

MONTHLY TELESEISMIC BULLETIN of SZGRF-ERLANGEN - October 1998

H. Aichele, K. Klinge, R. Hohl

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date           distance backazimut
  station time   phase   comp per[s] ampl[nm] magn
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SZGRF or NEIC-QED LOCATION
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1998-10-01      D 58.4  AZ257
  GRA1 03:51:09.4 i P      c Z      mb5.4
  ALIGN 03:51:09.4      T2.0  A82
  GRA1 03:52:02.0 e      Z
  GRA1 03:52:15.2 e      Z
  GRA1 03:53:11.0 e PP    Z
  GRA1 03:59:21.6 e S      Z
  GRA1 04:12:43.5 e L      Z T20.9 A1770 MS5.2
NEIC: OT 03:41:12.9 13.7N 45.5W dep 10km mb5.5
  NORTHERN MID-ATLANTIC RIDGE
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1998-10-01
  GRA1 09:05:11.7 e PKPdf Z
  GRA1 10:09:00.7 e L      Z T21.1 A218
NEIC: OT 08:45:25.4 22.1S 173.6E dep 33km mb4.7
  LOYALTY ISLANDS REGION
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1998-10-01      D 79.2  AZ 6
  GRA1 12:05:25.6 i P      c Z      mb5.0
  BEAM 12:05:25.6      T1.5  A25
  GRA1 12:44:33.6 e L      Z T21.7 A355 MS4.7
SZGRF: OT 11:53:25.8 51.2N 179.0W dep 33km
  ANDREANOF ISLANDS, ALEUTIAN IS.
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1998-10-01      D 69.1  AZ290
  GRA1 17:07:08.2 e P      Z      mb5.1
  BEAM 17:07:08.2      T2.4  A30
  GRA1 17:07:17.5 e (pP)  Z
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1998-10-01      D 49.4  AZ115
  GRA1 19:26:05.8 e P      Z      mb5.1
  ALIGN 19:26:05.8      T2.0  A40
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GRA1 19:26:15.1 e Z
 GRA1 19:33:13.4 e S Z
 GRA1 19:48:07.8 e L Z T22.5 A1469 MS4.9

 1998-10-01 D 85.7 AZ280
 GRA1 20:56:41.0 e P Z mb5.1
 ALIGN 20:56:41.0 T1.5 A25
 GRA1 20:56:49.7 e pP Z
 NEIC: OT 20:44:07.4 9.7N 82.5W dep 33km mb5.3
 PANAMA-COSTA RICA BORDER REGION

 1998-10-01 D 4.2 464km
 GRA1 02:38:34.2 e Sg N
 SZGRF: OT 02:36:23.4 49.9N 17.6E
 CZECHOSLOVAKIA

 1998-10-02 D 26.2 AZ292
 GRA1 00:21:02.7 i P c Z mb4.8
 ALIGN 00:21:02.7 T1.0 A25
 GRA1 00:30:15.7 e L Z T20.1 A329 MS3.9
 SZGRF: OT 00:15:28.7 52.5N 30.7W dep 10km
 NORTH ATLANTIC RIDGE

 1998-10-02
 GRA1 04:57:08.4 e Pn Z
 GRA1 04:58:35.1 e (SnI) Z

 1998-10-02 D 71.2 AZ 71
 GRA1 13:00:42.7 i P d Z mb5.6
 ALIGN 13:00:42.7 T1.2 A56
 GRA1 13:00:46.8 e pP Z
 GRA1 13:34:38.6 e L Z T19.0 A383 MS4.7
 SZGRF: OT 12:49:24.9 26.3N 102.5E dep 14km
 SZECHWAN PROVINCE, CHINA

 1998-10-02 D 77.1 AZ 27
 GRA1 15:39:16.9 i P c Z mb4.8
 ALIGN 15:39:16.9 T1.0 A8
 GRA1 15:39:22.3 e (pP) Z
 SZGRF: OT 15:27:26.6 47.5N 150.8E dep 19km
 KURIL ISLANDS

 1998-10-02
 GRA1 19:09:30.9 e PKPdf Z
 GRA1 19:10:07.1 e (pPKPdf)Z
 NEIC: OT 18:49:53.0 16.8S 173.2W dep 33km mb4.8
 TONGA ISLANDS

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1998-10-03      D 83.8  AZ 50
  GRA1 11:27:48.0 i P      c Z                mb6.4
  ALIGN 11:27:48.0                T1.0    A275
  GRA1 11:28:44.1 e pP      Z
  GRA1 11:29:03.8 e sP      Z
  GRA1 11:31:03.8 e PP      Z
  GRA1 11:31:52.7 e pPP     Z
  GRA1 11:32:11.2 e sPP     Z
  GRA1 11:46:03.6 e PKKP    Z
  GRA1 12:12:17.5 e L      Z T18.5 A1593 MS5.4
NEIC: OT 11:15:42.6 28.5N 127.6E dep226km mb5.6
NORTHWEST OF RYUKYU ISLANDS
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1998-10-04      D 31.3  AZ105
  GRA1 00:49:09.7 i P      c Z                mb5.8
  ALIGN 00:49:09.7                T1.3    A149
  GRA1 00:49:13.5 e (pP)   Z
  GRA1 00:54:14.8 e S      Z
  GRA1 01:08:06.9 e L      Z T18.2 A500 MS4.2
NEIC: OT 00:42:51.0 33.2N 47.1E dep 33km mb5.3
WESTERN IRAN
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1998-10-04      D 78.5  AZ 6
  GRA1 01:53:14.7 i P      c Z                mb4.9
  ALIGN 01:53:14.7                T1.1    A10
  GRA1 02:31:21.0 e L      Z T19.9 A86 MS4.1
SZGRF: OT 01:41:18.6 51.9N 178.5W dep 33km
ANDREANOF ISLANDS, ALEUTIAN IS.
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1998-10-04      D149.2
  GRA1 04:00:12.5 e PKPdf  Z
  GRA1 04:00:15.7 i PKPbc d Z
  GRA1 04:00:19.9 e PKPab  Z
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1998-10-04      D 48.5  AZ160
  GRA1 08:47:24.7 e P      Z                mb4.4
  BEAM 08:47:24.7                T0.9    A4
  GRA1 08:47:30.3 e pP     Z
NEIC: OT 08:38:09.5 .0S 27.9E dep 10km mb4.6
ZAIRE
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1998-10-04      D 9.2
  GRA1 11:21:41.2 e Pn     c Z
  GRA1 11:23:29.3 e Sn     Z
  GRA1 11:24:07.3 e Sg     Z
  GRA1 11:25:32.7 e L     Z T17.1 A1772 MS3.9
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1998-10-04 D 94.5
GRA1 13:54:30.4 e P Z mb5.8
BEAM 13:54:30.4 T2.7 A106
GRA1 13:54:44.0 e pP Z
GRA1 14:38:13.8 e L Z T19.3 A517 MS5.0
NEIC: OT 13:41:10.3 8.4S 76.4W dep 33km mb5.2
CENTRAL PERU

1998-10-05 D 87.6 AZ 35
GRA1 00:35:38.0 i P d Z mb5.8
ALIGN 00:35:38.0 T1.4 A65
SZGRF: OT 00:22:54.1 34.2N 146.8E dep 33km
OFF EAST COAST OF HONSHU, JAPAN

1998-10-05
GRA1 01:07:41.3 e Pn Z
GRA1 01:09:41.5 e (Sn) Z
NEIC: OT 01:04:14.2 37.7N 20.4E dep 10km mb4.3
IONIAN SEA

1998-10-05 D 31.3 AZ109
GRA1 02:26:52.1 i P c Z mb5.5
ALIGN 02:26:52.1 T1.2 A81
GRA1 02:45:59.2 e L Z T22.0 A480 MS4.1
NEIC: OT 02:20:33.6 33.3N 47.3E dep 33km mb5.2
WESTERN IRAN

1998-10-05 D 91.7 AZ 99
GRA1 02:33:29.2 e P Z T1.3 A15 mb5.2
GRA1 02:33:36.5 e (pP) Z
SZGRF: OT 02:20:23.4
SOUTH INDIAN OCEAN

1998-10-05
GRA1 02:47:58.6 e Pn Z
GRA1 02:50:11.6 e Sn Z
NEIC: OT 02:44:27.0 37.7N 20.4E dep 10km mb4.2
IONIAN SEA

1998-10-05 D 60.0 AZ 81
GRA1 10:34:51.5 e P Z mb4.6
BEAM 10:34:51.5 T1.1 A6
GRA1 11:02:22.0 e L Z T19.2 A628 MS4.8
NEIC: OT 10:24:48.5 30.2N 88.2E dep 33km mb4.8
XIZANG

1998-10-05 D 84.1 AZ200
GRA1 17:49:15.6 e P Z mb5.1

BEAM 17:49:15.6 T1.4 A18
 GRA1 17:50:16.5 e Z
 GRA1 17:50:47.8 e Z
 GRA1 18:24:55.6 e L Z T19.9 A129 MS4.3
 SZGRF: OT 17:36:45.9 32.2S 12.1W dep 33km
 SOUTH ATLANTIC RIDGE

1998-10-05 D 81.7 AZ 10
 GRA1 21:08:31.6 i P c Z mb4.9
 ALIGN 21:08:31.6 T0.9 A9
 GRA1 21:08:36.5 e pP Z
 NEIC: OT 20:56:54.1 52.9N 160.2E dep 33km mb4.7
 OFF EAST COAST OF KAMCHATKA

1998-10-05 D 85.4 AZ 92
 GRA1 22:52:44.7 i P d Z mb5.3
 BEAM 22:52:44.7 T1.1 A20
 GRA1 22:53:12.2 e pP Z
 NEIC: OT 22:40:44.4 7.5N 94.4E dep100km mb4.8
 NICOBAR ISLANDS, INDIA

1998-10-06 D 68.2 AZ 75
 GRA1 01:03:50.4 e P Z mb4.6
 ALIGN 01:03:50.4 T0.8 A4
 NEIC: OT 00:53:57.6 32.9N 88.4E dep 33km mb4.4
 XIZANG

1998-10-06
 GRA1 11:48:13.1 e PKPdf Z
 NEIC: OT 11:28:54.4 15.5S 167.7E dep107km mb5.0
 VANUATU ISLANDS

1998-10-06 D 14.8 AZ150
 GRA1 12:31:06.3 e P Z
 GRA1 12:31:15.2 e P1 Z
 GRA1 12:34:11.3 e S Z
 GRA1 12:38:42.0 e L Z T14.4 A11426 MS5.1
 NEIC: OT 12:27:41.7 37.2N 21.2E dep 10km mb5.0
 SOUTHERN GREECE

1998-10-06 D133.2
 GRA1 16:20:42.8 e PKPdf Z
 GRA1 17:05:45.8 e L Z T21.7 A62 MS4.3
 NEIC: OT 16:01:25.9 32.9S 109.1W dep 10km mb5.2
 SOUTHERN EAST PACIFIC RISE

1998-10-06 D 14.8
 GRA1 16:47:55.1 e P Z
 GRA1 16:56:09.1 e L Z T20.9 A91 MS2.9

NEIC: OT 16:44:21.1 37.2N 21.4E dep 10km mb4.3
SOUTHERN GREECE

1998-10-06

GRA1 18:49:17.0 e PKPdf Z

GRA1 19:41:10.2 e L Z T21.7 A102

NEIC: OT 18:29:59.2 33.0S 109.1W dep 10km mb4.8
SOUTHERN EAST PACIFIC RISE

1998-10-06

GRA1 19:56:18.6 e Pn Z

GRA1 19:57:02.4 e Sg Z

1998-10-07

GRA1 00:07:32.6 e Pn Z

GRA1 00:08:21.6 e (Sn) Z

GRA1 00:08:34.5 e Sg Z

1998-10-07 D 70.8 AZ 92

GRA1 05:04:16.6 e (P) Z

1998-10-07 D 97.2 AZ 50

GRA1 07:06:14.4 e Pdiff c Z

GRA1 07:10:16.4 e pPdiff Z

1998-10-07

GRA1 08:49:19.3 e PKPdf Z

GRA1 09:49:34.2 e L Z T18.0 A446

1998-10-07 D 19.2 AZ144

GRA1 18:51:59.8 i P c Z mb4.9

ALIGN 18:51:59.8 T1.4 A106

GRA1 18:55:34.0 e S Z

GRA1 18:59:21.7 e L Z T22.0 A1806 MS4.3

1998-10-07

GRA1 19:17:35.7 e P Z

NEIC: OT 19:13:10.9 33.8N 25.7E dep 10km

EASTERN MEDITERRANEAN SEA

1998-10-07

GRA1 19:28:51.6 e P Z

NEIC: OT 19:24:26.2 33.8N 25.9E dep 10km

EASTERN MEDITERRANEAN SEA

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1998-10-08      D 13.6  AZ149
  GRA1  03:53:35.3  e Pn      Z
  GRA1  03:53:42.1  e pP      Z
  GRA1  03:55:50.9  e Sn      Z
  GRA1  04:00:33.7  e L       Z  T20.3  A1125  MS3.9
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1998-10-08      D150.2
  GRA1  04:22:30.3  e PKPdf   Z
  GRA1  04:22:34.3  e PKPbc   Z
  GRA1  04:22:40.4  e PKPab   Z
  GRA1  04:23:25.9  e pPKPdf  Z
  GRA1  04:23:34.3  e pPKPbc  Z
  GRA1  04:23:51.0  e pPKPab  Z
NEIC:  OT 04:04:30.7  25.0S 179.6W dep500km  mb4.6
  SOUTH OF FIJI ISLANDS
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1998-10-08      D 97.1  AZ254
  GRA1  05:05:02.5  i P       Z
  GRA1  05:05:37.9  e pP      Z
  GRA1  05:08:46.4  e         Z
  GRA1  05:08:58.7  e         Z
  GRA1  05:09:30.0  e PP      Z
  GRA1  05:22:11.2  e (PKKP)  Z
  GRA1  05:29:54.5  e (P'P')  Z
  GRA1  05:45:33.3  e L       Z  T21.9  A1627  MS5.5
NEIC:  OT 04:51:43.3  16.0S  71.5W dep136km  mb6.1
  SOUTHERN PERU
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1998-10-08      D145.6
  GRA1  10:07:02.6  e PKP     Z
NEIC:  OT 09:47:40.2  15.1S 173.6W dep153km  mb4.6
  TONGA ISLANDS
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1998-10-08      D 24.6
  GRA1  20:53:18.6  e P       Z           mb4.6
  BEAM  20:53:18.6           T1.3  A18
  GRA1  20:57:38.1  i S       Z
  GRA1  21:05:57.7  e L       Z  T21.2  A200  MS3.6
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1998-10-08      D 94.9
  GRA1  21:36:48.8  e Pdiff   Z
  GRA1  21:37:04.7  e         Z
NEIC:  OT 21:23:26.8  4.8S 103.2E dep 33km  mb5.1
  SOUTHERN SUMATERA, INDONESIA
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1998-10-08

GRA1 23:15:48.2 e Pn Z
 GRA1 23:16:57.3 e Sn Z

1998-10-09 D 13.6 AZ156

GRA1 05:15:25.3 e P Z
 GRA1 05:18:08.8 e (S) Z
 GRA1 05:22:17.4 e L Z T19.3 A353 MS3.4

1998-10-09 D145.6

GRA1 05:57:30.0 e PKPdf c Z
 GRA1 05:57:40.6 e pPKPdf Z
 GRA1 05:57:53.6 e (PKPab) Z
 GRA1 05:58:01.4 e pPKPab Z

1998-10-09 D145.5

GRA1 06:00:08.0 e PKPab Z
 GRA1 06:00:14.3 e (pPKPab) Z

1998-10-09 D122.2

GRA1 10:43:29.3 e PKPdf Z
 GRA1 11:32:52.2 e L Z T20.7 A128 MS4.6
 NEIC: OT 10:24:27.4 47.7S 75.6W dep 10km mb5.3
 SOUTHERN CHILE

1998-10-09 D 86.4 AZ282

GRA1 12:07:10.8 i P c Z mb4.6
 BEAM 12:07:10.8 T0.9 A5
 GRA1 12:07:14.3 e PcP Z
 GRA1 12:07:26.7 e Z
 GRA1 12:07:35.8 e Z
 GRA1 12:07:41.2 e Z
 GRA1 12:07:49.0 e pP Z
 GRA1 12:08:06.9 e sP Z
 GRA1 12:10:36.5 e PP Z
 GRA1 12:17:59.5 e S R
 GRA1 12:43:26.5 e L Z T19.2 A14042 MS6.4
 NEIC: OT 11:54:29.0 11.3N 86.4W dep 10km mb5.6
 NEAR COAST OF NICARAGUA

1998-10-09 D 84.6 AZ 60

GRA1 13:05:31.3 e P Z mb5.2
 ALIGN 13:05:31.3 T1.1 A18
 GRA1 13:05:36.7 e (pP) Z
 NEIC: OT 12:52:52.3 22.0N 121.8E dep 33km mb5.2

TAIWAN REGION

 1998-10-10 D 15.0 AZ132
 GRA1 02:35:12.0 e P Z
 GRA1 02:35:20.1 e Z

 1998-10-10 D110.1
 GRA1 04:31:13.0 e PP Z
 GRA1 05:17:42.0 e L Z T19.2 A1627 MS5.6
 NEIC: OT 04:12:08.6 33.5S 71.9W dep 33km mb5.2
 NEAR COAST OF CENTRAL CHILE

 1998-10-10 D102.1
 GRA1 16:43:05.0 e Pdiff Z
 GRA1 16:47:10.4 e PP Z
 NEIC: OT 16:29:07.6 .4S 119.8E dep 33km mb5.4
 MINAHASSA PENINSULA, SULAWESI

 1998-10-10 D102.0
 GRA1 16:46:17.1 e Pdiff Z
 GRA1 16:50:28.2 e PP Z
 NEIC: OT 16:32:19.2 .4S 119.7E dep 33km mb5.7
 MINAHASSA PENINSULA, SULAWESI

 1998-10-10 D150.4
 GRA1 17:53:12.6 e (PKPdf) Z
 GRA1 17:53:15.4 i PKPbc d Z
 GRA1 17:53:23.7 e PKPab Z

 1998-10-10 D 46.2 AZ 82
 GRA1 21:51:59.0 e P Z mb4.5
 BEAM 21:51:59.0 T1.0 A5
 GRA1 21:52:48.7 e pP Z
 NEIC: OT 21:43:58.4 37.3N 71.8E dep152km mb4.4
 AFGHANISTAN-TAJIKISTAN BORD REG.

 1998-10-11
 GRA1 02:23:55.2 e PKPdf Z
 GRA1 02:24:04.3 e Z
 GRA1 02:24:17.2 e pPKPdf Z
 NEIC: OT 02:04:19.3 16.4S 173.5W dep 74km mb4.7
 TONGA ISLANDS

 1998-10-11 D152.4
 GRA1 10:19:15.2 e PKPdf Z
 GRA1 10:19:23.8 e PKPbc Z
 GRA1 10:19:37.0 e PKPab Z

GRA1 10:21:40.4 e pPKPab Z
NEIC: OT 10:00:27.4 23.8S 179.9E dep544km mb5.0
SOUTH OF FIJI ISLANDS

1998-10-11 D151.1
GRA1 12:23:32.0 e PKPdf d Z
GRA1 12:23:38.4 i PKPbc d Z
GRA1 12:23:46.8 e PKPab Z
GRA1 12:26:04.6 e pPKPab Z
GRA1 12:26:59.9 e PP Z
NEIC: OT 12:04:54.9 21.0S 179.1W dep624km mb5.3
FIJI ISLANDS REGION

1998-10-11 D 10.5
GRA1 17:06:13.0 e Pn Z
GRA1 17:08:12.1 e Sn Z
NEIC: OT 17:02:45.3 37.8N 20.6E dep 10km mb5.1
IONIAN SEA

1998-10-11 D 60.4 AZ 76
GRA1 20:59:35.9 e P Z mb4.4
BEAM 20:59:35.9 T1.0 A4
SZGRF: OT 20:49:30.7
TIBET

1998-10-11 D 64.2 AZ 74
GRA1 21:20:55.1 e P Z mb4.5
BEAM 21:20:55.1 T0.7 A3
GRA1 21:21:00.5 e (pP) Z
NEIC: OT 21:11:04.8 32.9N 88.2E dep 33km mb4.5
XIZANG

1998-10-11 D100.9
GRA1 21:57:06.4 i P d Z
GRA1 22:01:20.7 e pP Z
NEIC: OT 21:44:16.2 27.3S 63.3W dep583km mb5.3
SANTIAGO DEL ESTERO PROV., ARG.

1998-10-11 D162.4
GRA1 23:56:27.5 e PKPdf Z
GRA1 23:57:01.2 e PKPab Z
GRA1 00:00:58.6 e PP Z
NEIC: OT 23:36:23.1 56.8S 142.3W dep 10km mb5.1
PACIFIC-ANTARCTIC RIDGE

1998-10-12 D162.3
GRA1 00:17:34.0 e PKPdf Z
GRA1 00:18:24.8 e PKPab Z

 1998-10-12 D144.9
 GRA1 07:56:11.9 e PKPdf Z
 NEIC: OT 07:36:34.2 15.4S 173.4W dep 33km mb4.9
 TONGA ISLANDS

1998-10-12 D 40.1 AZ 1
 GRA1 16:36:12.2 e P Z mb4.3
 BEAM 16:36:12.2 T1.2 A10
 NEIC: OT 16:28:43.8 86.4N 71.8E dep 10km mb4.4
 NORTH OF SEVERNAYA Z EMLYA

1998-10-12 D 37.3 AZ 6
 GRA1 16:37:05.7 i P c Z mb4.6
 ALIGN 16:37:05.7 T1.2 A16
 GRA1 16:37:12.8 e pP Z
 SZGRF: OT 16:29:57.2 84.9N 60.1E dep 27km
 NORTH OF FRANZ JOSEF LAND

1998-10-12 D 38.8 AZ 12
 GRA1 17:10:35.2 e P Z mb4.7
 BEAM 17:10:35.2 T2.1 A38
 GRA1 17:24:48.5 e L Z T22.0 A155 MS3.8
 NEIC: OT 17:03:09.3 86.3N 73.0E dep 10km mb4.6
 NORTH OF SEVERNAYA Z EMLYA

1998-10-12 D 39.0 AZ 5
 GRA1 17:43:03.4 i P d Z mb4.7
 ALIGN 17:43:03.4 T1.2 A25
 GRA1 17:43:10.7 e pP Z
 GRA1 17:56:36.8 e L Z T21.9 A97 MS3.6

1998-10-12 D 8.0
 GRA1 22:34:22.1 e Pn Z
 GRA1 22:35:54.0 e Sn Z
 GRA1 22:36:48.2 e Sg Z M14.6
 GRA1 22:37:54.6 e L Z T18.5 A272 MS3.0

1998-10-13 D 71.8 AZ 74
 GRA1 05:09:27.2 e P Z mb4.8
 BEAM 05:09:27.2 T1.4 A10
 SZGRF: OT 04:58:08.5
 YUNNAN PROVINCE, CHINA

1998-10-13 D151.3
 GRA1 18:31:45.8 e PKPdf Z
 GRA1 18:31:50.3 i PKPbc d Z

GRA1 18:31:58.9 e PKPab Z
GRA1 18:34:13.4 e pPKPbc Z
NEIC: OT 18:13:04.9 20.8S 178.8W dep600km mb4.4
FIJI ISLANDS REGION

1998-10-13 D 82.2 AZ 35
GRA1 20:53:28.2 i P c Z T1.5 A210 mb6.0
GRA1 20:53:44.3 e pP Z
GRA1 20:56:34.7 e PP Z
GRA1 21:33:03.2 e L Z T18.0 A1578 MS5.4
SZGRF: OT 20:41:15.2 39.3N 144.1E dep 58km
OFF EAST COAST OF HONSHU, JAPAN

1998-10-14 D 32.5 AZ310
GRA1 01:42:51.6 i P d Z mb5.2
ALIGN 01:42:51.6 T1.5 A47
GRA1 01:44:07.7 e PP Z
GRA1 01:45:38.6 e PcP Z
GRA1 01:48:23.3 e S Z
GRA1 01:55:19.0 e L Z T18.5 A946 MS4.5
SZGRF: OT 01:36:21.9 60.3N 44.1W dep 10km
WESTERN GREENLAND

1998-10-14 D125.0
GRA1 03:13:02.8 i PKPdf c Z
GRA1 03:14:59.7 e PP Z
NEIC: OT 02:54:04.6 5.9S 151.0E dep 33km mb5.5
NEW BRITAIN REGION, P.N.G.

1998-10-14
GRA1 03:16:36.2 e PKPbc Z

1998-10-14
GRA1 03:55:06.0 e PKPdf Z
GRA1 03:55:16.8 e pPKPdf Z
NEIC: OT 03:36:07.8 5.8S 150.9E dep 33km mb5.3
NEW BRITAIN REGION, P.N.G.

1998-10-14 D 58.3
GRA1 04:46:11.3 e P Z mb4.5
BEAM 04:46:11.3 T1.1 A6
GRA1 04:46:17.7 e pP Z

1998-10-14 D 85.8 AZ181
GRA1 23:00:41.3 e P Z
ALIGN 23:00:41.3 T1.3 A16
GRA1 23:00:50.4 e pP Z

SZGRF: OT 22:48:02.9
SOUTH ATLANTIC OCEAN

1998-10-15

GRA1 05:09:36.3 e PKPab Z

1998-10-15

GRA1 05:42:59.3 e PKPdf Z

1998-10-15

GRA1 13:11:34.5 e PKPdf Z

GRA1 13:11:44.5 e (PKPab) Z

GRA1 14:05:26.3 e L Z T20.6 A158

1998-10-15 D 79.6 AZ 90

GRA1 19:17:31.3 i P c Z mb5.1

ALIGN 19:17:31.3 T0.9 A24

GRA1 19:20:33.7 e PP Z

GRA1 20:02:19.2 e L Z T19.6 A284 MS4.6

NEIC: OT 19:05:23.9 7.6N 94.3E dep 33km mb5.2

NICOBAR ISLANDS, INDIA

1998-10-16 D 68.2 AZ 79

GRA1 00:16:26.2 i P d Z mb5.8

ALIGN 00:16:26.2 T1.1 A71

GRA1 00:16:52.5 e pP Z

GRA1 00:17:10.4 e (sP) Z

GRA1 00:18:58.1 e PP Z

GRA1 00:46:56.5 e L Z T25.9 A320 MS4.4

NEIC: OT 00:05:34.0 23.7N 94.7E dep101km mb5.2

MYANMAR-INDIA BORDER REGION

1998-10-16

GRA1 04:24:54.0 e PKPab Z

1998-10-16 D 81.0 AZ 66

GRA1 11:42:20.2 e (P) Z

GRA1 12:25:44.7 e L Z T18.1 A442 MS4.9

NEIC: OT 11:29:31.1 19.8N 121.4E dep 33km mb4.8

PHILIPPINE ISLANDS REGION

1998-10-16

GRA1 19:42:36.7 e (PKPab) Z

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1998-10-16      D 15.0  AZ150
  GRA1 22:50:40.1 e P      Z
  GRA1 22:50:45.1 e P1     Z
  GRA1 22:58:18.8 e L      Z  T13.7  A293

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1998-10-17      D 44.3  AZ 79
  GRA1 01:15:00.2 e P      Z  T1.1   A11   mb4.5
  GRA1 01:15:06.8 e pP    Z
SZGRF: OT 01:06:53.2 39.2N 73.2E dep 25km
  TAJIK-SINKIANG BORDER REGION

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1998-10-17      D151.8
  GRA1 07:42:32.0 e PKPdf  Z
  GRA1 07:42:37.7 i PKPbc d Z
  GRA1 07:42:46.3 e PKPab  Z
NEIC:  OT 07:23:48.0 20.9S 178.6W dep554km  mb4.5
  FIJI ISLANDS REGION

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1998-10-17      D 17.3
  GRA1 10:05:57.3 e P      Z
NEIC:  OT 10:02:05.1 36.6N 26.7E dep147km  mb4.3
  DODECANESE ISLANDS

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1998-10-17      D139.6
  GRA1 13:00:38.1 e PKPdf  Z
  GRA1 13:00:40.7 e PKiKP  Z
  GRA1 14:00:11.9 e L      Z  T18.7  A78   MS4.5

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1998-10-17      D 77.7  AZ360
  GRA1 23:24:08.4 i P      c Z      mb5.8
  ALIGN 23:24:08.4          T1.3   A110
  GRA1 23:24:23.6 e pP    Z
  GRA1 00:13:15.7 e L      Z  T20.2  A530  MS4.9
NEIC:  OT 23:12:17.1 53.6N 163.2W dep 33km  mb5.1
  UNIMAK ISLAND REGION

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1998-10-17      D 77.1
  GRA1 23:37:32.9 i P      c Z      mb5.5
  ALIGN 23:37:32.9          T0.8   A32
  GRA1 23:37:44.7 e pP    Z
  GRA1 00:13:15.7 e L      Z  T20.2  A530  MS4.9

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1998-10-18      D 94.0  AZ 42
  GRA1 01:52:05.7 i P      c Z      mb5.5
  ALIGN 01:52:05.7          T1.0   A24
  GRA1 01:52:36.3 e pP    Z

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GRA1 01:52:47.3 e sP Z
GRA1 02:35:28.2 e L Z T19.2 A135 MS4.4

1998-10-18

GRA1 02:09:10.9 e PKPab Z
GRA1 03:21:43.0 e L Z T21.0 A88

1998-10-18

GRA1 03:35:17.3 e PKPdf Z
GRA1 04:40:22.0 e L Z T20.3 A115
NEIC: OT 03:15:38.4 16.9S 166.8E dep 33km mb5.0
VANUATU ISLANDS

1998-10-18 D 16.4 AZ 96

GRA1 05:26:01.4 e P Z mb3.5
BEAM 05:26:01.4 T1.1 A4
GRA1 05:26:09.0 e pP Z
GRA1 05:32:27.9 e L Z T18.3 A58 MS2.8
NEIC: OT 05:22:08.7 44.1N 33.6E dep 24km mb4.3
CRIMEA REGION, UKRAINE

1998-10-18 D 70.1

GRA1 06:30:27.2 e P Z mb4.5
BEAM 06:30:27.2 T0.9 A3
NEIC: OT 06:19:30.1 60.2N 152.6W dep 89km mb4.3
SOUTHERN ALASKA

1998-10-18 D 39.1

GRA1 07:36:46.0 e P Z mb4.3
ALIGN 07:36:46.0 T1.4 A11
GRA1 07:36:54.1 e pP Z
GRA1 07:37:00.3 e sP Z
GRA1 07:53:10.5 e L Z T19.5 A65 MS3.5

1998-10-18 D100.4

GRA1 08:47:23.0 e P Z
GRA1 08:51:31.1 e PP Z
GRA1 09:36:43.2 e L Z T19.8 A144 MS4.5
NEIC: OT 08:33:55.8 19.3N 145.2E dep169km mb5.4
MARIANA ISLANDS

1998-10-18 D 84.7 AZ 48

GRA1 10:04:22.8 e P c Z mb5.2
ALIGN 10:04:22.8 T1.7 A28
GRA1 10:45:11.8 e L Z T21.3 A449 MS4.8

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1998-10-18      D 37.3  AZ108
  GRA1 10:10:05.4 e P      Z      mb4.2
  BEAM 10:10:05.4          T1.5  A8
NEIC:  OT 10:02:40.6 28.5N 54.3E dep 33km mb4.4
  SOUTHERN IRAN
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1998-10-18      D 58.9  AZ161
  GRA1 13:07:32.0 e P      Z      mb4.3
  BEAM 13:07:32.0          T1.0  A3
NEIC:  OT 12:58:29.3  .8N 30.0E dep 33km mb4.3
  UGANDA
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1998-10-18      D149.8
  GRA1 14:13:55.8 e PKPdf  Z
  GRA1 14:14:04.8 e PKPab  Z
  GRA1 15:09:56.1 e L      Z  T18.9  A196  MS4.9
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1998-10-18      D 39.1  AZ 11
  GRA1 22:16:47.5 i P      d Z      mb5.1
  ALIGN 22:16:47.5          T1.4  A64
  GRA1 22:16:56.3 e pP     Z
  GRA1 22:34:40.5 e L      Z  T18.4  A329
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1998-10-19      D142.4
  GRA1 01:44:28.5 e PKPdf  Z
  GRA1 02:47:58.3 e L      Z  T21.5  A870  MS5.5
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1998-10-19
  GRA1 02:43:16.4 e PKPdf  Z
  GRA1 02:43:22.3 e pPKPdf Z
NEIC:  OT 02:23:34.6 17.2S 167.8E dep 33km mb4.8
  VANUATU ISLANDS
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1998-10-19      D 80.1  AZ 29
  GRA1 05:07:02.3 e P      Z      mb4.5
  BEAM 05:07:02.3          T1.4  A9
SZGRF: OT 04:54:56.9
  KURIL ISLANDS REGION
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1998-10-19      D 87.2  AZ279
  GRA1 18:28:36.7 e P      Z      mb4.8
  BEAM 18:28:36.7          T1.4  A12
  GRA1 18:28:44.0 e (pP)   Z
SZGRF: OT 18:15:52.5
  COSTA RICA
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1998-10-19 D 23.6 AZ341
GRA1 22:35:58.9 e P Z mb4.4
ALIGN 22:35:58.9 T1.3 A18
NEIC: OT 18:15:53.3 7.1N 82.1W dep 29km mb4.7
SOUTH OF PANAMA

1998-10-19 D 20.0 AZ150
GRA1 23:22:48.9 e P Z mb3.9
BEAM 23:22:48.9 T1.3 A10
GRA1 23:23:01.9 e Z
SZGRF: OT 23:18:18.4
NEAR COAST OF LIBYA

1998-10-20
GRA1 10:23:04.5 e PKPdf Z
GRA1 10:23:23.9 e (pPKPdf)Z

1998-10-20 D150.7
GRA1 12:12:26.2 e PKPdf Z
GRA1 12:12:31.7 i PKPbc c Z
GRA1 12:12:38.3 e PKPab Z
GRA1 13:17:44.0 e L Z T21.1 A159 MS4.8
NEIC: OT 11:52:40.6 20.6S 174.3W dep 33km mb5.1
TONGA ISLANDS

1998-10-21 AZ141
GRA1 10:11:43.6 e P Z

1998-10-22
GRA1 16:22:13.6 e PKP Z

1998-10-22
GRA1 08:42:09.4 e (P) Z T18.2 A127

1998-10-23 D 91.0 AZ266
GRA1 02:01:37.4 i P c Z T1.0 A34 mb5.6
SZGRF: OT 01:48:36.1 3.4S 76.4W dep 33km
NORTHERN PERU

1998-10-23
GRA1 05:08:36.3 e (PKP) Z

1998-10-24

GRA1 04:14:44.0 e P Z
NEIC: OT 04:03:50.0 61.5N 149.9W dep 43km mb4.2
SOUTHERN ALASKA

1998-10-24 D147.5
GRA1 08:46:28.0 e PKP Z
GRA1 08:46:48.3 e Z
GRA1 08:47:34.3 e pPKP Z
GRA1 08:47:56.2 e sPKPdf Z
NEIC: OT 08:27:11.9 17.7S 175.2W dep261km mb5.0
TONGA ISLANDS

1998-10-24
GRA1 11:55:54.7 e PKP Z
GRA1 11:55:57.9 e Z
NEIC: OT 11:36:08.7 18.4S 173.6W dep 33km mb4.7
TONGA ISLANDS

1998-10-25
GRA1 00:42:06.3 e PKP Z
NEIC: OT 00:23:25.0 19.2S 177.9W dep614km mb4.6
FIJI ISLANDS REGION

1998-10-25 D 45.8 AZ 85
GRA1 20:14:01.1 e P Z T1.6 A58 mb5.4
GRA1 20:34:44.4 e L Z T19.4 A626 MS4.6
SZGRF: OT 20:05:43.3 34.8N 71.4E dep 33km
PAKISTAN

1998-10-26 D150.2
GRA1 02:53:39.8 e PKPdf Z
GRA1 02:53:46.2 e PKPbc Z
GRA1 02:53:54.7 e PKPab Z
NEIC: OT 02:34:57.8 21.2S 179.0W dep573km mb4.7
FIJI ISLANDS REGION

1998-10-27 D 86.3 AZ 40
GRA1 11:46:18.4 e P Z
GRA1 12:28:58.8 e L Z T20.0 A5605 MS6.0
SZGRF: OT 11:33:41.0 33.2N 141.1E dep 33km
OFF EAST COAST OF HONSHU, JAPAN

1998-10-27 D 67.1
GRA1 18:49:29.1 e P Z
SZGRF: OT 18:38:40.8 58.6N 150.7E dep 33km
EASTERN SIBERIA

1998-10-27 D 15.0
GRA1 20:20:23.7 e P Z

NEIC: OT 20:16:48.5 35.7N 6.0E dep 10km mb4.6
NORTHERN ALGERIA

1998-10-27 D105.1
GRA1 21:34:44.9 e PP Z
GRA1 22:22:01.4 e L Z T20.6 A2342 MS5.7
NEIC: OT 21:16:20.9 2.9N 128.6E dep 63km mb5.9
HALMAHERA, INDONESIA

1998-10-27 D 11.3
GRA1 23:25:53.9 e Pn Z
SZGRF: OT 23:23:09.5 43.6N 2.7W dep 10km
SPAIN

1998-10-28
GRA1 13:42:23.5 e P Z

1998-10-28 D105.0
GRA1 16:39:09.4 e Pdiff Z
GRA1 16:43:25.0 e PP Z
GRA1 16:50:59.0 e Sdiff N
GRA1 17:28:58.4 e L Z T21.6 A8332 MS6.2
NEIC: OT 16:25:03.1 .8N 125.9E dep 33km mb6.2
NORTHERN MOLUCCA SEA

1998-10-28 D 9.3
GRA1 22:20:31.5 e Sn N
SZGRF: OT 22:16:41.4 43.0N 20.5E dep 10km
YUGOSLAVIA

1998-10-30
GRA1 02:59:43.1 e (PKPdf) Z

1998-10-30 D141.9
GRA1 14:54:00.9 e PKPdf Z
GRA1 14:55:15.9 e (pPKPdf) Z
GRA1 14:57:18.0 e PP Z
NEIC: OT 14:34:50.5 16.1S 167.9E dep 175km mb5.0
VANUATU ISLANDS

1998-10-31 D 93.1
GRA1 11:32:20.8 e P Z
GRA1 12:17:22.6 e L Z T21.7 A192 MS4.5
NEIC: OT 11:19:06.2 6.2S 98.9E dep 33km mb5.3
SOUTHWEST OF SUMATERA, INDONESIA

1998-10-31 D 90.4

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GRA2 13:55:29.2 e PP Z

NEIC: OT 13:38:52.4 29.4N 142.0E dep 33km mb5.1

SOUTH OF HONSHU, JAPAN
