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

(produced by SZGRF/BGR - HANNOVER)

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

(Format desciption at the end of the bulletin)

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/01	10:17:39.6	42.752N	81.160E	33.0N	4.7			SZGRF

Northern Xinjiang, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	10:26:08.8	47.1	70.3	1.0	6	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/01	14:07:39.9	32.826N	70.706E	33.0N	4.8			SZGRF

Pakistan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	14:16:03.6	46.4	88.0	1.4	10	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/01	15:46:51.2	61.200S	153.900E	10.0		5.2		NEIC

Balleny Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	16:07:13.4	156.4	133.2					
	e L	Z	17:21:34.4			20.9	366		5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/02	22:58: 9.4	36.200S	72.800W	30.0		6.0		NEIC

Near coast of central Chile

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e		23:16:43.0	113.3	240.9					
		e PP	Z	23:17:18.5							
		e L	Z	00:07:18.1			18.1	3521		6.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/02								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z	03:00:22.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/02	03:50:22.9	24.700S	176.100W	33.0				NEIC

South of Fiji Islands

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z	04:10:34.1	154.4	15.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/02	08:29:33.4	22.800S	177.230W	33.0N				SZGRF

South of Fiji Islands

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	BSEG	e PKPbc	Z	08:49:16.3	148.3	13.3					
	CLL	e PKPbc	Z	08:49:21.0	150.4	19.4					
		e PKPab	Z	08:49:27.6							
	BRG	e PKPbc	Z	08:49:22.1	150.6	21.3					
		e PKPab	Z	08:49:28.8							
	MOX	e PKPbc	Z	08:49:23.7	151.3	17.2					
	TANN	e PKPbc	Z	08:49:24.0	151.4	18.9					
	GRA1	e PKPbc	Z	08:49:26.2	152.3	16.9					
	GEC2	e PKPbc	Z	08:49:26.8	152.6	22.3					
	RJOB	e PKPbc	Z	08:49:29.8	153.8	21.3					
		e PKPab	Z	08:49:42.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/02	20:04:44.0	37.800N	15.100E	33.0G				INGV

Sicily, Italy

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

GRA1	e Pn	Z	20:07:58.3	12.2	165.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/02	22:07:49.0	70.804N	8.808W	33.0G	4.2			SZGRF

Jan Mayen Island region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:12:56.0	23.1	343.3	1.4	11	4.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/03	01:35:34.1	31.300S	176.900W	10.0		4.9		NEIC

Kermadec Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	01:56:14.8	160.6	21.3					
	e L	Z	03:14:34.4			19.7	180		4.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/03	02:19:54.7	26.224N	130.066E	20.6N	4.8			SZGRF

Southeast of Ryukyu Islands, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	02:32:37.6	86.7	51.9	0.9	7	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/03	13:10:31.9	46.933N	11.264E	10.0G			2.8	SZGRF

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WTTA	e Pg	Z	13:10:38.3	0.4	217.6					2.3
	e Sg	N	13:10:46.2							
FUR	e Pg	Z	13:10:55.0	1.2	180.4					2.9
	e Sg	N	13:11:13.3							
RJOB	e Pn	Z	13:10:54.4	1.3	232.8					
MOA	e Pn	Z	13:11:09.2	2.2	246.8					2.7
	e Sg	N	13:11:42.6							
OBKA	e Pn	Z	13:11:10.2	2.3	281.9					
BFO	e Pn	Z	13:11:10.1	2.4	124.1					
WET	e Pn	Z	13:11:10.6	2.5	206.6					2.9
GEC2	e Pn	Z	13:11:11.9	2.5	221.4					
GRA1	e Sg	N	13:11:59.3	2.8	179.4					3.2

MOX	e Pn	Z	13:11:27.0	3.7	183.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/03	21:41:38.2	46.635N	12.671E	10.0G			1.9	SZGRF

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
KBA	e Pg	Z	21:41:48.4	0.6	226.3					1.5
WTTA	e Pg	Z	21:41:53.8	0.9	131.3					2.0
	e Sg	N	21:42:07.4							
RJOB	e Pn	Z	21:41:57.5	1.1	184.4					2.0
MOA	e Pn	Z	21:42:07.6	1.6	222.3					1.9
FUR	e Pn	Z	21:42:09.9	1.8	147.8					
DAVA	e Sg	N	21:42:43.5	2.0	107.9					
WET	e Pn	Z	21:42:18.8	2.5	183.2					
GRA1	e Sg	N	21:43:21.0	3.2	161.9					
BFO	e Pn	Z	21:42:30.5	3.4	118.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/03	22:33:43.9	2.200S	100.100E	44.0	4.6			NEIC

Southern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:46:44.1	91.0	92.3	1.2	4	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/04								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	00:38:21.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/04	09:31:43.0	23.800S	179.900W	500.0				NEIC

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	09:50:55.8	152.7	22.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/04	09:39:59.5	23.640S	178.840W	33.0G				SZGRF

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	09:59:48.8	148.9	16.4					
NRDL	e PKPbc	Z	09:59:52.0	150.3	16.7					
CLL	e PKPbc	Z	09:59:53.8	150.9	22.7					
IBBN	e PKPbc	Z	09:59:53.6	150.9	12.5					
CLZ	e PKPbc	Z	09:59:54.2	150.9	17.6					
BRG	e PKPbc	Z	09:59:54.4	151.0	24.7					
MOX	e PKPbc	Z	09:59:56.0	151.8	20.6					
TANN	e PKPbc	Z	09:59:56.2	151.8	22.3					
ROTZ	e PKPbc	Z	09:59:57.3	152.5	22.3					
GRA1	e PKPab	Z	10:00:07.2	152.8	20.5					
WET	e PKPbc	Z	09:59:58.4	152.9	24.1					
	e PKPab	Z	10:00:09.2							
WLF	e PKPbc	Z	10:00:00.5	153.7	10.4					
RJOB	e PKPab	Z	10:00:14.9	154.2	25.1					
FUR	e PKPbc	Z	10:00:01.0	154.2	21.7					
	e PKPab	Z	10:00:14.4							
BFO	e PKPbc	Z	10:00:02.0	154.7	15.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/04	12:15:17.4	15.821N	93.429W	33.0G	5.3			SZGRF

Near coast of Chiapas, Mexico

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	12:27:47.4	87.1	291.2	2.7	75	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/04	13:46:45.8	40.000N	113.900E	12.0	4.4			NEIC

Northeastern China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	13:57:44.7	67.6	53.9	0.9	2	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/04	20:28: 4.6	17.200S	177.000W	23.0		5.1		NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	20:47:45.2	146.8	14.5					
	e L	Z	21:50:03.3			21.9	390		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/04	21:16:34.3	46.128N	7.392E	10.0G			3.5	SZGRF

Switzerland

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
DAVA	e Pn	Z	21:17:08.4	2.1	236.7					3.7
	e Sg	N	21:17:40.6							
BFO	e Pn	Z	21:17:10.6	2.3	196.5					3.0
STU	e Pn	Z	21:17:18.4	2.9	205.4					3.5
WTTA	e Pn	Z	21:17:23.1	3.1	250.2					3.4
FUR	e Pn	Z	21:17:24.7	3.3	233.8					3.6
WLF	e Pn	Z	21:17:31.2	3.6	166.3					
RJOB	e Pn	Z	21:17:36.0	4.0	248.4					3.5
KBA	e Pn	Z	21:17:39.3	4.2	259.1					
GRA1	e Pn	Z	21:17:37.8	4.4	217.2					3.9
WET	e Pn	Z	21:17:44.0	4.8	232.8					3.4
	e Sg	N	21:19:03.6							
OBKA	e Pn	Z	21:17:47.0	5.0	268.2					
MOA	e Pn	Z	21:17:49.1	5.0	252.4					
GEC2	e Pn	Z	21:17:48.7	5.1	239.8					
TANN	e Sg	N	21:19:27.4	5.5	220.1					
ARSA	e Pn	Z	21:17:57.5	5.7	261.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/04	22:05:52.4	38.333N	23.435E	10.0G				SZGRF

Greece

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
ARSA	e Pn	Z	22:08:22.9	10.6	144.2					
KBA	e Sn	N	22:10:33.9	11.4	136.2					
MOA	e Pn	Z	22:08:37.0	11.6	141.6					
WTTA	e Pn	Z	22:08:47.2	12.4	131.7					
	e Sn	N	22:10:55.0							
GEC2	e Pn	Z	22:08:53.0	12.6	142.7					
DAVA	e Sn	N	22:11:20.8	13.3	127.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/04	22:40:44.6	32.070N	115.340W	33.0G	6.4	7.6		SZGRF

California-Baja California border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	22:53:07.0	82.0	316.0	2.0	1364	6.7		

IBBN	e	P	Z	22:53:07.1	82.1	314.2	1.7	1147	6.7
BUG	e	P	Z	22:53:08.7	82.5	313.9			
	e	S	R	23:03:32.8					
NRDL	e	P	Z	22:53:11.7	83.0	315.9	1.4	885	6.8
WLF	e	P	Z	22:53:12.8	83.2	313.3	1.5	822	6.7
CLZ	e	P	Z	22:53:14.9	83.6	316.2	1.9	1642	6.9
UBBA	e	P	Z	22:53:17.4	84.2	316.0	1.8	914	6.7
MOX	e	P	Z	22:53:21.6	85.0	317.2	2.0	577	6.5
	e	S	R	23:03:57.9					
CLL	e	P	Z	22:53:21.7	85.1	318.2	1.6	309	6.3
BFO	e	P	Z	22:53:22.1	85.2	314.9	1.6	401	6.4
STU	e	P	Z	22:53:22.9	85.3	315.5	1.5	361	6.4
GRA1	e	P	Z	22:53:24.6	85.5	316.9	1.7	564	6.5
	e	S	R	23:04:04.8					
	e	L	Z	23:31:24.6			19.3	228402	7.6
TANN	e	P	Z	22:53:24.2	85.5	317.8	1.7	297	6.2
BRG	e	P	Z	22:53:25.5	85.8	318.9	1.8	290	6.1
ROTZ	e	P	Z	22:53:26.3	85.9	317.7	1.8	229	6.0
WET	e	P	Z	22:53:29.9	86.6	318.2	1.6	116	5.8
	e	S	T	23:04:10.0					
FUR	e	P	Z	22:53:30.3	86.6	317.1	2.5	597	6.3
GEC2	e	P	Z	22:53:32.9	87.2	318.8	1.4	54	5.5
RJOB	e	P	Z	22:53:35.5	87.6	318.2	1.6	58	5.5

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/04	23:15:10.0	32.000N	115.200W	10.0	4.8			NEIC

California-Baja California border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e	P	Z 23:27:56.4	85.5	316.8	1.1	9	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/04	23:25: 9.0	32.100N	115.100W	10.0	4.5			NEIC

California-Baja California border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e	P	Z 23:37:46.4	85.4	316.8	0.8	3	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/04	23:33:25.8	31.133N	110.097W	33.0N	4.7			SZGRF

Eastern Arizona-Sonora border region

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

	GRA1	e P	Z	23:45:52.7	83.9	312.7	1.2	5	4.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/05	00:07:23.4	32.549N	112.984W	33.0G	5.2			SZGRF

Western Arizona-Sonora border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	00:19:51.1	84.0	315.5	2.0	34	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/05	07:29:12.6	17.900N	81.500W	10.0	5.1			NEIC

North of Honduras

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	07:41:13.0	78.2	283.8	1.2	18	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/05	10:05:42.5	0.200S	125.000E	10.0		5.8		NEIC

Southern Molucca Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pdiff	Z	10:19:51.3	105.3	71.6					
	e PP	Z	10:24:09.8							
	e L	Z	11:15:58.3			21.4	2719		5.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/05	22:36:58.4	19.900S	68.800W	109.0				NEIC

Chile-Bolivia border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pdiff	Z	22:50:25.7	98.9	249.6					
	e pPdiff	Z	22:54:15.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/06	17:25:52.5	45.042N	14.934E	10.0G			2.8	SZGRF

Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
OBKA	e Pn	Z	17:26:17.6	1.5	169.5					3.0

	e Sn	N	17:26:36.6					
KBA	e Pn	Z	17:26:29.6	2.3	151.0			2.5
MOA	e Pn	Z	17:26:36.8	2.8	170.4			
	e Sn	N	17:27:10.2					
WTTA	e Pn	Z	17:26:42.9	3.2	133.0			
WET	e Pn	Z	17:26:57.0	4.3	160.4			
	e Sn	E	17:27:44.0					
BFO	e Pn	Z	17:27:14.0	5.6	123.5			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/06	22:15: 2.6	2.800N	96.060E	33.0G	6.9	7.7		SZGRF

Northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	22:27:28.9	82.9	94.4	1.8	1444	6.9		
	e S	T	22:37:48.1							
GEC2	e P	Z	22:27:29.0	82.9	93.9	1.8	1596	7.0		
	e S	T	22:37:50.4							
RJOB	e P	Z	22:27:31.2	83.4	93.1					
	e S	T	22:37:52.8							
WET	e P	Z	22:27:31.9	83.4	93.3					
	e S	T	22:37:56.0							
CLL	e P	Z	22:27:31.7	83.5	93.7	2.6	2428	7.0		
	e S	T	22:37:55.8							
TANN	e P	Z	22:27:33.7	83.8	93.2	2.1	1003	6.7		
	e S	T	22:37:59.1							
ROTZ	e P	Z	22:27:34.7	83.9	92.9	1.9	1271	6.8		
	e S	T	22:38:01.2							
MOX	e P	Z	22:27:36.3	84.3	92.5	2.5	2273	6.9		
	e S	T	22:38:05.4							
FUR	e P	Z	22:27:36.5	84.4	92.0	1.7	852	6.6		
	e S	T	22:38:05.0							
GRA1	e P	Z	22:27:37.6	84.5	92.1	1.6	1038	6.7		
	e S	T	22:38:07.7							
	e PKPPKP	Z	22:53:54.3							
	e L	Z	23:13:11.0			19.4	288666		7.7	
CLZ	e P	Z	22:27:40.4	85.1	91.7	2.3	2727	7.0		
	e S	T	22:38:10.1							
BSEG	e P	Z	22:27:40.8	85.2	91.8	1.5	1150	6.8		
	e S	T	22:38:11.3							
NRDL	e P	Z	22:27:41.3	85.3	91.5	2.7	7614	7.4		
	e S	T	22:38:12.7							
UBBA	e P	Z	22:27:41.3	85.3	91.3	2.6	2931	6.9		
	e S	T	22:38:12.2							
STU	e P	Z	22:27:43.7	85.8	90.5	2.0	1230	6.7		
	e S	T	22:38:18.3							
BFO	e P	Z	22:27:46.3	86.4	89.8	1.2	252	6.4		

	e S	T	22:38:23.3					
IBBN	e P	Z	22:27:48.3	86.7	89.6	1.6	1824	7.1
	e S	T	22:38:25.8					
BUG	e P	Z	22:27:49.7	87.1	89.2	1.4	749	6.8
	e S	T	22:38:30.5					
WLF	e P	Z	22:27:53.7	87.8	88.3	2.6	4659	7.3
	e S	T	22:38:35.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/06	22:53:55.5	0.476N	98.327E	33.0N	4.9			SZGRF

Northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	23:06:41.5	87.8	91.9	1.0	7	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/06	23:50:28.2	73.460N	9.300E	33.0G	4.8			SZGRF

Greenland Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	23:54:55.2	19.5	359.1	1.6	56	4.6		
NRDL	e P	Z	23:55:09.9	21.0	359.4	1.4	60	4.7		
IBBN	e P	Z	23:55:11.7	21.2	1.2	1.4	68	4.8		
CLZ	e P	Z	23:55:17.4	21.6	359.2	1.6	102	4.9		
BUG	e P	Z	23:55:21.1	22.0	1.5	1.4	92	5.0		
BRG	e P	Z	23:55:27.5	22.7	356.6	1.6	32	4.5		
MOX	e P	Z	23:55:29.4	22.8	358.3	1.1	44	4.9		
TANN	e P	Z	23:55:32.2	23.1	357.7	1.4	39	4.7		
GRA1	e P	Z	23:55:39.1	23.8	358.6	1.3	47	4.9		
WET	e P	Z	23:55:44.7	24.4	357.5	1.4	30	4.6		
STU	e P	Z	23:55:47.5	24.7	0.1	1.1	41	4.9		
GEC2	e P	Z	23:55:47.7	24.7	357.0	1.2	26	4.6		
BFO	e P	Z	23:55:51.3	25.1	0.7	1.3	64	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/07								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	03:48:55.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source

2010/04/07 04:22: 6.6 1.538N 98.736E 33.0N 4.9 SZGRF
Northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	04:34:50.0	87.2	90.9	1.0	10	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/07	09:22:32.6	39.866N	74.793E	33.0N	4.6			SZGRF

Southern Xinjiang, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	09:30:43.4	44.8	77.4	1.2	10	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/07	10:04:35.4	52.236N	170.911W	33.0G	5.0			SZGRF

Fox Islands, Aleutian Islands, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	10:16:31.2	78.1	1.3	0.9	15	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/07	12:52:53.8	55.800N	161.200E	111.0	4.8			NEIC

Near east coast of Kamchatka Peninsula, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	13:04:05.0	71.6	17.2	1.0	8	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/07	14:33: 3.7	3.800S	141.900E	33.0		5.7		NEIC

New Guinea, Papua New Guinea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKP	Z	14:51:54.1	116.0	61.1					
CLL	e PKP	Z	14:51:54.4	116.3	60.0					
BSEG	e PKP	Z	14:51:55.0	116.3	56.4					
TANN	e PKP	Z	14:51:55.7	117.1	59.9					
GEC2	e PKP	Z	14:51:56.0	117.1	61.8					
NRDL	e PKP	Z	14:51:56.1	117.2	56.8					
MOX	e PKP	Z	14:51:56.8	117.4	59.0					
CLZ	e PKP	Z	14:51:57.1	117.4	57.3					
WET	e PKP	Z	14:51:56.8	117.5	60.9					

	GRA1	e PKP	Z	14:51:57.8	118.1	59.1				
		e PKKP	Z	15:02:13.1						
		e L	Z	15:43:13.9			21.8	1846		5.7
	UBBA	e PKP	Z	14:51:58.1	118.2	57.4				
	IBBN	e PKP	Z	14:51:59.1	118.5	54.6				
	BUG	e PKP	Z	14:52:00.2	119.3	54.5				
	STU	e PKP	Z	14:52:00.7	119.7	57.6				
	BFO	e PKP	Z	14:52:01.8	120.4	57.0				
	WLF	e PKP	Z	14:52:03.9	120.9	54.2				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/07								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z	18:01:12.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/07	20:32:39.5	27.100S	179.500E	492.0				NEIC

Kermadec Islands region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z	20:52:06.2	155.7	26.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/08	05:31: 1.0	41.300N	79.100E	46.0	4.9			NEIC

Kyrgyzstan-Xinjiang border region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	05:39:27.0	46.7	73.1	0.9	9	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/08	06:05:26.1	41.300N	79.200E	33.0	4.8			GSRC

Kyrgyzstan-Xinjiang border region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	06:13:58.3	46.7	73.1	1.0	7	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/08	14:57:59.5	18.100S	168.100E	100.0				GSRC-M

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	15:17:28.9	143.4	38.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/08								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	15:20:05.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/08	16:44:36.8	32.441N	114.058W	33.0G	4.9			SZGRF

Western Arizona-Sonora border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	16:57:07.3	84.6	316.2	0.9	7	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/08	18:41:54.4	43.960N	144.750E	61.7	5.1			SZGRF

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	18:53:29.3	74.7	32.2	0.8	23	5.2		
NRDL	e P	Z	18:53:36.2	76.0	31.9	0.8	9	5.0		
CLL	e P	Z	18:53:36.1	76.0	33.6	0.9	35	5.5		
BRG	e P	Z	18:53:36.5	76.0	34.2	0.7	8	4.9		
	e pP	Z	18:53:54.1							
CLZ	e P	Z	18:53:39.3	76.4	32.0	0.7	22	5.4		
IBBN	e P	Z	18:53:41.4	76.9	30.3	0.8	27	5.4		
TANN	e P	Z	18:53:41.5	76.9	33.1	0.9	4	4.5		
MOX	e P	Z	18:53:42.2	77.0	32.6	0.7	8	5.0		
UBBA	e P	Z	18:53:44.0	77.4	31.6	0.7	4	4.7		
ROTZ	e P	Z	18:53:45.6	77.6	32.9	1.1	11	4.9		
BUG	e P	Z	18:53:46.2	77.8	29.9	0.8	16	5.2		
GEC2	e P	Z	18:53:46.4	77.8	33.7	0.6	8	5.1		
WET	e P	Z	18:53:47.1	77.8	33.3	0.9	16	5.2		
GRA1	e P	Z	18:53:47.9	78.0	32.3	0.9	30	5.4		
	e pP	Z	18:54:04.7							
TNS	e P	Z	18:53:49.7	78.4	30.5	0.9	9	4.8		
RJOB	e P	Z	18:53:53.8	79.0	33.0	0.8	16	5.1		
	e pP	Z	18:54:10.5							
FUR	e P	Z	18:53:54.6	79.2	32.1	0.8	22	5.2		

STU	e P	Z	18:53:55.4	79.4	30.8	0.8	21	5.1	
WLF	e P	Z	18:53:57.3	79.7	28.9	0.8	9	4.7	
	e pP	Z	18:54:14.3						
BFO	e P	Z	18:53:58.9	80.1	30.2	0.9	10	4.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/08	23:13:38.8	43.767N	10.542E	10.0G			3.2	SZGRF

Central Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
DAVA	e Pn	Z	23:14:34.3	3.6	172.3					3.4
	e Sn	N	23:15:12.1							
WTTA	e Pn	Z	23:14:33.8	3.6	192.8					3.5
KBA	e Pn	Z	23:14:37.5	3.9	211.7					2.9
OBKA	e Pn	Z	23:14:37.9	3.9	227.3					
RJOB	e Pn	Z	23:14:43.0	4.3	202.4					3.2
	e Sn	N	23:15:30.4							
BFO	e Pn	Z	23:14:49.5	4.8	160.6					
MOA	e Pn	Z	23:14:51.0	4.8	213.8					3.2
	e Sn	E	23:15:42.0							
ARSA	e Pn	Z	23:14:51.8	4.9	226.9					
WET	e Pn	Z	23:14:59.8	5.6	197.5					
TNS	e Pn	Z	23:15:14.2	6.6	166.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/09	17:55:48.1	35.042N	72.673E	113.8N	4.5			SZGRF

Pakistan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	18:04:02.1	46.3	84.2	0.8	3	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/09	18:02:25.1	14.550N	92.850E	40.3	4.5			SZGRF

Andaman Islands, India, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	18:13:45.1	71.8	89.2	0.7	4	4.7		
GEC2	e P	Z	18:13:46.4	72.0	88.3	0.7	5	4.8		
	e pP	Z	18:13:57.9							
CLL	e P	Z	18:13:48.1	72.4	88.6	1.0	4	4.5		
WET	e P	Z	18:13:49.6	72.5	87.8	0.8	3	4.5		
RJOB	e P	Z	18:13:49.6	72.6	87.3	0.9	2	4.3		
TANN	e P	Z	18:13:50.7	72.7	87.9	0.8	2	4.3		

ROTZ	e P	Z	18:13:52.3	72.9	87.5	0.9	4	4.6
MOX	e P	Z	18:13:53.8	73.3	87.3	0.8	3	4.5
GRA1	e P	Z	18:13:56.1	73.6	86.7	0.9	5	4.5
BSEG	e P	Z	18:13:57.8	73.9	87.2	0.9	6	4.6
CLZ	e P	Z	18:13:58.0	74.0	86.7	0.8	4	4.6
NRDL	e P	Z	18:13:58.8	74.1	86.7	1.0	2	4.2
TNS	e P	Z	18:14:05.7	75.3	84.8	0.7	3	4.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/09								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:37:28.8			1.1	8			
	e pP	Z	22:37:57.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/09	22:36:41.9	17.270S	174.350W	33.0N				SZGRF

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z	22:56:14.5	144.9	3.5					
CLZ	e PKPbc	Z	22:56:15.6	145.2	7.9					
CLL	e PKPbc	Z	22:56:15.9	145.5	12.4					
BRG	e PKPbc	Z	22:56:17.0	145.7	14.2					
BUG	e PKPbc	Z	22:56:17.2	145.8	2.8					
UBBA	e PKPbc	Z	22:56:18.3	146.3	7.5					
MOX	e PKPbc	Z	22:56:18.7	146.3	10.3					
TANN	e PKPbc	Z	22:56:19.1	146.4	11.8					
TNS	e PKPbc	Z	22:56:20.9	147.0	4.9					
ROTZ	e PKPbc	Z	22:56:21.4	147.1	11.6					
GRA1	e PKPbc	Z	22:56:21.4	147.3	9.9					
WET	e PKPbc	Z	22:56:22.5	147.6	13.0					
WLF	e PKPbc	Z	22:56:23.3	147.6	0.9					
GEC2	e PKPbc	Z	22:56:23.0	147.8	14.5					
FUR	e PKPbc	Z	22:56:25.8	148.8	10.4					
BFO	e PKPbc	Z	22:56:25.9	148.9	5.0					
RJOB	e PKPbc	Z	22:56:26.3	149.0	13.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/10	09:48:13.0	63.207N	142.072W	46.2	4.9			SZGRF

Central Alaska, United States

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

GRA1	e P	Z	09:58:49.1	65.2	347.1	0.6	5	4.9
	e pP	Z	09:59:02.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/10	16:54:17.7	20.860S	176.150W	279.6				SZGRF

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	17:13:31.7	146.6	11.0					
NRDL	e PKPbc	Z	17:13:35.6	148.0	11.1					
IBBN	e PKPbc	Z	17:13:37.1	148.4	7.0					
CLZ	e PKPbc	Z	17:13:37.5	148.6	11.8					
CLL	e PKPbc	Z	17:13:37.8	148.7	16.6					
BRG	e PKPbc	Z	17:13:38.5	149.0	18.5					
BUG	e PKPbc	Z	17:13:39.5	149.3	6.3					
	e pPKPbc	Z	17:14:49.4							
MOX	e PKPbc	Z	17:13:39.9	149.6	14.4					
UBBA	e PKPbc	Z	17:13:40.1	149.7	11.4					
TANN	e PKPbc	Z	17:13:40.2	149.7	16.1					
ROTZ	e PKPbc	Z	17:13:42.1	150.3	15.9					
TNS	e PKPbc	Z	17:13:42.3	150.4	8.7					
GRA1	e PKPbc	Z	17:13:42.5	150.6	14.1					
WET	e PKPbc	Z	17:13:43.3	150.8	17.5					
GEC2	e PKPbc	Z	17:13:43.3	150.9	19.2					
WLF	e PKPbc	Z	17:13:44.2	151.1	4.5					
STU	e PKPbc	Z	17:13:45.1	151.8	10.6					
FUR	e PKPbc	Z	17:13:46.0	152.1	14.9					
RJOB	e PKPbc	Z	17:13:46.7	152.2	18.1					
BFO	e PKPbc	Z	17:13:46.2	152.3	9.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/11	02:30: 8.8	47.084N	143.778E	33.0G	4.4			SZGRF

Sakhalin Island, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	02:41:21.6	74.9	31.3	1.1	4	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/11	04:57:24.9	23.060N	122.600E	33.0G	5.3	4.9		SZGRF

Taiwan region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	05:09:52.2	83.2	61.4	1.2	24	5.3		

CLL	e	P	Z	05:09:53.7	83.5	60.7	1.1	37	5.5
BSEG	e	P	Z	05:09:54.5	83.6	58.9	1.2	22	5.3
TANN	e	P	Z	05:09:57.7	84.3	60.2	1.2	20	5.2
GEC2	e	P	Z	05:09:58.3	84.3	61.0	1.1	31	5.5
NRDL	e	P	Z	05:09:59.0	84.5	58.7	1.3	30	5.4
MOX	e	P	Z	05:09:59.5	84.6	59.6	1.1	23	5.3
	e	L	Z	05:51:44.0			18.3	559	5.0
WET	e	P	Z	05:09:59.8	84.7	60.4	1.4	28	5.3
CLZ	e	P	Z	05:10:00.1	84.7	58.8	1.1	40	5.6
ROTZ	e	P	Z	05:10:00.3	84.7	60.0	1.1	31	5.5
GRA1	e	P	Z	05:10:03.2	85.3	59.3	1.3	37	5.4
	e	L	Z	05:52:19.1			19.1	517	4.9
UBBA	e	P	Z	05:10:03.3	85.4	58.5	1.5	24	5.1
RJOB	e	P	Z	05:10:03.4	85.4	60.3	1.1	19	5.1
IBBN	e	P	Z	05:10:05.4	85.8	56.8	1.0	53	5.6
FUR	e	P	Z	05:10:07.0	86.1	59.2	1.4	57	5.5
BUG	e	P	Z	05:10:08.9	86.5	56.4	1.3	50	5.5
TNS	e	P	Z	05:10:09.2	86.6	57.3	1.3	28	5.2
STU	e	P	Z	05:10:10.7	86.9	57.7	1.1	14	5.0
BFO	e	P	Z	05:10:14.2	87.6	57.1	1.9	22	5.2
WLF	e	P	Z	05:10:16.9	88.1	55.5	1.2	40	5.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/11	08:45:32.2	1.720S	147.470E	64.2				SZGRF

Admiralty Islands, Papua New Guinea, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	PKPdf	Z 09:04:04.7	117.1	49.8					
BRG	e	PKPdf	Z 09:04:05.1	117.2	54.6					
CLL	e	PKPdf	Z 09:04:05.2	117.5	53.5					
NRDL	e	PKPdf	Z 09:04:06.8	118.1	50.2					
TANN	e	PKPdf	Z 09:04:07.2	118.3	53.4					
CLZ	e	PKPdf	Z 09:04:07.6	118.4	50.7					
GEC2	e	PKPdf	Z 09:04:07.7	118.5	55.2					
MOX	e	PKPdf	Z 09:04:07.4	118.6	52.4					
ROTZ	e	PKPdf	Z 09:04:08.3	118.8	53.4					
	e	pPKPdf	Z 09:04:26.9							
WET	e	PKPdf	Z 09:04:08.4	118.8	54.3					
UBBA	e	PKPdf	Z 09:04:09.1	119.2	50.8					
IBBN	e	PKPdf	Z 09:04:09.0	119.3	47.9					
GRA1	e	PKPdf	Z 09:04:09.3	119.3	52.5					
RJOB	e	PKPdf	Z 09:04:09.5	119.7	54.9					
FUR	e	PKPdf	Z 09:04:11.0	120.2	53.2					
TNS	e	PKPdf	Z 09:04:11.2	120.4	49.5					
STU	e	PKPdf	Z 09:04:12.4	120.9	50.9					
BFO	e	PKPdf	Z 09:04:13.6	121.7	50.2					
WLF	e	PKPdf	Z 09:04:14.7	121.9	47.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/11	09:40:31.1	10.882S	161.127E	60.0G				EMSC

Northwest of New Zealand

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPdf	Z	09:59:35.7	131.1	39.5					
BRG	e PKPdf	Z	09:59:37.3	131.9	45.6					
CLL	e PKPdf	Z	09:59:37.4	132.0	44.2					
NRDL	e PKPdf	Z	09:59:37.8	132.3	40.0					
CLZ	e PKPdf	Z	09:59:39.2	132.7	40.7					
TANN	e PKPdf	Z	09:59:39.8	132.8	44.1					
MOX	e PKPdf	Z	09:59:40.1	133.0	43.0					
IBBN	e PKPdf	Z	09:59:40.9	133.3	37.2					
GEC2	e PKPdf	Z	09:59:40.0	133.4	46.7					
ROTZ	e PKPdf	Z	09:59:40.2	133.4	44.3					
WET	e PKPdf	Z	09:59:41.1	133.6	45.5					
UBBA	e PKPdf	Z	09:59:41.1	133.6	40.9					
GRA1	e PKPdf	Z	09:59:41.9	133.9	43.1					
BUG	e PKPdf	Z	09:59:42.6	134.2	37.1					
RJOB	e PKPdf	Z	09:59:42.9	134.6	46.4					
TNS	e PKPdf	Z	09:59:42.9	134.7	39.3					
FUR	e PKPdf	Z	09:59:43.3	135.0	44.2					
STU	e PKPdf	Z	09:59:44.7	135.5	41.2					
WLF	e PKPdf	Z	09:59:45.9	136.0	36.8					
BFO	e PKPdf	Z	09:59:45.5	136.2	40.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/11	09:39:54.4	26.280S	172.980E	33.0G				SZGRF

Norfolk Island, Australia, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	09:59:35.8	149.5	31.8					
BRG	e PKPbc	Z	09:59:37.3	150.7	40.9					
CLL	e PKPbc	Z	09:59:37.2	150.7	38.9					
NRDL	e PKPbc	Z	09:59:38.4	150.8	32.8					
CLZ	e PKPbc	Z	09:59:38.9	151.3	33.9					
TANN	e PKPbc	Z	09:59:39.3	151.6	39.0					
IBBN	e PKPbc	Z	09:59:40.3	151.7	28.8					
MOX	e PKPbc	Z	09:59:39.6	151.8	37.3					
ROTZ	e PKPbc	Z	09:59:40.2	152.2	39.3					
UBBA	e PKPbc	Z	09:59:40.5	152.2	34.3					
GEC2	e PKPbc	Z	09:59:40.2	152.3	43.0					
WET	e PKP	Z	09:59:40.8	152.4	41.2					
	e PKPbc	Z	09:59:45.7							

BUG	e PKPbc	Z	09:59:41.4	152.6	28.7
GRA1	e PKPbc	Z	09:59:41.4	152.7	37.7
TNS	e PKPbc	Z	09:59:42.9	153.3	32.1
RJOB	e PKPbc	Z	09:59:43.4	153.5	43.0
FUR	e PKPbc	Z	09:59:46.0	153.9	39.7
STU	e PKPbc	Z	09:59:45.9	154.2	35.1
WLF	e PKPbc	Z	09:59:46.6	154.5	28.3
BFO	e PKPbc	Z	09:59:47.1	154.9	34.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/11	13:02:17.1	30.480N	130.970E	33.0G	4.9			SZGRF

Kyushu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	13:14:29.9	81.3	48.6	0.8	9	5.0		
BRG	e P	Z	13:14:31.2	81.6	50.9	0.8	3	4.5		
CLL	e P	Z	13:14:32.0	81.8	50.3	0.9	12	5.0		
NRDL	e P	Z	13:14:35.4	82.3	48.3	0.8	3	4.6		
TANN	e P	Z	13:14:36.9	82.6	49.8	1.1	5	4.6		
CLZ	e P	Z	13:14:37.5	82.7	48.4	1.0	24	5.4		
MOX	e P	Z	13:14:38.1	82.9	49.2	0.9	6	4.8		
GEC2	e P	Z	13:14:38.5	83.0	50.5	0.8	6	4.9		
ROTZ	e P	Z	13:14:40.0	83.1	49.5	0.8	11	5.1		
WET	e P	Z	13:14:39.9	83.2	50.0	1.0	5	4.7		
UBBA	e P	Z	13:14:41.3	83.5	48.0	0.7	7	5.0		
IBBN	e P	Z	13:14:41.3	83.5	46.5	0.8	19	5.4		
GRA1	e P	Z	13:14:42.6	83.7	48.8	0.9	20	5.4		
RJOB	e P	Z	13:14:44.7	84.2	49.8	0.9	6	4.8		
BUG	e P	Z	13:14:45.4	84.3	46.1	0.8	7	5.0		
TNS	e P	Z	13:14:47.2	84.6	46.9	0.8	8	5.0		
FUR	e P	Z	13:14:47.6	84.7	48.8	1.0	11	5.1		
STU	e P	Z	13:14:50.0	85.3	47.3	1.2	14	5.0		
BFO	e P	Z	13:14:53.1	86.0	46.7	0.8	2	4.3		
WLF	e P	Z	13:14:54.6	86.1	45.2	1.0	9	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/11	22:08: 4.3	36.130N	3.560W	621.5N	5.6			SZGRF

Strait of Gibraltar

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z	22:11:11.1	15.0	220.0	1.1	848			
WLF	e P	Z	22:11:14.3	15.3	211.2	0.9	2584			
STU	e P	Z	22:11:17.8	15.7	221.2	0.7	1267			
FUR	e P	Z	22:11:23.2	16.2	227.7	0.8	1204			
TNS	e P	Z	22:11:25.7	16.5	216.2	0.6	1209			

RJOB	e P	Z	22:11:27.8	16.8	232.1	0.5	4630		
BUG	e P	Z	22:11:31.3	17.1	211.0	1.3	725		
GRA1	e P	Z	22:11:32.8	17.3	223.9	0.9	652		
UBBA	e P	Z	22:11:35.3	17.6	218.7	0.6	120		
WET	e P	Z	22:11:36.4	17.7	228.8	0.7	386		
ROTZ	e P	Z	22:11:37.1	17.8	225.9	0.7	304		
GEC2	e P	Z	22:11:38.9	17.9	231.2	0.6	1611		
IBBN	e P	Z	22:11:39.6	18.0	210.8	0.8	438		
MOX	e P	Z	22:11:40.7	18.2	222.7	0.8	114		
TANN	e P	Z	22:11:42.4	18.4	225.0	0.8	526		
CLZ	e P	Z	22:11:44.4	18.6	217.6	0.8	222		
NRDL	e P	Z	22:11:48.2	19.0	215.9	0.8	83		
CLL	e P	Z	22:11:50.2	19.2	224.3	0.7	121		
BRG	e P	Z	22:11:51.4	19.4	227.1	0.7	184		
BSEG	e P	Z	22:11:58.9	20.2	214.0	0.8	164	5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/12	07:57:54.3	73.738N	20.989E	10.0N	4.7	4.0		SZGRF

Barents Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	08:03:13.1	24.4	6.6	1.2	18	4.7		
	e L	Z	08:14:26.8			19.7	441		4.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/12	10:23:37.4	55.910S	134.226E	33.0G				SZGRF

South of Australia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z	10:43:09.9	146.0	122.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/13	23:49:46.1	34.230N	96.350E	33.0G	6.2	6.8		SZGRF

Qinghai, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	23:59:48.4	59.6	71.8	0.8	164	6.1		
CLL	e P	Z	23:59:51.1	60.1	71.4	0.9	151	6.0		
TANN	e P	Z	23:59:55.9	60.7	70.5	0.9	104	5.7		
BSEG	e P	Z	23:59:55.9	60.8	70.9	0.9	285	6.1		
WET	e P	Z	23:59:57.2	60.9	70.1	0.9	118	5.7		
ROTZ	e P	Z	23:59:58.6	61.1	70.0	0.9	222	6.0		
MOX	e P	Z	23:59:58.9	61.1	70.1	1.0	117	5.7		

	e L	Z	00:31:35.8			21.5	54724		6.7
RJOB	e P	Z	00:00:00.8	61.4	69.4	1.1	245	6.3	
CLZ	e P	Z	00:00:01.4	61.4	69.9	0.9	261	6.5	
GRA1	e P	Z	00:00:02.9	61.7	69.4	0.8	245	6.5	
	e L	Z	00:29:14.0			18.6	69509		6.8
FUR	e P	Z	00:00:06.1	62.2	68.6	0.9	468	6.7	
IBBN	e P	Z	00:00:10.7	62.8	68.4	0.9	143	6.1	
TNS	e P	Z	00:00:12.4	63.1	67.8	0.9	110	6.0	
STU	e P	Z	00:00:12.9	63.3	67.6	0.9	190	6.2	
BUG	e P	Z	00:00:14.1	63.4	67.6	0.9	139	6.2	
BFO	e P	Z	00:00:17.0	63.9	66.9				
WLF	e P	Z	00:00:23.0	64.7	66.1	0.9	478	6.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/13	08:37:38.5	22.380S	178.360W	33.0N				SZGRF

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	08:57:19.5	147.8	15.2					
NRDL	e PKPbc	Z	08:57:23.3	149.2	15.4					
CLL	e PKPbc	Z	08:57:24.9	149.8	21.2					
CLZ	e PKPbc	Z	08:57:25.2	149.8	16.2					
BRG	e PKPbc	Z	08:57:25.5	149.9	23.2					
BUG	e PKPbc	Z	08:57:26.9	150.6	10.7					
MOX	e PKPbc	Z	08:57:27.3	150.7	19.1					
TANN	e PKPbc	Z	08:57:27.5	150.7	20.8					
ROTZ	e PKPbc	Z	08:57:29.3	151.4	20.7					
TNS	e PKPbc	Z	08:57:30.4	151.7	13.3					
WET	e PKPbc	Z	08:57:30.1	151.8	22.4					
GEC2	e PKPbc	Z	08:57:30.3	151.9	24.2					
WLF	e PKPbc	Z	08:57:32.0	152.5	9.1					
RJOB	e PKPbc	Z	08:57:32.9	153.1	23.3					
BFO	e PKPbc	Z	08:57:33.5	153.5	14.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/13	20:14:59.1	8.560N	91.580E	10.0N	4.9	4.2		SZGRF

Nicobar Islands, India, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	20:26:45.0	75.6	94.2	0.9	10	5.0		
GEC2	e P	Z	20:26:45.1	75.6	93.5	0.9	13	5.1		
RJOB	e P	Z	20:26:47.7	76.1	92.5	1.0	9	4.9		
WET	e P	Z	20:26:48.2	76.2	92.9	0.9	6	4.8		
CLL	e P	Z	20:26:48.2	76.2	93.5	1.0	11	4.9		
TANN	e P	Z	20:26:50.1	76.5	92.9	1.1	9	4.8		

ROTZ	e P	Z	20:26:51.4	76.6	92.5	0.9	13	5.0	
MOX	e P	Z	20:26:53.1	77.0	92.3	0.8	6	4.8	
	e L	Z	21:06:10.6			19.6	140		4.3
FUR	e P	Z	20:26:53.5	77.2	91.5	1.1	20	5.2	
GRA1	e P	Z	20:26:54.8	77.3	91.8	1.0	23	5.3	
	e L	Z	21:03:49.0			20.3	93		4.1
CLZ	e P	Z	20:26:57.7	77.9	91.6	0.8	14	5.1	
NRDL	e P	Z	20:26:58.4	78.0	91.5	1.3	24	5.2	
TNS	e P	Z	20:27:04.4	79.0	89.7	0.9	11	4.9	
BFO	e P	Z	20:27:04.6	79.1	89.3	0.9	8	4.7	
IBBN	e P	Z	20:27:06.6	79.5	89.6	1.0	7	4.5	
BUG	e P	Z	20:27:08.4	79.8	89.1	1.0	11	4.7	
WLF	e P	Z	20:27:12.9	80.5	87.9	0.9	11	4.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/13	21:39: 7.3	27.588N	103.888E	33.0G	4.8	4.3		SZGRF

Yunnan, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	21:50:25.1	70.9	69.5	0.8	7	4.8		
	e L	Z	22:19:54.0			19.2	172		4.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/14	00:01:21.5	34.000N	97.250E	33.0G	4.7			SZGRF

Qinghai, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	00:11:30.2	60.3	71.3	0.6	2	4.1		
CLL	e P	Z	00:11:34.3	60.8	71.0	1.0	5	4.3		
GEC2	e P	Z	00:11:36.6	61.2	70.1	1.0	4	4.3		
TANN	e P	Z	00:11:37.8	61.4	70.1	0.8	3	4.5		
BSEG	e P	Z	00:11:39.4	61.4	70.5	0.8	4	4.7		
WET	e P	Z	00:11:39.8	61.6	69.8	0.9	4	4.6		
ROTZ	e P	Z	00:11:41.8	61.8	69.6	1.1	11	5.0		
MOX	e P	Z	00:11:41.6	61.8	69.7	1.0	3	4.5		
NRDL	e P	Z	00:11:43.8	62.0	69.6	1.0	12	5.1		
RJOB	e P	Z	00:11:44.5	62.1	69.0	0.8	4	4.8		
CLZ	e P	Z	00:11:42.9	62.1	69.5	0.7	3	4.6		
GRA1	e P	Z	00:11:45.9	62.4	69.0	0.8	8	4.9		
FUR	e P	Z	00:11:48.9	62.9	68.3	1.0	23	5.3		
TNS	e P	Z	00:11:55.4	63.8	67.4	0.9	4	4.6		
BFO	e P	Z	00:11:59.8	64.7	66.5	0.9	4	4.6		
WLF	e P	Z	00:12:05.0	65.4	65.7	0.8	8	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/14	00:12:32.9	33.340N	95.930E	33.0N	4.6			SZGRF

Qinghai, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	00:22:37.8	60.0	72.8	0.7	4	4.5		
CLL	e P	Z	00:22:40.4	60.4	72.4	0.7	3	4.2		
GEC2	e P	Z	00:22:43.4	60.8	71.5	0.8	3	4.2		
TANN	e P	Z	00:22:45.0	61.0	71.5	0.9	3	4.1		
BSEG	e P	Z	00:22:46.3	61.2	71.9	1.0	9	4.5		
WET	e P	Z	00:22:46.3	61.2	71.2	1.1	5	4.3		
ROTZ	e P	Z	00:22:47.9	61.4	71.0	0.8	5	4.8		
MOX	e P	Z	00:22:47.6	61.5	71.1	1.0	4	4.5		
NRDL	e P	Z	00:22:50.1	61.8	71.0	0.8	7	4.9		
CLZ	e P	Z	00:22:50.3	61.8	70.9	0.9	7	4.9		
GRA1	e P	Z	00:22:52.0	62.0	70.4	0.9	6	4.8		
BFO	e P	Z	00:23:06.1	64.3	67.9	1.0	6	4.8		
WLF	e P	Z	00:23:12.2	65.1	67.1	0.8	11	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/14	01:25:24.8	33.820N	94.860E	33.0G	5.5	6.1		SZGRF

Qinghai, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	01:35:27.1	59.0	73.1	1.0	32	5.3		
CLL	e P	Z	01:35:30.2	59.5	72.7	1.1	51	5.5		
GEC2	e P	Z	01:35:32.8	59.8	71.8	1.1	37	5.3		
TANN	e P	Z	01:35:34.3	60.1	71.8	1.1	33	5.3		
WET	e P	Z	01:35:35.6	60.2	71.4	1.2	42	5.4		
BSEG	e P	Z	01:35:35.7	60.2	72.3	1.1	93	5.7		
ROTZ	e P	Z	01:35:37.3	60.4	71.3	1.1	79	5.5		
MOX	e P	Z	01:35:37.4	60.5	71.4	1.2	46	5.2		
	e L	Z	02:07:20.6			18.0	15910		6.2	
RJOB	e P	Z	01:35:39.1	60.7	70.6	1.1	44	5.2		
NRDL	e P	Z	01:35:40.0	60.8	71.4	1.0	76	5.5		
CLZ	e P	Z	01:35:40.4	60.9	71.2	1.0	61	5.4		
GRA1	e P	Z	01:35:41.6	61.1	70.7	1.1	66	5.4		
	e L	Z	02:04:05.3			18.3	10313		6.0	
UBBA	e P	Z	01:35:44.4	61.4	70.4	1.2	33	5.4		
FUR	e P	Z	01:35:44.8	61.5	69.9	1.1	159	6.1		
IBBN	e P	Z	01:35:48.9	62.2	69.7	1.0	40	5.6		
TNS	e P	Z	01:35:51.3	62.5	69.1	1.1	29	5.3		
STU	e P	Z	01:35:51.9	62.6	68.9	1.2	61	5.6		
BUG	e P	Z	01:35:52.7	62.8	68.9	1.1	41	5.5		
BFO	e P	Z	01:35:55.8	63.3	68.2	1.0	33	5.4		
WLF	e P	Z	01:36:02.0	64.1	67.4	1.1	123	6.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/15	01:47:37.2	43.493N	12.436E	2.0G			4.1	EMSC

Central Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RJOB	e Pn	Z	01:48:43.2	4.3	183.5					3.9
FUR	e Pn	Z	01:48:50.2	4.7	169.8					4.3
GEC2	e Pn	Z	01:48:56.5	5.4	189.8					3.8
BFO	e Pn	Z	01:49:02.4	5.6	147.9					3.8
WET	e Pn	Z	01:49:01.0	5.7	183.3					4.1
GRA1	e Pn	Z	01:49:15.2	6.3	171.9					4.3
TANN	e Pn	Z	01:49:18.7	6.9	180.2					4.1
MOX	e Pn	Z	01:49:23.7	7.2	175.2					4.1
TNS	e Pn	Z	01:49:26.8	7.3	156.5					4.0
CLL	e Pn	Z	01:49:30.3	7.8	183.0					4.2

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/15	18:44:47.0	46.097N	12.517E	10.0G			3.1	SZGRF

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
KBA	e Pn	Z	18:45:07.8	1.1	210.4					2.5
	e Sg	N	18:45:24.0							
WTTA	e Pn	Z	18:45:09.5	1.3	152.3					3.0
	e Sg	E	18:45:29.1							
OBKA	e Pn	Z	18:45:13.7	1.5	254.4					3.2
RJOB	e Pn	Z	18:45:16.7	1.7	186.7					2.8
	e Sg	N	18:45:40.9							
MOA	e Pn	Z	18:45:19.2	2.1	214.9					2.5
DAVA	e Pn	Z	18:45:24.2	2.2	122.4					3.1
FUR	e Pn	Z	18:45:26.6	2.2	157.3					3.6
	e Sg	N	18:45:56.8							
GEC2	e Pn	Z	18:45:31.9	2.9	196.7					2.8
	e Sg	N	18:46:18.2							
WET	e Pn	Z	18:45:34.3	3.1	184.7					
BFO	e Pn	Z	18:45:42.2	3.6	126.6					3.4
	e Sg	E	18:46:41.3							
ROTZ	e Pn	Z	18:45:42.3	3.7	176.6					
TANN	e Pn	Z	18:45:52.3	4.3	179.5					3.5
MOX	e Pn	Z	18:45:54.8	4.6	172.2					3.5
	e Sg	E	18:47:11.7							
TNS	e Pn	Z	18:46:01.4	4.9	145.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/15	23:59:27.0	40.500N	114.500W	33.0G	4.9			SZGRF

Nevada, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	00:11:06.1	74.4	319.6	1.1	30	5.2		
IBBN	e P	Z	00:11:08.1	74.6	318.2	1.2	42	5.4		
BUG	e P	Z	00:11:10.4	75.0	318.0	1.2	26	5.1		
NRDL	e P	Z	00:11:11.9	75.4	319.7	1.2	19	5.1		
CLZ	e P	Z	00:11:15.8	76.0	320.0	1.4	33	5.3		
TNS	e P	Z	00:11:18.8	76.4	319.0	1.3	18	5.1		
UBBA	e P	Z	00:11:19.9	76.6	319.9	1.6	22	5.0		
MOX	e P	Z	00:11:23.7	77.4	321.0	1.3	14	4.9		
CLL	e P	Z	00:11:23.4	77.4	321.8	1.2	12	4.9		
BFO	e P	Z	00:11:25.4	77.8	319.2	1.2	11	4.9		
TANN	e P	Z	00:11:26.8	77.9	321.6	1.1	9	4.8		
GRA1	e P	Z	00:11:27.4	78.0	320.9	1.3	20	5.1		
BRG	e P	Z	00:11:28.2	78.1	322.5	1.3	7	4.7		
ROTZ	e P	Z	00:11:29.9	78.3	321.5	1.3	14	4.8		
WET	e P	Z	00:11:33.0	79.1	322.0	1.6	12	4.7		
FUR	e P	Z	00:11:34.3	79.2	321.1	1.2	15	4.8		
GEC2	e P	Z	00:11:36.1	79.7	322.6	1.2	7	4.5		
RJOB	e P	Z	00:11:38.5	80.2	322.1	1.0	5	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/16	01:45:17.8	54.910N	161.320W	33.0G	5.6	5.2		SZGRF

Alaska Peninsula, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	01:56:33.4	70.9	354.9	1.1	106	5.9		
NRDL	e P	Z	01:56:41.5	72.4	354.8	1.1	77	5.7		
IBBN	e P	Z	01:56:42.0	72.4	353.4	1.1	107	5.9		
CLZ	e P	Z	01:56:46.0	73.0	355.0	1.1	110	5.9		
BUG	e P	Z	01:56:46.4	73.2	353.2	1.1	98	5.8		
CLL	e P	Z	01:56:49.0	73.7	356.6	1.1	70	5.7		
UBBA	e P	Z	01:56:51.4	74.0	354.8	1.8	61	5.3		
BRG	e P	Z	01:56:52.0	74.1	357.2	1.2	75	5.6		
MOX	e P	Z	01:56:52.9	74.3	355.8	1.1	95	5.7		
TNS	e P	Z	01:56:54.3	74.5	353.9	1.0	50	5.5		
TANN	e P	Z	01:56:54.7	74.5	356.3	1.7	80	5.5		
WLF	e P	Z	01:56:56.8	74.9	352.6	1.1	66	5.6		
ROTZ	e P	Z	01:56:58.5	75.2	356.2	1.1	49	5.5		
GRA1	e P	Z	01:56:58.6	75.2	355.6	1.0	60	5.6		
	e L	Z	02:40:03.1			18.1	1028		5.2	
WET	e P	Z	01:57:02.2	75.8	356.6	1.3	55	5.5		
STU	e P	Z	01:57:02.7	76.0	354.4	1.0	46	5.6		

GEC2	e P	Z	01:57:03.8	76.2	357.1	1.0	40	5.5	
BFO	e P	Z	01:57:04.9	76.4	353.9	1.6	75	5.6	
FUR	e P	Z	01:57:07.1	76.7	355.6	1.0	66	5.7	
RJOB	e P	Z	01:57:09.8	77.2	356.5	0.8	43	5.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/16	05:28:48.0	17.240S	173.100W	33.0N				SZGRF

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z	05:48:20.5	144.9	1.4					
CLZ	e PKPbc	Z	05:48:21.9	145.3	5.8					
CLL	e PKPbc	Z	05:48:23.2	145.6	10.3					
BRG	e PKPbc	Z	05:48:23.5	145.9	12.1					
UBBA	e PKPbc	Z	05:48:24.9	146.3	5.3					
MOX	e PKPbc	Z	05:48:25.0	146.4	8.2					
TANN	e PKPbc	Z	05:48:25.8	146.5	9.7					
TNS	e PKPbc	Z	05:48:27.3	147.0	2.7					
ROTZ	e PKPbc	Z	05:48:27.6	147.2	9.4					
GEC2	e PKPbc	Z	05:48:29.7	147.9	12.3					
BFO	e PKPbc	Z	05:48:32.5	148.9	2.6					
RJOB	e PKPbc	Z	05:48:33.0	149.1	11.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/16	21:22:24.9	24.450S	177.310W	33.0N				SZGRF

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPbc	Z	21:42:16.9	152.0	20.3					
	e PKPab	Z	21:42:25.9							
BRG	e PKPbc	Z	21:42:17.5	152.2	22.4					
FBE	e PKPbc	Z	21:42:17.8	152.3	21.2					
	e PKPab	Z	21:42:27.6							
MOX	e PKPbc	Z	21:42:19.3	152.9	18.1					
PLN	e PKPbc	Z	21:42:19.1	153.0	19.2					
WERD	e PKPbc	Z	21:42:19.2	153.0	19.5					
	e PKPab	Z	21:42:30.1							
WERN	e PKPab	Z	21:42:30.8	153.1	19.8					
ROHR	e PKPbc	Z	21:42:19.5	153.2	19.7					
	e PKPab	Z	21:42:31.1							
GRA1	e PKPbc	Z	21:42:20.8	153.9	17.9					
GEC2	e PKPbc	Z	21:42:21.5	154.1	23.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/16	22:44:13.4	24.370S	178.610W	164.3				SZGRF

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	23:03:44.8	149.7	16.3					
NRDL	e PKPbc	Z	23:03:48.1	151.1	16.6					
CLL	e PKPbc	Z	23:03:49.7	151.6	22.7					
IBBN	e PKPbc	Z	23:03:49.2	151.6	12.3					
	e PKPab	Z	23:03:57.5							
CLZ	e PKPbc	Z	23:03:50.0	151.7	17.4					
BRG	e PKPbc	Z	23:03:50.3	151.8	24.8					
MOX	e PKPbc	Z	23:03:51.8	152.6	20.5					
UBBA	e PKPbc	Z	23:03:51.9	152.7	17.3					
ROTZ	e PKPbc	Z	23:03:53.7	153.2	22.3					
	e PKPab	Z	23:04:05.0							
GRA1	e PKPab	Z	23:04:06.1	153.5	20.4					
TNS	e PKPab	Z	23:04:05.7	153.6	14.6					
WET	e PKPab	Z	23:04:06.9	153.6	24.1					
GEC2	e PKPbc	Z	23:03:54.5	153.7	26.0					
	e PKPab	Z	23:04:07.3							
WLF	e PKPbc	Z	23:03:55.1	154.4	10.1					
	e PKPab	Z	23:04:09.2							
	e pPKPab	Z	23:04:51.0							
STU	e PKPab	Z	23:04:10.9	154.8	16.9					
RJOB	e PKPab	Z	23:04:13.1	154.9	25.2					
FUR	e PKPab	Z	23:04:12.2	155.0	21.7					
BFO	e PKPab	Z	23:04:13.4	155.4	15.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/17	00:58:52.9	31.626N	92.857E	10.0N	4.9	4.7		SZGRF

Xizang

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	01:08:54.4	59.3	76.3	1.5	20	4.9		
CLL	e P	Z	01:08:57.3	59.8	75.9	1.5	16	4.8		
GEC2	e P	Z	01:08:59.3	60.0	75.0	1.5	21	4.9		
WET	e P	Z	01:09:02.4	60.4	74.6	1.0	8	4.5		
ROTZ	e P	Z	01:09:04.4	60.7	74.5	1.3	19	4.8		
BSEG	e P	Z	01:09:04.2	60.7	75.4	0.8	15	4.9		
MOX	e P	Z	01:09:04.6	60.8	74.6	1.6	21	4.7		
RJOB	e P	Z	01:09:05.3	60.9	73.8	0.8	7	4.5		
NRDL	e P	Z	01:09:07.9	61.2	74.5	1.2	18	4.8		
CLZ	e P	Z	01:09:07.7	61.2	74.4	0.9	22	5.0		
GRA1	e P	Z	01:09:08.7	61.3	73.8	1.1	19	4.8		
	e L	Z	01:35:41.4			20.6	497		4.7	
FUR	e P	Z	01:09:11.3	61.7	73.0	0.9	19	5.3		

TNS	e P	Z	01:09:18.7	62.9	72.2	0.9	7	4.8
BUG	e P	Z	01:09:20.9	63.2	72.0	1.8	43	5.3
BFO	e P	Z	01:09:22.9	63.5	71.2	1.3	12	5.0
WLF	e P	Z	01:09:29.8	64.4	70.4	1.2	33	5.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/17	23:15:24.2	6.700S	147.300E	70.0				NEIC

Eastern New Guinea, Papua New Guinea, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKP	Z	23:34:09.3	121.4	57.8					
	e PKKP	Z	23:44:10.5							
BSEG	e PKP	Z	23:34:09.7	121.5	52.6					
	e PKKP	Z	23:44:10.5							
CLL	e PKP	Z	23:34:09.6	121.6	56.6					
	e PKKP	Z	23:44:09.9							
NRDL	e PKP	Z	23:34:11.6	122.4	53.1					
	e PKKP	Z	23:44:08.1							
GEC2	e PKP	Z	23:34:11.7	122.6	58.6					
	e PKKP	Z	23:44:05.7							
CLZ	e PKP	Z	23:34:12.2	122.7	53.7					
	e PKKP	Z	23:44:06.5							
MOX	e PKP	Z	23:34:11.9	122.7	55.6					
	e PKKP	Z	23:44:05.7							
WET	e PKP	Z	23:34:12.4	122.9	57.6					
	e PKKP	Z	23:44:05.0							
ROTZ	e PKP	Z	23:34:12.5	122.9	56.6					
	e PKKP	Z	23:44:05.0							
GRA1	e PKP	Z	23:34:13.4	123.5	55.7					
	e PKKP	Z	23:44:02.8							
IBBN	e PKP	Z	23:34:13.9	123.7	50.7					
	e PKKP	Z	23:44:02.1							
RJOB	e PKP	Z	23:34:13.3	123.7	58.3					
	e PKKP	Z	23:44:01.8							
FUR	e PKP	Z	23:34:15.0	124.3	56.6					
	e PKKP	Z	23:43:59.7							
BUG	e PKP	Z	23:34:15.2	124.4	50.7					
	e PKKP	Z	23:43:59.1							
TNS	e PKP	Z	23:34:15.8	124.6	52.6					
	e PKKP	Z	23:43:58.1							
STU	e PKP	Z	23:34:16.5	125.1	54.2					
	e PKKP	Z	23:43:56.4							
BFO	e PKP	Z	23:34:17.6	125.8	53.5					
	e PKKP	Z	23:43:53.6							
WLF	e PKP	Z	23:34:19.3	126.1	50.5					
	e PKKP	Z	23:43:52.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/18	01:38:27.0	18.000N	81.600W	10.0	4.8	4.8		NEIC

North of Honduras

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	01:50:28.7	78.1	283.9	1.4	10	4.8		
	e L	Z	02:19:50.0			21.0	463		4.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/18	05:33:49.3	15.200S	172.300W	35.0		4.6		NEIC

Samoa Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKP	Z	05:53:14.9	142.7	3.8					
CLZ	e PKP	Z	05:53:17.1	143.3	4.3					
CLL	e PKP	Z	05:53:18.3	143.6	8.7					
BUG	e PKP	Z	05:53:17.7	143.8	359.3					
MOX	e PKP	Z	05:53:20.7	144.4	6.5					
TNS	e PKP	Z	05:53:22.2	145.0	1.3					
ROTZ	e PKP	Z	05:53:23.4	145.2	7.6					
GRA1	e PKP	Z	05:53:23.7	145.4	6.0					
	e pPKP	Z	05:53:36.7							
	e L	Z	07:07:52.7			20.6	102		4.6	
WLF	e PKP	Z	05:53:24.0	145.5	357.4					
WET	e PKP	Z	05:53:24.7	145.8	8.9					
GEC2	e PKP	Z	05:53:25.6	146.0	10.4					
STU	e PKP	Z	05:53:26.9	146.4	2.6					
BFO	e PKP	Z	05:53:28.0	146.9	1.1					
	e pPKP	Z	05:53:40.8							
FUR	e PKP	Z	05:53:28.4	146.9	6.3					
RJOB	e PKP	Z	05:53:29.2	147.2	9.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/18	13:31: 6.3	15.500N	90.500W	60.3	5.2			SZGRF

Guatemala

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	13:43:23.0	82.4	285.1	1.9	52	5.4		
BUG	e P	Z	13:43:23.8	82.7	285.7	1.2	24	5.3		
IBBN	e P	Z	13:43:24.2	82.7	286.0	1.5	35	5.4		
BSEG	e P	Z	13:43:29.1	83.7	287.8	1.1	39	5.5		
TNS	e P	Z	13:43:29.5	83.7	286.7	1.3	50	5.6		
NRDL	e P	Z	13:43:30.9	84.0	287.8	1.3	28	5.3		

BFO	e P	Z	13:43:30.9	84.2	286.8	1.2	23	5.3
CLZ	e P	Z	13:43:33.3	84.4	288.0	1.2	30	5.4
	e pP	Z	13:43:50.7					
STU	e P	Z	13:43:33.8	84.6	287.4	1.0	24	5.4
MOX	e P	Z	13:43:37.7	85.5	289.1	1.2	11	4.9
	e pP	Z	13:43:54.2					
GRA1	e P	Z	13:43:39.2	85.6	288.9	1.3	34	5.3
	e pP	Z	13:43:55.7					
FUR	e P	Z	13:43:41.8	86.1	289.0	1.6	42	5.3
CLL	e P	Z	13:43:41.1	86.1	290.1	1.2	8	4.7
ROTZ	e P	Z	13:43:41.3	86.2	289.6	1.3	11	4.8
WET	e P	Z	13:43:44.7	86.8	290.1	1.4	21	5.1
	e pP	Z	13:44:01.3					
BRG	e P	Z	13:43:44.8	86.8	290.8	1.2	8	4.7
RJOB	e P	Z	13:43:46.3	87.2	290.1	1.4	11	4.8
GEC2	e P	Z	13:43:47.3	87.4	290.7	1.2	9	5.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/18	20:16:51.2	18.613N	66.416W	83.9	5.1			SZGRF

Puerto Rico region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	20:27:41.4	68.0	273.2	1.1	14	5.1		
	e pP	Z	20:28:02.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/18	20:28:48.1	34.710N	67.629E	10.0N	5.3	5.0		SZGRF

Southeastern Afghanistan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	20:36:34.4	41.5	91.6	1.0	36	5.1		
GEC2	e P	Z	20:36:35.6	41.6	89.1	1.3	42	5.0		
CLL	e P	Z	20:36:38.7	42.1	91.3	1.0	24	4.9		
WET	e P	Z	20:36:39.7	42.2	88.8	2.1	65	5.0		
RJOB	e P	Z	20:36:41.0	42.3	87.2	2.2	169	5.4		
ROTZ	e P	Z	20:36:44.3	42.6	89.0	1.3	70	5.2		
MOX	e P	Z	20:36:46.6	43.0	89.5	2.1	209	5.5		
GRA1	e P	Z	20:36:49.6	43.2	88.2	1.0	94	5.5		
	e L	Z	20:56:07.4			22.0	1926		5.0	
FUR	e P	Z	20:36:49.2	43.3	86.6	1.4	83	5.3		
CLZ	e P	Z	20:36:52.5	43.7	89.8	2.1	210	5.5		
BSEG	e P	Z	20:36:52.7	43.8	92.0	1.1	50	5.1		
NRDL	e P	Z	20:36:53.7	43.9	90.3	1.5	66	5.1		
STU	e P	Z	20:37:00.0	44.6	85.8	1.6	178	5.7		
TNS	e P	Z	20:37:03.1	45.0	86.7	1.4	35	5.1		

BFO	e P	Z	20:37:04.3	45.2	84.7	2.0	89	5.4	
IBBN	e P	Z	20:37:05.2	45.3	88.3	0.9	73	5.6	
BUG	e P	Z	20:37:08.0	45.7	87.0	1.3	56	5.4	
WLF	e P	Z	20:37:15.6	46.5	84.5	1.2	89	5.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/19	01:26:43.6	35.102N	70.176E	12.9	4.4	3.7		SZGRF

Hindu Kush, Afghanistan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	01:34:56.1	44.6	85.9	1.4	7	4.4		
	e pP	Z	01:34:59.5							
	e L	Z	01:54:48.5			18.7	92		3.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/20								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	02:16:40.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/20	03:19:40.4	37.500N	20.600E	10.0N				NOA

Ionian Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:23:06.0	13.9	147.5	0.9	8			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/20	03:40:27.1	39.198N	92.536E	33.0N	4.5			SZGRF

Southern Xinjiang, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:50:03.5	56.1	67.4	0.8	4	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/21	03:38:16.1	15.978N	93.101W	33.0G	4.6			SZGRF

Near coast of Chiapas, Mexico

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

	GRA1	e P	Z	03:50:57.4	86.8	291.1	1.3	6	4.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/21	17:20:29.8	15.100S	173.300W	35.0		5.9		NEIC

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	17:40:03.6	145.2	7.7					
	e L	Z	18:44:48.1			20.8	2245		5.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/21	18:03:56.2	1.341S	101.573E	33.0G	4.8			SZGRF

Southern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	18:16:58.6	91.2	90.6	1.4	8	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/22								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	03:51:46.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/22	04:02:38.1	15.570S	171.680W	35.5		4.9		SZGRF

Samoa Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WERD	e PKPbc	Z	04:22:10.6	145.0	6.7					
	e pPKPbc	Z	04:22:21.3							
GUNZ	e PKPbc	Z	04:22:10.8	145.1	6.8					
WERN	e PKPbc	Z	04:22:10.6	145.1	6.8					
	e pPKPbc	Z	04:22:21.7							
ROHR	e PKPbc	Z	04:22:11.5	145.2	6.8					
TNS	e PKPbc	Z	04:22:11.7	145.3	0.2					
	e pPKPbc	Z	04:22:22.7							
ROTZ	e PKPbc	Z	04:22:12.5	145.7	6.6					
GRA1	e PKPbc	Z	04:22:13.6	145.8	5.0					
	e pPKPbc	Z	04:22:24.1							
	e L	Z	05:28:03.6			21.7	246		4.9	
WLF	e pPKPbc	Z	04:22:24.6	145.9	356.3					

WET	e PKPbc	Z	04:22:14.8	146.2	7.9	
GEC2	e PKPbc	Z	04:22:15.3	146.4	9.4	
	e pPKPbc	Z	04:22:25.6			
STU	e pPKPbc	Z	04:22:26.7	146.8	1.5	
BFO	e PKPbc	Z	04:22:17.8	147.2	0.0	
	e pPKPbc	Z	04:22:28.3			
FUR	e PKPbc	Z	04:22:18.2	147.3	5.3	
RJOB	e PKPbc	Z	04:22:19.1	147.6	8.1	
	e pPKPbc	Z	04:22:29.5			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/22	16:38:18.1	51.462N	159.326E	35.0	4.8	4.6		SZGRF

Off east coast of Kamchatka Peninsula, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	16:49:50.1	75.3	19.9	0.9	6	4.8		
	e pP	Z	16:50:00.1							
	e L	Z	17:29:06.4			18.4	287		4.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/22	18:32:16.7	6.500S	146.400E	110.0				GSRC

Eastern New Guinea, Papua New Guinea, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKP	Z	18:50:56.9	120.7	58.5					
BSEG	e PKP	Z	18:50:57.3	120.9	53.4					
CLL	e PKP	Z	18:50:57.2	121.0	57.4					
TANN	e PKP	Z	18:50:59.0	121.8	57.3					
NRDL	e PKP	Z	18:50:59.2	121.8	53.9					
GEC2	e PKP	Z	18:50:59.2	121.9	59.3					
	e pPKP	Z	18:51:31.0							
CLZ	e PKP	Z	18:50:59.8	122.1	54.5					
MOX	e PKP	Z	18:50:59.5	122.1	56.4					
WET	e PKP	Z	18:51:00.0	122.2	58.4					
ROTZ	e PKP	Z	18:51:00.0	122.3	57.4					
GRA1	e PKP	Z	18:51:01.0	122.8	56.5					
	e pPKP	Z	18:51:33.1							
UBBA	e PKP	Z	18:51:01.1	122.8	54.6					
RJOB	e PKP	Z	18:51:00.9	123.0	59.1					
IBBN	e PKP	Z	18:51:01.5	123.1	51.6					
FUR	e PKP	Z	18:51:02.5	123.6	57.4					
BUG	e PKP	Z	18:51:02.8	123.8	51.5					
TNS	e PKP	Z	18:51:03.4	124.0	53.4					
STU	e PKP	Z	18:51:04.1	124.4	54.9					
BFO	e PKP	Z	18:51:05.2	125.2	54.3					

WLF	e PKP	Z	18:51:06.8	125.5	51.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/22	19:58:45.8	45.230N	148.230E	33.0G	5.3	4.8		SZGRF

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	20:10:24.0	74.6	29.3	1.5	47	5.3		
NRDL	e P	Z	20:10:31.2	75.9	29.0	1.7	43	5.3		
CLL	e P	Z	20:10:31.7	76.0	30.7	1.5	76	5.6		
BRG	e P	Z	20:10:32.2	76.1	31.3	1.5	27	5.2		
CLZ	e P	Z	20:10:34.4	76.4	29.1	1.5	98	5.7		
IBBN	e P	Z	20:10:35.9	76.7	27.4	1.3	43	5.4		
TANN	e P	Z	20:10:37.4	77.0	30.3	1.8	33	5.2		
MOX	e P	Z	20:10:37.7	77.0	29.8	1.4	38	5.3		
UBBA	e P	Z	20:10:39.8	77.4	28.7	0.9	15	5.1		
ROTZ	e P	Z	20:10:41.3	77.6	30.0	1.5	38	5.3		
BUG	e P	Z	20:10:40.9	77.6	27.0	1.6	70	5.5		
GEC2	e P	Z	20:10:42.3	77.9	30.9	1.1	11	4.9		
WET	e P	Z	20:10:42.9	77.9	30.4	1.4	44	5.4		
GRA1	e P	Z	20:10:43.5	78.0	29.4	1.1	50	5.6		
	e L	Z	20:50:19.1			19.6	398		4.8	
TNS	e P	Z	20:10:45.2	78.4	27.7	1.5	33	5.1		
RJOB	e P	Z	20:10:49.8	79.2	30.2	1.0	14	4.8		
FUR	e P	Z	20:10:50.3	79.3	29.3	1.3	49	5.3		
STU	e P	Z	20:10:51.1	79.4	28.0	0.9	21	5.1		
BFO	e P	Z	20:10:54.2	80.1	27.4	1.5	23	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/23	01:59:10.7	32.300N	142.500E	10.0	4.7			GSRC

Southeast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	02:11:50.1	85.3	41.5	1.2	7	4.7		
CLL	e P	Z	02:11:50.2	85.4	40.9	1.2	15	5.0		
FBE	e P	Z	02:11:51.4	85.5	41.1	1.2	19	5.1		
NEUB	e P	Z	02:11:53.4	85.9	40.0	1.1	11	4.9		
CLZ	e P	Z	02:11:54.0	86.0	38.9	1.2	13	4.9		
GUNZ	e P	Z	02:11:55.6	86.3	40.3	1.0	4	4.5		
WERN	e P	Z	02:11:55.8	86.4	40.4	0.9	4	4.5		
MOX	e P	Z	02:11:55.8	86.4	39.8	1.6	10	4.7		
ROHR	e P	Z	02:11:56.0	86.5	40.3	1.1	2	4.1		
ROTZ	e P	Z	02:11:58.6	86.9	40.2	1.2	4	4.4		
BFO	e P	Z	02:12:10.4	89.6	37.3	1.1	4	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/23	06:52:14.7	20.980S	178.630W	600.0G				SZGRF

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	07:10:49.1	146.3	15.2					
NRDL	e PKPbc	Z	07:10:52.7	147.8	15.4					
IBBN	e PKPbc	Z	07:10:54.0	148.3	11.4					
	e PKPab	Z	07:10:58.5							
CLL	e PKPbc	Z	07:10:54.1	148.3	21.0					
CLZ	e PKPbc	Z	07:10:54.5	148.4	16.2					
	e PKPab	Z	07:10:59.7							
BRG	e PKPbc	Z	07:10:54.6	148.5	22.9					
	e PKPab	Z	07:11:00.3							
BUG	e PKPbc	Z	07:10:56.2	149.2	10.8					
	e PKPab	Z	07:11:02.8							
MOX	e PKPbc	Z	07:10:56.4	149.3	19.0					
	e PKPab	Z	07:11:03.3							
TANN	e PKPbc	Z	07:10:56.6	149.3	20.6					
UBBA	e PKPbc	Z	07:10:56.6	149.4	16.0					
	e PKPab	Z	07:11:03.9							
ROTZ	e PKPbc	Z	07:10:58.3	150.0	20.5					
TNS	e PKPbc	Z	07:10:58.8	150.2	13.4					
	e PKPab	Z	07:11:07.7							
GRA1	e PKPbc	Z	07:10:59.0	150.2	18.8					
WET	e PKPbc	Z	07:10:59.1	150.4	22.1					
	e PKPab	Z	07:11:08.6							
GEC2	e PKPbc	Z	07:10:59.2	150.4	23.8					
WLF	e PKPbc	Z	07:11:01.3	151.1	9.3					
	e PKPab	Z	07:11:12.2							
STU	e PKPbc	Z	07:11:01.7	151.5	15.5					
FUR	e PKPbc	Z	07:11:02.1	151.7	19.8					
RJOB	e PKPbc	Z	07:11:01.6	151.7	23.0					
	e PKPab	Z	07:11:14.6							
BFO	e PKPbc	Z	07:11:02.6	152.1	14.0					
	e PKPab	Z	07:11:15.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/23	09:25:58.7	6.700S	147.400E	62.0				NEIC

Eastern New Guinea, Papua New Guinea, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKPdf	Z	09:44:45.0	121.4	57.7					
BSEG	e PKPdf	Z	09:44:45.3	121.5	52.5					
CLL	e PKPdf	Z	09:44:45.2	121.7	56.5					

NRDL	e PKPdf	Z	09:44:47.2	122.5	53.0
TANN	e PKPdf	Z	09:44:47.1	122.5	56.4
GEC2	e PKPdf	Z	09:44:47.4	122.6	58.5
CLZ	e PKPdf	Z	09:44:47.9	122.7	53.6
MOX	e PKPdf	Z	09:44:47.6	122.8	55.5
WET	e PKPdf	Z	09:44:48.1	122.9	57.5
ROTZ	e PKPdf	Z	09:44:48.2	123.0	56.5
UBBA	e PKPdf	Z	09:44:49.1	123.5	53.7
GRA1	e PKPdf	Z	09:44:49.1	123.5	55.6
IBBN	e PKPdf	Z	09:44:49.9	123.7	50.6
RJOB	e PKPdf	Z	09:44:49.0	123.7	58.2
FUR	e PKPdf	Z	09:44:50.6	124.4	56.5
BUG	e PKPdf	Z	09:44:50.9	124.5	50.6
TNS	e PKPdf	Z	09:44:51.4	124.7	52.5
STU	e PKPdf	Z	09:44:52.3	125.2	54.1
BFO	e PKPdf	Z	09:44:53.6	125.9	53.4
WLF	e PKPdf	Z	09:44:55.3	126.2	50.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/23	10:03: 7.2	37.212S	72.713W	35.0		6.1		NEIC

Central Chile

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e SP	Z	10:31:40.3	111.2	236.9					
BFO	e PKiKP	Z	10:21:36.9	111.7	237.8					
	e SP	Z	10:31:46.6							
STU	e SP	Z	10:31:52.9	112.4	238.5					
TNS	e SP	Z	10:32:02.3	112.7	238.6					
BUG	e SP	Z	10:32:01.7	112.7	238.3					
FUR	e SP	Z	10:32:08.4	113.3	239.6					
IBBN	e SP	Z	10:32:08.0	113.4	238.9					
UBBA	e SP	Z	10:32:15.5	113.9	239.8					
RJOB	e PKiKP	Z	10:21:41.0	113.9	240.3					
	e SP	Z	10:32:15.0							
GRA1	e PKiKP	Z	10:21:41.8	114.0	240.1					
	e SP	Z	10:32:16.7							
	e L	Z	11:10:39.7			19.5	3657		6.0	
ROTZ	e SP	Z	10:32:22.4	114.6	240.7					
CLZ	e PKiKP	Z	10:21:43.3	114.6	240.4					
	e SP	Z	10:32:21.9							
WET	e PKiKP	Z	10:21:42.6	114.7	240.9					
	e SP	Z	10:32:22.7							
MOX	e PKiKP	Z	10:21:42.9	114.7	240.7					
	e SP	Z	10:32:24.1							
	e L	Z	11:12:20.9			19.0	4340		6.1	
NRDL	e PKiKP	Z	10:21:43.4	114.8	240.5					
	e SP	Z	10:32:24.3							

GEC2	e PKiKP	Z	10:21:43.0	115.0	241.3	
	e SP	Z	10:32:25.9			
TANN	e PKiKP	Z	10:21:43.8	115.0	241.2	
	e SP	Z	10:32:27.3			
BSEG	e PKiKP	Z	10:21:44.8	115.6	241.2	
	e SP	Z	10:32:31.7			
CLL	e PKiKP	Z	10:21:44.9	115.8	241.9	
	e SP	Z	10:32:34.0			
BRG	e PKiKP	Z	10:21:45.6	116.1	242.3	
	e SP	Z	10:32:37.4			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/24	22:30:55.0	15.822S	172.435W	58.2		5.2		SZGRF

Samoa Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPbc	Z	22:50:17.8	143.3	4.1					
IBBN	e PKPbc	Z	22:50:18.9	143.5	0.3					
CLZ	e PKPbc	Z	22:50:20.0	143.9	4.6					
CLL	e PKPbc	Z	22:50:20.9	144.2	9.0					
BUG	e PKPbc	Z	22:50:21.4	144.4	359.5					
BRG	e PKPbc	Z	22:50:21.8	144.6	10.6					
UBBA	e PKPbc	Z	22:50:23.1	144.9	4.1					
MOX	e PKPbc	Z	22:50:23.7	145.0	6.8					
TANN	e PKPbc	Z	22:50:24.0	145.2	8.3					
TNS	e PKPbc	Z	22:50:25.5	145.6	1.5					
	e pPKPbc	Z	22:50:42.2							
ROTZ	e PKPbc	Z	22:50:26.9	145.8	8.0					
	e pPKPbc	Z	22:50:43.3							
GRA1	e PKPbc	Z	22:50:27.3	146.0	6.3					
	e L	Z	23:51:47.0			21.4	366		5.1	
WLF	e PKPbc	Z	22:50:27.2	146.1	357.6					
WET	e PKPbc	Z	22:50:27.3	146.4	9.3					
	e pPKPbc	Z	22:50:45.0							
GEC2	e PKPbc	Z	22:50:27.4	146.6	10.8					
STU	e PKPbc	Z	22:50:28.8	147.0	2.9					
BFO	e PKPbc	Z	22:50:31.3	147.5	1.4					
	e pPKPbc	Z	22:50:48.3							
FUR	e PKPbc	Z	22:50:31.5	147.5	6.7					
	e pPKPbc	Z	22:50:48.4							
RJOB	e PKPbc	Z	22:50:32.2	147.8	9.5					
MOX	e L	Z	00:02:03.7	145.0	6.8	18.8	436		5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/24	00:23:44.4	36.300S	99.500W	10.0				NEIC

Southeast of Easter Island

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKPdf	Z	00:42:47.7	127.3	254.7					
BUG	e PKPdf	Z	00:42:48.5	127.4	256.4					
TNS	e PKPdf	Z	00:42:49.7	127.9	256.2					
IBBN	e PKPdf	Z	00:42:49.5	127.9	257.3					
STU	e PKPdf	Z	00:42:49.6	128.0	255.6					
UBBA	e PKPdf	Z	00:42:51.9	129.0	257.7					
FUR	e PKPdf	Z	00:42:51.8	129.2	256.4					
NRDL	e PKPdf	Z	00:42:52.3	129.4	259.1					
CLZ	e PKPdf	Z	00:42:52.5	129.4	258.8					
GRA1	e PKPdf	Z	00:42:53.0	129.5	257.6					
BSEG	e PKPdf	Z	00:42:53.0	129.7	260.4					
MOX	e PKPdf	Z	00:42:53.2	129.9	258.6					
RJOB	e PKPdf	Z	00:42:53.0	130.1	257.0					
ROTZ	e PKPdf	Z	00:42:53.5	130.1	258.3					
TANN	e PKPdf	Z	00:42:54.3	130.4	259.0					
WET	e PKPdf	Z	00:42:54.0	130.4	258.2					
GEC2	e PKPdf	Z	00:42:54.5	130.9	258.5					
CLL	e PKPdf	Z	00:42:55.0	130.9	260.1					
BRG	e PKPdf	Z	00:42:55.9	131.4	260.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/24	07:41: 2.0	1.922S	128.208E	35.0G		5.4		NEIC

Halmahera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
MOX	e L	Z	08:51:04.6	108.0	70.0	22.0	1433		5.5	
NRDL	e PP	Z	07:59:49.0	108.3	68.2					
CLZ	e PP	Z	07:59:49.5	108.3	68.6					
GRA1	e PP	Z	07:59:52.4	108.6	70.0					
	e L	Z	08:52:42.5			20.2	1097		5.4	
UBBA	e PP	Z	07:59:54.1	108.9	68.6					
FUR	e PP	Z	07:59:55.7	109.1	70.5					
IBBN	e PP	Z	07:59:59.1	109.6	66.2					
TNS	e PP	Z	08:00:02.0	110.1	67.5					
STU	e PP	Z	08:00:04.1	110.2	68.6					
BUG	e PP	Z	08:00:05.4	110.3	66.0					
BFO	e PP	Z	08:00:07.9	110.9	68.0					
WLF	e PP	Z	08:00:14.2	111.6	65.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/24	10:37:35.5	26.920N	140.185E	455.0	5.1			NEIC

Bonin Islands, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	10:49:36.3	88.3	43.2	0.9	7	4.9		
BRG	e P	Z	10:49:39.2	88.9	46.0	0.8	5	4.8		
CLL	e P	Z	10:49:39.4	89.1	45.3	0.7	6	4.9		
CLZ	e P	Z	10:49:43.5	89.8	43.2	0.7	6	4.9		
MOX	e P	Z	10:49:44.9	90.1	44.2	1.1	4	4.5		
GEC2	e P	Z	10:49:46.4	90.5	45.8	0.9	9	5.1		
ROTZ	e P	Z	10:49:47.3	90.5	44.7	0.9	7	5.0		
IBBN	e P	Z	10:49:46.5	90.5	41.2	0.9	18	5.4		
GRA1	e P	Z	10:49:49.4	91.0	43.9	1.0	14	5.2		
RJOB	e P	Z	10:49:52.3	91.7	45.1	0.9	15	5.3		
FUR	e P	Z	10:49:54.4	92.1	44.0	0.9	28	5.6		
WLF	e P	Z	10:49:59.4	93.2	39.9	1.4	16	5.3		
BFO	e P	Z	10:49:59.3	93.3	41.7	1.1	9	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/24	15:01: 2.7	33.877N	26.612E	10.0G	4.9	4.9		SZGRF

Eastern Mediterranean Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RJOB	e P	Z	15:05:01.9	17.3	138.2	0.8	38	4.6		
GEC2	e P	Z	15:05:09.2	17.8	142.6	0.9	46	4.6		
FUR	e P	Z	15:05:15.1	18.3	135.7	1.0	159	5.1		
WET	e P	Z	15:05:16.1	18.3	141.2	1.4	76	4.6		
ROTZ	e P	Z	15:05:24.5	19.1	140.9	0.9	26	4.4		
BRG	e P	Z	15:05:27.6	19.3	146.6	0.7	21	4.5		
GRA1	e P	Z	15:05:28.5	19.5	138.6	1.0	104	5.0		
	e L	Z	15:14:27.3			18.0	4003		4.8	
TANN	e P	Z	15:05:29.0	19.5	142.6	1.0	85	4.9		
STU	e P	Z	15:05:31.6	19.7	132.6	0.7	74	5.0		
BFO	e P	Z	15:05:33.0	19.9	130.0	0.9	62	4.8		
MOX	e P	Z	15:05:34.9	20.0	141.1	1.0	36	4.6		
	e L	Z	15:14:50.1			18.3	6824		5.0	
CLL	e P	Z	15:05:35.0	20.0	145.2	0.7	37	4.7		
UBBA	e P	Z	15:05:43.0	20.8	138.1	1.3	48	4.7		
TNS	e P	Z	15:05:46.7	21.1	134.0	0.9	82	5.1		
CLZ	e P	Z	15:05:49.6	21.4	140.6	1.0	47	4.8		
WLF	e P	Z	15:05:55.1	21.8	128.7	0.9	164	5.4		
NRDL	e P	Z	15:05:56.3	22.1	141.1	1.4	87	5.0		
BUG	e P	Z	15:06:01.4	22.5	134.0	1.5	156	5.2		
IBBN	e P	Z	15:06:05.4	22.9	136.3	1.0	78	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/25	02:59:44.6	5.654N	94.963E	33.0N	4.6			SZGRF

Northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	03:11:50.4	80.0	93.4	0.7	4	4.4		
WET	e P	Z	03:11:53.5	80.6	92.3	0.8	4	4.5		
TANN	e P	Z	03:11:55.2	80.9	92.2	1.1	4	4.4		
ROTZ	e P	Z	03:11:56.4	81.0	91.9	0.7	4	4.6		
MOX	e P	Z	03:11:58.0	81.4	91.5	0.6	2	4.2		
GRA1	e P	Z	03:11:59.8	81.6	91.1	0.9	6	4.8		
CLZ	e P	Z	03:12:02.4	82.2	90.7	1.1	8	4.8		
BSEG	e P	Z	03:12:02.9	82.3	91.0	0.9	6	4.7		
IBBN	e P	Z	03:12:10.7	83.8	88.7	0.8	6	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/25	09:38:26.1	20.330S	174.030W	75.6				SZGRF

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	09:57:57.3	146.2	7.3					
NRDL	e PKPbc	Z	09:58:00.6	147.7	7.3					
IBBN	e PKPbc	Z	09:58:02.6	148.0	3.2					
CLZ	e PKPbc	Z	09:58:03.1	148.3	7.9					
	e PKPab	Z	09:58:06.4							
CLL	e PKPbc	Z	09:58:03.7	148.5	12.7					
BRG	e PKPbc	Z	09:58:04.7	148.8	14.5					
UBBA	e PKPbc	Z	09:58:05.7	149.3	7.4					
MOX	e PKPbc	Z	09:58:06.0	149.4	10.4					
	e PKPab	Z	09:58:11.2							
TANN	e PKPbc	Z	09:58:06.5	149.5	12.0					
	e pPKPbc	Z	09:58:27.8							
TNS	e PKPbc	Z	09:58:08.1	150.0	4.7					
	e PKPab	Z	09:58:13.6							
ROTZ	e PKPbc	Z	09:58:08.5	150.1	11.8					
GRA1	e PKPbc	Z	09:58:08.3	150.3	10.0					
	e PKPab	Z	09:58:15.2							
WLF	e PKPbc	Z	09:58:10.0	150.7	0.3					
	e PKPab	Z	09:58:16.8							
STU	e PKPbc	Z	09:58:11.3	151.4	6.3					
FUR	e PKPbc	Z	09:58:12.2	151.8	10.6					
BFO	e PKPbc	Z	09:58:11.4	151.9	4.7					
RJOB	e PKPbc	Z	09:58:12.1	152.0	13.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/25	15:51:52.1	50.130N	179.450W	32.7	4.8	4.2		SZGRF

Andreanof Islands, Aleutian Islands, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	16:03:36.2	75.6	6.4	0.8	10	5.0		
	e pP	Z	16:03:45.4							
NRDL	e P	Z	16:03:43.6	77.1	6.3	1.2	10	4.8		
IBBN	e P	Z	16:03:46.3	77.4	4.7	0.9	19	5.2		
	e pP	Z	16:03:55.2							
CLZ	e P	Z	16:03:47.9	77.7	6.4	1.0	11	4.9		
CLL	e P	Z	16:03:49.2	78.0	8.1	0.8	4	4.6		
	e pP	Z	16:03:58.4							
BUG	e P	Z	16:03:50.5	78.3	4.4	1.0	10	4.8		
BRG	e P	Z	16:03:50.9	78.4	8.7					
	e pP	Z	16:04:00.7							
UBBA	e P	Z	16:03:53.3	78.7	6.2	1.9	15	4.7		
TANN	e P	Z	16:03:54.3	78.9	7.7	1.4	7	4.5		
TNS	e P	Z	16:03:57.1	79.4	5.1	1.2	10	4.6		
ROTZ	e P	Z	16:03:58.3	79.6	7.6	1.2	8	4.5		
GRA1	e P	Z	16:03:59.3	79.8	6.9	1.0	16	4.9		
	e pP	Z	16:04:08.8							
	e L	Z	16:51:30.0			18.3	99		4.2	
WLF	e P	Z	16:04:00.9	80.1	3.6	0.9	6	4.5		
	e pP	Z	16:04:10.7							
WET	e P	Z	16:04:01.2	80.2	8.0	2.2	30	4.9		
STU	e P	Z	16:04:04.2	80.8	5.6	0.9	10	4.8		
FUR	e P	Z	16:04:07.0	81.3	6.9	1.1	22	5.2		
BFO	e P	Z	16:04:07.1	81.3	5.0	1.6	16	4.9		
RJOB	e P	Z	16:04:09.1	81.6	7.9	0.9	7	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/25	20:43:50.4	23.290N	126.000E	54.2	5.1			SZGRF

Southeast of Ryukyu Islands, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	20:56:21.2	84.9	58.7	0.9	4	4.7		
BSEG	e P	Z	20:56:22.4	85.1	56.2	1.0	19	5.3		
CLL	e P	Z	20:56:21.7	85.2	58.1	0.9	5	4.7		
NRDL	e P	Z	20:56:26.5	86.0	55.9	1.4	13	4.9		
	e pP	Z	20:56:41.8							
GEC2	e P	Z	20:56:26.4	86.1	58.4	1.0	6	4.6		
	e pP	Z	20:56:42.5							
CLZ	e P	Z	20:56:27.9	86.2	56.1	1.3	34	5.3		
	e pP	Z	20:56:43.2							
ROTZ	e P	Z	20:56:28.8	86.4	57.4	1.6	11	4.8		
GRA1	e P	Z	20:56:31.6	87.0	56.6	1.6	28	5.1		
UBBA	e P	Z	20:56:31.1	87.0	55.8	1.4	10	4.8		
IBBN	e P	Z	20:56:32.6	87.3	54.1	1.1	41	5.7		
FUR	e P	Z	20:56:35.6	87.8	56.6	0.9	22	5.5		

BUG	e P	Z	20:56:36.2	88.1	53.7	1.2	22	5.4
TNS	e P	Z	20:56:37.0	88.2	54.6	1.4	12	5.0
BFO	e P	Z	20:56:42.1	89.3	54.4	1.4	9	4.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/25	21:23: 8.5	39.284N	143.606E	33.0G	5.0			SZGRF

Off east coast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	21:35:06.9	78.5	35.1	1.4	31	5.1		
CLL	e P	Z	21:35:12.5	79.7	36.7	1.1	14	4.8		
CLZ	e P	Z	21:35:16.2	80.2	34.9	1.1	15	4.9		
UBBA	e P	Z	21:35:20.9	81.2	34.6	1.7	17	4.8		
ROTZ	e P	Z	21:35:21.5	81.2	36.0	1.4	15	4.9		
WET	e P	Z	21:35:22.6	81.5	36.4	1.3	10	4.8		
GRA1	e P	Z	21:35:23.8	81.6	35.3	1.3	28	5.2		
RJOB	e P	Z	21:35:28.7	82.6	36.2	1.1	14	5.1		
WLF	e P	Z	21:35:33.4	83.5	31.8	2.0	34	5.2		
BFO	e P	Z	21:35:34.6	83.8	33.2	1.2	19	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/26	02:59:52.5	21.910N	124.010E	33.0G	5.9	6.6		SZGRF

Southeast of Taiwan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	03:12:25.6	84.9	61.0	1.6	153	5.9		
	e S	R	03:22:47.2							
CLL	e P	Z	03:12:26.8	85.2	60.4	1.1	95	5.8		
	e S	R	03:22:49.0							
BSEG	e P	Z	03:12:27.8	85.3	58.5	1.5	225	6.1		
	e S	R	03:22:49.4							
TANN	e P	Z	03:12:30.9	86.0	59.9	1.9	193	5.9		
	e S	R	03:22:56.1							
GEC2	e P	Z	03:12:31.3	86.0	60.7	1.4	79	5.7		
	e S	R	03:22:56.8							
NRDL	e P	Z	03:12:32.1	86.2	58.2	1.7	376	6.2		
	e S	R	03:22:57.5							
CLZ	e P	Z	03:12:33.3	86.4	58.4	1.8	504	6.3		
	e S	R	03:22:58.3							
WET	e P	Z	03:12:33.3	86.4	60.1	1.6	94	5.7		
	e S	R	03:22:59.4							
ROTZ	e P	Z	03:12:33.7	86.4	59.7	1.9	204	5.9		
	e S	R	03:23:00.9							
GRA1	e P	Z	03:12:36.5	87.0	58.9	1.8	299	6.3		
	e S	R	03:23:04.2							

	e	L	Z	03:55:43.7			21.4	28357		6.6
UBBA	e	P	Z	03:12:36.5	87.1	58.1	1.6	138	6.0	
	e	S	R	03:23:04.5						
RJOB	e	P	Z	03:12:36.2	87.1	60.0	0.9	35	5.7	
	e	S	R	03:23:07.9						
IBBN	e	P	Z	03:12:38.2	87.5	56.4	1.3	191	6.3	
	e	S	R	03:23:07.5						
FUR	e	P	Z	03:12:40.3	87.8	58.9	1.8	369	6.3	
	e	S	R	03:23:12.3						
BUG	e	P	Z	03:12:41.5	88.2	56.0	1.4	83	5.8	
	e	S	R	03:23:11.4						
TNS	e	P	Z	03:12:42.1	88.2	56.9	1.6	79	5.7	
	e	S	R	03:23:10.8						
STU	e	P	Z	03:12:43.6	88.6	57.4	1.0	37	5.6	
	e	S	R	03:23:13.0						
BFO	e	P	Z	03:12:46.7	89.3	56.7	1.6	60	5.6	
	e	S	R	03:23:18.9						
WLF	e	P	Z	03:12:49.4	89.8	55.1	1.2	77	5.9	
	e	S	R	03:23:20.8						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/26	22:27:34.7	18.890S	179.320W	33.0N				SZGRF

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPbc	Z	22:47:09.3	145.6	15.9					
IBBN	e PKPbc	Z	22:47:11.1	146.1	12.1					
CLL	e PKPbc	Z	22:47:11.2	146.2	21.3					
CLZ	e PKPbc	Z	22:47:11.2	146.2	16.6					
BRG	e PKPbc	Z	22:47:11.7	146.3	23.1					
TANN	e PKPbc	Z	22:47:14.1	147.1	20.8					
ROTZ	e PKPbc	Z	22:47:16.0	147.8	20.8					
TNS	e PKPbc	Z	22:47:16.8	148.1	14.0					
	e PKPab	Z	22:47:19.5							
GRA1	e PKPbc	Z	22:47:16.5	148.1	19.1					
	e PKPab	Z	22:47:19.6							
WET	e PKPbc	Z	22:47:17.0	148.2	22.3					
	e PKPab	Z	22:47:20.3							
GEC2	e PKPbc	Z	22:47:17.4	148.3	23.9					
WLF	e PKPbc	Z	22:47:19.6	148.9	10.1					
STU	e PKPbc	Z	22:47:20.2	149.3	15.9					
FUR	e PKPbc	Z	22:47:20.5	149.5	20.0					
	e PKPab	Z	22:47:25.5							
RJOB	e PKPbc	Z	22:47:20.5	149.5	23.0					
	e PKPab	Z	22:47:26.0							
BFO	e PKPbc	Z	22:47:21.6	149.9	14.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/26	23:23:49.8	33.600N	137.000E	351.0	4.9			NEIC

Near south coast of eastern Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z	23:35:31.1	81.9	44.2	1.6	16	4.9		
FBE	e P	Z	23:35:32.4	82.0	44.4	1.0	11	4.9		
NEUB	e P	Z	23:35:34.3	82.5	43.3					
GUNZ	e P	Z	23:35:38.0	82.9	43.7	1.2	8	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/27	00:07:46.1	41.834N	70.446E	33.0G	4.4			SZGRF

Kyrgyzstan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	00:15:09.7	39.0	80.7	0.7	7	4.4		
FBE	e P	Z	00:15:12.8	39.4	80.4	0.6	15	4.8		
GEC2	e P	Z	00:15:14.1	39.5	78.1	0.8	6	4.3		
WET	e P	Z	00:15:17.7	40.0	78.0	0.8	5	4.2		
TANN	e P	Z	00:15:17.8	40.0	79.2	0.6	3	4.0		
WERD	e P	Z	00:15:18.4	40.1	79.1	0.8	5	4.2		
GUNZ	e P	Z	00:15:18.6	40.1	79.1	0.6	4	4.2		
PLN	e P	Z	00:15:19.2	40.2	79.1	1.7	11	4.2		
MANZ	e P	Z	00:15:20.3	40.3	78.5	0.7	3	4.0		
GRA1	e P	Z	00:15:26.0	41.0	77.6	1.4	16	4.6		
CLZ	e P	Z	00:15:25.9	41.1	79.5	0.8	5	4.3		
NRDL	e P	Z	00:15:26.6	41.1	80.1	0.8	6	4.4		
FUR	e P	Z	00:15:28.0	41.3	75.9	1.0	10	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/27	22:58:24.1	27.648N	51.492E	33.0N	4.9			SZGRF

Persian Gulf

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
OJC	e P	Z	23:04:55.6	33.0	121.2	1.0	27	5.1		
OKC	e P	Z	23:05:02.3	33.7	118.7	0.8	15	5.0		
MORC	e P	Z	23:05:05.1	34.0	117.9	0.9	16	4.9		
DPC	e P	Z	23:05:13.2	35.0	117.1	0.8	7	4.6		
KSP	e P	Z	23:05:15.0	35.2	117.7	1.6	32	5.0		
WET	e P	Z	23:05:26.2	36.5	111.7	0.8	6	4.3		
BRG	e P	Z	23:05:26.4	36.6	115.0	1.3	13	4.5		
ROTZ	e P	Z	23:05:32.3	37.1	111.7	1.4	21	4.7		
FUR	e P	Z	23:05:32.6	37.2	108.8	0.9	30	5.0		

CLL	e P	Z	23:05:32.5	37.3	114.5	1.3	17	4.6
RUE	e P	Z	23:05:32.7	37.4	116.8	1.3	52	5.1
GRA1	e P	Z	23:05:36.9	37.7	110.6	0.8	24	5.0
NEUB	e P	Z	23:05:38.2	37.9	113.0	1.0	14	4.6
RGN	e P	Z	23:05:42.2	38.6	118.6	1.5	137	5.4
CLZ	e P	Z	23:05:47.4	39.0	112.2	0.8	29	5.0
NRDL	e P	Z	23:05:50.8	39.4	112.7	1.0	48	5.1
TNS	e P	Z	23:05:52.6	39.6	108.4	1.2	19	4.6
BSEG	e P	Z	23:05:53.4	39.9	114.5	1.1	28	4.8
BUG	e P	Z	23:06:01.5	40.7	108.5	0.9	20	4.9
IBBN	e P	Z	23:06:01.2	40.7	110.0	1.7	96	5.3
WLF	e P	Z	23:06:02.7	40.8	105.5	0.8	18	4.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/28	16:34:34.4	32.890N	28.900E	33.0G	4.4			SZGRF

Eastern Mediterranean Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	16:39:00.3	19.6	138.9	1.2	33	4.4		
WET	e P	Z	16:39:06.3	20.2	137.8	1.7	34	4.3		
FUR	e P	Z	16:39:06.4	20.2	132.6	1.1	57	4.7		
ROTZ	e P	Z	16:39:15.0	20.9	137.5	1.0	6	3.9		
BRG	e P	Z	16:39:15.8	21.1	142.9	2.0	49	4.5		
MANZ	e P	Z	16:39:17.2	21.1	137.7	1.1	8	4.0		
WERN	e P	Z	16:39:18.7	21.2	138.7	1.9	32	4.3		
TANN	e P	Z	16:39:19.0	21.3	139.1	2.1	58	4.5		
GRA1	e P	Z	16:39:19.2	21.3	135.4	1.0	11	4.1		
GUNZ	e P	Z	16:39:19.3	21.3	138.8	1.6	31	4.4		
FBE	e P	Z	16:39:19.1	21.3	141.8	1.2	26	4.4		
WERD	e P	Z	16:39:20.1	21.4	138.9	1.5	22	4.3		
PLN	e P	Z	16:39:21.3	21.5	138.6	1.4	28	4.4		
CLL	e P	Z	16:39:23.2	21.8	141.7	1.1	13	4.3		
MOX	e P	Z	16:39:25.2	21.8	137.8	1.9	65	4.7		
CLZ	e P	Z	16:39:39.1	23.2	137.4	1.9	32	4.5		
NRDL	e P	Z	16:39:45.2	23.8	138.0	1.5	30	4.6		
BSEG	e P	Z	16:39:55.0	24.8	140.4	2.1	91	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/28	18:01:26.7	19.860N	92.550E	41.0	5.3	4.8		SZGRF

Bay of Bengal

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	18:12:19.7	67.6	86.2	0.9	44	5.7		
	e pP	Z	18:12:31.4							
BRG	e P	Z	18:12:19.9	67.6	85.6	1.1	18	5.2		

	e pP	Z	18:12:31.5						
GEC2	e P	Z	18:12:22.0	67.9	84.6	1.1	22	5.3	
	e pP	Z	18:12:33.6						
FBE	e P	Z	18:12:22.6	68.0	85.2	1.1	36	5.5	
	e pP	Z	18:12:34.3						
CLL	e P	Z	18:12:23.0	68.2	85.1	1.1	13	5.1	
	e pP	Z	18:12:34.7						
WET	e P	Z	18:12:25.2	68.5	84.2	1.1	15	5.2	
	e pP	Z	18:12:36.8						
TANN	e P	Z	18:12:26.0	68.6	84.3	1.1	15	5.2	
	e pP	Z	18:12:37.6						
RJOB	e P	Z	18:12:26.0	68.7	83.5	1.1	9	4.9	
	e pP	Z	18:12:37.6						
WERN	e P	Z	18:12:26.6	68.7	84.2	1.2	15	5.1	
	e pP	Z	18:12:38.3						
GUNZ	e P	Z	18:12:26.6	68.7	84.2	1.0	23	5.3	
	e pP	Z	18:12:38.3						
WERD	e P	Z	18:12:26.5	68.7	84.2	1.0	16	5.2	
	e pP	Z	18:12:38.1						
PLN	e P	Z	18:12:27.1	68.8	84.1	0.9	12	5.1	
	e pP	Z	18:12:38.7						
ROTZ	e P	Z	18:12:28.1	68.8	83.9	1.1	25	5.4	
	e pP	Z	18:12:39.4						
MANZ	e P	Z	18:12:28.1	68.9	83.9	1.2	22	5.2	
	e pP	Z	18:12:39.6						
NEUB	e P	Z	18:12:28.0	68.9	84.1	1.2	33	5.4	
	e pP	Z	18:12:39.7						
MOX	e P	Z	18:12:29.2	69.1	83.8	1.1	16	5.2	
	e pP	Z	18:12:40.9						
GRA1	e P	Z	18:12:31.9	69.5	83.2	1.3	35	5.3	
	e pP	Z	18:12:43.3						
	e L	Z	18:50:02.6			18.5	456		4.8
BSEG	e P	Z	18:12:32.2	69.5	84.0	1.0	51	5.6	
	e pP	Z	18:12:43.9						
FUR	e P	Z	18:12:32.2	69.6	82.6	0.9	14	5.1	
	e pP	Z	18:12:43.8						
CLZ	e P	Z	18:12:33.2	69.7	83.3	1.0	29	5.3	
	e pP	Z	18:12:44.9						
NRDL	e P	Z	18:12:34.0	69.8	83.3	1.3	52	5.5	
	e pP	Z	18:12:45.3						
TNS	e P	Z	18:12:41.8	71.2	81.3	0.9	20	5.2	
	e pP	Z	18:12:53.5						
IBBN	e P	Z	18:12:42.5	71.3	81.5	1.3	78	5.7	
BFO	e P	Z	18:12:43.5	71.5	80.6	1.3	8	4.7	
BUG	e P	Z	18:12:45.0	71.7	80.8	1.1	36	5.4	
	e pP	Z	18:12:56.7						
WLF	e P	Z	18:12:51.6	72.7	79.4	1.0	34	5.4	
	e pP	Z	18:13:03.0						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/28								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z	20:31:06.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/29	00:40:30.6	13.200S	167.100E	200.0				NEIC

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKiKP	Z	00:59:28.2	135.3	33.1					
BRG	e PKiKP	Z	00:59:30.6	136.5	39.7					
CLL	e PKiKP	Z	00:59:30.5	136.5	38.2					
NRDL	e PKiKP	Z	00:59:30.9	136.6	33.6					
CLZ	e PKiKP	Z	00:59:32.0	137.1	34.4					
NEUB	e PKiKP	Z	00:59:31.7	137.1	36.6					
TANN	e PKiKP	Z	00:59:32.5	137.4	38.1					
WERD	e PKiKP	Z	00:59:32.6	137.5	37.8					
PLN	e PKiKP	Z	00:59:32.6	137.5	37.6					
GUNZ	e PKiKP	Z	00:59:32.7	137.5	37.9					
MOX	e PKiKP	Z	00:59:32.7	137.6	36.8					
MANZ	e PKiKP	Z	00:59:33.4	137.9	37.9					
GEC2	e PKiKP	Z	00:59:33.9	138.1	40.8					
TNS	e PKiKP	Z	00:59:35.9	139.1	32.8					
WLF	e PKiKP	Z	00:59:38.7	140.3	29.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/29	10:33:33.3	37.690N	23.763E	33.0G				SZGRF

Southern Greece

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	10:37:11.1	15.0	138.4	1.9	66			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/29	23:48: 5.4	52.330S	139.400E	33.0G		5.5		SZGRF

West of Macquarie Island

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKPbc	Z	00:07:47.3	146.9	114.3					
FUR	e PKPab	Z	00:07:51.0	147.3	117.2					

ROTZ	e PKPbc	Z	00:07:49.3	147.4	115.2				
	e PKPab	Z	00:07:51.6						
CLL	e PKPbc	Z	00:07:49.3	147.6	113.3				
	e PKPab	Z	00:07:51.6						
GRA1	e PKPbc	Z	00:07:50.5	148.0	115.0				
	e L	Z	01:18:17.4			22.0	770	5.4	
MOX	e PKPbc	Z	00:07:50.5	148.2	113.7				
	e L	Z	01:18:02.1			21.7	1089	5.6	
STU	e PKPbc	Z	00:07:52.3	148.8	115.7				
	e PKPab	Z	00:07:55.3						
BFO	e PKPbc	Z	00:07:53.0	149.1	116.2				
UBBA	e PKPbc	Z	00:07:53.0	149.2	112.9				
CLZ	e PKPbc	Z	00:07:53.7	149.3	111.4				
NRDL	e PKPbc	Z	00:07:54.8	149.7	110.3				
TNS	e PKPbc	Z	00:07:55.4	149.8	113.3				
BSEG	e PKPbc	Z	00:07:55.5	150.1	108.0				
WLF	e PKPbc	Z	00:07:58.4	151.0	113.5				
BUG	e PKPbc	Z	00:07:57.6	151.0	110.9				
IBBN	e PKPbc	Z	00:07:57.7	151.0	109.6				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/30	00:26:45.0	52.926S	139.340E	33.0G				SZGRF

West of Macquarie Island

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RJOB	e PKPbc	Z	00:46:21.2	146.3	119.2					
GEC2	e PKPbc	Z	00:46:21.2	146.3	118.0					
WET	e PKPbc	Z	00:46:23.0	146.9	117.4					
GRA1	e PKPbc	Z	00:46:27.0	148.1	116.1					
UBBA	e PKPbc	Z	00:46:29.4	149.3	114.0					
CLZ	e PKPbc	Z	00:46:30.6	149.5	112.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/30	23:11:54.1	61.553N	178.382W	33.0G	6.1			SZGRF

Bering Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	23:22:26.9	64.3	4.6	1.4	201	6.2		
NRDL	e P	Z	23:22:35.7	65.8	4.4	1.5	144	6.0		
IBBN	e P	Z	23:22:37.7	66.0	3.2	1.3	297	6.4		
CLZ	e P	Z	23:22:40.2	66.4	4.5	1.3	271	6.3		
CLL	e P	Z	23:22:42.0	66.8	5.9	1.6	243	6.2		
BUG	e P	Z	23:22:42.9	66.9	2.9	1.6	222	6.1		
BRG	e P	Z	23:22:44.5	67.1	6.3	1.6	227	6.1		
UBBA	e P	Z	23:22:46.2	67.4	4.3	1.7	233	6.1		

MOX	e P	Z	23:22:47.1	67.5	5.1	1.4	202	6.2
TANN	e P	Z	23:22:48.4	67.7	5.6	1.6	218	6.1
TNS	e P	Z	23:22:50.6	68.1	3.5	1.6	191	6.1
ROTZ	e P	Z	23:22:52.8	68.4	5.4	1.6	193	6.1
GRA1	e P	Z	23:22:53.5	68.5	4.9	1.6	392	6.4
WLF	e P	Z	23:22:54.7	68.7	2.3	1.2	156	6.1
WET	e P	Z	23:22:56.2	68.9	5.7	1.6	252	6.2
GEC2	e P	Z	23:22:57.3	69.2	6.1	1.6	256	6.1
STU	e P	Z	23:22:59.1	69.5	3.8	1.3	136	5.9
BFO	e P	Z	23:23:02.1	70.0	3.4	1.5	162	5.9
FUR	e P	Z	23:23:02.5	70.0	4.9	1.5	304	6.2
RJOB	e P	Z	23:23:04.5	70.3	5.6	2.0	203	5.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/04/30	23:16:36.2	60.856N	178.215W	33.0G	6.1			SZGRF

Bering Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	23:27:13.7	65.0	4.6	1.7	293	6.2		
NRDL	e P	Z	23:27:22.5	66.5	4.4	1.7	201	6.1		
IBBN	e P	Z	23:27:24.6	66.7	3.2	1.4	277	6.3		
CLZ	e P	Z	23:27:27.1	67.1	4.5	1.4	316	6.3		
CLL	e P	Z	23:27:28.6	67.5	5.9	1.6	280	6.2		
BUG	e P	Z	23:27:29.6	67.6	2.9	1.6	195	6.1		
BRG	e P	Z	23:27:31.1	67.8	6.4	1.7	187	6.0		
UBBA	e P	Z	23:27:32.9	68.1	4.3	1.7	291	6.2		
MOX	e P	Z	23:27:33.7	68.2	5.1	2.0	394	6.3		
TANN	e P	Z	23:27:35.0	68.4	5.6	1.6	238	6.2		
TNS	e P	Z	23:27:37.2	68.8	3.5	1.7	183	6.0		
ROTZ	e P	Z	23:27:39.3	69.1	5.4	1.7	199	6.1		
GRA1	e P	Z	23:27:39.9	69.2	4.9	1.7	468	6.3		
WLF	e P	Z	23:27:41.2	69.4	2.3	2.0	393	6.2		
WET	e P	Z	23:27:42.9	69.6	5.7	1.5	225	6.1		
GEC2	e P	Z	23:27:44.1	69.9	6.1	1.5	213	6.0		
STU	e P	Z	23:27:45.8	70.2	3.8	1.6	179	5.9		
BFO	e P	Z	23:27:48.6	70.7	3.4	1.7	218	6.0		
FUR	e P	Z	23:27:49.0	70.7	4.9	1.6	348	6.2		
RJOB	e P	Z	23:27:51.1	71.0	5.6	2.5	396	6.1		

Format description
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(T. Plenefisch, Email: plene@szgrf.bgr.de)

In general all regional and teleseismic events clearly recorded with stations of the GrÃ¤fenberg-Array (GRF) and stronger events recorded with stations of the German Regional Seismological Network (GRSN) are included in this bulletin. Each event is reported by an EPICENTER LINE, a REGION LINE and a block of PHASE LINES.

EPICENTER LINE:

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, SED, MAD)

REGION LINE:
The region name of the epicenter location.

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 Component where the phase was picked
Time	Arrival time of the reported phase
Dist	Distance from the epicenter location to the station in degree
BAz	Backazimuth from the epicenter location 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