

MONTHLY TELESEISMIC BULLETIN of SZGRF-ERLANGEN - October 1997

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

1997-10-01

GRA1	05:09:22.6	e	PKPdf	Z					
GRA1	05:09:32.0	e	pPKPdf	Z					

1997-10-01

	D	6.8							
GRA1	06:15:44.8	e	PnI	Z					
GRA1	06:16:37.4	e	SnI	Z					
GRA1	06:17:05.8	e	Sg	Z					M14.2

1997-10-01

	D	73.4							
GRA1	06:16:37.2	i	P	d	Z				mb5.9
ALIGN	06:16:37.2					T1.2	A110		
NEIC:	OT 06:05:48.5	46.2N	136.1E	dep418km	mb5.0				
	NEAR SOUTHEAST COAST OF RUSSIA								

1997-10-02

	D	23.1	AZ105						
GRA1	01:12:06.8	e	P	Z	T1.9	A64			mb4.8
SZGRF:	OT 01:07:04.5	39.7N	40.6E	dep 33km					
	TURKEY								

1997-10-02

GRA1	01:55:16.8	e	PKP	Z					
NEIC:	OT 01:36:57.8	7.6S	127.6E	dep160km	mb5.0				
	BANDA SEA								

1997-10-02

GRA1	07:36:47.3	e	PKP	Z					
NEIC:	OT 07:17:11.8	19.0S	169.1E	dep 33km	mb4.5				
	VANUATU ISLANDS								

1997-10-02

D 6.8

GRA1 11:01:37.1 e Pn Z M14.5
 GRA1 11:02:52.5 e Sn N
 SZGRF: OT 10:59:57.1 43.0N 12.8E dep 10km
 CENTRAL ITALY

 1997-10-02 D 5.4

GRC1 19:39:23.7 e Pn Z
 GRA1 19:39:33.1 e Pn Z M14.7
 GRA1 19:40:42.6 e Sn N
 SZGRF: OT 19:38:03.5 43.6N 12.4E dep 10km
 CENTRAL ITALY

 1997-10-02 D 5.4

GRC1 21:40:03.9 e Pn Z M14.1
 GRA1 21:40:13.3 e Pn Z M14.3
 GRA1 21:41:20.8 e Sn N
 SZGRF: OT 21:38:43.2 43.6N 12.7E dep 10km
 CENTRAL ITALY

 1997-10-03

GRA1 00:34:24.8 e PKPdf Z
 GRA1 01:29:05.7 e L Z T21.5 A669
 NEIC: OT 00:15:34.8 6.2S 148.5E dep 81km mb5.1
 NEW BRITAIN REGION, P.N.G.

 1997-10-03

GRA1 03:02:20.6 e PKPdf Z
 GRA1 04:13:06.5 e L Z T20.3 A186
 NEIC: OT 02:42:32.2 53.6S 140.5E dep 10km mb5.2
 WEST OF MACQUARIE ISLAND

 1997-10-03 D 3.6 404km

GRA1 04:18:36.4 e Pn Z M14.0
 GRA1 04:19:34.9 e Sg N
 SZGRF: OT 04:17:39.0 51.5N 16.2E dep 1km
 POLAND

 1997-10-03 D 79.6 AZ 32

GRA1 04:58:37.5 i P c Z mb5.2
 ALIGN 04:58:37.5 T1.3 A44
 GRA1 04:58:50.2 e pP Z
 GRA1 05:37:01.6 e L Z T19.5 A346
 SZGRF: OT 04:46:36.8 42.8N 145.5E dep 44km
 HOKKAIDO, JAPAN REGION

 1997-10-03 D 6.8

GRA1 06:37:15.5 e PnI Z
 GRA1 06:38:21.4 e SnI Z
 GRA1 06:38:48.5 e Sg Z M14.1

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1997-10-03      D  6.8
  GRA1 07:51:60.0 e PnI      Z
  GRA1 07:53:09.0 e SnI      Z
  GRA1 07:53:50.0 e Sg       Z
                                     M13.9

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1997-10-03      D 76.6  AZ 87
  GRA1 08:28:54.3 e P        Z
  BEAM 08:28:54.3           T1.6  A10
NEIC:  OT 08:16:18.3  4.6N 94.8E dep 33km mb4.2
OFF W COAST OF NORTHERN SUMATERA

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1997-10-03      D  6.7
  GRA1 08:57:01.5 e PnI      Z
  GRA1 08:58:22.1 e SnI      Z
  GRA1 08:58:55.1 e Sg       Z
  GRA1 09:00:21.6 e L        Z  T15.8  A23540
                                     M16.2
                                     MS4.8

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1997-10-03      D 39.8  AZ106
  GRA1 11:36:11.1 i P        c Z
  ALIGN 11:36:11.1           T1.0  A19
  GRA1 11:56:39.5 e L        Z  T18.2  A654
                                     mb4.7
                                     MS4.5

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1997-10-03      D 49.7  AZ 95
  GRA1 13:22:29.4 e P        Z
  BEAM 13:22:29.4           T1.5  A6
  GRA1 13:22:34.5 e (pP)    Z
NEIC:  OT 13:14:00.6 29.9N 68.0E dep 33km mb4.3
PAKISTAN

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1997-10-03      D  6.8
  GRA1 13:28:36.1 e PnI      Z
  GRA1 13:29:38.6 e SnI      Z
  GRA1 13:30:00.0 e Sg       Z
                                     M13.9

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1997-10-03      D 39.8
  GRA1 17:08:33.9 e P        Z
  GRA1 17:27:01.4 e L        Z  T19.0  A120
                                     MS3.8

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1997-10-03      D 76.4  AZ  4
  GRA1 22:17:38.4 i P        c Z
  ALIGN 22:17:38.4           T1.0  A16
  GRA1 22:17:53.6 e pP      Z
                                     mb5.1

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GRA1 22:18:37.6 e Z
 GRA1 22:51:44.7 e L Z T21.7 A140 MS4.2
 SZGRF: OT 22:06:18.7 54.1N 175.9W dep 54km
 BERING SEA

 1997-10-04 D 6.9
 GRA1 00:43:24.9 e PnI Z
 GRA1 00:44:33.4 e SnI Z
 GRA1 00:45:09.6 e Sg Z M14.1

 1997-10-04 D 6.8
 GRA1 00:49:32.5 e PnI Z
 GRA1 00:50:30.6 e SnI Z
 GRA1 00:51:25.5 e Sg Z M14.4
 GRA1 00:52:44.5 e L Z T15.2 A327 MS3.0

 1997-10-04 D 76.0 AZ 12
 GRA1 01:49:59.0 i P c Z mb5.1
 ALIGN 01:49:59.0 T1.4 A23
 GRA1 01:50:07.6 e (pP) Z
 GRA1 02:27:14.8 e L Z T18.0 A114 MS4.2
 SZGRF: OT 01:38:16.5 53.3N 171.1E dep 30km
 NEAR ISLANDS, ALEUTIAN ISLANDS

 1997-10-04 D 6.4
 GRA1 03:29:40.8 e PnI Z
 GRA1 03:30:28.7 e SnI Z
 GRA1 03:30:55.6 e Sg Z M14.1

 1997-10-04 D 3.6 401km
 GRA1 03:41:33.1 e Pn Z M13.5
 GRA1 03:42:30.1 e Sg N
 SZGRF: OT 03:40:36.3 51.4N 16.2E dep 1km
 POLAND

 1997-10-04 D 6.5
 GRA1 03:52:18.5 e PnI Z
 GRA1 03:53:18.8 e SnI Z
 GRA1 03:53:55.0 e Sg Z M14.0

 1997-10-04 D 6.8
 GRA1 04:22:26.4 e PnI Z
 GRA1 04:23:30.8 e SnI Z
 GRA1 04:24:03.4 e Sg Z

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1997-10-04      D  7.6
  GRA1 06:06:09.6 e PnI      Z
  GRA1 06:07:23.8 e SnI      Z
  GRA1 06:08:11.0 e Sg       Z           M14.9
  GRA1 06:09:32.0 e L        Z T15.4  A532  MS3.3
NEIC:  OT 06:04:30.6 43.0N 12.9E dep 10km
      CENTRAL ITALY
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1997-10-04      D  6.9
  GRA1 06:51:42.5 e PnI      Z
  GRA1 06:52:60.0 e SnI      Z
  GRA1 06:53:50.5 e Sg       Z           M15.1
  GRA1 06:55:01.6 e L        Z T15.6  A1432 MS3.7
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1997-10-04      D 82.2  AZ327
  GRA1 11:09:57.3 e P        Z
  GRA1 11:44:56.4 e L        Z T19.3  A1131  MS5.2
NEIC:  OT 10:57:33.9 41.0N 125.3W dep 10km mb5.2
      OFF COAST OF NORTHERN CALIFORNIA
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1997-10-04      D  7.3
  GRA1 15:09:02.9 e PnI      Z
  GRA1 15:10:18.0 e SnI      Z
  GRA1 15:10:54.9 e Sg       Z           M15.1
  GRA1 15:12:23.1 e L        Z T15.3  A1469  MS3.7
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1997-10-04      D 93.2  AZ 65
  GRA1 15:27:02.5 e P        c Z           mb5.3
  ALIGN 15:27:02.5                T1.5  A18
SZGRF: OT 15:13:51.7 13.5N 122.9E dep 33km
      LUZON, PHILIPPINE ISLANDS
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1997-10-04      D 57.4  AZ255
  GRA1 15:39:37.2 i P        c Z           mb5.4
  ALIGN 15:39:37.2                T1.9  A82
  GRA1 15:39:42.3 i (pP)    c Z
  GRA1 15:39:51.3 e          Z
  GRA1 15:39:56.6 e          Z
NEIC:  OT 15:29:46.3 15.9N 46.7W dep 10km mb5.5
      NORTHERN MID-ATLANTIC RIDGE
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1997-10-04      D 57.4  AZ255
  GRA1 15:44:20.3 e P        c Z           mb5.8
  ALIGN 15:44:20.3                T1.9  A183
  GRA1 15:44:25.9 e pP       Z
NEIC:  OT 15:34:29.7 16.0N 46.8W dep 10km mb5.7
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NORTHERN MID-ATLANTIC RIDGE

 1997-10-04 AZ144
 GRA1 16:07:05.1 e P Z
 NEIC: OT 16:02:44.3 34.6N 27.0E dep 10km mb4.3
 EASTERN MEDITERRANEAN SEA

1997-10-04 D 6.9
 GRA1 16:15:15.1 e PnI Z
 GRA1 16:16:29.5 e SnI Z
 GRA1 16:17:21.6 e Sg Z M15.4
 GRA1 16:18:35.4 e L Z T15.5 A5951 MS4.3

1997-10-04 D 7.3
 GRA1 18:49:30.2 e PnI Z
 GRA1 18:50:44.8 e SnI Z
 GRA1 18:51:30.3 e Sg Z M15.0
 GRA1 18:52:50.8 e L Z T15.8 A1599 MS3.7

1997-10-04 D 3.6 398km
 GRA1 08:46:24.6 e Pg Z M13.5
 GRA1 08:47:14.2 e Sg E
 SZGRF: OT 08:45:20.6 51.5N 16.1E dep 1km
 POLAND

1997-10-05 D 84.9 AZ273
 GRA1 01:07:53.7 i P d Z mb5.1
 BEAM 01:07:53.7 T1.4 A18
 GRA1 01:08:01.7 e (pP) Z
 GRA1 01:41:04.0 e L Z T20.0 A102 MS4.2
 NEIC: OT 00:54:58.4 2.7N 79.7W dep 10km mb5.0
 SOUTH OF PANAMA

1997-10-05 D 80.8 AZ 30
 GRA1 01:57:30.0 i P c Z mb5.0
 ALIGN 01:57:30.0 T1.0 A16
 SZGRF: OT 01:45:21.0 42.9N 149.5E dep 33km
 OFF COAST OF HOKKAIDO, JAPAN

1997-10-05 D 81.8 AZ 33
 GRA1 02:40:53.0 i P d Z mb4.7
 ALIGN 02:40:53.0 T0.9 A6
 NEIC: OT 02:29:30.7 43.3N 138.0E dep264km mb4.3
 EASTERN SEA OF JAPAN

1997-10-05 D 80.1 AZ 25
 GRA1 03:40:58.6 i P c Z mb6.0

ALIGN 03:40:58.6 T1.5 A320
GRA1 04:19:09.6 e L Z T20.0 A660 MS5.0
SZGRF: OT 03:28:53.2 45.3N 154.4E dep 33km
KURIL ISLANDS REGION

1997-10-05 D 3.9 431km
GRA1 05:55:27.6 e Pn Z M13.5
GRA1 05:55:32.5 e Pg Z
GRA1 05:56:23.9 e Sg E
SZGRF: OT 05:54:21.9 46.5N 14.5E dep 10km
YUGOSLAVIA

1997-10-05 D 87.4 AZ285
GRA1 09:58:17.2 i P d Z mb5.0
ALIGN 09:58:17.2 T1.5 A19
GRA1 10:37:38.6 e L Z T18.1 A426 MS4.9
SZGRF: OT 09:45:33.3 12.0N 88.9W dep 33km
OFF COAST OF CENTRAL AMERICA

1997-10-05 D 6.3
GRA1 10:23:43.0 e PnI Z
GRA1 10:24:50.0 e SnI Z
GRA1 10:25:23.3 e Sg Z M14.2

1997-10-05
GRA1 10:47:56.9 e PKPdf Z

1997-10-05
GRA1 13:32:02.7 e PKPdf Z
NEIC: OT 13:12:49.6 15.3S 167.5E dep100km mb4.6
VANUATU ISLANDS

1997-10-05 D 7.0
GRA1 15:29:50.4 e PnI Z
GRA1 15:31:02.0 e SnI Z
GRA1 15:31:48.9 e Sg Z M14.4
GRA1 15:33:08.9 e L Z T16.4 A197 MS2.8
NEIC: OT 15:28:00.8 42.6N 13.2E dep 10km
CENTRAL ITALY

1997-10-05
GRA1 17:30:01.8 i PKP d Z
GRA1 17:31:11.1 e (pPKP) Z
NEIC: OT 17:10:47.1 15.3S 175.0W dep200km mb4.4
TONGA ISLANDS

1997-10-05

GRA1 18:09:25.9 e PKPdf Z

 1997-10-05 D113.5
 GRA1 18:18:55.7 e Pdiff Z
 GRA1 18:19:00.2 e Z
 GRA1 18:19:07.0 e Z
 GRA1 18:19:13.6 e Z
 GRA1 18:23:33.8 e PP Z
 GRA1 18:25:56.6 e pPP Z
 GRA1 18:33:19.8 e PKKPdf Z
 GRA1 18:33:28.0 e Z
 GRA1 18:36:35.6 e SKKPdf Z
 GRA1 18:36:51.5 e Z
 GRA1 19:04:48.5 e L Z T20.6 A955 MS5.4
 NEIC: OT 18:04:30.4 59.7S 29.4W dep271km mb6.0
 SOUTH SANDWICH ISLANDS REGION

1997-10-05
 GRA1 18:52:41.8 e PKPdf Z
 NEIC: OT 18:31:53.8 19.1N 66.5W dep 33km
 PUERTO RICO REGION

1997-10-05 D101.0
 GRA1 19:13:27.1 e Pdiff Z
 GRA1 19:14:27.2 e pPdiff Z
 GRA1 19:14:59.7 e sPdiff Z
 GRA1 19:17:42.5 e PP Z
 GRA1 20:02:07.6 e L Z T19.1 A364 MS4.9
 NEIC: OT 19:00:01.8 5.7N 125.4E dep220km mb5.5
 MINDANAO, PHILIPPINE ISLANDS

1997-10-05 D 59.5 AZ208
 GRA1 23:34:30.7 i P c Z mb4.5
 BEAM 23:34:30.7 T1.0 A5
 SZGRF: OT 23:24:29.3 6.3S 12.6W dep 33km
 ASCENSION ISLAND REGION

1997-10-05 D 57.0 AZ208
 GRA1 23:45:24.8 e P c Z mb4.4
 BEAM 23:45:24.8 T1.3 A6
 SZGRF: OT 23:35:40.5 3.9S 12.1W dep 33km
 NORTH OF ASCENSION ISLAND

1997-10-05 D 1.9 210km
 GRC1 10:58:15.5 e Pg Z
 GRA1 10:58:20.7 e Pg Z M12.1
 GRA1 10:58:49.8 e Sg E
 SZGRF: OT 10:57:41.2 48.1N 9.0E dep 5km

Spaichingen/Swabian Jura, S of Albstadt

 1997-10-06 D 80.5 AZ 28
 GRA1 00:01:42.7 i P Z T1.8 A52 mb5.3
 GRA1 00:01:55.9 e Z
 SZGRF: OT 23:49:35.2 43.8N 151.2E dep 33km
 KURIL ISLANDS REGION

 1997-10-06 D 88.0 AZ 65
 GRA1 03:21:44.1 e P Z mb5.4
 BEAM 03:21:44.1 T1.0 A20
 SZGRF: OT 03:08:57.5 17.4N 119.2E dep 33km
 PHILIPPINE ISLANDS REGION

 1997-10-06 D 2.6 291km
 GRA1 04:10:28.3 e Pg Z M12.7
 GRA1 04:11:05.1 e Sg E
 SZGRF: OT 04:09:40.2 47.7N 13.7E dep 10km
 E Salzkammergut/A, Totes Gebirge

 1997-10-06
 GRA1 05:50:28.1 e PKP Z
 GRA1 05:50:35.5 e Z
 NEIC: OT 05:31:38.6 19.9S 178.0W dep530km mb4.6
 FIJI ISLANDS REGION

 1997-10-06
 GRA1 07:16:52.1 e PKP Z

 1997-10-06 D 89.0 AZ 65
 GRA1 12:43:31.0 e P Z T1.2 A44 mb5.6
 GRA1 12:43:58.5 e Z
 GRA1 12:47:21.8 e PP Z
 GRA1 12:53:13.3 e pP E
 GRA1 13:28:05.5 e L Z T18.7 A1708 MS5.5
 SZGRF: OT 12:30:39.8 16.9N 120.2E dep 33km
 LUZON, PHILIPPINE ISLANDS

 1997-10-06 D 77.0
 GRA1 17:23:33.5 e P Z
 SZGRF: OT 17:11:45.5 53.5N 175.0W dep 33km
 ANDREANOF ISLANDS, ALEUTIAN IS.

 1997-10-06
 GRA1 18:53:30.5 e P Z T0.6 A5

 1997-10-06 D 3.6 405km

GRA1 19:19:19.3 e Pn Z M13.6
 GRA1 19:20:17.3 e Sg N
 SZGRF: OT 19:18:22.0 51.5N 16.2E dep 1km
 POLAND

1997-10-06

GRA1 20:04:31.5 e PKP Z

1997-10-06

GRA1 21:11:56.6 e PKP Z
 GRA1 21:12:04.7 e Z
 NEIC: OT 20:52:44.5 9.3S 158.7E dep 33km mb5.7
 SOLOMON ISLANDS

1997-10-06

GRA1 21:15:29.8 e PKP Z

1997-10-06

D 24.4
 GRA1 21:18:25.6 e P Z T1.3 A39 mb4.8
 NEIC: OT 21:13:10.4 73.4N 8.0E dep 10km mb5.0
 GREENLAND SEA

1997-10-06

D 23.5
 GRA1 21:34:32.1 e P Z T2.2 A90 mb4.9
 SZGRF: OT 21:29:25.8 73.1N 9.2E dep 33km
 GREENLAND SEA

1997-10-06

D 6.2
 GRC1 23:26:22.7 i Pn c Z
 GRA1 23:26:32.2 i Pn c Z M15.8
 GRA1 23:27:51.3 e Sn N
 SZGRF: OT 23:24:52.2 42.9N 13.0E dep 10km
 CENTRAL ITALY

1997-10-06

D 23.8
 GRA1 23:50:51.9 e P Z T2.0 A133 mb5.1
 SZGRF: OT 23:45:42.4 73.1N 2.6E dep 33km
 GREENLAND SEA

1997-10-07

D 6.9
 GRA1 00:34:08.3 e PnI Z
 GRA1 00:35:20.9 e SnI Z
 GRA1 00:35:55.7 e Sg Z M14.2

1997-10-07

D 6.7
 GRA1 01:26:16.7 e PnI Z

GRA1	01:27:29.5	e SnI	Z			
GRA1	01:28:22.6	e Sg	Z			M14.8
GRA1	01:29:33.7	e L	Z	T16.0	A492	MS3.2

1997-10-07 D 6.6

GRA1	02:41:03.9	e PnI	Z			
GRA1	02:42:14.1	e SnI	Z			
GRA1	02:42:57.5	e Sg	Z			M14.3
GRA1	02:44:17.3	e L	Z	T14.5	A282	MS3.0

1997-10-07 D 7.1

GRA1	03:45:30.6	e PnI	Z			
GRA1	03:46:41.6	e SnI	Z			
GRA1	03:47:18.3	e Sg	Z			M14.2
NEIC: OT	03:43:41.5	42.7N	13.1E	dep 10km		
CENTRAL ITALY						

1997-10-07 D 6.9

GRA1	04:27:46.2	e PnI	Z			
GRA1	04:29:04.0	e SnI	Z			
GRA1	04:29:30.5	e Sg	Z			M14.5
GRA1	04:30:58.0	e L	Z	T14.6	A232	MS2.9

1997-10-07 D 6.8

GRA1	04:55:02.6	e PnI	Z			
GRA1	04:56:13.9	e SnI	Z			
GRA1	04:56:42.3	e Sg	Z			M14.2

1997-10-07 D 6.7

GRA1	05:11:39.1	e PnI	Z			
GRA1	05:12:53.2	e SnI	Z			
GRA1	05:13:36.2	e Sg	Z			M15.2
GRA1	05:14:58.0	e L	Z	T15.6	A2281	MS3.8

1997-10-07 D 50.9 AZ259

GRA1	13:22:43.3	e P	Z			mb4.6
BEAM	13:22:43.3			T0.8	A6	
GRA1	13:40:31.7	e L	Z	T21.6	A522	MS4.5
NEIC: OT	13:13:39.1	23.2N	44.9W	dep 10km	mb5.0	
NORTHERN MID-ATLANTIC RIDGE						

1997-10-07 D156.4

GRA1	13:35:52.9	e PKPdf	Z			
GRA1	13:36:32.8	e PKPab	Z			

GRA1 13:40:03.4 e PP Z
GRA1 14:57:42.2 e L Z T20.2 A1151 MS5.7
NEIC: OT 13:15:52.6 31.8S 178.2W dep 33km mb5.6
KERMADEC ISLANDS REGION

1997-10-07 D 15.0 AZ153

GRA1 16:45:57.7 e P Z

1997-10-07 D101.0

GRA1 18:11:35.4 e PP Z

GRA1 19:00:34.6 e L Z T19.1 A467 MS5.0

NEIC: OT 17:53:32.3 52.1S 15.2E dep 10km mb5.3

SOUTHWEST OF AFRICA

1997-10-07 D 7.0

GRA1 19:08:02.9 e PnI Z

GRA1 19:09:20.3 e SnI Z

GRA1 19:09:45.8 e Sg Z M14.2

1997-10-07 D 7.2

GRA1 19:57:50.1 e PnI Z

GRA1 19:59:02.9 e SnI Z

GRA1 19:59:43.1 e Sg Z M14.7

GRA1 20:01:07.7 e L Z T14.6 A444 MS3.2

1997-10-08 D 67.3 AZ 79

GRA1 03:13:45.4 e P Z mb5.0

BEAM 03:13:45.4 T1.6 A15

1997-10-08 D 7.1

GRA1 06:49:08.6 e PnI Z

GRA1 06:50:23.1 e SnI Z

GRA1 06:51:11.1 e Sg Z M14.4

GRA1 06:52:27.3 e L Z T13.9 A204 MS2.9

1997-10-08 D157.1

GRA1 11:06:37.4 e PKPdf Z

GRA1 11:06:49.5 e Z

GRA1 11:06:54.3 e Z

GRA1 11:07:13.8 e PKPab Z

GRA1 11:10:50.4 e PP Z

NEIC: OT 10:47:50.4 29.0S 178.3E dep616km mb5.4

KERMADEC ISLANDS REGION

1997-10-08 D 88.4
 GRA1 17:12:56.9 e P Z mb5.4
 BEAM 17:12:56.9 T2.6 A56
 GRA1 17:53:05.9 e L Z T20.7 A408 MS4.8

 1997-10-08 D 79.6 AZ 33
 GRA1 21:33:08.3 i P c Z mb5.9
 BEAM 21:33:08.3 T1.5 A221
 GRA1 21:33:35.3 e (pP) Z
 GRA1 21:36:13.9 e PP Z
 GRA1 22:11:55.4 e L Z T19.3 A8232 MS6.1
 SZGRF: OT 21:21:14.5 42.4N 144.7E dep105km
 HOKKAIDO, JAPAN REGION

 1997-10-09 D 3.0 332km
 GRA1 02:42:50.6 e Pg Z
 GRA1 02:43:31.5 e Sg E
 SZGRF: OT 02:41:56.2 49.2N 6.7E dep 1km
 Lauterbach, SW of Saarbruecken, French-German border

 1997-10-09 D 80.3 AZ 33
 GRA1 03:41:17.9 i P c Z mb5.2
 ALIGN 03:41:17.9 T1.6 A55
 GRA1 03:41:33.1 e (pP) Z
 GRA1 04:20:03.9 e L Z T19.1 A1148 MS5.2
 SZGRF: OT 03:29:14.3 42.0N 145.6E dep 54km
 HOKKAIDO, JAPAN REGION

 1997-10-09 D 80.4 AZ 34
 GRA1 04:12:59.1 i P c Z mb5.6
 ALIGN 04:12:59.1 T1.4 A104
 GRA1 04:13:12.3 e (pP) Z
 GRA1 04:51:45.1 e L Z T19.1 A1541 MS5.4
 SZGRF: OT 04:00:54.1 41.5N 144.6E dep 45km
 HOKKAIDO, JAPAN REGION

 1997-10-09 D157.8
 GRA1 08:22:24.4 e PKPab Z
 NEIC: OT 08:02:25.1 28.9S 178.6W dep278km mb5.2
 KERMADEC ISLANDS REGION

 1997-10-09 D 7.1
 GRA1 18:13:22.8 e PnI Z
 GRA1 18:14:33.0 e SnI Z
 GRA1 18:15:09.9 e Sg Z M14.5
 GRA1 18:16:33.7 e L Z T14.5 A388 MS3.1

1997-10-09 D 78.0
 GRA1 20:53:58.9 i P c Z mb5.7
 ALIGN 20:53:58.9 T1.9 A115
 GRA1 20:54:07.7 e Z
 GRA1 20:54:28.1 e pP Z
 GRA1 20:54:35.4 e pX Z
 GRA1 21:35:39.6 e L Z T21.5 A350 MS4.7

 1997-10-10
 GRA1 01:08:36.8 e PKPab Z

 1997-10-10 D 66.0 AZ155
 GRA1 06:36:22.3 e P Z mb4.9
 BEAM 06:36:22.3 T0.8 A6
 GRA1 06:36:30.1 e pP Z
 SZGRF: OT 06:25:36.5
 MALAWI

 1997-10-10 D131.3
 GRA1 19:05:03.3 e PKPdf Z
 GRA1 20:04:11.3 e L Z T21.2 A1859 MS5.8

 1997-10-10 D 6.8
 GRA1 22:10:29.4 e (PnI) Z
 GRA1 22:11:45.1 e SnI Z
 GRA1 22:12:22.6 e (Sg) Z M14.3

 1997-10-10 D 86.9 AZ280
 GRA1 23:42:18.8 i P d Z mb4.8
 ALIGN 23:42:18.8 T0.8 A7
 NEIC: OT 23:29:17.1 32.9S 70.3W dep100km
 CHILE-ARGENTINA BORDER REGION

 1997-10-11 D 2.9 320km
 GRA1 00:36:27.6 e Pg Z M13.0
 GRA1 00:37:05.9 e Sg N
 SZGRF: OT 00:35:34.5 49.4N 6.8E dep 1km
 Saarbruecken-West

 1997-10-11 D 6.8
 GRA1 03:22:37.5 e PnI Z
 GRA1 03:23:48.9 e SnI Z
 GRA1 03:24:19.9 e Sg Z M14.6
 GRA1 03:25:53.6 e L Z T17.5 A248 MS2.8

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1997-10-11      D 58.9  AZ157
  GRA1 04:21:39.6 e P      Z      mb4.7
  BEAM 04:21:39.6              T1.4  A13
SZGRF: OT 04:11:41.8
  LAKE TANGANYIKA REGION
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1997-10-11      D 83.8  AZ 41
  GRA1 05:57:05.4 i P      c Z      mb5.5
  ALIGN 05:57:05.4              T1.3  A44
  GRA1 05:57:11.6 e pP      Z
  GRA1 06:43:01.2 e L      Z  T19.9  A195
SZGRF: OT 05:44:39.0 34.8N 138.3E dep 22km
  NEAR S. COAST OF HONSHU, JAPAN
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1997-10-11      D 80.9  AZ 36
  GRA1 09:57:46.7 i P      c Z      mb5.7
  ALIGN 09:57:46.7              T1.1  A98
  GRA1 09:58:04.4 e (pP)    Z
  GRA1 10:00:52.7 e (PP)    Z
  GRA1 10:37:06.7 e L      Z  T18.2  A521  MS4.9
SZGRF: OT 09:45:41.1 39.7N 141.9E dep 64km
  HONSHU, JAPAN
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1997-10-11      D 80.9  AZ334
  GRA1 16:06:13.6 i P      c Z      mb4.9
  ALIGN 16:06:13.6              T1.3  A15
  GRA1 16:06:27.3 e pP      Z
  GRA1 16:06:32.7 e (sP)    Z
  GRA1 16:40:56.5 e L      Z  T21.9  A590  MS4.9
SZGRF: OT 15:54:06.3 44.4N 131.8W dep 47km
  OFF COAST OF OREGON
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1997-10-11
  GRA1 18:34:27.7 e PKPdf    Z
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1997-10-11      D 83.6  AZ 59
  GRA1 18:36:39.0 i P      d Z      mb5.8
  ALIGN 18:36:39.0              T1.5  A98
  GRA1 18:37:20.1 i pP      d Z
  GRA1 18:37:30.8 e sP      Z
  GRA1 18:39:54.7 e PP      Z
  GRA1 19:19:11.3 e L      Z  T18.2  A157  MS4.4
SZGRF: OT 18:24:29.4 25.0N 121.9E dep155km
  TAIWAN
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1997-10-11      D 11.3
  GRA1 19:02:36.7 e P      Z
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BEAM 19:02:36.7 T1.5 A10

 1997-10-11 D 79.4 AZ 33
 GRA1 19:51:53.1 i P c Z mb5.7
 ALIGN 19:51:53.1 T1.2 A110
 GRA1 20:30:38.5 e L Z T18.8 A1314 MS5.3
 SZGRF: OT 19:39:51.9 42.8N 144.9E dep 33km
 HOKKAIDO, JAPAN REGION

 1997-10-12 D 90.7 AZ299
 GRA1 02:56:04.1 e P Z mb4.7
 BEAM 02:56:04.1 T1.2 A4
 GRA1 03:31:38.8 e L Z T21.9 A47 MS3.9

 1997-10-12 D 21.1 AZ281
 GRA1 04:23:33.7 e P Z mb3.5
 BEAM 04:23:33.7 T1.5 A4

 1997-10-12 AZ106
 GRA1 05:11:36.1 e P Z

 1997-10-12
 GRA1 09:08:26.4 e (PKPab) Z
 GRA1 10:05:22.6 e L Z T21.8 A203

 1997-10-12 D 6.9
 GRA1 11:10:19.2 e PnI Z
 GRA1 11:11:35.9 e SnI Z
 GRA1 11:12:11.7 e Sg Z M15.8
 GRA1 11:13:42.3 e L Z T15.5 A23871 MS4.9

 1997-10-12 D 6.8
 GRA1 13:01:43.0 e PnI Z
 GRA1 13:02:57.2 e SnI Z
 GRA1 13:03:40.3 e Sg Z M14.4
 GRA1 13:05:03.7 e L Z T15.1 A460 MS3.2

 1997-10-12 D 6.8
 GRA1 18:13:48.5 e PnI Z
 GRA1 18:15:10.6 e SnI Z
 GRA1 18:15:49.5 e Sg Z M14.7
 GRA1 18:17:09.0 e L Z T15.4 A539 MS3.2


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1997-10-12      D  6.8
  GRA1 20:17:15.3 e PnI      Z
  GRA1 20:18:31.2 e SnI      Z
  GRA1 20:19:13.6 e Sg       Z      M14.4
  GRA1 20:20:34.1 e L        Z  T16.0  A231  MS2.8
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1997-10-12      D  6.8
  GRA1 21:32:51.9 e PnI      Z
  GRA1 21:34:11.8 e SnI      Z
  GRA1 21:34:45.1 e Sg       Z      M14.7
  GRA1 21:36:11.8 e L        Z  T15.1  A667  MS3.3
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1997-10-12      D  6.8
  GRA1 21:54:19.0 e PnI      Z
  GRA1 21:55:39.2 e SnI      Z
  GRA1 21:56:31.1 e Sg       Z      M14.7
  GRA1 21:57:39.5 e L        Z  T14.8  A469  MS3.2
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1997-10-13      D  4.2  462km
  GRA1 03:28:14.5 e PnI      Z
  GRA1 03:29:18.2 e SnI      Z
  GRA1 03:29:33.4 e Sg       Z      M13.5
  GRA1 03:31:13.6 e L        Z  T13.8  A134  MS2.3
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1997-10-13      D  6.8
  GRA1 04:18:51.1 e PnI      Z
  GRA1 04:20:05.2 e SnI      Z
  GRA1 04:20:39.2 e Sg       Z      M14.3
  GRA1 04:22:09.7 e L        Z  T15.6  A172  MS2.7
NEIC:  OT 04:17:05.4 42.8N 13.0E dep 10km
CENTRAL ITALY
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1997-10-13      D  6.8
  GRA1 11:03:11.2 e PnI      Z
  GRA1 11:04:46.8 e SnI      Z
  GRA1 11:05:21.7 e Sg       Z      M14.8
  GRA1 11:06:51.1 e L        Z  T15.3  A1444  MS3.7
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1997-10-13      D  6.8
  GRA1 12:48:39.1 e PnI      Z
  GRA1 12:49:37.0 e SnI      Z
  GRA1 12:50:11.7 e Sg       Z      M14.3
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GRA1 12:51:41.0 e L Z T15.3 A202 MS2.8

1997-10-13 D 6.9

GRA1 13:11:06.4 e PnI Z
GRA1 13:11:57.2 e SnI Z
GRA1 13:13:04.6 e Sg Z M15.1
GRA1 13:14:25.3 e L Z T15.8 A1064 MS3.5

1997-10-13 D 15.5

GRA1 13:43:12.7 e PnI Z
GRA1 13:46:00.4 e SnI Z
GRA1 13:47:55.7 e Sg Z
GRA1 13:50:29.0 e L Z T19.8 A590806 MS6.8

1997-10-13 D 88.1 AZ329

GRA1 14:18:48.7 e (P) Z
BEAM 14:18:48.7 T1.8 A17
SZGRF: OT 14:06:02.7
OFF COAST OF CALIFORNIA

1997-10-13 AZ151

GRA1 16:19:17.4 e P Z

1997-10-13 AZ144

GRA1 17:17:08.8 e P Z

1997-10-13 D 6.8

GRA1 18:33:24.0 e PnI Z
GRA1 18:34:26.1 e SnI Z
GRA1 18:35:12.9 e Sg Z M14.4
GRA1 18:36:29.5 e L Z T16.4 A340 MS3.0

1997-10-13 D 6.8

GRA1 18:49:33.7 e PnI Z
GRA1 18:50:47.6 e SnI Z
GRA1 18:51:27.8 e Sg Z M14.3
GRA1 18:52:51.6 e L Z T16.8 A174 MS2.7

1997-10-14 D 16.8

GRA1 03:08:20.4 e PnI Z
GRA1 03:11:27.8 e SnI Z
GRA1 03:15:14.6 e L Z T18.9 A601 MS3.8

NEIC: OT 03:04:34.9 36.6N 22.5E dep 10km mb4.3
SOUTHERN GREECE

1997-10-14 D151.7
GRA1 10:12:47.8 i PKPdf d Z
GRA1 10:12:54.8 i PKPbc d Z
GRA1 10:13:02.6 e PKiKP Z
GRA1 10:13:03.5 e PKPab Z
GRA1 10:13:41.9 e (pPKPbc)Z
GRA1 10:16:37.8 e PP Z
GRA1 11:06:51.6 e L1 Z T40.0 A258615
GRA1 11:16:08.6 e L Z T21.8 A39091 MS7.2

1997-10-14
GRA1 10:36:52.2 e PKPbc Z
GRA1 10:37:00.6 e PKPab Z
NEIC: OT 10:17:01.6 21.6S 176.4W dep 33km mb5.1
FIJI ISLANDS REGION

1997-10-14
GRA1 10:49:27.5 e (PKPab) Z
GRA1 10:53:28.0 e PP Z

1997-10-14 D 7.0
GRA1 15:24:51.7 e PnI Z
GRA1 15:26:06.8 e SnI Z
GRA1 15:27:02.8 e Sg Z M16.2
GRA1 15:28:15.8 e L Z T16.0 A99659 MS5.5

1997-10-14 D 6.8
GRA1 16:17:02.8 e PnI Z
GRA1 16:18:34.8 e SnI Z
GRA1 16:19:15.2 e Sn Z M14.3

1997-10-14 D 6.8
GRA1 16:26:27.0 e PnI Z
GRA1 16:27:41.1 e SnI Z
GRA1 16:28:31.0 e Sg Z M14.8

1997-10-14 D 6.8
GRA1 16:38:36.6 e PnI Z
GRA1 16:40:14.8 e SnI Z
GRA1 16:40:34.9 e Sg Z M14.4

1997-10-14

GRA1 16:48:06.4 e PKP Z

GRA1 16:48:19.9 e (pPKP) Z

GRA1 16:50:47.0 e Z

GRA1 16:50:57.3 e PP Z

NEIC: OT 16:28:46.7 10.8S 166.0E dep 33km mb4.9

SANTA CRUZ ISLANDS

1997-10-14 D 6.8

GRA1 17:43:43.8 e PnI Z

GRA1 17:45:08.9 e SnI Z

GRA1 17:45:27.3 e Sg Z

M14.6

NEIC: OT 17:42:01.8 43.0N 12.9E dep 10km

CENTRAL ITALY

1997-10-14 D152.5

GRA1 18:06:19.3 e PKPdf Z

GRA1 18:06:26.1 i PKPbc d Z

GRA1 18:06:34.9 e PKPab Z

NEIC: OT 17:46:51.7 21.6S 176.9W dep175km mb4.9

FIJI ISLANDS REGION

1997-10-14 D 81.2 AZ 88

GRA1 18:25:47.6 e P Z

mb4.7

BEAM 18:25:47.6 T1.1 A9

GRA1 18:25:54.2 e (pP) Z

NEIC: OT 18:13:45.0 8.3N 93.8E dep 33km mb4.6

NICOBAR ISLANDS, INDIA

1997-10-14 D 6.8

GRA1 19:36:02.5 e PnI Z

GRA1 19:37:19.2 e SnI Z

GRA1 19:37:49.0 e Sg Z

M14.4

GRA1 19:39:37.2 e (L) Z T20.3 A139

MS2.5

NEIC: OT 19:34:19.6 42.9N 13.0E dep 10km

CENTRAL ITALY

1997-10-14 D152.4

GRA1 21:37:09.7 e PKPdf Z

GRA1 21:37:15.9 i PKPbc d Z

GRA1 21:37:25.1 e PKPab Z

GRA1 21:37:54.3 e (pPKPbc) Z

GRA1 21:38:03.5 e pPKPab Z

NEIC: OT 21:17:40.3 21.8S 176.7W dep169km mb5.0

FIJI ISLANDS REGION

1997-10-14 D 6.8

GRA1 23:25:12.6 e PnI Z

GRA1 23:26:29.6 e SnI Z
 GRA1 23:27:06.9 e Sg Z M14.8
 GRA1 23:28:30.3 e L Z T16.1 A417 MS3.1

 1997-10-15 D108.1

GRA1 01:17:52.8 i Pdiff d Z
 GRA1 01:18:12.0 e Z
 GRA1 01:18:17.1 e pPdiff Z
 GRA1 01:18:26.5 e sPdiff Z
 GRA1 01:21:16.7 e PKiKP Z
 GRA1 01:22:19.2 e PP Z
 GRA1 01:22:48.6 e pPP Z
 GRA1 01:31:29.9 e SP Z
 GRA1 01:41:27.6 e P'P' Z
 GRA1 02:06:27.0 e L Z T21.1 A45746 MS7.0
 NEIC: OT 01:03:29.9 31.0S 71.2W dep 33km mb6.8
 NEAR COAST OF CENTRAL CHILE

 1997-10-15 D 15.0 AZ123

GRA1 02:23:22.5 i P d Z
 ALIGN 02:23:22.5 T1.2 A15
 GRA1 02:23:28.5 e pP Z

 1997-10-15 D 98.5

GRA1 03:07:56.7 i P c Z mb5.5
 ALIGN 03:07:56.7 T1.4 A13
 GRA1 03:08:00.7 e Z

 1997-10-15 D 79.5

GRA1 03:23:11.6 i P c Z mb5.2
 ALIGN 03:23:11.6 T1.4 A36
 GRA1 03:23:34.0 e (pP) Z

 1997-10-15 D 6.8

GRA1 11:53:32.4 e PnI Z
 GRA1 11:54:42.0 e SnI Z
 GRA1 11:55:29.9 e Sg Z M14.9
 GRA1 11:56:47.8 e L Z T15.0 A797 MS3.4

 1997-10-15

GRA1 13:01:40.0 e PKPdf Z

 1997-10-15 D 6.8

GRA1 14:11:33.3 e PnI Z

GRA1 14:12:58.4 e SnI Z
 GRA1 14:13:40.2 e Sg Z M14.4
 GRA1 14:15:01.7 e L Z T16.0 A218 MS2.8

 1997-10-15 D 6.8

GRA1 15:37:59.8 e PnI Z
 GRA1 15:39:07.1 e SnI Z
 GRA1 15:39:42.6 e Sg Z M14.2
 GRA1 15:41:14.9 e L Z T15.6 A135 MS2.6

 1997-10-15

GRA1 18:15:36.5 e (PKPab) Z

 1997-10-15 D 6.8

GRA1 18:19:59.9 e PnI Z
 GRA1 18:21:17.4 e SnI Z
 GRA1 18:21:54.0 e Sg Z M14.1

 1997-10-15 D 6.8

GRA1 18:51:39.3 e PnI Z
 GRA1 18:52:55.7 e SnI Z
 GRA1 18:53:28.2 e Sg Z M14.4

 1997-10-15 D 3.6 398km

GRA1 19:21:45.8 e Pn Z M13.2
 GRA1 19:22:44.1 e Sg E
 SZGRF: OT 19:20:50.0 51.4N 16.2E dep 1km
 POLAND

 1997-10-15 D 51.4 AZ 78

GRA1 20:39:57.7 i P c Z mb4.9
 ALIGN 20:39:57.7 T1.7 A25
 GRA1 21:03:34.5 e L Z T19.0 A1513 MS5.0
 SZGRF: OT 20:30:56.7 35.7N 81.1E dep 33km
 SOUTHERN SINKIANG PROV., CHINA

 1997-10-15 D138.6

GRA1 20:42:36.2 e PKPdf Z

 1997-10-15 D 6.8

GRA1 22:54:53.6 e PnI Z
 GRA1 22:56:20.9 e SnI Z
 GRA1 22:56:50.3 e Sg Z M15.1

GRA1 22:58:14.3 e L Z T15.1 A1727 MS3.7

1997-10-15

GRA1 23:05:50.4 e (PKPab) Z

1997-10-16 D 6.8

GRA1 00:13:28.7 e PnI Z

GRA1 00:14:44.3 e SnI Z

GRA1 00:15:16.6 e Sg Z M14.3

GRA1 00:16:49.2 e L Z T17.0 A84 MS2.4

1997-10-16 D108.2

GRA1 01:04:22.0 e PP d Z

GRA1 01:46:03.3 e L Z T21.5 A63 MS4.1

NEIC: OT 00:45:36.8 31.1S 71.0W dep 63km mb5.4

NEAR COAST OF CENTRAL CHILE

1997-10-16 D 6.8

GRA1 02:25:21.5 e PnI Z

GRA1 02:26:38.4 e SnI Z

GRA1 02:27:15.1 e Sg Z M14.7

GRA1 02:28:41.5 e L Z T15.3 A714 MS3.4

1997-10-16 D 6.8

GRA1 04:54:45.7 e PnI Z

GRA1 04:56:00.0 e SnI Z

GRA1 04:56:47.7 e Sg Z M15.0

GRA1 04:57:57.1 e L Z T15.0 A1515 MS3.7

1997-10-16 D 79.2 AZ 88

GRA1 06:54:40.1 i P d Z mb4.9

BEAM 06:54:40.1 T1.5 A19

GRA1 07:34:54.0 e L Z T18.8 A50 MS3.9

SZGRF: OT 06:42:38.1

NICOBAR ISLANDS REGION

1997-10-16 D 32.5 AZ 46

GRA1 08:28:03.5 e P Z mb4.2

BEAM 08:28:03.5 T0.8 A3

GRA1 08:28:09.3 e (pP) Z

SZGRF: OT 08:21:35.7

WESTERN SIBERIA

1997-10-16 D 6.8

GRA1 12:02:13.5 e PnI Z

GRA1 12:03:33.5 e SnI Z
GRA1 12:04:13.0 e Sg Z M15.1
GRA1 12:05:36.4 e L Z T14.2 A3335 MS4.1

1997-10-16 D 6.8

GRA1 17:33:28.4 e PnI Z
GRA1 17:34:44.8 e Sn Z M14.7
GRA1 17:35:15.5 e Sg Z
GRA1 17:36:48.8 e L Z T15.8 A933 MS3.5

1997-10-16

GRA1 21:57:25.3 e P Z
NEIC: OT 21:45:22.7 51.3N 177.9W dep 33km mb4.7
ANDREANOF ISLANDS, ALEUTIAN IS.

1997-10-17 D153.8

GRA1 10:15:14.9 e PKPdf Z
GRA1 11:37:23.4 e L Z T21.8 A2336 MS6.0

1997-10-17 D151.2

GRA1 11:18:59.7 e PKPdf Z
GRA1 11:19:04.9 e PKPbc Z
GRA1 11:19:12.0 e (PKPab) Z

1997-10-17 D 6.8

GRA1 14:25:28.4 e PnI Z
GRA1 14:26:44.6 e SnI Z
GRA1 14:27:25.8 e Sg Z M14.8
GRA1 14:28:48.9 e L Z T15.5 A743

1997-10-17 D150.1

GRA1 15:20:42.2 e PKPdf Z
GRA1 15:20:47.4 e PKPbc Z
GRA1 15:20:57.3 e PKPab Z
GRA1 15:23:08.3 e pPKPbc Z

1997-10-17 D 46.9

GRA1 17:43:42.7 e P Z mb5.1
BEAM 17:43:42.7 T1.6 A26
GRA1 17:43:52.9 e pP Z
GRA1 18:04:53.2 e L Z T19.0 A3435 MS5.3
NEIC: OT 17:35:16.0 39.5N 76.9E dep 33km mb5.0
SOUTHERN XINJIANG, CHINA

 1997-10-17 D 3.6 402km
 GRA1 19:02:18.7 e Sg N
 SZGRF: OT 19:00:23.3 51.5N 16.1E dep 1km
 POLAND

1997-10-17 D 3.5 394km
 GRA1 19:12:58.7 e Pn Z M13.5
 GRA1 19:13:54.1 e Sg E
 SZGRF: OT 19:12:02.6 51.5N 16.0E dep 1km
 POLAND

1997-10-18 D105.0
 GRA1 02:58:37.2 e PP Z
 GRA1 03:44:47.6 e L Z T21.7 A744 MS5.2
 NEIC: OT 02:40:03.5 .9S 124.1E dep 33km mb5.5
 SOUTHERN MOLUCCA SEA

1997-10-18 D 4.5 503km
 GRA1 08:08:46.7 e Pn Z M14.2
 GRA1 08:10:03.4 e Sg N
 SZGRF: OT 08:07:38.4 49.8N 18.2E dep 1km
 CZECHOSLOVAKIA

1997-10-18 D 79.2 AZ 26
 GRA1 10:19:31.8 i P c Z T0.8 A24 mb5.3
 GRA1 10:19:42.1 e (pP) Z
 SZGRF: OT 10:07:31.7 46.0N 153.5E dep 36km
 KURIL ISLANDS REGION

1997-10-18 D 3.6 402km
 GRA1 11:37:50.1 e Sg E M13.6
 SZGRF: OT 11:35:56.1 51.5N 16.1E dep 1km
 POLAND

1997-10-18 D 6.8
 GRA1 17:12:33.4 e PnI Z
 GRA1 17:13:09.8 e SnI Z
 GRA1 17:13:59.7 e Sg Z M14.1
 GRA1 17:15:54.6 e L Z T16.3 A100 MS2.5

1997-10-18 D 3.6 401km
 GRA1 18:44:53.2 e Pn Z M14.0
 GRA1 18:45:49.0 e Sg E
 SZGRF: OT 18:43:55.4 51.4N 16.2E dep 1km
 POLAND

1997-10-18 D 95.6 AZ290

GRA1 19:22:49.3 e P Z mb5.1
 BEAM 19:22:49.3 T1.6 A11
 SZGRF: OT 19:09:27.7
 OFF COAST OF MEXICO

 1997-10-19 D 6.8
 GRA1 00:46:14.5 e PnI Z
 GRA1 00:47:34.2 e SnI Z
 GRA1 00:48:08.7 e Sg Z M14.3
 GRA1 00:49:36.7 e L Z T15.6 A187 MS2.8
 NEIC: OT 00:44:31.8 42.9N 12.9E dep 10km
 CENTRAL ITALY

 1997-10-19 D149.4
 GRA1 02:34:48.9 e PKPdf Z
 GRA1 02:34:53.1 e PKPbc Z
 GRA1 02:34:56.5 e PKPab Z
 GRA1 02:35:05.9 e pPKPab Z
 NEIC: OT 02:15:07.2 18.6S 174.2W dep 33km
 TONGA ISLANDS

 1997-10-19
 GRA1 03:35:50.2 e PKPab Z

 1997-10-19 D 6.8
 GRA1 04:53:21.2 e PnI Z
 GRA1 04:54:32.0 e Sn Z M14.3
 GRA1 04:54:53.8 e Sg Z
 NEIC: OT 04:51:22.7 42.7N 13.1E dep 10km
 CENTRAL ITALY

 1997-10-19 D 58.4 AZ239
 GRA1 07:39:57.2 e P Z mb5.1
 ALIGN 07:39:57.2 T1.8 A33
 GRA1 07:48:04.5 e S Z
 GRA1 08:00:32.4 e L Z T21.1 A469 MS4.6

 1997-10-19 D 2.3 259km
 GRA1 10:31:42.5 e Pg Z M13.1
 GRA1 10:32:04.9 e Sn E
 GRA1 10:32:12.9 e Sg E
 SZGRF: OT 10:30:58.8 47.4N 11.7E dep 10km
 Schwaz/A, Inn Valley, Northern Tuxer Alps

 1997-10-19 D 78.2 AZ 26
 GRA1 12:43:38.0 e P Z mb4.4
 BEAM 12:43:38.0 T1.1 A3

GRA1 12:43:51.3 e pP Z
 SZGRF: OT 12:31:45.5 46.6N 151.8E dep 46km
 KURIL ISLANDS

 1997-10-19 D 44.5 AZ 84
 GRA1 14:38:58.8 i P c Z mb5.1
 ALIGN 14:38:58.8 T0.8 A22
 GRA1 14:39:21.3 e Z
 GRA1 14:39:50.5 e pP Z
 GRA1 14:40:44.2 e PP Z
 SZGRF: OT 14:31:12.4 36.2N 70.8E dep244km
 HINDU KUSH REGION

 1997-10-19 D 6.8
 GRA1 16:01:57.2 e PnI Z
 GRA1 16:03:20.5 e SnI Z
 GRA1 16:03:49.4 e Sg Z M14.8
 GRA1 16:05:21.2 e L Z T14.7 A1076 MS3.5

 1997-10-19 D152.0
 GRA1 16:13:31.6 e PKPdf Z
 GRA1 17:26:40.4 e L Z T19.4 A2469 MS6.0
 NEIC: OT 15:53:38.7 21.8S 175.0W dep 33km mb5.6
 TONGA ISLANDS Scalar Moment (PPT):

 1997-10-19 D 86.1 AZ293
 GRA1 19:07:22.2 e P Z mb4.7
 BEAM 19:07:22.2 T1.2 A7
 GRA1 19:07:32.1 e pP Z
 SZGRF: OT 18:54:45.3 18.0N 94.2W dep 34km
 CHIAPAS, MEXICO

 1997-10-19
 GRA1 20:08:20.9 e PKPdf Z
 GRA1 20:08:26.0 e (pPKPdf)Z
 NEIC: OT 19:49:43.7 17.7S 178.4W dep600km mb4.1
 FIJI ISLANDS REGION

 1997-10-19 D 2.8 316km
 GRA1 20:53:35.8 e Pn Z
 GRA1 20:53:43.3 e Pg Z
 GRA1 20:54:21.7 e Sg E
 SZGRF: OT 20:52:51.0 47.0N 12.8E dep 10km
 Grossglockner Mountain/A, Central Hohe Tauern

 1997-10-19 D 78.4 AZ 26
 GRA1 23:11:52.6 i P c Z mb5.0
 ALIGN 23:11:52.6 T0.9 A10

SZGRF: OT 22:59:56.9 46.6N 152.5E dep 33km
KURIL ISLANDS

1997-10-19 D 3.0 328km
GRA1 06:22:40.8 e Pg Z M12.9
GRA1 06:23:21.2 e Sg E

SZGRF: OT 06:21:48.9 49.2N 6.8E dep 1km
Lauterbach, SW of Saarbruecken, French-German border

1997-10-20 D 6.8
GRA1 01:29:01.5 e PnI Z
GRA1 01:30:10.7 e SnI Z
GRA1 01:30:37.3 e Sg Z M14.3
GRA1 01:32:04.7 e L Z T14.3 A220 MS2.9
NEIC: OT 01:27:00.1 42.7N 13.1E dep 10km
CENTRAL ITALY

1997-10-20
GRA1 04:12:26.9 e PKPdf Z
GRA1 04:12:34.0 e (pPKPdf)Z
NEIC: OT 03:54:06.5 7.5S 127.5E dep150km mb5.0
BANDA SEA

1997-10-20 D155.0
GRA1 05:34:56.8 i PKPab d Z
NEIC: OT 05:14:40.4 25.7S 176.7W dep 33km mb5.1
SOUTH OF FIJI ISLANDS

1997-10-20 D 6.8
GRA1 06:11:07.7 e PnI Z
GRA1 06:11:50.7 e SnI Z
GRA1 06:12:44.4 e Sg Z M14.3

1997-10-20 D 40.7 AZ104
GRA1 06:16:44.4 i P c Z mb5.8
ALIGN 06:16:44.4 T1.0 A205
GRA1 06:16:56.6 e pP Z
GRA1 06:37:37.1 e L Z T21.4 A794 MS4.5

1997-10-20
GRA1 07:34:26.7 e PKPdf Z
NEIC: OT 07:15:27.7 4.6S 153.3E dep 33km mb4.3
NEW IRELAND REGION, P.N.G.

1997-10-20
GRA1 08:14:51.9 e PKPdf Z
NEIC: OT 07:55:08.0 17.5S 176.6W dep 33km mb4.2

FIJI ISLANDS REGION

 1997-10-20 D 40.9 AZ104
 GRA1 10:14:14.2 i P c Z T1.0 A31 mb5.0
 GRA1 10:14:26.1 e pP Z

 1997-10-20 D 85.6 AZ 36
 GRA1 14:24:40.2 e P Z mb5.0
 ALIGN 14:24:40.2 T0.9 A11
 NEIC: OT 14:12:14.6 36.3N 141.0E dep 45km mb4.9
 NEAR EAST COAST OF HONSHU, JAPAN

 1997-10-20 D147.2
 GRA1 21:03:40.5 e PKPab Z
 GRA1 21:04:15.8 e pPKPab Z
 NEIC: OT 20:44:09.2 17.1S 174.2W dep134km mb5.1
 TONGA ISLANDS

 1997-10-21 D 63.5 AZ 57
 GRA1 06:43:05.4 i P d Z mb5.3
 ALIGN 06:43:05.4 T1.1 A21
 GRA1 06:43:12.7 e pP Z
 GRA1 07:12:02.2 e L Z T21.1 A302 MS4.4
 NEIC: OT 06:32:36.2 41.1N 107.2E dep 33km mb5.0
 WESTERN NEI MONGOL, CHINA

 1997-10-21 D 1.3 149km
 GRA1 16:45:03.8 e Pn Z M13.9
 GRA1 16:45:05.7 e Pg Z
 GRA1 16:45:22.6 e Sg N
 SZGRF: OT 16:44:39.4 48.8N 9.7E dep 10km
 Geislingen/Swabian Jura

 1997-10-21 D 13.2
 GRA1 18:00:51.8 e P Z
 GRA1 18:06:53.2 e L Z T21.4 A1239 MS3.9

 1997-10-21 D 4.3 477km
 GRA1 23:05:51.1 e Pn Z
 GRA1 23:06:50.0 e Sg N
 SZGRF: OT 23:04:28.6 45.5N 12.4E dep 1km
 NORTHERN ITALY

 1997-10-22 D 78.2 AZ 32
 GRA1 10:07:31.5 i P d Z mb6.2
 ALIGN 10:07:31.5 T1.2 A268
 GRA1 10:08:12.7 e (pP) Z

GRA1 10:47:57.6 e L Z T18.4 A387 MS4.8
NEIC: OT 09:55:47.7 44.8N 146.2E dep152km mb5.6
KURIL ISLANDS

1997-10-22

GRA1 22:47:50.0 e (P) Z
GRA1 22:53:48.5 e Z
GRA1 23:20:18.4 e L Z T19.5 A260

1997-10-23 D 65.1

GRA1 06:37:37.5 e P Z T0.7 A4 mb4.7
SZGRF: OT 06:27:01.8 64.6N 150.4W dep 33km
CENTRAL ALASKA

1997-10-23 D 2.9 327km

GRC1 12:08:26.0 e Sg N M13.3
GRA1 12:08:43.4 e Sg E M13.6
SZGRF: OT 12:06:53.3 46.7N 8.7E dep 10km
SWITZERLAND

1997-10-23 D 68.5 AZ 73

GRA1 12:39:42.7 e P Z T0.8 A23 mb5.4
SZGRF: OT 12:28:44.1 27.1N 99.1E dep 33km
YUNNAN PROVINCE, CHINA

1997-10-23 D 24.4 AZ279

GRA1 14:13:02.7 e P Z T2.0 A188 mb5.3
GRA1 14:13:08.8 e sP Z
GRA1 14:17:43.7 e S E
GRA1 14:22:20.2 e L Z T20.0 A7098 MS5.2
SZGRF: OT 14:07:48.1 47.6N 25.8W dep 16km
NORTH ATLANTIC RIDGE

1997-10-23 D 39.2 AZ107

GRA1 14:42:57.2 e P Z T1.0 A18 mb4.6
SZGRF: OT 14:35:32.7 28.4N 54.6E dep 33km
SOUTHERN IRAN

1997-10-23

GRA1 16:27:58.8 e PKP Z
NEIC: OT 16:09:12.3 17.5S 178.8W dep500km mb4.5
FIJI ISLANDS REGION

1997-10-25 D 6.5

GRC1 03:09:39.4 e Pn Z
GRA1 03:09:49.5 e Pn Z M14.6
GRA1 03:11:09.6 e Sn N
SZGRF: OT 03:08:04.8 42.7N 13.7E dep 10km

CENTRAL ITALY

1997-10-25 D148.5
GRA1 05:37:12.0 e PKPdf Z
GRA1 05:37:15.0 e PKPac Z
GRA1 05:37:17.7 e PKPab Z
NEIC: OT 05:18:36.0 17.6S 179.1W dep600km mb4.9
FIJI ISLANDS REGION

1997-10-25 D 53.3
GRA1 10:04:07.0 i P c Z T1.3 A91 mb5.5
GRA1 10:21:35.1 e L Z T20.1 A439 MS4.5
SZGRF: OT 09:54:51.6 21.0N 46.1W dep 33km
NORTH ATLANTIC RIDGE

1997-10-25
GRB5 19:45:44.7 e PKP Z
GRA1 19:45:45.1 e PKP Z
NEIC: OT 19:26:58.7 20.6S 178.3W dep600km mb4.4
FIJI ISLANDS REGION

1997-10-25 D 6.4
GRC2 19:50:33.9 e Pn Z
GRA1 19:52:03.0 e Sn Z M13.9
SZGRF: OT 19:48:59.1 42.7N 13.7E dep 10km
CENTRAL ITALY

1997-10-25 D 7.0
GRB4 20:00:10.1 e Sn Z
GRA1 20:00:17.8 e Sn Z M13.9
SZGRF: OT 19:57:12.2 42.7N 13.9E dep 10km
CENTRAL ITALY

1997-10-25
GRA1 21:11:46.9 e PKP Z

1997-10-25 D 72.7
GRA1 23:13:09.9 e P Z T1.3 A19 mb5.1
GRA1 23:13:18.1 e Z
NEIC: OT 23:01:06.9 44.0N 147.1E dep 33km mb4.8
KURIL ISLANDS

1997-10-26 D100.9 AZ 66
GRA1 08:57:18.6 e P Z T0.9 A6 mb5.2
NEIC: OT 08:43:30.5 7.2N 127.5E dep 33km mb5.6
PHILIPPINE ISLANDS REGION

1997-10-26 D 3.3 367km

GRC1 09:29:11.4 e Pn Z M13.5
SZGRF: OT 09:28:20.8 46.5N 14.7E dep 10km
YUGOSLAVIA

1997-10-26 D 81.6 AZ328
GRA1 10:56:27.3 e P Z T1.2 A12 mb4.9
SZGRF: OT 10:44:14.2 41.3N 125.0W dep 33km
OFF COAST OF NORTHERN CALIFORNIA

1997-10-26 D157.2
GRA1 14:15:36.5 e PKP Z
GRA1 14:39:35.6 e SS N
GRA1 15:19:59.5 e L Z T21.6 A688 MS5.4
NEIC: OT 13:55:33.6 54.0S 132.2W dep 10km mb5.6
PACIFIC-ANTARCTIC RIDGE

1997-10-26 D 3.1 341km
GRC3 17:20:37.7 e Pg Z
GRA1 17:20:51.3 e Pg Z M12.8
GRA1 17:21:43.5 e Sg E
SZGRF: OT 17:19:42.8 46.7N 14.8E dep 10km
YUGOSLAVIA

1997-10-26
GRA1 18:34:12.6 e PKP Z

1997-10-26 D 80.2 AZ 38
GRA1 19:18:44.9 i P c Z T1.0 A56 mb5.5
SZGRF: OT 19:06:38.8 39.5N 139.6E dep 33km
NEAR WEST COAST OF HONSHU, JAPAN

1997-10-26
GRA1 20:04:05.2 e PKP Z

1997-10-26
GRA1 22:30:03.7 e PKP Z
GRA1 22:30:11.9 e Z
NEIC: OT 22:10:11.0 21.3S 174.3W dep 33km mb4.9
TONGA ISLANDS

1997-10-27 D159.4
GRA1 09:52:55.3 e PKPdf Z
GRA1 09:53:32.2 e PKPab Z
NEIC: OT 09:33:00.2 30.6S 178.5W dep 33km mb5.4
KERMADEC ISLANDS, NEW ZEALAND

1997-10-27 D 80.3 AZ 3

GRA1 15:56:40.8 e P Z T0.8 A19 mb5.1
GRA1 15:57:16.0 e pP Z
SZGRF: OT 15:44:34.8 50.3N 173.6W dep141km
ANDREANOF ISLANDS, ALEUTIAN IS.

1997-10-27

GRA1 17:49:28.5 e PKP Z
NEIC: OT 17:30:10.0 19.0S 169.5E dep150km mb4.7
VANUATU ISLANDS

1997-10-28 D 7.0

GRA1 00:26:45.1 e Sn N M13.9
SZGRF: OT 00:23:45.6 42.8N 13.1E dep 10km
CENTRAL ITALY

1997-10-28 D 2.9 324km

GRA1 04:35:55.1 e Sg N
SZGRF: OT 04:34:22.0 49.2N 6.8E dep 1km
Lauterbach, SW of Saarbruecken, French-German border

1997-10-28 D 92.0

GRA1 06:28:15.5 i P d Z T1.5 A651 mb6.7
GRA1 06:28:47.7 e pP Z
GRA1 06:31:58.5 e PP Z
GRA1 06:38:40.4 e SKSac E
GRA1 06:40:13.9 e SP Z
GRA1 06:45:20.1 e SS E
GRA1 06:53:45.0 e P'P' Z
GRA1 06:54:13.8 e pP'P' Z
NEIC: OT 08:16:38.2 23.8S 67.1W dep250km
CHILE-ARGENTINA BORDER REGION

1997-10-29 D 86.6 AZ289

GRA1 02:52:12.5 e P Z T0.9 A5 mb4.6
GRA1 02:52:18.0 e Z
NEIC: OT 02:40:01.1 17.6N 83.7W dep 10km mb5.1
CARIBBEAN SEA

1997-10-29

GRA1 05:09:25.7 e PKP Z
GRA1 05:09:38.8 e Z
NEIC: OT 04:55:58.7 6.3S 104.1E dep 45km mb5.2
SUNDA STRAIT

1997-10-29

GRB5 13:41:06.7 e Z
NEIC: OT 13:22:23.2 17.3S 179.1W dep541km mb5.2
FIJI ISLANDS REGION

1997-10-29

GRA1 16:18:20.4 e P Z
NEIC: OT 16:06:40.8 45.2N 147.4E dep201km mb4.8
KURIL ISLANDS

1997-10-30 D 65.1 AZ 77

GRA1 02:13:04.6 i P c Z T1.2 A76 mb5.8
SZGRF: OT 02:02:28.1 26.8N 93.3E dep 33km
EASTERN INDIA

1997-10-30 D 23.6

GRA1 04:11:04.9 e P Z T1.4 A18 mb4.4
SZGRF: OT 04:05:56.7 38.8N 40.7E dep 33km
TURKEY

1997-10-30 D 78.3 AZ 91

GRA1 06:42:11.1 e P Z T0.7 A10 mb5.0
GRA1 06:42:27.4 e Z
SZGRF: OT 06:30:14.2 8.1N 92.6E dep 33km
NICOBAR ISLANDS REGION

1997-10-30 D 22.9

GRA2 17:39:19.9 e P Z T1.3 A11 mb4.2
SZGRF: OT 17:34:18.5 35.1N 35.6E dep 33km
JORDAN - SYRIA REGION

1997-10-31 D 6.4

GRA1 04:25:18.7 e Pn Z M15.0
GRA1 04:25:39.8 e Pg Z
GRA1 04:26:31.0 e Sn N
GRA1 04:27:04.4 e Sg N
GRA1 04:27:49.1 e L Z T18.4 A365 MS2.9
SZGRF: OT 04:23:42.9 44.1N 6.7E dep 1km
FRANCE

1997-10-31 D138.5

GRA1 12:48:55.5 e PKPdf Z
GRA1 12:49:44.6 e pPKPdf Z

1997-10-31

GRA1 12:52:15.0 e PKPdf Z
GRA1 12:53:38.7 e (pPKPdf) Z

1997-10-31

GRA1 13:07:53.1 e PKPdf Z

1997-10-31 D 85.8 AZ 58
GRA1 13:12:43.5 e P Z mb4.6
BEAM 13:12:43.5 T0.9 A5
GRA1 13:12:48.0 e (pP) Z
GRA1 13:12:50.9 e (sP) Z
GRA1 13:55:37.3 e L Z T19.7 A458 MS4.9
SZGRF: OT 13:00:05.9 23.9N 124.2E dep 17km
SOUTHWESTERN RYUKYU ISLANDS

1997-10-31
GRA1 16:16:45.5 e PKPdf Z

1997-10-31 D 43.4 AZ 83
GRA1 17:23:47.8 i P d Z mb4.9
ALIGN 17:23:47.8 T0.9 A25
GRA1 17:24:39.2 e pP Z
GRA1 17:25:00.4 e (sP) Z
GRA1 17:39:46.8 e L Z T18.7 A149 MS3.9
SZGRF: OT 17:16:09.2 37.6N 70.4E dep233km
AFGHANISTAN-USSR BORDER REGION
