

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

(produced by SZGRF/BGR - HANNOVER)

August 2009 UPDATED 25.JANUARY.2010

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
2009/08/01	01:16: 9.1	20.600S	174.300W	35.0		4.4		NEIC
Tonga Islands								
Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb MS ML
BSEG	e PKP	Z	01:35:48.0	146.5	7.8			
NRDL	e PKP	Z	01:35:51.7	147.9	7.8			
IBBN	e PKP	Z	01:35:52.8	148.3	3.7			
CLL	e PKP	Z	01:35:54.2	148.8	13.3			
NEUB	e PKP	Z	01:35:55.1	149.0	11.1			
FBE	e PKP	Z	01:35:55.6	149.1	14.0			
BUG	e PKP	Z	01:35:55.0	149.1	2.9			
MOX	e PKP	Z	01:35:56.3	149.6	11.0			
PLN	e PKP	Z	01:35:56.7	149.7	12.0			
WERD	e PKP	Z	01:35:56.7	149.7	12.3			
TANN	e PKP	Z	01:35:56.7	149.7	12.6			
GUNZ	e PKP	Z	01:35:57.1	149.8	12.4			
WERN	e PKP	Z	01:35:57.4	149.8	12.5			
MANZ	e PKP	Z	01:35:57.9	150.2	12.1			
TNS	e PKP	Z	01:35:57.9	150.3	5.2			
ROTZ	e PKP	Z	01:35:58.5	150.4	12.4			
GRA1	e PKP	Z	01:35:58.7	150.6	10.6			
	e L	Z	02:48:34.0			18.5	62	4.4
WET	e PKP	Z	01:35:59.6	150.9	13.9			
WLF	e PKP	Z	01:35:59.8	150.9	0.9			
GEC2	e PKP	Z	01:35:59.7	151.0	15.6			
STU	e PKP	Z	01:36:01.2	151.7	6.9			
FUR	e PKP	Z	01:36:01.8	152.1	11.2			
BFO	e PKP	Z	01:36:02.1	152.2	5.3			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/01	03:02:45.0	19.240S	175.250W	33.0N				SZGRF

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	03:22:18.5	145.0	9.2					
NRDL	e PKPbc	Z	03:22:22.4	146.5	9.2					
CLL	e PKPbc	Z	03:22:24.6	147.3	14.5					
PLN	e PKPbc	Z	03:22:27.4	148.2	13.4					
WERD	e PKPbc	Z	03:22:27.5	148.2	13.6					
TANN	e PKPbc	Z	03:22:27.4	148.2	13.9					
GUNZ	e PKPbc	Z	03:22:27.6	148.3	13.7					
WERN	e PKPbc	Z	03:22:28.0	148.4	13.8					
MANZ	e PKPbc	Z	03:22:28.9	148.7	13.5					
TNS	e PKPbc	Z	03:22:29.3	148.9	6.8					
ROTZ	e PKPbc	Z	03:22:29.5	148.9	13.7					
GRA1	e PKPbc	Z	03:22:29.7	149.1	12.0					
GEC2	e PKPbc	Z	03:22:30.9	149.5	16.8					
WLF	e PKPbc	Z	03:22:31.4	149.6	2.6					
STU	e PKPbc	Z	03:22:32.7	150.3	8.5					
FUR	e PKPbc	Z	03:22:33.6	150.6	12.6					
RJOB	e PKPbc	Z	03:22:34.3	150.8	15.7					
BFO	e PKPbc	Z	03:22:33.7	150.8	6.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/01	09:45:53.1	38.258N	142.883E	43.6	5.4	4.4		SZGRF

Near east coast of eastern Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	09:57:45.2	77.6	38.3	0.9	63	5.8		
BSEG	e P	Z	09:57:53.6	79.2	36.1	1.0	70	5.6		
	e pP	Z	09:58:06.2							
CLL	e P	Z	09:57:59.0	80.3	37.7	1.0	49	5.5		
	e pP	Z	09:58:11.5							
NRDL	e P	Z	09:57:59.8	80.4	35.8	0.9	15	5.0		
	e pP	Z	09:58:12.5							
FBE	e P	Z	09:58:00.4	80.5	37.9	1.1	52	5.5		
	e pP	Z	09:58:12.9							
NEUB	e P	Z	09:58:02.2	80.8	36.8	1.2	73	5.6		
	e pP	Z	09:58:14.7							
TANN	e P	Z	09:58:04.0	81.2	37.2	1.4	15	4.9		
	e pP	Z	09:58:16.7							
WERD	e P	Z	09:58:04.2	81.2	37.1	1.2	16	5.0		
	e pP	Z	09:58:16.8							
PLN	e P	Z	09:58:04.4	81.3	37.0	1.3	90	5.7		
	e pP	Z	09:58:17.1							

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

3

GUNZ	e P	Z	09:58:04.7	81.3	37.1	1.2	21	5.1	
	e pP	Z	09:58:17.3						
WERN	e P	Z	09:58:04.9	81.3	37.2	1.0	20	5.2	
	e pP	Z	09:58:17.7						
MOX	e P	Z	09:58:04.8	81.4	36.7	1.3	26	5.2	
	e pP	Z	09:58:17.5						
IBBN	e P	Z	09:58:05.2	81.4	34.1	1.2	59	5.6	
MANZ	e P	Z	09:58:06.7	81.7	36.9	1.2	20	5.1	
	e pP	Z	09:58:19.3						
UBBA	e P	Z	09:58:07.0	81.8	35.5	1.5	16	4.9	
ROTZ	e P	Z	09:58:07.8	81.8	37.0	1.3	34	5.3	
	e pP	Z	09:58:20.5						
GEC2	e P	Z	09:58:07.8	82.0	37.9	1.2	21	5.1	
WET	e P	Z	09:58:08.6	82.1	37.4	1.3	29	5.3	
GRA1	e P	Z	09:58:10.1	82.3	36.3	1.2	60	5.7	
	e L	Z	10:39:43.9			21.0	159		4.4
BUG	e P	Z	09:58:09.6	82.3	33.7	1.0	22	5.4	
	e pP	Z	09:58:22.2						
TNS	e P	Z	09:58:12.9	82.9	34.4	1.4	23	5.2	
	e pP	Z	09:58:25.6						
RJOB	e P	Z	09:58:14.6	83.2	37.2	1.0	37	5.6	
FUR	e P	Z	09:58:16.1	83.5	36.2	0.9	46	5.7	
STU	e P	Z	09:58:17.4	83.8	34.8	1.3	57	5.7	
WLF	e P	Z	09:58:19.4	84.2	32.8	1.6	47	5.5	
	e pP	Z	09:58:32.5						
BFO	e P	Z	09:58:20.9	84.5	34.2	1.1	47	5.6	

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/01 15:57: 2.3 38.820N 139.860E 22.2 4.9
 Near west coast of eastern Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	16:08:51.0	76.0	40.2					
BSEG	e P	Z	16:08:59.4	77.6	38.0	1.4	39	5.3		
CLL	e P	Z	16:09:04.5	78.6	39.5	1.6	24	5.0		
FBE	e P	Z	16:09:05.9	78.8	39.7	1.9	38	5.1		
TANN	e P	Z	16:09:10.0	79.5	39.0	2.3	27	4.8		
WERD	e P	Z	16:09:10.1	79.6	38.9	1.9	26	4.8		
PLN	e P	Z	16:09:10.4	79.6	38.8	2.0	114	5.5		
GUNZ	e P	Z	16:09:10.5	79.6	38.9	1.6	14	4.6		
	e pP	Z	16:09:16.4							
WERN	e P	Z	16:09:10.7	79.7	38.9	1.3	11	4.6		
MOX	e P	Z	16:09:10.6	79.7	38.5	1.5	14	4.7		
IBBN	e P	Z	16:09:11.3	79.8	36.0	1.4	26	5.0		
MANZ	e P	Z	16:09:12.5	80.0	38.7	1.8	12	4.5		
	e pP	Z	16:09:18.6							
ROTZ	e P	Z	16:09:13.6	80.1	38.8	1.5	18	4.8		

	e pP	Z	16:09:19.7							
UBBA	e P	Z	16:09:13.3	80.2	37.4	1.5	7	4.5		
GEC2	e P	Z	16:09:13.4	80.2	39.7	1.5	8	4.5		
	e pP	Z	16:09:19.8							
WET	e P	Z	16:09:14.2	80.4	39.1	1.5	13	4.7		
GRA1	e P	Z	16:09:16.1	80.6	38.1	1.2	22	5.1		
BUG	e P	Z	16:09:16.0	80.7	35.5	1.0	11	4.8		
RJOB	e P	Z	16:09:20.3	81.5	38.9	1.8	24	5.0		
FUR	e P	Z	16:09:22.0	81.8	38.0	0.7	17	5.3		
STU	e P	Z	16:09:23.8	82.1	36.6	1.4	22	5.1		
WLF	e P	Z	16:09:26.2	82.6	34.6	1.5	17	5.1		
BFO	e P	Z	16:09:27.3	82.8	36.0	1.2	18	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/01	17:54:32.6	38.300N	138.600E	24.0	4.9			NEIC

Near west coast of eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 18:06:44.7	80.5	39.2	1.1	13	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/01	21:38:11.2	19.543S	172.895W	33.0N				SZGRF

Tonga Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e PKPbc	Z 21:57:44.3	144.7	10.2					
BSEG	e PKPbc	Z 21:57:47.3	145.5	5.4					
IBBN	e x	Z 21:58:03.1	147.2	1.1					
CLL	e PKPbc	Z 21:57:53.6	147.9	10.5					
	e x	Z 21:58:04.6							
NEUB	e x	Z 21:58:05.1	148.1	8.4					
FBE	e x	Z 21:58:05.6	148.2	11.2					
MOX	e PKPbc	Z 21:57:55.6	148.7	8.2					
	e x	Z 21:58:06.8							
PLN	e PKPbc	Z 21:57:55.9	148.8	9.2					
	e x	Z 21:58:07.0							
WERD	e PKPbc	Z 21:57:56.1	148.8	9.5					
	e x	Z 21:58:07.0							
TANN	e PKPbc	Z 21:57:56.1	148.8	9.8					
	e x	Z 21:58:07.1							
GUNZ	e x	Z 21:58:07.4	148.9	9.6					
WERN	e PKPbc	Z 21:57:56.6	149.0	9.7					
	e x	Z 21:58:07.7							
MANZ	e PKPbc	Z 21:57:57.2	149.3	9.3					
	e x	Z 21:58:08.3							

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

5

TNS	e	PKPbc	Z	21:57:57.1	149.3	2.5
ROTZ	e	x	Z	21:58:08.4	149.5	9.5
GRA1	e	x	Z	21:58:09.3	149.7	7.7
WLF	e	PKPbc	Z	21:57:59.1	149.9	358.2
WET	e	PKPbc	Z	21:57:58.6	150.0	10.9
	e	x	Z	21:58:09.8		
GEC2	e	PKPbc	Z	21:57:59.0	150.2	12.6
	e	x	Z	21:58:10.0		
BFO	e	PKPbc	Z	21:58:01.5	151.2	2.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/01	23:07:4.8	12.100S	75.300W	124.0G	5.3			NEIC
Central Peru								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BUG	e P	Z 23:20:13.5	94.9	256.7	1.0	8	5.1		
IBBN	e P	Z 23:20:14.7	95.4	257.1	1.2	17	5.3		
STU	e P	Z 23:20:15.2	95.5	257.9	1.0	9	5.2		
FUR	e P	Z 23:20:21.2	96.7	259.4	1.3	17	5.5		
NRDL	e P	Z 23:20:21.5	96.8	259.0	0.9	5	5.1		
GRA1	e P	Z 23:20:22.1	97.0	259.5	1.6	16	5.4		
BSEG	e P	Z 23:20:23.5	97.2	259.3	0.9	14	5.6		
MANZ	e P	Z 23:20:25.5	97.6	260.2	1.3	7	5.1		
ROTZ	e P	Z 23:20:25.6	97.6	260.2	1.5	10	5.3		
RJOB	e P	Z 23:20:25.3	97.7	260.4	0.9	8	5.4		
WERD	e P	Z 23:20:27.5	97.8	260.4	1.4	5	5.0		
TANN	e P	Z 23:20:26.8	97.9	260.5	1.5	9	5.3		
WET	e P	Z 23:20:26.7	97.9	260.7	1.4	11	5.4		
CLL	e P	Z 23:20:28.6	98.4	261.1	1.0	4	5.1		
GEC2	e P	Z 23:20:28.6	98.4	261.2	1.0	5	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/02	04:54:14.9	17.531S	177.533E	33.0N				SZGRF
Fiji Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	PKPbc	Z	05:13:39.1	142.3	20.2			
CLL	e	PKPbc	Z	05:13:44.7	144.1	25.7			
IBBN	e	PKPbc	Z	05:13:46.0	144.3	16.9			
FBE	e	PKPbc	Z	05:13:45.9	144.3	26.5			
NEUB	e	PKPbc	Z	05:13:46.4	144.5	23.8			
TANN	e	PKPbc	Z	05:13:48.2	145.0	25.4			
WERD	e	PKPbc	Z	05:13:48.1	145.0	25.1			
PLN	e	PKPbc	Z	05:13:48.2	145.0	24.8			
GUNZ	e	PKPbc	Z	05:13:48.3	145.1	25.2			

WERN	e	PKPbc	Z	05:13:48.6	145.1	25.3
ROTZ	e	PKPbc	Z	05:13:50.2	145.7	25.4
WET	e	PKPbc	Z	05:13:50.9	146.0	26.9
GEC2	e	PKPbc	Z	05:13:50.7	146.0	28.4
TNS	e	PKPbc	Z	05:13:51.5	146.2	18.9
WLF	e	PKPbc	Z	05:13:55.0	147.1	15.3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/02	08:54:35.9	0.500S	132.900E	35.0G		5.9		NEIC

Irian Jaya, Indonesia, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FBE	e Pdiff	Z	09:08:56.3	108.5	66.6	1.6	25			
CLL	e Pdiff	Z	09:08:55.9	108.6	66.1	1.8	29			
GEC2	e Pdiff	Z	09:08:58.7	109.1	67.5	1.8	19			
	e PP	Z	09:13:36.2							
TANN	e Pdiff	Z	09:08:59.3	109.2	65.9	1.9	18			
	e PP	Z	09:13:35.5							
NEUB	e Pdiff	Z	09:08:59.5	109.3	65.1	2.3	76			
	e PP	Z	09:13:35.8							
WERD	e Pdiff	Z	09:08:59.5	109.3	65.8	1.6	18			
	e PP	Z	09:13:36.2							
GUNZ	e Pdiff	Z	09:08:59.6	109.3	65.8	1.4	20			
	e PP	Z	09:13:36.3							
WERN	e Pdiff	Z	09:08:59.9	109.3	65.9	1.5	12			
	e PP	Z	09:13:36.3							
PLN	e Pdiff	Z	09:08:59.9	109.4	65.7	1.6	86			
	e PP	Z	09:13:37.0							
WET	e Pdiff	Z	09:09:00.7	109.5	66.7	1.5	10			
	e PP	Z	09:13:39.1							
MANZ	e Pdiff	Z	09:09:01.4	109.6	65.8	1.6	10			
	e PP	Z	09:13:38.6							
MOX	e Pdiff	Z	09:09:01.1	109.6	65.1	1.6	22			
	e PP	Z	09:13:38.5							
ROTZ	e Pdiff	Z	09:09:01.4	109.7	65.9	2.0	43			
	e PP	Z	09:13:39.2							
NRDL	e Pdiff	Z	09:09:01.5	109.7	63.2	1.4	27			
GRA1	e PP	Z	09:13:43.4	110.3	65.1					
	e L	Z	10:04:14.9			20.9	3602		5.9	
UBBA	e Pdiff	Z	09:09:04.7	110.5	63.7	1.7	27			
	e PP	Z	09:13:44.5							
TNS	e PP	Z	09:13:53.1	111.6	62.5					
BUG	e PP	Z	09:13:53.4	111.7	61.0					
STU	e PP	Z	09:13:56.6	111.9	63.7					
WLF	e Pdiff	Z	09:09:17.7	113.2	60.7	2.1	69			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/03	01:33:52.9	21.837S	166.482E	33.0G				SZGRF

New Caledonia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
PLN	e PKPbc	Z	01:53:24.7	145.0	44.5					
MOX	e PKPbc	Z	01:53:25.1	145.1	43.6					
MANZ	e PKPbc	Z	01:53:26.3	145.4	45.0					
IBBN	e PKPbc	Z	01:53:26.6	145.4	36.4					
ROTZ	e PKPbc	Z	01:53:26.6	145.5	45.3					
WET	e PKPbc	Z	01:53:26.7	145.6	46.9					
UBBA	e PKPbc	Z	01:53:27.2	145.7	41.1					
GRA1	e PKPbc	Z	01:53:28.7	146.0	44.0					
BUG	e PKPbc	Z	01:53:29.6	146.3	36.4					
RJOB	e PKPbc	Z	01:53:30.7	146.6	48.4					
TNS	e PKPbc	Z	01:53:31.8	146.8	39.3					
FUR	e PKPbc	Z	01:53:32.8	147.1	45.7					
WLF	e PKPbc	Z	01:53:37.1	148.1	36.3					
BFO	e PKPbc	Z	01:53:36.7	148.3	41.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/03	17:55:23.9	29.000N	113.000W	10.0G	5.2			NEIC

Gulf of California, Mexico

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e P	Z	18:07:53.8	83.7	310.9	1.2	44	5.6		
BSEG	e P	Z	18:07:54.3	83.7	312.7	1.1	71	5.8		
	e sP	Z	18:07:59.4							
BUG	e P	Z	18:07:55.0	84.0	310.6	1.1	30	5.4		
WLF	e P	Z	18:07:58.2	84.6	309.9	1.2	23	5.3		
	e sP	Z	18:08:03.2							
NRDL	e P	Z	18:07:57.9	84.6	312.6	1.2	36	5.5		
	e sP	Z	18:08:03.0							
TNS	e sP	Z	18:08:06.5	85.4	311.5					
UBBA	e P	Z	18:08:03.0	85.7	312.6	1.4	18	5.0		
	e sP	Z	18:08:07.8							
NEUB	e P	Z	18:08:05.6	86.3	313.9	1.1	36	5.4		
	e sP	Z	18:08:10.6							
MOX	e P	Z	18:08:06.9	86.6	313.9	1.2	15	5.0		
	e sP	Z	18:08:12.0							
BFO	e P	Z	18:08:07.0	86.6	311.5	1.1	14	5.0		
CLL	e P	Z	18:08:07.6	86.7	314.9	1.5	18	5.0		
	e sP	Z	18:08:12.6							
PLN	e P	Z	18:08:08.6	86.9	314.3					
	e sP	Z	18:08:13.6							

WERD	e P	Z	18:08:09.2	87.0	314.4	1.2	10	4.8
	e sP	Z	18:08:14.1					
GRA1	e P	Z	18:08:09.7	87.0	313.6	1.4	36	5.3
	e sP	Z	18:08:14.7					
GUNZ	e sP	Z	18:08:14.5	87.1	314.4			
TANN	e P	Z	18:08:09.5	87.1	314.5	1.6	29	5.1
	e sP	Z	18:08:14.5					
FBE	e P	Z	18:08:09.9	87.2	315.1	1.6	17	4.9
	e sP	Z	18:08:15.0					
MANZ	e P	Z	18:08:10.2	87.3	314.2	1.3	10	5.0
	e sP	Z	18:08:15.1					
ROTZ	e P	Z	18:08:11.4	87.5	314.3	1.2	9	4.9
GEC2	e P	Z	18:08:17.2	88.8	315.5	1.2	9	4.9
	e sP	Z	18:08:22.1					

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/03 18:00: 4.9 29.343N 113.291W 33.0G 6.1 7.3
 Gulf of California, Mexico SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e P	Z 18:12:30.0	83.5	311.3	1.9	937	6.7		
	e S	T 18:22:55.5							
	e SS	T 18:28:30.3							
BSEG	e P	Z 18:12:30.6	83.6	313.1	1.6	768	6.7		
	e S	T 18:22:55.4							
	e SS	T 18:28:30.3							
BUG	e P	Z 18:12:31.5	83.9	311.0	1.7	425	6.4		
	e S	T 18:22:58.2							
	e SS	T 18:28:34.5							
RGN	e P	Z 18:12:34.6	84.4	315.3	2.4	1512	6.8		
	e S	T 18:23:04.8							
	e SS	T 18:28:44.8							
NRDL	e P	Z 18:12:34.7	84.5	313.0	1.5	443	6.5		
	e S	T 18:23:03.7							
	e SS	T 18:28:41.7							
WLF	e P	Z 18:12:35.0	84.5	310.3	1.5	323	6.3		
	e S	T 18:23:05.7							
	e SS	T 18:28:44.0							
TNS	e P	Z 18:12:38.4	85.2	311.9	2.0	348	6.2		
	e S	T 18:23:13.2							
	e SS	T 18:28:54.8							
UBBA	e P	Z 18:12:40.0	85.6	313.0	2.2	418	6.2		
	e S	T 18:23:15.7							
	e SS	T 18:28:59.8							
NEUB	e P	Z 18:12:42.6	86.1	314.3	1.2	151	6.0		

	e S	T	18:23:19.7								
	e SS	T	18:29:08.3								
MOX	e P	Z	18:12:44.2	86.4	314.3	1.3		83	5.7		
	e S	T	18:23:23.7								
	e SS	T	18:29:13.2								
	e L	Z	18:49:47.3			20.9		88803		7.1	
BFO	e P	Z	18:12:44.1	86.4	312.0	1.2		88	5.8		
	e S	T	18:23:23.1								
	e SS	T	18:29:12.2								
STU	e P	Z	18:12:45.0	86.6	312.6	1.1		114	5.9		
	e S	T	18:23:24.6								
	e SS	T	18:29:14.1								
CLL	e P	Z	18:12:44.8	86.6	315.3	1.3		63	5.9		
	e S	T	18:23:24.1								
	e SS	T	18:29:14.3								
GRA1	e P	Z	18:12:46.8	86.9	314.0	1.4		232	6.1		
	e S	T	18:23:29.0								
	e SS	T	18:29:20.9								
	e L	Z	18:52:15.5			19.3		171294		7.5	
TANN	e P	Z	18:12:46.9	87.0	314.9	1.5		80	5.6		
	e S	T	18:23:29.0								
	e SS	T	18:29:20.3								
MANZ	e P	Z	18:12:47.6	87.1	314.6	1.3		53	5.5		
	e S	T	18:23:31.0								
	e SS	T	18:29:23.1								
ROTZ	e P	Z	18:12:48.9	87.3	314.7	1.5		67	5.8		
	e S	T	18:23:33.2								
	e SS	T	18:29:26.4								
FUR	e P	Z	18:12:51.9	88.0	314.1	1.4		253	6.3		
	e S	T	18:23:38.7								
	e SS	T	18:29:35.0								
WET	e P	Z	18:12:52.1	88.0	315.2	1.4		59	5.7		
	e S	T	18:23:40.2								
	e SS	T	18:29:37.9								
GEC2	e P	Z	18:12:54.7	88.6	315.9	1.5		58	5.6		
	e S	T	18:23:45.1								
	e SS	T	18:29:46.6								

Date 2009/08/03
 Origin Time 18:40:50.5
 Lat 29.300N
 Long 113.700W
 Depth 10.0G
 mb
 Ms
 ML
 Source NEIC
 Gulf of California, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e P	Z 18:53:20.1	83.7	311.6					
BSEG	e P	Z 18:53:20.5	83.8	313.4					
BUG	e P	Z 18:53:21.3	84.1	311.3					
NRDL	e P	Z 18:53:26.1	84.7	313.3					

WLF	e P	Z	18:53:24.8	84.7	310.6
MOX	e P	Z	18:53:34.1	86.6	314.5
GRA1	e P	Z	18:53:36.8	87.1	314.3
GUNZ	e P	Z	18:53:36.5	87.2	315.1
WERN	e P	Z	18:53:37.1	87.2	315.1
ROTZ	e P	Z	18:53:38.4	87.5	315.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/04	16:20:40.1	49.700N	96.745E	31.6	5.1	4.9		SZGRF
Tuva-Buryatia-Mongolia border region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e pP	Z	16:29:26.0	48.4	59.3					
BSEG	e P	Z	16:29:32.5	50.2	57.2	1.2	51	5.3		
	e pP	Z	16:29:41.1							
CLL	e P	Z	16:29:32.6	50.3	56.7	1.2	25	5.0		
	e pP	Z	16:29:41.2							
FBE	e P	Z	16:29:33.4	50.3	56.6	1.1	28	5.1		
	e pP	Z	16:29:42.0							
	e PP	Z	16:31:26.1							
NEUB	e P	Z	16:29:38.0	51.0	56.1	1.4	56	5.3		
	e pP	Z	16:29:46.6							
TANN	e P	Z	16:29:39.0	51.0	55.9	1.4	26	5.0		
	e pP	Z	16:29:47.7							
	e PP	Z	16:31:33.5							
NRDL	e P	Z	16:29:39.4	51.1	56.1	1.2	28	5.1		
	e pP	Z	16:29:48.0							
	e PP	Z	16:31:34.1							
WERD	e P	Z	16:29:39.4	51.1	55.8	1.4	22	4.9		
	e pP	Z	16:29:48.1							
	e PP	Z	16:31:33.9							
GUNZ	e P	Z	16:29:39.8	51.1	55.8	1.2	22	4.9		
	e pP	Z	16:29:48.4							
	e PP	Z	16:31:34.5							
WERN	e P	Z	16:29:40.0	51.2	55.7	1.2	26	5.0		
	e pP	Z	16:29:48.7							
	e PP	Z	16:31:34.6							
PLN	e P	Z	16:29:39.9	51.2	55.8	1.3	116	5.7		
	e pP	Z	16:29:48.5							
GEC2	e P	Z	16:29:40.9	51.3	55.4	1.4	14	4.7		
	e pP	Z	16:29:49.5							
	e PP	Z	16:31:35.0							
MOX	e P	Z	16:29:41.4	51.4	55.6	1.4	30	5.0		
	e pP	Z	16:29:50.0							
	e L	Z	16:53:17.9			19.7	2116		5.2	
MANZ	e P	Z	16:29:42.5	51.5	55.4	1.6	17	4.7		
	e pP	Z	16:29:51.1							

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Thu Apr 23 08:38:25 2020

11

WET	e P	Z	16:29:43.1	51.5	55.2	1.2	17	4.8		
	e pP	Z	16:29:51.7							
ROTZ	e P	Z	16:29:43.2	51.5	55.3	1.1	14	4.8		
	e pP	Z	16:29:51.8							
UBBA	e P	Z	16:29:46.7	52.1	54.9	1.6	31	5.0		
	e pP	Z	16:29:55.3							
GRA1	e P	Z	16:29:47.5	52.1	54.8	1.5	69	5.4		
	e pP	Z	16:29:56.2							
	e L	Z	16:54:25.3			21.9	553		4.6	
BUG	e P	Z	16:29:54.3	53.1	54.0	1.2	42	5.2		
	e pP	Z	16:30:03.0							
TNS	e P	Z	16:29:55.6	53.2	53.8	1.4	30	5.1		
	e pP	Z	16:30:04.2							
STU	e P	Z	16:29:58.8	53.7	53.3	1.0	39	5.4		
	e pP	Z	16:30:07.4							
BFO	e P	Z	16:30:03.8	54.4	52.6	1.2	15	4.9		
	e pP	Z	16:30:12.5							
WLF	e P	Z	16:30:06.8	54.8	52.4	1.3	14	4.8		
	e pP	Z	16:30:15.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/04	17:57:40.6	17.600S	167.500E	49.0		4.7		NEIC

Vanuatu Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
TANN	e PKP	Z 18:17:07.6	141.6	40.4					
MOX	e L	Z 19:28:12.7	141.8	39.0	21.0	110		4.6	
WET	e PKP	Z 18:17:08.8	142.4	42.0					
GRA1	e L	Z 19:22:09.7	142.7	39.2	21.6	202		4.8	
TNS	e PKP	Z 18:17:09.4	143.3	34.8					
STU	e PKP	Z 18:17:11.0	144.2	37.0					
WLF	e PKP	Z 18:17:12.7	144.6	31.7					
BFO	e PKP	Z 18:17:13.2	144.9	36.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/05	00:17:57.5	24.380N	125.950E	29.3	6.4	6.7		SZGRF

Southwestern Ryukyu Islands, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z 00:30:18.0	82.4	58.0	2.5	1680	6.8		
BSEG	e P	Z 00:30:27.5	84.2	55.6	1.7	963	6.8		
CLL	e P	Z 00:30:27.4	84.3	57.5	2.0	597	6.5		
FBE	e P	Z 00:30:28.0	84.3	57.7	2.0	994	6.7		
NEUB	e P	Z 00:30:31.1	84.9	56.5	1.8	704	6.6		
TANN	e P	Z 00:30:31.6	85.0	57.0	2.0	487	6.4		

NRDL	e P	Z	00:30:32.2	85.1	55.4	1.9	720	6.6	
	e sP	Z	00:30:44.0						
WERD	e P	Z	00:30:31.8	85.1	56.9	1.9	441	6.4	
GUNZ	e P	Z	00:30:32.1	85.1	56.9	1.8	476	6.4	
	e sP	Z	00:30:44.0						
WERN	e P	Z	00:30:32.2	85.1	56.9	1.7	364	6.3	
PLN	e P	Z	00:30:32.3	85.1	56.8	2.5	4044	7.2	
GEC2	e P	Z	00:30:32.4	85.2	57.8	2.7	852	6.5	
MOX	e P	Z	00:30:33.1	85.3	56.4	2.0	501	6.3	
	e sP	Z	00:30:45.1						
	e L	Z	01:13:19.7			18.3	31599		6.7
MANZ	e P	Z	00:30:33.8	85.4	56.7	2.2	683	6.4	
	e sP	Z	00:30:45.9						
WET	e P	Z	00:30:34.1	85.5	57.2	2.4	823	6.4	
ROTZ	e P	Z	00:30:34.4	85.5	56.8	2.0	601	6.4	
	e sP	Z	00:30:46.3						
GRA1	e P	Z	00:30:37.0	86.1	56.0	1.8	646	6.5	
	e L	Z	01:13:25.2			18.2	26245		6.7
UBBA	e P	Z	00:30:36.8	86.1	55.2	1.9	426	6.2	
	e sP	Z	00:30:48.7						
IBBN	e P	Z	00:30:38.2	86.4	53.6	1.6	438	6.3	
	e sP	Z	00:30:50.5						
FUR	e P	Z	00:30:41.0	86.9	56.0	1.7	694	6.5	
	e sP	Z	00:30:53.2						
BUG	e P	Z	00:30:41.8	87.1	53.1	1.8	307	6.1	
	e sP	Z	00:30:53.8						
TNS	e P	Z	00:30:42.8	87.2	54.0	2.4	396	6.1	
	e sP	Z	00:30:54.6						
STU	e P	Z	00:30:44.3	87.7	54.5	1.6	162	6.1	
	e sP	Z	00:30:56.5						
BFO	e P	Z	00:30:47.7	88.4	53.8	1.8	170	6.0	
	e sP	Z	00:30:59.6						
WLF	e P	Z	00:30:50.1	88.8	52.2	1.8	155	5.9	
	e sP	Z	00:31:02.0						

Date 2009/08/05
 Origin Time 02:58:45.5
 Lat 23.190N
 Long 93.260E
 Depth 33.0N
 mb 5.0
 Ms
 ML
 Source SZGRF
 Myanmar-India border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FBE	e P	Z	03:09:29.6	66.0	82.2	1.0	17	5.2		
GEC2	e P	Z	03:09:29.8	66.0	81.6	1.0	11	5.0		
CLL	e P	Z	03:09:30.0	66.1	82.2	1.2	6	4.7		
WET	e P	Z	03:09:32.9	66.5	81.1	0.9	4	4.7		
TANN	e P	Z	03:09:33.4	66.6	81.4	1.1	7	4.8		
GUNZ	e P	Z	03:09:33.9	66.7	81.3	1.1	11	5.0		
WERD	e P	Z	03:09:33.8	66.7	81.3	1.1	9	4.9		

PLN	e P	Z	03:09:34.3	66.8	81.2	1.1	41	5.6
ROTZ	e P	Z	03:09:35.6	66.9	80.9	0.9	10	5.1
MANZ	e P	Z	03:09:35.4	66.9	80.9	1.1	8	4.8
NEUB	e P	Z	03:09:34.9	66.9	81.2	1.2	19	5.2
MOX	e P	Z	03:09:36.3	67.1	80.9	0.9	5	4.7
BSEG	e P	Z	03:09:38.6	67.4	81.2	0.8	16	5.3
NRDL	e P	Z	03:09:40.8	67.7	80.5	1.2	13	5.1
TNS	e P	Z	03:09:49.3	69.2	78.4	1.0	9	4.9
BUG	e P	Z	03:09:52.2	69.6	78.0	1.1	14	5.0
WLF	e P	Z	03:09:59.3	70.7	76.6	1.2	32	5.3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/05	07:49: 4.6	43.400N	28.700E	10.0G				NEIC
Black Sea								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	07:51:55.2	11.7	112.1					
RJOB	e Pn	Z	07:51:53.3	11.9	105.5					
WET	e Pn	Z	07:51:57.9	12.3	111.8					
FBE	e Pn	Z	07:52:07.7	12.8	119.9					
ROTZ	e Pn	Z	07:52:10.5	13.0	113.1					
WERN	e Pn	Z	07:52:12.9	13.1	115.5					
TANN	e Pn	Z	07:52:09.3	13.1	116.2					
MANZ	e Pn	Z	07:52:11.0	13.1	113.8					
GUNZ	e Pn	Z	07:52:10.3	13.1	115.7					
WERD	e Pn	Z	07:52:10.5	13.2	116.0					
CLL	e Pn	Z	07:52:13.6	13.2	120.6					
GRA1	e Pn	Z	07:52:17.1	13.5	111.1					
MOX	e Pn	Z	07:52:19.1	13.7	115.4					
BFO	e Pn	Z	07:52:37.1	15.0	101.6					
RGN	e Pn	Z	07:52:32.2	15.0	131.8					
BSEG	e Pn	Z	07:52:50.4	16.0	123.7					
IBBN	e Pn	Z	07:53:00.9	16.5	114.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/05	08:31:41.3	45.500S	166.300E	10.0		6.3		NEIC
Off west coast of South Island, New Zealand								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e PKPdf	Z	08:51:42.8	161.2	90.2					
FBE	e PKPdf	Z	08:51:43.5	161.3	83.7					
CLL	e PKPdf	Z	08:51:43.1	161.5	82.3					
WET	e PKPdf	Z	08:51:43.5	161.7	88.6					
RJOB	e PKPdf	Z	08:51:43.2	161.8	92.8					
TANN	e PKPdf	Z	08:51:43.7	161.9	84.4					

WERN	e	PKPdf	Z	08:51:44.0	162.0	84.7					
GUNZ	e	PKPdf	Z	08:51:43.9	162.0	84.4					
WERD	e	PKPdf	Z	08:51:43.3	162.0	84.1					
PLN	e	PKPdf	Z	08:51:44.2	162.1	83.9					
ROTZ	e	PKPdf	Z	08:51:43.9	162.1	86.1					
MANZ	e	PKPdf	Z	08:51:43.9	162.2	85.4					
NEUB	e	PKPdf	Z	08:51:43.7	162.2	81.3					
MOX	e	PKPdf	Z	08:51:44.0	162.4	82.8					
	e	L	Z	10:04:30.4			20.5	3509		6.2	
BSEG	e	PKPdf	Z	08:51:44.2	162.5	71.1					
GRA1	e	L	Z	10:03:30.6	162.8	85.5	19.9	6775		6.5	
NRDL	e	PKPdf	Z	08:51:44.6	163.0	75.3					
UBBA	e	PKPdf	Z	08:51:44.6	163.4	80.6					
IBBN	e	PKPdf	Z	08:51:45.7	164.4	72.7					
BFO	e	PKPdf	Z	08:51:45.5	164.7	87.6					
BUG	e	PKPdf	Z	08:51:46.6	164.9	75.0					

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/05 09:13:13.2 29.600N 113.800W 10.0 5.6
 Gulf of California, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e P	Z 09:25:48.2	84.5	313.5	1.5	76	5.7		
WLF	e P	Z 09:25:48.7	84.5	310.8	1.9	152	5.9		
TNS	e P	Z 09:25:51.9	85.3	312.4	1.6	43	5.3		
UBBA	e P	Z 09:25:53.7	85.6	313.6	2.2	62	5.4		
GRA1	e P	Z 09:25:59.8	86.9	314.5	1.7	65	5.5		

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/08 06:43:48.7 47.426N 24.524W 33.0N 5.2 4.5
 Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:48:56.6	23.5	278.3	2.4	118	5.2		
	e L	Z 06:58:07.7			19.9	1636		4.5	

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/08 21:51:50.8 24.170S 180.040W 652.9
 South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 22:11:41.2	149.2	18.7					
NRDL	e PKPbc	Z 22:11:44.5	150.6	19.1					

CLL	e	PKPbc	Z	22:11:45.5	151.1	25.2
BRG	e	PKPbc	Z	22:11:46.0	151.2	27.2
	e	pPKPbc	Z	22:14:13.8		
IBBN	e	PKPbc	Z	22:11:45.6	151.2	14.9
TANN	e	PKPbc	Z	22:11:47.9	152.0	24.9
MOX	e	PKPbc	Z	22:11:47.8	152.0	23.1
BUG	e	PKPbc	Z	22:11:47.8	152.2	14.4
UBBA	e	PKPbc	Z	22:11:48.5	152.2	20.0
ROTZ	e	PKPbc	Z	22:11:49.4	152.7	24.9
GRA1	e	PKPbc	Z	22:11:50.1	153.0	23.1
WET	e	PKPbc	Z	22:11:50.3	153.0	26.7
GEC2	e	PKPbc	Z	22:11:50.1	153.1	28.6
TNS	e	PKPbc	Z	22:11:50.3	153.1	17.3
WLF	e	PKPbc	Z	22:11:52.9	154.1	13.0
RJOB	e	PKPbc	Z	22:11:52.9	154.3	27.9
STU	e	PKPbc	Z	22:11:52.9	154.3	19.8
FUR	e	PKPbc	Z	22:11:53.3	154.4	24.5
BFO	e	PKPbc	Z	22:11:54.3	155.0	18.3

Date Origin Time Lat Long Depth mb Ms ML Source
2009/08/08

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
GRA1 e P Z 02:47:04.1

Date Origin Time Lat Long Depth mb Ms ML Source
2009/08/09 04:02: 9.1
Southern Xinjiang, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	04:11:01.3	49.6	78.3	1.0	17	4.9		
CLL	e P	Z	04:11:04.7	50.1	78.0	1.0	10	4.7		
GEC2	e P	Z	04:11:05.6	50.2	76.5	0.9	5	4.5		
TANN	e P	Z	04:11:09.0	50.7	76.9	1.1	9	4.6		
WET	e P	Z	04:11:09.0	50.7	76.2	0.9	4	4.4		
ROTZ	e P	Z	04:11:11.7	51.0	76.3	1.2	14	4.8		
RJOB	e P	Z	04:11:12.4	51.1	75.0	0.7	2	4.2		
MOX	e P	Z	04:11:12.5	51.1	76.6	1.0	8	4.6		
	e L	Z	04:34:49.3			18.4	506		4.6	
BSEG	e P	Z	04:11:14.3	51.2	78.3	0.9	26	5.2		
GRA1	e P	Z	04:11:16.6	51.6	75.6	1.5	41	5.1		
	e L	Z	04:34:06.8			19.5	598		4.6	
NRDL	e P	Z	04:11:17.1	51.6	77.0	1.0	22	5.0		
FUR	e P	Z	04:11:18.5	52.0	74.4	0.8	18	5.1		
UBBA	e P	Z	04:11:19.6	52.1	75.6	1.8	44	5.1		

IBBN	e P	Z	04:11:27.4	53.1	75.3	1.0	8	4.6
STU	e P	Z	04:11:27.0	53.1	73.6	1.0	10	4.7
TNS	e P	Z	04:11:27.9	53.2	74.2	0.7	3	4.3
BUG	e P	Z	04:11:31.1	53.6	74.3	1.2	16	4.9
BFO	e P	Z	04:11:33.2	53.8	72.8	0.9	3	4.3
WLF	e P	Z	04:11:39.5	54.8	72.4	0.8	7	4.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/09	07:09:3.5	4.700S	153.100E	83.0	5.4			NEIC
New Ireland Region, P.N.G.								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPdf	Z	07:27:50.3	115.6	46.5					
BRG	e PKPdf	Z	07:27:51.0	115.9	51.2					
CLL	e PKPdf	Z	07:27:51.1	116.1	50.1					
	e pPKPdf	Z	07:28:06.1							
NRDL	e PKPdf	Z	07:27:52.5	116.6	46.8					
TANN	e PKPdf	Z	07:27:53.1	116.9	49.9					
MOX	e PKPdf	Z	07:27:53.4	117.2	49.0					
GEC2	e PKPdf	Z	07:27:53.8	117.3	51.8					
ROTZ	e PKPdf	Z	07:27:54.1	117.5	49.9					
WET	e PKPdf	Z	07:27:54.4	117.5	50.8					
IBBN	e PKPdf	Z	07:27:54.6	117.8	44.5					
UBBA	e PKPdf	Z	07:27:54.4	117.8	47.3					
	e pPKPdf	Z	07:28:09.4							
GRA1	e PKPdf	Z	07:27:55.0	118.0	49.0					
RJOB	e PKPdf	Z	07:27:55.6	118.5	51.3					
BUG	e PKPdf	Z	07:27:56.1	118.6	44.3					
TNS	e PKPdf	Z	07:27:57.0	119.0	46.0					
STU	e PKPdf	Z	07:27:58.3	119.6	47.4					
	e pPKPdf	Z	07:28:13.4							
BFO	e PKPdf	Z	07:27:59.2	120.3	46.7					
WLF	e PKPdf	Z	07:28:00.4	120.4	43.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/09	10:55:13.7	31.965N	139.721E	319.8	6.9			SZGRF
Southeast of Honshu, Japan								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	11:07:43.7	83.6	41.3	1.0	2422	7.4		
BRG	e P	Z	11:07:47.4	84.4	43.8	1.3	1472	7.1		
CLL	e P	Z	11:07:47.6	84.5	43.1	0.9	2246	7.4		
NRDL	e P	Z	11:07:49.4	84.8	41.0	1.3	1140	6.9		
TANN	e P	Z	11:07:52.4	85.4	42.6	1.4	859	6.7		
MOX	e P	Z	11:07:53.3	85.6	42.0	1.4	1164	6.8		

IBBN	e P	Z	11:07:54.7	85.9	39.2	0.9	2252	7.3
ROTZ	e P	Z	11:07:55.7	86.0	42.4	1.5	2064	7.0
GEC2	e P	Z	11:07:55.0	86.0	43.5	1.3	693	6.6
UBBA	e P	Z	11:07:55.9	86.1	40.8	1.6	984	6.7
WET	e P	Z	11:07:56.1	86.1	42.9	1.5	723	6.6
GRA1	e P	Z	11:07:58.0	86.4	41.7	1.5	1691	7.0
BUG	e P	Z	11:07:58.7	86.7	38.8	1.2	1261	6.9
RJOB	e P	Z	11:08:01.2	87.2	42.8	1.3	629	6.6
TNS	e P	Z	11:08:01.4	87.2	39.7	1.8	1027	6.9
FUR	e P	Z	11:08:03.0	87.6	41.7	1.4	1263	7.1
STU	e P	Z	11:08:04.9	88.0	40.2	1.5	688	6.8
WLF	e P	Z	11:08:08.3	88.6	37.9	1.6	832	6.7
	e pP	Z	11:09:23.3					
BFO	e P	Z	11:08:08.2	88.7	39.5	1.4	546	6.6

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/09 19:43:27.0 56.402N 167.731E 33.0G 4.6 SZGRF
 Komandorsky Islands, Russia, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	19:54:52.7	72.1	13.4	1.0	4	4.6		

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/10 04:05:51.5 21.560S 172.680E 33.0G 6.5 SZGRF
 Southeast of Loyalty Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	04:25:24.7	145.0	29.4					
NRDL	e PKPbc	Z	04:25:28.4	146.3	30.1					
BRG	e PKPbc	Z	04:25:25.4	146.3	37.4					
CLL	e PKPbc	Z	04:25:26.2	146.3	35.6					
IBBN	e PKPbc	Z	04:25:30.4	147.1	26.5					
TANN	e PKPbc	Z	04:25:28.8	147.2	35.6					
MOX	e PKPbc	Z	04:25:30.2	147.4	34.0					
	e L	Z	05:26:58.5			21.6	8323		6.5	
UBBA	e PKPbc	Z	04:25:30.9	147.8	31.3					
ROTZ	e PKPbc	Z	04:25:33.9	147.9	35.7					
GEC2	e PKPbc	Z	04:25:33.5	148.0	39.0					
BUG	e PKPbc	Z	04:25:33.8	148.0	26.3					
WET	e PKPbc	Z	04:25:34.6	148.1	37.4					
GRA1	e PKPbc	Z	04:25:32.9	148.3	34.2					
	e L	Z	05:30:07.6			20.3	8539		6.5	
TNS	e PKPbc	Z	04:25:35.9	148.8	29.2					
RJOB	e PKPbc	Z	04:25:38.7	149.2	38.7					
FUR	e PKPbc	Z	04:25:39.6	149.5	35.8					

STU e PKPbc Z 04:25:40.1 149.8 31.7
 WLF e PKPbc Z 04:25:40.6 149.9 25.6

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/10 12:42:49.8 43.830N 132.750E 576.3N 5.3
 Primorye, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 12:53:10.0	70.6	40.2	0.9	71	5.8		
BRG	e P	Z 12:53:14.3	71.5	41.8	0.7	15	5.2		
CLL	e P	Z 12:53:14.5	71.5	41.3	0.8	38	5.6		
NRDL	e P	Z 12:53:16.6	71.8	39.8	0.8	20	5.3		
TANN	e P	Z 12:53:20.1	72.4	40.8	0.9	10	4.9		
MOX	e P	Z 12:53:21.2	72.6	40.3	0.8	11	5.1		
IBBN	e P	Z 12:53:22.4	72.8	38.2	0.8	23	5.4		
ROTZ	e P	Z 12:53:24.0	73.0	40.5	0.8	17	5.2		
GEC2	e P	Z 12:53:23.6	73.1	41.2	1.0	15	5.1		
UBBA	e P	Z 12:53:24.0	73.1	39.3	0.8	7	4.9		
WET	e P	Z 12:53:24.7	73.2	40.8	0.8	13	5.0		
GRA1	e P	Z 12:53:26.8	73.5	39.9	0.8	68	5.7		
BUG	e P	Z 12:53:27.5	73.7	37.7	0.8	25	5.3		
TNS	e P	Z 12:53:30.6	74.2	38.3	0.9	16	5.0		
RJOB	e P	Z 12:53:31.2	74.3	40.5	0.9	23	5.2		
FUR	e P	Z 12:53:32.9	74.6	39.6	0.8	37	5.5		
STU	e P	Z 12:53:34.1	75.0	38.5	0.8	23	5.3		
WLF	e P	Z 12:53:37.5	75.6	36.7	0.9	8	4.8		
BFO	e P	Z 12:53:39.0	75.7	37.9	0.8	37	5.6		

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/10 17:46:23.4 2.403S 143.824E 33.0G 5.1
 Ninigo Islands, Papua New Guinea, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKPdf	Z 18:05:08.0	115.9	58.5					
BSEG	e PKPdf	Z 18:05:08.4	116.0	53.8					
CLL	e PKPdf	Z 18:05:08.3	116.2	57.4					
TANN	e PKPdf	Z 18:05:10.1	116.9	57.3					
NRDL	e PKPdf	Z 18:05:10.2	117.0	54.1					
GEC2	e PKPdf	Z 18:05:10.1	117.1	59.1					
MOX	e PKPdf	Z 18:05:10.6	117.3	56.4					
	e L	Z 18:57:33.3			21.6	553		5.1	
WET	e PKPdf	Z 18:05:10.8	117.4	58.2					
ROTZ	e PKPdf	Z 18:05:10.9	117.4	57.3					
GRA1	e PKPdf	Z 18:05:12.0	118.0	56.4					
	e L	Z 19:02:47.0			19.3	440		5.1	

UBBA	e	PKPdf	Z	18:05:10.9	118.0	54.7
RJOB	e	PKPdf	Z	18:05:12.5	118.2	58.8
BUG	e	PKPdf	Z	18:05:13.9	119.0	51.8
TNS	e	PKPdf	Z	18:05:14.3	119.2	53.5
STU	e	PKPdf	Z	18:05:15.0	119.6	54.9
BFO	e	PKPdf	Z	18:05:16.9	120.3	54.2
WLF	e	PKPdf	Z	18:05:17.9	120.7	51.5

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/10	19:55:36.6	13.020N	92.550E	33.0G	6.4	7.7		SZGRF

Andaman Islands, India, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 20:07:02.7	72.8	90.4	1.1	484	6.5		
GEC2	e P	Z 20:07:03.8	72.9	89.6	1.0	543	6.6		
CLL	e P	Z 20:07:05.7	73.4	89.8	1.2	400	6.4		
WET	e P	Z 20:07:06.7	73.5	89.1	1.2	521	6.4		
RJOB	e P	Z 20:07:07.0	73.5	88.6	1.2	290	6.2		
TANN	e P	Z 20:07:08.3	73.7	89.1	1.2	359	6.3		
ROTZ	e P	Z 20:07:09.9	73.9	88.8	1.2	704	6.6		
MOX	e P	Z 20:07:11.4	74.2	88.6	1.1	392	6.3		
	e L	Z 20:43:51.0			21.9	525455		7.8	
GRA1	e P	Z 20:07:13.6	74.5	88.0	1.2	651	6.5		
	e L	Z 20:45:35.1			21.0	365019		7.6	
FUR	e P	Z 20:07:13.1	74.5	87.6	1.2	486	6.4		
BSEG	e P	Z 20:07:15.3	75.0	88.4	1.1	1213	6.8		
NRDL	e P	Z 20:07:16.6	75.1	87.9	1.3	753	6.6		
UBBA	e P	Z 20:07:17.2	75.3	87.4	1.6	324	6.1		
STU	e P	Z 20:07:21.0	75.9	86.2	1.7	585	6.4		
TNS	e P	Z 20:07:23.2	76.3	86.0	1.1	319	6.4		
BFO	e P	Z 20:07:23.5	76.5	85.5	1.3	262	6.2		
IBBN	e P	Z 20:07:24.6	76.6	86.0	1.2	826	6.7		
BUG	e P	Z 20:07:26.7	76.9	85.4	1.2	646	6.6		
WLF	e P	Z 20:07:32.0	77.8	84.2	1.5	487	6.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/10	20:07: 6.4	35.350N	139.990E	33.0N	6.0			SZGRF

Near south coast of eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 20:19:18.8	80.7	39.5	1.2	336	6.3		
BRG	e P	Z 20:19:23.3	81.6	41.8	1.0	42	5.5		
CLL	e P	Z 20:19:23.2	81.7	41.2	0.9	108	6.0		
NRDL	e P	Z 20:19:24.6	81.9	39.2	1.0	50	5.6		
TANN	e P	Z 20:19:28.1	82.6	40.7	1.1	27	5.4		

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

20

MOX	e P	Z	20:19:29.1	82.7	40.1	1.0	40	5.6
IBBN	e P	Z	20:19:30.1	83.0	37.5	0.9	102	6.0
ROTZ	e P	Z	20:19:31.7	83.2	40.5	1.4	222	6.2
GEC2	e P	Z	20:19:31.2	83.2	41.5	1.1	54	5.7
UBBA	e P	Z	20:19:31.8	83.3	39.0	1.8	380	6.3
WET	e P	Z	20:19:32.3	83.4	40.9	1.0	48	5.7
GRA1	e P	Z	20:19:34.1	83.6	39.8	1.0	198	6.3
BUG	e P	Z	20:19:34.4	83.8	37.1	2.7	6627	7.4
TNS	e P	Z	20:19:37.4	84.3	37.8	0.9	43	5.7
RJOB	e P	Z	20:19:37.9	84.5	40.8	0.9	124	6.1
FUR	e P	Z	20:19:39.4	84.8	39.7	0.8	131	6.2
STU	e P	Z	20:19:41.4	85.2	38.3	1.0	116	6.0
WLF	e P	Z	20:19:44.2	85.7	36.2	1.2	154	6.0
BFO	e P	Z	20:19:44.6	85.9	37.7	0.9	58	5.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/11	07:54:28.7	13.400N	92.910E	33.0G	5.0			SZGRF
Andaman Islands, India, region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	08:05:58.9	72.7	89.9	0.9	16	5.1		
GEC2	e P	Z	08:06:00.0	72.9	89.1	1.0	18	5.1		
CLL	e P	Z	08:06:01.9	73.3	89.3	1.1	12	4.9		
WET	e P	Z	08:06:03.3	73.4	88.6	1.2	16	5.0		
RJOB	e P	Z	08:06:03.3	73.5	88.1	1.0	6	4.6		
TANN	e P	Z	08:06:04.6	73.7	88.6	1.2	13	4.8		
ROTZ	e P	Z	08:06:06.2	73.8	88.2	1.2	22	5.1		
MOX	e P	Z	08:06:07.6	74.2	88.0	0.8	9	4.9		
GRA1	e P	Z	08:06:09.7	74.5	87.5	1.4	30	5.1		
BSEG	e P	Z	08:06:11.6	74.9	87.9	0.7	32	5.5		
NRDL	e P	Z	08:06:12.6	75.0	87.4	1.5	23	5.0		
TNS	e P	Z	08:06:19.6	76.2	85.5	0.9	10	5.0		
BFO	e P	Z	08:06:20.5	76.5	85.0	1.6	12	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/11	19:25:32.6	22.544S	176.695W	33.0N				SZGRF
South of Fiji Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	19:45:15.5	148.2	12.3					
CLL	e PKPbc	Z	19:45:20.5	150.3	18.3					
BRG	e PKPbc	Z	19:45:21.0	150.5	20.2					
BUG	e PKPbc	Z	19:45:22.2	150.9	7.6					
MOX	e PKPbc	Z	19:45:22.3	151.2	16.1					
TANN	e PKPbc	Z	19:45:22.9	151.2	17.8					

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

21

ROTZ	e	PKPbc	Z	19:45:24.3	151.9	17.7
TNS	e	PKPbc	Z	19:45:24.6	152.0	10.2
GEC2	e	PKPbc	Z	19:45:25.5	152.4	21.1
WLF	e	PKPbc	Z	19:45:27.0	152.8	5.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/11	21:43:34.5	23.820N	94.590E	101.0	5.1			SZGRF
Myanmar-India border region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 21:54:23.3	66.0	81.2	0.7	8	5.1		
GEC2	e P	Z 21:54:26.3	66.5	80.2	0.8	11	5.2		
	e pP	Z 21:54:51.7							
CLL	e P	Z 21:54:26.1	66.5	80.7	0.8	5	4.8		
WET	e P	Z 21:54:29.6	66.9	79.7	0.8	8	5.0		
TANN	e P	Z 21:54:29.6	67.0	79.9	0.8	7	4.9		
RJOB	e P	Z 21:54:31.1	67.3	79.1	0.9	7	4.9		
ROTZ	e P	Z 21:54:31.9	67.3	79.5	0.7	19	5.4		
MOX	e P	Z 21:54:32.4	67.5	79.4	0.9	8	4.9		
BSEG	e P	Z 21:54:34.1	67.7	79.8	0.8	31	5.6		
GRA1	e P	Z 21:54:35.9	67.9	78.8	0.9	10	5.1		
NRDL	e P	Z 21:54:36.4	68.0	79.1	1.0	15	5.2		
FUR	e P	Z 21:54:37.3	68.2	78.2	0.8	10	5.1		
UBBA	e P	Z 21:54:38.1	68.4	78.3	0.8	2	4.4		
STU	e P	Z 21:54:44.5	69.4	77.0	0.8	18	5.3		
IBBN	e P	Z 21:54:45.5	69.5	77.2	1.1	21	5.2		
TNS	e P	Z 21:54:45.6	69.5	77.0	0.8	11	5.0		
BUG	e P	Z 21:54:48.2	70.0	76.6	0.9	16	5.2		
BFO	e P	Z 21:54:48.3	70.0	76.2	0.8	4	4.6		
WLF	e P	Z 21:54:55.8	71.1	75.2	0.9	41	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/12								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:45:20.5							
	e L	Z 04:59:13.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/12	04:45:43.0	68.291N	18.229W	10.0G	4.7	3.7		SZGRF
Iceland region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

22

GRA1	e P	Z	04:50:54.6	23.5	332.9	1.5	34	4.7
	e L	Z	04:59:13.2			22.0	277	3.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/12	20:05:5.2	14.511N	120.309E	33.0N	5.4			SZGRF
Luzon, Philippine Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	20:18:05.4	90.8	66.2	1.8	40	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/12	22:48:41.2	32.480N	141.410E	69.5	5.7			SZGRF
Southeast of Honshu, Japan								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	23:01:13.3	83.8	39.8	0.8	91	6.1		
BRG	e P	Z	23:01:17.4	84.7	42.3	0.8	87	6.1		
CLL	e P	Z	23:01:17.7	84.7	41.6	0.8	165	6.3		
NRDL	e P	Z	23:01:18.9	85.0	39.5	0.9	42	5.7		
TANN	e P	Z	23:01:22.3	85.6	41.1	0.9	34	5.5		
MOX	e P	Z	23:01:23.1	85.8	40.5	0.9	53	5.7		
IBBN	e P	Z	23:01:24.2	86.0	37.7	0.7	181	6.3		
ROTZ	e P	Z	23:01:25.3	86.2	40.9	0.9	45	5.6		
GEC2	e P	Z	23:01:25.1	86.3	42.0	0.8	34	5.5		
UBBA	e P	Z	23:01:25.5	86.3	39.3	0.8	21	5.4		
WET	e P	Z	23:01:26.1	86.4	41.4	1.0	28	5.3		
GRA1	e P	Z	23:01:27.9	86.7	40.2	1.1	121	5.9		
	e pP	Z	23:01:47.0							
BUG	e P	Z	23:01:28.4	86.9	37.3	0.9	89	5.9		
TNS	e P	Z	23:01:30.9	87.4	38.2	1.0	33	5.6		
RJOB	e P	Z	23:01:31.4	87.5	41.3	0.8	24	5.6		
FUR	e P	Z	23:01:33.0	87.9	40.2	0.7	25	5.7		
STU	e P	Z	23:01:34.7	88.3	38.7	0.7	20	5.4		
WLF	e P	Z	23:01:37.8	88.8	36.4	1.0	31	5.5		
BFO	e P	Z	23:01:38.0	89.0	38.0	0.8	22	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/13	09:21:45.7	15.330N	90.350E	44.1	4.7			SZGRF
Bay of Bengal								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	09:32:57.3	69.6	90.5	0.8	4	4.6		
GEC2	e P	Z	09:32:58.5	69.8	89.6	0.7	5	4.8		

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

23

CLL	e P	Z	09:33:01.9	70.2	90.0	0.9	8	4.9
WET	e P	Z	09:33:01.6	70.3	89.1	0.8	3	4.5
	e pP	Z	09:33:14.2					
RJOB	e P	Z	09:33:02.9	70.4	88.5	0.6	2	4.5
TANN	e P	Z	09:33:03.3	70.6	89.2	0.8	2	4.4
ROTZ	e P	Z	09:33:05.0	70.7	88.8	0.8	4	4.6
MOX	e P	Z	09:33:06.3	71.1	88.7	0.8	3	4.5
GRA1	e P	Z	09:33:08.5	71.4	88.0	0.7	3	4.6
FUR	e P	Z	09:33:09.4	71.4	87.6	0.6	17	5.3
BSEG	e P	Z	09:33:11.9	71.8	88.8	0.8	21	5.3
NRDL	e P	Z	09:33:11.9	72.0	88.1	0.9	3	4.4
UBBA	e P	Z	09:33:12.8	72.1	87.5	0.7	2	4.3
TNS	e P	Z	09:33:18.1	73.1	86.1	0.7	3	4.6
BFO	e P	Z	09:33:20.0	73.4	85.5	1.2	11	4.9
IBBN	e P	Z	09:33:20.8	73.4	86.2	0.8	10	4.9
BUG	e P	Z	09:33:23.4	73.8	85.6	0.9	16	5.1

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/13 11:16:59.7 21.840S 172.510W 33.0G 5.6
 Tonga Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	11:36:45.5	147.8	4.9					
NRDL	e PKPbc	Z	11:36:49.8	149.3	4.8					
CLL	e PKPbc	Z	11:36:51.4	150.2	10.3					
BRG	e PKPbc	Z	11:36:52.0	150.5	12.2					
UBBA	e PKPbc	Z	11:36:54.5	151.0	4.8					
MOX	e PKPbc	Z	11:36:53.6	151.0	7.9					
	e L	Z	12:45:31.4			19.8	853		5.6	
TANN	e PKPbc	Z	11:36:53.4	151.2	9.6					
TNS	e PKPbc	Z	11:36:54.8	151.6	1.9					
ROTZ	e PKPbc	Z	11:36:55.2	151.8	9.3					
GRA1	e PKPbc	Z	11:36:57.4	152.0	7.4					
	e L	Z	12:46:01.5			21.2	817		5.5	
WLF	e PKPbc	Z	11:36:56.5	152.2	357.3					
WET	e PKPbc	Z	11:36:57.9	152.4	10.8					
GEC2	e PKPbc	Z	11:36:58.1	152.5	12.6					
BFO	e PKPbc	Z	11:36:59.0	153.5	1.7					
RJOB	e PKPbc	Z	11:37:00.3	153.8	11.2					

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/13 14:43: 8.1 10.717N 97.659E 36.2 5.0 4.3
 Andaman Islands, India, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

24

GRA1	e P	Z	14:55:12.2	79.6	85.7	1.5	30	5.0		
	e pP	Z	14:55:22.6							
	e L	Z	15:23:11.7			21.4	142		4.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/14	02:31:11.6	16.870S	175.230W	91.7				SZGRF

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPbc	Z	02:50:36.4	144.9	13.8					
BRG	e PKPbc	Z	02:50:36.9	145.2	15.5					
MOX	e PKPbc	Z	02:50:39.0	145.8	11.7					
	e pPKPbc	Z	02:51:02.3							
TANN	e pPKPbc	Z	02:51:03.6	145.9	13.2					
TNS	e PKPbc	Z	02:50:41.6	146.5	6.4					
	e pPKPbc	Z	02:51:07.2							
ROTZ	e PKPbc	Z	02:50:41.7	146.6	13.0					
GRA1	e PKPbc	Z	02:50:42.9	146.8	11.3					
WLF	e PKPbc	Z	02:50:44.0	147.2	2.4					
GEC2	e PKPbc	Z	02:50:43.7	147.2	15.9					
STU	e PKPbc	Z	02:50:45.6	147.9	8.0					
FUR	e PKPbc	Z	02:50:46.5	148.3	11.9					
BFO	e PKPbc	Z	02:50:46.9	148.4	6.5					
RJOB	e PKPbc	Z	02:50:47.9	148.4	14.8					
	e pPKPbc	Z	02:51:11.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/14	19:39:47.6	13.430N	92.670E	27.8	5.3	4.2		SZGRF

Andaman Islands, India, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	19:51:14.3	72.5	90.1	1.1	28	5.3		
	e pP	Z	19:51:21.9							
GEC2	e P	Z	19:51:15.5	72.7	89.2	1.1	32	5.4		
	e pP	Z	19:51:22.7							
FBE	e P	Z	19:51:16.7	72.9	89.6	1.1	51	5.6		
	e pP	Z	19:51:24.5							
CLL	e P	Z	19:51:17.2	73.1	89.5	1.2	26	5.2		
	e pP	Z	19:51:25.4							
WET	e P	Z	19:51:18.5	73.2	88.7	1.2	27	5.3		
	e pP	Z	19:51:26.7							
RJOB	e P	Z	19:51:18.6	73.3	88.2	1.1	18	5.1		
	e pP	Z	19:51:26.8							
TANN	e P	Z	19:51:19.9	73.5	88.8	1.2	17	5.0		
	e pP	Z	19:51:28.1							

WERN	e P	Z	19:51:20.3	73.5	88.7	1.1	13	4.9	
	e pP	Z	19:51:28.4						
GUNZ	e P	Z	19:51:20.4	73.6	88.7	1.2	27	5.2	
	e pP	Z	19:51:28.6						
WERD	e P	Z	19:51:20.4	73.6	88.7	1.2	24	5.1	
	e pP	Z	19:51:28.5						
ROTZ	e P	Z	19:51:21.5	73.7	88.4	1.2	41	5.3	
	e pP	Z	19:51:29.7						
PLN	e P	Z	19:51:20.5	73.7	88.6	1.0	94	5.8	
MANZ	e P	Z	19:51:21.6	73.7	88.4	1.3	41	5.3	
	e pP	Z	19:51:29.4						
NEUB	e P	Z	19:51:22.0	73.9	88.5	1.4	41	5.3	
MOX	e P	Z	19:51:22.9	74.0	88.2	1.0	18	5.1	
	e L	Z	20:29:06.5			20.0	162		4.3
GRA1	e P	Z	19:51:24.9	74.3	87.6	1.3	43	5.3	
	e L	Z	20:29:31.4			19.7	131		4.2
FUR	e P	Z	19:51:24.7	74.3	87.2	1.1	25	5.1	
BSEG	e P	Z	19:51:27.0	74.7	88.1	1.1	77	5.6	
	e pP	Z	19:51:34.6						
NRDL	e P	Z	19:51:28.1	74.9	87.5	1.5	58	5.4	
	e pP	Z	19:51:36.2						
UBBA	e P	Z	19:51:28.5	75.0	87.0	1.4	13	4.8	
TNS	e P	Z	19:51:34.8	76.0	85.7	1.1	17	5.1	
	e pP	Z	19:51:42.8						
BFO	e P	Z	19:51:35.5	76.3	85.1	1.3	17	5.0	
	e pP	Z	19:51:43.8						
IBBN	e P	Z	19:51:36.2	76.3	85.6	1.4	64	5.6	
	e pP	Z	19:51:44.0						
BUG	e P	Z	19:51:38.1	76.7	85.1	1.3	44	5.4	
	e pP	Z	19:51:46.5						
WLF	e P	Z	19:51:43.7	77.6	83.8	1.9	64	5.4	
	e pP	Z	19:51:51.6						

Date 2009/08/15 Origin Time 04:04:29.9 Lat 4.240N Long 96.100E Depth 33.0G mb 4.8 Ms ML Source SZGRF
Northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	04:16:45.8	81.8	93.4	1.0	4	4.6		
GEC2	e P	Z	04:16:46.2	81.8	92.9	1.0	8	4.8		
WET	e P	Z	04:16:49.0	82.4	92.4	0.8	4	4.6		
RJOB	e P	Z	04:16:48.9	82.4	92.1	0.8	4	4.6		
CLL	e P	Z	04:16:48.8	82.4	92.7	1.0	5	4.5		
TANN	e P	Z	04:16:50.5	82.7	92.2	1.0	2	4.4		
ROTZ	e P	Z	04:16:51.8	82.8	91.9	0.9	4	4.6		
MANZ	e P	Z	04:16:51.9	82.9	91.9	1.1	9	4.9		
NEUB	e P	Z	04:16:52.9	83.1	91.8	0.8	8	5.0		

MOX	e P	Z	04:16:53.3	83.2	91.6	0.8	2	4.4
GRA1	e P	Z	04:16:54.7	83.5	91.2	0.9	6	4.8
BSEG	e P	Z	04:16:57.7	84.1	90.9	1.0	14	5.1
NRDL	e P	Z	04:16:59.0	84.2	90.6	1.0	8	4.9
TNS	e P	Z	04:17:04.0	85.2	89.1	1.0	5	4.7
BFO	e P	Z	04:17:03.9	85.4	88.8	0.9	4	4.7
IBBN	e P	Z	04:17:05.8	85.6	88.7	0.9	11	5.0
BUG	e P	Z	04:17:07.5	86.0	88.3	0.8	11	5.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/15	06:54:12.5	22.001S	179.031W	607.2				SZGRF
South of Fiji Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	07:12:48.8	147.3	16.2					
	e pPKPbc	Z	07:15:06.5							
CLL	e PKPbc	Z	07:12:53.4	149.2	22.2					
	e pPKPbc	Z	07:15:11.8							
BRG	e PKPbc	Z	07:12:53.8	149.4	24.1					
	e pPKPbc	Z	07:15:12.8							
NEUB	e PKPbc	Z	07:12:54.3	149.6	20.1					
MOX	e PKPbc	Z	07:12:55.7	150.2	20.1					
TANN	e PKPbc	Z	07:12:55.9	150.2	21.8					
MANZ	e PKPbc	Z	07:12:56.8	150.7	21.5					
ROTZ	e PKPbc	Z	07:12:57.2	150.9	21.8					
	e pPKPbc	Z	07:15:16.3							
TNS	e PKPbc	Z	07:12:58.2	151.2	14.5					
WET	e pPKPbc	Z	07:15:18.7	151.3	23.4					
GEC2	e PKPbc	Z	07:12:57.8	151.3	25.2					
	e pPKPbc	Z	07:15:17.0							
BFO	e pPKPbc	Z	07:15:23.1	153.0	15.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/15	11:37:16.0	22.985S	177.267W	33.0				SZGRF
South of Fiji Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	11:56:59.2	148.5	13.5					
CLL	e PKPbc	Z	11:57:04.2	150.6	19.5					
	e PKPab	Z	11:57:09.6							
BRG	e PKPbc	Z	11:57:04.7	150.8	21.5					
	e PKPab	Z	11:57:10.7							
MOX	e PKPbc	Z	11:57:06.3	151.5	17.3					
TANN	e PKPbc	Z	11:57:06.8	151.5	19.1					
MANZ	e PKPbc	Z	11:57:08.0	152.0	18.6					

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

27

ROTZ	e	PKPbc	Z	11:57:08.3	152.2	19.0
TNS	e	PKPbc	Z	11:57:08.9	152.4	11.4
GRA1	e	PKPbc	Z	11:57:09.1	152.5	17.1
WET	e	PKPab	Z	11:57:18.6	152.6	20.7
GEC2	e	PKPbc	Z	11:57:09.3	152.7	22.5
FUR	e	PKPab	Z	11:57:24.5	153.9	18.1
RJOB	e	PKPbc	Z	11:57:11.7	154.0	21.5
	e	PKPab	Z	11:57:25.1		
BFO	e	PKPbc	Z	11:57:12.5	154.3	11.9
	e	PKPab	Z	11:57:24.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/15	13:22:45.3	17.327N	100.733W	81.1	5.2			SZGRF
Guerrero, Mexico								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e P	Z	13:35:21.8	87.1	295.0	1.0	24	5.3		
BUG	e P	Z	13:35:21.5	87.2	294.6	0.8	6	4.8		
WLF	e P	Z	13:35:22.4	87.3	293.9	1.1	44	5.5		
BSEG	e P	Z	13:35:24.4	87.8	296.9	1.0	63	5.9		
NRDL	e P	Z	13:35:27.2	88.3	296.8	1.0	25	5.5		
TNS	e P	Z	13:35:27.4	88.4	295.6	0.9	20	5.4		
UBBA	e P	Z	13:35:30.4	89.0	296.8	1.2	14	5.0		
BFO	e P	Z	13:35:30.3	89.1	295.5	1.1	9	4.9		
STU	e P	Z	13:35:32.3	89.5	296.2	1.1	14	5.1		
NEUB	e P	Z	13:35:34.2	89.8	298.1	0.9	9	5.0		
MOX	e P	Z	13:35:35.0	90.0	298.0	1.0	8	4.9		
GRA1	e P	Z	13:35:36.7	90.2	297.7	1.1	21	5.3		
CLL	e P	Z	13:35:36.9	90.4	299.1	1.0	7	5.0		
TANN	e P	Z	13:35:37.8	90.6	298.7	1.1	8	5.0		
MANZ	e P	Z	13:35:37.6	90.6	298.4	1.0	5	4.8		
	e pP	Z	13:35:59.0							
ROTZ	e P	Z	13:35:38.8	90.7	298.5	1.2	11	5.1		
	e pP	Z	13:36:01.1							
BRG	e P	Z	13:35:40.4	91.2	299.8	1.0	11	5.1		
	e pP	Z	13:36:02.4							
WET	e P	Z	13:35:41.9	91.4	299.0	1.1	11	5.1		
GEC2	e P	Z	13:35:44.5	92.0	299.6	0.9	4	4.8		
RJOB	e P	Z	13:35:44.6	92.1	298.9	1.1	6	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/15	23:30:19.1	19.930S	177.150W	608.4				SZGRF
Fiji Islands region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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RGN	e PKPbc	Z	23:48:46.6	144.5	17.1
BSEG	e PKPbc	Z	23:48:49.3	145.5	12.5
NRDL	e PKPbc	Z	23:48:53.8	147.0	12.6
IBBN	e pPKPbc	Z	23:51:14.1	147.4	8.6
CLL	e PKPbc	Z	23:48:55.7	147.6	18.0
	e pPKPbc	Z	23:51:12.9		
BRG	e PKPbc	Z	23:48:56.4	147.8	19.9
	e pPKPbc	Z	23:51:13.2		
FBE	e PKPbc	Z	23:48:57.0	147.9	18.8
	e pPKPbc	Z	23:51:14.6		
NEUB	e PKPbc	Z	23:48:56.6	147.9	16.0
BUG	e PKPbc	Z	23:48:57.5	148.3	7.9
MOX	e PKPbc	Z	23:48:58.0	148.5	15.9
	e pPKPbc	Z	23:51:18.7		
PLN	e PKPbc	Z	23:48:58.4	148.6	17.0
	e pPKPbc	Z	23:51:17.3		
WERD	e PKPbc	Z	23:48:58.4	148.6	17.2
	e pPKPbc	Z	23:51:16.4		
TANN	e PKPbc	Z	23:48:58.4	148.6	17.5
	e pPKPbc	Z	23:51:16.7		
UBBA	e PKPbc	Z	23:48:58.1	148.6	13.0
	e pPKPbc	Z	23:51:16.1		
GUNZ	e PKPbc	Z	23:48:58.7	148.7	17.3
	e pPKPbc	Z	23:51:17.4		
WERN	e PKPbc	Z	23:48:59.0	148.7	17.4
	e pPKPbc	Z	23:51:17.3		
MANZ	e PKPbc	Z	23:48:59.7	149.1	17.1
	e pPKPbc	Z	23:51:18.6		
ROTZ	e PKPbc	Z	23:49:00.1	149.2	17.4
	e pPKPbc	Z	23:51:19.2		
TNS	e PKPbc	Z	23:49:00.5	149.4	10.4
GRA1	e PKPbc	Z	23:49:00.7	149.5	15.6
	e PKPab	Z	23:49:07.9		
WET	e PKPbc	Z	23:49:00.9	149.7	18.9
	e PKPab	Z	23:49:08.3		
GEC2	e PKPbc	Z	23:49:01.1	149.8	20.6
WLF	e PKPbc	Z	23:49:02.9	150.1	6.2
	e PKPab	Z	23:49:11.0		
STU	e PKPbc	Z	23:49:03.5	150.7	12.3
	e PKPab	Z	23:49:12.5		
	e pPKPbc	Z	23:51:21.7		
FUR	e PKPbc	Z	23:49:03.8	151.0	16.5
	e PKPab	Z	23:49:13.8		
RJOB	e PKPbc	Z	23:49:03.7	151.0	19.6
BFO	e PKPbc	Z	23:49:04.5	151.3	10.8
	e PKPab	Z	23:49:15.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/16	05:47:52.3	34.240N	27.293E	10.0G	4.0			SZGRF

Eastern Mediterranean Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	05:51:58.8	17.7	140.4	0.8	8	3.9		
WET	e P	Z	05:52:05.0	18.3	139.1	0.9	9	3.9		
ROTZ	e P	Z	05:52:13.3	19.1	138.8	1.0	3	3.5		
MANZ	e P	Z	05:52:15.7	19.3	139.0	0.8	4	3.7		
GRA1	e P	Z	05:52:17.7	19.4	136.6	0.8	7	4.0		
TANN	e P	Z	05:52:18.5	19.5	140.6	0.9	10	4.1		
STU	e P	Z	05:52:20.8	19.8	130.6	0.8	7	3.9		
BFO	e P	Z	05:52:22.9	19.9	128.0	1.0	7	3.9		
CLL	e P	Z	05:52:24.4	20.0	143.3	0.8	3	3.6		
MOX	e P	Z	05:52:23.9	20.0	139.2	0.8	4	3.7		
UBBA	e P	Z	05:52:32.9	20.8	136.2	0.7	2	3.6		
TNS	e P	Z	05:52:37.3	21.1	132.1	0.7	9	4.2		
WLF	e P	Z	05:52:46.3	21.9	126.9	0.9	11	4.3		
IBBN	e P	Z	05:52:54.7	22.8	134.6	1.1	14	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/16	07:38:19.1	2.880S	100.120E	44.6	6.5	6.6		SZGRF

Southern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	07:51:13.0	89.8	94.6	1.8	711	6.6		
BRG	e P	Z	07:51:13.1	89.8	94.8	1.8	627	6.5		
FBE	e P	Z	07:51:15.0	90.2	94.3	1.8	726	6.6		
RJOB	e P	Z	07:51:14.7	90.3	93.9	1.4	130	6.0		
WET	e P	Z	07:51:15.7	90.4	94.0	1.9	605	6.5		
CLL	e P	Z	07:51:15.5	90.4	94.0	2.1	669	6.5		
RGN	e P	Z	07:51:16.0	90.5	94.3	1.8	1110	6.8		
TANN	e P	Z	07:51:17.3	90.7	93.6	1.8	281	6.3		
WERN	e P	Z	07:51:17.8	90.8	93.6	1.9	243	6.2		
GUNZ	e P	Z	07:51:17.9	90.8	93.5	1.9	426	6.5		
WERD	e P	Z	07:51:17.8	90.8	93.5	1.9	429	6.4		
ROTZ	e P	Z	07:51:18.3	90.9	93.5	2.1	809	6.7		
PLN	e P	Z	07:51:18.1	90.9	93.4	2.1	3105	7.3		
MANZ	e P	Z	07:51:18.6	90.9	93.4	2.1	1169	6.8		
	e pP	Z	07:51:31.9							
NEUB	e P	Z	07:51:19.5	91.2	93.1	1.3	339	6.5		
	e pP	Z	07:51:32.6							
MOX	e P	Z	07:51:19.8	91.3	93.0	1.8	476	6.5		
	e pP	Z	07:51:33.0							
	e L	Z	08:40:34.4			18.8	21823		6.6	
FUR	e P	Z	07:51:20.0	91.4	92.8	1.3	225	6.3		
	e pP	Z	07:51:33.2							

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

30

GRA1	e P	Z	07:51:21.2	91.5	92.7	1.4	333	6.5	
	e L	Z	08:39:36.3			21.1	19520	6.5	6.5
BSEG	e P	Z	07:51:24.1	92.2	91.9	1.6	733	6.8	
NRDL	e P	Z	07:51:24.7	92.3	91.7	1.8	796	6.7	
UBBA	e P	Z	07:51:24.4	92.3	91.7	2.0	424	6.4	
	e pP	Z	07:51:37.5						
STU	e P	Z	07:51:26.6	92.8	91.2	2.0	726	6.8	
	e pP	Z	07:51:39.7						
TNS	e P	Z	07:51:29.4	93.3	90.6	1.2	216	6.5	
BFO	e P	Z	07:51:29.0	93.3	90.6	1.5	193	6.3	
IBBN	e P	Z	07:51:31.0	93.7	89.9	1.6	373	6.5	
	e pP	Z	07:51:43.6						
BUG	e P	Z	07:51:32.2	94.0	89.6	1.8	336	6.4	
WLF	e P	Z	07:51:36.1	94.8	88.8	2.0	439	6.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/16	10:21:48.6	2.256S	98.021E	22.6	4.9			SZGRF

Southwest of Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	10:34:35.2	88.0	95.8	0.9	4	4.8		
BRG	e P	Z	10:34:35.2	88.0	96.0	0.8	5	4.9		
RJOB	e P	Z	10:34:36.9	88.5	95.1	0.8	3	4.7		
WET	e P	Z	10:34:37.8	88.5	95.2	0.9	7	4.9		
CLL	e P	Z	10:34:37.8	88.7	95.3	1.0	9	4.9		
	e pP	Z	10:34:44.0							
TANN	e P	Z	10:34:39.5	88.9	94.9	0.9	2	4.4		
ROTZ	e P	Z	10:34:40.5	89.0	94.7	0.9	5	4.8		
MANZ	e P	Z	10:34:40.9	89.1	94.6	0.9	11	5.1		
	e pP	Z	10:34:47.6							
NEUB	e P	Z	10:34:41.7	89.4	94.3	0.8	15	5.3		
MOX	e P	Z	10:34:42.1	89.5	94.2	0.9	4	4.7		
	e pP	Z	10:34:48.1							
GRA1	e P	Z	10:34:43.5	89.7	93.9	0.9	12	5.1		
NRDL	e pP	Z	10:34:54.3	90.5	93.0					
TNS	e P	Z	10:34:51.6	91.5	91.8	0.9	9	5.1		
BFO	e P	Z	10:34:51.2	91.5	91.7	0.9	4	4.8		
	e pP	Z	10:34:58.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/16	10:27:54.5	47.580N	152.180E	22.1	4.9			SZGRF

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e P	Z	10:39:37.8	74.8	25.4	0.9	7	4.7		

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

31

CLL	e P	Z	10:39:38.5	75.1	27.1	0.8	13	5.0
IBBN	e P	Z	10:39:42.4	75.6	23.9	0.9	13	5.1
TANN	e P	Z	10:39:44.6	76.1	26.7	0.9	2	4.4
MOX	e P	Z	10:39:44.8	76.1	26.2	0.9	8	4.9
UBBA	e P	Z	10:39:46.1	76.4	25.2	0.8	4	4.7
BUG	e P	Z	10:39:47.3	76.5	23.5	1.0	17	5.1
	e pP	Z	10:39:55.2					
MANZ	e P	Z	10:39:47.5	76.5	26.4	0.9	7	4.8
ROTZ	e P	Z	10:39:48.7	76.7	26.5	0.9	8	4.8
GRA1	e P	Z	10:39:50.3	77.1	25.8	0.9	20	5.3
WET	e P	Z	10:39:50.6	77.1	26.8	0.9	8	4.9
GEC2	e P	Z	10:39:49.9	77.1	27.3	0.8	4	4.6
	e pP	Z	10:39:54.8					
TNS	e P	Z	10:39:51.6	77.3	24.1	0.8	12	5.1
RJOB	e P	Z	10:39:57.8	78.3	26.6	0.9	11	4.9
STU	e P	Z	10:39:58.3	78.5	24.5	0.9	12	5.0
BFO	e P	Z	10:40:01.1	79.1	23.9	1.0	16	5.0

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/16 10:45:24.8 2.699S 99.971E 22.4 5.2
 Southern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	10:58:18.9	89.6	94.6	1.2	26	5.3		
BRG	e P	Z	10:58:19.0	89.6	94.8	1.0	13	5.1		
	e pP	Z	10:58:25.5							
RJOB	e P	Z	10:58:20.6	90.1	93.9	0.9	6	4.8		
WET	e P	Z	10:58:21.6	90.1	94.0	1.0	15	5.2		
CLL	e P	Z	10:58:21.5	90.2	94.1	1.0	15	5.2		
TANN	e P	Z	10:58:23.1	90.5	93.6	1.1	10	5.0		
	e pP	Z	10:58:29.8							
ROTZ	e P	Z	10:58:24.3	90.6	93.4	1.0	12	5.2		
MANZ	e P	Z	10:58:24.6	90.7	93.4	1.0	19	5.4		
NEUB	e P	Z	10:58:25.7	91.0	93.1	0.8	21	5.5		
MOX	e P	Z	10:58:25.8	91.0	93.0	1.1	16	5.2		
GRA1	e P	Z	10:58:27.2	91.2	92.7	1.0	17	5.4		
NRDL	e P	Z	10:58:30.3	92.1	91.8	1.1	17	5.3		
TNS	e P	Z	10:58:35.4	93.0	90.6	1.0	17	5.4		
BFO	e P	Z	10:58:34.9	93.1	90.6	0.9	7	5.1		

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/16 11:27: 2.1 1.906S 100.216E 22.4 4.8
 Southern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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BRG	e P	Z	11:39:55.7	89.1	94.1	1.0	7	4.8
GEC2	e P	Z	11:39:55.6	89.1	93.9	1.1	9	4.9
RJOB	e P	Z	11:39:57.4	89.7	93.2	0.8	4	4.6
WET	e P	Z	11:39:58.2	89.7	93.3			
	e pP	Z	11:40:04.7					
CLL	e P	Z	11:39:57.5	89.7	93.4	0.9	7	4.9
TANN	e P	Z	11:39:59.8	90.0	92.9	0.9	3	4.5
ROTZ	e P	Z	11:39:59.9	90.2	92.8	0.9	5	4.7
	e pP	Z	11:40:06.3					
MANZ	e P	Z	11:40:01.3	90.2	92.7	0.9	9	5.0
NEUB	e P	Z	11:40:01.5	90.5	92.4	0.8	15	5.3
MOX	e P	Z	11:40:02.4	90.6	92.3	1.0	5	4.8
GRA1	e P	Z	11:40:03.9	90.8	92.0	0.9	10	5.1
UBBA	e P	Z	11:40:06.9	91.6	91.0	0.9	2	4.3
TNS	e P	Z	11:40:11.9	92.6	89.9	0.8	6	5.1
	e pP	Z	11:40:18.5					
BFO	e P	Z	11:40:11.5	92.7	89.9	0.9	3	4.8

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/16 12:48:56.4 3.260S 99.180E 33.9 6.1 5.4
 Southwest of Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 13:01:50.2	89.5	95.5	1.6	247	6.2		
BRG	e P	Z 13:01:50.3	89.5	95.8	1.6	202	6.1		
FBE	e P	Z 13:01:52.4	89.9	95.3	2.0	370	6.3		
RJOB	e P	Z 13:01:51.9	90.0	94.9	1.7	101	5.8		
WET	e P	Z 13:01:52.9	90.1	94.9	1.7	191	6.1		
	e pP	Z 13:02:02.8							
CLL	e P	Z 13:01:53.0	90.2	95.0	1.4	104	5.9		
TANN	e P	Z 13:01:54.6	90.4	94.6	1.6	110	5.8		
WERN	e P	Z 13:01:54.8	90.5	94.5	1.5	80	5.7		
GUNZ	e P	Z 13:01:55.2	90.5	94.5	1.3	88	5.8		
WERD	e P	Z 13:01:55.1	90.5	94.5	1.5	107	5.8		
ROTZ	e P	Z 13:01:55.6	90.5	94.4	2.4	514	6.4		
MANZ	e P	Z 13:01:56.0	90.6	94.3	1.4	156	6.2		
	e pP	Z 13:02:05.9							
PLN	e P	Z 13:01:55.5	90.6	94.4	1.8	1015	6.8		
NEUB	e P	Z 13:01:56.8	90.9	94.1	0.9	112	6.2		
	e pP	Z 13:02:06.6							
MOX	e P	Z 13:01:57.2	91.0	93.9	1.6	180	6.1		
	e L	Z 13:51:05.8			19.4	1864		5.5	
FUR	e P	Z 13:01:57.1	91.0	93.7	1.0	118	6.2		
GRA1	e P	Z 13:01:58.6	91.2	93.7	1.3	132	6.1		
	e pP	Z 13:02:08.4							
	e L	Z 13:49:55.8			21.2	1424		5.4	
BSEG	e P	Z 13:02:01.6	92.0	92.8	1.8	265	6.3		

UBBA	e P	Z	13:02:01.9	92.0	92.7	2.2	289	6.2
NRDL	e P	Z	13:02:02.2	92.0	92.7	2.2	494	6.5
STU	e P	Z	13:02:04.0	92.4	92.2	2.0	299	6.3
TNS	e P	Z	13:02:06.9	93.0	91.5	1.1	84	6.1
BFO	e P	Z	13:02:06.5	93.0	91.5	1.1	91	6.1
IBBN	e P	Z	13:02:08.4	93.4	90.9	1.9	229	6.3
BUG	e P	Z	13:02:09.8	93.7	90.5	2.3	269	6.2
WLF	e P	Z	13:02:13.3	94.4	89.8	2.5	399	6.3
	e pP	Z	13:02:23.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/16	18:42:21.5	1.330S	100.440E	20.9	4.8			SZGRF
Southern Sumatera, Indonesia								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	18:55:14.2	88.8	93.6	0.8	5	4.8		
GEC2	e P	Z	18:55:14.2	88.9	93.3	0.9	4	4.7		
WET	e P	Z	18:55:16.8	89.4	92.7	0.8	4	4.7		
CLL	e P	Z	18:55:16.8	89.4	92.8	1.0	9	4.9		
TANN	e P	Z	18:55:18.4	89.7	92.4	1.0	3	4.5		
ROTZ	e P	Z	18:55:19.6	89.9	92.2	0.9	5	4.8		
	e pP	Z	18:55:25.1							
MANZ	e P	Z	18:55:19.9	89.9	92.1	0.9	8	5.0		
	e pP	Z	18:55:26.1							
NEUB	e P	Z	18:55:20.8	90.2	91.9	0.8	15	5.3		
	e pP	Z	18:55:27.0							
MOX	e P	Z	18:55:21.0	90.3	91.8	0.9	3	4.5		
	e pP	Z	18:55:27.5							
UBBA	e P	Z	18:55:25.6	91.3	90.5	1.0	2	4.4		
TNS	e P	Z	18:55:30.7	92.3	89.3	0.8	6	5.0		
BFO	e P	Z	18:55:30.4	92.4	89.3	0.9	4	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/16	18:50:14.4	1.045S	98.699E	20.8	4.8			SZGRF
Southern Sumatera, Indonesia								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	19:03:03.5	87.5	94.5	0.8	4	4.6		
BRG	e P	Z	19:03:03.5	87.5	94.7	0.8	6	4.7		
RJOB	e P	Z	19:03:05.2	88.0	93.7	0.8	3	4.7		
WET	e P	Z	19:03:06.1	88.1	93.8	0.8	6	4.9		
CLL	e P	Z	19:03:05.8	88.1	94.0	0.9	7	5.0		
TANN	e P	Z	19:03:07.8	88.4	93.6	1.0	4	4.7		
ROTZ	e P	Z	19:03:08.9	88.5	93.4	0.9	6	4.8		
MANZ	e P	Z	19:03:09.2	88.6	93.3	0.9	9	5.0		

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

34

MOX	e P	Z	19:03:10.3	89.0	92.9	0.8	3	4.6
GRA1	e P	Z	19:03:11.8	89.2	92.6	0.9	9	5.0
NRDL	e P	Z	19:03:15.0	90.0	91.8	1.0	9	4.9
TNS	e P	Z	19:03:20.0	91.0	90.5	0.9	10	5.1
BFO	e P	Z	19:03:19.6	91.0	90.4	0.8	4	4.8
	e pP	Z	19:03:25.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/16	20:23:40.8	1.805S	99.343E	27.3	5.1			SZGRF

Southern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 20:36:34.7	88.5	94.5	1.0	10	5.1		
BRG	e P	Z 20:36:34.7	88.5	94.7	0.9	9	5.1		
RJOB	e P	Z 20:36:36.4	89.0	93.8	0.8	6	4.9		
WET	e P	Z 20:36:37.4	89.1	93.9	0.9	9	5.0		
CLL	e P	Z 20:36:37.1	89.1	94.0	0.9	10	5.0		
TANN	e P	Z 20:36:38.8	89.4	93.6	1.0	6	4.8		
ROTZ	e P	Z 20:36:39.9	89.5	93.4	0.9	8	5.0		
MANZ	e P	Z 20:36:40.4	89.6	93.3	0.9	13	5.2		
NEUB	e P	Z 20:36:41.3	89.9	93.0	0.9	24	5.5		
MOX	e P	Z 20:36:41.6	90.0	92.9	1.0	8	4.9		
	e pP	Z 20:36:49.2							
GRA1	e P	Z 20:36:42.8	90.2	92.6	0.9	13	5.2		
NRDL	e P	Z 20:36:46.4	91.0	91.7	1.2	20	5.3		
UBBA	e P	Z 20:36:46.1	91.0	91.7	0.9	2	4.5		
STU	e P	Z 20:36:48.5	91.5	91.1	0.7	7	5.1		
TNS	e P	Z 20:36:51.2	92.0	90.5	0.9	14	5.3		
BFO	e P	Z 20:36:50.8	92.0	90.4	0.8	6	5.0		
	e pP	Z 20:36:59.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/16	21:53:17.0	1.695S	98.725E	27.6	4.7			SZGRF

Southern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 22:06:04.6	88.0	94.9	0.8	3	4.7		
BRG	e P	Z 22:06:04.6	88.0	95.1	0.9	5	4.8		
RJOB	e P	Z 22:06:06.3	88.5	94.2	0.9	3	4.6		
WET	e P	Z 22:06:07.2	88.6	94.3	0.8	4	4.7		
CLL	e P	Z 22:06:07.4	88.7	94.4	0.9	5	4.8		
TANN	e P	Z 22:06:08.7	88.9	94.0	1.0	2	4.4		
ROTZ	e P	Z 22:06:09.9	89.0	93.8	0.9	3	4.5		
MANZ	e P	Z 22:06:10.3	89.1	93.7	0.9	7	4.9		
	e pP	Z 22:06:18.4							

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

35

NEUB	e P	Z	22:06:11.2	89.4	93.4	0.8	12	5.2
MOX	e P	Z	22:06:11.4	89.5	93.3	0.9	3	4.5
GRA1	e P	Z	22:06:12.8	89.7	93.0	0.9	7	4.9
NRDL	e P	Z	22:06:16.4	90.5	92.1	1.0	6	4.8
UBBA	e P	Z	22:06:16.0	90.5	92.1	0.9	2	4.2
TNS	e P	Z	22:06:21.1	91.5	90.9	0.9	7	5.0
BFO	e P	Z	22:06:20.7	91.5	90.8	0.9	2	4.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/16	22:03:8.4	17.900S	178.110W	618.0				SZGRF
Fiji Islands region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	22:21:31.6	143.4	13.5					
NRDL	e PKPbc	Z	22:21:36.2	144.8	13.7					
IBBN	e PKPbc	Z	22:21:37.9	145.3	9.8					
CLL	e PKPbc	Z	22:21:38.2	145.4	18.9					
BRG	e PKPbc	Z	22:21:38.8	145.7	20.6					
FBE	e PKPbc	Z	22:21:39.4	145.7	19.6					
NEUB	e PKPbc	Z	22:21:39.2	145.8	16.9					
BUG	e PKPbc	Z	22:21:40.0	146.2	9.2					
MOX	e PKPbc	Z	22:21:40.6	146.3	16.9					
PLN	e PKPbc	Z	22:21:40.8	146.4	17.8					
WERD	e PKPbc	Z	22:21:41.0	146.4	18.1					
TANN	e PKPbc	Z	22:21:41.0	146.4	18.4					
UBBA	e PKPbc	Z	22:21:40.5	146.5	14.1					
GUNZ	e PKPbc	Z	22:21:41.4	146.5	18.2					
WERN	e PKPbc	Z	22:21:41.4	146.5	18.3					
MANZ	e PKPbc	Z	22:21:42.3	146.9	18.0					
ROTZ	e PKPbc	Z	22:21:43.0	147.1	18.3					
TNS	e PKPbc	Z	22:21:43.4	147.3	11.6					
	e pPKPbc	Z	22:24:00.3							
GRA1	e PKPbc	Z	22:21:43.6	147.3	16.6					
WET	e PKPbc	Z	22:21:43.9	147.5	19.7					
GEC2	e PKPbc	Z	22:21:44.1	147.6	21.3					
WLF	e PKPbc	Z	22:21:46.0	148.1	7.7					
RJOB	e PKPbc	Z	22:21:46.9	148.9	20.4					
BFO	e PKPbc	Z	22:21:47.8	149.1	12.0					
	e pPKPbc	Z	22:24:11.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/17	00:05:47.4	22.811N	124.129E	33.0G	6.3	7.1		SZGRF
Southeast of Taiwan								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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RGN	e P	Z	00:18:08.1	82.8	60.3	1.0	282	6.4	
BRG	e P	Z	00:18:15.7	84.3	60.4	1.4	270	6.3	
CLL	e P	Z	00:18:17.0	84.6	59.7	0.9	169	6.3	
FBE	e P	Z	00:18:17.6	84.6	60.0	1.7	719	6.6	
BSEG	e P	Z	00:18:17.7	84.6	57.9	1.1	310	6.5	
NEUB	e P	Z	00:18:20.8	85.3	58.8	1.1	264	6.4	
TANN	e P	Z	00:18:21.1	85.3	59.3	1.2	128	5.9	
WERD	e P	Z	00:18:21.4	85.4	59.2	1.5	210	6.0	
GUNZ	e P	Z	00:18:21.7	85.4	59.2	1.0	170	6.1	
GEC2	e P	Z	00:18:21.8	85.4	60.1	1.0	223	6.2	
WERN	e P	Z	00:18:21.8	85.4	59.2	1.0	238	6.3	
PLN	e P	Z	00:18:21.7	85.4	59.0	1.9	2427	7.0	
NRDL	e P	Z	00:18:22.1	85.5	57.6	1.5	418	6.3	
MOX	e P	Z	00:18:22.8	85.6	58.7	1.3	174	6.0	
	e L	Z	01:01:17.8			20.9	80831		7.1
MANZ	e P	Z	00:18:23.3	85.7	59.0	1.4	179	6.0	
WET	e P	Z	00:18:23.3	85.7	59.5	1.5	281	6.2	
ROTZ	e P	Z	00:18:23.9	85.8	59.0	1.2	263	6.2	
GRA1	e P	Z	00:18:26.6	86.4	58.3	1.2	379	6.4	
	e L	Z	01:01:19.6			21.4	65118		7.0
UBBA	e P	Z	00:18:26.5	86.4	57.4	1.5	328	6.2	
RJOB	e P	Z	00:18:26.9	86.5	59.3	1.0	151	6.1	
IBBN	e P	Z	00:18:28.5	86.8	55.8	1.4	658	6.6	
FUR	e P	Z	00:18:30.4	87.1	58.3	1.7	1166	6.7	
BUG	e P	Z	00:18:32.0	87.5	55.4	1.4	664	6.8	
TNS	e P	Z	00:18:32.3	87.6	56.3	1.2	226	6.4	
STU	e P	Z	00:18:33.9	88.0	56.8	1.6	419	6.5	
BFO	e P	Z	00:18:37.3	88.7	56.1	1.3	225	6.2	
WLF	e P	Z	00:18:40.0	89.1	54.5	1.2	357	6.5	

Date 2009/08/17 Origin Time 10:10:54.2 Lat 23.240N Long 124.150E Depth 10.0G mb 6.0 Ms 6.6 ML Source SZGRF
 Southwestern Ryukyu Islands, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	10:23:25.5	83.9	60.1	1.2	82	5.8		
CLL	e P	Z	10:23:26.9	84.2	59.5	1.0	112	6.1		
FBE	e P	Z	10:23:27.4	84.2	59.7	0.9	148	6.2		
BSEG	e P	Z	10:23:26.8	84.2	57.6	1.3	209	6.2		
NEUB	e P	Z	10:23:30.7	84.9	58.5	1.3	191	6.2		
TANN	e P	Z	10:23:30.8	85.0	59.0	1.4	87	5.8		
WERD	e P	Z	10:23:31.1	85.0	58.9	1.3	83	5.8		
GUNZ	e P	Z	10:23:31.6	85.1	58.9	0.9	105	6.1		
GEC2	e P	Z	10:23:31.5	85.1	59.8	0.9	151	6.2		
WERN	e P	Z	10:23:31.6	85.1	58.9	0.9	100	6.0		
PLN	e P	Z	10:23:31.5	85.1	58.8	1.4	482	6.5		
NRDL	e P	Z	10:23:32.0	85.1	57.4	1.5	252	6.2		

MOX	e P	Z	10:23:32.4	85.3	58.4	1.3	107	5.8	
	e L	Z	11:06:22.2			20.4	26071		6.6
MANZ	e P	Z	10:23:32.9	85.4	58.7	1.3	100	5.8	
WET	e P	Z	10:23:33.0	85.4	59.2	1.5	99	5.7	
ROTZ	e P	Z	10:23:33.6	85.4	58.8	1.0	109	5.9	
GRA1	e P	Z	10:23:36.4	86.0	58.0	1.3	233	6.2	
	e L	Z	11:06:24.2			19.4	20813		6.5
UBBA	e P	Z	10:23:36.3	86.1	57.2	1.8	186	5.9	
RJOB	e P	Z	10:23:36.6	86.2	59.1	1.0	76	5.8	
IBBN	e P	Z	10:23:38.4	86.4	55.6	1.2	310	6.3	
FUR	e P	Z	10:23:40.0	86.8	58.0	1.1	265	6.3	
BUG	e P	Z	10:23:41.6	87.2	55.1	1.2	225	6.2	
TNS	e P	Z	10:23:42.1	87.2	56.0	1.4	113	5.8	
STU	e P	Z	10:23:43.8	87.6	56.5	1.1	89	6.0	
BFO	e P	Z	10:23:46.8	88.4	55.8	1.9	143	5.9	
WLF	e P	Z	10:23:49.7	88.8	54.2	1.1	118	6.0	

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/17 23:02:32.8 55.500N 159.500E 10.0G 4.7
 Kamchatka Peninsula, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	23:13:33.4	67.7	18.3	1.0	12	5.1		
KWP	e P	Z	23:13:40.8	68.9	24.6	1.1	22	5.3		
NRDL	e P	Z	23:13:41.7	69.1	18.0	0.9	5	4.7		
CLL	e P	Z	23:13:44.8	69.6	19.5	1.0	11	4.9		
BRG	e P	Z	23:13:46.1	69.8	20.0	1.1	6	4.6		
MOX	e P	Z	23:13:50.6	70.5	18.6	1.0	7	4.8		
TANN	e P	Z	23:13:50.9	70.6	19.1	0.8	2	4.2		
UBBA	e P	Z	23:13:51.2	70.7	17.7	0.7	2	4.5		
MANZ	e P	Z	23:13:53.7	71.1	18.8	1.0	3	4.4		
ROTZ	e P	Z	23:13:55.2	71.3	18.9	0.8	3	4.5		
GRA1	e P	Z	23:13:56.9	71.5	18.3	0.8	8	4.9		
TNS	e P	Z	23:13:56.7	71.6	16.8	0.8	4	4.6		
WET	e P	Z	23:13:58.0	71.7	19.2	0.9	5	4.7		
GEC2	e P	Z	23:13:58.2	71.8	19.6	0.8	4	4.6		
WLF	e P	Z	23:14:04.1	72.5	15.4	1.0	7	4.8		
STU	e P	Z	23:14:03.8	72.8	17.1	1.1	7	4.7		
RJOB	e P	Z	23:14:05.8	73.1	19.0	0.8	5	4.7		
BFO	e P	Z	23:14:07.0	73.4	16.6	0.8	2	4.3		

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/18 00:59:40.7 23.180S 171.640E 30.7
 Southeast of Loyalty Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	01:19:17.3	146.2	31.9					
BRG	e PKPbc	Z	01:19:20.8	147.4	40.3					
CLL	e PKPbc	Z	01:19:20.7	147.4	38.4					
NRDL	e PKPbc	Z	01:19:21.1	147.5	32.8					
FBE	e PKPbc	Z	01:19:21.5	147.6	39.3					
NEUB	e PKPbc	Z	01:19:22.7	147.9	36.6					
TANN	e PKPbc	Z	01:19:23.5	148.3	38.5					
WERD	e PKPbc	Z	01:19:23.7	148.3	38.2					
IBBN	e PKPbc	Z	01:19:23.7	148.4	29.1					
	e pPKPbc	Z	01:19:33.2							
GUNZ	e PKPbc	Z	01:19:24.0	148.4	38.3					
WERN	e PKPbc	Z	01:19:24.1	148.4	38.5					
MOX	e PKPbc	Z	01:19:23.8	148.5	36.9					
MANZ	e PKPbc	Z	01:19:24.9	148.8	38.3					
UBBA	e PKPbc	Z	01:19:24.8	148.9	34.1					
ROTZ	e PKPbc	Z	01:19:25.4	148.9	38.7					
GEC2	e PKPbc	Z	01:19:25.3	149.0	42.1					
WET	e PKPbc	Z	01:19:25.7	149.1	40.5					
BUG	e PKPbc	Z	01:19:25.8	149.3	29.0					
GRA1	e PKPbc	Z	01:19:26.5	149.4	37.2					
	e pPKPbc	Z	01:19:35.5							
TNS	e PKPbc	Z	01:19:28.0	149.9	32.1					
RJOB	e PKPbc	Z	01:19:28.2	150.2	41.9					
STU	e PKPbc	Z	01:19:30.2	150.9	34.7					
WLF	e PKPbc	Z	01:19:31.5	151.2	28.5					
BFO	e PKPbc	Z	01:19:31.5	151.6	33.7					

Date Origin Time Lat Long Depth mb Ms ML Source
2009/08/18 01:47:57.5 23.654N 123.579E 37.2 5.1
Southwestern Ryukyu Islands, Japan SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	02:00:20.9	83.3	60.3	0.9	6	4.8		
CLL	e P	Z	02:00:22.2	83.6	59.7	1.1	17	5.2		
FBE	e P	Z	02:00:22.8	83.6	59.9	1.1	22	5.3		
TANN	e P	Z	02:00:26.2	84.3	59.2	1.0	6	4.8		
WERD	e P	Z	02:00:26.6	84.4	59.1	1.0	6	4.8		
GUNZ	e P	Z	02:00:26.9	84.4	59.1	0.9	13	5.1		
GEC2	e P	Z	02:00:26.9	84.4	59.9	0.9	16	5.2		
	e pP	Z	02:00:37.9							
WERN	e P	Z	02:00:27.0	84.4	59.1	1.0	13	5.1		
	e pP	Z	02:00:38.0							
NRDL	e P	Z	02:00:27.5	84.5	57.6	1.2	19	5.2		
MOX	e P	Z	02:00:27.9	84.7	58.6	1.7	32	5.3		
	e pP	Z	02:00:39.7							
MANZ	e pP	Z	02:00:40.3	84.7	58.9					

WET	e P	Z	02:00:28.3	84.7	59.4	1.4	12	5.0
ROTZ	e P	Z	02:00:29.0	84.8	58.9	1.0	12	5.1
GRA1	e P	Z	02:00:31.9	85.4	58.2	1.4	30	5.2
RJOB	e P	Z	02:00:32.1	85.5	59.2	1.2	7	4.6
FUR	e P	Z	02:00:35.6	86.2	58.1	1.5	46	5.4
BUG	e P	Z	02:00:37.2	86.5	55.3	1.3	23	5.1
STU	e P	Z	02:00:39.3	87.0	56.7	1.5	23	5.1
WLF	e P	Z	02:00:45.3	88.1	54.4	1.1	17	5.3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/18	13:17:40.5	23.550N	123.610E	41.6	5.7	5.6		SZGRF
Southwestern Ryukyu Islands, Japan								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	13:30:04.1	83.4	60.3	1.4	50	5.6		
CLL	e P	Z	13:30:05.5	83.7	59.7	1.1	55	5.7		
FBE	e P	Z	13:30:05.7	83.7	59.9	1.2	88	5.9		
BSEG	e P	Z	13:30:06.2	83.7	57.9	1.8	201	6.0		
NEUB	e P	Z	13:30:09.5	84.4	58.8	1.4	98	5.8		
TANN	e P	Z	13:30:09.7	84.4	59.2	1.3	34	5.4		
WERD	e P	Z	13:30:10.0	84.5	59.1	1.2	35	5.5		
GUNZ	e P	Z	13:30:10.4	84.5	59.1	1.1	52	5.7		
GEC2	e P	Z	13:30:10.2	84.5	60.0	1.1	59	5.7		
WERN	e P	Z	13:30:10.4	84.5	59.1	1.1	43	5.6		
NRDL	e P	Z	13:30:10.9	84.6	57.6	1.3	97	5.9		
MOX	e P	Z	13:30:11.3	84.8	58.6	1.6	80	5.7		
	e L	Z	14:16:00.8			19.8	2041		5.5	
MANZ	e P	Z	13:30:11.7	84.8	58.9	1.1	32	5.5		
WET	e P	Z	13:30:11.8	84.8	59.4	1.6	58	5.6		
	e pP	Z	13:30:23.8							
ROTZ	e P	Z	13:30:12.3	84.9	59.0	1.3	58	5.7		
GRA1	e P	Z	13:30:15.2	85.5	58.2	1.4	106	5.8		
	e L	Z	14:14:26.9			18.4	2512		5.6	
UBBA	e P	Z	13:30:15.0	85.5	57.4	1.5	71	5.6		
RJOB	e P	Z	13:30:15.6	85.6	59.3	1.3	23	5.2		
	e pP	Z	13:30:28.1							
IBBN	e P	Z	13:30:16.8	85.9	55.8	1.0	117	6.0		
BUG	e P	Z	13:30:20.6	86.6	55.4	1.1	77	5.7		
TNS	e P	Z	13:30:20.9	86.7	56.2	1.2	45	5.5		
	e pP	Z	13:30:32.6							
BFO	e P	Z	13:30:25.8	87.8	56.0	1.7	54	5.6		
WLF	e P	Z	13:30:28.5	88.2	54.5	1.1	63	5.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/18	17:50:44.0	0.605S	96.232E	27.1	5.1	5.2		SZGRF

Southwest of Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 18:03:20.2	85.5	96.0	1.2	27	5.2		
BRG	e P	Z 18:03:20.3	85.6	96.4	1.1	10	4.9		
WET	e P	Z 18:03:22.8	86.1	95.4	1.2	15	5.0		
CLL	e P	Z 18:03:23.3	86.2	95.7	1.4	22	5.1		
ROTZ	e P	Z 18:03:24.4	86.6	95.0	1.1	12	4.9		
MANZ	e P	Z 18:03:26.0	86.7	94.9	0.8	4	4.6		
NEUB	e P	Z 18:03:26.1	87.0	94.7	0.9	6	4.7		
	e pP	Z 18:03:34.9							
MOX	e P	Z 18:03:27.1	87.1	94.6	1.4	19	5.0		
	e L	Z 18:51:01.8			18.7	856		5.2	
GRA1	e L	Z 18:51:18.1	87.2	94.2	18.5	1053		5.3	
BSEG	e P	Z 18:03:32.1	88.1	93.7	1.2	48	5.7		
	e pP	Z 18:03:39.6							
UBBA	e P	Z 18:03:31.9	88.1	93.3	1.3	16	5.2		
NRDL	e P	Z 18:03:32.4	88.1	93.4	1.1	24	5.4		
TNS	e P	Z 18:03:37.1	89.0	92.1	1.1	26	5.4		
	e pP	Z 18:03:44.6							
BFO	e P	Z 18:03:36.4	89.1	92.0	1.4	28	5.3		
WLF	e P	Z 18:03:44.2	90.5	90.3	1.2	24	5.4		

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/18 21:20:51.4 25.240S 178.370W 295.5
 South of Fiji Islands SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e pPKPbc	Z 21:41:18.5	149.4	21.1					
BSEG	e PKPdf	Z 21:40:02.1	150.6	16.2					
	e PKPbc	Z 21:40:08.8							
RUE	e PKPdf	Z 21:40:05.0	151.3	23.3					
	e PKPbc	Z 21:40:10.6							
NRDL	e PKPdf	Z 21:40:05.2	152.0	16.5					
	e PKPbc	Z 21:40:11.8							
	e pPKPbc	Z 21:41:25.8							
CLL	e PKPdf	Z 21:40:05.2	152.5	22.7					
	e PKPbc	Z 21:40:13.0							
	e PKPab	Z 21:40:26.1							
	e pPKPbc	Z 21:41:26.7							
IBBN	e PKPdf	Z 21:40:07.2	152.5	12.1					
	e PKPbc	Z 21:40:14.5							
	e PKPab	Z 21:40:26.0							
BRG	e PKPdf	Z 21:40:04.7	152.7	24.9					
	e PKPbc	Z 21:40:13.7							
	e PKPab	Z 21:40:27.1							
	e pPKPbc	Z 21:41:27.3							

FBE	e PKPdf	Z	21:40:05.9	152.8	23.7
	e PKPbc	Z	21:40:14.2		
	e PKPab	Z	21:40:27.5		
NEUB	e PKPdf	Z	21:40:05.8	152.9	20.5
	e PKPab	Z	21:40:27.7		
	e pPKPbc	Z	21:41:27.0		
BUG	e PKPdf	Z	21:40:06.4	153.4	11.5
	e pPKPbc	Z	21:41:28.7		
MOX	e PKPdf	Z	21:40:06.4	153.5	20.5
	e PKPab	Z	21:40:30.1		
	e pPKPbc	Z	21:41:28.8		
	e PP	Z	21:44:03.7		
TANN	e PKPdf	Z	21:40:06.5	153.5	22.4
	e PKPab	Z	21:40:30.7		
WERD	e PKPdf	Z	21:40:06.5	153.5	22.0
	e PKPab	Z	21:40:30.8		
	e PP	Z	21:44:04.0		
GUNZ	e PKPdf	Z	21:40:06.4	153.6	22.2
	e PKPab	Z	21:40:30.9		
	e pPKPbc	Z	21:41:29.1		
	e PP	Z	21:44:03.0		
WERN	e PKPdf	Z	21:40:07.0	153.6	22.3
	e PKPab	Z	21:40:31.5		
	e PP	Z	21:44:03.8		
UBBA	e PKPdf	Z	21:40:07.9	153.6	17.2
	e PKPab	Z	21:40:31.8		
	e PP	Z	21:44:05.0		
MANZ	e PKPdf	Z	21:40:07.2	154.0	22.0
	e PKPbc	Z	21:40:16.3		
	e PKPab	Z	21:40:32.5		
	e PP	Z	21:44:06.9		
ROTZ	e PKPdf	Z	21:40:07.6	154.1	22.4
	e PKPab	Z	21:40:33.7		
GRA1	e PKPdf	Z	21:40:07.1	154.4	20.4
	e PKPab	Z	21:40:34.8		
TNS	e PKPdf	Z	21:40:08.2	154.5	14.4
	e PKPab	Z	21:40:34.5		
	e PP	Z	21:44:09.6		
WET	e PKPdf	Z	21:40:07.4	154.5	24.2
	e PKPab	Z	21:40:35.4		
GEC2	e PKPdf	Z	21:40:07.6	154.6	26.1
	e PKPab	Z	21:40:35.2		
WLF	e PKPdf	Z	21:40:09.7	155.3	9.8
STU	e PKPdf	Z	21:40:09.2	155.7	16.8
	e PKPab	Z	21:40:40.2		
RJOB	e PKPdf	Z	21:40:09.6	155.8	25.3
	e PKPab	Z	21:40:41.3		
FUR	e PKPdf	Z	21:40:09.5	155.9	21.7
	e PKPab	Z	21:40:40.9		

	e PP	Z	21:44:18.5					
BFO	e PKPdf	Z	21:40:11.2	156.3	15.2			
	e PKPab	Z	21:40:42.4					
	e PP	Z	21:44:19.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/18 Taiwan	23:48: 6.1	23.250N	121.120E	36.6	4.9			SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	00:00:23.6	82.2	62.4	1.5	9	4.7		
FBE	e P	Z	00:00:25.5	82.5	61.9	1.0	14	5.1		
CLL	e P	Z	00:00:25.6	82.6	61.7	1.0	6	4.8		
BSEG	e P	Z	00:00:27.3	82.7	60.0	1.5	30	5.3		
	e pP	Z	00:00:37.3							
TANN	e P	Z	00:00:29.7	83.3	61.2	1.1	5	4.6		
GEC2	e P	Z	00:00:29.8	83.3	62.0	0.9	8	4.9		
	e pP	Z	00:00:40.2							
GUNZ	e P	Z	00:00:29.9	83.4	61.1	0.9	6	4.8		
WERN	e P	Z	00:00:30.0	83.4	61.1	1.0	6	4.8		
	e pP	Z	00:00:41.1							
NRDL	e P	Z	00:00:30.2	83.5	59.7	1.3	14	5.0		
ROTZ	e P	Z	00:00:32.1	83.7	61.0	1.1	8	4.9		
	e pP	Z	00:00:42.6							
GRA1	e P	Z	00:00:34.7	84.3	60.2	1.4	25	5.2		
	e pP	Z	00:00:45.1							
UBBA	e P	Z	00:00:35.1	84.4	59.4	1.7	24	5.1		
BUG	e P	Z	00:00:40.6	85.6	57.4	1.3	17	5.0		
STU	e P	Z	00:00:42.9	85.9	58.7	2.2	25	4.9		
WLF	e P	Z	00:00:49.0	87.1	56.5	1.0	8	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/19 Southern Sumatera, Indonesia	01:15:16.1	2.490S	99.190E	33.0	4.8			SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	01:28:07.5	88.9	95.0	0.8	4	4.7		
BRG	e P	Z	01:28:07.5	88.9	95.3	0.8	5	4.8		
RUE	e P	Z	01:28:08.7	89.2	95.2	0.9	23	5.4		
RJOB	e P	Z	01:28:09.1	89.4	94.3	0.8	4	4.7		
WET	e P	Z	01:28:10.2	89.5	94.4	0.8	5	4.8		
CLL	e P	Z	01:28:10.1	89.6	94.5	0.9	6	4.8		
TANN	e P	Z	01:28:11.8	89.8	94.1	0.9	3	4.5		
ROTZ	e P	Z	01:28:12.7	90.0	93.9	0.9	5	4.8		
MANZ	e P	Z	01:28:13.3	90.0	93.8	0.9	8	5.0		

NEUB	e P	Z	01:28:14.1	90.3	93.6	0.8	14	5.2
MOX	e P	Z	01:28:14.4	90.4	93.5	0.8	3	4.5
GRA1	e P	Z	01:28:15.7	90.6	93.2	0.9	8	5.1
NRDL	e P	Z	01:28:19.1	91.4	92.2	1.0	6	4.9
UBBA	e P	Z	01:28:18.9	91.4	92.2	0.7	1	4.3
STU	e P	Z	01:28:21.1	91.9	91.6	0.8	3	4.7
TNS	e P	Z	01:28:24.1	92.4	91.0	1.0	9	5.1
BFO	e P	Z	01:28:23.5	92.4	91.0	0.8	4	4.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/19	02:55:17.4	0.035N	99.226E	30.5	5.5	5.1		SZGRF
Northern Sumatera, Indonesia								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	03:07:59.8	87.0	93.6	0.9	34	5.5		
GEC2	e P	Z	03:07:59.8	87.0	93.3	1.0	32	5.4		
RUE	e P	Z	03:08:01.1	87.2	93.6	0.9	131	6.1		
FBE	e P	Z	03:08:01.8	87.4	93.2	1.0	45	5.6		
RJOB	e P	Z	03:08:01.6	87.6	92.6	0.8	20	5.5		
WET	e P	Z	03:08:02.5	87.6	92.7	0.9	33	5.7		
CLL	e P	Z	03:08:02.3	87.6	92.9	0.9	29	5.6		
TANN	e P	Z	03:08:03.9	87.9	92.5	1.0	17	5.3		
WERN	e P	Z	03:08:04.5	88.0	92.4	0.9	19	5.4		
GUNZ	e P	Z	03:08:04.6	88.0	92.4	0.9	28	5.6		
	e pP	Z	03:08:14.1							
WERD	e P	Z	03:08:04.6	88.0	92.4	0.9	27	5.6		
ROTZ	e P	Z	03:08:05.1	88.0	92.3	0.9	30	5.6		
	e pP	Z	03:08:13.8							
MANZ	e P	Z	03:08:05.6	88.1	92.2	1.0	51	5.8		
NEUB	e P	Z	03:08:06.3	88.4	92.0	0.8	76	6.1		
	e pP	Z	03:08:15.7							
MOX	e P	Z	03:08:06.7	88.5	91.8	1.1	24	5.4		
	e pP	Z	03:08:15.3							
	e L	Z	03:57:54.6			18.3	725		5.1	
GRA1	e P	Z	03:08:08.1	88.7	91.5	1.0	51	5.7		
	e L	Z	03:56:13.7			21.5	566		5.0	
BSEG	e P	Z	03:08:09.9	89.3	90.9	1.1	28	5.4		
NRDL	e P	Z	03:08:11.4	89.4	90.7	1.2	34	5.5		
UBBA	e P	Z	03:08:11.1	89.5	90.6	1.6	27	5.2		
STU	e P	Z	03:08:13.6	90.0	90.0	0.9	32	5.5		
TNS	e P	Z	03:08:16.4	90.5	89.4	0.9	43	5.7		
BFO	e P	Z	03:08:15.9	90.6	89.3	0.9	22	5.5		
BUG	e P	Z	03:08:19.6	91.2	88.4	1.0	13	5.2		
	e pP	Z	03:08:27.8							
WLF	e P	Z	03:08:24.0	92.0	87.6	0.8	12	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/19	13:07:27.5	15.752S	171.275W	33.0N				SZGRF

Samoa Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPbc	Z	13:26:57.1	144.3	7.1					
MOX	e PKPbc	Z	13:26:59.3	145.0	4.9					
TANN	e PKPbc	Z	13:27:00.0	145.2	6.3					
TNS	e PKPbc	Z	13:27:00.6	145.5	359.5					
MANZ	e PKPbc	Z	13:27:01.3	145.7	5.8					
ROTZ	e PKPbc	Z	13:27:02.5	145.9	6.0					
GRA1	e PKPbc	Z	13:27:03.4	146.0	4.3					
GEC2	e PKPbc	Z	13:27:04.3	146.7	8.7					
BFO	e PKPbc	Z	13:27:07.0	147.4	359.3					
RJOB	e PKPbc	Z	13:27:07.8	147.8	7.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/19	18:19:34.1	62.540N	151.740W	72.2	4.8			SZGRF

Central Alaska, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	18:29:53.7	62.7	350.8	0.8	8	4.9		
IBBN	e P	Z	18:30:02.6	64.0	349.7	0.6	6	5.0		
NRDL	e P	Z	18:30:02.5	64.1	350.8	0.9	4	4.7		
BUG	e P	Z	18:30:06.8	64.8	349.5	0.6	8	5.1		
CLL	e P	Z	18:30:11.6	65.5	352.3	0.7	3	4.7		
UBBA	e P	Z	18:30:12.9	65.7	350.9	0.6	2	4.5		
	e pP	Z	18:30:31.6							
BRG	e P	Z	18:30:15.0	66.0	352.8	0.7	4	4.7		
MOX	e P	Z	18:30:15.4	66.0	351.7	0.7	6	4.9		
	e pP	Z	18:30:34.7							
TANN	e P	Z	18:30:17.7	66.4	352.1	0.9	3	4.6		
WLF	e P	Z	18:30:17.9	66.4	349.1	0.8	4	4.8		
	e pP	Z	18:30:36.1							
MANZ	e pP	Z	18:30:39.0	66.7	352.0					
GRA1	e P	Z	18:30:21.8	67.0	351.6	0.9	5	4.8		
ROTZ	e P	Z	18:30:21.6	67.0	352.0	0.9	3	4.6		
	e pP	Z	18:30:40.9							
WET	e P	Z	18:30:26.0	67.6	352.4	0.9	3	4.5		
GEC2	e P	Z	18:30:26.8	68.0	352.8	0.7	2	4.5		
RJOB	e P	Z	18:30:34.3	69.0	352.4	0.7	6	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/19	23:21:35.3	52.470N	174.570W	45.2	4.7			SZGRF

Andreanof Islands, Aleutian Islands, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 23:33:06.1	73.5	3.1	0.8	9	4.8		
NRDL	e P	Z 23:33:13.9	75.0	2.9	0.7	4	4.6		
IBBN	e P	Z 23:33:15.6	75.2	1.5	0.6	9	5.1		
CLL	e P	Z 23:33:19.9	76.0	4.7	0.7	6	4.9		
	e pP	Z 23:33:33.0							
NEUB	e P	Z 23:33:21.2	76.2	4.0	0.9	9	4.9		
BRG	e P	Z 23:33:22.2	76.4	5.3	0.7	8	4.9		
UBBA	e P	Z 23:33:23.3	76.6	2.9	0.8	2	4.2		
MOX	e P	Z 23:33:24.3	76.8	3.9	0.7	6	4.8		
	e pP	Z 23:33:37.1							
TANN	e P	Z 23:33:25.4	76.9	4.4	0.9	2	4.4		
TNS	e P	Z 23:33:27.1	77.3	1.9	0.7	5	4.8		
MANZ	e P	Z 23:33:27.8	77.4	4.2	0.8	3	4.5		
ROTZ	e P	Z 23:33:29.3	77.6	4.2	0.7	4	4.6		
	e pP	Z 23:33:42.4							
GRA1	e P	Z 23:33:30.1	77.7	3.6	0.6	15	5.3		
	e pP	Z 23:33:43.2							
WET	e P	Z 23:33:32.4	78.2	4.6	0.7	2	4.3		
GEC2	e P	Z 23:33:33.6	78.4	5.1	0.7	4	4.5		
STU	e P	Z 23:33:35.0	78.7	2.3	0.7	6	4.8		
BFO	e P	Z 23:33:37.4	79.2	1.8	0.8	4	4.4		
	e pP	Z 23:33:50.3							
FUR	e P	Z 23:33:38.0	79.2	3.6	0.8	8	4.7		
RJOB	e P	Z 23:33:40.0	79.6	4.6	0.8	5	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/20	06:35: 8.9	71.890N	1.270E	12.1	6.1	5.8		SZGRF

Norwegian Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z 06:39:22.0	18.1	347.9	1.4	1612	6.0		
BSEG	e P	Z 06:39:25.2	18.4	351.1	1.8	2247	6.0		
NRDL	e P	Z 06:39:40.8	19.8	351.9	1.7	1240	5.9		
IBBN	e P	Z 06:39:40.3	19.8	354.0	1.8	1328	5.9		
RUE	e P	Z 06:39:44.5	20.2	348.7	1.8	3472	6.3		
BUG	e P	Z 06:39:49.5	20.6	354.7	1.6	1538	6.1		
NEUB	e P	Z 06:39:55.8	21.2	351.0	1.1	1264	6.2		
CLL	e P	Z 06:39:55.6	21.2	349.9	1.5	1210	6.0		
UBBA	e P	Z 06:39:58.5	21.4	352.6	1.7	1228	6.1		
FBE	e P	Z 06:40:00.4	21.7	349.8	1.5	1582	6.2		
MOX	e P	Z 06:40:01.5	21.7	351.3	1.7	1491	6.1		
	e L	Z 06:48:11.3			21.5	37633		5.8	
BRG	e P	Z 06:40:01.1	21.8	349.4	1.9	1855	6.2		
TNS	e P	Z 06:40:03.4	21.9	354.0	1.4	1283	6.2		

WERD	e P	Z	06:40:04.2	22.0	350.9	1.4	809	6.0	
TANN	e P	Z	06:40:04.9	22.1	350.8	1.4	1036	6.1	
GUNZ	e P	Z	06:40:05.1	22.1	350.9	1.7	1060	6.0	
WERN	e P	Z	06:40:06.2	22.2	350.9	1.5	1394	6.2	
WLF	e P	Z	06:40:07.8	22.3	356.0	1.8	930	5.9	
MANZ	e P	Z	06:40:08.7	22.4	351.2	1.5	374	5.7	
GRA1	e P	Z	06:40:11.0	22.7	352.0	1.7	1375	6.2	
	e pP	Z	06:40:13.9						
	e L	Z	06:48:38.7			22.0	35297		5.8
ROTZ	e P	Z	06:40:11.7	22.7	351.2	1.4	853	6.1	
WET	e P	Z	06:40:18.8	23.4	350.9	1.9	1669	6.3	
	e pP	Z	06:40:21.6						
STU	e P	Z	06:40:18.9	23.4	353.8	2.3	2866	6.4	
GEC2	e P	Z	06:40:23.0	23.7	350.4	1.3	584	5.9	
BFO	e P	Z	06:40:21.9	23.8	354.6	1.9	1262	6.1	
FUR	e P	Z	06:40:26.3	24.2	352.4	1.4	862	6.1	
RJOB	e P	Z	06:40:31.6	24.7	351.5	1.5	597	6.1	

Date 2009/08/20 Origin Time 14:18:10.6 Lat 23.138N Long 124.270E Depth 27.4 mb 5.1 Ms ML Source SZGRF
Southwestern Ryukyu Islands, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 14:30:38.2	84.1	60.1	0.8	6	4.9		
CLL	e P	Z 14:30:39.3	84.4	59.4	0.8	18	5.3		
BSEG	e P	Z 14:30:40.8	84.4	57.6	0.8	26	5.5		
NEUB	e P	Z 14:30:43.3	85.1	58.5	0.8	14	5.2		
TANN	e P	Z 14:30:43.3	85.1	59.0	0.8	7	4.9		
GEC2	e P	Z 14:30:44.1	85.2	59.8	0.8	24	5.5		
NRDL	e P	Z 14:30:44.7	85.3	57.3	1.0	16	5.2		
MOX	e P	Z 14:30:45.3	85.5	58.4	0.8	6	4.8		
MANZ	e P	Z 14:30:45.9	85.5	58.7	0.8	9	4.9		
ROTZ	e P	Z 14:30:46.4	85.6	58.7	0.8	13	5.1		
GRA1	e P	Z 14:30:48.7	86.2	58.0	1.0	12	5.0		
	e pP	Z 14:30:57.6							
UBBA	e P	Z 14:30:48.9	86.2	57.2	0.8	4	4.6		
RJOB	e P	Z 14:30:50.4	86.3	59.0	0.9	10	5.0		
	e pP	Z 14:30:57.2							
IBBN	e P	Z 14:30:51.0	86.6	55.5	0.8	38	5.6		
	e pP	Z 14:30:59.6							
FUR	e P	Z 14:30:53.6	87.0	58.0	0.9	30	5.4		
BUG	e P	Z 14:30:54.9	87.3	55.1	1.0	20	5.4		
TNS	e P	Z 14:30:54.2	87.4	56.0	0.9	10	5.1		
BFO	e P	Z 14:30:59.8	88.5	55.8	0.8	4	4.7		
WLF	e P	Z 14:31:02.6	88.9	54.2	0.9	18	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/21	11:15:40.0	22.549S	172.973E	33.0N		5.1		SZGRF

Southeast of Loyalty Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	11:35:16.7	146.0	29.5					
RUE	e PKPbc	Z	11:35:16.8	146.1	36.0					
NRDL	e PKPbc	Z	11:35:20.5	147.3	30.2					
BRG	e PKPbc	Z	11:35:20.2	147.3	37.7					
CLL	e PKPbc	Z	11:35:20.1	147.3	35.9					
FBE	e PKPbc	Z	11:35:21.0	147.5	36.8					
NEUB	e PKPbc	Z	11:35:21.9	147.8	34.0					
IBBN	e PKPbc	Z	11:35:23.1	148.2	26.5					
TANN	e PKPbc	Z	11:35:23.2	148.2	35.8					
WERD	e PKPbc	Z	11:35:23.2	148.3	35.6					
GUNZ	e PKPbc	Z	11:35:23.4	148.3	35.7					
MOX	e PKPbc	Z	11:35:23.3	148.4	34.3					
	e L	N	12:40:39.4			21.7	328		5.1	
WERN	e PKPbc	Z	11:35:23.7	148.4	35.8					
ROTZ	e PKPbc	Z	11:35:24.8	148.9	36.0					
GEC2	e PKPbc	Z	11:35:24.9	149.0	39.4					
BUG	e PKPbc	Z	11:35:25.1	149.1	26.3					
WET	e PKPbc	Z	11:35:25.3	149.1	37.8					
TNS	e PKPbc	Z	11:35:27.3	149.8	29.3					
RJOB	e PKPbc	Z	11:35:27.5	150.2	39.1					
STU	e PKPbc	Z	11:35:29.4	150.8	31.9					
WLF	e PKPbc	Z	11:35:30.7	151.0	25.7					
BFO	e PKPbc	Z	11:35:30.8	151.5	30.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/21	14:26: 2.3	13.735N	93.083E	33.0G	5.1			SZGRF

Andaman Islands, India, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	14:37:26.2	72.6	89.5	0.9	13	5.1		
RUE	e P	Z	14:37:26.4	72.7	89.9	0.7	36	5.6		
GEC2	e P	Z	14:37:27.3	72.7	88.7	0.9	18	5.2		
FBE	e P	Z	14:37:28.7	72.9	89.1	1.0	27	5.3		
CLL	e P	Z	14:37:29.2	73.1	88.9	1.4	17	5.0		
WET	e P	Z	14:37:30.5	73.3	88.2	1.4	20	5.1		
RJOB	e P	Z	14:37:30.4	73.4	87.7	1.2	12	4.9		
TANN	e P	Z	14:37:31.8	73.5	88.2	1.3	14	4.8		
WERN	e P	Z	14:37:32.2	73.6	88.1	1.4	16	4.8		
GUNZ	e P	Z	14:37:32.3	73.6	88.1	1.3	20	5.0		
WERD	e P	Z	14:37:32.2	73.6	88.1	1.2	14	4.9		
ROTZ	e P	Z	14:37:33.4	73.7	87.9	1.2	22	5.1		

NEUB	e P	Z	14:37:33.8	73.9	88.0	1.7	41	5.2
MOX	e P	Z	14:37:34.8	74.0	87.7	0.8	9	4.9
GRA1	e P	Z	14:37:37.0	74.3	87.1	1.3	28	5.1
BSEG	e P	Z	14:37:38.8	74.7	87.6	1.0	41	5.4
NRDL	e P	Z	14:37:40.1	74.9	87.0	1.5	26	5.0
TNS	e P	Z	14:37:46.5	76.1	85.1	0.9	10	5.0
IBBN	e P	Z	14:37:48.1	76.3	85.1	1.0	23	5.3
BUG	e P	Z	14:37:50.1	76.7	84.5	0.9	16	5.2
WLF	e P	Z	14:37:55.8	77.6	83.3	1.0	15	5.1

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/21	15:07:30.0	23.380S	172.640E	33.6				SZGRF
Southeast of Loyalty Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	15:27:07.5	146.7	30.5					
BRG	e PKPbc	Z	15:27:11.2	147.9	38.9					
	e pPKPbc	Z	15:27:21.3							
CLL	e PKPbc	Z	15:27:11.0	148.0	37.0					
	e pPKPbc	Z	15:27:21.0							
NRDL	e PKPbc	Z	15:27:10.9	148.0	31.3					
	e pPKPbc	Z	15:27:21.0							
FBE	e PKPbc	Z	15:27:12.0	148.1	37.9					
NEUB	e PKPbc	Z	15:27:12.7	148.5	35.2					
IBBN	e PKPbc	Z	15:27:13.5	148.9	27.6					
	e pPKPbc	Z	15:27:23.8							
TANN	e PKPbc	Z	15:27:14.0	148.9	37.0					
	e pPKPbc	Z	15:27:23.9							
WERD	e PKPbc	Z	15:27:14.1	148.9	36.7					
	e pPKPbc	Z	15:27:24.0							
GUNZ	e PKPbc	Z	15:27:14.2	149.0	36.9					
	e pPKPbc	Z	15:27:24.2							
MOX	e PKPbc	Z	15:27:14.1	149.0	35.4					
	e pPKPbc	Z	15:27:24.2							
WERN	e PKPbc	Z	15:27:14.6	149.0	37.0					
UBBA	e PKPbc	Z	15:27:15.0	149.4	32.6					
ROTZ	e PKPbc	Z	15:27:15.6	149.5	37.3					
GEC2	e PKPbc	Z	15:27:15.4	149.6	40.7					
	e pPKPbc	Z	15:27:25.6							
WET	e PKPbc	Z	15:27:15.9	149.7	39.0					
GRA1	e PKPbc	Z	15:27:16.5	149.9	35.7					
TNS	e PKPbc	Z	15:27:18.0	150.5	30.5					
RJOB	e PKPbc	Z	15:27:18.4	150.8	40.5					
STU	e PKPbc	Z	15:27:20.3	151.4	33.2					
WLF	e PKPbc	Z	15:27:21.4	151.7	26.9					
BFO	e PKPbc	Z	15:27:21.3	152.1	32.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/21	18:48:58.8	0.050S	97.570E	33.0N	5.0			SZGRF

Southwest of Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	19:01:36.3	86.0	94.7	1.5	23	5.1		
BRG	e P	Z	19:01:36.4	86.0	95.0	1.4	16	5.0		
RUE	e P	Z	19:01:37.5	86.3	95.0	1.0	48	5.6		
FBE	e P	Z	19:01:38.4	86.4	94.5	1.3	22	5.1		
RJOB	e P	Z	19:01:38.2	86.5	93.9	1.0	5	4.6		
WET	e P	Z	19:01:39.0	86.6	94.1	1.1	9	4.8		
CLL	e P	Z	19:01:39.0	86.6	94.3	1.1	9	4.8		
WERN	e P	Z	19:01:41.1	87.0	93.7	1.4	7	4.6		
GUNZ	e P	Z	19:01:41.4	87.0	93.7	1.2	10	4.8		
WERD	e P	Z	19:01:41.2	87.0	93.7	1.1	8	4.7		
ROTZ	e P	Z	19:01:41.8	87.0	93.6	0.9	6	4.7		
NEUB	e P	Z	19:01:42.9	87.4	93.3	1.0	22	5.3		
MOX	e P	Z	19:01:43.4	87.5	93.2	1.6	17	4.9		
GRA1	e P	Z	19:01:44.8	87.7	92.8	1.0	18	5.4		
BSEG	e P	Z	19:01:47.9	88.4	92.3	1.4	23	5.3		
NRDL	e P	Z	19:01:48.1	88.5	92.0	1.3	14	5.1		
TNS	e P	Z	19:01:52.9	89.5	90.7	1.0	11	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/21	20:57:51.6	24.180N	120.970E	34.0	5.1			SZGRF

Taiwan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e pP	Z	21:10:13.6	80.8	62.0					
BRG	e P	Z	21:10:06.8	81.4	61.9	1.9	25	5.0		
	e pP	Z	21:10:16.8							
FBE	e P	Z	21:10:08.8	81.7	61.5	2.0	38	5.2		
	e pP	Z	21:10:18.5							
CLL	e P	Z	21:10:08.4	81.7	61.3	1.5	11	4.8		
	e pP	Z	21:10:18.1							
BSEG	e pP	Z	21:10:19.2	81.9	59.6					
NEUB	e P	Z	21:10:12.4	82.5	60.4	1.3	10	4.9		
	e pP	Z	21:10:22.0							
TANN	e P	Z	21:10:12.4	82.5	60.8	2.1	24	5.1		
	e pP	Z	21:10:22.2							
GEC2	e P	Z	21:10:12.4	82.5	61.5	2.0	33	5.2		
	e pP	Z	21:10:22.3							
WERD	e P	Z	21:10:12.8	82.5	60.7	1.8	14	4.9		
	e pP	Z	21:10:22.5							
GUNZ	e P	Z	21:10:12.8	82.6	60.7	1.4	14	5.0		

	e pP	Z	21:10:22.7						
WERN	e P	Z	21:10:12.8	82.6	60.7	1.5	16	5.0	
	e pP	Z	21:10:22.9						
NRDL	e P	Z	21:10:13.9	82.7	59.3	2.2	55	5.4	
	e pP	Z	21:10:23.9						
MOX	e P	Z	21:10:14.0	82.8	60.2	1.5	10	4.8	
	e pP	Z	21:10:24.0						
WET	e P	Z	21:10:14.3	82.8	60.9	1.8	22	5.1	
	e pP	Z	21:10:24.3						
ROTZ	e P	Z	21:10:14.9	82.9	60.5	1.8	21	5.0	
	e pP	Z	21:10:24.9						
GRA1	e P	Z	21:10:17.9	83.5	59.8	1.8	31	5.2	
	e pP	Z	21:10:27.8						
RJOB	e pP	Z	21:10:27.6	83.6	60.7				
UBBA	e P	Z	21:10:18.0	83.6	59.0	1.6	13	4.9	
	e pP	Z	21:10:28.0						
IBBN	e P	Z	21:10:20.3	84.0	57.5	2.2	63	5.5	
FUR	e pP	Z	21:10:31.4	84.3	59.7				
BUG	e pP	Z	21:10:33.7	84.7	57.0				
TNS	e pP	Z	21:10:33.9	84.8	57.8				
BFO	e pP	Z	21:10:38.5	85.8	57.6				

Date 2009/08/22 Origin Time 01:26:43.1 Lat 21.300S Long 174.500W Depth 26.0 mb 4.9 Ms ML Source NEIC
Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 01:46:35.1	151.2	11.1					

Date 2009/08/22 Origin Time 02:50: 6.5 Lat 71.690N Long 2.530E Depth 33.0N mb 4.6 Ms ML Source SZGRF
Norwegian Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e P	Z 02:54:31.1	19.5	352.9	1.8	48	4.4		
IBBN	e P	Z 02:54:30.8	19.5	355.1	2.2	74	4.5		
BUG	e P	Z 02:54:40.1	20.4	355.7	1.3	32	4.4		
NEUB	e P	Z 02:54:46.4	20.9	351.9	1.5	60	4.7		
CLL	e P	Z 02:54:45.9	20.9	350.8	1.8	41	4.5		
UBBA	e P	Z 02:54:49.1	21.1	353.5	1.7	32	4.4		
FBE	e P	Z 02:54:50.9	21.3	350.7	1.8	75	4.7		
BRG	e P	Z 02:54:51.8	21.4	350.2	2.6	112	4.8		
MOX	e P	Z 02:54:52.1	21.4	352.2	1.8	56	4.7		
TNS	e P	Z 02:54:53.9	21.6	355.0	1.6	23	4.4		
TANN	e P	Z 02:54:55.3	21.7	351.6	1.6	41	4.6		

GUNZ	e P	Z	02:54:55.8	21.8	351.7	1.5	30	4.5
WERN	e P	Z	02:54:56.8	21.9	351.7	1.6	48	4.7
WLF	e P	Z	02:54:58.5	22.1	357.0	1.4	16	4.2
GRA1	e P	Z	02:55:02.9	22.4	352.8	1.2	16	4.3
ROTZ	e P	Z	02:55:03.1	22.4	352.0	1.7	27	4.4
WET	e P	Z	02:55:09.7	23.0	351.7	1.8	31	4.6
STU	e P	Z	02:55:09.4	23.1	354.7	2.0	47	4.7
GEC2	e P	Z	02:55:13.3	23.4	351.2	2.0	42	4.6
FUR	e P	Z	02:55:19.1	23.9	353.2	2.5	94	4.9
RJOB	e P	Z	02:55:22.0	24.4	352.2			

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/22 10:26:36.8 51.727N 145.113E 33.0G 5.2
 Sea of Okhotsk

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:37:53.4	71.3	28.1	1.6	30	5.2		

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/22 12:34:54.6 0.620N 27.740W 33.0N 5.3 4.6
 Central Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z 12:44:36.1	56.9	224.6	2.1	91	5.4		
STU	e P	Z 12:44:40.9	57.7	225.3	2.3	111	5.5		
FUR	e P	Z 12:44:45.2	58.2	227.8	2.4	263	5.8		
TNS	e P	Z 12:44:45.8	58.4	223.9	1.4	31	5.2		
RJOB	e P	Z 12:44:48.2	58.7	229.5	1.1	17	5.0		
BUG	e P	Z 12:44:48.4	58.7	222.2	2.1	100	5.5		
GRA1	e P	Z 12:44:52.2	59.3	227.0	2.0	147	5.7		
	e L	N 13:07:26.7			21.6	524		4.6	
UBBA	e P	Z 12:44:53.8	59.5	225.3	2.0	56	5.2		
IBBN	e P	Z 12:44:54.2	59.6	222.3	1.7	59	5.3		
WET	e P	Z 12:44:55.1	59.7	228.9	2.1	91	5.4		
ROTZ	e P	Z 12:44:55.7	59.8	228.0	1.3	36	5.2		
GEC2	e P	Z 12:44:56.7	59.9	229.9	2.1	100	5.5		
MOX	e P	Z 12:44:58.2	60.1	227.0	2.2	102	5.5		
WERN	e P	Z 12:44:58.9	60.2	227.9	1.6	36	5.1		
GUNZ	e P	Z 12:44:59.0	60.2	227.9	1.4	25	5.1		
WERD	e P	Z 12:44:59.3	60.3	227.8	1.9	55	5.3		
TANN	e P	Z 12:44:59.8	60.3	228.0	1.2	31	5.2		
NEUB	e P	Z 12:45:01.1	60.5	226.9	1.0	23	5.2		
NRDL	e P	Z 12:45:02.6	60.7	224.7	1.8	59	5.1		
FBE	e P	Z 12:45:05.1	61.1	228.7	1.1	29	5.0		
CLL	e P	Z 12:45:05.5	61.2	228.1	1.7	35	4.9		

BRG	e P	Z	12:45:06.4	61.3	229.3	1.2	18	4.8
BSEG	e P	Z	12:45:09.2	61.8	224.4	2.0	146	5.9
RUE	e P	Z	12:45:13.4	62.3	228.5	2.4	281	6.1

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/22	13:18:26.8	47.497N	150.080E	33.0G	5.7			SZGRF

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	13:29:45.8	71.6	29.2	0.8	105	6.0		
BSEG	e P	Z	13:29:53.8	73.0	27.2	1.0	108	5.9		
RUE	e P	Z	13:29:55.3	73.3	29.2	1.0	127	5.9		
NRDL	e P	Z	13:30:01.3	74.3	26.8	1.0	45	5.4		
CLL	e P	Z	13:30:02.1	74.6	28.5	0.8	117	6.0		
BRG	e P	Z	13:30:02.8	74.7	29.0	1.3	55	5.4		
FBE	e P	Z	13:30:04.0	74.8	28.7	1.0	80	5.7		
NEUB	e P	Z	13:30:05.0	75.0	27.7	1.0	102	5.8		
IBBN	e P	Z	13:30:05.8	75.1	25.3	0.8	96	5.9		
TANN	e P	Z	13:30:07.9	75.5	28.1	1.6	50	5.4		
WERD	e P	Z	13:30:08.1	75.5	28.0	1.2	46	5.5		
MOX	e P	Z	13:30:08.2	75.6	27.6	1.1	52	5.6		
GUNZ	e P	Z	13:30:08.5	75.6	28.0	1.2	59	5.6		
WERN	e P	Z	13:30:08.9	75.7	28.0	1.2	67	5.7		
UBBA	e P	Z	13:30:09.8	75.9	26.6	1.9	124	5.7		
BUG	e P	Z	13:30:10.9	76.1	24.9	1.1	94	5.8		
ROTZ	e P	Z	13:30:12.0	76.2	27.8	0.9	51	5.6		
WET	e P	Z	13:30:13.9	76.5	28.2	1.1	83	5.8		
GEC2	e P	Z	13:30:13.4	76.5	28.6	1.4	55	5.5		
GRA1	e P	Z	13:30:14.0	76.5	27.2	1.2	139	6.0		
TNS	e P	Z	13:30:15.5	76.8	25.5	1.5	109	5.8		
RJOB	e P	Z	13:30:20.8	77.8	28.0	2.2	159	5.8		
FUR	e P	Z	13:30:21.2	77.9	27.1	0.9	85	5.9		
STU	e P	Z	13:30:21.3	77.9	25.8	1.3	78	5.7		
BFO	e P	Z	13:30:24.7	78.6	25.3	1.1	56	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/23	07:20:21.7	0.710N	96.180E	40.6	5.3	4.6		SZGRF

Off west coast of northern Sumatra, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	07:32:51.1	84.5	95.2	1.4	46	5.5		
	e pP	Z	07:33:02.9							
BRG	e P	Z	07:32:51.1	84.6	95.6	1.6	37	5.4		
	e pP	Z	07:33:02.9							
RUE	e P	Z	07:32:52.5	84.8	95.6	1.2	49	5.6		

	e pP	Z	07:33:04.2								
FBE	e P	Z	07:32:53.2	84.9	95.1	1.5	36	5.4			
	e pP	Z	07:33:04.8								
RJOB	e P	Z	07:32:52.8	85.0	94.4	1.3	19	5.2			
	e pP	Z	07:33:04.6								
WET	e P	Z	07:32:53.9	85.1	94.6	1.5	32	5.3			
	e pP	Z	07:33:05.6								
CLL	e P	Z	07:32:53.8	85.2	94.9	1.2	16	5.1			
	e pP	Z	07:33:05.6								
TANN	e P	Z	07:32:55.6	85.5	94.4	1.3	17	5.1			
	e pP	Z	07:33:07.3								
WERN	e P	Z	07:32:55.9	85.5	94.3	1.0	7	4.8			
	e pP	Z	07:33:07.5								
GUNZ	e P	Z	07:32:56.0	85.5	94.3	1.2	17	5.0			
	e pP	Z	07:33:07.7								
WERD	e P	Z	07:32:55.9	85.6	94.3	1.4	17	5.0			
	e pP	Z	07:33:07.8								
ROTZ	e P	Z	07:32:56.6	85.6	94.1	1.2	18	5.1			
	e pP	Z	07:33:08.3								
NEUB	e P	Z	07:32:57.7	85.9	93.9	1.1	25	5.3			
	e pP	Z	07:33:09.8								
MOX	e P	Z	07:32:58.2	86.0	93.8	1.5	24	5.1			
	e pP	Z	07:33:10.1								
GRA1	e L	E	08:19:32.4	86.2	93.4	21.3	278		4.6		
BSEG	e P	Z	07:33:03.2	87.0	92.9	1.3	68	5.6			
	e pP	Z	07:33:15.1								
UBBA	e P	Z	07:33:03.2	87.0	92.5	1.8	35	5.2			
NRDL	e P	Z	07:33:03.5	87.0	92.7	1.3	46	5.5			
	e pP	Z	07:33:15.3								
STU	e P	Z	07:33:05.4	87.5	91.8	1.4	21	5.1			
	e pP	Z	07:33:17.0								
TNS	e P	Z	07:33:08.2	88.0	91.3	1.1	22	5.4			
	e pP	Z	07:33:20.1								
BFO	e P	Z	07:33:07.7	88.0	91.1	1.6	24	5.3			
	e pP	Z	07:33:19.6								
IBBN	e P	Z	07:33:10.2	88.5	90.8	1.4	68	5.8			
	e pP	Z	07:33:22.2								
BUG	e P	Z	07:33:11.6	88.8	90.4	1.4	42	5.5			
	e pP	Z	07:33:23.5								
WLF	e P	Z	07:33:15.2	89.5	89.5	1.5	48	5.5			
	e pP	Z	07:33:27.3								

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/23 08:25:29.3 20.700N 121.660E 51.7 5.1 SZGRF
 Philippine Islands region

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

RUE	e P	Z	08:37:55.1	83.9	63.5	1.2	51	5.6
	e pP	Z	08:38:09.9					
BRG	e P	Z	08:37:57.9	84.6	63.5	1.2	18	5.2
	e pP	Z	08:38:13.0					
FBE	e P	Z	08:37:59.7	84.9	63.1	1.3	31	5.4
	e pP	Z	08:38:14.6					
CLL	e P	Z	08:37:59.3	84.9	62.8	1.2	20	5.2
	e pP	Z	08:38:14.3					
BSEG	e P	Z	08:38:00.9	85.1	61.0	1.1	42	5.6
	e pP	Z	08:38:15.6					
TANN	e pP	Z	08:38:18.1	85.6	62.4			
GEC2	e P	Z	08:38:03.1	85.6	63.2	1.4	14	4.9
	e pP	Z	08:38:18.2					
NEUB	e P	Z	08:38:03.2	85.6	61.9	0.9	11	5.0
	e pP	Z	08:38:17.9					
WERD	e P	Z	08:38:03.2	85.7	62.3	1.5	14	4.9
	e pP	Z	08:38:18.3					
GUNZ	e P	Z	08:38:03.6	85.7	62.3	1.2	8	4.7
	e pP	Z	08:38:18.7					
WERN	e P	Z	08:38:03.7	85.7	62.3	1.6	21	5.0
	e pP	Z	08:38:18.7					
NRDL	e P	Z	08:38:05.0	85.9	60.7	1.6	22	5.0
	e pP	Z	08:38:19.8					
WET	e P	Z	08:38:05.2	86.0	62.6	1.7	14	4.8
	e pP	Z	08:38:20.1					
MOX	e P	Z	08:38:04.9	86.0	61.8	1.5	10	4.7
	e pP	Z	08:38:19.9					
ROTZ	e P	Z	08:38:05.5	86.1	62.1	1.6	10	4.7
	e pP	Z	08:38:20.7					
IBBN	e P	Z	08:38:10.8	87.3	58.9	2.2	82	5.5
	e pP	Z	08:38:26.0					
WLF	e P	Z	08:38:22.0	89.5	57.6	1.1	22	5.3
	e pP	Z	08:38:37.2					

Date 2009/08/23
 Origin Time 08:26:31.8
 Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 08:45:43.7	146.5	10.0					
RUE	e PKPbc	Z 08:45:46.4	147.4	16.4					
NRDL	e PKPbc	Z 08:45:47.6	147.9	10.0					
	e pPKPbc	Z 08:46:48.1							
IBBN	e PKPbc	Z 08:45:49.1	148.3	5.9					
	e pPKPbc	Z 08:46:49.5							
CLL	e PKPbc	Z 08:45:49.9	148.7	15.5					
	e pPKPbc	Z 08:46:50.3							

BRG	e	PKPbc	Z	08:45:50.7	148.9	17.4
	e	pPKPbc	Z	08:46:51.6		
NEUB	e	PKPbc	Z	08:45:50.7	148.9	13.4
	e	pPKPbc	Z	08:46:51.3		
FBE	e	PKPbc	Z	08:45:51.2	149.0	16.3
	e	pPKPbc	Z	08:46:51.9		
BUG	e	PKPbc	Z	08:45:51.1	149.2	5.2
	e	pPKPbc	Z	08:46:52.0		
MOX	e	PKPbc	Z	08:45:52.1	149.5	13.3
	e	pPKPbc	Z	08:46:53.1		
UBBA	e	PKPbc	Z	08:45:51.8	149.6	10.3
	e	pPKPbc	Z	08:46:53.1		
WERD	e	PKPbc	Z	08:45:52.5	149.6	14.7
	e	pPKPbc	Z	08:46:53.3		
TANN	e	PKPbc	Z	08:45:52.6	149.6	15.0
GUNZ	e	PKPbc	Z	08:45:52.9	149.7	14.8
WERN	e	PKPbc	Z	08:45:53.1	149.7	14.9
ROTZ	e	PKPbc	Z	08:45:54.5	150.3	14.8
	e	pPKPbc	Z	08:46:55.4		
TNS	e	PKPbc	Z	08:45:54.2	150.3	7.6
GRA1	e	PKPbc	Z	08:45:54.7	150.5	13.0
WET	e	PKPbc	Z	08:45:55.6	150.8	16.3
	e	pPKPbc	Z	08:46:56.4		
GEC2	e	PKPbc	Z	08:45:55.7	150.9	18.0
	e	pPKPbc	Z	08:46:56.7		
WLF	e	PKPbc	Z	08:45:56.5	151.0	3.3
	e	pPKPbc	Z	08:46:57.2		
STU	e	PKPbc	Z	08:45:57.5	151.7	9.4
FUR	e	PKPbc	Z	08:45:58.0	152.0	13.7
	e	pPKPbc	Z	08:46:59.4		
RJOB	e	PKPbc	Z	08:45:58.1	152.1	16.9
BFO	e	PKPbc	Z	08:45:58.5	152.2	7.8
	e	pPKPbc	Z	08:46:59.4		

Date 2009/08/23 Origin Time 17:38:27.1 Lat 1.550S Long 98.760E Depth 21.8 mb 5.7 Ms 4.6 ML Source SZGRF
Southern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 17:51:16.0	87.9	94.7	2.0	136	5.9		
	e pP	Z 17:51:22.4							
BRG	e P	Z 17:51:16.0	87.9	95.0	2.0	113	5.9		
	e pP	Z 17:51:22.4							
RUE	e P	Z 17:51:16.9	88.2	94.9	2.0	302	6.3		
	e pP	Z 17:51:23.3							
FBE	e P	Z 17:51:18.0	88.3	94.5	2.0	171	6.0		
	e pP	Z 17:51:24.4							

RJOB	e P	Z	17:51:17.8	88.4	94.0	1.8	44	5.5	
	e pP	Z	17:51:24.1						
WET	e P	Z	17:51:18.6	88.5	94.1	2.1	117	5.8	
	e pP	Z	17:51:25.0						
CLL	e P	Z	17:51:18.5	88.6	94.3	2.2	114	5.7	
	e pP	Z	17:51:24.9						
TANN	e P	Z	17:51:20.2	88.8	93.8	1.9	62	5.5	
	e pP	Z	17:51:26.6						
WERN	e P	Z	17:51:20.5	88.9	93.8	2.0	47	5.4	
	e pP	Z	17:51:27.0						
GUNZ	e P	Z	17:51:20.6	88.9	93.7	2.1	97	5.7	
	e pP	Z	17:51:27.1						
WERD	e P	Z	17:51:20.6	88.9	93.7	2.1	83	5.6	
	e pP	Z	17:51:27.0						
ROTZ	e P	Z	17:51:21.4	89.0	93.6	2.1	110	5.7	
	e pP	Z	17:51:27.8						
NEUB	e P	Z	17:51:22.2	89.3	93.3	1.9	148	5.9	
	e pP	Z	17:51:28.6						
MOX	e P	Z	17:51:22.8	89.4	93.2	1.8	66	5.6	
	e pP	Z	17:51:29.2						
FUR	e P	Z	17:51:22.8	89.5	92.9	1.7	75	5.6	
	e pP	Z	17:51:29.2						
GRA1	e P	Z	17:51:24.1	89.6	92.9	2.1	183	5.9	
	e pP	Z	17:51:30.5						
	e L	E	18:39:52.3			21.8	245		4.6
BSEG	e P	Z	17:51:27.2	90.3	92.2	1.8	117	5.8	
	e pP	Z	17:51:33.6						
NRDL	e P	Z	17:51:27.7	90.4	92.0	2.1	135	5.8	
	e pP	Z	17:51:34.1						
UBBA	e P	Z	17:51:27.6	90.4	91.9	2.0	59	5.5	
	e pP	Z	17:51:33.9						
STU	e P	Z	17:51:29.7	90.9	91.3	2.2	126	5.9	
	e pP	Z	17:51:36.0						
TNS	e P	Z	17:51:32.2	91.4	90.8	2.0	91	5.8	
	e pP	Z	17:51:38.6						
BFO	e P	Z	17:51:32.0	91.4	90.7	2.0	32	5.3	
	e pP	Z	17:51:38.3						
IBBN	e P	Z	17:51:34.2	91.8	90.2	2.0	71	5.6	
	e pP	Z	17:51:40.6						
BUG	e P	Z	17:51:35.5	92.1	89.8	2.6	125	5.8	
	e pP	Z	17:51:41.9						
WLF	e P	Z	17:51:39.2	92.9	89.0	3.0	249	6.1	
	e pP	Z	17:51:45.6						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/23	17:41:49.8	23.900S	178.690W	33.0G				SZGRF
South of Fiji Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	18:01:34.9	149.2	16.2					
RUE	e PKPbc	Z	18:01:36.7	149.9	23.2					
NRDL	e PKPbc	Z	18:01:38.5	150.6	16.6					
CLL	e PKPbc	Z	18:01:39.7	151.2	22.6					
IBBN	e PKPbc	Z	18:01:39.9	151.2	12.3					
BRG	e PKPbc	Z	18:01:40.2	151.3	24.6					
FBE	e PKPbc	Z	18:01:40.8	151.4	23.5					
NEUB	e PKPbc	Z	18:01:40.7	151.5	20.4					
BUG	e PKPbc	Z	18:01:41.7	152.1	11.7					
MOX	e PKPbc	Z	18:01:41.9	152.1	20.5					
TANN	e PKPbc	Z	18:01:42.1	152.1	22.2					
WERD	e PKPbc	Z	18:01:42.1	152.1	21.9					
GUNZ	e PKPbc	Z	18:01:42.4	152.2	22.0					
WERN	e PKPbc	Z	18:01:42.7	152.2	22.1					
UBBA	e PKPbc	Z	18:01:42.2	152.3	17.3					
ROTZ	e PKPbc	Z	18:01:43.7	152.8	22.2					
TNS	e PKPbc	Z	18:01:44.2	153.1	14.5					
WET	e PKPbc	Z	18:01:44.6	153.2	24.0					
GEC2	e PKPbc	Z	18:01:44.5	153.2	25.8					
WLF	e PKPbc	Z	18:01:46.7	154.0	10.1					
RJOB	e PKPbc	Z	18:01:46.7	154.5	25.0					
BFO	e PKPbc	Z	18:01:48.2	154.9	15.3					

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/23 23:05:27.9 50.240N 157.240E 78.2 4.9
 Kuril Islands, Russia SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	23:16:46.7	72.2	21.5	0.9	16	5.2		
	e pP	Z	23:17:07.1							
RUE	e pP	Z	23:17:10.0	72.7	23.5					
NRDL	e P	Z	23:16:54.3	73.6	21.2	1.1	8	4.7		
	e pP	Z	23:17:15.0							
CLL	e P	Z	23:16:56.4	74.0	22.9	1.1	16	4.9		
	e pP	Z	23:17:16.9							
BRG	e P	Z	23:16:57.4	74.2	23.4	1.5	14	4.7		
	e pP	Z	23:17:18.0							
FBE	e P	Z	23:16:58.4	74.3	23.1	1.0	10	4.8		
	e pP	Z	23:17:19.0							
NEUB	e pP	Z	23:17:19.5	74.4	22.1					
MOX	e P	Z	23:17:02.3	74.9	22.0	1.2	12	4.8		
	e pP	Z	23:17:22.9							
TANN	e P	Z	23:17:02.3	75.0	22.5	1.6	10	4.6		
	e pP	Z	23:17:23.2							
WERD	e P	Z	23:17:02.5	75.0	22.4	1.2	9	4.7		

	e pP	Z	23:17:23.1							
GUNZ	e P	Z	23:17:03.0	75.0	22.4	1.0	10	4.8		
	e pP	Z	23:17:23.6							
WERN	e P	Z	23:17:03.3	75.1	22.4	1.0	12	4.9		
	e pP	Z	23:17:23.9							
UBBA	e P	Z	23:17:03.4	75.2	21.0	1.7	20	5.0		
	e pP	Z	23:17:24.2							
BUG	e pP	Z	23:17:24.3	75.2	19.3					
ROTZ	e P	Z	23:17:06.5	75.6	22.2	1.1	14	5.0		
	e pP	Z	23:17:27.1							
GRA1	e P	Z	23:17:08.3	75.9	21.6	1.0	21	5.2		
	e pP	Z	23:17:29.0							
WET	e P	Z	23:17:08.8	76.0	22.6	1.0	12	5.0		
	e pP	Z	23:17:29.5							
TNS	e P	Z	23:17:08.8	76.1	20.0	0.9	14	5.1		
	e pP	Z	23:17:29.7							
GEC2	e P	Z	23:17:08.6	76.1	23.1	0.9	6	4.7		
	e pP	Z	23:17:29.5							
STU	e P	Z	23:17:15.3	77.3	20.3	1.0	11	4.9		
	e pP	Z	23:17:36.1							
FUR	e P	Z	23:17:15.9	77.3	21.5	1.7	58	5.4		
	e pP	Z	23:17:36.7							
RJOB	e P	Z	23:17:16.1	77.4	22.4	1.1	8	4.8		
	e pP	Z	23:17:37.0							
BFO	e P	Z	23:17:18.3	77.9	19.7	1.6	20	5.0		
	e pP	Z	23:17:39.5							

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/24 05:26:13.2 40.582N 141.621E 169.1 5.2 SZGRF
 Near east coast of eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:38:02.5	79.8	36.0	0.8	21	5.2		
	e pP	Z 05:38:43.8							

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/25 11:32:21.1 15.729S 170.753W 33.0G SZGRF
 Samoa Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPbc	Z 11:51:51.2	144.3	6.2					
FBE	e PKPbc	Z 11:51:52.9	144.7	6.8					
UBBA	e PKPbc	Z 11:51:52.6	144.9	1.3					
MOX	e PKPbc	Z 11:51:53.0	145.0	4.0					
WERD	e PKPbc	Z 11:51:53.4	145.2	5.2					

TANN	e	PKPbc	Z	11:51:53.8	145.2	5.4
GUNZ	e	PKPbc	Z	11:51:53.9	145.3	5.2
WERN	e	PKPbc	Z	11:51:54.7	145.3	5.3
TNS	e	PKPbc	Z	11:51:54.9	145.5	358.6
MANZ	e	PKPbc	Z	11:51:55.4	145.7	4.9
ROTZ	e	PKPbc	Z	11:51:56.7	145.9	5.1
WLF	e	PKPbc	Z	11:51:57.4	146.0	354.7
GRA1	e	PKPbc	Z	11:51:57.0	146.0	3.4
WET	e	PKPbc	Z	11:51:58.1	146.5	6.3
GEC2	e	PKPbc	Z	11:51:58.8	146.7	7.8
STU	e	PKPbc	Z	11:51:59.9	147.0	359.9
BFO	e	PKPbc	Z	11:52:01.3	147.4	358.4
FUR	e	PKPbc	Z	11:52:01.6	147.5	3.6
RJOB	e	PKPbc	Z	11:52:02.3	147.9	6.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/25	20:07:46.5	45.629N	150.866E	33.0N	4.9			SZGRF
Kuril Islands, Russia								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:19:44.5	78.4	27.5	1.1	14	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/26	02:59:41.4	34.000N	25.500E	10.0				NEIC
Crete, Greece								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pn	Z 03:04:01.7	18.9	140.8	1.1	24			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/26	02:57:43.9	12.937N	93.413E	33.0G	4.8			SZGRF
Andaman Islands, India, region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 03:09:13.0	73.4	89.8	0.8	6	4.8		
GEC2	e P	Z 03:09:14.2	73.6	89.0	1.0	10	4.8		
FBE	e P	Z 03:09:15.5	73.7	89.4	1.0	19	5.1		
CLL	e P	Z 03:09:16.0	74.0	89.2	1.0	6	4.6		
WET	e P	Z 03:09:17.0	74.1	88.5	1.2	7	4.6		
GUNZ	e P	Z 03:09:19.2	74.4	88.4	1.4	9	4.6		
WERD	e P	Z 03:09:19.1	74.4	88.4	1.1	7	4.6		
ROTZ	e P	Z 03:09:20.3	74.5	88.2	1.2	11	4.8		
MANZ	e P	Z 03:09:19.9	74.6	88.2	1.4	12	4.7		

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

60

MOX	e P	Z	03:09:21.0	74.9	88.0	0.9	6	4.6
NRDL	e P	Z	03:09:26.8	75.7	87.3	1.5	12	4.8
TNS	e P	Z	03:09:33.3	76.9	85.4	0.9	6	4.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/26	07:26:46.1	39.819N	70.998E	33.0G	4.9			SZGRF
Tajikistan								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 07:34:37.7	42.4	79.8	0.7	17	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/26	07:30:42.9	15.835S	172.609W	33.0N				SZGRF
Samoa Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPbc	Z 07:50:13.8	144.2	9.3					
MOX	e PKPbc	Z 07:50:14.9	145.0	7.1					
WERD	e PKPbc	Z 07:50:15.5	145.2	8.3					
TANN	e PKPbc	Z 07:50:15.6	145.2	8.6					
GUNZ	e PKPbc	Z 07:50:15.9	145.2	8.4					
WERN	e PKPbc	Z 07:50:16.2	145.3	8.4					
TNS	e PKPbc	Z 07:50:17.4	145.6	1.8					
MANZ	e PKPbc	Z 07:50:17.4	145.6	8.1					
ROTZ	e PKPbc	Z 07:50:18.3	145.8	8.3					
GRA1	e PKPbc	Z 07:50:18.7	146.0	6.6					
WLF	e PKPbc	Z 07:50:19.7	146.2	357.9					
WET	e PKPbc	Z 07:50:19.8	146.4	9.6					
GEC2	e PKPbc	Z 07:50:20.2	146.6	11.1					
BFO	e PKPbc	Z 07:50:23.1	147.5	1.7					
RJOB	e PKPbc	Z 07:50:23.9	147.8	9.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/26	11:49:26.9	15.777S	171.739W	33.0N				SZGRF
Samoa Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FBE	e PKPbc	Z 12:08:59.3	144.6	8.5					
UBBA	e PKPbc	Z 12:08:58.0	144.9	2.9					
MOX	e PKPbc	Z 12:08:58.9	145.0	5.6					
WERD	e PKPbc	Z 12:08:58.9	145.2	6.8					
TANN	e PKPbc	Z 12:08:59.7	145.2	7.1					
GUNZ	e PKPbc	Z 12:08:59.8	145.3	6.9					

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

61

WERN	e	PKPbc	Z	12:09:00.4	145.3	7.0
TNS	e	PKPbc	Z	12:09:01.2	145.6	0.3
MANZ	e	PKPbc	Z	12:09:01.4	145.6	6.6
ROTZ	e	PKPbc	Z	12:09:02.2	145.9	6.8
GRA1	e	PKPbc	Z	12:09:02.7	146.0	5.1
WLF	e	PKPbc	Z	12:09:03.5	146.1	356.4
WET	e	PKPbc	Z	12:09:04.0	146.4	8.1
GEC2	e	PKPbc	Z	12:09:04.4	146.6	9.5
STU	e	PKPbc	Z	12:09:06.0	147.0	1.6
BFO	e	PKPbc	Z	12:09:07.0	147.4	0.1
RJOB	e	PKPbc	Z	12:09:08.0	147.8	8.2

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/26	22:20:15.9	13.550N	122.070E	33.0G	5.5	4.5		SZGRF
Luzon, Philippine Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	22:33:13.5	90.0	67.4	1.1	70	5.8		
BRG	e P	Z	22:33:15.6	90.5	67.5	0.9	30	5.6		
FBE	e P	Z	22:33:17.2	90.8	67.1	1.0	40	5.7		
CLL	e P	Z	22:33:16.9	90.9	66.8	1.1	20	5.4		
BSEG	e P	Z	22:33:19.2	91.3	64.6	1.0	30	5.6		
GEC2	e P	Z	22:33:19.6	91.4	67.4	1.4	23	5.3		
TANN	e P	Z	22:33:20.3	91.6	66.4	0.9	14	5.3		
NEUB	e P	Z	22:33:20.7	91.6	65.8	0.9	36	5.7		
WERD	e P	Z	22:33:20.6	91.6	66.2	1.1	24	5.4		
GUNZ	e P	Z	22:33:20.8	91.7	66.3	1.0	32	5.6		
WERN	e P	Z	22:33:20.8	91.7	66.3	1.2	31	5.5		
WET	e P	Z	22:33:21.6	91.8	66.7	1.3	14	5.2		
MANZ	e P	Z	22:33:22.2	91.9	66.1	1.1	13	5.2		
MOX	e P	Z	22:33:22.1	92.0	65.7	1.1	16	5.3		
ROTZ	e P	Z	22:33:22.5	92.0	66.2	0.9	19	5.4		
NRDL	e P	Z	22:33:22.8	92.0	64.4	1.0	24	5.5		
CLZ	e P	Z	22:33:23.5	92.2	64.7	1.0	37	5.7		
GRA1	e P	Z	22:33:25.1	92.6	65.4	1.0	16	5.4		
	e L	Z	23:32:56.4			21.9	184		4.5	
IBBN	e P	Z	22:33:28.8	93.4	62.6	1.0	32	5.6		
TNS	e P	Z	22:33:31.5	94.0	63.2	1.2	19	5.3		
BUG	e P	Z	22:33:31.7	94.1	62.2	0.9	17	5.4		
WLF	e P	Z	22:33:38.9	95.5	61.5	1.2	27	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/26	22:44: 2.2	16.328N	94.275W	33.0N	5.3	4.4		SZGRF
Oaxaca, Mexico								

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

62

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:56:45.6	87.2	292.2	2.2	63	5.3		
	e L	Z	23:32:56.4			21.9	184		4.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/27	03:07:46.3	21.019S	177.820W	33.0G				SZGRF

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	03:27:24.5	146.5	13.9					
NRDL	e PKPbc	Z	03:27:28.0	147.9	14.0					
CLZ	e PKPbc	Z	03:27:29.8	148.5	14.8					
CLL	e PKPbc	Z	03:27:29.6	148.6	19.6					
BRG	e PKPbc	Z	03:27:30.0	148.8	21.5					
FBE	e PKPbc	Z	03:27:30.5	148.8	20.5					
NEUB	e PKPbc	Z	03:27:30.5	148.9	17.5					
BUG	e PKPbc	Z	03:27:31.5	149.3	9.3					
MOX	e PKPbc	Z	03:27:31.9	149.5	17.5					
TANN	e PKPbc	Z	03:27:32.0	149.5	19.2					
WERD	e PKPbc	Z	03:27:32.1	149.5	18.9					
GUNZ	e PKPbc	Z	03:27:32.5	149.6	19.0					
WERN	e PKPbc	Z	03:27:32.7	149.6	19.1					
MANZ	e PKPbc	Z	03:27:33.4	150.0	18.8					
ROTZ	e PKPbc	Z	03:27:33.8	150.2	19.1					
TNS	e PKPbc	Z	03:27:34.4	150.4	11.9					
GEC2	e PKPbc	Z	03:27:34.6	150.7	22.4					
WLF	e PKPbc	Z	03:27:36.7	151.2	7.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/27	20:10:41.9	46.663N	153.025E	15.8	5.2	4.6		SZGRF

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	20:22:20.5	74.5	25.6	1.6	73	5.4		
	e pP	Z	20:22:25.2							
RUE	e P	Z	20:22:22.5	74.9	27.6	1.5	54	5.4		
NRDL	e P	Z	20:22:28.0	75.9	25.3	2.0	53	5.3		
	e pP	Z	20:22:32.6							
CLL	e P	Z	20:22:29.2	76.2	27.0	1.8	55	5.4		
	e pP	Z	20:22:34.0							
BRG	e P	Z	20:22:30.0	76.3	27.6	2.0	42	5.2		
CLZ	e P	Z	20:22:31.4	76.4	25.4	1.4	76	5.6		
FBE	e P	Z	20:22:31.1	76.4	27.2	1.6	43	5.3		
	e pP	Z	20:22:35.6							
NEUB	e P	Z	20:22:31.9	76.6	26.2	2.0	87	5.5		

	e pP	Z	20:22:36.7								
IBBN	e P	Z	20:22:32.5	76.7	23.7	1.5	47	5.4			
TANN	e P	Z	20:22:35.1	77.1	26.6	2.0	30	5.1			
	e pP	Z	20:22:39.4								
WERD	e P	Z	20:22:35.1	77.1	26.5	1.6	20	5.0			
	e pP	Z	20:22:39.5								
MOX	e P	Z	20:22:35.2	77.2	26.0	1.9	38	5.2			
	e pP	Z	20:22:39.7								
GUNZ	e P	Z	20:22:35.6	77.2	26.5	2.1	52	5.3			
	e pP	Z	20:22:40.2								
UBBA	e P	Z	20:22:36.6	77.4	25.0	2.0	36	5.2			
BUG	e P	Z	20:22:37.4	77.6	23.3	1.7	52	5.4			
MANZ	e P	Z	20:22:37.8	77.6	26.3	2.4	59	5.3			
	e pP	Z	20:22:42.0								
ROTZ	e P	Z	20:22:39.1	77.8	26.3	1.4	20	5.0			
GRA1	e P	Z	20:22:41.0	78.1	25.7	2.1	74	5.5			
	e L	Z	21:00:44.6			19.1	264		4.6		
WET	e P	Z	20:22:41.1	78.1	26.7	2.6	96	5.5			
GEC2	e P	Z	20:22:40.4	78.2	27.2	2.1	25	4.9			
TNS	e P	Z	20:22:42.1	78.4	24.0	1.6	22	4.9			
RJOB	e P	Z	20:22:47.6	79.4	26.5	1.7	29	4.9			
WLF	e P	Z	20:22:48.0	79.5	22.4	2.4	92	5.3			
FUR	e P	Z	20:22:48.2	79.5	25.6	1.5	34	5.1			
STU	e P	Z	20:22:48.2	79.5	24.3	1.8	43	5.1			
BFO	e P	Z	20:22:51.3	80.2	23.7	1.1	13	4.9			

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/27 22:38:57.7 14.367N 95.456E 33.0N 4.6
 Andaman Islands, India, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 22:50:38.5	75.4	84.9	0.9	6	4.6		

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/28 01:52:10.5 37.458N 95.720E 33.0G 6.2 6.2
 Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z 02:01:47.3	56.2	71.2	1.1	573	6.5		
RUE	e P	Z 02:01:49.9	56.6	70.3	1.2	304	6.2		
BRG	e P	Z 02:01:53.3	57.1	69.4	1.1	238	6.1		
FBE	e P	Z 02:01:56.1	57.4	69.0	1.1	260	6.2		
CLL	e P	Z 02:01:55.8	57.5	69.0	1.0	239	6.2		
GEC2	e P	Z 02:01:59.9	58.0	68.0	1.1	164	6.0		
BSEG	e P	Z 02:02:00.6	58.1	68.8	1.1	427	6.4		

TANN	e P	Z	02:02:00.8	58.1	68.2	1.1	182	6.0
WERD	e P	Z	02:02:01.4	58.2	68.1	1.1	156	5.9
GUNZ	e P	Z	02:02:01.8	58.2	68.1	1.1	256	6.2
NEUB	e P	Z	02:02:01.3	58.2	68.2	1.1	348	6.3
WET	e P	Z	02:02:02.7	58.4	67.7	1.3	222	6.0
MANZ	e P	Z	02:02:03.6	58.5	67.7	1.4	193	5.9
ROTZ	e P	Z	02:02:04.0	58.5	67.6	1.1	289	6.2
MOX	e P	Z	02:02:03.6	58.5	67.8	1.1	194	6.0
	e S	N	02:10:10.1					
	e L	Z	02:26:57.5			21.3	11682	6.0
NRDL	e P	Z	02:02:05.2	58.7	67.9	1.1	510	6.5
CLZ	e P	Z	02:02:05.6	58.8	67.7	1.1	470	6.4
RJOB	e P	Z	02:02:07.1	58.9	66.9	1.4	263	6.1
GRA1	e P	Z	02:02:08.3	59.1	67.0	1.1	427	6.4
	e S	N	02:10:20.1					
	e L	Z	02:28:23.1			19.4	24325	6.3
UBBA	e P	Z	02:02:09.4	59.4	66.9	1.6	190	5.9
FUR	e P	Z	02:02:12.4	59.7	66.2	1.1	597	6.5
IBBN	e P	Z	02:02:14.4	60.1	66.2	1.3	287	6.1
TNS	e P	Z	02:02:17.7	60.6	65.6	1.4	186	5.7
STU	e P	Z	02:02:18.7	60.7	65.3	1.1	270	6.0
BUG	e P	Z	02:02:18.8	60.7	65.5	1.1	282	6.0
BFO	e P	Z	02:02:23.3	61.4	64.6	1.1	244	6.3
WLF	e P	Z	02:02:28.9	62.1	63.9	1.2	484	6.6

Date Origin Time Lat Long Depth mb Ms ML Source
2009/08/28

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
AHRW	e PKPdf	Z 02:08:44.8							
BFO	e PKPdf	Z 02:08:43.8							
BRG	e PKPdf	Z 02:08:36.5							
BSEG	e PKPdf	Z 02:08:39.7							
BUG	e PKPdf	Z 02:08:44.0							
	e	02:08:48.7							
CLL	e PKPdf	Z 02:08:37.2							
CLZ	e PKPdf	Z 02:08:40.6							
FBE	e PKPdf	Z 02:08:37.4							
FLT1	e PKPdf	Z 02:08:38.8							
FUR	e PKPdf	Z 02:08:40.7							
GEC2	e PKPdf	Z 02:08:37.3							
	e	02:08:41.8							
GRA1	e PKPdf	Z 02:08:40.1							
GTTG	e PKPdf	Z 02:08:40.9							
	e	02:08:45.6							
GUNZ	e PKPdf	Z 02:08:38.7							
IBBN	e PKPdf	Z 02:08:43.1							

MANZ	e	PKPdf	Z	02:08:39.2
NEUB	e	PKPdf	Z	02:08:38.9
NRDL	e	PKPdf	Z	02:08:40.4
RGN	e	PKPdf	Z	02:08:36.2
RJOB	e	PKPdf	Z	02:08:38.7
RUE	e	PKPdf	Z	02:08:36.3
STU	e	PKPdf	Z	02:08:42.9
TANN	e	PKPdf	Z	02:08:38.3
TNS	e	PKPdf	Z	02:08:43.5
UBBA	e	PKPdf	Z	02:08:40.8
WERD	e	PKPdf	Z	02:08:38.5
WET	e	PKPdf	Z	02:08:38.5
WLF	e	PKPdf	Z	02:08:46.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/28								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKPbc	Z 02:19:38.7							
BRG	e PKPbc	Z 02:19:52.3							
BSEG	e PKPbc	Z 02:19:47.6							
BUG	e PKPbc	Z 02:19:39.3							
CLL	e PKPbc	Z 02:19:50.5							
CLZ	e PKPbc	Z 02:19:46.4							
FLT1	e PKPbc	Z 02:19:47.6							
FUR	e PKPbc	Z 02:19:45.1							
GEC2	e PKPbc	Z 02:19:50.2							
GRA1	e PKPbc	Z 02:19:46.4							
	e	02:19:51.9							
GTTG	e PKPbc	Z 02:19:45.1							
MANZ	e PKPbc	Z 02:19:48.2							
MOX	e PKPbc	Z 02:19:47.8							
	e	02:19:53.5							
NEUB	e PKPbc	Z 02:19:48.3							
NRDL	e PKPbc	Z 02:19:46.8							
RGN	e PKPbc	Z 02:19:53.6							
RJOB	e PKPbc	Z 02:19:47.9							
ROTZ	e PKPbc	Z 02:19:48.2							
RUE	e PKPbc	Z 02:19:52.6							
STU	e PKPbc	Z 02:19:41.5							
TANN	e PKPbc	Z 02:19:49.4							
TNS	e PKPbc	Z 02:19:41.1							
WET	e PKPbc	Z 02:19:49.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

66

2009/08/28 02:15: 0.5
Qinghai, China

36.726N

95.132E

33.0G

5.5

SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	02:24:44.5	57.2	70.4	1.3	53	5.4		
FBE	e P	Z	02:24:47.3	57.6	70.0	1.3	60	5.5		
CLL	e P	Z	02:24:47.2	57.6	70.1	1.0	38	5.4		
GEC2	e P	Z	02:24:51.7	58.1	69.0	1.4	60	5.4		
BSEG	e P	Z	02:24:52.3	58.3	69.8	1.2	107	5.8		
WERD	e P	Z	02:24:52.8	58.3	69.1	1.2	30	5.2		
GUNZ	e P	Z	02:24:53.3	58.4	69.1	1.1	34	5.3		
NEUB	e P	Z	02:24:53.0	58.4	69.2	1.2	68	5.6		
MOX	e P	Z	02:24:54.8	58.7	68.8	1.3	46	5.4		
NRDL	e P	Z	02:24:56.5	58.9	68.8	1.2	107	5.7		
CLZ	e P	Z	02:24:57.0	59.0	68.7	1.1	91	5.7		
GRA1	e P	Z	02:24:59.2	59.3	68.0	1.1	66	5.6		
IBBN	e P	Z	02:25:05.7	60.3	67.2	1.4	47	5.3		
STU	e P	Z	02:25:10.3	60.8	66.3	1.2	62	5.3		
BUG	e P	Z	02:25:10.1	60.9	66.4	1.4	81	5.4		
BFO	e P	Z	02:25:14.5	61.5	65.5	1.2	52	5.6		
WLF	e P	Z	02:25:20.3	62.3	64.9	1.2	99	5.9		

Date Origin Time
2009/08/28 02:16:17.1
Qinghai, China

Lat
38.049N

Long
95.029E

Depth
33.0G

mb
5.5

Ms

ML

Source
SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	02:25:50.9	55.8	70.2	1.2	63	5.5		
BRG	e P	Z	02:25:54.7	56.3	69.3	1.3	56	5.4		
FBE	e P	Z	02:25:57.0	56.6	68.9	1.2	57	5.5		
CLL	e P	Z	02:25:57.1	56.7	69.0	1.1	54	5.5		
GEC2	e P	Z	02:26:01.1	57.2	67.9	1.2	32	5.2		
BSEG	e P	Z	02:26:01.3	57.3	68.8	1.2	95	5.7		
TANN	e P	Z	02:26:01.9	57.3	68.1	1.3	51	5.4		
WERD	e P	Z	02:26:01.9	57.4	68.0	1.2	29	5.2		
GUNZ	e P	Z	02:26:02.5	57.4	68.0	1.2	54	5.5		
NEUB	e P	Z	02:26:02.4	57.4	68.1	1.1	68	5.6		
WET	e P	Z	02:26:03.5	57.6	67.6	1.1	20	5.1		
MANZ	e P	Z	02:26:04.5	57.7	67.6	1.4	44	5.3		
ROTZ	e P	Z	02:26:05.3	57.7	67.5	1.2	55	5.5		
MOX	e P	Z	02:26:04.8	57.7	67.7	1.3	50	5.4		
NRDL	e P	Z	02:26:06.2	57.9	67.8	1.2	96	5.7		
CLZ	e P	Z	02:26:06.7	58.0	67.6	1.1	84	5.7		
RJOB	e P	Z	02:26:08.0	58.1	66.7	1.3	46	5.3		
GRA1	e P	Z	02:26:09.3	58.3	66.9	1.2	96	5.7		
UBBA	e P	Z	02:26:11.1	58.6	66.8	2.0	134	5.6		
FUR	e P	Z	02:26:13.4	58.9	66.1	1.1	126	5.8		

TNS	e P	Z	02:26:18.6	59.8	65.5	1.2	36	5.3
STU	e P	Z	02:26:19.7	59.9	65.2	1.1	60	5.5
BUG	e P	Z	02:26:19.8	59.9	65.4	1.2	69	5.5
BFO	e P	Z	02:26:24.6	60.6	64.4	1.2	49	5.2
WLF	e P	Z	02:26:30.1	61.3	63.8	1.1	86	5.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/28								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z 02:31:47.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/28	04:08: 5.3	16.435S	173.368W	134.5				SZGRF
Tonga Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z 04:27:22.6	144.1	1.8					
CLZ	e PKPbc	Z 04:27:23.7	144.5	6.2					
CLL	e PKPbc	Z 04:27:24.1	144.8	10.6					
NEUB	e PKPbc	Z 04:27:25.1	145.0	8.6					
	e pPKPbc	Z 04:28:00.7							
BUG	e PKPbc	Z 04:27:25.2	145.0	1.1					
	e pPKPbc	Z 04:28:01.0							
BRG	e PKPbc	Z 04:27:25.3	145.1	12.3					
	e pPKPbc	Z 04:28:01.0							
FBE	e PKPbc	Z 04:27:25.8	145.1	11.3					
UBBA	e PKPbc	Z 04:27:26.8	145.5	5.7					
MOX	e PKPbc	Z 04:27:27.0	145.6	8.5					
	e pPKPbc	Z 04:28:02.7							
WERD	e PKPbc	Z 04:27:27.5	145.7	9.7					
TANN	e PKPbc	Z 04:27:27.6	145.7	10.0					
GUNZ	e PKPbc	Z 04:27:28.0	145.8	9.7					
MANZ	e PKPbc	Z 04:27:29.1	146.2	9.5					
	e pPKPbc	Z 04:28:04.4							
ROTZ	e PKPbc	Z 04:27:29.8	146.4	9.7					
	e pPKPbc	Z 04:28:05.2							
WLF	e PKPbc	Z 04:27:31.4	146.8	359.2					
	e pPKPbc	Z 04:28:07.0							
WET	e PKPbc	Z 04:27:31.2	146.9	11.0					
	e pPKPbc	Z 04:28:06.2							
GEC2	e PKPbc	Z 04:27:31.6	147.1	12.5					
	e pPKPbc	Z 04:28:06.8							
STU	e PKPbc	Z 04:27:33.3	147.6	4.6					
FUR	e PKPbc	Z 04:27:34.3	148.0	8.4					

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

68

	e	pPKPbc	Z	04:28:09.5					
BFO	e	PKPbc	Z	04:27:34.4	148.1	3.1			
	e	pPKPbc	Z	04:28:09.7					
RJOB	e	PKPbc	Z	04:27:34.7	148.3	11.3			
	e	pPKPbc	Z	04:28:10.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/28	04:28:54.9	38.636N	94.991E	33.3G	4.8			SZGRF

Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 04:38:28.2	55.9	68.8	1.0	7	4.6		
CLL	e P	Z 04:38:31.6	56.3	68.5	0.9	9	4.8		
GEC2	e P	Z 04:38:35.4	56.8	67.4	1.1	6	4.6		
BSEG	e P	Z 04:38:35.3	56.8	68.3	1.0	19	5.1		
TANN	e P	Z 04:38:36.2	56.9	67.6	1.4	11	4.7		
WET	e P	Z 04:38:38.0	57.2	67.1	1.3	7	4.5		
ROTZ	e P	Z 04:38:39.3	57.3	67.0	1.2	11	4.8		
MOX	e P	Z 04:38:38.9	57.3	67.2	1.2	9	4.7		
NRDL	e P	Z 04:38:40.3	57.5	67.3	1.0	18	5.1		
CLZ	e P	Z 04:38:40.8	57.6	67.1	1.0	17	5.0		
RJOB	e P	Z 04:38:42.9	57.8	66.2	0.8	4	4.5		
GRA1	e P	Z 04:38:44.2	57.9	66.4	0.6	11	5.0		
FUR	e P	Z 04:38:47.3	58.5	65.6	1.2	26	5.1		
BFO	e P	Z 04:38:59.0	60.2	64.0	1.2	12	4.8		
WLF	e P	Z 04:39:04.6	60.9	63.3	1.0	18	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/28	05:47:57.7	30.682N	129.029E	33.0G	5.1			SZGRF

Kyushu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z 06:00:07.5	80.7	51.6	1.0	12	4.9		
TANN	e P	Z 06:00:12.7	81.5	51.1	1.8	29	5.1		
CLZ	e P	Z 06:00:12.9	81.6	49.7	1.3	42	5.4		
MOX	e P	Z 06:00:13.7	81.8	50.5	1.5	15	4.9		
GEC2	e P	Z 06:00:13.9	81.8	51.7	1.3	9	4.7		
ROTZ	e P	Z 06:00:15.1	82.0	50.8	1.4	19	5.0		
WET	e P	Z 06:00:15.1	82.1	51.2	1.9	24	5.0		
UBBA	e P	Z 06:00:16.9	82.4	49.3	2.2	38	5.2		
GRA1	e P	Z 06:00:17.7	82.6	50.1	1.5	52	5.5		
RJOB	e P	Z 06:00:19.9	83.0	51.0	1.6	20	5.1		
BUG	e P	Z 06:00:21.2	83.3	47.4	1.5	32	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/28	08:54:43.6	51.483N	165.154W	33.0N	5.1			SZGRF

South of Aleutian Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:06:43.4	78.8	357.7	0.7	15	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/28	10:14: 6.6	37.795N	95.162E	33.0G	5.0			SZGRF

Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:24:00.5	58.6	67.0	1.3	21	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/28	16:28:48.7	37.441N	95.253E	33.0G	5.2	4.9		SZGRF

Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 16:38:26.4	56.4	70.6	0.9	43	5.5		
BRG	e P	Z 16:38:29.6	56.8	69.7	0.9	24	5.2		
FBE	e P	Z 16:38:32.3	57.1	69.3	0.9	24	5.2		
CLL	e P	Z 16:38:32.2	57.2	69.4	0.9	25	5.3		
GEC2	e P	Z 16:38:36.2	57.7	68.3	1.0	17	5.0		
BSEG	e P	Z 16:38:37.0	57.8	69.1	0.9	47	5.5		
TANN	e P	Z 16:38:37.2	57.9	68.5	0.9	18	5.1		
WERD	e P	Z 16:38:37.7	57.9	68.4	0.9	16	5.1		
GUNZ	e P	Z 16:38:37.9	58.0	68.4	0.9	28	5.3		
NEUB	e P	Z 16:38:37.9	58.0	68.5	0.8	34	5.4		
WET	e P	Z 16:38:39.0	58.1	68.0	1.1	19	5.1		
MANZ	e P	Z 16:38:39.9	58.2	68.0	0.9	8	4.8		
ROTZ	e P	Z 16:38:40.5	58.3	67.9	0.9	27	5.3		
MOX	e P	Z 16:38:40.1	58.3	68.1	1.0	16	5.0		
	e L	Z 17:04:41.4			18.6	647		4.8	
NRDL	e P	Z 16:38:41.5	58.5	68.2	1.0	49	5.5		
CLZ	e P	Z 16:38:42.2	58.5	68.0	0.8	54	5.6		
RJOB	e P	Z 16:38:43.2	58.7	67.1	1.2	19	5.0		
GRA1	e P	Z 16:38:44.6	58.9	67.3	0.9	52	5.6		
	e L	Z 17:05:01.4			18.8	844		4.9	
FUR	e P	Z 16:38:48.5	59.4	66.5	0.9	71	5.7		
IBBN	e P	Z 16:38:50.9	59.8	66.5	0.8	20	5.2		
TNS	e P	Z 16:38:54.1	60.3	65.9	1.6	23	5.0		
STU	e P	Z 16:38:55.2	60.5	65.6	0.7	29	5.2		
BUG	e P	Z 16:38:55.4	60.5	65.8	0.9	26	5.0		

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

70

BFO e P Z 16:38:59.6 61.2 64.8 0.9 21 4.9

Date Origin Time Lat Long Depth mb Ms ML Source
2009/08/28 16:45:14.8 4.540N 94.872E 58.2 5.2
Off west coast of northern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 16:57:22.0	80.8	94.2	1.8	44	5.2		
	e pP	Z 16:57:38.4							
GEC2	e P	Z 16:57:22.5	80.8	93.7	1.0	27	5.3		
FBE	e P	Z 16:57:24.0	81.1	93.7	2.0	72	5.4		
RJOB	e P	Z 16:57:24.6	81.3	92.8	0.9	13	4.9		
WET	e P	Z 16:57:25.1	81.3	93.1	1.0	16	5.0		
TANN	e P	Z 16:57:26.8	81.7	93.0	1.4	11	4.8		
GUNZ	e P	Z 16:57:27.3	81.7	92.8	1.2	15	5.0		
WERD	e pP	Z 16:57:43.8	81.8	92.8					
ROTZ	e P	Z 16:57:28.2	81.8	92.7	1.9	51	5.3		
MANZ	e P	Z 16:57:28.2	81.9	92.6	1.2	22	5.2		
NEUB	e P	Z 16:57:29.1	82.1	92.5	1.1	26	5.3		
MOX	e P	Z 16:57:29.6	82.2	92.3	1.4	14	4.9		
FUR	e P	Z 16:57:30.5	82.3	91.7	0.9	25	5.4		
GRA1	e pP	Z 16:57:47.2	82.4	91.9					
CLZ	e P	Z 16:57:34.2	83.0	91.5	2.1	102	5.7		

Date Origin Time Lat Long Depth mb Ms ML Source
2009/08/29 06:10:35.4 18.700S 169.100E 235.0G
Vanuatu Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
TANN	e PKP	Z 06:29:38.6	143.2	38.9					
WERD	e PKP	Z 06:29:39.2	143.3	38.6					
GUNZ	e PKP	Z 06:29:39.3	143.3	38.7					
MANZ	e PKP	Z 06:29:40.3	143.7	38.7					
ROTZ	e PKP	Z 06:29:41.0	143.9	39.1					
GEC2	e PKP	Z 06:29:41.3	143.9	42.0					
WET	e PKP	Z 06:29:41.3	144.0	40.6					
GRA1	e PKP	Z 06:29:42.5	144.3	37.7					
TNS	e PKP	Z 06:29:43.5	144.9	33.1					
RJOB	e PKP	Z 06:29:45.2	145.1	41.8					
STU	e PKP	Z 06:29:47.0	145.8	35.4					
WLF	e PKP	Z 06:29:48.7	146.2	29.9					
BFO	e PKP	Z 06:29:48.9	146.5	34.4					

./2009/bul0908.txt

Thu Apr 23 08:38:25 2020

71

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/29	10:11:15.9	43.925N	128.979W	10.0G	5.0			SZGRF

Off coast of Oregon, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:23:26.5	80.2	332.1	1.6	33	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/29	10:42:50.7	14.858N	93.637W	33.0N	5.4	4.9		SZGRF

Near coast of Chiapas, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 10:55:23.2	84.9	287.0	1.2	46	5.6		
BUG	e P	Z 10:55:23.4	85.0	287.7	1.3	52	5.6		
IBBN	e P	Z 10:55:24.1	85.1	288.0	1.1	57	5.7		
BSEG	e P	Z 10:55:28.5	86.0	289.9	1.1	64	5.7		
TNS	e P	Z 10:55:29.1	86.1	288.7	0.9	48	5.6		
NRDL	e P	Z 10:55:30.3	86.4	289.8	1.5	38	5.3		
BFO	e P	Z 10:55:31.1	86.7	288.7	3.2	266	5.8		
CLZ	e P	Z 10:55:32.4	86.7	290.1	1.8	100	5.7		
UBBA	e P	Z 10:55:32.9	86.9	289.8	1.9	49	5.3		
STU	e P	Z 10:55:33.6	87.1	289.3	1.4	41	5.4		
MOX	e P	Z 10:55:37.3	87.9	291.1	1.6	27	5.3		
	e L	Z 11:35:52.7			19.7	674		5.1	
GRA1	e L	Z 11:31:48.6	88.0	290.8	21.0	416		4.8	
GUNZ	e P	Z 10:55:39.9	88.4	291.6	1.1	16	5.2		
MANZ	e P	Z 10:55:40.1	88.4	291.5	1.0	8	4.9		
CLL	e P	Z 10:55:40.0	88.4	292.1	1.1	14	5.1		
TANN	e P	Z 10:55:40.3	88.5	291.7	1.0	11	5.0		
ROTZ	e P	Z 10:55:41.0	88.5	291.5	1.4	14	5.0		
FBE	e P	Z 10:55:41.9	88.8	292.4	1.1	18	5.2		
BRG	e P	Z 10:55:43.3	89.2	292.9	1.0	16	5.2		
WET	e P	Z 10:55:44.0	89.2	292.1	2.4	121	5.7		
RJOB	e P	Z 10:55:46.1	89.7	292.0	0.6	18	5.4		
GEC2	e P	Z 10:55:46.5	89.8	292.7	1.1	13	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/29	13:05:59.7	44.213N	130.454W	33.0N	4.7			SZGRF

Off coast of Oregon, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:18:07.9	80.3	333.2	1.4	10	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/29	13:59: 7.4	12.150N	55.818E	10.0G	5.6	4.3		SZGRF

Socotra region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RJOB	e P	Z	14:08:06.6	50.5	120.1	2.0	74	5.3		
GEC2	e P	Z	14:08:06.5	50.5	121.9	2.5	100	5.3		
WET	e P	Z	14:08:10.5	51.1	121.2	1.8	35	5.0		
BRG	e P	Z	14:08:13.4	51.5	123.5	2.5	129	5.4		
FUR	e P	Z	14:08:14.3	51.6	118.9	3.2	993	6.2		
FBE	e P	Z	14:08:16.3	51.8	122.9	2.2	142	5.5		
ROTZ	e P	Z	14:08:16.3	51.8	121.0	2.2	117	5.4		
MANZ	e P	Z	14:08:17.4	52.0	121.0	2.7	145	5.4		
TANN	e P	Z	14:08:18.0	52.0	121.6	2.5	199	5.6		
GUNZ	e P	Z	14:08:18.3	52.1	121.5	2.9	409	5.9		
WERD	e P	Z	14:08:18.6	52.1	121.5	2.2	133	5.5		
CLL	e P	Z	14:08:19.1	52.2	122.8	2.8	346	5.8		
GRA1	e P	Z	14:08:19.6	52.4	119.9	2.6	296	5.8		
	e L	Z	14:32:52.7			19.9	254		4.3	
RUE	e P	Z	14:08:20.5	52.5	124.4	1.4	95	5.5		
MOX	e P	Z	14:08:22.2	52.6	120.9	2.0	98	5.4		
	e L	Z	14:33:12.2			20.2	287		4.3	
NEUB	e P	Z	14:08:23.5	52.8	121.5	1.0	53	5.4		
BFO	e P	Z	14:08:28.2	53.4	116.1	3.0	333	5.8		
UBBA	e P	Z	14:08:29.2	53.6	119.4	2.5	122	5.5		
RGN	e P	Z	14:08:30.9	53.9	125.2	2.0	493	6.2		
CLZ	e P	Z	14:08:31.7	53.9	120.4	2.8	528	6.1		
TNS	e P	Z	14:08:33.4	54.2	117.5	1.4	32	5.1		
NRDL	e P	Z	14:08:35.1	54.4	120.6	1.4	76	5.5		
BSEG	e P	Z	14:08:38.8	55.0	121.7	2.7	349	5.9		
WLF	e P	Z	14:08:42.0	55.3	114.9	3.0	482	6.0		
BUG	e P	Z	14:08:42.7	55.4	117.1	1.7	87	5.5		
IBBN	e P	Z	14:08:43.6	55.5	118.1	1.9	169	5.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/29	18:44: 7.4	38.628N	94.503E	33.0G	5.1	3.6		SZGRF

Qinghai, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	18:53:39.5	55.6	69.1	1.6	32	5.1		
FBE	e P	Z	18:53:42.3	55.9	68.7	1.3	20	5.0		
CLL	e P	Z	18:53:42.0	56.0	68.8	1.3	21	5.0		
GEC2	e P	Z	18:53:46.1	56.5	67.7	1.6	25	5.0		
TANN	e P	Z	18:53:47.0	56.6	67.9	1.4	16	4.9		
WERD	e P	Z	18:53:47.5	56.7	67.8	1.3	17	4.9		
GUNZ	e P	Z	18:53:47.9	56.7	67.8	1.5	30	5.1		
NEUB	e P	Z	18:53:47.5	56.7	67.9	1.3	31	5.2		

WET	e P	Z	18:53:48.8	56.9	67.4	1.7	29	5.0	
MANZ	e P	Z	18:53:49.8	57.0	67.4	1.7	26	5.0	
ROTZ	e P	Z	18:53:50.3	57.0	67.3	1.4	21	5.0	
MOX	e P	Z	18:53:49.8	57.0	67.5	1.5	26	5.0	
	e L	Z	19:15:53.0			19.9	50		3.6
NRDL	e P	Z	18:53:51.4	57.2	67.7	1.1	23	5.1	
CLZ	e P	Z	18:53:51.9	57.3	67.4	1.4	47	5.3	
RJOB	e P	Z	18:53:53.4	57.5	66.5	2.0	51	5.2	
GRA1	e P	Z	18:53:54.7	57.6	66.7	1.4	44	5.3	
	e L	Z	19:19:44.2			20.5	52		3.6
FUR	e P	Z	18:53:58.7	58.2	65.9	1.4	72	5.5	
IBBN	e P	Z	18:54:01.0	58.6	66.0	2.2	144	5.6	
TNS	e P	Z	18:54:04.3	59.1	65.3	2.3	74	5.3	
BUG	e P	Z	18:54:05.4	59.2	65.3	1.8	88	5.5	
STU	e P	Z	18:54:05.2	59.2	65.0	1.4	28	5.1	
BFO	e P	Z	18:54:09.4	59.9	64.2	1.3	18	4.9	
WLF	e P	Z	18:54:15.6	60.6	63.6	1.3	50	5.2	

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/30 09:19:47.3 14.640N 94.214W 33.0N 5.2 4.8
 Off coast of Chiapas, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 09:32:22.1	85.4	287.3	1.2	41	5.4		
BUG	e P	Z 09:32:22.6	85.6	288.0	1.6	49	5.4		
IBBN	e P	Z 09:32:22.9	85.6	288.3	1.0	39	5.5		
BSEG	e P	Z 09:32:27.3	86.5	290.2	1.1	66	5.7		
TNS	e P	Z 09:32:28.3	86.6	289.0	1.0	49	5.6		
NRDL	e P	Z 09:32:28.9	86.9	290.1	1.4	20	5.1		
BFO	e P	Z 09:32:30.1	87.2	289.0	1.1	12	5.0		
CLZ	e P	Z 09:32:31.0	87.2	290.4	1.4	49	5.4		
UBBA	e P	Z 09:32:31.6	87.4	290.1	2.0	60	5.6		
STU	e P	Z 09:32:32.5	87.6	289.6	0.9	21	5.5		
MOX	e P	Z 09:32:36.1	88.4	291.4	1.2	14	5.1		
	e L	Z 10:12:50.6			19.5	490		4.9	
GRA1	e L	Z 10:12:44.8	88.5	291.1	20.3	302		4.7	
GUNZ	e P	Z 09:32:38.8	88.9	291.9	0.9	6	4.9		
MANZ	e P	Z 09:32:38.9	88.9	291.8	1.1	7	4.8		
CLL	e P	Z 09:32:38.8	89.0	292.4	0.9	7	4.9		
TANN	e P	Z 09:32:39.2	89.0	292.0	1.0	10	5.0		
ROTZ	e P	Z 09:32:39.7	89.1	291.8	1.0	4	4.6		
FBE	e P	Z 09:32:41.0	89.3	292.7	1.1	14	5.1		
BRG	e P	Z 09:32:42.2	89.7	293.2	1.3	21	5.2		
WET	e P	Z 09:32:42.7	89.7	292.4	1.3	20	5.2		
GEC2	e P	Z 09:32:45.1	90.3	293.0	1.1	10	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/30	13:09:55.4	31.711N	131.017E	33.0N	5.3	4.8		SZGRF

Kyushu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
MOX	e L	Z 14:03:33.9	81.9	48.5	18.6	484		4.9	
GRA1	e P	Z 13:22:16.1	82.7	48.1	1.7	31	5.3		
	e L	Z 14:03:59.1			18.3	275		4.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/30								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 14:10:51.7			1.2	13			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/30	14:51:33.4	15.200S	172.600W	10.0G		6.4		NEIC

Samoa Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKP	Z 15:10:59.2	141.2	4.5					
IBBN	e PKP	Z 15:11:04.2	142.9	0.6					
CLZ	e PKP	Z 15:11:05.3	143.3	4.8					
CLL	e PKP	Z 15:11:06.1	143.6	9.1					
BUG	e PKP	Z 15:11:06.5	143.8	359.8					
NEUB	e PKP	Z 15:11:06.8	143.8	7.2					
BRG	e PKP	Z 15:11:06.9	143.9	10.8					
FBE	e PKP	Z 15:11:07.4	144.0	9.8					
UBBA	e PKP	Z 15:11:08.5	144.3	4.3					
MOX	e PKP	Z 15:11:09.1	144.4	7.0					
	e SS	T 15:33:11.8							
	e SSS	T 15:38:50.2							
	e L	Z 16:19:19.4			18.5	7430		6.5	
WERD	e PKP	Z 15:11:09.4	144.5	8.2					
TANN	e PKP	Z 15:11:09.7	144.5	8.4					
GUNZ	e PKP	Z 15:11:10.1	144.6	8.2					
TNS	e PKP	Z 15:11:11.1	145.0	1.8					
MANZ	e PKP	Z 15:11:11.6	145.0	7.9					
ROTZ	e PKP	Z 15:11:12.3	145.2	8.1					
GRA1	e PKP	Z 15:11:12.7	145.4	6.5					
	e SS	T 15:33:20.3							
	e SSS	T 15:38:54.4							
	e L	Z 16:20:24.0			20.0	6955		6.4	
WLF	e PKP	Z 15:11:13.3	145.5	357.9					

WET	e PKP	Z	15:11:13.9	145.8	9.4
GEC2	e PKP	Z	15:11:14.4	146.0	10.9
STU	e PKP	Z	15:11:15.7	146.4	3.1
BFO	e PKP	Z	15:11:16.8	146.9	1.6
FUR	e PKP	Z	15:11:17.1	146.9	6.9
RJOB	e PKP	Z	15:11:17.9	147.2	9.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/30	15:45:56.3	37.520N	142.543E	42.9	5.3			SZGRF

Off east coast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	15:57:59.4	79.6	39.0	1.1	35	5.2		
BSEG	e P	Z	15:58:00.2	79.7	36.6	1.0	56	5.4		
BRG	e P	Z	15:58:05.4	80.8	38.9	0.9	18	5.1		
	e pP	Z	15:58:17.7							
CLL	e P	Z	15:58:05.3	80.8	38.3	0.9	35	5.4		
NRDL	e P	Z	15:58:06.4	80.9	36.4	0.9	16	5.0		
FBE	e P	Z	15:58:06.8	81.0	38.5	0.9	38	5.4		
NEUB	e P	Z	15:58:08.5	81.4	37.4	0.9	34	5.5		
CLZ	e P	Z	15:58:09.1	81.4	36.5	1.0	46	5.6		
	e pP	Z	15:58:21.5							
TANN	e P	Z	15:58:10.5	81.7	37.8	1.9	29	5.1		
	e pP	Z	15:58:22.7							
WERD	e P	Z	15:58:10.7	81.8	37.7	1.0	11	4.9		
GUNZ	e P	Z	15:58:11.1	81.8	37.7	0.9	15	5.1		
	e pP	Z	15:58:23.6							
MOX	e P	Z	15:58:11.2	81.9	37.3	1.5	24	5.1		
IBBN	e P	Z	15:58:11.7	81.9	34.7	0.9	34	5.5		
	e pP	Z	15:58:24.3							
MANZ	e P	Z	15:58:13.0	82.2	37.5	0.9	15	5.2		
ROTZ	e P	Z	15:58:14.3	82.3	37.6	1.5	32	5.3		
GEC2	e P	Z	15:58:14.1	82.5	38.5	1.0	14	5.2		
WET	e P	Z	15:58:15.0	82.6	38.0	1.0	16	5.2		
GRA1	e P	Z	15:58:16.5	82.8	36.9	0.9	32	5.6		
	e pP	Z	15:58:28.5							
BUG	e P	Z	15:58:16.1	82.8	34.2	0.9	14	5.2		
	e pP	Z	15:58:29.1							
TNS	e P	Z	15:58:19.3	83.4	35.0	1.1	14	5.1		
RJOB	e P	Z	15:58:20.9	83.7	37.8	1.0	26	5.4		
FUR	e P	Z	15:58:22.2	84.0	36.8	0.8	48	5.8		
	e pP	Z	15:58:34.7							
STU	e P	Z	15:58:23.8	84.3	35.4	0.9	34	5.6		
	e pP	Z	15:58:36.2							
WLF	e pP	Z	15:58:38.2	84.7	33.3					
BFO	e P	Z	15:58:27.2	85.0	34.8	0.9	30	5.5		
	e pP	Z	15:58:39.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/30								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKPbc	Z 16:00:51.0							
GEC2	e PKPbc	Z 16:00:48.3							
GRA1	e PKPbc	Z 16:00:47.0							
RJOB	e PKPbc	Z 16:00:52.0							
ROTZ	e PKPbc	Z 16:00:46.5							
WET	e PKPbc	Z 16:00:47.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/30	17:15:53.8	37.700N	95.700E	29.0G	5.1	4.8		NEIC
Qinghai, China								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 17:25:37.7	56.9	69.2	1.9	46	5.2		
FBE	e P	Z 17:25:40.3	57.2	68.8	0.9	14	5.0		
CLL	e P	Z 17:25:42.2	57.3	68.8	0.8	12	5.0		
GEC2	e P	Z 17:25:44.4	57.8	67.8	1.3	13	4.8		
BSEG	e P	Z 17:25:44.7	57.9	68.6	0.9	21	5.2		
TANN	e P	Z 17:25:45.1	58.0	68.0	2.2	48	5.1		
WERD	e P	Z 17:25:45.4	58.0	67.9	2.8	91	5.3		
GUNZ	e P	Z 17:25:45.7	58.0	67.9	2.2	63	5.3		
NEUB	e P	Z 17:25:45.8	58.1	68.0	0.9	17	5.1		
WET	e P	Z 17:25:47.3	58.2	67.5	2.3	71	5.3		
MANZ	e P	Z 17:25:47.9	58.3	67.5	2.0	42	5.1		
ROTZ	e P	Z 17:25:48.0	58.3	67.4	1.0	14	4.9		
MOX	e P	Z 17:25:48.1	58.4	67.6	2.0	44	5.1		
	e L	Z 17:52:27.2			18.1	1053		5.0	
NRDL	e P	Z 17:25:49.9	58.5	67.7	1.0	21	5.1		
CLZ	e P	Z 17:25:50.8	58.6	67.5	1.0	25	5.2		
RJOB	e P	Z 17:25:51.9	58.8	66.7	2.0	54	5.2		
GRA1	e P	Z 17:25:52.2	59.0	66.8	0.8	24	5.3		
	e L	Z 17:47:43.9			21.0	555		4.7	
UBBA	e P	Z 17:25:54.3	59.2	66.7	2.0	25	4.9		
FUR	e P	Z 17:25:56.3	59.5	66.0	1.8	106	5.6		
IBBN	e P	Z 17:25:59.9	59.9	66.0	1.2	16	4.9		
TNS	e P	Z 17:26:02.0	60.4	65.4	1.0	5	4.3		
BUG	e P	Z 17:26:04.5	60.5	65.3	0.8	15	4.9		
STU	e P	Z 17:26:03.4	60.5	65.1	0.8	13	4.8		
BFO	e P	Z 17:26:07.8	61.3	64.4	1.8	39	4.9		
WLF	e P	Z 17:26:13.5	62.0	63.7	1.0	21	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/30	17:15:53.8	37.700N	95.700E	29.0G	5.1	4.8		NEIC

Qinghai, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	17:25:37.7	56.9	69.2	1.9	46	5.2		
FBE	e P	Z	17:25:40.3	57.2	68.8	0.9	14	5.0		
CLL	e P	Z	17:25:42.2	57.3	68.8	0.8	12	5.0		
GEC2	e P	Z	17:25:44.4	57.8	67.8	1.3	13	4.8		
BSEG	e P	Z	17:25:44.7	57.9	68.6	0.9	21	5.2		
TANN	e P	Z	17:25:45.1	58.0	68.0	2.2	48	5.1		
WERD	e P	Z	17:25:45.4	58.0	67.9	2.8	91	5.3		
GUNZ	e P	Z	17:25:45.7	58.0	67.9	2.2	63	5.3		
NEUB	e P	Z	17:25:45.8	58.1	68.0	0.9	17	5.1		
WET	e P	Z	17:25:47.3	58.2	67.5	2.3	71	5.3		
MANZ	e P	Z	17:25:47.9	58.3	67.5	2.0	42	5.1		
ROTZ	e P	Z	17:25:48.0	58.3	67.4	1.0	14	4.9		
MOX	e P	Z	17:25:48.1	58.4	67.6	2.0	44	5.1		
	e L	Z	17:52:27.2			18.1	1053		5.0	
NRDL	e P	Z	17:25:49.9	58.5	67.7	1.0	21	5.1		
CLZ	e P	Z	17:25:50.8	58.6	67.5	1.0	25	5.2		
RJOB	e P	Z	17:25:51.9	58.8	66.7	2.0	54	5.2		
GRA1	e P	Z	17:25:52.2	59.0	66.8	0.8	24	5.3		
	e L	Z	17:47:43.9			21.0	555		4.7	
UBBA	e P	Z	17:25:54.3	59.2	66.7	2.0	25	4.9		
FUR	e P	Z	17:25:56.3	59.5	66.0	1.8	106	5.6		
IBBN	e P	Z	17:25:59.9	59.9	66.0	1.2	16	4.9		
TNS	e P	Z	17:26:02.0	60.4	65.4	1.0	5	4.3		
BUG	e P	Z	17:26:04.5	60.5	65.3	0.8	15	4.9		
STU	e P	Z	17:26:03.4	60.5	65.1	0.8	13	4.8		
BFO	e P	Z	17:26:07.8	61.3	64.4	1.8	39	4.9		
WLF	e P	Z	17:26:13.5	62.0	63.7	1.0	21	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/30	19:27:45.4	24.132N	95.182E	83.7	5.5			SZGRF

Myanmar

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	19:38:21.8	65.9	81.7	1.2	200	6.2		
RUE	e P	Z	19:38:21.9	66.0	81.1	1.6	108	5.8		
	e pP	Z	19:38:43.1			1.4	64			
BRG	e P	Z	19:38:23.3	66.1	80.5	1.4	43	5.5		
	e pP	Z	19:38:44.3			1.1	26			
FBE	e P	Z	19:38:25.7	66.5	80.1	1.3	60	5.7		
	e pP	Z	19:38:46.8			1.4	78			

GEC2	e P	Z	19:38:26.6	66.6	79.5	1.1	34	5.5
	e pP	Z	19:38:48.1			1.3	46	
CLL	e P	Z	19:38:26.0	66.6	80.0	1.3	31	5.4
	e pP	Z	19:38:47.7			1.5	29	
WET	e P	Z	19:38:29.6	67.1	79.0	1.2	26	5.3
	e pP	Z	19:38:51.0			1.2	31	
TANN	e P	Z	19:38:29.6	67.1	79.3	1.4	32	5.4
	e pP	Z	19:38:50.9			1.2	27	
WERD	e P	Z	19:38:30.1	67.2	79.2	1.3	26	5.3
	e pP	Z	19:38:51.2			1.1	28	
GUNZ	e P	Z	19:38:30.4	67.2	79.2	1.2	34	5.4
	e pP	Z	19:38:51.8			1.2	42	
NEUB	e P	Z	19:38:31.3	67.4	79.1	1.2	50	5.6
	e pP	Z	19:38:53.0			1.0	44	
ROTZ	e P	Z	19:38:32.1	67.4	78.8	1.2	51	5.6
	e pP	Z	19:38:53.4			1.1	54	
RJOB	e P	Z	19:38:31.6	67.4	78.4	1.1	17	5.2
	e pP	Z	19:38:53.2			1.2	22	
MANZ	e P	Z	19:38:32.0	67.4	78.8	1.4	40	5.5
MOX	e P	Z	19:38:32.8	67.6	78.8	1.2	24	5.3
	e pP	Z	19:38:54.5			1.4	40	
BSEG	e P	Z	19:38:34.0	67.8	79.1	1.1	98	6.0
	e pP	Z	19:38:55.2			0.9	64	
GRA1	e P	Z	19:38:36.0	68.0	78.1	1.5	58	5.6
	e pP	Z	19:38:57.5			1.5	87	
CLZ	e P	Z	19:38:36.1	68.1	78.3	1.2	72	5.8
	e pP	Z	19:38:57.9			1.1	70	
NRDL	e P	Z	19:38:36.4	68.2	78.4	1.3	74	5.7
	e pP	Z	19:38:57.9			1.4	89	
FUR	e P	Z	19:38:37.6	68.3	77.5	1.2	44	5.6
	e pP	Z	19:38:59.3			1.3	67	
UBBA	e P	Z	19:38:38.7	68.6	77.7	1.6	36	5.3
	e pP	Z	19:39:00.2			1.7	42	
STU	e P	Z	19:38:45.1	69.5	76.3	1.2	44	5.5
	e pP	Z	19:39:06.7			1.1	56	
IBBN	e P	Z	19:38:45.2	69.6	76.6	1.5	67	5.5
	e pP	Z	19:39:06.9			1.8	100	
TNS	e P	Z	19:38:45.8	69.7	76.3	1.0	19	5.2
	e pP	Z	19:39:07.5			0.9	19	
BUG	e P	Z	19:38:48.4	70.1	75.9	1.2	36	5.4
	e pP	Z	19:39:10.2			1.1	26	
BFO	e P	Z	19:38:48.6	70.2	75.6	1.5	25	5.1
	e pP	Z	19:39:10.5			2.1	54	
WLF	e P	Z	19:38:56.0	71.2	74.5			
	e pP	Z	19:39:17.5			1.1	79	

2009/08/30

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:47:23.4							
	e L	Z 20:24:44.6			18.8	335			
MOX	e L	Z 20:24:13.6			18.5	354			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/30								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z 22:24:31.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/31								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 02:12:46.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/31	04:03:21.3	48.300N	153.100E	138.0G	4.8			NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e P	Z 04:14:45.8	74.4	24.6	1.3	10	4.7		
CLL	e P	Z 04:14:47.4	74.7	26.3	1.0	11	4.9		
BRG	e P	Z 04:14:48.2	74.8	26.8	1.4	8	4.5		
CLZ	e P	Z 04:14:49.3	74.9	24.7	1.4	26	5.1		
TANN	e P	Z 04:14:53.2	75.7	25.8	1.1	3	4.4		
MOX	e P	Z 04:14:53.4	75.7	25.3	1.0	5	4.6		
BUG	e P	Z 04:14:55.7	76.1	22.6	1.2	16	5.0		
ROTZ	e P	Z 04:14:57.2	76.3	25.6	1.2	10	4.8		
GRA1	e P	Z 04:14:59.3	76.7	25.0	0.8	16	5.2		
WET	e P	Z 04:14:59.3	76.7	25.9	1.0	8	4.8		
GEC2	e P	Z 04:14:59.2	76.7	26.4	1.0	4	4.5		
TNS	e P	Z 04:15:00.5	76.9	23.3	0.7	5	4.8		
RJOB	e P	Z 04:15:06.8	78.0	25.7	0.7	5	4.7		
BFO	e P	Z 04:15:10.1	78.7	23.0	0.9	6	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/31	06:25:39.1	44.080N	11.954E	10.0G			3.4	SZGRF

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
OBER	e Pn	Z	06:26:33.6	3.5	160.2					3.5
	e Sn	N	06:27:12.1							
RJOB	e Pn	Z	06:26:35.2	3.7	189.4					3.4
	e Sn	N	06:27:17.4							
GEC2	e Pn	Z	06:26:50.3	4.9	194.8					3.3
	e Pg	Z	06:27:10.8							
	e Sn	N	06:27:44.0							
BFO	e Pn	Z	06:26:51.7	4.9	148.1					
	e Pg	Z	06:27:12.8							
	e Sn	N	06:27:41.8							
WET	e Sn	N	06:27:47.2	5.1	187.5					
MOX	e Pn	Z	06:27:12.8	6.6	177.9					
	e Sn	N	06:28:21.1							
TNS	e Pn	Z	06:27:14.3	6.6	157.5					
	e Sn	N	06:28:23.7							

Date Origin Time Lat Long Depth mb Ms ML Source
 2009/08/31 10:15:35.2 37.499N 95.989E 33.0G 6.0 5.6 ML SZGRF
 Qinghai, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	10:25:12.9	56.3	71.0	1.2	421	6.3		
RUE	e P	Z	10:25:15.5	56.7	70.0	0.8	186	6.1		
BRG	e P	Z	10:25:18.9	57.2	69.2	1.2	165	5.9		
FBE	e P	Z	10:25:21.6	57.5	68.8	1.2	198	6.0		
CLL	e P	Z	10:25:21.3	57.6	68.8	1.1	149	5.9		
GEC2	e P	Z	10:25:25.6	58.1	67.8	1.2	118	5.8		
BSEG	e P	Z	10:25:26.2	58.2	68.6	1.1	278	6.2		
TANN	e P	Z	10:25:26.4	58.3	68.0	1.2	128	5.8		
WERD	e P	Z	10:25:26.9	58.3	67.9	1.2	110	5.8		
NEUB	e P	Z	10:25:26.9	58.4	68.0	1.1	214	6.1		
WET	e P	Z	10:25:28.3	58.5	67.5	1.7	262	6.0		
MANZ	e P	Z	10:25:29.2	58.6	67.5	1.7	208	5.9		
ROTZ	e P	Z	10:25:29.6	58.7	67.4	1.2	208	6.0		
MOX	e P	Z	10:25:29.2	58.7	67.6	1.2	137	5.9		
	e S	T	10:33:36.4							
	e L	E	10:48:17.2							
NRDL	e P	Z	10:25:30.7	58.8	67.6	1.2	345	6.3		
	e P	Z	10:25:32.8							
RJOB	e P	Z	10:25:32.8	59.1	66.7	1.7	290	6.0		
	e P	Z	10:25:33.9							
	e S	T	10:33:46.6							
GRA1	e P	Z	10:25:33.9	59.3	66.8	1.1	295	6.2		
	e L	E	10:52:17.6							
UBBA	e P	Z	10:25:35.2	59.5	66.7	1.6	162	5.8		
	e P	Z	10:25:38.0							
FUR	e P	Z	10:25:38.0	59.8	66.0	1.1	411	6.4		
IBBN	e P	Z	10:25:40.0	60.2	66.0	1.6	309	6.1		

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Thu Apr 23 08:38:25 2020

81

TNS	e P	Z	10:25:43.3	60.7	65.4	1.7	219	5.7
BUG	e P	Z	10:25:44.4	60.9	65.3	1.2	206	5.8
STU	e P	Z	10:25:44.2	60.9	65.1	1.0	154	5.8
BFO	e P	Z	10:25:48.8	61.6	64.4	1.2	162	6.1
WLF	e P	Z	10:25:54.4	62.3	63.7	1.0	257	6.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/31								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:53:16.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/31	21:51:45.5	37.658N	95.269E	33.0G	5.2	4.4		SZGRF
Qinghai, China								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 22:01:22.3	56.2	70.4	1.5	44	5.3		
BRG	e P	Z 22:01:25.6	56.7	69.5	1.4	36	5.2		
FBE	e P	Z 22:01:28.4	57.0	69.1	1.4	39	5.2		
CLL	e P	Z 22:01:28.1	57.1	69.2	1.4	32	5.2		
GEC2	e P	Z 22:01:32.0	57.6	68.1	1.5	28	5.1		
BSEG	e P	Z 22:01:32.9	57.7	69.0	1.3	64	5.5		
TANN	e P	Z 22:01:33.0	57.7	68.3	1.5	35	5.2		
WERD	e P	Z 22:01:33.5	57.8	68.2	1.4	24	5.0		
NEUB	e P	Z 22:01:33.5	57.8	68.3	1.3	36	5.2		
WET	e P	Z 22:01:34.9	57.9	67.8	1.5	26	5.1		
MANZ	e P	Z 22:01:35.7	58.1	67.8	1.4	21	5.0		
ROTZ	e P	Z 22:01:36.3	58.1	67.7	1.4	38	5.2		
MOX	e P	Z 22:01:35.7	58.1	67.9	1.3	22	5.0		
	e L	Z 22:27:45.8			19.4	206		4.3	
NRDL	e P	Z 22:01:37.3	58.3	68.0	1.3	51	5.4		
CLZ	e P	Z 22:01:38.0	58.4	67.8	1.4	69	5.5		
RJOB	e P	Z 22:01:39.1	58.5	66.9	2.0	69	5.3		
GRA1	e P	Z 22:01:40.5	58.7	67.1	1.6	73	5.5		
	e L	Z 22:27:57.0			18.2	356		4.5	
FUR	e P	Z 22:01:44.6	59.3	66.3	1.6	114	5.7		
TNS	e P	Z 22:01:49.8	60.2	65.7	1.4	21	5.0		
STU	e P	Z 22:01:51.1	60.3	65.4	1.5	42	5.0		
BUG	e P	Z 22:01:51.0	60.3	65.6	1.2	28	5.0		
BFO	e P	Z 22:01:55.5	61.0	64.6	1.5	33	4.9		
WLF	e P	Z 22:02:01.2	61.7	64.0	1.2	47	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/31	22:28:3.2	38.008N	94.760E	33.0N	5.0	4.2		SZGRF

Qinghai, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	22:37:39.9	56.1	69.5	1.2	16	4.9		
FBE	e P	Z	22:37:42.0	56.5	69.1	1.3	22	5.0		
CLL	e P	Z	22:37:41.8	56.5	69.2	1.1	14	4.9		
GEC2	e P	Z	22:37:46.1	57.0	68.1	1.2	11	4.7		
BSEG	e P	Z	22:37:46.4	57.1	69.0	1.0	20	5.1		
TANN	e P	Z	22:37:46.8	57.2	68.3	1.2	11	4.8		
WERD	e P	Z	22:37:47.5	57.3	68.2	1.8	21	4.9		
NEUB	e P	Z	22:37:47.3	57.3	68.3	1.3	28	5.1		
WET	e P	Z	22:37:48.2	57.4	67.8	1.5	16	4.8		
MANZ	e P	Z	22:37:49.9	57.6	67.8	1.4	13	4.8		
ROTZ	e P	Z	22:37:50.2	57.6	67.7	1.2	18	5.0		
MOX	e P	Z	22:37:49.7	57.6	67.9	1.3	16	4.9		
	e L	Z	23:03:53.7			19.0	148		4.1	
NRDL	e P	Z	22:37:51.4	57.8	68.0	1.1	28	5.2		
CLZ	e P	Z	22:37:52.0	57.9	67.8	1.1	29	5.2		
RJOB	e P	Z	22:37:52.9	58.0	66.9	1.3	14	4.8		
GRA1	e P	Z	22:37:54.5	58.2	67.1	1.1	26	5.2		
	e L	Z	23:04:24.2			19.4	202		4.3	
UBBA	e P	Z	22:37:55.6	58.5	67.0	1.6	12	4.7		
FUR	e P	Z	22:37:59.0	58.8	66.3	1.4	53	5.4		
TNS	e P	Z	22:38:04.3	59.6	65.7	1.1	10	4.7		
STU	e P	Z	22:38:04.8	59.8	65.4	0.9	14	5.0		
BUG	e P	Z	22:38:05.4	59.8	65.6	1.6	32	5.1		
BFO	e P	Z	22:38:09.6	60.5	64.6	1.4	21	4.8		
WLF	e P	Z	22:38:15.2	61.2	64.0	1.2	24	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2009/08/31								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKPbc	Z	23:42:24.6							
BRG	e PKPbc	Z	23:42:16.8							
BSEG	e PKPbc	Z	23:42:10.5							
BUG	e PKPbc	Z	23:42:17.6							
CLL	e PKPbc	Z	23:42:16.1							
GEC2	e PKPbc	Z	23:42:21.6							
GRA1	e PKPbc	Z	23:42:20.8							
MOX	e PKPbc	Z	23:42:18.2							
NRDL	e PKPbc	Z	23:42:14.6							
ROTZ	e PKPbc	Z	23:42:20.3							
TANN	e PKPbc	Z	23:42:18.4							
TNS	e PKPbc	Z	23:42:20.9							

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 Gräfenberg-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

