Z
 SZGRF: OT 19:15:53.8 13.8N 23.5W dep 33km
 NORTH ATLANTIC OCEAN

1998-05-02 D 54.2 AZ232
 GRA1 19:28:09.2 i P c Z mb4.6
 BEAM 19:28:09.2 T1.3 A9
 SZGRF: OT 19:18:45.7 7.2N 29.3W dep 33km
 NORTH ATLANTIC OCEAN

1998-05-02 D 23.6 AZ357
 GRA1 22:11:22.8 e P Z
 NEIC: OT 21:59:31.6 66.8N 147.2W dep 32km
 NORTHERN ALASKA

1998-05-03 D120.3
 GRA1 00:32:25.7 e PKPdf Z
 GRA1 00:32:50.2 e pPKPdf Z

1998-05-03 D 83.7
 GRA1 02:21:36.3 e P Z mb5.3
 ALIGN 02:21:36.3 T1.4 A28
 GRA1 02:24:55.8 e PP Z
 GRA1 03:06:30.1 e L Z T18.4 A2624 MS5.6
 NEIC: OT 02:09:07.7 34.8N 138.9E dep 33km mb5.1
 NEAR S. COAST OF HONSHU, JAPAN

1998-05-03 D144.8
 GRA1 04:16:36.2 i PKPdf c Z

1998-05-03 D151.3
 GRA1 15:07:33.2 e PKPdf Z
 GRA1 15:07:38.8 i PKPbc c Z
 GRA1 15:07:45.6 e PKPab Z
 GRA1 15:08:37.9 e pPKPbc Z
 NEIC: OT 14:48:21.0 20.4S 176.1W dep300km mb4.6

FIJI ISLANDS REGION

 1998-05-03 D 83.5
 GRA1 17:52:29.6 e P Z mb5.0
 ALIGN 17:52:29.6 T1.0 A10
 NEIC: OT 17:40:41.7 34.3N 136.3E dep368km mb4.4
 WESTERN HONSHU, JAPAN

1998-05-03 D 33.7 AZ352
 GRA1 21:22:51.8 e P Z mb4.3
 BEAM 21:22:51.8 T1.2 A5
 SZGRF: OT 21:16:14.2
 NEAR NORTH COAST OF GREENLAND

1998-05-03 D 87.7
 GRA1 23:43:08.8 i P d Z mb6.8
 ALIGN 23:43:08.8 T1.5 A782
 GRA1 00:23:40.0 e L Z T21.8 A309340 MS7.7

1998-05-04 D 80.8 AZ 32
 GRA1 09:40:41.1 i P d Z mb5.1
 ALIGN 09:40:41.1 T1.1 A22
 GRA1 09:40:51.9 e pP Z
 GRA1 10:19:21.8 e L Z T20.7 A183 MS4.4
 SZGRF: OT 09:28:32.5 41.8N 146.7E dep 37km
 OFF COAST OF HOKKAIDO, JAPAN

1998-05-04
 GRA1 10:08:06.4 e PKP Z
 NEIC: OT 09:48:16.3 16.3S 173.6W dep 33km mb4.6
 TONGA ISLANDS

1998-05-04
 GRA1 18:26:34.8 e PKPab Z
 GRA1 18:26:47.7 e pPKPab Z
 NEIC: OT 18:05:47.8 33.4S 178.1W dep 33km mb5.0
 SOUTH OF KERMADEC ISLANDS

1998-05-04 D 23.2 AZ 97
 GRA1 19:45:11.1 e P Z mb3.9
 BEAM 19:45:11.1 T1.3 A5
 GRA1 19:45:30.6 e Z
 SZGRF: OT 19:40:07.8
 WESTERN CAUCASUS

1998-05-05
 GRA1 03:01:29.7 e Pn Z
 GRA1 03:02:34.6 e Sn Z

NEIC: OT 02:59:42.2 43.4N 13.4E dep 10km
CENTRAL ITALY

1998-05-05 D 85.5 AZ 60
GRA1 03:24:06.6 e P Z mb4.6
BEAM 03:24:06.6 T1.2 A4
GRA1 04:05:56.3 e L Z T19.9 A317 MS4.7

NEIC: OT 03:11:14.7 19.6N 122.0E dep 33km mb4.8
PHILIPPINE ISLANDS REGION

1998-05-05 D 18.2
GRA1 14:42:22.5 e P Z mb4.3
BEAM 14:42:22.5 T1.5 A36
GRA1 14:45:43.9 e S Z
GRA1 14:50:25.8 e L Z T20.1 A842 MS4.0

1998-05-05 D 76.5 AZ 10
GRA1 15:15:26.2 e P Z mb4.8
BEAM 15:15:26.2 T1.3 A10
NEIC: OT 15:03:58.3 54.9N 162.1E dep 33km mb4.6
NEAR EAST COAST OF KAMCHATKA

1998-05-05 D 18.2
GRA1 15:18:54.2 e P Z mb4.1
BEAM 15:18:54.2 T1.0 A15
GRA1 15:22:26.2 e (S) Z
GRA1 15:26:57.7 e L Z T19.4 A472 MS3.8

1998-05-05 D 73.4
GRA1 16:56:19.7 i P c Z mb4.6
BEAM 16:56:19.7 T0.8 A4
GRA1 16:56:22.4 e (pP) Z
GRA1 17:51:43.3 e L Z T19.2 A100 MS4.1
NEIC: OT 16:44:46.5 54.5N 161.9E dep 70km mb4.6
NEAR EAST COAST OF KAMCHATKA

1998-05-05 AZ148
GRA1 17:43:48.8 e P Z
NEIC: OT 17:39:28.3 35.0N 25.9E dep 22km mb4.0
CRETE

1998-05-05 D 5.1
GRA1 22:50:07.4 e Pn Z
GRA1 22:51:23.3 e Sg Z

1998-05-06 D 4.9 541km

GRA1 01:29:03.2 e Pn Z
 GRA1 01:30:00.5 e Sn Z

 1998-05-06 D 88.2
 GRA1 01:59:10.3 e P Z mb5.1
 ALIGN 01:59:10.3 T1.1 A10
 GRA1 01:59:19.5 e pP Z
 NEIC: OT 01:46:19.1 15.6N 94.6W dep 33km mb4.4
 NEAR COAST OF OAXACA, MEXICO

 1998-05-06 D 88.0
 GRA1 02:05:57.8 i P c Z mb5.2
 ALIGN 02:05:57.8 T1.1 A15
 GRA1 02:06:15.6 e pP Z
 GRA1 02:51:42.5 e L Z T19.5 A2088 MS5.6

 1998-05-06 D 3.7 411km
 GRA1 02:54:00.8 e Pn Z M15.1
 GRA1 02:55:00.9 e Sg N
 SZGRF: OT 02:53:04.5 46.4N 13.8E dep 10km
 AUSTRIA

 1998-05-06 D 77.0 AZ 82
 GRA1 20:07:38.5 i P c Z mb5.3
 ALIGN 20:07:38.5 T1.3 A34
 GRA1 20:08:08.2 e (pP) Z
 NEIC: OT 19:56:13.8 17.6N 94.2E dep 33km mb5.0
 MYANMAR

 1998-05-06 D 78.5 AZ 29
 GRA1 20:26:46.0 i P c Z mb5.4
 ALIGN 20:26:46.0 T0.9 A25
 GRA1 20:27:21.2 e pP Z
 SZGRF: OT 20:15:02.7 45.3N 148.8E dep142km
 KURIL ISLANDS

 1998-05-07 D 57.0 AZ209
 GRA1 02:28:05.1 e P Z mb4.9
 BEAM 02:28:05.1 T1.3 A18
 GRA1 02:52:00.1 e L Z T18.3 A134 MS4.1
 SZGRF: OT 02:18:20.8 3.6S 12.8W dep 33km
 NORTH OF ASCENSION ISLAND

 1998-05-07 D 87.3
 GRA1 15:21:31.6 e P Z mb4.5
 BEAM 15:21:31.6 T1.0 A4
 GRA1 16:04:29.3 e L Z T20.0 A274 MS4.7

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1998-05-07      D  2.9  319km
  GRA1 17:17:50.2 e Pn      Z
SZGRF: OT 17:17:05.7 47.2N  9.2E dep 10km
  Glarus, Walenstadt/CH, Walensee
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1998-05-07      D 86.3  AZ 63
  GRA1 19:14:28.4 e P      Z      mb4.7
  BEAM 19:14:28.4          T1.1  A7
  GRA1 19:58:47.0 e L      Z  T18.2 A201  MS4.6
NEIC:  OT 19:01:40.6 19.2N 121.0E dep 33km mb4.9
  PHILIPPINE ISLANDS REGION
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1998-05-07      D  4.4  493km
  GRA1 17:18:05.7 e Pg      Z      M13.7
  GRA1 17:18:41.1 e Sn      N
  GRA1 17:19:05.5 e Sg      E
SZGRF: OT 17:16:43.7 46.1N  7.3E dep 10km
  SWITZERLAND
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1998-05-08      D 86.9  AZ 56
  GRA1 02:48:18.1 e P      Z
  GRA1 03:32:19.0 e L      Z  T20.0 A89  MS4.2
NEIC:  OT 02:35:16.3 21.9N 125.3E dep 33km mb4.7
  SOUTHEAST OF TAIWAN
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1998-05-08      D 17.5  AZ152
  GRA1 03:42:26.6 e P      Z      mb3.8
  BEAM 03:42:26.6          T1.4  A10
  GRA1 03:45:48.1 e (S)    Z
  GRA1 03:50:30.1 e L      Z  T19.5 A240  MS3.5
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1998-05-08      D 88.8
  GRA1 05:01:25.5 e P      Z  T1.4  A42  mb5.5
  GRA1 05:01:37.6 e pP     Z
  GRA1 05:01:44.9 e (sP)   Z
  GRA1 05:04:56.4 e PP     Z
  GRA1 05:05:05.6 e pPP    Z
  GRA1 05:50:05.8 e L      Z  T20.7 A352  MS4.8
NEIC:  OT 04:48:34.0 30.9N 141.9E dep 33km mb5.1
  SOUTH OF HONSHU, JAPAN
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1998-05-08      D  2.9  326km
  GRC1 10:12:08.5 e Pn      Z      M13.1
  GRA1 10:12:30.2 e Pg      Z
  GRA1 10:13:15.0 e Sg      N      M13.5
SZGRF: OT 10:11:20.0 46.5N 13.8E dep 10km

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AUSTRIA

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1998-05-08      D 59.3
  GRA1 14:10:57.4 e P      Z      mb5.0
  BEAM 14:10:57.4          T1.6   A23
  GRA1 14:27:03.2 e L      Z T21.3 A140  MS4.1
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1998-05-08      D 87.4
  GRA1 17:49:53.3 e P      Z      mb4.5
  BEAM 17:49:53.3          T0.8   A3
  GRA1 18:51:45.3 e L      Z T20.1 A420  MS4.8
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1998-05-08      D 81.0  AZ 32
  GRA1 20:26:16.5 i P      d Z      mb4.7
  ALIGN 20:26:16.5          T1.2   A10
  GRA1 20:26:32.8 e pP     Z
  GRA1 20:26:41.4 e (sP)   Z
  GRA1 21:04:21.5 e L      Z T19.5 A99  MS4.2
SZGRF: OT 20:14:10.4 41.5N 146.3E dep 61km
  OFF COAST OF HOKKAIDO, JAPAN
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1998-05-08      D 81.8  AZ 52
  GRA1 20:59:44.0 e P      Z      mb4.4
  BEAM 20:59:44.0          T1.0   A3
  GRA1 21:41:06.4 e L      Z T19.3 A94  MS4.2
NEIC:  OT 20:47:14.7 30.6N 131.2E dep 33km mb4.3
  KYUSHU, JAPAN
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1998-05-09      D 72.6
  GRA1 00:41:39.0 e P      Z      mb4.8
  BEAM 00:41:39.0          T1.7   A12
  GRA1 01:14:52.2 e L      Z T20.9 A451  MS4.7
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1998-05-09      D 72.4
  GRA1 01:10:49.2 e P      Z      mb4.8
  BEAM 01:10:49.2          T1.4   A12
  GRA1 01:44:22.6 e L      Z T21.0 A448  MS4.7
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1998-05-09      D 3.6  399km
  GRA1 01:39:12.2 e Pn     Z      M13.5
  GRA1 01:40:08.9 e Sg     N
SZGRF: OT 01:38:15.3 51.3N 16.2E dep 1km
  POLAND
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1998-05-09      D 87.5  AZ 63
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GRA1 02:28:57.5 e P Z mb4.9
 BEAM 02:28:57.5 T1.5 A9
 GRA1 02:29:05.9 e pP Z
 GRA1 03:06:39.7 e L Z T22.0 A103 MS4.2
 NEIC: OT 02:16:14.2 20.0N 121.0E dep 33km mb5.0
 PHILIPPINE ISLANDS REGION

 1998-05-09 D 72.5
 GRA1 04:07:22.9 e P Z mb5.0
 ALIGN 04:07:22.9 T1.4 A16
 GRA1 04:07:38.3 e pP Z
 GRA1 04:07:45.7 e sP Z

 1998-05-09 D 75.2 AZ356
 GRA1 04:08:27.7 e P Z mb4.7
 ALIGN 04:08:27.7 T1.4 A11
 GRA1 04:08:46.2 e pP Z
 GRA1 04:08:55.8 e sP Z
 SZGRF: OT 03:56:55.0 55.3N 162.5W dep 71km
 ALASKA PENINSULA

 1998-05-09 D 90.0 AZ 48
 GRA1 05:19:52.3 i P c Z mb4.8
 ALIGN 05:19:52.3 T0.9 A6
 GRA1 05:20:02.5 e pP Z
 GRA1 05:20:06.5 e sP Z
 GRA1 06:03:31.5 e L Z T18.4 A179 MS4.5
 NEIC: OT 05:07:11.7 26.9N 129.5E dep 33km mb4.5
 RYUKYU ISLANDS

 1998-05-09 D 86.9 AZ 63
 GRA1 05:40:25.2 e P Z mb4.7
 BEAM 05:40:25.2 T2.1 A15
 GRA1 06:20:12.1 e L Z T21.0 A86 MS4.1
 NEIC: OT 05:27:41.6 20.1N 121.0E dep 33km mb4.9
 PHILIPPINE ISLANDS REGION

 1998-05-09 D 72.5
 GRA1 07:11:40.3 e P Z mb4.4
 BEAM 07:11:40.3 T1.5 A4

 1998-05-09 D 46.3 AZ130
 GRA1 07:19:07.3 e P Z mb4.8
 ALIGN 07:19:07.3 T2.1 A22
 GRA1 07:19:16.5 e (pP) Z
 GRA1 07:44:36.8 e L Z T20.9 A135 MS3.9
 SZGRF: OT 07:10:44.5

WESTERN ARABIAN PENINSULA

 1998-05-09 D 87.5
 GRA1 11:54:56.1 e P Z
 GRA1 12:31:12.6 e L Z T20.6 A546 MS4.9

1998-05-09 D 12.9
 GRA1 13:08:50.6 e Pn Z
 GRA1 13:11:15.6 e Sn Z
 GRA1 13:12:04.7 e Sg Z
 GRA1 13:13:41.5 e L Z T18.4 A374 MS3.5

1998-05-09
 GRA1 14:53:34.7 e PKPdf Z

1998-05-09 D 23.0
 GRA1 15:43:05.8 e P Z mb5.1
 ALIGN 15:43:05.8 T1.4 A86
 GRA1 15:47:18.3 e S Z
 GRA1 15:54:18.0 e L Z T15.6 A1047 MS4.4

1998-05-09 D 42.8 AZ 84
 GRA1 16:08:50.6 i P d Z mb4.6
 BEAM 16:08:50.6 T1.3 A16
 GRA1 16:09:00.7 e pP Z
 GRA1 16:09:07.8 e sP Z
 GRA1 16:10:31.2 e PP Z
 GRA1 16:28:52.6 e L Z T21.2 A119 MS3.8
 SZGRF: OT 16:00:57.9 37.6N 69.4E dep 41km
 AFGHANISTAN-USSR BORDER REGION

1998-05-09 D 48.2 AZ 96
 GRA1 17:47:38.2 e P Z mb4.3
 BEAM 17:47:38.2 T0.7 A2
 SZGRF: OT 17:39:01.4 27.4N 67.8E dep 33km
 PAKISTAN

1998-05-09 D 86.2 AZ 60
 GRA1 21:05:59.6 e P Z mb4.6
 BEAM 21:05:59.6 T1.6 A8
 GRA1 21:06:12.5 e Z
 GRA1 21:06:24.9 e (pP) Z
 NEIC: OT 20:53:31.8 24.7N 121.7E dep 33km mb4.5
 TAIWAN

1998-05-10

GRA1 02:23:03.7 e PKPab Z

GRA1 02:23:18.2 e pPKPab Z

NEIC: OT 02:02:17.3 33.4S 178.3W dep 33km mb4.6

SOUTH OF KERMADEC ISLANDS

1998-05-10

GRA1 02:53:54.2 i PKPdf d Z

1998-05-10 D 87.5

GRA1 06:18:43.0 i P c Z mb5.1

ALIGN 06:18:43.0 T1.5 A16

GRA1 06:54:51.9 e L Z T20.6 A9268 MS6.2

1998-05-10 D 3.7 409km

GRA1 09:33:40.0 e Pn Z M13.7

GRA1 09:34:38.7 e Sq N

SZGRF: OT 09:32:41.5 51.6N 16.2E dep 1km

POLAND

1998-05-10 D 22.5 AZ246

GRA1 10:20:00.6 e P Z mb3.9

BEAM 10:20:00.6 T0.9 A4

SZGRF: OT 10:15:03.9

NORTH ATLANTIC OCEAN

1998-05-10 D150.6

GRA1 13:01:24.7 e PKPdf Z

GRA1 13:01:32.5 e PKPbc Z

GRA1 13:01:44.1 e PKPab Z

GRA1 13:04:22.6 e PP Z

NEIC: OT 12:42:09.2 13.7S 166.5E dep 33km mb5.1

VANUATU ISLANDS

1998-05-10

GRA1 13:05:08.3 e PKPdf Z

GRA1 13:05:15.7 e pPKPdf Z

1998-05-10 D 78.9 AZ359

GRA1 14:36:05.7 i P c Z mb4.3

BEAM 14:36:05.7 T1.0 A4

NEIC: OT 14:24:20.7 54.6N 160.6W dep 33km mb4.7

ALASKA PENINSULA

1998-05-10

GRA1 14:54:34.1 e PKPdf Z

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1998-05-10      D151.2
  GRA1 19:04:46.4 e PKPdf Z
  GRA1 19:04:50.9 i PKPbc d Z
  GRA1 19:04:59.0 e PKPab Z
NEIC: OT 18:46:01.0 20.5S 178.0W dep550km mb4.2
  FIJI ISLANDS REGION
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1998-05-11      D 23.4 AZ104
  GRA1 00:30:60.0 i P      d Z      mb4.4
  ALIGN 00:30:60.0      T1.5  A16
NEIC: OT 00:25:41.3 39.7N 42.4E dep 10km mb4.0
  TURKEY
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1998-05-11      D 98.9
  GRA1 01:48:18.7 e P      Z
  GRA1 01:52:16.7 e PP     Z
  GRA1 02:29:17.8 e L      Z T20.9 A2103 MS5.6
-----
1998-05-11      D118.0
  GRA1 04:20:35.2 e PKPdf Z
  GRA1 04:21:48.2 e PP     Z
  GRA1 05:12:44.8 e L      Z T21.4 A237 MS4.8
NEIC: OT 04:01:40.4 2.9S 142.0E dep 33km mb5.0
  NEAR N COAST OF NEW GUINEA, PNG.
-----
1998-05-11      D 52.2
  GRA1 10:22:48.9 i P      c Z T0.9 A26 mb5.1
NEIC: OT 10:13:42.0 27.1N 71.9E dep 0km mb5.2
  INDIA-PAKISTAN BORDER REG.
-----
1998-05-11      D124.8
  GRA1 12:59:38.7 i PKPdf c Z
  GRA1 13:59:20.0 e L      Z T19.6 A805 MS5.4
NEIC: OT 12:40:39.5 5.1S 152.6E dep 33km mb5.5
  NEW BRITAIN REGION, P.N.G.
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1998-05-11      D 87.2 AZ280
  GRA1 15:45:32.7 e P      Z      mb4.7
  BEAM 15:45:32.7      T1.4  A9
SZGRF: OT 15:32:49.8
  OFF COAST OF COSTA RICA
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1998-05-11      D 85.9 AZ279
  GRA1 22:21:39.3 e P      Z      mb4.5
  BEAM 22:21:39.3      T1.1  A5
  GRA1 22:53:16.1 e L      Z T25.9 A254 MS4.5

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NEIC: OT 15:32:44.4 8.8N 83.5W dep 23km mb4.6
COSTA RICA

1998-05-11 D 3.7 408km
GRA1 23:31:51.1 e Pn Z M14.0
GRA1 23:32:50.4 e Sg E
SZGRF: OT 23:30:53.7 46.4N 13.8E dep 10km
AUSTRIA

1998-05-12 D 25.0 AZ127
GRA1 00:08:24.2 e P Z mb4.2
BEAM 00:08:24.2 T0.9 A5
SZGRF: OT 00:03:03.3 31.8N 34.5E dep 33km
DEAD SEA REGION

1998-05-12 D 87.1 AZ287
GRA1 01:08:58.4 e P Z mb4.7
BEAM 01:08:58.4 T1.0 A6
GRA1 01:45:15.9 e L Z T20.8 A743 MS5.1
SZGRF: OT 00:56:16.0 13.0N 89.7W dep 33km
EL SALVADOR

1998-05-12 D 72.9 AZ206
GRA1 02:31:15.1 e P Z mb4.9
BEAM 02:31:15.1 T1.5 A14
GRA1 02:31:20.8 e pP Z
GRA1 03:02:38.3 e L Z T21.4 A203
SZGRF: OT 02:19:45.2 19.7S 14.9W dep 20km
SOUTH ATLANTIC RIDGE

1998-05-12 D 4.5 496km
GRC1 15:19:11.5 e Pn Z M14.1
GRA1 15:19:19.8 e Pn Z M14.2
GRA1 15:20:45.8 e Sg N
SZGRF: OT 15:18:04.8 46.2N 16.7E dep 10km
YUGOSLAVIA

1998-05-12 D 3.6 403km
GRA1 15:45:03.0 e Pn Z M13.8
GRA1 15:46:01.8 e Sg N
SZGRF: OT 15:44:05.7 51.5N 16.1E dep 1km
POLAND

1998-05-12 D 57.5 AZ 72
GRA1 17:03:31.3 e P Z mb4.2
BEAM 17:03:31.3 T1.3 A3
GRA1 17:29:05.3 e L Z T21.0 A356 MS4.5
SZGRF: OT 16:53:46.0
TSINGHAI PROVINCE, CHINA

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1998-05-12      D 79.0
  GRA1 17:13:05.8 i P      c Z      mb5.9
  ALIGN 17:13:05.8              T1.0  A132
  GRA1 17:13:17.8 e pP      Z
  GRA1 17:13:21.4 e sP      Z
  GRA1 17:51:01.6 e L      Z  T20.1  A1136  MS5.2

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1998-05-12      D 86.7  AZ 90
  GRA1 21:09:11.9 e P      Z      mb4.5
  BEAM 21:09:11.9              T1.0  A4
  GRA1 21:09:31.3 e (pP)   Z
SZGRF: OT 20:56:36.1  2.4N  98.9E dep 70km
  NORTHERN SUMATERA

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1998-05-12      D 56.8  AZ 73
  GRA1 22:00:58.6 e P      Z      mb4.6
  BEAM 22:00:58.6              T0.8  A5
SZGRF: OT 21:51:18.3 35.2N  89.2E dep 33km
  TIBET

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1998-05-12
  GRA1 23:36:04.7 e PKP    Z

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1998-05-13      D 5.1
  GRA1 00:13:17.3 e Pn     Z      M14.6
  GRA1 00:14:48.3 e Sg     E
  GRA1 00:15:47.1 e L      Z  T16.4  A355  MS2.8
SZGRF: OT 00:12:01.7 44.6N  10.4E dep 10km
  NORTHERN ITALY

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1998-05-13      D 15.0  AZ150
  GRA1 00:35:56.3 e P      Z
  GRA1 00:36:05.9 e (PP)   Z

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1998-05-13      D 3.8  425km
  GRA1 01:59:56.0 e Pn     Z      M13.8
  GRA1 02:00:41.3 e Sn     N
  GRA1 02:00:56.5 e Sg     N
SZGRF: OT 01:58:55.8 46.3N  13.9E dep 10km
  AUSTRIA

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1998-05-13      D 47.2  AZ134
  GRA1 10:07:05.5 e P      Z      mb4.6
  BEAM 10:07:05.5              T1.2  A6
SZGRF: OT 09:58:35.0

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NORTHWESTERN SOMALIA

 1998-05-13 D126.2
 GRA1 13:24:04.9 e PKPdf Z
 GRA1 14:22:24.6 e L Z T21.6 A149 MS4.6

1998-05-13 D 3.7 414km
 GRA1 21:38:53.1 e Pg Z M13.3
 GRA1 21:39:42.8 e Sg E
 SZGRF: OT 21:37:43.8 46.5N 14.1E dep 10km
 YUGOSLAVIA

1998-05-13 D124.6
 GRA1 23:20:59.5 i PKPdf c Z
 GRA1 23:21:04.9 e pPKPbc Z
 GRA1 23:21:06.5 e sPKPdf Z
 GRA1 23:21:40.9 e (SKP) Z
 GRA1 23:22:49.6 e PP Z
 GRA1 00:16:38.4 e L Z T22.0 A11528 MS6.5
 NEIC: OT 23:02:02.4 5.1S 151.8E dep 33km mb6.0
 NEW BRITAIN REGION, P.N.G.

1998-05-14 D 90.0
 GRA1 06:33:33.5 i P c Z mb5.4
 ALIGN 06:33:33.5 T1.2 A28
 GRA1 06:37:07.0 e PP Z
 GRA1 07:20:57.4 e L Z T18.9 A919 MS5.2
 NEIC: OT 06:20:35.6 29.3N 142.0E dep 33km mb5.3
 SOUTH OF HONSHU, JAPAN

1998-05-14 D 81.4 AZ 34
 GRA1 11:05:57.7 i P c Z mb5.9
 ALIGN 11:05:57.7 T1.2 A151
 GRA1 11:06:14.5 e (pP) Z
 GRA1 11:09:00.0 e PP Z
 GRA1 11:45:21.5 e L Z T19.0 A1154 MS5.3
 SZGRF: OT 10:53:49.4 40.3N 144.5E dep 60km
 OFF EAST COAST OF HONSHU, JAPAN

1998-05-14 D 77.9 AZ 22
 GRA1 11:08:09.1 i P c Z mb5.4
 ALIGN 11:08:09.1 T1.1 A37
 GRA1 11:08:21.3 e pP Z
 SZGRF: OT 10:56:17.2 48.6N 157.7E dep 42km
 KURIL ISLANDS REGION

1998-05-14 D109.5
 GRA1 13:42:10.6 e Pdiff Z

GRA1 13:51:36.5 e PP Z
GRA1 14:22:38.3 e L Z T21.3 A229 MS4.7

1998-05-14 D 90.3
GRA1 15:41:21.5 e P Z mb4.8
BEAM 15:41:21.5 T1.7 A12
GRA1 16:28:36.4 e L Z T19.1 A184 MS4.5
NEIC: OT 15:28:24.3 29.3N 142.0E dep 33km mb4.8
SOUTH OF HONSHU, JAPAN

1998-05-14 D 81.2 AZ 35
GRA1 19:08:36.7 e P c Z mb6.3
ALIGN 19:08:36.7 T1.3 A405
GRA1 19:09:21.9 e pP Z
GRA1 19:09:31.8 e sP Z
GRA1 19:11:41.7 e PP Z
GRA1 19:50:27.4 e L Z T18.6 A10596 MS6.2
SZGRF: OT 18:56:41.5 40.2N 143.7E dep170km
OFF EAST COAST OF HONSHU, JAPAN

1998-05-14 D 86.0
GRA1 20:06:43.8 i P c Z mb4.7
BEAM 20:06:43.8 T1.2 A7
GRA1 20:07:23.0 e pP Z
GRA1 20:07:35.3 e (sP) Z
NEIC: OT 19:54:19.3 11.6N 86.2W dep156km mb4.6
NEAR COAST OF NICARAGUA

1998-05-14 D151.4
GRA1 20:22:52.9 e PKPdf Z
GRA1 20:23:06.2 e PKPab Z
NEIC: OT 20:03:18.3 19.8S 169.3E dep 70km mb5.0
VANUATU ISLANDS

1998-05-15 D105.7
GRA1 00:16:49.2 e Pdiff Z
GRA1 01:06:39.0 e L Z T20.6 A425 MS5.0
SZGRF: OT 00:02:40.0 12.1N 143.7E dep 33km
SOUTH OF MARIANA ISLANDS

1998-05-15 D 28.6 AZ238
GRA1 00:32:26.8 e (P) Z

1998-05-15 D104.6
GRA1 06:11:52.9 e (Pdiff) Z
GRA1 06:12:15.4 e (pPdiff)Z
GRA1 06:16:05.9 e (pPKPdf)Z

GRA1 06:16:19.2 e PP Z
GRA1 06:16:55.0 e pPP Z
GRA1 07:00:13.8 e L Z T19.9 A1143 MS5.4
NEIC: OT 05:58:06.3 14.2N 144.8E dep157km mb5.7
MARIANA ISLANDS

1998-05-15 D 77.3
GRA1 08:53:20.6 e P Z mb4.9
BEAM 08:53:20.6 T1.7 A16
GRA1 08:53:25.1 e pP Z
GRA1 09:37:14.7 e L Z T18.9 A209 MS4.5
NEIC: OT 08:41:24.6 10.1N 94.0E dep 33km mb5.2
ANDAMAN ISLANDS, INDIA

1998-05-15 D 3.7 407km
GRA1 13:38:49.4 e Pn Z M13.6
GRA1 13:39:49.1 e Sg E
SZGRF: OT 13:37:51.9 46.4N 13.6E dep 10km
AUSTRIA

1998-05-15 D 48.4 AZ 74
GRA1 15:50:18.1 e P Z mb4.4
BEAM 15:50:18.1 T1.4 A4
GRA1 16:14:06.8 e L Z T21.7 A547 MS4.5
SZGRF: OT 15:41:40.3
SOUTHERN SINKIANG PROV., CHINA

1998-05-15 D 84.0
GRA1 18:57:31.1 e P Z mb4.4
BEAM 18:57:31.1 T1.1 A3

1998-05-15
GRA1 20:12:44.1 e Pn Z
GRA1 20:13:19.8 e Sn Z

1998-05-15
GRA1 21:20:00.0 e Pn Z
GRA1 21:21:08.9 e Sn Z

1998-05-15
GRA1 22:28:52.1 e P Z

1998-05-16 D 80.6 AZ 28
GRA1 01:46:29.1 e P Z mb4.2
BEAM 01:46:29.1 T1.0 A2

GRA1 01:46:34.2 e pP Z
SZGRF: OT 01:34:19.1
KURIL ISLANDS REGION

1998-05-16 D151.2
GRA1 02:40:45.3 i PKPdf d Z
GRA1 02:40:52.4 i PKPbc d Z
GRA1 02:41:03.5 e PKPab Z
GRA1 02:43:12.1 e pPKPdf Z
GRA1 02:43:21.1 e pPKPbc Z
GRA1 02:43:28.9 e pPKPab Z
GRA1 02:44:36.6 e PP Z

1998-05-16
GRA1 03:17:26.2 e PKPab Z

1998-05-16
GRA1 03:40:07.0 e PKPdf Z
GRA1 03:40:46.4 e pPKPdf Z
NEIC: OT 03:20:19.5 19.9S 175.6W dep 33km mb5.1
TONGA ISLANDS

1998-05-16 D 7.8
GRA1 10:57:08.3 e Pn Z
GRA1 10:58:19.4 e Sn Z
GRA1 10:59:16.8 e Sg Z M15.1
GRA1 11:00:36.1 e L Z T14.1 A1324 MS3.8

1998-05-16 D151.4
GRA1 11:01:00.1 e PKPdf Z
GRA1 11:01:04.0 e PKPbc Z
GRA1 11:01:12.3 e PKPab Z
NEIC: OT 10:41:28.9 21.6S 176.8W dep174km mb5.3
FIJI ISLANDS REGION

1998-05-16 D 10.6
GRA1 13:30:39.6 e Pn Z
GRA1 13:32:38.8 e Sn Z
GRA1 13:32:59.8 e Sg Z
NEIC: OT 13:28:43.6 43.5N 18.1E dep 10km
NORTHWESTERN BALKAN REGION

1998-05-16 D 95.3 AZ303
GRA1 17:54:56.3 e P Z mb5.1
BEAM 17:54:56.3 T2.0 A17
GRA1 17:55:05.4 e pP Z

GRA1 18:33:20.7 e L Z T21.7 A153 MS4.4
 SZGRF: OT 17:41:36.1 16.6N 108.5W dep 31km
 OFF COAST OF MEXICO

 1998-05-16 D147.0

GRA1 18:00:41.9 i PKPdf c Z
 GRA1 18:01:01.3 e (pPKPdf) Z

 1998-05-16

GRA1 19:12:59.2 e Pn Z
 GRA1 19:13:52.9 e Sn Z

 1998-05-16 D 6.6

GRA1 23:56:32.5 e Pn Z M14.2
 GRA1 23:57:41.9 e Sn N
 GRA1 23:58:29.2 e Sg Z
 SZGRF: OT 23:54:56.5 53.2N 2.4E dep 10km
 NORTH SEA

 1998-05-17

GRA1 02:55:30.6 e Pn Z
 NEIC: OT 02:53:41.6 44.1N 18.0E dep 10km
 NORTHWESTERN BALKAN REGION

 1998-05-17 D 95.5 AZ130

GRA1 04:12:36.4 e PKP Z mb4.8
 BEAM 04:12:36.4 T1.1 A5
 NEIC: OT 03:52:21.7 62.9S 149.9E dep 10km mb4.4
 BALLENY ISLANDS REGION

 1998-05-17 D 87.3 AZ128

GRA1 10:51:00.7 e P Z mb4.8
 BEAM 10:51:00.7 T1.3 A10
 SZGRF: OT 10:38:15.7 21.6S 68.6E dep 33km
 MID-INDIAN RISE

 1998-05-17 D 90.5

GRA1 15:30:20.6 i P d Z mb5.3
 ALIGN 15:30:20.6 T1.3 A23
 GRA1 15:30:29.8 e pP Z
 GRA1 16:09:45.5 e L Z T21.3 A100 MS4.2

 1998-05-17 D147.1

GRA1 16:36:37.7 e PKPdf Z
 GRA1 16:36:40.5 i PKPbc c Z
 GRA1 16:37:00.8 e PKPab Z
 GRA1 17:45:46.7 e L Z T21.6 A259 MS5.0

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1998-05-17          D151.6
  GRA1 16:59:44.0 e (PKPdf) Z
  GRA1 16:59:49.1 e PKPbc  Z
  GRA1 16:59:57.4 e PKPab  Z
NEIC:  OT 16:40:13.0 21.9S 176.8W dep172km mb4.5
      FIJI ISLANDS REGION
-----
1998-05-18          D124.1
  GRA1 00:56:17.9 e PKPdf  Z
NEIC:  OT 00:37:22.3  4.6S 151.4E dep 33km  mb4.9
      NEW BRITAIN REGION, P.N.G.
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1998-05-18          D149.1
  GRA1 12:04:51.5 e PKPdf  Z
  GRA1 12:04:56.3 e PKPbc  Z
  GRA1 12:05:01.3 e PKPab  Z
  GRA1 12:06:11.2 e (pPKPbc)Z
NEIC:  OT 11:45:42.1 19.2S 176.7W dep305km mb4.8
      FIJI ISLANDS REGION
-----
1998-05-18          D 79.8
  GRA1 15:53:00.1 e P      Z T0.7  A13      mb5.0
  GRA1 15:53:13.7 e pP     Z
-----
1998-05-18          D 10.9
  GRA1 17:21:33.0 i P      d Z
  GRA1 17:23:51.0 e L      Z T20.0 A1823  MS4.0
NEIC:  OT 17:19:04.6 39.2N 15.1E dep279km mb5.3
      SOUTHERN ITALY
-----
1998-05-18
  GRA1 18:03:44.2 e PKPdf  Z
-----
1998-05-18          D 78.3
  GRA1 18:52:32.9 e P      Z          mb4.7
  BEAM 18:52:32.9          T1.4  A9
  GRA1 18:52:43.6 e (pP)  Z
NEIC:  OT 18:40:33.8 52.6N 165.2W dep 33km  mb4.6
      SOUTH OF ALEUTIAN ISLANDS
-----
1998-05-18          D 3.6 404km
  GRA1 20:04:57.8 e Pn     Z          M14.6
  GRA1 20:05:56.1 e Sg     E
SZGRF: OT 20:04:00.4 51.5N 16.2E dep 1km
      POLAND

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1998-05-19 D 83.9
GRA1 01:31:02.8 i P c Z mb5.5
ALIGN 01:31:02.8 T1.5 A50
GRA1 01:31:10.1 e pP Z
GRA1 01:31:24.1 e Z
GRA1 02:11:28.1 e L Z T19.8 A593 MS5.0
NEIC: OT 01:18:33.7 36.4N 142.3E dep 33km mb5.0
OFF EAST COAST OF HONSHU, JAPAN

1998-05-19 D 85.1 AZ 43
GRA1 02:08:08.7 i P d Z mb5.0
ALIGN 02:08:08.7 T1.3 A14
GRA1 02:09:41.0 e pP Z
GRA1 02:11:34.3 e PP Z
SZGRF: OT 01:56:18.2 32.5N 137.2E dep404km
SOUTH OF HONSHU, JAPAN

1998-05-19 D 15.0 AZ143
GRA1 06:54:27.4 e P Z
BEAM 06:54:27.4 T0.8 A8

1998-05-19 D123.1
GRA1 08:13:23.2 e PKPdf Z
GRA1 09:04:58.2 e L Z T21.2 A386 MS5.0

1998-05-19
GRA1 14:43:03.3 e PKPab Z
GRA1 16:04:24.2 e L Z T19.6 A135
NEIC: OT 14:23:12.9 53.8S 140.6E dep 10km mb5.0
WEST OF MACQUARIE ISLAND

1998-05-20
GRA1 01:38:07.5 e PKPdf Z

1998-05-20 D 84.2 AZ 50
GRA1 01:41:22.4 e P Z T1.1 A10 mb5.0
GRA1 01:41:38.5 e (pP) Z
NEIC: OT 01:28:56.1 29.6N 130.2E dep 75km mb4.7
RYUKYU ISLANDS

1998-05-20 D 35.5 AZ107
GRA1 05:30:36.6 e P Z mb4.3
BEAM 05:30:36.6 T0.7 A4
GRA1 05:30:45.1 e (pP) Z
GRA1 05:30:49.9 e (sP) Z

NEIC: OT 05:23:39.5 30.4N 51.5E dep 33km mb4.4
NORTHERN IRAN

1998-05-20 D 87.9
GRA1 06:57:08.1 e P Z mb4.7
BEAM 06:57:08.1 T1.0 A4
GRA1 07:40:38.7 e L Z T21.9 A318 MS4.7

1998-05-20 D114.0
GRA1 08:24:59.6 i PKPdf d Z
NEIC: OT 08:06:29.5 6.6S 130.5E dep 97km mb4.8
BANDA SEA

1998-05-20 D 78.0 AZ 2
GRA1 09:30:38.8 e P Z mb5.5
BEAM 09:30:38.8 T1.7 A67
GRA1 09:30:49.9 e pP Z
GRA1 10:16:11.3 e L Z T18.2 A326 MS4.7
SZGRF: OT 09:18:46.5 52.7N 171.9W dep 39km
FOX ISLANDS, ALEUTIAN ISLANDS

1998-05-20 D 11.4
GRA1 09:58:06.6 e P Z

1998-05-20 D 6.6
GRA1 11:09:16.9 e Pn Z
GRA1 11:10:06.9 e (SnI) Z
GRA1 11:11:01.5 e Sg Z M14.4
GRA1 11:12:26.5 e L Z T16.5 A365 MS3.0

1998-05-20 D 77.4 AZ 28
GRA1 12:59:43.1 e P Z mb5.0
BEAM 12:59:43.1 T1.5 A18
NEIC: OT 12:48:34.8 46.7N 145.1E dep383km mb4.6
SEA OF OKHOTSK

1998-05-20
GRA1 13:29:09.2 e PKPab Z

1998-05-20 D 77.8 AZ***
GRA1 18:41:29.4 e P Z mb4.9
BEAM 18:41:29.4 T1.9 A21
SZGRF: OT 18:29:37.4 52.9N 170.1W dep 33km
FOX ISLANDS, ALEUTIAN ISLANDS

1998-05-20 D 84.5 AZ 62
 GRA1 19:57:35.8 e P Z mb4.6
 BEAM 19:57:35.8 T1.8 A7
 GRA1 19:58:00.6 e pP Z
 NEIC: OT 19:44:38.3 22.6N 125.3E dep 33km mb4.5
 SOUTHEAST OF TAIWAN

1998-05-20 D 78.7 AZ 38
 GRA1 22:05:59.8 e P Z mb4.7
 ALIGN 22:05:59.8 T0.8 A7
 GRA1 22:06:08.6 e Z
 GRA1 22:06:20.9 e pP Z
 GRA1 22:06:30.1 e sP Z
 GRA1 22:09:03.3 e PP Z
 GRA1 22:41:32.6 e L Z T20.0 A55 MS3.9
 SZGRF: OT 21:54:08.2 40.6N 138.0E dep 80km
 EASTERN SEA OF JAPAN

1998-05-20 D 3.1 342km
 GRC1 22:31:01.8 e Pn Z M13.2
 GRA1 22:31:04.5 e Pn Z M13.6
 GRA1 22:32:04.1 e Sg Z
 SZGRF: OT 22:30:09.4 47.7N 15.7E dep 10km
 AUSTRIA

1998-05-20 D 3.7 412km
 GRA1 06:36:37.7 e Sg E M14.0
 SZGRF: OT 06:34:40.1 51.6N 16.2E dep 1km
 POLAND

1998-05-21 D 86.8 AZ292
 GRA1 00:49:23.4 i P Z mb4.6
 ALIGN 00:49:23.4 T1.0 A6
 SZGRF: OT 00:36:42.6 16.6N 93.7W dep 33km
 CHIAPAS, MEXICO

1998-05-21
 GRA1 02:02:33.4 e PKPdf Z

1998-05-21
 GRA1 04:30:28.5 e (PKPdf) Z

1998-05-21 D101.5
 GRA1 05:48:15.7 e (Pdiff) Z
 GRA1 05:49:03.7 e Z
 GRA1 05:50:48.0 e Z
 GRA1 06:37:54.1 e L Z T20.8 A15352 MS6.5

NEIC: OT 05:34:25.1 .2N 119.6E dep 33km mb6.2
MINAHASSA PENINSULA, SULAWESI

1998-05-21

GRA1 19:26:06.4 e (PKPab) Z

1998-05-21 D 77.5 AZ 29

GRA1 19:56:42.5 e P Z mb4.2

BEAM 19:56:42.5 T1.2 A3

SZGRF: OT 19:44:51.6

NORTHWEST OF KURIL ISLANDS

1998-05-21 D 95.7

GRA1 22:44:50.0 e P Z mb5.0

BEAM 22:44:50.0 T2.0 A10

GRA1 22:48:40.0 e PP Z

GRA1 23:30:51.6 e L Z T21.4 A2618 MS5.7

NEIC: OT 22:31:23.0 43.1S 41.4E dep 10km mb5.5

PRINCE EDWARD ISLANDS REGION

1998-05-22 D 94.5 AZ248

GRA1 04:49:13.9 e P Z mb5.3

BEAM 04:49:13.9 T2.7 A31

NEIC: OT 04:35:50.3 17.9S 65.6W dep 33km mb4.8

CENTRAL BOLIVIA

1998-05-22 D 94.2

GRA1 05:02:10.4 e P Z mb6.0

BEAM 05:02:10.4 T1.4 A110

GRA1 05:06:09.0 e PP Z

GRA1 05:43:04.8 e L Z T20.4 A15214 MS6.4

1998-05-22 D 93.9

GRA1 06:30:27.3 e P Z mb5.1

BEAM 06:30:27.3 T1.5 A14

GRA1 06:30:39.2 e pP Z

GRA1 06:30:44.6 e (sP) Z

NEIC: OT 06:17:05.2 18.0S 65.4W dep 33km mb5.1

CENTRAL BOLIVIA

1998-05-22 D 88.3 AZ 90

GRA1 13:45:31.5 i P d Z mb4.9

BEAM 13:45:31.5 T0.9 A6

GRA1 13:45:39.3 e pP Z

SZGRF: OT 13:32:41.8 1.2N 100.1E dep 27km

NORTHERN SUMATERA

1998-05-22 D 81.9
GRA1 20:01:44.5 e P c Z mb5.7
ALIGN 20:01:44.5 T1.3 A90
GRA1 20:01:56.7 e Z
GRA1 20:02:07.8 e pP Z
GRA1 20:02:17.7 e sP Z
GRA1 20:04:55.5 e PP Z
GRA1 20:05:18.7 e pPP Z
GRA1 20:40:57.5 e L Z T21.6 A642 MS4.9

1998-05-23 D148.3
GRA1 02:56:47.4 e PKPdf Z

1998-05-23 D149.2
GRA1 14:45:54.7 e (PKPdf) Z
GRA1 14:45:58.2 i PKPbc c Z
GRA1 14:46:02.0 e PKPab Z
GRA1 14:47:50.6 e (pPKPab)Z
NEIC: OT 14:27:12.8 31.8S 178.5W dep 33km mb4.9
KERMADEC ISLANDS REGION

1998-05-23
GRA1 16:03:40.4 i PKPdf c Z
NEIC: OT 15:44:38.2 6.3S 154.9E dep 33km mb5.2
SOLOMON ISLANDS

1998-05-23 D 98.0
GRA1 17:57:17.6 i P d Z mb6.6
ALIGN 17:57:17.6 T1.3 A169
GRA1 17:59:38.2 e pP Z
GRA1 18:00:18.3 e sP Z
GRA1 18:01:26.3 e PP Z
GRA1 18:03:17.2 e pPP Z
NEIC: OT 17:44:47.6 8.2N 123.8E dep656km mb5.9
MINDANAO, PHILIPPINE ISLANDS

1998-05-24 D 97.2
GRA1 02:38:21.3 e Pdiff Z
GRA1 02:42:23.1 e PP Z

1998-05-24 D151.4
GRA1 02:43:05.8 e (PKPdf) Z
GRA1 02:43:10.8 i PKPbc d Z
GRA1 02:43:18.9 e PKPab Z
NEIC: OT 02:24:16.6 20.4S 177.9W dep500km mb4.6
FIJI ISLANDS REGION

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1998-05-24      D 96.7
  GRA1 02:46:25.4 e P      Z
  GRA1 02:50:13.3 e PP     Z
NEIC:  OT 02:32:51.1  6.4S 104.9E dep 33km  mb5.2
  SUNDA STRAIT
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1998-05-24      D 98.7
  GRA1 13:55:23.8 e P      Z                mb5.5
  BEAM 13:55:23.8                T2.2  A21
  GRA1 14:37:28.7 e L      Z T20.2  A516     MS5.0
NEIC:  OT 13:41:52.6 17.0S  72.5W dep 87km  mb4.8
  NEAR COAST OF PERU
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1998-05-24
  GRA1 14:03:22.9 e PKPdf  Z
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1998-05-24      D 3.7 408km
  GRA1 17:46:22.7 e Pn     Z                M13.2
  GRA1 17:47:26.6 e Sg     E
SZGRF: OT 17:45:27.6 46.5N 13.9E dep 10km
  AUSTRIA
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1998-05-24
  GRA1 19:18:09.6 e (PKPdf) Z
  GRA1 19:18:23.0 e PKPab  Z
NEIC:  OT 18:58:38.1 18.3S 167.7E dep 33km  mb4.8
  VANUATU ISLANDS
-----
1998-05-25      D 23.6 AZ334
  GRA1 02:03:44.4 e P      Z                mb4.3
  BEAM 02:03:44.4                T1.9  A19
  GRA1 02:14:38.5 e L      Z T18.0  A91     MS3.3
SZGRF: OT 01:58:36.5 68.6N 17.7W dep 33km
  ICELAND REGION
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1998-05-25      D 81.3
  GRA1 02:29:44.6 e (P)    Z
  GRA1 02:30:17.2 e (pP)   Z
NEIC:  OT 02:17:55.2  6.8N  73.0W dep155km  mb5.0
  NORTHERN COLOMBIA
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1998-05-25      D 87.5
  GRA1 19:27:01.4 e P      Z                mb5.0
  BEAM 19:27:01.4                T1.0  A8
  GRA1 19:27:18.3 e pP     Z
  GRA1 20:03:06.2 e L      Z T21.2  A348     MS4.7

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1998-05-25

GRA1 21:03:44.9 i PKPdf d Z

NEIC: OT 20:45:01.9 17.3S 178.8W dep550km mb4.5

FIJI ISLANDS REGION

1998-05-26

D 80.6 AZ 26

GRA1 00:26:44.9 e P Z mb4.2

BEAM 00:26:44.9 T1.0 A3

NEIC: OT 00:14:40.4 44.3N 149.1E dep 33km mb4.5

KURIL ISLANDS

1998-05-26

D 94.5 AZ247

GRA1 01:21:41.3 e P Z mb5.1

BEAM 01:21:41.3 T1.6 A12

GRA1 02:02:22.2 e L Z T19.4 A370 MS4.9

1998-05-26

GRA1 20:11:44.8 e PKPdf Z

GRA1 20:11:54.2 e pPKPdf Z

NEIC: OT 19:51:53.1 62.9S 144.5E dep 33km mb4.7

SOUTH OF AUSTRALIA

1998-05-27

D 88.0

GRA1 01:29:19.0 e P Z mb5.3

ALIGN 01:29:19.0 T1.2 A18

GRA1 01:29:25.6 e (pP) Z

GRA1 01:29:35.1 e Z

GRA1 01:29:40.4 e Z

GRA1 02:14:21.4 e L Z T18.6 A315 MS4.8

NEIC: OT 01:16:30.3 22.0N 125.5E dep 33km mb5.3

SOUTHEAST OF TAIWAN

1998-05-27

D147.4

GRA1 03:44:01.9 e PKPdf Z

GRA1 04:54:31.8 e L Z T22.0 A872 MS5.5

1998-05-27

D 60.2 AZ 60

GRA1 04:18:06.1 e P Z mb4.4

BEAM 04:18:06.1 T0.5 A2

1998-05-27

GRA1 04:29:30.1 e PKPab Z

1998-05-27

D127.5

GRA1 10:56:17.4 e PKPdf Z
 NEIC: OT 10:37:23.6 6.4S 155.3E dep117km mb5.0
 SOLOMON ISLANDS

 1998-05-27

GRA1 13:26:01.8 e PKPdf Z

 1998-05-27 D124.3

GRA1 15:46:11.7 e PKPdf Z
 GRA1 15:46:26.3 e (pPKPdf)Z
 GRA1 15:46:53.1 e (SKP) Z
 GRA1 15:48:04.4 e PP Z
 GRA1 16:42:13.3 e L Z T20.2 A2147 MS5.8
 NEIC: OT 15:27:16.4 5.8S 149.7E dep 33km mb5.5
 NEW BRITAIN REGION, P.N.G.

 1998-05-27 D 74.0 AZ 20

GRA1 20:53:13.9 i P c Z mb6.2
 ALIGN 20:53:13.9 T2.0 A450
 GRA1 20:53:30.8 e pP Z
 GRA1 21:31:33.3 e L Z T18.9 A8712 MS6.1
 SZGRF: OT 20:41:47.0 53.0N 158.4E dep 62km
 NEAR EAST COAST OF KAMCHATKA

 1998-05-27 D 96.5

GRA1 23:56:47.1 e P Z mb5.0
 BEAM 23:56:47.1 T1.4 A6
 GRA1 00:37:60.0 e L Z T19.2 A70

 1998-05-28 D 75.4 AZ 22

GRA1 00:33:04.5 e P Z mb4.6
 BEAM 00:33:04.5 T1.5 A9
 GRA1 00:33:19.3 e pP Z
 SZGRF: OT 00:21:28.3
 KAMCHATKA

 1998-05-28 D 3.6 395km

GRA1 00:38:54.4 e Pn Z M13.2
 GRA1 00:39:52.0 e Sg E
 SZGRF: OT 00:37:58.5 51.3N 16.2E dep 1km
 POLAND

 1998-05-28 D 74.4 AZ 19

GRA1 05:10:33.5 i P c Z mb5.9
 ALIGN 05:10:33.5 T2.1 A273
 GRA1 05:11:09.8 e pP Z
 GRA1 05:11:26.3 e sP Z

GRA1 05:11:46.5 e Z
GRA1 05:49:03.1 e L Z T18.3 A5680 MS5.9
SZGRF: OT 04:59:14.2 53.0N 160.4E dep149km
NEAR EAST COAST OF KAMCHATKA

1998-05-28 D 77.9
GRA1 07:16:06.1 e P Z mb4.8
BEAM 07:16:06.1 T0.9 A7
GRA1 07:16:17.2 e pP Z

1998-05-28 D 3.6 399km
GRA1 09:33:29.7 e Pn Z M14.4
GRA1 09:33:58.8 e Sn N
GRA1 09:34:16.7 e Sg Z
GRA1 09:34:51.2 e L Z T13.0 A351 MS2.7

1998-05-28 D 3.5 394km
GRA1 09:37:31.3 e Pn Z
GRA1 09:38:00.8 e Sn Z
GRA1 09:38:18.0 e Sg Z M13.6

1998-05-28 D 85.7
GRA1 10:10:52.1 e P Z mb4.6
BEAM 10:10:52.1 T1.7 A8

1998-05-28 D 45.3
GRA1 10:24:36.9 e P Z mb4.6
BEAM 10:24:36.9 T1.2 A10
NEIC: OT 10:16:15.2 28.9N 64.8E dep 0km mb4.8
SOUTHWESTERN PAKISTAN

1998-05-28
GRA1 10:26:17.8 e PKPdf Z

1998-05-28 D 62.7 AZ199
GRA1 11:51:15.0 e P Z mb4.7
BEAM 11:51:15.0 T1.6 A11
GRA1 12:33:33.6 e L Z T20.3 A267 MS4.4
SZGRF: OT 11:40:51.0 11.5S 5.7W dep 33km
SOUTH ATLANTIC OCEAN

1998-05-28 D 4.1 460km
GRA1 12:14:51.9 e Pn Z M13.6
GRA1 12:15:23.7 e Sn Z

GRA1 12:15:39.5 e Sg Z

1998-05-28 D 74.9 AZ 19
GRA1 13:30:40.6 i P c Z mb4.9
BEAM 13:30:40.6 T1.5 A20
GRA1 13:30:58.6 e pP Z
GRA1 13:31:04.2 e sP Z
GRA1 14:08:38.6 e L Z T20.2 A155 MS4.3
SZGRF: OT 13:19:08.7 52.3N 159.8E dep 64km
OFF EAST COAST OF KAMCHATKA

1998-05-28 D 43.8 AZ 84
GRA1 15:51:44.7 i P c Z mb4.4
BEAM 15:51:44.7 T1.2 A10
GRA1 15:51:49.1 e (pP) Z
SZGRF: OT 15:43:40.8 36.7N 70.1E dep 16km
HINDU KUSH REGION

1998-05-28 D 77.3
GRA1 17:06:03.4 i P c Z mb5.0
BEAM 17:06:03.4 T1.1 A13
GRA1 17:06:10.9 e (pP) Z
NEIC: OT 16:54:12.1 53.5N 164.7W dep 33km mb4.7
UNIMAK ISLAND REGION

1998-05-28 D 22.1
GRA1 18:38:24.8 i P c Z mb5.5
ALIGN 18:38:24.8 T1.2 A238
GRA1 18:42:22.3 e (S) Z
GRA1 18:48:13.9 e L Z T21.6 A2102 MS4.5

1998-05-28 D 43.0 AZ104
GRA1 20:41:01.1 i P c Z mb4.4
BEAM 20:41:01.1 T1.3 A10
GRA1 20:41:12.8 e pP Z
SZGRF: OT 20:33:06.4
SOUTHERN IRAN

1998-05-28 D 49.3
GRA1 21:20:30.4 i P d Z mb5.4
ALIGN 21:20:30.4 T1.4 A49
GRA1 21:20:45.6 e pP Z
NEIC: OT 21:11:43.8 37.3N 78.9E dep 33km mb5.3
SOUTHERN XINJIANG, CHINA

1998-05-28 D 49.1
GRA1 21:37:26.7 i P d Z mb5.2

ALIGN 21:37:26.7 T1.2 A28
 GRA1 21:37:36.6 e (pP) Z
 NEIC: OT 21:28:41.0 37.4N 78.8E dep 33km mb5.2
 SOUTHERN XINJIANG, CHINA

 1998-05-28

GRA1 22:16:16.1 e PKPab Z
 GRA1 22:16:29.0 e pPKPab Z

 1998-05-28

D 3.6 399km
 GRA1 23:45:32.8 e Pg Z M12.9
 GRA1 23:46:21.1 e Sg E
 SZGRF: OT 23:44:27.1
 AUSTRIA

 1998-05-29

D 90.2
 GRA1 03:08:59.8 e P Z mb4.9
 BEAM 03:08:59.8 T2.0 A17
 NEIC: OT 02:55:57.5 2.1S 99.6E dep 33km mb4.9
 SOUTHERN SUMATERA, INDONESIA

 1998-05-29

D 90.5
 GRA1 03:37:49.5 e P Z mb4.9
 BEAM 03:37:49.5 T1.6 A12
 NEIC: OT 03:24:40.0 2.2S 99.7E dep 33km mb4.9
 SOUTHERN SUMATERA, INDONESIA

 1998-05-29

D 90.4
 GRA1 05:00:56.0 e P Z mb5.4
 BEAM 05:00:56.0 T1.3 A32
 GRA1 05:01:02.8 e pP Z
 GRA1 05:01:10.4 e (sP) Z
 GRA1 05:49:36.2 e L Z T19.2 A444 MS4.9
 NEIC: OT 04:47:53.9 2.2S 99.7E dep 33km mb5.3
 SOUTHERN SUMATERA, INDONESIA

 1998-05-29

D 94.3
 GRA1 11:37:14.1 e Pdiff Z
 BEAM 11:37:14.1 T1.4 A11
 GRA1 12:17:45.0 e L Z T19.1 A607 MS5.1

 1998-05-29

D 3.8 425km
 GRA1 22:51:38.2 e Pn Z M13.1
 GRA1 22:52:39.2 e Sg E
 GRA1 22:52:39.9 e Sg N
 SZGRF: OT 22:50:38.5 46.3N 13.7E dep 10km
 AUSTRIA

1998-05-29 D 44.9
GRA1 22:57:49.4 i P c Z mb5.8
ALIGN 22:57:49.4 T1.1 A139
GRA1 22:57:54.5 e pP Z
GRA1 22:57:57.8 e sP Z
GRA1 23:17:58.4 e L Z T16.3 A7307 MS5.7
NEIC: OT 22:49:33.8 41.1N 75.6E dep 18km mb5.5
KYRGYZSTAN

1998-05-29
GRA1 23:57:33.8 e Pn Z
GRA1 23:58:28.9 e SgI Z
NEIC: OT 23:56:27.4 46.2N 13.7E dep 10km
AUSTRIA

1998-05-30 D 44.9
GRA1 02:06:18.1 e P Z mb4.4
BEAM 02:06:18.1 T1.3 A8
NEIC: OT 01:58:05.6 36.1N 71.0E dep 33km mb4.6
HINDU KUSH REGION, AFGHANISTAN

1998-05-30 D 74.1
GRA1 04:02:48.2 i P c Z mb5.0
ALIGN 04:02:48.2 T1.0 A15

1998-05-30 D 43.4
GRA1 06:30:31.8 i P d Z mb5.6
ALIGN 06:30:31.8 T1.1 A150
GRA1 06:30:46.7 e (pP) Z
GRA1 06:52:10.8 e L Z T18.8 A134220 MS6.9

1998-05-30 D 42.8 AZ 84
GRA1 07:00:25.2 e P Z mb4.5
BEAM 07:00:25.2 T1.2 A12
NEIC: OT 06:52:20.9 37.3N 70.3E dep 33km mb4.5
AFGHANISTAN-TAJIKISTAN BORD REG.

1998-05-30 D 45.0
GRA1 07:03:13.9 e P Z mb4.6
BEAM 07:03:13.9 T0.9 A7
NEIC: OT 06:54:54.9 28.5N 63.8E dep 0km mb4.7
SOUTHWESTERN PAKISTAN

1998-05-30 D 43.0 AZ 85
GRA1 09:50:31.4 e P Z mb5.0
BEAM 09:50:31.4 T2.0 A61

SZGRF: OT 09:42:35.5 36.8N 69.1E dep 33km
HINDU KUSH REGION

1998-05-30 D 69.9
GRA1 16:14:40.0 e P Z mb4.4
BEAM 16:14:40.0 T0.9 A3
NEIC: OT 16:03:41.9 60.3N 152.1W dep 75km mb4.3
SOUTHERN ALASKA

1998-05-30 D 82.5 AZ 34
GRA1 18:30:35.0 i P c Z mb6.2
ALIGN 18:30:35.0 T1.5 A286
GRA1 18:31:51.2 e pP Z
GRA1 18:32:08.2 e (sP) Z
GRA1 18:33:40.6 e PP Z
GRA1 19:12:27.9 e L Z T18.9 A10080 MS6.2
SZGRF: OT 18:18:17.0 39.2N 144.8E dep301km
OFF EAST COAST OF HONSHU, JAPAN

1998-05-30 D 57.8 AZ164
GRA1 20:53:42.1 e P Z mb4.3
BEAM 20:53:42.1 T1.0 A3
GRA1 20:54:10.9 e pP Z
SZGRF: OT 20:44:01.9 7.1S 25.0E dep120km
ZAIRE REPUBLIC

1998-05-30 D 79.5 AZ 37
GRA1 21:55:41.7 e P Z mb4.2
BEAM 21:55:41.7 T1.0 A3
SZGRF: OT 21:43:39.7
NEAR WEST COAST OF HONSHU, JAPAN

1998-05-31 D 53.1
GRA1 01:52:58.1 e P Z mb4.6
BEAM 01:52:58.1 T1.5 A12
GRA1 01:53:03.1 e pP Z
GRA1 02:10:36.8 e L Z T20.9 A168 MS4.1
NEIC: OT 01:43:39.5 21.3N 45.9W dep 10km mb4.7
NORTHERN MID-ATLANTIC RIDGE

1998-05-31 D144.6
GRA1 02:05:13.5 i PKPdf c Z
GRA1 02:08:28.4 e PP Z

1998-05-31 D 84.2 AZ 33
GRA1 03:26:42.3 i P c Z mb5.0
BEAM 03:26:42.3 T0.9 A9
GRA1 03:26:51.7 e pP Z

GRA1 03:26:57.7 e sP Z
SZGRF: OT 03:14:15.6 38.3N 147.6E dep 35km
OFF EAST COAST OF HONSHU, JAPAN

1998-05-31 D 19.7 AZ326
GRA1 10:37:22.9 e P Z mb3.5
BEAM 10:37:22.9 T1.2 A4
SZGRF: OT 10:32:56.3
ICELAND REGION

