

MONTHLY BULLETIN of REGIONAL and TELESEISMIC EVENTS RECORDED with GRF- and GRSN-STATIONS in GERMANY

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(produced by SZGRF/BGR - ERLANGEN and partly by CLL - Observatory)

SEPTEMBER 2002 UPDATED 24.JANUARY.2003

Please note that local events recorded in Germany are part of the "LOCAL BULLETIN".

(Format description at the end of the bulletin)

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source		
2002/09/01	03:06:26.6	7.470S	94.290E	33.0N				SZGRF		
2002/09/01	03:07:53.5	12.128N	93.651E	124D	4.7			NEIC		
South Indian Ocean										
Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:19:28.9	75.9	87.8					
Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source		
2002/09/01	05:56:26.6	24.790N	123.050E	33.0N	5.7	5.7		SZGRF		
2002/09/01	05:56:23.5	24.033N	122.237E	33N	5.5	5.7		NEIC		
Southwestern Ryukyu Islands, Japan										
Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	06:08:40.2	81.6	61.1	1.3	61	5.6		
BRG	e P	Z	06:08:43.7	82.2	61.1	2.3	147	5.7		
CLL	i P	+	06:08:45.3			1.4	48	5.5		
	e PP	Z	06:11:56.8							
	e PPP	Z	06:14:00.9							
	e PPPP	Z	06:15:33.8							
	e SKSac	R	06:19:02.0							
	e S	N	06:19:11.1							
	e PS	Z	06:19:56.1							
	e SS	Z	06:24:24.5							
	e L	Z	06:50:00.4			18.0	4086		5.8	
GEC2	e P	Z	06:08:49.5	83.4	60.7	1.2	75	5.8		
MOX	e P	Z	06:08:50.8	83.6	59.3	1.4	38	5.4		
WET	e P	Z	06:08:51.4	83.7	60.1	1.5	56	5.6		
GRA1	e P	Z	06:08:55.0	84.3	59.0	2.6	439	6.2		

	e PP	Z	06:12:19.8								
	e S	E	06:19:29.6								
	e SS	E	06:25:36.8								
	e L	Z	06:51:00.4			18.7	2866		5.7		
IBBN	e P	Z	06:08:56.7	84.8	56.6	1.2	30		5.4		
FUR	e P	Z	06:08:58.7	85.1	58.9	2.7	830		6.5		
BUG	e P	Z	06:09:00.2	85.5	56.2	1.5	108		5.8		
TNS	e P	Z	06:09:00.9	85.6	57.0	1.8	75		5.5		
BFO	e P	Z	06:09:05.7	86.7	56.8	1.9	99		5.6		
WLF	e P	Z	06:09:08.4	87.1	55.2	1.3	96		5.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/01	07:07:40.3	24.960N	123.050E	33.0N	5.5	5.3		SZGRF
2002/09/01	07:07:36.4	24.034N	122.285E	33N	5.3	5.4		NEIC

Southwestern Ryukyu Islands, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	07:19:53.2	81.6	61.1	1.5	56	5.4		
BRG	e P	Z	07:19:56.8	82.3	61.0	2.0	50	5.3		
CLL	i P	+ Z	07:19:58.4			1.3	29	5.3		
	e PP	Z	07:23:08.4							
	e S	Z	07:30:11.5							
	e L	Z	08:01:13.1			18.0	1760		5.5	
GEC2	e P	Z	07:20:02.6	83.4	60.6	1.0	45	5.6		
MOX	e P	Z	07:20:03.9	83.7	59.3	1.4	26	5.3		
WET	e P	Z	07:20:04.5	83.7	60.1	1.6	46	5.5		
GRA1	e P	Z	07:20:08.0	84.4	58.9	1.6	92	5.7		
	e L	Z	08:02:13.5			18.6	1263		5.3	
IBBN	e P	Z	07:20:09.7	84.8	56.5	1.4	35	5.4		
FUR	e P	Z	07:20:11.8	85.1	58.8	1.1	81	5.9		
BUG	e P	Z	07:20:13.3	85.5	56.1	1.3	57	5.6		
TNS	e P	Z	07:20:13.9	85.6	56.9	1.2	22	5.3		
BFO	e P	Z	07:20:18.8	86.7	56.7	1.7	50	5.4		
WLF	e P	Z	07:20:21.5	87.1	55.2	1.1	58	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/01	12:41:49.1	31.407S	179.976E	400G	4.8			NEIC

Kermadec Islands Region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPab	+ Z	13:01:34.7			1.4	36			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2002/09/01 15:13:37.4 23.397S 179.094E 600G 4.4 NEIC
South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKP	Z	15:32:19.9	148.8	26.7					
CLL	i PKPbc	Z	15:32:22.7	151.3	26.3					
	e PKPab	Z	15:32:30.8	151.3						
BRG	e PKP	Z	15:32:22.9	150.2	28.3					
MOX	e PKP	Z	15:32:24.7	151.1	24.3					
BUG	e PKP	Z	15:32:24.8	151.3	15.7					
GEC2	e PKP	Z	15:32:26.9	152.1	29.6					
TNS	e PKP	Z	15:32:27.3	152.2	18.7					
FUR	e PKP	Z	15:32:30.1	153.4	25.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/01	16:01:37.6	17.600N	100.130W	33.0N				SZGRF
2002/09/01	16:01:20.3	17.021N	100.638W	33N	4.8	4.2		NEIC

Guerrero, Mexico

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	16:14:32.5	90.4	297.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/01	17:14:54.0	13.630N	53.020E	33.0N	5.7	5.6		SZGRF
2002/09/01	17:15:00.0	14.328N	51.959E	10G	5.2	5.8		NEIC

Socotra region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	17:23:29.2	46.6	124.3	1.9	158	5.8		
WET	e P	Z	17:23:33.7	47.2	123.7	2.1	88	5.5		
FUR	e P	Z	17:23:36.2	47.6	121.2	2.2	632	6.3		
BRG	e P	Z	17:23:36.8	47.6	126.2	1.7	82	5.5		
CLL	e P	Z	17:23:42.5			2.0	225	6.0		
	e PP	Z	17:25:37.2							
	e PPP	Z	17:26:34.1							
	e S	T	17:30:44.3							
	e SS	N	17:34:24.9							
	e		17:34:32.1							
	e LQ	T	17:36:53.9							
	e LR	Z	17:38:49.0							
	e L	Z	17:44:33.1			22.0	6257		5.5	
GRA1	e P	Z	17:23:43.0	48.4	122.3	1.9	201	5.7		
	e PP	Z	17:25:40.4							
	e S	E	17:30:49.0							
	e SS	N	17:34:34.2							

	e L	Z	17:48:36.1			18.0	5454		5.6
RUE	e P	Z	17:23:44.8	48.7	127.1	1.2	97	5.6	
MOX	e P	Z	17:23:45.3	48.7	123.4	1.8	129	5.6	
BFO	e P	Z	17:23:50.2	49.4	118.3	1.2	118	5.7	
TNS	e P	Z	17:23:56.8	50.2	119.8	2.7	325	5.8	
BUG	e P	Z	17:24:06.7	51.5	119.4	2.1	143	5.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/01								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 21:46:50.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/01	23:55:29.5	16.211S	173.465W	33N	4.4			NEIC
Tonga Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 00:15:09.9	146.3	8.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/02	01:00:21.1	37.020N	48.000E	33.0N	5.3	4.0		SZGRF
2002/09/02	01:00:03.4	35.727N	48.801E	10G	5.1	4.4		NEIC
Northwestern Iran								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 01:06:04.0	28.7	103.9	2.0	117	5.4		
WET	e P	Z 01:06:08.9	29.3	103.6	2.2	97	5.2		
RUE	e P	Z 01:06:11.2	29.8	110.2	2.4	192	5.5		
CLL	e P	Z 01:06:13.1	29.8	107.4	1.2	17	4.7		
FUR	e P	Z 01:06:16.2	30.2	100.3	0.9	42	5.3		
GRA1	e P	Z 01:06:20.1	30.5	102.8	2.4	122	5.3		
	e L	Z 01:25:52.1			20.7	411		4.0	
RGN	e P	Z 01:06:19.6	30.8	113.0	1.1	156	5.7		
TNS	e P	Z 01:06:36.5	32.4	101.0	1.2	44	5.2		
BUG	e P	Z 01:06:44.8	33.3	101.7	1.2	33	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/02	01:00:21.1	37.890N	24.150E	33.0N	4.3	3.8		SZGRF
2002/09/02	09:23:42.1	34.970N	26.650E	18	5.0	4.3		NEIC
Southern Greece								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	09:27:36.4	16.8	140.7	1.2	101			
WET	e P	Z	09:27:42.6	17.4	139.3	1.8	126			
FUR	e P	Z	09:27:43.6	17.4	133.5	1.0	93			
BRG	e P	Z	09:27:53.8	18.4	145.1	0.9	45			
GRA1	e P	Z	09:27:57.4	18.5	136.7	1.4	121			
	e L	Z	09:36:05.8			20.4	722		3.8	
BFO	e P	Z	09:28:01.8	19.0	127.8	1.1	27	4.3		
CLL	e P	Z	09:28:02.3	19.1	143.7	1.0	39			
MOX	e P	Z	09:28:02.8	19.1	139.5	1.2	56			
RUE	e P	Z	09:28:10.8	19.8	147.3	1.2	113			
TNS	e P	Z	09:28:14.9	20.2	132.1	2.5	389			
WLF	e P	Z	09:28:23.4	21.0	126.7	1.0	64			
BUG	e P	Z	09:28:29.7	21.6	132.3	1.1	68			
BSEG	e P	Z	09:28:34.8	22.1	142.3	1.3	35			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/02	13:38:23.7	45.250N	127.950W	33.0N	5.2			SZGRF
2002/09/02	13:38:10.9	43.915N	128.385W	22D	5.2			NEIC

Off coast of Oregon, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e P	Z	13:50:04.0	76.6	329.1	1.4	70	5.6		
BUG	e P	Z	13:50:06.8	77.2	328.9	1.4	40	5.4		
WLF	e P	Z	13:50:13.9	78.4	328.4	1.5	39	5.3		
TNS	e P	Z	13:50:15.1	78.6	329.8	1.4	25	5.2		
CLL	e P	Z	13:50:17.1	79.1	332.8	1.4	32	5.3		
MOX	e P	Z	13:50:18.2	79.3	331.9	1.1	18	5.1		
BRG	e P	Z	13:50:20.9	79.7	333.4	1.4	36	5.2		
GRA1	e P	Z	13:50:22.7	80.0	331.7	1.1	33	5.3		
BFO	e P	Z	13:50:23.6	80.2	329.9	1.5	36	5.2		
WET	e P	Z	13:50:27.5	81.0	332.8	1.6	24	4.9		
FUR	e P	Z	13:50:29.9	81.3	331.9	1.6	45	5.2		
GEC2	e P	Z	13:50:30.1	81.5	333.4	1.1	17	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/02	13:39:33.2	45.570N	128.040W	33.0N	5.6	4.5		SZGRF
2002/09/02	13:39:17.8	43.932N	128.261W	19D	5.4	5.0		NEIC

Off coast of Oregon, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	13:51:10.8	76.2	332.6	1.6	187	5.9		
IBBN	e P	Z	13:51:12.0	76.6	329.1	1.4	112	5.7		
BUG	e P	Z	13:51:14.8	77.2	328.8	1.4	87	5.7		

RUE	e P	Z	13:51:20.7	78.2	333.1	1.5	115	5.8		
WLF	e P	Z	13:51:22.0	78.3	328.3	1.4	72	5.6		
TNS	e P	Z	13:51:23.1	78.6	329.7	1.3	66	5.6		
CLL	e P	Z	13:51:24.4	79.0	332.7	1.3	67	5.4		
	e PP	Z	13:54:29.8							
	e S	Z	14:01:29.5							
	e SS	Z	14:06:41.4							
	e LR	Z	14:16:32.5							
	e L	Z	14:26:45.0			18.0	577		5.0	
MOX	e P	Z	13:51:26.3	79.2	331.8	1.5	72	5.6		
BRG	e P	Z	13:51:28.9	79.7	333.3	1.4	97	5.7		
GRA1	e P	Z	13:51:30.8	79.9	331.6	1.4	129	5.8		
	e L	Z	14:26:14.7			20.4	221		4.5	
BFO	e P	Z	13:51:31.8	80.2	329.9	1.4	88	5.6		
WET	e P	Z	13:51:35.5	80.9	332.8	1.1	23	5.0		
FUR	e P	Z	13:51:37.9	81.3	331.8	1.8	149	5.6		
GEC2	e P	Z	13:51:38.1	81.4	333.3	1.5	74	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/02	17:28:31.1	23.332S	169.827E	33N	4.7			NEIC

Southeast of Loyalty Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 17:48:16.0	148.8	40.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/03	14:24:5.5	16.680N	119.350E	33.0N	5.5	5.8		SZGRF
2002/09/03	14:23:48.5	13.558N	120.602E	33N	5.5	5.4		NEIC

Luzon, Philippine Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z 14:36:46.4			1.5	41	5.4		
	e PP	Z 14:40:19.8							
	e PS	Z 14:48:42.8							
	e SS	R 14:53:43.6							
	e LR	Z 15:07:12.2							
	e L	Z 15:19:26.7			20.0	2786		5.7	
GRA1	e P	Z 14:36:55.0	91.7	66.6	1.4	50	5.5		
	e SS	E 14:54:21.6							
	e L	Z 15:20:58.7			19.0	3160		5.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/03	17:26:32.4	36.230N	71.940E	33.0N	5.0			SZGRF

2002/09/03 17:26:54.6 36.411N 70.697E 221D 4.9 NEIC
Afghanistan-Tajikistan border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 17:34:30.4	42.4	87.3	0.7	31	5.2		
RUE	e P	Z 17:34:30.1	42.4	88.9	1.0	32	5.0		
GEC2	e P	Z 17:34:32.6	42.7	84.9	1.0	15	4.7		
CLL	e P	Z 17:34:34.4	42.9	87.0	0.8	16	4.8		
WET	e P	Z 17:34:36.7	43.2	84.6	1.7	13	4.4		
MOX	e P	Z 17:34:42.3	43.8	85.3	0.7	16	5.0		
GRA1	e P	Z 17:34:45.7	44.2	84.0	1.8	73	5.3		
FUR	e P	Z 17:34:46.1	44.3	82.5	1.0	34	5.2		
TNS	e P	Z 17:34:58.3	45.9	82.7	1.2	16	5.0		
IBBN	e P	Z 17:34:59.9	46.1	84.2	0.9	28	5.4		
BFO	e P	Z 17:35:00.3	46.2	80.8	1.2	12	4.9		
BUG	e P	Z 17:35:02.8	46.5	83.0	0.9	21	5.3		
WLF	e P	Z 17:35:10.7	47.4	80.6	1.0	29	5.4		

Date Origin Time Lat Long Depth mb Ms ML Source
2002/09/03 20:29:24.4 15.176S 167.559E 33N 4.9 NEIC
Vanuatu Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPpre	Z 20:48:38.8							
	e PKPdf	Z 20:48:47.2			1.6	29			
GRA1	e PKP	Z 20:48:50.2	140.5	37.5					

Date Origin Time Lat Long Depth mb Ms ML Source
2002/09/04 07:24:46.0 35.402N 27.256E 33N 4.4 NEIC
Aegean Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 07:29:00.6	18.5	134.7	1.1	60			

Date Origin Time Lat Long Depth mb Ms ML Source
2002/09/04 08:06:32.1 23.796S 179.948W 522D 4.9 NEIC
South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 08:25:21.1							
	i PKPbc	- Z 08:25:26.4			0.8	31			
	e PKPab	Z 08:25:35.2			0.7	10			
	e pPKPbc	Z 08:27:33.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/04	14:34:19.1	0.818S	147.818E	33N	5.9	5.1		NEIC

Admiralty Islands, Papua New Guinea, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML	
CLL	e PKiKP	Z 14:53:01.6			0.9	24				
	e	14:53:10.3								
	e (PP)	Z 14:54:05.2								
	e PS	R 15:03:50.7								
	e PPS	Z 15:05:07.0								
	e SS	T 15:10:20.6								
	e LR	Z 15:31:04.7								
	e L	Z 15:45:12.4			20.0	567		5.2		
	GRA1	e	14:53:05.8	118.7	51.6					
		e PKP	Z 14:53:13.7							
e L		Z 15:45:24.5			21.6	474		5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/05	00:14:40.2	6.228S	104.894E	33N	5.3	4.5		NEIC

Sunda Strait, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:28:12.0	97.1	91.2					
	e PP	Z 00:32:04.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/05	03:38:44.9	58.910N	151.060W	33.0N	5.3	4.2		SZGRF
2002/09/05	03:38:36.8	58.354N	151.815W	32D	5.0	4.6		NEIC

Kodiak Island, Alaska, United States, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 03:49:40.6	68.6	351.9	1.3	78	5.8		
BUG	e P	Z 03:49:42.3	68.9	348.4	0.6	28	5.7		
CLL	i P	Z 03:49:46.6	69.6	351.6	1.2	21	5.1		
	e pP	Z 03:49:56.4							
	e sP	Z 03:50:01.8							
	e PcP	Z 03:50:07.5							
	e S	T 03:59:05.2							
	e LR	Z 04:12:16.5							
	e L	Z 04:21:06.1			22.0	175		4.3	
	BRG	e P	Z 03:49:50.0	70.2	352.1	1.2	23	5.2	
	MOX	e P	Z 03:49:50.5	70.2	350.8	1.2	31	5.3	

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TNS	e P	Z	03:49:51.0	70.2	349.1	0.8	13	5.1		
GRA1	e P	Z	03:49:56.3	71.1	350.7	1.2	21	5.1		
	e pP	Z	03:50:06.6							
	e L	Z	04:21:54.8			20.5	128		4.2	
WET	e P	Z	03:50:00.0	71.8	351.6	1.5	31	5.2		
BFO	e P	Z	03:50:01.7	72.1	349.2	1.0	12	5.0		
GEC2	e P	Z	03:50:02.4	72.1	352.1	1.7	42	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/05	11:03: 7.0	40.090N	72.860E	33.0N	5.2	5.1		SZGRF
2002/09/05	11:03:05.5	39.770N	71.966E	30	5.3	5.2		NEIC

Kyrgyzstan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	11:10:49.3	41.0	84.0	1.5	71	5.2		
BRG	e P	Z	11:10:50.5	41.1	82.3	1.6	66	5.1		
RGN	e P	Z	11:10:49.7	41.1	86.1	1.2	128	5.5		
GEC2	e P	Z	11:10:54.7	41.6	79.9	1.2	55	5.2		
CLL	e P	Z	11:10:54.4	41.7	82.2	1.2	29	4.9		
	e sP	Z	11:11:05.8							
	e		11:11:13.6							
	e PP	Z	11:12:28.3							
	e S	R	11:17:10.2							
	e SS	R	11:20:20.1							
	e LQ	T	11:22:06.2							
	e LR	Z	11:23:12.6							
	e L	Z	11:29:11.3			20.0	3414		5.2	
WET	e P	Z	11:10:58.5	42.1	79.7	1.3	33	4.9		
MOX	e P	Z	11:11:02.8	42.6	80.5	1.2	24	4.8		
GRA1	e P	Z	11:11:07.0	43.0	79.2	0.9	44	5.2		
	e PP	Z	11:12:55.6							
	e S	E	11:17:37.0							
	e SS	E	11:21:00.0							
	e L	Z	11:30:07.0			20.1	2594		5.1	
FUR	e P	Z	11:11:08.7	43.3	77.7	0.9	60	5.3		
STU	e P	Z	11:11:18.1	44.5	77.1	0.8	22	5.1		
TNS	e P	Z	11:11:19.5	44.7	78.0	1.8	42	5.1		
IBBN	e P	Z	11:11:19.3	44.7	79.6	1.2	43	5.2		
BUG	e P	Z	11:11:23.0	45.2	78.5	1.8	76	5.4		
BFO	e P	Z	11:11:23.1	45.2	76.1	1.1	20	5.1		
WLF	e P	Z	11:11:32.1	46.3	76.1	1.1	37	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/05	11:29:07.4	54.249N	133.678W	26D	4.8			NEIC

Queen Charlotte Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	Z 11:40:26.8			1.3	21	5.1		
	e pP	Z 11:40:31.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/05	22:18:54.4	34.680N	28.040E	33.0N	4.4	4.1		SZGRF
2002/09/05	22:19:51.5	38.720N	24.530E	30	4.5			NEIC

Eastern Mediterranean Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 22:22:55.1	12.8	138.4	1.2	63	4.6		
WET	e P	Z 22:23:02.1	13.3	137.0	1.7	39	4.3		
BRG	e P	Z 22:23:15.8	14.3	144.4	1.6	20	4.1		
GRA1	e P	Z 22:23:18.4	14.5	134.2	0.9	18	4.3		
	e L	Z 22:28:43.6			19.5	958		4.1	
CLL	e P	Z 22:23:30.3	15.0	142.8	0.9	19	4.3		
MOX	e P	Z 22:23:24.5	15.0	137.7	2.3	112	4.7		
BFO	e P	Z 22:23:23.0	15.1	123.4	0.7	9	4.1		
TNS	e P	Z 22:23:43.8	16.2	129.1	1.3	41	4.6		
CLZ	e P	Z 22:22:05.0	16.4	137.5	1.3	28	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/06	01:21:21.4	37.610N	14.100E	10.0G		5.5		SZGRF
2002/09/06	01:21:27.5	38.371N	13.698E	10G	5.8	5.6		NEIC

Sicily, Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 01:24:00.9	10.5	180.0					
BFO	e Pn	Z 01:24:03.6	10.7	156.7					
	e L	Z 01:28:37.8			18.1	30703		5.3	
WET	e Pn	Z 01:24:04.8	10.8	176.6					
	e L	Z 01:28:34.7			18.5	60039		5.6	
STU	e Pn	Z 01:24:05.8	10.9	161.0					
GRA1	e Pn	Z 01:24:12.8	11.5	170.2					
	e L	Z 01:29:03.4			18.6	59211		5.6	
MOX	e Pn	Z 01:24:24.5	12.4	172.4					
TNS	e Pn	Z 01:24:27.0	12.4	160.5					
	e L	Z 01:28:58.5			21.5	40633		5.4	
BRG	e Pn	Z 01:24:27.2	12.5	180.9					
WLF	e Pn	Z 01:24:28.9	12.5	151.6					
CLL	e Pn	Z 01:24:33.5	12.9	177.6					
BUG	e Pn	Z 01:24:47.3	13.8	158.4					
RUE	e Pn	Z 01:24:50.1	14.1	180.3					
IBBN	e Pn	Z 01:24:57.3	14.5	161.1					

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BSEG e Pn Z 01:25:12.4 15.7 170.2

Date Origin Time Lat Long Depth mb Ms ML Source
2002/09/06 01:45:29.3 38.302N 13.623E 10G 4.5
Sicily, Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 01:48:02.4	10.5	180.3					
BFO	e Pn	Z 01:48:05.8	10.7	157.1					
WET	e Pn	Z 01:48:06.6	10.9	176.9					
GRA1	e Pn	Z 01:48:16.0	11.5	170.5					
MOX	e Pn	Z 01:48:27.5	12.4	172.7					
TNS	e Pn	Z 01:48:32.1	12.5	160.9					
WLF	e Pn	Z 01:48:32.2	12.6	152.0					
CLL	e Pn	Z 01:48:35.7	13.0	177.8					
RUE	e Pn	Z 01:49:01.3	14.2	180.5					

Date Origin Time Lat Long Depth mb Ms ML Source
2002/09/06

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pn	Z 03:49:49.3							

Date Origin Time Lat Long Depth mb Ms ML Source
2002/09/06 11:01:54.1 22.540N 122.460E 33.0N 4.9 SZGRF
2002/09/06 11:02:00.5 23.721N 120.737E 33N 4.7 NEIC
Taiwan region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 11:14:29.8	83.7	60.2	1.3	13	4.9		

Date Origin Time Lat Long Depth mb Ms ML Source
2002/09/06 21:25:11.0 16.357S 173.321W 33N 4.8 4.8 NEIC
Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 21:44:51.8	146.5	7.9					

Date Origin Time Lat Long Depth mb Ms ML Source

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2002/09/07 01:59:58.1
Kermadec Islands region

28.935S 178.518W 200G 4.9 NEIC

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 02:19:28.2							
	e PKPbc	Z 02:19:38.6			0.9	5			
	i PKPab	Z 02:19:56.9			1.2	30			
	e pPKPab	Z 02:20:46.7							
GRA1	e PKP	Z 02:20:05.8	158.0	23.2					

Date Origin Time
2002/09/07 08:14:19.7
Fiji Islands region

Lat Long Depth mb Ms ML Source
20.226S 176.135W 210D 5.5 NEIC

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPbc	Z 08:33:38.7	146.8	17.2					
IBBN	e PKPbc	Z 08:33:41.4	147.8	6.9					
CLL	i PKPdf	Z 08:33:38.4	148.1	16.4	1.6	48			
	i PKPbc	- Z 08:33:42.0			1.2	145			
	e PKPab	Z 08:33:45.2							
	e pPKPbc	Z 08:34:36.6							
	e	08:34:45.7							
	e SKP	Z 08:37:04.6							
	e PP	Z 08:37:15.2							
	e sPP	Z 08:38:16.0							
	e PPP	Z 08:40:32.9							
	e sPPP	Z 08:41:39.7							
	e SS	T 08:55:59.7							
	e PSS	T 08:57:16.2							
BRG	e PKPdf	Z 08:33:38.9	148.3	18.2					
	e PKPbc	Z 08:33:43.1							
BUG	e PKPbc	Z 08:33:43.4	148.7	6.2					
MOX	e PKPdf	Z 08:33:39.6	149.0	14.2					
	e PKPbc	Z 08:33:44.7							
TNS	e PKPbc	Z 08:33:46.5	149.8	8.6					
	e pPKPbc	Z 08:34:38.8							
GRA1	e PKPbc	Z 08:33:47.3	150.0	13.9					
	e pPKPbc	Z 08:34:40.5							
WET	e PKPdf	Z 08:33:41.6	150.2	17.2					
	e PKPbc	Z 08:33:47.6							
GEC2	e PKPdf	Z 08:33:41.7	150.3	18.9					
	e PKPbc	Z 08:33:48.2							
	e PKPab	Z 08:33:54.9							
WLF	e PKPbc	Z 08:33:48.7	150.5	4.4					
STU	e PKPdf	Z 08:33:43.4	151.1	10.4					
	e PKPbc	Z 08:33:49.8							
FUR	e PKPdf	Z 08:33:43.7	151.4	14.7					

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	e	PKPbc	Z	08:33:50.3								
	e	PKPab	Z	08:33:58.6								
BFO	e	PKPbc	Z	08:33:50.7	151.7	8.9						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/07	11:34:16.8	20.238S	168.880E	60D	4.8			NEIC

Loyalty Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e	PKPdf	Z	11:53:51.0	145.6	39.2			
	e	pPKPdf	Z	11:55:36.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/07	21:36:18.7	19.273S	169.520E	239D	4.7			NEIC

Vanuatu Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e	PKPbc	Z	21:55:24.7	144.0	30.2			
GEC2	e	PKPbc	Z	21:55:26.8	144.6	41.9			
WET	e	PKPbc	Z	21:55:27.2	144.7	40.4			
BUG	e	PKPbc	Z	21:55:27.3	144.9	30.1			
GRA1	e	PKPbc	Z	21:55:28.6	145.0	37.5			
FUR	e	PKPbc	Z	21:55:31.8	146.2	38.9			
STU	e	PKPbc	Z	21:55:32.8	146.5	35.2			
WLF	e	PKPbc	Z	21:55:34.0	146.8	29.6			
BFO	e	PKPbc	Z	21:55:34.3	147.2	34.2			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/07								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e	P	Z	23:47:34.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/08								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e	PKPbc	Z	00:17:11.3					
	e	pPKPbc	Z	00:18:45.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/08	03:36:29.3	33.150S	62.450E	33.0N	5.7	4.8		SZGRF
2002/09/08	03:36:41.2	30.142S	60.894E	10G	5.4	5.3		NEIC

South Indian Ocean

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:49:46.4	91.2	138.7	1.3	56	5.7		
	e S	N	04:00:02.9							
	e L	Z	04:39:14.9			21.7	343		4.8	
CLL	e P	Z	03:49:51.0			1.4	22	5.3		
	e PP	Z	03:53:32.1							
	e PPP	R	03:55:18.8							
	e SKSac	R	04:00:21.8							
	e S	T	04:00:45.9							
	e PPS	Z	04:02:25.4							
	e SS	E	04:06:58.5							
	e LR	Z	04:20:45.6							
	e L	Z	04:29:04.3			22.0	298		4.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/08	05:20:59.1	52.440N	156.340E	33.0N	5.2			SZGRF
2002/09/08	05:20:44.6	49.579N	156.320E	68	4.9			NEIC

Kamchatka Peninsula, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z	05:32:17.5	74.4	23.7	1.4	29	5.2		
BRG	e P	Z	05:32:18.7	74.5	24.2	1.4	13	4.9		
IBBN	e P	Z	05:32:20.0	74.7	20.5	0.9	12	5.0		
MOX	e P	Z	05:32:23.6	75.3	22.8	1.3	19	5.1		
BUG	e P	Z	05:32:24.8	75.6	20.1	1.2	22	5.2		
GRA1	e P	Z	05:32:30.0	76.3	22.4	1.0	47	5.4		
WET	e P	Z	05:32:30.3	76.4	23.4	1.0	23	5.2		
GEC2	e P	Z	05:32:30.2	76.5	23.9	2.1	54	5.2		
STU	e P	Z	05:32:36.8	77.7	21.1	1.0	19	5.1		
FUR	e P	Z	05:32:37.3	77.7	22.3	0.9	27	5.3		
BFO	e P	Z	05:32:40.1	78.3	20.5	0.9	18	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/08	09:17: 3.1	15.840N	57.420E	33.0N	5.0			SZGRF

Arabian Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	09:25:56.7	50.3	115.5	1.6	35	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/08	12:14:05.6	22.032S	179.631W	600G	4.7			NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z 12:32:48.3	148.7	20.3	0.6	28			
	i PKPab	Z 12:32:55.2			0.7	20			
GRA1	e PKPdf	Z 12:32:52.8	151.0	21.1					
	e PKPbc	Z 12:33:03.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/08	13:15:55.7	22.810S	178.889E	619D	5.1			NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPdf	Z 13:34:32.6			1.2	8			
	i PKPbc	Z 13:34:38.5			0.7	78			
	i PKPab	Z 13:34:45.7			0.8	55			
	e pPKPdf	Z 13:36:58.5							
	e pPKPbc	Z 13:37:02.9							
	e pPKPab	Z 13:37:09.6							
	e sPKPbc	Z 13:37:56.6							
	e pPP	Z 13:40:16.2							
	e sPP	Z 13:41:20.5							
	e	13:47:37.3							
GRA1	e PKPdf	Z 13:34:42.9	151.4	24.3					
	e PKPbc	Z 13:34:54.2							
	e pPKPdf	Z 13:37:00.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/08	16:14:26.8	34.378N	23.392E	33N	4.7			NEIC

Crete, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 16:18:34.3	17.7	145.2	1.2	157			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/08	18:44:39.1	1.910S	142.660E	33.0N		7.6		SZGRF
2002/09/08	18:44:23.4	3.271S	142.855E	13G	6.4	7.8		NEIC

Ninigo Islands, Papua New Guinea, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML								
RUE	e Pdiff	Z 18:59:20.0	115.4	59.1													
	e PP	Z 19:04:09.1															
BRG	e Pdiff	Z 18:59:23.7	116.1	59.9													
	e PP	Z 19:04:14.6															
CLL	e Pdiff	Z 18:59:24.4	116.4	58.8													
	e	18:59:39.6															
	e PKPdf	Z 19:03:10.7								1.1	68						
	e PP	Z 19:04:15.0															
	e PPP	Z 19:06:46.0															
	e SKSac	R 19:10:00.1															
	e SKKSac	R 19:11:10.8															
	e Sdiff	T 19:12:02.2															
	e PKKPab	Z 19:13:45.3															
	e PS	R 19:13:59.8															
	e SS	T 19:20:25.0															
	e SKKSdf	R 19:21:14.7															
	e LQ	T 19:34:38.1															
	e LR	Z 19:41:02.0															
	e L	Z 19:44:21.5															
	GEC2	e Pdiff								Z 18:59:29.0	117.2	60.6					
		e PP								Z 19:04:22.9							
MOX	e Pdiff	Z 18:59:30.1	117.5	57.8													
	e PP	Z 19:04:24.6															
WET	e Pdiff	Z 18:59:30.7	117.6	59.7													
	e PP	Z 19:04:25.3															
GRA1	e Pdiff	Z 18:59:33.7	118.2	57.9													
	e PKPdf	Z 19:03:15.0															
	e PP	Z 19:04:30.1															
	e SKSac	R 19:10:08.7															
	e SKKSac	R 19:11:34.1															
	e Sdiff	T 19:12:21.9															
	e PS	R 19:14:19.5															
	e SS	R 19:20:52.2															
	e L	Z 19:56:28.4								21.3	147201	7.6					
	IBBN	e Pdiff								Z 18:59:34.6	118.5	53.3					
e PP		Z 19:04:31.4															
FUR	e Pdiff	Z 18:59:36.7	119.0	58.6													
	e PKPdf	Z 19:03:16.2															
	e PP	Z 19:04:35.2															
BUG	e Pdiff	Z 18:59:37.9	119.3	53.2													
	e PP	Z 19:04:36.7															
STU	e Pdiff	Z 18:59:40.7	119.8	56.3													
	e PKPdf	Z 19:03:17.5															
	e PP	Z 19:04:41.0															
BFO	e Pdiff	Z 18:59:43.9	120.5	55.7													
	e PP	Z 19:04:45.9															
WLF	e Pdiff	Z 18:59:46.1	120.9	52.9													
	e PP	Z 19:04:49.0															

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/08	23:03:50.9	1.150S	13.630W	33.0N	5.5			SZGRF
2002/09/08	23:03:45.1	1.292S	14.534W	10G	5.3	4.9		NEIC

North of Ascension Island

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:13:20.4	55.6	211.8	1.0	48	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/08	23:48: 3.7	23.300N	124.000E	40.1	5.5			SZGRF
2002/09/08	23:47:56.5	23.306N	125.428E	39D	5.3	5.0		NEIC

Southwestern Ryukyu Islands, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 00:00:28.8	84.6	59.1	1.4	48	5.6		
CLL	i P	- Z 00:00:30.2	84.8	58.5	1.1	58	5.7		
	e pP	Z 00:00:41.8							
	e LR	Z 00:28:49.4							
	e L	Z 00:43:07.9			20.0	868		5.1	
MOX	e P	Z 00:00:35.5	85.9	57.4	1.4	46	5.5		
WET	e P	Z 00:00:36.4	86.1	58.2	1.5	33	5.4		
GRA1	e P	Z 00:00:39.6	86.7	57.0	1.5	78	5.6		
	e pP	Z 00:00:51.3							
FUR	e P	Z 00:00:43.3	87.5	57.0	1.2	74	5.7		
BUG	e P	Z 00:00:45.8	87.8	54.1	1.2	21	5.1		
STU	e P	Z 00:00:46.5	88.3	55.5	1.3	26	5.4		
BFO	e P	Z 00:00:49.7	89.0	54.9	1.5	29	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/09	06:06:36.2	37.487N	20.068E	33N	4.4			NEIC

Ionian Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:10:00.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/09	08:04:57.1	22.298S	179.171E	614D	4.5			NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
-----	-------	------	------	-----	------	-------	----	----	----

CLL	e PKPdf	Z	08:23:34.0						
	i PKPbc	+ Z	08:23:39.1		1.0		99		
	i PKPab	Z	08:23:45.8		1.1		31		
	i pPKPbc	Z	08:25:57.6						
MOX	e PKPbc	Z	08:23:41.4	150.0		23.5			
GRA1	e PKPbc	Z	08:23:43.9	151.0		23.5			
	e PKPab	Z	08:23:55.1						
GEC2	e PKPbc	Z	08:23:43.7	151.1		28.7			
TNS	e PKPbc	Z	08:23:44.2	151.1		18.0			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/09	23:13:56.0	74.882N	6.939E	10G	4.5			NEIC

Greenland Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:19:25.6	25.3	357.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/10	02:32:48.9	38.266N	13.495E	10G	3.7			NEIC

Sicily, Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 02:35:35.4	11.5	171.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/10	02:33:12.0	21.459S	168.704E	29D	4.9	4.8		NEIC

Loyalty Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 02:52:53.2	146.6	40.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/11	04:50:32.2	83.500N	0.500W	10.0G	5.4	4.8		SZGRF
2002/09/11	04:50:32.8	83.104N	6.090W	10G	5.2	5.3		NEIC

North of Svalbard

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z 04:57:05.0			1.6	46			
	e PP	Z 04:58:00.6							
	e PcP	Z 04:59:52.0							
	e	04:59:58.7							

	e S	N	05:02:19.5							
	e SS	E	05:04:33.2							
	e LR	Z	05:05:45.4							
	e L	Z	05:09:58.8			18.0	1726		4.8	
RGN	e S	N	05:01:29.0	29.0	355.3					
RUE	e S	N	05:01:59.4	31.1	355.5					
MOX	e P	Z	04:57:08.0	32.8	356.1					
	e PP	Z	04:58:19.6							
	e S	E	05:02:25.9							
WLF	e P	Z	04:57:17.2	33.6	357.4					
	e S	N	05:02:41.8							
GRA1	e P	Z	04:57:18.5	33.8	356.3	2.0	106		5.4	
	e S	N	05:02:43.2							
	e L	Z	05:09:59.7			22.0	2068		4.8	
WET	e P	Z	04:57:23.8	34.4	356.0					
	e S	E	05:02:56.4							
STU	e P	Z	04:57:25.1	34.6	356.8					
	e PP	Z	04:58:44.2							
	e S	N	05:03:00.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/11	05:40:2.4	83.310N	5.010W	33.0N	5.0	4.0		SZGRF
2002/09/11	05:39:56.3	82.962N	6.452W	10G	4.7			NEIC

North of Svalbard

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:46:42.8	33.7	356.2	1.5	34	5.0		
	e L	Z 05:58:57.4			21.6	312		4.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/11	16:29:18.0	55.690N	157.510W	33.0N	5.1			SZGRF
2002/09/11	16:29:27.8	57.453N	155.008W	53D	4.7			NEIC

Alaska Peninsula, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 16:40:51.9	72.3	352.3	0.7	13	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/12								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 00:02:32.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/12	03:02:39.7	38.299N	13.783E	10G	4.6			NEIC

Sicily, Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	03:05:12.7	10.5	179.7					
BFO	e P	Z	03:05:15.8	10.8	156.5					
WET	e P	Z	03:05:17.0	10.9	176.2					
STU	e P	Z	03:05:19.3	11.0	160.8					
GRA1	e P	Z	03:05:26.6	11.5	169.9	1.8	56			
MOX	e P	Z	03:05:37.7	12.4	172.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/13	22:28:30.5	12.400N	93.240E	33.0N	6.2	6.5		SZGRF
2002/09/13	22:28:30.9	13.013N	93.147E	33N	6.2	6.8		NEIC

Andaman Islands, India, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	22:40:00.7	73.2	90.0	1.0	239	6.2		
RUE	e P	Z	22:40:01.1	73.3	90.3	1.0	504	6.5		
GEC2	e P	Z	22:40:01.7	73.3	89.2	0.9	377	6.4		
CLL	i P	+ Z	22:40:03.5	73.7	89.4	1.1	213	6.1		
	e PP	Z	22:42:57.9							
	e PPP	Z	22:44:38.8							
	e S	T	22:49:33.1							
	e SS	T	22:54:30.1							
	e SSS	T	22:57:55.9							
	e LQ	T	23:03:31.2							
	e LR	Z	23:07:13.0							
	e PKPPKP	Z	23:07:43.9							
	e SKPPKPbc	Z	23:11:10.5							
	e L	Z	23:17:37.6			18.0	40986		6.8	
WET	e P	Z	22:40:04.8	73.9	88.6	1.0	193	6.1		
MOX	e P	Z	22:40:09.2	74.6	88.1	1.0	192	6.1		
GRA1	e P	Z	22:40:11.5	74.9	87.5	1.1	272	6.2		
	e PP	Z	22:43:09.4							
	e S	N	22:49:47.4							
	e SKPPKPbc	Z	23:11:08.4							
	e L	E	23:19:22.3			19.0	23838		6.5	
FUR	e P	Z	22:40:10.8	75.0	87.2	1.0	228	6.2		
STU	e P	Z	22:40:18.5	76.3	85.8	0.9	145	6.1		
TNS	e P	Z	22:40:20.9	76.7	85.6	1.0	150	6.1		
BFO	e P	Z	22:40:21.7	76.9	85.1	1.3	144	6.0		
IBBN	e P	Z	22:40:22.5	76.9	85.5	1.0	363	6.5		
BUG	e P	Z	22:40:24.5	77.3	85.0	1.0	237	6.3		

WLF e P Z 22:40:29.8 78.2 83.7 1.6 383 6.2

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/13	23:14:0.9	12.510N	95.260E	33.0N	5.2			SZGRF
2002/09/13	23:14:07.6	12.990N	93.095E	33N	5.0			NEIC

Andaman Islands, India, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 23:25:38.1	73.1	90.0	1.2	28	5.2		
RUE	e P	Z 23:25:38.7	73.2	90.4					
CLL	e P	Z 23:25:41.2	73.7	89.4	1.4	36	5.3		
WET	e P	Z 23:25:42.1	73.8	88.7	1.4	31	5.2		
MOX	e P	Z 23:25:46.6	74.6	88.2	1.2	22	5.2		
GRA1	e P	Z 23:25:48.9	74.9	87.6	1.5	54	5.5		
FUR	e P	Z 23:25:47.8	74.9	87.2					
STU	e P	Z 23:25:55.3	76.3	85.9	1.5	39	5.3		
TNS	e P	Z 23:25:58.3	76.6	85.6	1.0	14	5.0		
BFO	e P	Z 23:25:58.9	76.9	85.1	1.8	31	5.0		
BUG	e P	Z 23:26:01.5	77.3	85.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/14	06:42:28.4	18.051S	176.579W	33N	4.8			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	Z 07:02:06.0			1.2	39			
GRA1	e PKP	Z 07:02:12.0	147.7	14.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/14	19:50:18.9	37.942N	21.203E	33N	4.8			NEIC

SOUTHERN GREECE

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:53:33.3	13.8	144.9					
	e	19:53:43.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/14	19:58:36.4	12.470N	93.310E	33.0N	5.8	5.5		SZGRF
2002/09/14	19:58:36.8	13.092N	93.163E	33N	5.6	5.7		NEIC

Andaman Islands, India, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	20:10:06.7	73.1	89.9	1.4	101	5.7		
RUE	e P	Z	20:10:07.0	73.2	90.3	1.3	252	6.1		
GEC2	e P	Z	20:10:07.6	73.3	89.1	1.2	176	6.0		
CLL	i P	Z	20:10:09.4	73.7	89.3	1.4	91	5.6		
	e		20:10:23.9							
	e PP	Z	20:12:58.8							
	e S	E	20:19:35.5							
	e		20:19:52.1							
	e PPS	N	20:20:31.0							
	e SS	E	20:24:27.6							
	e SSS	E	20:27:54.6							
	e LR	Z	20:37:16.6							
	e L	Z	20:47:50.4			20.0	3044		5.6	
WET	e P	Z	20:10:10.8	73.8	88.6	1.4	98	5.7		
MOX	i P	Z	20:10:15.2	74.6	88.0	1.5	113	5.7		
GRA1	e P	Z	20:10:17.4	74.9	87.5	1.5	164	5.8		
	e S	E	20:19:51.3							
	e L	Z	20:51:53.1			20.3	2332		5.5	
FUR	e P	Z	20:10:16.7	74.9	87.1	1.4	106	5.8		
TNS	e P	Z	20:10:26.8	76.6	85.5	1.3	62	5.6		
BFO	e P	Z	20:10:27.6	76.8	85.0	2.7	197	5.8		
IBBN	e P	Z	20:10:28.4	76.9	85.5	1.3	208	6.1		
BUG	e P	Z	20:10:30.4	77.3	84.9	1.4	125	5.9		
WLF	e P	Z	20:10:35.8	78.1	83.7	1.7	170	5.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/14	22:12:35.2	12.940N	94.080E	33.0N	5.2			SZGRF
2002/09/14	22:12:36.6	13.088N	93.175E	33N	5.0			NEIC

Andaman Islands, India, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:24:17.1	74.9	87.5	1.1	22	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/15	01:06:58.7	23.770N	121.570E	33.0N	5.3			SZGRF
2002/09/15	01:07:00.0	24.238N	122.344E	66*	5.0			NEIC

Taiwan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	01:19:27.0	84.2	58.8	1.3	25	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2002/09/15	08:39:41.3	45.620N	129.060E	577.2	6.5	SZGRF
2002/09/15	08:39:31.8	44.858N	130.078E	578*	6.3	NEIC

Northeastern China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	08:49:39.4	68.4	43.1	1.2	634	6.6		
	e pP	Z	08:51:36.8							
	e PP	Z	08:52:19.6							
	e sP	Z	08:52:37.5							
BRG	e P	Z	08:49:46.0	69.5	42.8	1.0	283	6.3		
	e pP	Z	08:51:44.0							
	e PP	Z	08:52:26.5							
	e sP	Z	08:52:43.7							
CLL	i P	- Z	08:49:46.0	69.6	42.3	1.1	535	6.6		
	e PcP	Z	08:50:05.3							
	e pP	Z	08:51:44.2							
	e PP	Z	08:52:28.1							
	e ScP	Z	08:53:11.5							
	e pPP	Z	08:54:14.3							
	e S	T	08:58:09.0							
	e ScS	R	08:58:51.7							
	e sS	T	09:01:36.2							
	e SS	R	09:02:53.0							
	e SSS	R	09:06:38.0							
	e PKPPKP	Z	09:17:36.5							
	e SKPPKP	Z	09:20:18.8							
	e L	Z	09:23:18.7			20.0	2238		5.4	
MOX	e P	Z	08:49:52.8	70.7	41.3	1.2	238	6.2		
	e pP	Z	08:51:50.7							
IBBN	e P	Z	08:49:54.2	70.9	39.3	1.2	576	6.6		
	e pP	Z	08:51:52.4							
GEC2	e P	Z	08:49:55.4	71.1	42.2	1.0	312	6.4		
	e pP	Z	08:51:54.0							
	e PP	Z	08:52:43.4							
	e sP	Z	08:52:56.1							
WET	e P	Z	08:49:56.6	71.2	41.7	1.1	272	6.3		
	e pP	Z	08:51:56.0							
	e PP	Z	08:52:44.4							
	e sP	Z	08:52:56.8							
GRA1	e P	Z	08:49:58.7	71.5	40.9	1.2	1166	6.8		
	e pP	Z	08:51:57.8							
	e PP	Z	08:52:47.2							
	e sP	Z	08:52:58.5							
	e PPP	Z	08:54:32.1							
	e S	Z	08:58:31.7							
	e ScS	Z	08:59:04.5							
	e sS	E	09:02:04.6							
	e PKPPKP	Z	09:17:31.8							
	e SKPPKP	Z	09:20:17.2							

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BUG	e P	Z	08:49:59.3	71.8	38.8	1.1	426	6.4
	e pP	Z	08:51:59.1					
	e PP	Z	08:52:47.8					
TNS	e P	Z	08:50:02.4	72.3	39.3	1.1	338	6.3
	e pP	Z	08:52:01.6					
	e PP	Z	08:52:52.3					
FUR	e P	Z	08:50:04.9	72.7	40.6	1.0	739	6.7
	e pP	Z	08:52:04.6					
WLF	e P	Z	08:50:10.0	73.6	37.8	1.2	175	6.0
	e pP	Z	08:52:09.1					
BFO	e P	Z	08:50:11.0	73.8	38.9	1.2	784	6.7
	e pP	Z	08:52:10.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/15	09:07:42.3	21.110S	174.534W	33N	4.7			NEIC
Tonga Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPbc	Z 09:27:29.5	147.7	8.3	1.4	24			
GRA1	e PKP	Z 09:27:34.2	151.1	11.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/15	13:33:15.6	18.840S	168.990E	42D	4.7			NEIC
Vanuatu Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 13:52:50.1	144.4	37.9					
	e	13:53:02.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/16	00:03:33.6	25.690N	122.710E	184.1	5.7			SZGRF
2002/09/16	00:03:30.1	25.201N	122.218E	183D	5.2			NEIC
Taiwan region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 00:15:24.6	80.6	60.5	1.4	100	5.7		
	e pP	Z 00:16:10.2							
BRG	e P	Z 00:15:28.3	81.3	60.4	1.3	28	5.1		
	e pP	Z 00:16:13.6							
CLL	i P	- Z 00:15:29.7	81.6	59.7	1.2	47	5.5		
	e pP	Z 00:16:14.8							
	e sP	Z 00:16:34.2							
	e PP	Z 00:18:37.5							

	e sPP	Z	00:19:38.5								
	e sS	T	00:26:45.8								
	e L	Z	00:56:58.9			20.0	199		4.5		
GEC2	e P	Z	00:15:34.5	82.4	59.9	1.3	56		5.6		
	e pP	Z	00:16:19.7								
MOX	e P	Z	00:15:35.7	82.7	58.6	1.5	39		5.4		
	e pP	Z	00:16:20.6								
WET	e P	Z	00:15:36.2	82.8	59.4	2.2	113		5.7		
	e pP	Z	00:16:21.5								
GRA1	e P	Z	00:15:39.2	83.4	58.3	1.4	71		5.7		
	e pP	Z	00:16:24.7								
	e PP	Z	00:18:55.1								
IBBN	e P	Z	00:15:41.5	83.8	55.9	0.8	50		5.8		
	e pP	Z	00:16:26.7								
FUR	e P	Z	00:15:43.7	84.2	58.2	2.3	526		6.4		
	e pP	Z	00:16:28.0								
BUG	e P	Z	00:15:45.1	84.5	55.5	1.2	99		5.9		
	e pP	Z	00:16:29.9								
TNS	e P	Z	00:15:45.3	84.6	56.3	1.6	73		5.6		
	e pP	Z	00:16:30.7								
STU	e P	Z	00:15:47.4	85.0	56.7	2.4	194		5.9		
	e pP	Z	00:16:32.5								
BFO	e P	Z	00:15:50.4	85.7	56.1	1.8	95		5.6		
	e pP	Z	00:16:36.0								
WLF	e P	Z	00:15:53.3	86.1	54.6	1.0	80		5.8		
	e pP	Z	00:16:38.6								

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/16	01:10:38.7	32.000N	137.360E	33.0N	5.2	5.0		SZGRF
2002/09/16	01:10:53.3	35.293N	133.635E	33N	4.8	4.9		NEIC

Southeast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z 01:22:58.8			1.5	25	4.9		
	e	01:24:43.0							
	e S	T 01:32:52.1							
	e L	Z 02:01:17.7			20.0	561		4.9	
GRA1	e P	Z 01:23:13.0	80.9	44.2	1.5	33	5.3		
	e L	Z 01:59:45.8			18.9	567		5.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/16	13:23:46.6	2.310N	141.140E	33.0N		6.1		SZGRF

Ninigo Islands, Papua New Guinea, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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RUE	e PP	Z	13:42:45.4	109.7	57.5				
BRG	e PP	Z	13:42:50.9	110.5	58.2				
CLL	e Pdiff	Z	13:38:06.1	110.7	57.2				
	e PKiKP	Z	13:41:46.3						
	e PP	Z	13:42:53.1						
	e PPP	Z	13:45:22.3						
	e SKSac	R	13:48:38.0						
	e SKKSac	R	13:49:53.2						
	e PKKPbc	Z	13:52:13.7						
	e PS	R	13:52:35.2						
	e PPS	Z	13:53:47.4						
	e SS	T	13:59:11.6						
	e LQ	T	14:13:19.2						
	e LR	Z	14:19:17.2						
	e L	Z	14:34:05.7			20.0	6462		6.2
GEC2	e PP	Z	13:42:59.4	111.7	58.6				
MOX	e PP	Z	13:43:01.0	111.8	56.1				
WET	e PP	Z	13:43:01.9	112.0	57.8				
GRA1	e PKiKP	Z	13:41:46.3	112.6	56.1				
	e PP	Z	13:43:06.6						
	e PS	E	13:52:53.2						
	e SS	E	13:59:36.2						
	e L	Z	14:36:55.3			19.2	4479		6.1
IBBN	e PP	Z	13:43:08.0	112.8	52.0				
FUR	e PP	Z	13:43:11.6	113.4	56.7				
BUG	e PP	Z	13:43:13.3	113.6	51.8				
TNS	e PP	Z	13:43:14.9	113.7	53.3				
STU	e PP	Z	13:43:17.5	114.2	54.6				
BFO	e PP	Z	13:43:22.4	114.9	53.9				
WLF	e PP	Z	13:43:25.5	115.2	51.4				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/16	18:48:35.7	66.570N	17.770W	33.0N	5.6	5.5		SZGRF
2002/09/16	18:48:26.7	66.917N	18.500W	10G	5.5	5.7		NEIC

Iceland region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e P	Z 18:52:54.5	19.5	328.6	1.4	145	5.0		
BUG	e P	Z 18:53:01.5	20.0	330.2	1.3	371	5.5		
WLF	e P	Z 18:53:14.9	21.3	333.2	1.5	300	5.4		
RUE	e P	Z 18:53:14.9	21.3	324.9	1.3	462	5.7		
TNS	e P	Z 18:53:17.0	21.5	331.0	1.5	493	5.6		
CLL	e P	Z 18:53:22.5	22.0	326.9	1.7	923	5.9		
MOX	e P	Z 18:53:23.9	22.1	328.5	1.5	417	5.6		
BRG	e P	Z 18:53:29.6	22.7	327.0	1.4	189	5.3		

GRA1	e P	Z	18:53:31.5	22.8	329.9	1.5	247	5.4
	e S	E	18:57:41.4					
	e S	T	18:57:42.7					
	e L	E	19:02:30.9			18.2	16269	5.5
STU	e P	Z	18:53:33.3	23.0	332.2	1.3	300	5.7
BFO	e P	Z	18:53:34.9	23.1	333.2	1.4	314	5.7
WET	e P	Z	18:53:41.8	23.8	329.6	1.7	378	5.6
FUR	e P	Z	18:53:44.4	24.2	331.6	2.2	1180	6.0
GEC2	e P	Z	18:53:47.1	24.4	329.6	1.5	482	5.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/16	22:44:11.4	36.120N	24.600E	33.0N				SZGRF
2002/09/16	22:43:55.3	34.221N	23.604E	33N	4.3			NEIC

Southern Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 22:48:05.3	18.0	144.9	1.6	63			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/17	03:58:16.9	30.450N	140.020E	33.0N	5.4	5.3		SZGRF
2002/09/17	03:58:14.1	31.069N	141.770E	33N	5.2	5.4		NEIC

Southeast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z 04:10:54.3			1.3	21	5.1		
	i	04:11:07.6							
	e PP	Z 04:14:19.2							
	e PPP	Z 04:16:14.9							
	e SKSac	R 04:21:18.7							
	e S	T 04:21:28.1							
	e PS	N 04:22:29.6							
	e SS	T 04:27:11.2							
	e LQ	T 04:37:34.5							
	e LR	Z 04:39:36.8							
	e L	Z 04:54:16.8			18.0	1355		5.4	
GRA1	e P	Z 04:11:03.5	88.1	40.6	1.9	42	5.4		
	e	04:11:17.2							
	e PP	Z 04:14:32.4							
	e S	E 04:21:43.4							
	e SS	N 04:27:40.6							
	e L	Z 04:53:19.9			19.2	1064		5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2002/09/17	11:21:19.0	3.910N	140.780E	33.0N	5.9		SZGRF
2002/09/17	11:20:23.6	3.227S	142.774E	10G	5.7	5.9	NEIC

Western Caroline Islands, Micronesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PP	Z	11:40:12.5	116.0	59.9					
CLL	e Pdiff	Z	11:35:21.3	116.3	58.9					
	i PKPdf	Z	11:39:09.1			0.8	11			
	e PP	Z	11:40:16.9							
	e PPP	Z	11:42:43.1							
	e SKSac	R	11:45:59.6							
	e SKKSac	R	11:47:16.6							
	e Sdiff	T	11:48:01.9							
	e PKKP	Z	11:49:42.0							
	e PS	R	11:49:58.9							
	e PPS	Z	11:51:09.3							
	e SS	T	11:56:27.3							
	e LQ	T	12:07:34.8							
	e LR	Z	12:16:39.9							
	e L	Z	12:31:39.3			20.0	4360		6.1	
GEC2	e PP	Z	11:40:21.0	117.2	60.6					
MOX	e PP	Z	11:40:22.5	117.4	57.9					
WET	e PP	Z	11:40:23.2	117.5	59.7					
GRA1	e Pdiff	Z	11:35:29.9	118.1	57.9					
	e PKiKP	Z	11:39:17.0							
	e PP	Z	11:40:28.0							
	e PS	E	11:50:23.5							
	e SS	E	11:56:48.4							
	e L	Z	12:37:00.4			20.1	2997		5.9	
BUG	e PP	Z	11:40:35.1	119.2	53.3					
TNS	e PP	Z	11:40:36.4	119.3	55.0					
STU	e PP	Z	11:40:38.8	119.7	56.4					
BFO	e PP	Z	11:40:43.8	120.5	55.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/17	16:26:45.8	17.802S	178.751W	600G	4.3			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	+ Z	16:45:18.8			0.9	28			
GRA1	e PKP	Z	16:45:24.5	147.1	17.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/17	22:35:27.0	12.020N	60.180W	33.0N	5.0			SZGRF

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2002/09/17 22:35:28.8 12.211N 59.455W 33N 4.9 3.8 NEIC
Windward Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 22:46:28.8	68.3	263.2	1.3	13	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/18	04:13:49.1	47.120N	151.150E	33.0N	5.8			SZGRF
2002/09/18	04:13:39.9	45.403N	151.529E	71D	5.2			NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 04:25:21.5	75.6	29.2	1.4	194	5.9		
CLL	i P	+ Z 04:25:28.2	76.9	28.5	0.7	124	6.1		
	e pP	Z 04:25:43.9							
	e sP	Z 04:25:52.8							
	e PP	Z 04:28:22.9							
	e S	Z 04:34:57.2							
	e LR	Z 04:52:46.7							
	e L	Z 05:02:44.6			20.0	254		4.5	
BRG	e P	Z 04:25:28.8	77.0	29.1	0.8	36	5.5		
IBBN	e P	Z 04:25:31.9	77.5	25.2	0.7	126	6.2		
MOX	e P	Z 04:25:34.2	77.9	27.5	0.8	49	5.7		
BUG	e P	Z 04:25:36.8	78.4	24.8	0.9	92	5.9		
WET	e P	Z 04:25:39.9	78.8	28.2	0.9	90	5.9		
GEC2	e P	Z 04:25:39.3	78.8	28.7	1.0	66	5.7		
GRA1	e P	Z 04:25:40.1	78.8	27.2	0.9	150	6.1		
TNS	i P	+ Z 04:25:41.4	79.2	25.4	1.0	87	5.8		
FUR	e P	Z 04:25:47.1	80.2	27.1	1.1	124	5.9		
WLF	e P	Z 04:25:47.6	80.3	23.9	1.4	76	5.5		
BFO	e P	Z 04:25:50.7	80.9	25.2	1.0	60	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/18	11:27:42.9	25.827N	65.650E	33N	4.6			NEIC

Pakistan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z 11:36:13.5			1.5	29	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/18	12:01:42.5	13.490N	92.500E	33.0N	5.5	5.0		SZGRF
2002/09/18	12:01:36.0	13.120N	93.146E	33N	5.4	5.1		NEIC

Andaman Islands, India, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	Z 12:13:08.5			1.6	78	5.5		
	e PcP	Z 12:13:23.6							
	e PP	Z 12:15:48.9							
	e S	Z 12:22:36.6							
	e L	Z 12:50:37.9			18.0	1026		5.2	
GRA1	e P	Z 12:13:16.1	74.8	87.5	1.4	73	5.5		
	e L	Z 12:52:26.7			18.2	731		5.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/18	19:07:00.3	22.452S	172.885E	33N	5.7	5.3		NEIC

Southeast of Loyalty Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKP	Z 19:26:37.0	146.0	36.1					
BRG	e PKP	Z 19:26:40.6	147.2	37.8					
CLL	i PKPbc	- Z 19:26:40.4	147.2	35.9	1.2	34			
	e PP	Z 19:30:09.1							
	e SS	T 19:49:06.6							
	e SSS	T 19:54:42.2							
	e LR	Z 20:18:20.0							
	e L	Z 20:31:54.3				22.0	399		5.2
IBBN	e PKP	Z 19:26:42.7	148.0	26.6					
MOX	e PKP	Z 19:26:43.3	148.2	34.3					
GEC2	e PKP	Z 19:26:45.0	148.9	39.5					
BUG	e PKP	Z 19:26:44.9	148.9	26.4					
WET	e PKP	Z 19:26:45.5	149.0	37.8					
GRA1	e PKP	Z 19:26:45.9	149.2	34.6					
	e L	Z 20:42:40.4			20.8	308		5.1	
TNS	e PKP	Z 19:26:46.8	149.7	29.4					
WLF	e PKP	Z 19:26:49.7	150.9	25.8					
BFO	e PKP	Z 19:26:50.5	151.3	30.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/18	23:58:31.6	20.824S	178.707W	600G	4.7			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPbc	Z 00:17:08.7	146.9	21.7					
CLL	e PKPdf	Z 00:17:07.5	148.2	21.1	1.0	8			
	i PKPbc	- Z 00:17:12.0			0.9	64			
	i PKPab	Z 00:17:17.2			0.7	34			
BRG	e PKPbc	Z 00:17:12.7	148.4	23.0					

	e PKPab	Z	00:17:18.1			
BUG	e PKPbc	Z	00:17:14.0	149.0	10.9	
	e PKPab	Z	00:17:21.0			
MOX	e PKPbc	Z	00:17:14.4	149.1	19.0	
	e PKPab	Z	00:17:21.1			
TNS	e PKPbc	Z	00:17:16.9	150.1	13.5	
	e PKPab	Z	00:17:25.0			
GRA1	e PKPbc	Z	00:17:17.0	150.1	18.8	
	e PKPab	Z	00:17:25.8			
WET	e PKPbc	Z	00:17:17.0	150.2	22.2	
	e PKPab	Z	00:17:26.2			
GEC2	e PKPbc	Z	00:17:17.1	150.3	23.9	
	e PKPab	Z	00:17:26.2			
STU	e PKPbc	Z	00:17:19.7	151.3	15.5	
	e PKPab	Z	00:17:30.4			
FUR	e PKPbc	Z	00:17:19.9	151.5	19.9	
	e PKPab	Z	00:17:31.7			
BFO	e PKPbc	Z	00:17:20.8	151.9	14.1	
	e PKPab	Z	00:17:32.7			

Date Origin Time Lat Long Depth mb Ms ML Source
 2002/09/19 09:19:42.8 37.810N 21.120E 15 4.7 NEIC
 Southern Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:23:08.7			1.2	42			
	e L	Z 09:29:07.9			18.1	575		3.8	

Date Origin Time Lat Long Depth mb Ms ML Source
 2002/09/19 10:15:03.5 15.220S 173.239W 33N 4.8 NEIC
 Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 10:34:40.3	145.3	7.6					
	e L	Z 11:45:35.6			19.2	318		5.1	

Date Origin Time Lat Long Depth mb Ms ML Source
 2002/09/19 21:21:16.7 41.300N 150.280E 33.0N 5.2 SZGRF
 2002/09/19 21:21:30.6 43.277N 147.158E 53* 4.8 NEIC
 North Pacific Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:33:34.7	79.4	31.0	0.9	14	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/19	23:56:33.0	11.710N	122.770E	33.0N	5.2			SZGRF
2002/09/19	23:56:32.1	13.358N	121.314E	33N	4.8			NEIC

Panay, Philippine Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:09:50.2	92.3	66.1			5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/20	11:29:05.8	33.130N	137.659E	331	4.7			NEIC

Near S. Coast Honshu, JAPAN

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	- Z 11:40:54.8			1.1	40	5.6		
	e pP	Z 11:42:13.5							
	e sP	Z 11:42:47.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/20	13:33:42.0	1.580S	133.924E	10G	5.7	6.0		NEIC

Irian Jaya, Indonesia, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e	13:48:51.4							
	e PKiKP	Z 13:52:15.9							
	e PP	Z 13:52:52.2							
	e PPP	R 13:54:59.6							
	e SKSac	R 13:58:56.4							
	e SKKSac	E 13:59:49.9							
	e Sdiff	T 14:00:30.0							
	e PS	Z 14:02:16.7							
	e PPS	Z 14:03:11.5							
	e SS	T 14:08:17.7							
	e LQ	T 14:22:29.9							
	e LR	Z 14:28:50.2							
	e L	Z 14:40:46.2			20.0	5084		6.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/20	15:12:51.9	34.690N	147.070E	42.6	4.9			SZGRF

Off east coast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	+ Z	22:04:36.4			0.9	54			
GRA1	e PKP	Z	22:04:42.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/20	23:06:4.4	38.220N	13.510E	10.0G				SZGRF
2002/09/20	23:06:06.3	38.424N	13.616E	33N	5.0			NEIC

Sicily, Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	23:08:35.9	10.4	180.4					
BFO	e Pn	Z	23:08:39.3	10.6	156.9					
WET	e Pn	Z	23:08:39.8	10.7	176.9					
GRFO	e Pn	Z	23:08:48.7	11.4	170.5					
MOX	e Pn	Z	23:09:01.4	12.3	172.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/21	00:13:13.3	43.350N	17.730E	10.0G				SZGRF

Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	00:14:44.4	6.2	151.6					
	e Sn	N	00:15:51.0							
WET	e Pn	Z	00:14:50.4	6.7	148.1					
	e Sn	N	00:16:05.5							
GRA1	e Pn	Z	00:15:04.6	7.8	142.4					
BFO	e Pn	Z	00:15:11.8	8.2	123.8					
MOX	e Pn	Z	00:15:14.7	8.4	148.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/21	05:03:20.9	55.549S	124.898W	10G	4.9	5.0		NEIC

Southern East Pacific Rise

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	05:23:21.0	153.2	240.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/21	21:13:42.7	23.907S	179.789E	600G	4.5			NEIC

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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CLL	e PKPdf	Z	21:32:23.0									
	i PKPbc	- Z	21:32:30.0			0.6			30			
	e PKPab	Z	21:32:39.5									
	e pPKPbc	Z	21:34:33.2									

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/21	23:08:57.0	12.463S	166.936E	200G	4.9			NEIC

Santa Cruz Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 23:28:01.1	137.8	36.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/21	23:39:35.0	35.010N	80.360E	20.6	4.6			SZGRF
2002/09/21	23:39:53.7	37.149N	78.088E	33N	4.5			NEIC

Kashmir-Xizang border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:48:37.4	48.5	78.3			4.6		
	e pP	Z 23:48:43.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/22	01:23:34.3	32.762S	178.520W	33N	4.5			NEIC

South of Kermadec Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 01:44:15.2	161.6	26.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 19:00:53.2	71.7	351.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/22	22:13:49.0	22.300S	170.321E	33N	5.0	5.2		NEIC

Southeast of Loyalty Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKP	Z 22:33:26.4	146.0	41.6					

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CLL	e PKPdf	Z	22:33:27.3	146.1	39.7	1.1	24
	e PKPbc	Z	22:33:29.1			1.7	157
	e PP	Z	22:36:52.3				
	e SKKSdf	R	22:49:33.2				
	e SS	T	22:55:51.7				
	e LQ	T	23:15:21.9				
	e L	Z	23:38:41.2			22.0	336
IBBN	e PKP	Z	22:33:30.1	147.1	30.7		
MOX	e PKP	Z	22:33:30.3	147.1	38.3		
WET	e PKP	Z	22:33:32.0	147.8	41.7		
BUG	e PKP	Z	22:33:32.0	148.0	30.6		
GRA1	e PKP	Z	22:33:32.9	148.0	38.6		
TNS	e PKP	Z	22:33:33.3	148.7	33.6		
FUR	e PKP	Z	22:33:35.1	149.2	40.3		
STU	e PKP	Z	22:33:36.0	149.6	36.2		
WLF	e PKP	Z	22:33:37.2	149.9	30.2		
BFO	e PKP	Z	22:33:36.1	150.3	35.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/22	23:53:17.8	52.410N	1.730W	10.0G			5.4	SZGRF
2002/09/22	23:53:14.6	52.518N	2.141W	10	4.7			NEIC

United Kingdom

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BUG	e Pn	Z 23:54:40.1	5.9	284.2					5.4
	e Sn	N 23:55:44.4							
WLF	e Pn	Z 23:54:41.4	5.9	301.9					5.5
	e Sn	E 23:55:45.8							
IBBN	e Pn	Z 23:54:42.4	6.0	275.9					5.4
	e Sn	N 23:55:48.0							
TNS	e Pn	Z 23:54:55.8	7.0	293.2					5.5
	e Sn	N 23:56:10.1							
BFO	e Pn	Z 23:55:07.2	7.9	306.1					5.3
	e Sn	N 23:56:29.0							
STU	e Pn	Z 23:55:10.9	8.1	301.8					5.4
	e Sn	N 23:56:36.6							
MOX	e Pn	Z 23:55:19.4	8.7	287.7					
GRA1	e Pn	Z 23:55:21.4	8.8	293.7					
CLL	e Pn	Z 23:55:28.7	9.4	283.3					
FUR	e Pn	Z 23:55:32.5	9.6	302.0					
WET	e Pn	Z 23:55:39.2	10.0	295.3					
BRG	e Pn	Z 23:55:38.7	10.1	285.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/23	00:22:38.2	24.759S	179.874E	500G	4.7			NEIC

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z	00:41:29.8							
	i PKPbc	- Z	00:41:36.0			0.9	25			
	i PKPab	Z	00:41:47.2			1.1	19			
	e pPKPbc	Z	00:43:35.4							
GRA1	e PKP	Z	00:41:55.8	153.5	23.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/24	02:26:33.8	10.529S	161.146E	33N	5.5			NEIC

Solomon Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PP	Z	02:48:02.8							
	e PKS	Z	02:49:06.4							
	e PS	Z	02:58:18.5							
	e PPS	Z	02:59:49.2							
	e SS	Z	03:05:37.2							
	e L	Z	03:45:34.7			20.0	916		5.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/24	03:57:23.1	31.150S	66.820W	33.0N		6.1		SZGRF
2002/09/24	03:57:22.1	31.429S	68.960W	120D	6.3			NEIC

La Rioja Province, Argentina

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e Pdiff	Z	04:11:17.0	104.8	238.5					
BFO	e Pdiff	Z	04:11:19.1	105.3	239.7					
	e PP	Z	04:15:41.1							
STU	e Pdiff	Z	04:11:22.7	106.1	240.3					
	e PP	Z	04:15:45.5							
BUG	e Pdiff	Z	04:11:23.9	106.3	239.7					
	e PP	Z	04:15:47.1							
TNS	e Pdiff	Z	04:11:24.2	106.4	240.2					
	e PP	Z	04:15:48.0							
FUR	e Pdiff	Z	04:11:26.9	107.0	241.6					
IBBN	e Pdiff	Z	04:11:26.8	107.0	240.3					
	e PP	Z	04:15:52.1							
	e Pdiff	Z	04:11:30.3	107.7	241.9					
GRA1	e PKiKP	Z	04:15:37.5							
	e PP	Z	04:15:57.1							
	e PS	E	04:25:28.0							
	e SS	E	04:31:16.0							
	e L	Z	05:35:08.3			20.3	5732		6.1	

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MOX	e Pdiff	Z	04:11:33.2	108.3	242.5				
	e PKiKP	Z	04:15:38.7						
	e PP	Z	04:16:01.4						
WET	e Pdiff	Z	04:11:33.1	108.4	242.9				
	e PKiKP	Z	04:15:38.8						
	e PP	Z	04:15:59.0						
GEC2	e Pdiff	Z	04:11:34.5	108.7	243.3				
	e PKiKP	Z	04:15:39.3						
	e PP	Z	04:16:03.8						
CLL	i Pdiff	- Z	04:11:36.7	109.4	243.6	2.0		61	
	e sPdiff	Z	04:12:05.2						
	i PKiKP	Z	04:15:41.1			1.5		54	
	e PP	Z	04:16:06.7						
	e sPP	Z	04:16:53.4						
	e PPP	Z	04:18:32.1						
	e PPPP	Z	04:20:38.4						
	e SKSac	R	04:22:05.6						
	e SKKSac	R	04:23:00.2						
	e Sdiff	T	04:23:38.8						
	e sSdiff	T	04:24:27.7						
	e SP	Z	04:25:27.8						
	e PPS	Z	04:26:18.7						
	e PKKPbc	Z	04:26:47.5						
	e PKKPab	Z	04:26:58.7						
	e pPKKPbc	Z	04:27:20.4						
	e pPKKPab	Z	04:27:30.5						
	e SS	T	04:31:26.9						
	e sSS	T	04:32:10.0						
	e SSS	R	04:35:46.2						
	e SSSS	E	04:38:44.9						
	e LR	Z	04:49:11.5						
	e L	Z	05:00:11.2			22.0		1915	5.6
BRG	e PKiKP	Z	04:15:41.7	109.8	244.1				
	e PP	Z	04:16:11.9						
RUE	e PKiKP	Z	04:15:42.7	110.4	244.5				
	e PP	Z	04:16:14.2						

Date Origin Time Lat Long Depth mb Ms ML Source
2002/09/24 04:13:14.6 10.513S 161.135E 33N 5.5 6.2 NEIC
Solomon Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z	04:32:24.7							
	e		04:32:35.4							
	e PP	Z	04:34:33.3							
	e SKKSac	Z	04:41:35.0							
	e SKKSdf	Z	04:49:34.9							

e SS	N	04:52:25.3							
e LQ	T	05:16:23.2							
e L	Z	05:32:37.4			20.0		6460		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/24	05:01:09.2	16.056S	173.916W	103D	4.8			NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 05:20:40.2	146.1	8.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/24	09:00:59.4	51.310N	154.240E	33.0N	5.4			SZGRF
2002/09/24	09:00:46.5	49.273N	155.298E	62*	5.3			NEIC

Northwest of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	Z 09:12:21.4	74.4	24.5	0.8	29	5.4		
	e SS	Z 09:27:19.6							
	e LR	Z 09:36:52.9							
	e L	Z 09:48:33.4			20.0	436		4.8	
BRG	e P	Z 09:12:21.9	74.6	25.0	1.2	17	5.1		
IBBN	e P	Z 09:12:23.7	74.7	21.3	1.1	34	5.4		
MOX	e P	Z 09:12:26.9	75.4	23.5	1.2	28	5.2		
BUG	e P	Z 09:12:29.0	75.7	20.9	1.1	45	5.4		
GRA1	e P	Z 09:12:33.3	76.3	23.2	1.1	67	5.6		
WET	e P	Z 09:12:33.3	76.4	24.2	1.2	47	5.4		
GEC2	e P	Z 09:12:33.2	76.5	24.6	1.5	47	5.3		
TNS	e P	Z 09:12:33.7	76.5	21.5	1.2	47	5.4		
STU	e P	Z 09:12:40.1	77.7	21.9					
FUR	e P	Z 09:12:40.7	77.7	23.1					
BFO	e P	Z 09:12:43.5	78.3	21.3	1.2	47	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/24	13:31:57.7	32.236S	179.436E	388G	4.7			NEIC

South of Kermadec Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPab	Z 13:51:46.0			1.0	20			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2002/09/24	22:54:39.1	7.130S	161.720E	33.0N		6.4		SZGRF
2002/09/24	22:54:25.0	10.514S	161.004E	33N	5.7	6.3		NEIC

Bougainville - Solomon Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z	23:13:35.3			1.9	31			
	e		23:14:34.9							
	e PP	Z	23:15:57.5							
	e PKS	Z	23:17:01.8							
	e SS	N	23:33:32.2							
	e L	Z	00:17:48.1			18.0	11707		6.6	
GRA1	e PKP	Z	23:13:38.0	133.5	43.0					
	e PP	Z	23:16:03.1							
	e SS	N	23:33:55.5							
	e L	Z	00:22:18.5			20.3	7574		6.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/24	23:01:28.8	10.590S	161.156E	19G	5.7	6.5		NEIC

Solomon Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z	23:20:44.0			2.1	42			
	e		23:21:00.7							
	e PP	Z	23:23:08.2							
	e PKS	Z	23:24:06.5							
	e SKSac	R	23:27:50.8							
	e PS	Z	23:33:10.3							
	e PPS	Z	23:34:57.8							
	e SS	T	23:40:41.8							
	e L	Z	00:21:09.7			20.0	9260		6.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/25	22:28:22.4	32.220N	48.580E	33.0N	5.7	4.6		SZGRF
2002/09/25	22:28:15.8	32.067N	49.238E	33N	5.5	5.0		NEIC

Western Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	22:34:35.9	31.4	109.0	1.4	105	5.6		
BRG	e P	Z	22:34:40.6	32.0	112.4	1.6	77	5.4		
WET	e P	Z	22:34:40.9	32.0	108.6	1.1	125	5.7		
CLL	i P	+ Z	22:34:47.2	32.7	111.9	2.4	206	5.6		
	e PP	Z	22:35:49.8							
	e PPP	Z	22:36:06.6							
	e PcP	Z	22:37:35.3							
	e S	N	22:40:02.4							

	e	ScP	Z	22:41:15.1							
	e	PcS	Z	22:41:22.4							
	e	L	Z	22:51:55.9			22.0	2316		4.8	
RUE	e	P	Z	22:34:47.1	32.7	114.5	2.5	617	6.1		
FUR	e	P	Z	22:34:47.6	32.7	105.4	1.0	447	6.4		
GRA1	e	P	Z	22:34:52.1	33.2	107.6	1.1	314	6.1		
	e	L	E	22:53:21.6			19.3	1186		4.6	
MOX	e	P	Z	22:34:51.9	33.3	109.4	1.6	67	5.3		
STU	e	P	Z	22:34:59.6	34.2	104.2	2.3	295	5.8		
BFO	e	P	Z	22:35:03.3	34.7	102.7	1.1	23	5.0		
TNS	e	P	Z	22:35:08.2	35.1	105.5	1.3	197	5.9		
IBBN	e	P	Z	22:35:17.3	36.1	107.6	1.8	375	5.9		
BUG	e	P	Z	22:35:17.6	36.1	105.9	1.1	131	5.7		
WLF	e	P	Z	22:35:19.0	36.4	102.5	0.9	71	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/26	12:55:44.2	18.410S	9.640W	33.0N	5.3	5.3		SZGRF
2002/09/26	12:55:29.0	19.622S	11.899W	10G	4.9	5.4		NEIC

South Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z 13:06:44.1	70.3	200.2	1.0	23	5.4		
STU	e P	Z 13:06:47.7	70.9	201.0	0.8	25	5.5		
WLF	e P	Z 13:06:49.5	71.1	198.0	2.1	96	5.7		
TNS	e P	Z 13:06:55.5	72.1	200.1	1.1	17	5.1		
GEC2	e P	Z 13:06:55.6	72.2	205.3	1.4	26	5.2		
WET	e P	Z 13:06:55.7	72.2	204.5	1.2	22	5.2		
GRA1	e P	Z 13:06:56.4	72.3	202.8	1.5	40	5.3		
	e L	Z 13:36:54.9			21.6	1921		5.3	
BUG	e P	Z 13:07:01.0	73.0	198.9	1.7	31	5.2		
MOX	e P	Z 13:07:02.0	73.3	203.1	1.2	18	5.1		
IBBN	e P	Z 13:07:06.8	73.9	199.3	1.3	38	5.4		
BRG	e P	Z 13:07:06.9	74.1	205.3	1.5	14	4.9		
CLL	e P	Z 13:07:08.0			1.3	12	4.8		
	e PcP	Z 13:07:20.0							
	e S	N 13:16:39.2							
	e PS	N 13:17:17.7							
	e SS	R 13:21:23.3							
	e SSS	E 13:25:06.9							
	e LR	Z 13:30:54.4							
	e L	Z 13:38:23.0			22.0	1336		5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/26	20:43:23.8	34.020N	32.290E	33.0N	4.8	3.6		SZGRF
2002/09/26	20:43:39.9	35.690N	29.680E	5G	4.5			NEIC

Cyprus region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	20:47:57.5	17.6	132.4	1.1	25	4.4		
WET	e P	Z	20:48:01.3	18.2	131.3	1.0	19	4.4		
FUR	e P	Z	20:48:05.9	18.4	125.8	1.0	53	4.8		
BRG	e P	Z	20:48:10.7	18.9	137.2	1.3	19	4.4		
GRA1	e P	Z	20:48:17.1	19.4	129.2	1.1	20	4.5		
	e L	Z	20:55:55.2			18.8	210		3.6	
CLL	e P	Z	20:48:19.8	19.7	136.1	2.5	148	5.0		
MOX	e P	Z	20:48:21.6	19.8	132.0	1.0	58	5.0		
STU	e P	Z	20:48:21.3	19.9	123.4	0.9	35	4.9		
BFO	e P	Z	20:48:24.6	20.2	120.9	1.3	41	4.8		
TNS	e P	Z	20:48:34.9	21.1	125.3	1.0	26	4.7		
WLF	e P	Z	20:48:44.9	22.1	120.4	0.9	26	4.9		
BUG	e P	Z	20:48:48.9	22.4	125.8	1.6	75	5.2		
IBBN	e P	Z	20:48:52.3	22.7	128.3	1.6	110	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/27	06:10:53.2	38.790N	14.340E	10.0G		4.4		SZGRF
2002/09/27	06:10:44.2	38.391N	13.781E	10G	4.9	4.5		NEIC

Sicily, Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e Pn	Z	06:13:10.4	9.9	168.5					
GEC2	e Pn	Z	06:13:16.8	10.5	179.7					
BFO	e Pn	Z	06:13:21.1	10.7	156.3					
GRC1	e Pn	Z	06:13:20.0	10.7	170.4					
WET	e Pn	Z	06:13:20.8	10.8	176.2					
GRB1	e Pn	Z	06:13:25.1	11.1	171.3					
GRA1	e Pn	Z	06:13:29.4	11.4	169.8					
	e L	Z	06:18:18.8			18.5	3618		4.4	
MOX	e Pn	Z	06:13:42.1	12.3	172.0					
TNS	e Pn	Z	06:13:46.2	12.4	160.2					
BRG	e Pn	Z	06:13:44.4	12.5	180.6					
WLF	e Pn	Z	06:13:46.8	12.5	151.3					
CLL	e Pn	Z	06:13:49.4	12.9	177.3					
IBBN	e Pn	Z	06:14:14.9	14.5	160.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/27	07:05: 5.8	20.070N	101.470W	33.0N	5.2	4.3		SZGRF
2002/09/27	07:04:55.4	17.275N	100.282W	33D	5.0	4.7		NEIC

Central Mexico

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	07:17:55.0	90.0	297.3	1.4	24	5.2		

e L Z 08:00:02.1 20.0 126 4.3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/27	15:20:39.2	23.090N	94.450E	0.0G	5.2			SZGRF
2002/09/27	15:20:45.4	23.195N	93.944E	54D	4.7			NEIC

Myanmar-India border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 15:31:29.6	66.0	82.2	0.5	14	5.4		
GEC2	e P	Z 15:31:32.5	66.5	81.1	0.7	26	5.6		
CLL	e P	Z 15:31:32.4	66.6	81.6	1.3	11	4.9		
WET	e P	Z 15:31:35.6	67.0	80.6	0.7	7	5.0		
MOX	e P	Z 15:31:39.0	67.5	80.4	1.4	16	5.1		
GRA1	e P	Z 15:31:42.3	67.9	79.7	1.5	21	5.2		
FUR	e P	Z 15:31:43.0	68.2	79.1	0.6	18	5.5		
TNS	e P	Z 15:31:51.9	69.6	77.9	1.0	14	5.0		
BUG	e P	Z 15:31:54.7	70.0	77.5	0.8	18	5.2		
BFO	e P	Z 15:31:54.3	70.1	77.1	1.4	8	4.7		
WLF	e P	Z 15:32:02.2	71.1	76.1	1.1	36	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/27	17:14:36.7	33.390N	94.880E	33.0N	5.3	4.8		SZGRF
2002/09/27	17:14:38.6	33.392N	93.631E	33N	4.8	4.7		NEIC

Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 17:24:35.2	58.6	74.3	1.8	43	5.2		
CLL	i P	Z 17:24:38.3	59.0	73.9	1.5	26	5.0		
	e PP	Z 17:26:53.4							
	e S	R 17:32:47.8							
	e SS	T 17:36:42.0							
	e LQ	T 17:42:25.6							
	e LR	Z 17:44:07.0							
	e L	Z 17:51:16.1			20.0	746		4.8	
GEC2	e P	Z 17:24:40.4	59.3	72.9	1.7	47	5.2		
WET	e P	Z 17:24:43.4	59.7	72.6	2.0	44	4.9		
MOX	e P	Z 17:24:45.5	60.1	72.6	1.4	21	4.8		
GRA1	e P	Z 17:24:49.7	60.6	71.8	1.1	23	5.3		
	e L	Z 17:51:42.1			21.8	684		4.8	
FUR	e P	Z 17:24:52.7	61.0	71.0	1.0	36	5.6		
TNS	e P	Z 17:24:59.4	62.1	70.3	0.2	14	5.7		
BUG	e P	Z 17:25:01.0	62.4	70.1	1.8	50	5.4		
BFO	e P	Z 17:25:03.2	62.8	69.3	1.5	29	5.3		
WLF	e P	Z 17:25:10.5	63.7	68.5	1.4	51	5.6		

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 04:06:28.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/28	03:53:57.0	53.251S	117.463W	10G	5.1	4.9		NEIC

Southern East Pacific Rise

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 04:13:44.7	148.5	243.5					
CLL	e PKPbc	Z 04:13:48.7			1.5	42			
	e	04:13:53.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/28	05:09:56.6	48.290N	26.640W	33.0N	4.9			SZGRF
2002/09/28	05:09:41.1	47.921N	27.950W	10G	4.6	4.4		NEIC

Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:15:14.3	25.6	281.2	1.7	46	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/28	13:53:19.9	10.877S	161.337E	33N	5.4	5.5		NEIC

Solomon Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PP	Z 14:14:50.6							
	e SS	T 14:32:30.0							
	e SSS	R 14:37:26.5							
	e L	Z 15:10:47.7			22.0	974		5.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/28	14:16:25.7	42.985N	146.061E	33N	4.8	5.3		NEIC

Off the coast of Hokkaido, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z 14:28:19.8			1.0	22	5.2		
	e PcP	Z 14:28:29.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2002/09/29 03:34:43.5 6.262S 146.359E 119D 5.4 NEIC
 Eastern New Guinea, Papua New Guinea, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	03:53:27.5	122.6	56.4					
	e		03:53:57.7							
	e SS	N	04:12:35.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/29	13:25:17.3	11.440N	82.710W	26.9	5.3	4.8		SZGRF
2002/09/29	13:25:01.5	9.020N	84.126W	24D	5.1	4.6		NEIC

North of Panama

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	13:37:27.9	83.3	276.1	1.1	28	5.2		
	e pP	Z	13:37:36.0							
BUG	e P	Z	13:37:30.2	83.8	276.7	1.2	33	5.2		
IBBN	e P	Z	13:37:31.1	84.0	277.0	1.3	28	5.1		
TNS	e P	Z	13:37:35.1	84.7	277.8	1.1	22	5.2		
BFO	e P	Z	13:37:35.4	84.9	277.8	1.0	13	5.0		
GRA1	e P	Z	13:37:44.7	86.6	279.9	1.1	28	5.4		
	e pP	Z	13:37:52.1							
	e L	Z	14:12:39.9			19.9	422		4.8	
MOX	e P	Z	13:37:44.8	86.6	280.1	1.4	30	5.3		
CLL	e P	Z	13:37:48.3	87.4	281.2	1.5	48	5.5		
	e pP	Z	13:37:56.1							
RUE	e P	Z	13:37:49.3	87.6	281.7					
WET	e P	Z	13:37:50.4	87.7	281.2	1.3	38	5.5		
	e pP	Z	13:37:58.1							
BRG	e P	Z	13:37:51.8	88.0	281.9	1.7	37	5.3		
	e pP	Z	13:37:59.5							
GEC2	e P	Z	13:37:53.0	88.3	281.8	1.4	41	5.4		
	e pP	Z	13:38:01.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/29	17:02:48.4	36.070N	70.180E	141.3	5.2			SZGRF
2002/09/29	17:02:44.9	36.193N	70.069E	136D	5.1			NEIC

Hindu Kush, Afghanistan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	17:10:26.4	42.1	88.0	0.9	38	5.1		
	e pP	Z	17:10:57.8							
RUE	e P	Z	17:10:26.2	42.2	89.6	0.9	41	5.1		
	e pP	Z	17:10:58.0							
	e PP	Z	17:12:07.4							

GEC2	e P	Z	17:10:28.5	42.4	85.6	1.2	32	4.9
	e PP	Z	17:12:12.8					
CLL	i P	Z	17:10:30.7	42.7	87.7	0.8	22	
	e pP	Z	17:11:01.5					
	e PP	Z	17:12:15.3					
	e PcP	R	17:12:21.1					
WET	e P	Z	17:10:32.8	42.9	85.3	1.7	21	4.6
MOX	e P	Z	17:10:38.4	43.6	86.0	0.9	20	4.9
GRA1	e P	Z	17:10:42.0	43.9	84.7	1.6	105	5.5
	e pP	Z	17:11:13.6					
TNS	e P	Z	17:10:54.6	45.6	83.3	1.2	24	5.2
	e PcP	Z	17:12:29.0					
IBBN	e P	Z	17:10:56.1	45.8	84.9	0.9	68	5.8
	e pP	Z	17:11:28.3					
BFO	e P	Z	17:10:56.5	46.0	81.4	1.1	23	5.2
BUG	e P	Z	17:10:59.1	46.2	83.7	1.1	43	5.5
WLF	i P	Z	17:11:06.9	47.2	81.2			
	e pP	Z	17:11:39.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/09/30	06:44:46.5	47.520N	3.120W	10.0G				SZGRF
2002/09/30	06:44:45.2	47.814N	2.911W	10G	4.0			NEIC

France

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BUG	e Pn	Z	06:46:37.3	7.5	245.1					
	e Sg	E	06:48:52.8							
BFO	e Pn	Z	06:46:37.0	7.5	270.3					
	e Sg	N	06:48:53.3							
TNS	e Pn	Z	06:46:41.9	7.8	256.4					
	e Sg	N	06:49:04.5							
GRA1	e Pn	Z	06:47:07.2	9.5	264.0					
	e Sg	N	06:49:56.2							
MOX	e Pn	Z	06:47:11.3	9.9	259.0					
	e Sg	N	06:50:08.3							
WET	e Pn	Z	06:47:19.4	10.5	268.7					
	e Sg	N	06:50:29.7							
CLL	e Pn	Z	06:47:24.9	10.9	257.5					
	e Sg	N	06:50:43.6							
GEC2	e Pn	Z	06:47:26.8	11.1	270.9					
BRG	e Sg	N	06:50:57.5	11.4	261.0					

Format description

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In general all regional and teleseismic events clearly recorded with GRF-Array stations and stronger events recorded with stations of the German Regional Seismological Network (GRSN) are included in this bulletin. Additionally, some selected events are analysed more comprehensively at CLL-station and included in the bulletin (ISOP-analyses).

Each event is reported by several EPICENTER LINES with possible COMMENT LINES, a REGION LINE and a block of PHASE LINES.

EPICENTER LINES:

The epicenter locations of several authorities can be reported. The epicenter location with the highest priority (i.e. the most reliable one) is written in the undermost EPICENTER LINE. The REGION LINE and all origin related parameter in the PHASE LINES (i.e. Def, Dist, EvAz) are determined regarding this epicenter location with the highest priority.

Date	Date of the event
Origin Time	Origin time of the event
Lat	Geographic latitude (N/S) of epicenter in degree
Long	Geographic longitude (E/W) of epicenter in degree
Depth	Depth of the hypocenter beneath the surface in kilometer
	Appended flag indicates the method by which the depth was determined:
	BLANK - free
	N - preset depth of 33 kilometer
	G - geophysicist preset depth
mb, Ms, ML	Magnitudes of the event and magnitude type
Source	Abbreviations for the authority (e.g. SZGRF, NEIC, PIDC, SED)

COMMENT LINE:

Each EPICENTER LINE can be followed by a COMMENT LINE about interesting topics submitted by the preceding authority.

REGION LINE:

The region name of the epicenter location with the highest priority (undermost EPICENTER LINE).

PHASE LINE:

Sta	Station code of the reported phase
Phase	Preceded flag for the sharpness of the onset of the phase
	e - emergent
	i - impulsive
	w - weak
	ISC phase code
	Flag for the direction of the first motion
	'+' - compression
	'-' - dilatation
	Component where the phase was picked

Time	Arrival time of the reported phase
Dist	Distance from the epicenter location with the highest priority to the station in kilometer
BAz	Backazimuth from the epicenter location with the highest priority to the station in degree
T[s]	Phase Period
A[nm]	Phase Amplitude
mb	Body wave magnitude
MS	Surface wave magnitude
ML	Local Richter magnitude