

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

(produced by SZGRF/BGR - HANNOVER)

September 2010 UPDATED 04.MAY.2011

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
2010/09/01								
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb MS ML
	BRG	e PKP	Z 01:27:21.8					
	CLL	e PKP	Z 01:27:21.4					
	CLZ	e PKP	Z 01:27:21.9					
	FBE	e PKP	Z 01:27:22.3					
	MOX	e PKP	Z 01:27:23.7					
	ROHR	e PKP	Z 01:27:24.5					
	SCHD	e PKP	Z 01:27:24.1					
	TANN	e PKP	Z 01:27:23.5					
	TAUT	e PKP	Z 01:27:22.9					
	WIMM	e PKP	Z 01:27:21.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/01	19:35:40.8	15.320S	173.390W	10.0				GFZ
Tonga Islands								
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb MS ML
	GRA1	e PKP	Z 19:55:19.1	145.4	7.9			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/01	21:37:15.2	17.630S	178.410W	536.3				NEIC
Fiji Islands region								
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb MS ML

./2010/bul1009.txt

Thu Apr 23 08:38:25 2020

2

GRA1 e PKP Z 21:55:57.7 147.0 17.0

Date Origin Time Lat Long Depth mb Ms ML Source  
2010/09/02 00:16:45.2 12.590N 93.270E 33.0G 4.8  
Andaman Islands, India, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 00:28:15.7	73.6	90.2	0.9	8	4.8		
RUE	e P	Z 00:28:16.3	73.7	90.5	1.0	36	5.3		
GEC2	e P	Z 00:28:16.6	73.7	89.4	0.9	11	4.9		
FBE	e P	Z 00:28:18.2	73.9	89.7	0.8	12	5.0		
CLL	e P	Z 00:28:18.8	74.1	89.6	0.9	5	4.6		
WET	e P	Z 00:28:19.7	74.3	88.8	0.9	7	4.7		
RJOB	e P	Z 00:28:20.4	74.3	88.4	0.8	6	4.7		
TANN	e P	Z 00:28:21.2	74.5	88.9	1.0	6	4.6		
WERN	e P	Z 00:28:21.7	74.6	88.8	0.8	4	4.5		
GUNZ	e P	Z 00:28:21.8	74.6	88.8	0.8	5	4.6		
WERD	e P	Z 00:28:21.7	74.6	88.8	0.9	6	4.6		
ROTZ	e P	Z 00:28:22.8	74.7	88.5	1.0	10	4.8		
PLN	e P	Z 00:28:22.3	74.7	88.7	0.9	5	4.6		
MANZ	e P	Z 00:28:23.0	74.7	88.5	0.9	7	4.7		
NEUB	e P	Z 00:28:23.4	74.9	88.6	0.9	7	4.7		
MOX	e P	Z 00:28:24.3	75.0	88.3	0.8	5	4.6		
GRA1	e P	Z 00:28:26.2	75.3	87.7	1.0	9	4.8		
BSEG	e P	Z 00:28:28.7	75.7	88.1	0.9	13	5.1		
CLZ	e P	Z 00:28:28.6	75.8	87.6	0.9	11	5.0		
TNS	e P	Z 00:28:35.9	77.1	85.8	1.0	8	4.8		
BFO	e P	Z 00:28:36.6	77.3	85.3	1.0	3	4.4		
IBBN	e P	Z 00:28:37.7	77.3	85.7	1.1	26	5.3		
BUG	e P	Z 00:28:39.6	77.7	85.1	0.8	8	4.9		

Date Origin Time Lat Long Depth mb Ms ML Source  
2010/09/03 02:29:11.0 6.120S 149.950E 47.7  
New Britain, Papua New Guinea, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPdf	Z 02:47:59.0	121.4	53.8					
BSEG	e PKPdf	Z 02:48:00.6	122.2	49.5					
BRG	e PKPdf	Z 02:48:00.6	122.3	54.8					
CLL	e PKPdf	Z 02:48:00.8	122.5	53.6					
FBE	e PKPdf	Z 02:48:01.4	122.6	54.2					
NEUB	e PKPdf	Z 02:48:02.3	123.2	52.4					
TANN	e PKPdf	Z 02:48:02.6	123.3	53.5					
WERD	e PKPdf	Z 02:48:02.7	123.4	53.3					
GUNZ	e PKPdf	Z 02:48:03.0	123.4	53.4					

PLN	e	PKPdf	Z	02:48:02.8	123.4	53.2
WERN	e	PKPdf	Z	02:48:03.0	123.4	53.5
CLZ	e	PKPdf	Z	02:48:03.3	123.5	50.6
GEC2	e	PKPdf	Z	02:48:03.0	123.6	55.6
MOX	e	PKPdf	Z	02:48:03.2	123.6	52.5
MANZ	e	PKPdf	Z	02:48:03.6	123.8	53.4
ROTZ	e	PKPdf	Z	02:48:03.6	123.8	53.6
WET	e	PKPdf	Z	02:48:03.7	123.8	54.6
GRA1	e	PKPdf	Z	02:48:04.6	124.4	52.6
RJOB	e	PKPdf	Z	02:48:04.8	124.7	55.3
BUG	e	PKPdf	Z	02:48:06.1	125.2	47.5
FUR	e	PKPdf	Z	02:48:06.4	125.3	53.5
BFO	e	PKPdf	Z	02:48:08.8	126.7	50.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/03	04:19:14.9	14.020S	65.910E	10.0	5.0			NEIC

Mid-Indian Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	04:31:18.9	79.1	128.9	2.4	87	5.4		
MANZ	e P	Z	04:31:20.4	79.5	127.2	1.6	16	4.8		
WERN	e P	Z	04:31:21.3	79.5	127.5	1.2	20	5.0		
TANN	e P	Z	04:31:21.6	79.5	127.6	1.5	16	4.8		
GUNZ	e P	Z	04:31:21.6	79.6	127.5	1.4	30	5.1		
WERD	e P	Z	04:31:21.8	79.6	127.4	1.8	25	4.9		
PLN	e P	Z	04:31:22.5	79.7	127.3	2.2	45	5.0		
GRA1	e P	Z	04:31:21.7	79.7	126.4	1.6	46	5.2		
CLL	e P	Z	04:31:22.8	79.8	128.2	1.5	20	4.8		
MOX	e P	Z	04:31:24.4	80.1	126.9	2.0	31	4.9		
NEUB	e P	Z	04:31:26.0	80.4	127.1	1.2	25	5.0		
BFO	e P	Z	04:31:25.2	80.5	123.9	1.4	14	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/03	11:16:10.4	52.086N	177.073W	33.0G	5.5	6.2		SZGRF

Andreanof Islands, Aleutian Islands, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	11:27:42.0	73.8	4.7	1.1	77	5.6		
IBBN	e P	Z	11:27:51.9	75.5	3.1	1.1	129	6.0		
CLZ	e P	Z	11:27:54.1	75.9	4.7	1.1	93	5.8		
CLL	e P	Z	11:27:55.3	76.3	6.4	1.3	46	5.4		
BUG	e P	Z	11:27:56.3	76.4	2.7	1.2	70	5.6		
NEUB	e P	Z	11:27:56.8	76.4	5.6	1.1	108	5.9		
FBE	e P	Z	11:27:58.0	76.6	6.6	1.0	48	5.6		
BRG	e P	Z	11:27:57.6	76.6	6.9	1.2	47	5.5		

UBBA	e P	Z	11:27:59.2	76.9	4.5	1.5	41	5.3	
MOX	e P	Z	11:28:00.0	77.0	5.5	1.2	44	5.5	
	e L	Z	12:04:55.0			21.7	8402		6.0
PLN	e P	Z	11:28:00.6	77.1	5.8	1.2	38	5.4	
WERD	e P	Z	11:28:00.8	77.2	5.9	1.2	28	5.3	
TANN	e P	Z	11:28:01.0	77.2	6.0	1.1	27	5.3	
GUNZ	e P	Z	11:28:01.4	77.2	5.9	1.2	38	5.4	
WERN	e P	Z	11:28:01.9	77.3	5.9	1.2	64	5.6	
MANZ	e P	Z	11:28:03.3	77.6	5.8	1.1	24	5.2	
ROTZ	e P	Z	11:28:04.9	77.8	5.8	1.1	31	5.3	
GRA1	e P	Z	11:28:05.8	78.0	5.2	1.3	113	5.8	
	e L	Z	12:02:13.8			21.9	14458		6.3
WLF	e P	Z	11:28:06.7	78.2	2.0	0.9	55	5.6	
WET	e P	Z	11:28:07.9	78.4	6.2	1.1	22	5.1	
GEC2	e P	Z	11:28:09.0	78.7	6.7	1.2	28	5.2	
STU	e P	Z	11:28:10.7	79.0	3.9	1.1	46	5.4	
BFO	e P	Z	11:28:13.2	79.5	3.4	1.1	31	5.1	
RJOB	e P	Z	11:28:15.4	79.8	6.1	1.1	23	5.0	

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/03 16:35:44.5 43.330S 172.430E 16.1 7.4 NEIC  
 South Island, New Zealand

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e PKPab	Z 16:56:37.1	162.4	59.0					
RUE	e PKPab	Z 16:56:40.6	163.1	65.7					
BRG	e PKPdf	Z 16:55:49.0	163.6	71.0					
	e PKPab	Z 16:56:42.8							
FBE	e PKPdf	Z 16:55:49.6	163.9	69.9					
	e PKPab	Z 16:56:44.6							
CLL	e PKPdf	Z 16:55:49.1	164.0	68.1					
	e PKPab	Z 16:56:44.4							
BSEG	e PKPdf	Z 16:55:49.7	164.2	55.1					
	e PKPab	Z 16:56:45.2							
GEC2	e PKPdf	Z 16:55:49.5	164.3	77.4					
	e PKPab	Z 16:56:45.6							
TANN	e PKPdf	Z 16:55:49.5	164.6	70.3					
	e PKPab	Z 16:56:47.5							
WERD	e PKPdf	Z 16:55:49.7	164.7	69.9					
	e PKPab	Z 16:56:47.7							
WERN	e PKPdf	Z 16:55:50.0	164.7	70.6					
	e PKPab	Z 16:56:47.9							
GUNZ	e PKPdf	Z 16:55:50.2	164.7	70.2					
	e PKPab	Z 16:56:47.9							
NEUB	e PKPdf	Z 16:55:50.0	164.8	66.4					
	e PKPab	Z 16:56:47.8							
WET	e PKPdf	Z 16:55:50.0	164.8	75.3					

	e PKPab	Z	16:56:47.9							
PLN	e PKPdf	Z	16:55:50.2	164.8	69.5					
	e PKPab	Z	16:56:48.4							
MANZ	e PKPdf	Z	16:55:49.8	165.0	71.2					
	e PKPab	Z	16:56:49.2							
ROTZ	e PKPdf	Z	16:55:50.0	165.0	72.1					
	e PKPab	Z	16:56:49.3							
MOX	e PKPdf	Z	16:55:50.1	165.1	68.1					
	e PKPab	Z	16:56:49.3							
	e L	Z	18:16:58.9			21.2	52139		7.4	
RJOB	e PKPdf	Z	16:55:50.2	165.1	80.3					
CLZ	e PKPdf	Z	16:55:50.5	165.3	61.8					
GRA1	e PKPdf	Z	16:55:50.7	165.6	70.9					
	e PKPab	Z	16:56:51.8							
	e L	Z	18:20:36.7			19.6	63272		7.5	
UBBA	e PKPdf	Z	16:55:51.0	165.9	64.7					
	e PKPab	Z	16:56:52.9							
FUR	e PKPdf	Z	16:55:50.8	166.0	76.8					
IBBN	e PKPdf	Z	16:55:51.3	166.4	54.8					
BUG	e PKPdf	Z	16:55:52.1	167.1	56.8					
STU	e PKPdf	Z	16:55:51.9	167.2	71.2					
BFO	e PKPdf	Z	16:55:52.3	167.9	71.6					
	e PKPab	Z	16:57:00.9							
WLF	e PKPdf	Z	16:55:53.9	168.7	61.3					
	e PKPab	Z	16:57:05.7							

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/03 17:06:38.7 5.510S 104.190E 74.6 5.6 SZGRF  
 Southern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	17:19:50.3	94.4	93.3	0.9	28	5.6		
	e pP	Z	17:20:10.9							
GEC2	e P	Z	17:19:50.5	94.5	93.3	2.2	167	6.0		
	e pP	Z	17:20:11.0							
FBE	e P	Z	17:19:52.1	94.8	92.8	1.0	28	5.7		
	e pP	Z	17:20:12.7							
WET	e P	Z	17:19:52.9	95.0	92.6	1.0	29	5.7		
	e pP	Z	17:20:13.6							
CLL	e P	Z	17:19:52.6	95.0	92.5	1.1	18	5.4		
	e pP	Z	17:20:13.0							
TANN	e P	Z	17:19:54.3	95.3	92.2	0.9	9	5.2		
	e pP	Z	17:20:14.9							
WERN	e P	Z	17:19:54.8	95.4	92.1	0.9	12	5.3		
	e pP	Z	17:20:15.0							
GUNZ	e P	Z	17:19:55.0	95.4	92.1	0.9	15	5.4		
	e pP	Z	17:20:15.2							

WERD	e P	Z	17:19:54.8	95.4	92.1	0.9	14	5.4
	e pP	Z	17:20:15.1					
ROTZ	e P	Z	17:19:55.3	95.5	92.1	1.0	19	5.5
PLN	e P	Z	17:19:55.2	95.5	91.9	0.9	12	5.4
MANZ	e P	Z	17:19:55.7	95.6	92.0	1.0	24	5.7
NEUB	e P	Z	17:19:56.3	95.8	91.6	1.0	42	5.9
MOX	e P	Z	17:19:56.9	95.9	91.5	1.0	12	5.4
FUR	e P	Z	17:19:57.1	96.0	91.5	0.9	22	5.7
GRA1	e P	Z	17:19:58.1	96.1	91.3	0.9	24	5.7
CLZ	e P	Z	17:20:00.5	96.7	90.4	1.0	16	5.6
BSEG	e P	Z	17:20:00.8	96.7	90.1	1.1	22	5.7
TNS	e P	Z	17:20:06.0	97.9	89.1	0.9	24	5.9
BFO	e P	Z	17:20:05.7	98.0	89.3	1.1	7	5.3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/03	21:15:34.4	43.910N	145.840E	55.7	5.1			SZGRF
Hokkaido, Japan, region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	21:27:12.4	75.0	31.5	0.8	27	5.3		
CLL	e P	Z	21:27:19.3	76.4	32.9	0.8	32	5.5		
BRG	e P	Z	21:27:19.7	76.4	33.5	1.1	13	5.0		
FBE	e P	Z	21:27:20.9	76.6	33.1	0.8	20	5.3		
CLZ	e P	Z	21:27:22.4	76.8	31.3	0.8	20	5.3		
NEUB	e P	Z	21:27:22.3	76.9	32.1	0.9	26	5.4		
IBBN	e P	Z	21:27:24.4	77.2	29.6	0.6	22	5.4		
TANN	e pP	Z	21:27:40.5	77.3	32.5					
WERD	e P	Z	21:27:25.0	77.4	32.4	0.9	6	4.8		
	e pP	Z	21:27:40.7							
PLN	e P	Z	21:27:25.1	77.4	32.3	0.9	7	4.8		
	e pP	Z	21:27:40.7							
GUNZ	e P	Z	21:27:25.4	77.4	32.4	0.8	8	4.9		
	e pP	Z	21:27:41.2							
MOX	e P	Z	21:27:25.4	77.4	31.9	0.9	10	4.9		
	e pP	Z	21:27:41.1							
WERN	e P	Z	21:27:25.8	77.5	32.4	0.7	11	5.1		
	e pP	Z	21:27:41.4							
MANZ	e P	Z	21:27:27.6	77.8	32.2	0.9	7	4.8		
ROTZ	e P	Z	21:27:28.8	78.0	32.2	1.1	14	5.0		
BUG	e P	Z	21:27:29.3	78.1	29.2	0.9	15	5.2		
GEC2	e P	Z	21:27:29.7	78.2	33.1	0.9	7	4.7		
WET	e P	Z	21:27:30.4	78.3	32.6	1.0	19	5.1		
GRA1	e P	Z	21:27:31.1	78.4	31.6	0.9	24	5.2		
RJOB	e P	Z	21:27:37.0	79.5	32.4	0.9	15	4.9		
FUR	e P	Z	21:27:37.7	79.7	31.4	0.9	20	5.1		
STU	e P	Z	21:27:38.4	79.8	30.2	0.8	16	5.0		
BFO	e P	Z	21:27:42.0	80.5	29.6	2.1	54	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/04	01:26:24.9	54.586N	167.440W	33.0N	4.7			SZGRF
Fox Islands, Aleutian Islands, United States								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e P	Z	01:37:55.1	73.6	358.7	0.9	9	4.8		
NEUB	e P	Z	01:37:58.4	74.2	359.5	1.7	33	5.1		
FBE	e P	Z	01:38:00.4	74.5	0.5	1.1	8	4.7		
BRG	e P	Z	01:38:00.2	74.5	0.8	0.9	5	4.5		
MOX	e P	Z	01:38:01.7	74.8	359.4	0.8	9	4.8		
WERD	e P	Z	01:38:02.9	75.0	359.8	1.3	4	4.3		
WERN	e P	Z	01:38:04.0	75.1	359.9	0.9	5	4.5		
WLF	e P	Z	01:38:06.7	75.6	356.2	1.3	13	4.9		
ROTZ	e P	Z	01:38:07.2	75.6	359.8	1.1	5	4.5		
GRA1	e P	Z	01:38:07.5	75.7	359.2	1.2	15	5.0		
WET	e P	Z	01:38:10.5	76.3	0.2	1.3	6	4.5		
GEC2	e P	Z	01:38:12.0	76.6	0.7	0.9	5	4.7		
BFO	e P	Z	01:38:14.3	77.0	357.5	1.1	5	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/04	08:52: 3.3	16.423S	173.022W	33.0G				SZGRF
Tonga Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z	09:11:33.1	144.1	1.3					
CLZ	e PKPbc	Z	09:11:34.3	144.5	5.6					
CLL	e PKPbc	Z	09:11:34.6	144.8	10.1					
BUG	e PKPbc	Z	09:11:35.8	145.0	0.5					
NEUB	e PKPbc	Z	09:11:35.7	145.0	8.0					
BRG	e PKPbc	Z	09:11:35.9	145.1	11.7					
FBE	e PKPbc	Z	09:11:36.3	145.1	10.7					
UBBA	e PKPbc	Z	09:11:37.4	145.5	5.1					
MOX	e PKPbc	Z	09:11:37.6	145.6	7.9					
PLN	e PKPbc	Z	09:11:38.2	145.7	8.8					
WERD	e PKPbc	Z	09:11:38.0	145.7	9.1					
TANN	e PKPbc	Z	09:11:38.2	145.7	9.4					
GUNZ	e PKPbc	Z	09:11:38.5	145.8	9.2					
WERN	e PKPbc	Z	09:11:38.7	145.9	9.3					
MANZ	e PKPbc	Z	09:11:39.6	146.2	8.9					
ROTZ	e PKPbc	Z	09:11:40.4	146.4	9.1					
GRA1	e PKPbc	Z	09:11:40.8	146.6	7.4					
WLF	e PKPbc	Z	09:11:41.7	146.8	358.6					
WET	e PKPbc	Z	09:11:41.6	146.9	10.4					
GEC2	e PKPbc	Z	09:11:41.9	147.1	11.9					

STU	e	PKPbc	Z	09:11:43.6	147.6	4.0
FUR	e	PKPbc	Z	09:11:44.5	148.1	7.8
BFO	e	PKPbc	Z	09:11:44.6	148.1	2.5
RJOB	e	PKPbc	Z	09:11:45.0	148.3	10.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/04	11:30: 4.0	14.460S	76.010W	34.7				NEIC
Near coast of Peru								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pdiff	Z 11:43:42.8	99.2	258.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/04	23:00: 2.9	38.020S	49.020E	16.1	5.0			NEIC
Southwest Indian Ridge								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:13:17.8	93.8	151.1	1.2	10	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/05	20:06: 3.9	23.080S	177.950W	33.0		4.8		SZGRF
South of Fiji Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 20:25:47.4	148.5	14.7					
RUE	e PKPbc	Z 20:25:49.2	149.3	21.5					
IBBN	e PKPbc	Z 20:25:52.4	150.4	10.7					
CLL	e PKPbc	Z 20:25:52.3	150.5	20.8					
CLZ	e PKPbc	Z 20:25:52.8	150.5	15.7					
BRG	e PKPbc	Z 20:25:53.0	150.7	22.8					
FBE	e PKPbc	Z 20:25:53.5	150.8	21.7					
NEUB	e PKPbc	Z 20:25:53.3	150.9	18.6					
BUG	e PKPbc	Z 20:25:54.3	151.4	10.1					
MOX	e PKPbc	Z 20:25:54.6	151.4	18.7					
	e L	Z 21:46:15.4			22.0	174		4.8	
TANN	e PKPbc	Z 20:25:54.8	151.5	20.4					
PLN	e PKPbc	Z 20:25:54.7	151.5	19.8					
	e PKPab	Z 20:26:02.9							
WERD	e PKPbc	Z 20:25:54.7	151.5	20.1					
UBBA	e PKPbc	Z 20:25:54.7	151.6	15.5					
WERN	e PKPbc	Z 20:25:55.4	151.6	20.3					
	e PKPab	Z 20:26:03.8							
MANZ	e PKPbc	Z 20:25:56.0	152.0	20.0					

./2010/bul1009.txt

Thu Apr 23 08:38:25 2020

9

ROTZ	e	PKPbc	Z	20:25:56.4	152.1	20.3				
TNS	e	PKPbc	Z	20:25:57.0	152.4	12.8				
GRA1	e	PKPbc	Z	20:25:57.0	152.4	18.5				
	e	PKPab	Z	20:26:07.3						
	e	L	Z	21:45:18.5			22.0	156	4.8	
WET	e	PKPbc	Z	20:25:57.3	152.6	22.0				
	e	PKPab	Z	20:26:07.9						
GEC2	e	PKPbc	Z	20:25:57.2	152.6	23.8				
WLF	e	PKPbc	Z	20:25:59.3	153.2	8.4				
	e	PKPab	Z	20:26:10.6						
STU	e	PKPbc	Z	20:25:59.7	153.7	15.0				
FUR	e	PKPab	Z	20:26:13.4	153.9	19.6				
RJOB	e	PKPab	Z	20:26:13.6	153.9	22.9				
BFO	e	PKPbc	Z	20:26:00.8	154.3	13.4				
	e	PKPab	Z	20:26:14.4						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/05	23:48:31.0	23.020S	179.400W	563.6				SZGRF
South of Fiji Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e	PKPbc	Z 00:07:10.9	147.1	21.9					
BSEG	e	PKPbc	Z 00:07:14.1	148.2	17.2					
RUE	e	PKPbc	Z 00:07:15.4	148.9	23.9					
CLL	e	PKPbc	Z 00:07:18.2	150.1	23.4					
IBBN	e	PKPbc	Z 00:07:18.7	150.2	13.3					
CLZ	e	PKPbc	Z 00:07:18.8	150.2	18.3					
	e	pPKPbc	Z 00:09:29.1							
BRG	e	PKPbc	Z 00:07:18.7	150.3	25.4					
	e	pPKPbc	Z 00:09:29.2							
FBE	e	PKPbc	Z 00:07:19.3	150.4	24.3					
	e	pPKPbc	Z 00:09:29.8							
NEUB	e	PKPbc	Z 00:07:19.2	150.5	21.2					
	e	pPKPbc	Z 00:09:29.6							
MOX	e	PKPbc	Z 00:07:20.4	151.1	21.3					
TANN	e	PKPbc	Z 00:07:20.4	151.1	23.0					
WERD	e	PKPbc	Z 00:07:20.4	151.1	22.7					
PLN	e	PKPbc	Z 00:07:20.5	151.1	22.4					
BUG	e	PKPbc	Z 00:07:20.4	151.1	12.8					
WERN	e	PKPbc	Z 00:07:21.1	151.2	23.0					
MANZ	e	PKPbc	Z 00:07:21.6	151.6	22.7					
ROTZ	e	PKPbc	Z 00:07:21.8	151.7	23.0					
GRA1	e	PKPab	Z 00:07:36.7	152.1	21.2					
TNS	e	PKPbc	Z 00:07:23.0	152.1	15.6					
	e	PKPab	Z 00:07:36.3							
WET	e	PKPab	Z 00:07:36.9	152.1	24.8					
GEC2	e	PKPbc	Z 00:07:22.6	152.2	26.5					

	e	PKPab	Z	00:07:36.7		
WLF	e	PKPbc	Z	00:07:25.2	153.0	11.3
	e	PKPab	Z	00:07:40.6		
STU	e	PKPab	Z	00:07:41.7	153.4	17.9
RJOB	e	PKPab	Z	00:07:42.6	153.4	25.8
FUR	e	PKPab	Z	00:07:42.6	153.5	22.4
BFO	e	PKPbc	Z	00:07:26.4	154.0	16.4
	e	PKPab	Z	00:07:44.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/06	07:24:34.3	19.100S	174.750W	223.8				SZGRF
Tonga Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	PKPbc	Z 07:43:42.9	144.9	8.4					
RUE	e	PKPbc	Z 07:43:46.3	146.0	14.5					
IBBN	e	PKPbc	Z 07:43:49.2	146.7	4.3					
	e	pPKPbc	Z 07:44:45.8							
CLZ	e	PKPbc	Z 07:43:50.1	147.0	8.9					
	e	pPKPbc	Z 07:44:47.0							
CLL	e	PKPbc	Z 07:43:50.3	147.2	13.6					
	e	pPKPbc	Z 07:44:47.1							
NEUB	e	PKPbc	Z 07:43:51.2	147.5	11.5					
	e	pPKPbc	Z 07:44:48.1							
BRG	e	PKPbc	Z 07:43:51.3	147.5	15.4					
	e	pPKPbc	Z 07:44:48.1							
BUG	e	PKPbc	Z 07:43:51.5	147.6	3.6					
MOX	e	PKPdf	Z 07:43:50.7	148.1	11.4					
	e	PKPbc	Z 07:43:52.9							
UBBA	e	PKPdf	Z 07:43:50.6	148.1	8.5					
PLN	e	PKPdf	Z 07:43:50.9	148.1	12.4					
	e	PKPbc	Z 07:43:53.3							
WERD	e	PKPdf	Z 07:43:51.0	148.2	12.7					
	e	PKPbc	Z 07:43:53.3							
TANN	e	PKPdf	Z 07:43:51.1	148.2	13.0					
	e	PKPbc	Z 07:43:53.4							
WERN	e	PKPdf	Z 07:43:51.2	148.3	12.9					
	e	PKPbc	Z 07:43:54.1							
MANZ	e	PKPdf	Z 07:43:51.7	148.6	12.5					
	e	PKPbc	Z 07:43:54.7							
TNS	e	PKPbc	Z 07:43:55.0	148.8	5.8					
ROTZ	e	PKPdf	Z 07:43:52.1	148.8	12.8					
	e	PKPbc	Z 07:43:55.4							
GRA1	e	PKPdf	Z 07:43:52.5	149.0	11.0					
	e	PKPbc	Z 07:43:56.1							
WET	e	PKPdf	Z 07:43:52.7	149.3	14.2					
	e	PKPbc	Z 07:43:56.6							

./2010/bul1009.txt

Thu Apr 23 08:38:25 2020

11

WLF	e	PKPbc	Z	07:43:57.2	149.4	1.7
GEC2	e	PKPdf	Z	07:43:53.0	149.5	15.9
	e	PKPbc	Z	07:43:56.7		
STU	e	PKPbc	Z	07:43:58.5	150.2	7.5
FUR	e	PKPbc	Z	07:43:59.2	150.5	11.6
BFO	e	PKPdf	Z	07:43:54.7	150.7	5.9
	e	PKPbc	Z	07:43:59.6		
RJOB	e	PKPbc	Z	07:43:59.5	150.7	14.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/06	09:54:31.5	30.920S	178.060W	35.0				NEIC
Kermadec Islands, New Zealand								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	pPKPab	Z	10:15:00.0	156.2	18.0				
CLL	e	pPKPab	Z	10:15:07.4	158.0	26.1				
BRG	e	pPKPab	Z	10:15:08.1	158.1	28.6				
CLZ	e	pPKPab	Z	10:15:08.5	158.2	19.8				
IBBN	e	pPKPab	Z	10:15:08.6	158.2	13.5				
NEUB	e	pPKPab	Z	10:15:09.4	158.4	23.5				
WERD	e	pPKPab	Z	10:15:12.1	159.0	25.5				
MOX	e	pPKPab	Z	10:15:11.8	159.0	23.7				
PLN	e	pPKPab	Z	10:15:12.0	159.0	25.1				
WERN	e	pPKPab	Z	10:15:12.8	159.1	25.9				
ROTZ	e	pPKPab	Z	10:15:15.2	159.6	26.1				
GRA1	e	pPKPab	Z	10:15:16.7	160.0	23.8				
TNS	e	pPKPab	Z	10:15:16.7	160.1	16.6				
RJOB	e	pPKPab	Z	10:15:22.1	161.2	30.2				
STU	e	pPKPab	Z	10:15:21.9	161.3	19.8				
FUR	e	pPKPab	Z	10:15:22.6	161.3	25.8				
BFO	e	pPKPab	Z	10:15:24.6	161.9	17.9				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/06	13:46:25.6	10.980S	162.310E	17.5G				NEIC
Bougainville - Solomon Islands region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e	PKSbc	Z	14:09:04.8	132.5	44.3				
CLL	e	PKSbc	Z	14:09:05.2	132.6	42.9				
NEUB	e	PKSbc	Z	14:09:07.4	133.2	41.4				
CLZ	e	PKSbc	Z	14:09:07.9	133.2	39.3				
TANN	e	PKSbc	Z	14:09:08.5	133.4	42.8				
WERD	e	PKSbc	Z	14:09:08.5	133.5	42.6				
PLN	e	PKSbc	Z	14:09:08.8	133.5	42.4				
WERN	e	PKSbc	Z	14:09:09.2	133.6	42.8				

MOX	e	PKSbc	Z	14:09:08.8	133.6	41.6
IBBN	e	PKSbc	Z	14:09:10.0	133.8	35.8
MANZ	e	PKSbc	Z	14:09:10.2	133.9	42.6
GEC2	e	PKSbc	Z	14:09:10.3	134.0	45.3
ROTZ	e	PKSbc	Z	14:09:10.7	134.0	42.9
UBBA	e	PKSbc	Z	14:09:10.7	134.2	39.5
WET	e	PKSbc	Z	14:09:11.1	134.2	44.1
GRA1	e	PKSbc	Z	14:09:12.2	134.5	41.7
BUG	e	PKSbc	Z	14:09:12.4	134.7	35.7
RJOB	e	PKSbc	Z	14:09:13.8	135.2	45.0
TNS	e	PKSbc	Z	14:09:14.4	135.3	37.9
FUR	e	PKSbc	Z	14:09:15.5	135.6	42.8
STU	e	PKSbc	Z	14:09:16.8	136.1	39.8
WLF	e	PKSbc	Z	14:09:19.0	136.6	35.3
BFO	e	PKSbc	Z	14:09:18.9	136.8	39.0

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/07 00:57:19.4 6.888S 105.133E 33.0G 5.5 5.2 SZGRF  
 Sunda Strait, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 01:10:47.6	96.1	93.4	2.0	53	5.5		
	e PP	Z 01:14:35.6							
GEC2	e P	Z 01:10:47.5	96.1	93.5	2.0	58	5.6		
RUE	e P	Z 01:10:48.4	96.3	93.1	2.5	224	6.1		
RGN	e PP	Z 01:14:41.2	96.7	92.5					
RJOB	e P	Z 01:10:49.2	96.7	92.9	2.4	68	5.6		
	e PP	Z 01:14:40.3							
WET	e P	Z 01:10:50.0	96.7	92.8	2.1	54	5.6		
	e PP	Z 01:14:40.9							
CLL	e P	Z 01:10:50.0	96.7	92.7	1.4	12	5.1		
	e PP	Z 01:14:39.2							
TANN	e P	Z 01:10:51.6	97.0	92.4	1.5	11	5.1		
	e PP	Z 01:14:42.5							
WERN	e P	Z 01:10:52.1	97.1	92.3	2.6	72	5.6		
WERD	e P	Z 01:10:52.0	97.1	92.2	1.7	21	5.3		
ROTZ	e P	Z 01:10:52.7	97.1	92.2	2.0	40	5.5		
	e PP	Z 01:14:43.7							
MANZ	e P	Z 01:10:53.0	97.2	92.1	2.1	76	5.9		
	e PP	Z 01:14:44.1							
NEUB	e P	Z 01:10:53.5	97.5	91.7	1.1	23	5.6		
	e PP	Z 01:14:45.2							
MOX	e P	Z 01:10:54.0	97.5	91.7	1.4	10	5.1		
	e L	Z 01:57:12.4			21.9	620		5.1	
FUR	e P	Z 01:10:53.8	97.7	91.7	1.6	26	5.5		
GRA1	e P	Z 01:10:55.4	97.8	91.5	1.5	26	5.5		
	e PP	Z 01:14:49.7							

	e L	Z	02:01:42.8			20.5	1111		5.3
CLZ	e P	Z	01:10:57.8	98.3	90.5	2.7	111	6.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/07	01:42:11.6	16.466S	177.686W	33.0G				SZGRF

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	02:01:31.3	142.0	12.5					
RUE	e PKPbc	Z	02:01:33.6	142.9	18.4					
IBBN	e PKPab	Z	02:01:39.5	143.9	8.9					
CLZ	e PKPbc	Z	02:01:37.4	144.0	13.2					
	e PKPab	Z	02:01:40.0							
CLL	e PKPbc	Z	02:01:37.0	144.1	17.7					
	e PKPab	Z	02:01:40.0							
BRG	e PKPbc	Z	02:01:37.8	144.4	19.4					
	e PKPab	Z	02:01:41.1							
NEUB	e PKPbc	Z	02:01:38.1	144.4	15.7					
	e PKPab	Z	02:01:41.5							
MOX	e PKPbc	Z	02:01:39.6	145.0	15.7					
PLN	e PKPbc	Z	02:01:39.8	145.1	16.6					
WERD	e PKPbc	Z	02:01:39.8	145.1	16.9					
	e PKPab	Z	02:01:44.0							
TANN	e PKPbc	Z	02:01:39.9	145.1	17.2					
	e PKPab	Z	02:01:44.3							
UBBA	e PKPbc	Z	02:01:39.8	145.1	13.0					
WERN	e PKPbc	Z	02:01:40.4	145.2	17.1					
	e PKPab	Z	02:01:45.0							
MANZ	e PKPbc	Z	02:01:41.1	145.6	16.8					
ROTZ	e PKPbc	Z	02:01:41.6	145.7	17.0					
	e PKPab	Z	02:01:47.1							
TNS	e PKPbc	Z	02:01:42.0	145.9	10.5					
	e PKPab	Z	02:01:47.5							
GRA1	e PKPbc	Z	02:01:42.1	146.0	15.4					
	e PKPab	Z	02:01:48.2							
WET	e PKPbc	Z	02:01:42.5	146.2	18.4					
	e PKPab	Z	02:01:48.7							
GEC2	e PKPbc	Z	02:01:42.7	146.3	20.0					
	e PKPab	Z	02:01:49.0							
WLF	e PKPbc	Z	02:01:44.2	146.7	6.7					
STU	e PKPbc	Z	02:01:45.0	147.2	12.2					
	e PKPab	Z	02:01:53.0							
FUR	e PKPbc	Z	02:01:45.5	147.5	16.1					
	e PKPab	Z	02:01:54.4							
RJOB	e PKPbc	Z	02:01:45.4	147.6	19.0					
	e PKPab	Z	02:01:55.1							
BFO	e PKPbc	Z	02:01:46.1	147.8	10.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/07	02:11:24.3	27.586N	51.938E	33.0G	5.0			SZGRF
Persian Gulf								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	02:18:24.3	36.2	111.8	2.2	61	5.1		
WET	e P	Z	02:18:29.1	36.8	111.3	1.0	15	4.7		
BRG	e P	Z	02:18:29.2	36.9	114.6	1.0	16	4.7		
ROTZ	e P	Z	02:18:35.1	37.5	111.3	0.9	27	4.9		
FUR	e P	Z	02:18:35.4	37.5	108.4	1.0	63	5.3		
CLL	e P	Z	02:18:35.4	37.6	114.1	1.0	24	4.9		
MANZ	e P	Z	02:18:36.0	37.6	111.5	1.1	14	4.6		
RUE	e P	Z	02:18:35.5	37.6	116.3	0.9	65	5.4		
WERD	e P	Z	02:18:35.8	37.7	112.3	2.1	43	4.8		
PLN	e P	Z	02:18:36.9	37.8	112.1	1.9	17	4.5		
GRA1	e P	Z	02:18:39.8	38.0	110.2	0.9	60	5.3		
MOX	e P	Z	02:18:40.2	38.1	111.8	1.0	5	4.2		
NEUB	e P	Z	02:18:41.1	38.3	112.6	0.8	18	4.8		
UBBA	e P	Z	02:18:48.9	39.2	110.2	1.0	14	4.6		
CLZ	e P	Z	02:18:50.4	39.3	111.8	0.9	48	5.2		
TNS	e P	Z	02:18:55.3	39.9	108.0	1.8	88	5.1		
BSEG	e P	Z	02:18:56.2	40.1	114.1	1.1	60	5.1		
IBBN	e P	Z	02:19:04.2	41.0	109.6	1.4	103	5.4		
BUG	e P	Z	02:19:04.4	41.0	108.1	1.5	85	5.3		
WLF	e P	Z	02:19:05.5	41.1	105.1	1.0	51	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/07	11:31: 0.2	47.300N	150.990E	33.0G	5.3	4.6		SZGRF
Kuril Islands, Russia								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	11:42:32.0	73.4	26.6	1.2	29	5.2		
CLL	e P	Z	11:42:40.4	75.0	28.0	1.1	46	5.4		
BRG	e P	Z	11:42:41.0	75.1	28.6	1.0	14	5.0		
CLZ	e P	Z	11:42:42.7	75.3	26.4	1.2	47	5.5		
IBBN	e P	Z	11:42:44.0	75.6	24.8	1.0	29	5.4		
TANN	e P	Z	11:42:46.1	76.0	27.6	1.6	26	5.1		
WERD	e P	Z	11:42:46.3	76.0	27.5	1.1	19	5.1		
PLN	e P	Z	11:42:46.4	76.0	27.4	1.2	21	5.2		
MOX	e P	Z	11:42:46.4	76.0	27.1	1.3	27	5.2		
	e L	Z	12:20:16.4			21.2	254		4.5	
WERN	e P	Z	11:42:47.2	76.1	27.5	0.9	23	5.3		
UBBA	e P	Z	11:42:47.9	76.3	26.1	1.7	38	5.3		
MANZ	e P	Z	11:42:48.9	76.4	27.3	1.0	18	5.1		

./2010/bul1009.txt

Thu Apr 23 08:38:25 2020

15

BUG	e P	Z	11:42:49.0	76.5	24.4	1.3	52	5.5		
ROTZ	e P	Z	11:42:50.2	76.6	27.3	0.9	22	5.3		
WET	e P	Z	11:42:52.2	77.0	27.7	1.1	43	5.5		
GRA1	e P	Z	11:42:52.3	77.0	26.7	0.8	47	5.7		
	e L	Z	12:20:45.6			20.0	281		4.6	
GEC2	e P	Z	11:42:51.7	77.0	28.2	1.2	22	5.2		
TNS	e P	Z	11:42:53.7	77.3	25.0	1.1	38	5.5		
RJOB	e P	Z	11:42:59.1	78.2	27.5	1.0	22	5.1		
STU	e P	Z	11:42:59.6	78.4	25.4	0.7	26	5.4		
BFO	e P	Z	11:43:03.0	79.0	24.8	1.0	30	5.3		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/07 12:48:57.7 15.520S 175.680W 33.0N  
 Tonga Islands SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
TNS	e PKPbc	Z	13:08:30.8	145.1	7.0					
ROTZ	e PKPbc	Z	13:08:31.0	145.2	13.4					
GRA1	e PKPbc	Z	13:08:32.0	145.4	11.8					
WET	e PKPbc	Z	13:08:32.6	145.7	14.7					
GEC2	e PKPbc	Z	13:08:33.0	145.8	16.2					
WLF	e PKPbc	Z	13:08:33.7	145.8	3.1					
STU	e PKPbc	Z	13:08:35.7	146.5	8.5					
FUR	e PKPbc	Z	13:08:36.6	146.9	12.3					
BFO	e PKPbc	Z	13:08:37.0	147.0	7.1					
RJOB	e PKPbc	Z	13:08:37.1	147.0	15.1					

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/07 15:41:43.3 39.940N 73.690E 33.0N 5.4  
 Tajikistan-Xinjiang border region SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	15:49:33.3	42.0	82.6	1.6	147	5.5		
RGN	e P	Z	15:49:34.6	42.0	84.6	1.0	372	6.1		
BRG	e P	Z	15:49:35.0	42.1	81.0	0.7	72	5.5		
FBE	e P	Z	15:49:38.2	42.5	80.6	0.7	117	5.7		
GEC2	e P	Z	15:49:39.5	42.6	78.6	0.9	65	5.4		
CLL	e P	Z	15:49:38.7	42.6	80.8	0.7	68	5.5		
WET	e P	Z	15:49:43.0	43.1	78.4	0.9	57	5.3		
TANN	e P	Z	15:49:43.2	43.1	79.5	0.8	37	5.1		
WERN	e P	Z	15:49:43.8	43.2	79.3	1.8	60	5.0		
WERD	e P	Z	15:49:43.8	43.2	79.4	0.8	42	5.2		
PLN	e P	Z	15:49:44.5	43.3	79.4	0.9	37	5.1		
ROTZ	e P	Z	15:49:46.0	43.4	78.7	1.5	61	5.1		
NEUB	e P	Z	15:49:45.2	43.4	79.9	0.8	91	5.5		

MANZ	e P	Z	15:49:45.8	43.4	78.8	0.8	33	5.1
RJOB	e P	Z	15:49:45.3	43.5	76.9	1.4	30	4.8
MOX	e P	Z	15:49:47.0	43.6	79.2	1.0	46	5.2
BSEG	e P	Z	15:49:49.3	43.8	81.7	0.9	96	5.5
GRA1	e P	Z	15:49:51.3	44.0	78.0	0.8	118	5.7
CLZ	e P	Z	15:49:51.4	44.2	79.6	1.6	103	5.3
NRDL	e P	Z	15:49:52.1	44.2	80.1			
FUR	e P	Z	15:49:53.3	44.3	76.5	0.8	127	5.7
UBBA	e P	Z	15:49:54.5	44.6	78.3	0.8	24	5.2
STU	e P	Z	15:50:02.5	45.5	75.8	1.1	89	5.7
IBBN	e P	Z	15:50:03.2	45.6	78.3	0.9	84	5.8
TNS	e P	Z	15:50:03.5	45.7	76.7	1.6	65	5.4
BUG	e P	Z	15:50:07.1	46.1	77.1	1.3	94	5.7
BFO	e P	Z	15:50:07.3	46.2	74.9	0.9	40	5.4
WLF	e P	Z	15:50:16.1	47.2	74.8	0.9	78	5.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/07	16:13:35.7	16.710S	179.470W	33.0G				SZGRF

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
MOX	e PKPbc	Z 16:33:08.1	144.9	18.7					
TANN	e PKPbc	Z 16:33:08.4	145.0	20.2					
WERD	e PKPbc	Z 16:33:08.1	145.0	19.9					
WERN	e PKPbc	Z 16:33:09.0	145.1	20.1					
ROTZ	e PKPbc	Z 16:33:10.8	145.6	20.1					
TNS	e PKPbc	Z 16:33:11.2	145.9	13.6					
GRA1	e PKPbc	Z 16:33:11.6	145.9	18.5					
WET	e PKPbc	Z 16:33:12.1	146.0	21.5					
GEC2	e PKPbc	Z 16:33:12.2	146.1	23.0					
WLF	e PKPbc	Z 16:33:14.2	146.7	9.8					
STU	e PKPbc	Z 16:33:15.5	147.2	15.4					
FUR	e PKPbc	Z 16:33:16.1	147.3	19.3					
BFO	e PKPbc	Z 16:33:16.7	147.7	14.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/07	19:54:29.2	53.374S	118.730W	33.0G				SZGRF

Southern East Pacific Rise

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
STU	e PKPbc	Z 20:14:10.1	147.7	241.7					
BUG	e PKPbc	Z 20:14:10.2	147.8	244.9					
TNS	e PKPbc	Z 20:14:10.8	147.9	243.6					
IBBN	e PKPbc	Z 20:14:12.2	148.4	246.4					
UBBA	e PKPbc	Z 20:14:13.7	149.1	244.9					

RJOB	e	PKPbc	Z	20:14:14.2	149.3	241.1
CLZ	e	PKPbc	Z	20:14:15.8	149.7	246.6
NRDL	e	PKPbc	Z	20:14:16.1	149.8	247.6
ROTZ	e	PKPbc	Z	20:14:16.0	149.9	244.0
MOX	e	PKPbc	Z	20:14:16.2	149.9	245.2
MANZ	e	PKPbc	Z	20:14:16.0	149.9	244.3
WET	e	PKPbc	Z	20:14:15.9	150.0	243.2
PLN	e	PKPbc	Z	20:14:16.8	150.2	245.1
WERN	e	PKPbc	Z	20:14:17.1	150.2	244.9
WERD	e	PKPbc	Z	20:14:17.0	150.3	245.1
NEUB	e	PKPbc	Z	20:14:17.0	150.3	246.1
TANN	e	PKPbc	Z	20:14:17.3	150.3	245.1
GEC2	e	PKPbc	Z	20:14:16.7	150.4	242.9
BSEG	e	PKPbc	Z	20:14:17.5	150.5	250.0
CLL	e	PKPbc	Z	20:14:18.6	151.0	246.7
FBE	e	PKPbc	Z	20:14:18.9	151.1	246.2
BRG	e	PKPbc	Z	20:14:19.5	151.4	246.3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/08	03:04: 9.0	20.495S	177.175W	33.0G				SZGRF

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	PKPbc	Z 03:23:46.0	146.1	12.6					
NRDL	e	PKPbc	Z 03:23:49.8	147.5	12.8					
CLL	e	PKPbc	Z 03:23:51.1	148.2	18.3					
BRG	e	PKPbc	Z 03:23:51.8	148.4	20.2					
FBE	e	PKPbc	Z 03:23:52.3	148.5	19.1					
NEUB	e	PKPbc	Z 03:23:52.2	148.5	16.2					
MOX	e	PKPbc	Z 03:23:53.5	149.1	16.2					
PLN	e	PKPbc	Z 03:23:53.7	149.1	17.2					
WERD	e	PKPbc	Z 03:23:53.7	149.1	17.5					
TANN	e	PKPbc	Z 03:23:53.7	149.1	17.8					
WERN	e	PKPbc	Z 03:23:54.2	149.3	17.7					
MANZ	e	PKPbc	Z 03:23:54.9	149.6	17.4					
TNS	e	PKPbc	Z 03:23:55.9	149.9	10.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/08	08:01:20.3	20.760S	170.310E	10.0				NEIC

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e	PKPbc	Z 08:20:59.2	146.7	37.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/08	11:37:37.0	19.516S	171.586E	33.0G				SZGRF

Vanuatu Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPbc	Z	11:57:05.9	144.0	30.6					
BRG	e PKPbc	Z	11:57:05.6	144.0	37.6					
CLL	e PKPbc	Z	11:57:05.6	144.0	35.9					
FBE	e PKPbc	Z	11:57:06.6	144.2	36.7					
CLZ	e PKPbc	Z	11:57:08.0	144.5	31.5					
NEUB	e PKPbc	Z	11:57:07.9	144.5	34.1					
IBBN	e PKPbc	Z	11:57:09.1	144.9	27.1					
TANN	e PKPbc	Z	11:57:09.1	144.9	35.8					
WERD	e PKPbc	Z	11:57:09.2	145.0	35.5					
PLN	e PKPbc	Z	11:57:09.3	145.0	35.3					
MOX	e PKPbc	Z	11:57:09.3	145.1	34.3					
WERN	e PKPbc	Z	11:57:09.8	145.1	35.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/08	17:39:49.7	45.490N	149.790E	44.9	5.9	5.4		SZGRF

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	17:51:27.4	74.8	28.2	1.3	102	5.7		
RUE	e P	Z	17:51:28.9	75.0	30.3	1.4	249	6.0		
NRDL	e P	Z	17:51:34.6	76.1	27.9	1.4	398	6.4		
	e pP	Z	17:51:47.7							
CLL	e P	Z	17:51:35.5	76.3	29.6	1.4	143	5.9		
	e pP	Z	17:51:48.2							
BRG	e P	Z	17:51:36.1	76.4	30.2	1.8	146	5.8		
	e pP	Z	17:51:48.9							
FBE	e P	Z	17:51:36.9	76.5	29.8	1.7	212	6.0		
	e pP	Z	17:51:50.0							
CLZ	e P	Z	17:51:37.9	76.6	28.0	1.7	269	6.1		
	e pP	Z	17:51:50.8							
NEUB	e P	Z	17:51:38.3	76.7	28.8	1.4	141	5.9		
	e pP	Z	17:51:51.1							
IBBN	e P	Z	17:51:39.5	76.9	26.3	1.1	92	5.8		
	e pP	Z	17:51:51.8							
TANN	e P	Z	17:51:41.1	77.2	29.2	2.0	166	5.8		
	e pP	Z	17:51:53.8							
WERD	e P	Z	17:51:41.2	77.2	29.1	2.0	190	5.9		
	e pP	Z	17:51:54.0							
PLN	e P	Z	17:51:41.2	77.3	29.0	2.1	228	5.9		
	e pP	Z	17:51:54.1							
MOX	e P	Z	17:51:41.2	77.3	28.6	1.9	182	5.9		

	e pP	Z	17:51:54.0								
	e L	Z	18:29:34.8			19.7	2163		5.5		
WERN	e P	Z	17:51:42.0	77.4	29.1	2.2	220	5.9			
	e pP	Z	17:51:54.8								
UBBA	e P	Z	17:51:43.2	77.6	27.6	1.7	131	5.8			
	e pP	Z	17:51:55.7								
MANZ	e P	Z	17:51:43.1	77.7	28.9	2.2	200	5.9			
	e pP	Z	17:51:56.7								
BUG	e P	Z	17:51:44.3	77.8	25.9	1.5	108	5.8			
	e pP	Z	17:51:57.2								
ROTZ	e P	Z	17:51:45.0	77.9	28.9	1.9	176	5.9			
	e pP	Z	17:51:58.0								
GEC2	e P	Z	17:51:46.3	78.2	29.8	2.1	186	5.7			
	e pP	Z	17:51:59.3								
WET	e P	Z	17:51:46.9	78.2	29.3	2.2	327	6.0			
	e pP	Z	17:51:59.9								
GRA1	e P	Z	17:51:47.2	78.2	28.3	2.4	700	6.3			
	e pP	Z	17:52:00.0								
	e L	Z	18:30:03.9			21.1	1885		5.4		
TNS	e P	Z	17:51:48.8	78.6	26.5	2.4	263	5.8			
	e pP	Z	17:52:02.0								
RJOB	e P	Z	17:51:53.6	79.5	29.1	2.4	317	5.8			
	e pP	Z	17:52:07.0								
FUR	e P	Z	17:51:54.2	79.6	28.2	1.1	96	5.7			
STU	e P	Z	17:51:54.4	79.7	26.9	2.5	270	5.7			
	e pP	Z	17:52:07.7								
BFO	e P	Z	17:51:57.9	80.3	26.3	2.5	229	5.8			

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/08 19:26: 9.2 46.410N 150.200E 42.6 5.5 5.1 SZGRF  
 Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	19:37:44.9	74.3	29.6	1.1	70	5.6		
CLL	e P	Z	19:37:51.4	75.6	28.9	1.1	41	5.5		
	e pP	Z	19:38:03.5							
BRG	e P	Z	19:37:52.1	75.7	29.5	1.7	63	5.5		
FBE	e P	Z	19:37:53.0	75.8	29.1	1.5	60	5.5		
	e pP	Z	19:38:05.6							
CLZ	e P	Z	19:37:53.7	75.9	27.3	1.7	108	5.7		
	e pP	Z	19:38:06.1							
NEUB	e P	Z	19:37:54.3	76.0	28.1	1.4	52	5.5		
	e pP	Z	19:38:06.7							
TANN	e P	Z	19:37:56.8	76.5	28.5	2.2	61	5.3		
	e pP	Z	19:38:09.3							
WERD	e P	Z	19:37:57.3	76.5	28.4	2.0	58	5.4		
	e pP	Z	19:38:09.6							

./2010/bul1009.txt

Thu Apr 23 08:38:25 2020

20

PLN	e P	Z	19:37:57.7	76.6	28.3	2.0	82	5.5		
	e pP	Z	19:38:09.6							
MOX	e P	Z	19:37:57.7	76.6	28.0	1.9	76	5.5		
	e pP	Z	19:38:09.5							
	e L	Z	20:15:50.3			19.6	883		5.1	
WERN	e P	Z	19:37:58.1	76.7	28.4	2.2	104	5.6		
	e pP	Z	19:38:10.1							
UBBA	e P	Z	19:37:58.9	76.9	26.9	2.3	106	5.6		
	e pP	Z	19:38:11.2							
MANZ	e P	Z	19:37:59.7	77.0	28.2	2.4	82	5.4		
	e pP	Z	19:38:11.9							
BUG	e P	Z	19:38:00.3	77.1	25.2	1.5	48	5.4		
	e pP	Z	19:38:12.7							
ROTZ	e P	Z	19:38:01.0	77.2	28.2	1.9	59	5.4		
	e pP	Z	19:38:13.3							
WET	e P	Z	19:38:02.7	77.5	28.6	1.3	39	5.4		
	e pP	Z	19:38:15.0							
GEC2	e P	Z	19:38:02.6	77.5	29.1	2.4	99	5.5		
	e pP	Z	19:38:14.8							
GRA1	e P	Z	19:38:03.1	77.5	27.6	0.9	28	5.4		
	e pP	Z	19:38:15.2							
	e L	Z	20:16:29.8			20.4	803		5.0	
TNS	e P	Z	19:38:04.5	77.9	25.9	2.6	146	5.7		
	e pP	Z	19:38:16.9							
FUR	e pP	Z	19:38:22.1	78.9	27.5					
BFO	e pP	Z	19:38:26.4	79.6	25.6					

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/09 05:49:40.9 17.530S 178.890W 506.2 NEIC  
 Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z	06:08:19.9	144.8	11.1					
CLZ	e PKPbc	Z	06:08:20.5	144.9	15.5					
CLL	e PKPbc	Z	06:08:20.2	144.9	20.0					
BRG	e PKPbc	Z	06:08:20.9	145.1	21.7					
FBE	e PKPbc	Z	06:08:21.5	145.2	20.8					
NEUB	e PKPbc	Z	06:08:21.3	145.3	18.0					
MOX	e PKPbc	Z	06:08:22.8	145.8	18.0					
PLN	e PKPbc	Z	06:08:23.0	145.9	19.0					
TANN	e PKPbc	Z	06:08:23.2	145.9	19.5					
WERD	e PKPbc	Z	06:08:23.1	145.9	19.3					
MANZ	e PKPbc	Z	06:08:24.6	146.4	19.2					
ROTZ	e PKPbc	Z	06:08:25.2	146.5	19.4					
TNS	e PKPbc	Z	06:08:25.8	146.8	12.8					
GEC2	e PKPbc	Z	06:08:26.4	147.1	22.5					
BFO	e PKPbc	Z	06:08:30.3	148.6	13.3					

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/09 10:31: 7.2 59.880N 30.280W 33.0G 5.3 4.6  
 Reykjanes Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	10:36:05.9	22.6	301.6	1.6	234	5.5		
NRDL	e P	Z	10:36:13.0	23.2	304.5	1.6	987	6.1		
CLZ	e P	Z	10:36:18.3	23.7	305.7	1.9	301	5.5		
TNS	e P	Z	10:36:18.1	23.8	308.8	1.5	185	5.4		
UBBA	e P	Z	10:36:21.6	24.2	307.6	2.3	195	5.2		
NEUB	e P	Z	10:36:27.7	24.8	306.8	1.2	42	5.0		
BFO	e P	Z	10:36:28.3	24.9	312.0	1.1	30	4.9		
STU	e P	Z	10:36:29.9	25.1	311.1	1.0	70	5.3		
MOX	e P	Z	10:36:30.3	25.1	307.8	1.2	79	5.3		
	e L	Z	10:45:10.3			20.8	2138		4.6	
RUE	e P	Z	10:36:30.5	25.1	304.6	1.4	164	5.6		
CLL	e P	Z	10:36:32.7	25.4	306.6	1.4	38	5.0		
PLN	e P	Z	10:36:33.7	25.5	308.0	1.3	88	5.2		
GRA1	e P	Z	10:36:34.1	25.5	309.4	1.2	101	5.3		
	e L	Z	10:45:32.1			22.0	2444		4.7	
WERD	e P	Z	10:36:34.6	25.6	308.1	1.3	66	5.1		
TANN	e P	Z	10:36:35.4	25.6	308.1	1.3	44	4.9		
WERN	e P	Z	10:36:35.8	25.7	308.3	1.4	90	5.2		
MANZ	e P	Z	10:36:36.1	25.7	308.8	1.2	70	5.2		
FBE	e P	Z	10:36:36.8	25.8	307.3	1.5	78	5.1		
ROTZ	e P	Z	10:36:37.9	25.9	309.2	1.6	41	4.8		
BRG	e P	Z	10:36:39.3	26.1	307.3	2.0	95	5.1		
FUR	e P	Z	10:36:43.1	26.5	311.8	1.0	71	5.3		
WET	e P	Z	10:36:44.6	26.7	310.1	1.5	55	5.1		
GEC2	e P	Z	10:36:50.1	27.3	310.5	1.4	29	4.8		
RJOB	e P	Z	10:36:52.7	27.5	312.2	2.1	116	5.3		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/11 11:43: 0.5 5.505N 93.654E 10.0N 5.3 5.1  
 Off west coast of northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	11:55:05.7	79.2	94.5	1.0	12	4.9		
GEC2	e P	Z	11:55:06.2	79.3	93.9	0.9	32	5.4		
	e L	Z	12:33:45.4			21.0	949		5.1	
RUE	e P	Z	11:55:06.7	79.5	94.7	1.0	88	5.7		
FBE	e P	Z	11:55:08.0	79.6	94.1	1.0	42	5.3		
RJOB	e P	Z	11:55:08.5	79.8	93.1	1.0	41	5.3		
WET	e P	Z	11:55:09.1	79.8	93.4	1.3	41	5.2		

	e L	Z	12:34:33.5			21.3	936		5.1
CLL	e P	Z	11:55:08.6	79.9	93.9	1.0	21	5.0	
	e L	Z	12:35:52.5			20.7	1256		5.2
TANN	e P	Z	11:55:10.5	80.2	93.3	1.2	18	4.9	
WERN	e P	Z	11:55:11.1	80.2	93.2	1.0	17	4.9	
WERD	e P	Z	11:55:11.2	80.3	93.2	1.3	22	4.9	
ROTZ	e P	Z	11:55:12.1	80.3	93.0	1.2	33	5.1	
PLN	e P	Z	11:55:11.6	80.3	93.1	2.3	68	5.2	
MANZ	e P	Z	11:55:12.4	80.4	92.9	1.2	42	5.3	
MOX	e P	Z	11:55:13.6	80.7	92.7	1.5	27	5.1	
FUR	e L	Z	12:35:00.0	80.8	92.0	21.3	871		5.1
GRA1	e P	Z	11:55:15.2	80.9	92.2	1.1	46	5.4	
	e L	Z	12:35:12.2			21.8	1001		5.1
CLZ	e P	Z	11:55:18.0	81.5	91.9	1.6	82	5.6	
BSEG	e P	Z	11:55:18.6	81.6	92.1	1.1	97	5.8	
NRDL	e P	Z	11:55:19.1	81.7	91.8	1.3	311	6.3	
STU	e P	Z	11:55:22.0	82.2	90.5	1.5	40	5.3	
BFO	e P	Z	11:55:24.7	82.8	89.8	1.2	22	5.3	
	e L	Z	12:36:15.4			22.0	1226		5.2
IBBN	e P	Z	11:55:26.6	83.1	89.9	1.0	61	5.8	
BUG	e P	Z	11:55:28.2	83.4	89.4	1.1	46	5.6	

Date 2010/09/11 Origin Time 18:55:43.3 Lat 1.322S Long 77.146W Depth 33.0G mb 5.3 Ms 4.2 ML Source SZGRF Ecuador

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 19:08:24.6	86.7	264.0					
BUG	e P	Z 19:08:28.2	87.6	264.8	2.5	134	5.8		
IBBN	e P	Z 19:08:30.2	87.9	265.2	1.1	24	5.4		
BFO	e L	Z 19:46:45.0	88.0	265.7	21.6	94		4.2	
STU	e P	Z 19:08:32.9	88.6	266.4	1.3	18	5.1		
NRDL	e P	Z 19:08:37.1	89.4	267.0	1.0	57	5.7		
CLZ	e P	Z 19:08:37.8	89.5	267.2	0.9	22	5.4		
BSEG	e P	Z 19:08:37.6	89.6	267.2	1.0	15	5.2		
FUR	e L	Z 19:48:25.8	89.9	267.9	20.3	72		4.1	
GRA1	e P	Z 19:08:39.6	90.0	267.9	2.4	96	5.6		
	e L	Z 19:47:07.5			21.5	113		4.3	
MOX	e P	Z 19:08:40.8	90.2	268.2	1.1	8	4.9		
	e L	Z 19:47:42.3			21.9	107		4.2	
NEUB	e P	Z 19:08:41.5	90.4	268.3	1.5	30	5.3		
MANZ	e P	Z 19:08:42.6	90.5	268.6	2.6	66	5.5		
PLN	e P	Z 19:08:42.7	90.6	268.6	0.9	12	5.2		
ROTZ	e P	Z 19:08:42.8	90.6	268.7	2.1	34	5.3		
WERD	e P	Z 19:08:43.0	90.7	268.7	1.0	11	5.2		
WERN	e P	Z 19:08:43.6	90.7	268.8	1.0	11	5.2		
TANN	e P	Z 19:08:43.7	90.8	268.9	1.0	14	5.3		

./2010/bul1009.txt

Thu Apr 23 08:38:25 2020

23

RJOB	e P	Z	19:08:43.8	90.9	269.1	0.8	8	5.1	
WET	e P	Z	19:08:44.6	91.0	269.2	1.6	15	5.1	
	e L	Z	19:46:08.3			20.8	97		4.2
CLL	e P	Z	19:08:45.1	91.1	269.3	1.0	9	5.1	
	e L	Z	19:49:29.7			21.3	102		4.2
FBE	e P	Z	19:08:46.6	91.3	269.6	0.9	12	5.2	
GEC2	e L	Z	19:46:56.6	91.6	269.8	21.5	58		4.0
RUE	e P	Z	19:08:47.1	91.6	269.9	1.0	29	5.6	
BRG	e P	Z	19:08:47.9	91.7	270.0	1.0	8	5.0	

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/12 03:59:0.2 44.183N 11.552E 10.0G 3.0 SZGRF  
 Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WTTA	e Pn	Z	03:59:48.4	3.1	181.1					3.4
	e Sn	N	04:00:23.6							
KBA	e Pn	Z	03:59:48.8	3.2	204.1					2.9
	e Sn	E	04:00:24.0							
PLONS	e Pn	Z	03:59:50.7	3.2	151.3					2.7
	e Sn	N	04:00:27.6							
DAVA	e Pn	Z	03:59:51.6	3.3	158.8					3.1
	e Sn	N	04:00:29.7							
RJOB	e Pn	Z	03:59:56.1	3.7	194.1					3.0
	e Sn	E	04:00:36.8							
FUR	e Sn	N	04:00:43.5	4.0	177.1					3.5
MOA	e Pn	Z	04:00:02.2	4.1	208.2					
	e Sn	E	04:00:47.7							
SLE	e Pn	Z	04:00:02.0	4.2	148.2					3.2
	e Sn	E	04:00:45.3							
BFO	e Pn	Z	04:00:09.1	4.7	150.6					3.1
	e Sn	E	04:00:59.2							
GEC2	e Pn	Z	04:00:11.5	4.9	198.4					3.1
	e Sn	E	04:01:03.7							
WET	e Pn	Z	04:00:12.9	5.0	190.9					3.1
	e Sn	E	04:01:06.6							
ROTZ	e Pn	Z	04:00:20.6	5.6	184.8					
	e Sn	E	04:01:18.6							
MANZ	e Sn	E	04:01:23.6	5.8	183.9					

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/12 07:41:29.2 55.687N 170.018E 33.0G 5.2 4.5  
 Bering Sea

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

BSEG	e P	Z	07:52:28.4	69.1	12.1	0.9	31	5.5	
RUE	e P	Z	07:52:34.7	70.1	14.0	0.8	22	5.3	
NRDL	e P	Z	07:52:36.2	70.6	11.8	0.8	75	5.9	
IBBN	e P	Z	07:52:38.4	71.0	10.5	1.0	51	5.6	
CLZ	e P	Z	07:52:40.2	71.2	12.0	0.8	34	5.5	
CLL	e P	Z	07:52:41.2	71.3	13.4	1.0	14	5.0	
	e L	Z	08:30:44.9			21.4	324		4.6
NEUB	e P	Z	07:52:43.0	71.6	12.7	1.0	31	5.4	
BRG	e P	Z	07:52:43.3	71.6	13.9	0.9	12	5.0	
FBE	e P	Z	07:52:43.7	71.6	13.6	1.6	46	5.4	
BUG	e P	Z	07:52:43.0	71.9	10.1	0.8	22	5.3	
MOX	e P	Z	07:52:45.9	72.2	12.6	1.0	14	5.1	
UBBA	e P	Z	07:52:45.5	72.2	11.7	1.8	34	5.2	
PLN	e P	Z	07:52:46.6	72.2	12.9	1.9	31	5.1	
WERD	e P	Z	07:52:46.7	72.3	13.0	1.3	15	5.0	
TANN	e P	Z	07:52:46.9	72.3	13.1	1.4	18	5.0	
WERN	e P	Z	07:52:47.8	72.4	13.0	0.9	20	5.2	
ROTZ	e P	Z	07:52:50.8	72.9	12.9	1.2	15	5.0	
GRA1	e P	Z	07:52:52.0	73.1	12.3	1.0	34	5.3	
	e L	Z	08:31:53.1			21.4	342		4.6
WET	e P	Z	07:52:53.9	73.4	13.2	1.4	16	4.9	
	e L	Z	08:31:24.8			21.8	259		4.5
GEC2	e P	Z	07:52:55.0	73.6	13.7	0.8	10	4.9	
	e L	Z	08:32:23.6			20.6	272		4.5
WLF	e P	Z	07:52:53.5	73.8	9.4	0.9	21	5.2	
RJOB	e P	Z	07:53:01.5	74.8	13.1	0.8	13	5.0	
BFO	e P	Z	07:52:59.6	74.9	10.6	1.1	16	5.0	
	e L	Z	08:34:32.8			21.6	205		4.4

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/13 23:05:20.9 33.470N 142.250E 10.4N 5.4 4.6  
 Off east coast of Honshu, Japan SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 23:17:46.4	83.0	41.1	1.2	59	5.7		
BSEG	e P	Z 23:17:47.6	83.2	38.7	1.0	47	5.7		
CLL	e P	Z 23:17:52.0	84.2	40.5	1.0	59	5.8		
FBE	e P	Z 23:17:53.2	84.4	40.7	1.0	56	5.7		
NRDL	e P	Z 23:17:53.1	84.4	38.4	1.0	74	5.9		
NEUB	e P	Z 23:17:54.7	84.8	39.6	1.1	56	5.7		
CLZ	e P	Z 23:17:55.6	84.9	38.6	1.1	50	5.6		
TANN	e P	Z 23:17:56.5	85.1	40.0	1.2	11	5.0		
WERD	e P	Z 23:17:56.7	85.2	39.9	1.2	17	5.2		
PLN	e P	Z 23:17:56.6	85.2	39.8	1.2	19	5.1		
WERN	e P	Z 23:17:57.4	85.3	40.0	1.0	20	5.2		
MOX	e P	Z 23:17:57.3	85.3	39.4	1.3	26	5.2		
IBBN	e P	Z 23:17:58.3	85.5	36.7	1.1	74	5.7		

MANZ	e P	Z	23:17:59.0	85.6	39.8	1.3	20	5.1	
ROTZ	e P	Z	23:17:59.8	85.7	39.8	1.5	36	5.3	
GRA1	e P	Z	23:18:02.6	86.2	39.1	1.5	47	5.4	
BUG	e P	Z	23:18:02.4	86.3	36.2	1.2	30	5.3	
RJOB	e P	Z	23:18:05.8	87.0	40.2	1.2	14	4.9	
CLL	e L	Z	00:03:21.8	84.2	40.5	19.9	219		4.5
WET	e L	Z	00:01:36.3	85.9	40.3	18.0	369		4.8
GRA1	e L	Z	00:09:53.6	86.2	39.1	19.5	156		4.4
FUR	e L	Z	00:05:24.1	87.4	39.1	18.3	301		4.7
BFO	e L	Z	00:07:02.1	88.4	36.9	18.1	257		4.7

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/13 05:47:49.4 41.581N 142.054E 33.0G 6.0 5.6  
 Hokkaido, Japan, region SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	05:59:22.8	74.4	37.3	1.1	245	6.1		
RUE	e P	Z	05:59:31.0	75.9	37.3	1.3	318	6.3		
BRG	e P	Z	05:59:37.8	77.1	37.1	1.4	134	5.9		
CLL	e P	Z	05:59:37.5	77.1	36.6	1.1	167	6.1		
	e L	Z	06:36:28.4			21.0	3941		5.7	
NRDL	e P	Z	05:59:38.3	77.2	34.8	1.1	487	6.5		
FBE	e P	Z	05:59:39.1	77.3	36.8	1.4	232	6.1		
CLZ	e P	Z	05:59:41.0	77.6	34.9					
	e L	Z	06:36:21.0			21.7	3115		5.6	
NEUB	e P	Z	05:59:40.7	77.6	35.7	1.1	201	6.2		
TANN	e P	Z	05:59:43.1	78.0	36.1	2.4	354	6.1		
WERD	e P	Z	05:59:43.2	78.0	36.0	1.4	113	5.8		
PLN	e P	Z	05:59:43.3	78.1	35.9	2.4	532	6.2		
IBBN	e P	Z	05:59:43.4	78.1	33.2	1.1	212	6.2		
MOX	e P	Z	05:59:43.7	78.1	35.6	1.3	129	5.9		
	e L	Z	06:37:38.4			19.4	2896		5.6	
WERN	e P	Z	05:59:44.0	78.1	36.0	1.1	109	5.9		
MANZ	e P	Z	05:59:45.8	78.5	35.8	1.1	88	5.7		
UBBA	e P	Z	05:59:45.9	78.6	34.5	1.9	219	5.9		
ROTZ	e P	Z	05:59:47.0	78.6	35.9	1.2	156	5.9		
GEC2	e P	Z	05:59:47.4	78.8	36.7	1.1	77	5.6		
	e L	Z	06:37:38.3			18.8	2080		5.5	
WET	e P	Z	05:59:48.2	78.9	36.2	1.1	158	5.9		
BUG	e P	Z	05:59:48.2	79.0	32.7	1.2	194	6.0		
GRA1	e P	Z	05:59:49.2	79.1	35.2	1.1	296	6.2		
	e L	Z	06:37:47.5			20.2	3199		5.7	
RJOB	e P	Z	05:59:54.7	80.0	36.0	1.0	188	6.0		
FUR	e P	Z	05:59:55.7	80.3	35.1	1.0	264	6.2		
	e L	Z	06:38:15.9			21.5	2758		5.6	
STU	e P	Z	05:59:56.9	80.6	33.8	1.0	181	6.1		
WLF	e P	Z	05:59:58.8	80.9	31.8	2.2	529	6.2		

./2010/bul1009.txt

Thu Apr 23 08:38:25 2020

26

BFO	e P	Z	06:00:00.4	81.3	33.2	1.8	328	6.2	
	e L	Z	06:39:00.4			21.0	1885		5.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/13	18:46:49.0	47.197N	14.173E	0.0G			2.5	SZGRF
Austria								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
KBA	e Pg	Z	18:46:59.0	0.6	77.8					2.2
	e Sg	N	18:47:05.8							
OBKA	e Pg	Z	18:47:02.6	0.7	339.6					2.3
	e Sg	E	18:47:12.4							
GEC2	e Pg	Z	18:47:20.6	1.7	169.0					2.5
	e Sn	E	18:47:39.3							
	e Sg	E	18:47:42.9							
WTTA	e Pg	Z	18:47:22.3	1.7	91.3					2.4
	e Sg	E	18:47:47.1							
WET	e Sg	N	18:47:57.1	2.1	155.6					2.4
FUR	e Sg	N	18:47:55.1	2.2	115.3					2.7
ROTZ	e Pg	Z	18:47:43.2	2.9	152.4					2.8
	e Sg	Z	18:48:19.7							
DAVA	e Sg	Z	18:48:22.6	2.9	90.2					2.7
MANZ	e Pg	Z	18:47:47.2	3.1	153.1					
GRA1	e Pg	Z	18:47:50.0	3.2	140.8					
WERN	e Pg	Z	18:47:51.0	3.3	158.3					2.9
	e Sg	N	18:48:35.1							
TANN	e Pg	Z	18:47:52.3	3.4	160.0					
	e Sg	Z	18:48:36.9							
WERD	e Pg	Z	18:47:54.9	3.5	158.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/15	02:21:18.0	45.515N	14.586E	10.0G			3.9	SZGRF
Northwestern Balkan Peninsula								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
OBKA	e Pg	N	02:21:35.8	1.0	178.5					
	e Sg	E	02:21:49.2							3.7
KBA	e Pn	N	02:21:47.4	1.8	150.8					
	e Sn	E	02:22:09.3							3.7
ARSA	e Pn	Z	02:21:50.2	1.9	200.8					3.2
	e Pg	Z	02:21:52.5							
	e Sn	N	02:22:10.7							
	e Sg	E	02:22:16.9							
MOA	e Pn	Z	02:21:56.5	2.3	174.5					
RJOB	e Pn	Z	02:21:58.6	2.5	150.4					3.9

	e Sn	N	02:22:29.7						
WTTA	e Pn	Z	02:21:59.8	2.7	129.6				
GEC2	e Pn	Z	02:22:09.6	3.4	169.4			4.1	
	e Sn	N	02:22:48.2						
	e Sg	N	02:23:01.9						
DAVA	e Pn	Z	02:22:13.8	3.7	116.9				
WET	e Pn	Z	02:22:14.9	3.8	161.7			4.0	
	e Sn	E	02:22:58.6						
ROTZ	e Pn	Z	02:22:24.6	4.5	158.5			4.2	
	e Sn	E	02:23:14.1						
MANZ	e Pn	N	02:22:27.7	4.8	158.6				
	e Sn	E	02:23:19.1					4.1	
STU	e Pn	Z	02:22:29.2	4.9	129.6				
WERN	e Pn	Z	02:22:31.2	5.0	161.9				
TANN	e Pn	Z	02:22:32.4	5.1	163.0			4.3	
	e Sn	E	02:23:29.3						
BFO	e Pn	Z	02:22:31.5	5.1	121.1				
PLN	e Pn	Z	02:22:35.3	5.2	161.0				
BRG	e Pn	Z	02:22:36.2	5.4	175.2				
FBE	e Pn	Z	02:22:39.0	5.5	170.9				
MOX	e Pn	Z	02:22:37.6	5.5	157.7				
CLL	e Pn	Z	02:22:43.7	5.9	169.1				
TNS	e Pn	Z	02:22:48.5	6.3	136.5				

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/15 02:30:19.1 45.752N 14.219E 10.0G  
 Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
OBKA	e Pg	Z	02:30:32.5	0.8	196.9					2.3
	e Sg	E	02:30:46.3							
KBA	e Pn	N	02:30:45.2	1.5	155.2					
	e Sg	E	02:31:06.5							2.3
ARSA	e Pn	Z	02:30:46.9	1.7	211.4					1.9
	e Sg	E	02:31:14.6							
MOA	e Pn	Z	02:30:53.1	2.1	180.9					
RJOB	e Pn	Z	02:30:56.3	2.2	153.3					2.5
	e Sg	N	02:31:26.8							
WTTA	e Pn	Z	02:30:57.1	2.3	129.4					
GEC2	e Pn	Z	02:31:06.7	3.1	173.3					
WET	e Pn	Z	02:31:12.9	3.5	164.5					

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/15 06:12:39.1 45.688N 14.232E 10.0G  
 Northwestern Balkan Peninsula

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
OBKA	e Pg	Z 06:12:53.8	0.9	195.1					2.7
	e Sg	E 06:13:08.5							
KBA	e Pn	Z 06:13:05.5	1.5	155.9					2.7
	e Sg	E 06:13:27.8							
ARSA	e Pn	Z 06:13:08.0	1.8	210.1					2.4
	e Sg	E 06:13:34.3							
MOA	e Pn	Z 06:13:14.2	2.2	180.6					2.3
	e Sg	N 06:13:43.7							
RJOB	e Pn	Z 06:13:17.6	2.3	153.8					2.8
	e Sg	E 06:13:48.0							
WTTA	e Pn	Z 06:13:19.0	2.4	130.5					3.2
	e Sg	N 06:13:51.8							
GEC2	e Pn	Z 06:13:27.8	3.2	173.3					3.0
	e Sn	E 06:14:06.6							
	e Sg	E 06:14:21.5							
WET	e Pn	Z 06:13:27.8	3.6	164.7					3.4
	e Sn	E 06:14:16.0							
ROTZ	e Pn	Z 06:13:42.7	4.3	160.8					3.3
	e Sn	E 06:14:32.2							
MANZ	e Sn	E 06:14:37.2	4.5	160.9					3.3

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/15 18:21:49.2 45.675N 14.255E 10.0G 2.2 SZGRF  
 Northwestern Balkan Peninsula

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
OBKA	e Pg	Z 18:22:04.1	0.9	193.8					2.2
	e Sg	E 18:22:17.7							
KBA	e Sg	E 18:22:37.7	1.5	155.6					2.2
	e Pn	Z 18:22:18.3							
ARSA	e Pn	Z 18:22:18.3	1.8	209.5					
	e Pg	Z 18:22:21.1							
MOA	e Pn	Z 18:22:24.7	2.2	180.2					
RJOB	e Sg	N 18:22:57.9	2.3	153.6					2.4
WTTA	e Pn	Z 18:22:28.9	2.4	130.4					
	e Pg	Z 18:22:33.3							
GEC2	e Sn	N 18:23:16.5	3.2	173.0					2.8
	e Sg	N 18:23:29.9							
WET	e Sn	E 18:23:25.5	3.6	164.5					
ROTZ	e Sn	E 18:23:42.5	4.3	160.6					

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/16 01:54:40.0 16.090S 173.950W 82.0 NEIC  
 Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKP	Z	02:14:04.5	144.3	11.5					
NEUB	e PKP	Z	02:14:05.6	144.6	9.5					
BUG	e PKP	Z	02:14:05.0	144.6	2.0					
BRG	e PKP	Z	02:14:05.6	144.6	13.2					
FBE	e PKP	Z	02:14:06.1	144.7	12.2					
UBBA	e PKP	Z	02:14:07.1	145.1	6.6					
MOX	e PKP	Z	02:14:07.5	145.2	9.4					
PLN	e PKP	Z	02:14:07.9	145.3	10.3					
WERD	e PKP	Z	02:14:07.7	145.3	10.6					
TANN	e PKP	Z	02:14:08.0	145.3	10.9					
WERN	e PKP	Z	02:14:08.5	145.4	10.8					
MANZ	e PKP	Z	02:14:09.5	145.8	10.4					
TNS	e PKP	Z	02:14:09.8	145.8	4.1					
ROTZ	e PKP	Z	02:14:10.0	146.0	10.6					
GRA1	e PKP	Z	02:14:10.5	146.1	8.9					
WLF	e PKP	Z	02:14:10.8	146.4	0.2					
WET	e PKP	Z	02:14:10.2	146.5	11.9					
GEC2	e PKP	Z	02:14:10.9	146.7	13.5					
STU	e PKP	Z	02:14:12.4	147.2	5.6					
FUR	e PKP	Z	02:14:14.8	147.6	9.4					
BFO	e PKP	Z	02:14:14.9	147.7	4.1					
RJOB	e PKP	Z	02:14:15.3	147.9	12.3					

Date 2010/09/17  
 Origin Time 10:17: 9.1  
 Turkey  
 Lat 38.030N  
 Long 38.990E  
 Depth 12.0  
 mb 4.5  
 Ms 4.1  
 ML  
 Source NEIC

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	10:21:53.7	21.2	111.2	1.2	31	4.5		
RJOB	e P	Z	10:21:55.2	21.4	107.4	1.3	24	4.4		
BRG	e P	Z	10:22:00.5	21.8	116.3	1.8	49	4.6		
ROTZ	e P	Z	10:22:07.3	22.4	111.4	1.4	37	4.6		
TANN	e P	Z	10:22:10.0	22.5	113.2	1.2	21	4.5		
CLL	e P	Z	10:22:10.4	22.6	115.9	1.1	22	4.6		
GRA1	e P	Z	10:22:12.9	23.0	109.9	1.1	28	4.7		
	e L	Z	10:32:05.0			19.9	455		3.9	
MOX	e P	Z	10:22:15.8	23.1	112.5	1.2	12	4.3		
	e L	Z	10:32:50.8			18.0	700		4.2	
UBBA	e P	Z	10:22:22.1	24.1	110.8	1.8	21	4.4		
CLZ	e P	Z	10:22:24.6	24.3	113.4	1.1	16	4.5		

Date 2010/09/17  
 Origin Time 11:10:26.4  
 Lat 15.891S  
 Long 173.304W  
 Depth 33.0G  
 mb  
 Ms  
 ML  
 Source SZGRF

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e PKPbc	Z	11:29:55.3	143.9	6.0					
CLL	e PKPbc	Z	11:29:55.9	144.2	10.4					
BUG	e PKPbc	Z	11:29:56.8	144.4	0.9					
BRG	e PKPbc	Z	11:29:57.1	144.5	12.1					
UBBA	e PKPbc	Z	11:29:58.4	145.0	5.5					
MOX	e PKPbc	Z	11:29:58.7	145.0	8.3					
TANN	e PKPbc	Z	11:29:59.2	145.2	9.7					
ROTZ	e PKPbc	Z	11:30:01.7	145.8	9.5					
GRA1	e PKPbc	Z	11:30:02.2	146.0	7.8					
WLF	e PKPbc	Z	11:30:03.1	146.2	359.1					
WET	e PKPbc	Z	11:30:03.1	146.4	10.8					
GEC2	e PKPbc	Z	11:30:03.5	146.6	12.3					
STU	e PKPbc	Z	11:30:05.4	147.1	4.4					
FUR	e PKPbc	Z	11:30:06.6	147.5	8.2					
BFO	e PKPbc	Z	11:30:05.9	147.5	2.9					
RJOB	e PKPbc	Z	11:30:06.8	147.8	11.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/17	12:20:12.4	41.170N	15.798E	10.0G				SZGRF

Southern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RJOB	e Pn	Z	12:21:52.0	6.9	160.9					
	e Sn	N	12:23:04.7							
GEC2	e Pn	Z	12:22:03.6	7.8	168.3					
	e Sn	E	12:23:23.8							
WET	e Pn	Z	12:22:08.8	8.2	164.5					
	e Sn	E	12:23:34.3							
STU	e Sn	E	12:23:50.3	8.9	146.0					
ROTZ	e Pn	Z	12:22:18.3	9.0	162.4					
BRG	e Pn	Z	12:22:31.3	9.8	171.8					
MOX	e Pn	Z	12:22:31.6	9.9	161.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/17	19:21: 8.2	35.930N	71.580E	223.2	6.0			SZGRF

Pakistan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	19:28:48.1	43.2	87.1	0.9	164	5.8		
	e sP	Z	19:30:00.1							
	e S	R	19:34:59.6							
GEC2	e P	Z	19:28:50.5	43.5	84.8	0.8	70	5.4		

	e sP	Z	19:30:02.9					
	e S	R	19:35:03.7					
CLL	e P	Z	19:28:52.1	43.8	86.9	0.9	115	5.6
	e sP	Z	19:30:04.2					
	e S	R	19:35:07.8					
WET	e P	Z	19:28:54.7	44.0	84.6	0.9	33	5.3
	e pP	Z	19:29:43.9					
	e sP	Z	19:30:07.0					
	e S	R	19:35:11.1					
TANN	e P	Z	19:28:56.0	44.2	85.6	1.2	73	5.5
	e sP	Z	19:30:08.2					
RJOB	e P	Z	19:28:55.8	44.2	83.1	0.9	118	5.8
	e sP	Z	19:30:08.5					
ROTZ	e P	Z	19:28:58.4	44.4	84.7	1.2	122	5.7
	e sP	Z	19:30:10.6					
MOX	e P	Z	19:29:00.0	44.7	85.2	1.1	96	5.6
	e sP	Z	19:30:12.4					
	e S	R	19:35:21.0					
GRA1	e P	Z	19:29:03.5	45.0	84.0	1.1	168	6.0
	e pP	Z	19:29:53.0					
	e sP	Z	19:30:16.0					
	e S	R	19:35:25.8					
FUR	e P	Z	19:29:04.0	45.2	82.5	1.4	192	5.9
	e sP	Z	19:30:16.5					
BSEG	e P	Z	19:29:04.7	45.3	87.5	0.9	237	6.2
	e sP	Z	19:30:17.0					
CLZ	e P	Z	19:29:06.5	45.4	85.5	1.0	298	6.3
	e sP	Z	19:30:17.6					
	e S	R	19:35:30.8					
NRDL	e P	Z	19:29:06.4	45.5	85.9	0.9	220	6.2
	e pP	Z	19:29:55.8					
	e sP	Z	19:30:18.7					
	e S	R	19:35:32.5					
UBBA	e P	Z	19:29:07.7	45.7	84.2	1.2	108	5.8
	e pP	Z	19:29:57.2					
	e sP	Z	19:30:20.2					
STU	e P	Z	19:29:13.8	46.5	81.7	0.8	154	6.2
	e sP	Z	19:30:26.8					
	e S	R	19:35:46.0					
TNS	e P	Z	19:29:16.2	46.8	82.6	0.9	109	6.0
	e sP	Z	19:30:28.8					
IBBN	e P	Z	19:29:17.5	46.9	84.0	0.7	237	6.4
	e sP	Z	19:30:30.0					
BFO	e P	Z	19:29:18.2	47.1	80.7	0.9	72	5.8
	e pP	Z	19:30:08.5					
	e sP	Z	19:30:31.2					
	e S	R	19:35:54.9					
BUG	e P	Z	19:29:20.5	47.3	82.9	0.9	292	6.4
	e sP	Z	19:30:33.2					

	e S	R	19:35:58.4								
WLF	e P	Z	19:29:28.4	48.3	80.5	0.8		441	6.5		
	e sP	Z	19:30:41.3								

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/17	23:12:22.3	45.079N	150.968E	33.0N	4.5			SZGRF

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:24:23.2	79.0	27.7	0.9	4	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/18	06:08:18.4	19.765S	67.645E	33.0N	4.9			SZGRF

Mid-Indian Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:20:53.3	85.5	128.1	1.6	14	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/18	09:58: 0.0	14.000N	51.740E	10.0	4.9			NEIC

Eastern Gulf of Aden

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 10:06:28.2	46.8	124.8	1.6	19	5.0		
BRG	e P	Z 10:06:36.9	47.8	126.6	1.1	7	4.7		
ROTZ	e P	Z 10:06:38.7	48.1	123.9	1.2	6	4.6		
TANN	e P	Z 10:06:41.0	48.3	124.7	1.9	36	5.2		
GRA1	e P	Z 10:06:42.3	48.6	122.8	0.7	11	5.0		
BFO	e P	Z 10:06:50.1	49.5	118.7	1.2	26	5.1		
CLZ	e P	Z 10:06:55.6	50.2	123.4	2.3	96	5.3		
TNS	e P	Z 10:06:56.4	50.4	120.2	1.0	7	4.5		
WLF	e P	Z 10:07:04.4	51.4	117.5	1.2	38	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/18	11:17:18.7	0.630S	19.540W	10.0	4.9			NEIC

Central Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z 11:26:46.2	54.6	215.0	1.1	15	4.9		
STU	e P	Z 11:26:50.8	55.3	215.8	0.7	12	5.0		
FUR	e P	Z 11:26:53.5	55.6	218.4	0.8	23	5.3		

RJOB	e P	Z	11:26:55.4	55.9	220.2	1.0	18	5.0
TNS	e P	Z	11:26:57.8	56.2	214.4	1.6	25	5.0
GRA1	e P	Z	11:27:02.2	56.8	217.7	1.1	11	4.8
WET	e P	Z	11:27:03.8	57.1	219.7	1.0	13	4.9
GEC2	e P	Z	11:27:04.3	57.2	220.7	1.0	7	4.6
ROTZ	e P	Z	11:27:05.4	57.3	218.7	1.4	11	4.7
MOX	e P	Z	11:27:08.7	57.7	217.7	1.1	12	4.8
TANN	e P	Z	11:27:09.6	57.9	218.7	1.1	10	4.8
NRDL	e P	Z	11:27:15.5	58.6	215.4	1.3	17	4.9
BRG	e P	Z	11:27:16.2	58.8	220.2	1.1	4	4.4

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/18 14:29:22.7 17.140S 178.970W 600.0G SZGRF  
 Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPbc	Z	14:47:49.3	143.9	14.8					
IBBN	e PKPbc	Z	14:47:51.3	144.4	11.1					
CLZ	e PKPbc	Z	14:47:51.3	144.5	15.5					
CLL	e PKPbc	Z	14:47:51.2	144.5	20.0					
BRG	e PKPbc	Z	14:47:52.2	144.7	21.7					
MOX	e PKPbc	Z	14:47:54.0	145.4	18.0					
TANN	e PKPbc	Z	14:47:54.3	145.5	19.5					
ROTZ	e PKPbc	Z	14:47:56.5	146.1	19.4					
TNS	e PKPbc	Z	14:47:56.7	146.4	12.9					
	e PKPab	Z	14:47:59.4							
GRA1	e PKPbc	Z	14:47:57.1	146.4	17.8					
	e PKPab	Z	14:48:00.1							
WET	e PKPbc	Z	14:47:57.4	146.6	20.9					
	e PKPab	Z	14:48:00.8							
GEC2	e PKPbc	Z	14:47:57.5	146.7	22.4					
WLF	e PKPbc	Z	14:47:59.4	147.2	9.1					
STU	e PKPab	Z	14:48:05.0	147.7	14.7					
FUR	e PKPbc	Z	14:48:00.9	147.9	18.6					
	e PKPab	Z	14:48:05.8							
RJOB	e PKPbc	Z	14:48:00.8	147.9	21.5					
	e PKPab	Z	14:48:05.9							
BFO	e PKPbc	Z	14:48:01.5	148.2	13.3					
	e PKPab	Z	14:48:06.7							

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/18 21:52:51.5 48.720N 152.420E 33.0G 4.9 SZGRF  
 Kuril Islands, Russia

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

NRDL	e P	Z	22:04:23.5	73.8	24.8	1.4	17	4.9
CLL	e P	Z	22:04:25.1	74.1	26.5	0.7	11	5.0
BRG	e P	Z	22:04:26.5	74.3	27.0	1.1	8	4.6
CLZ	e P	Z	22:04:27.3	74.4	24.9	0.8	9	4.9
IBBN	e P	Z	22:04:28.3	74.6	23.3	1.0	16	5.0
TANN	e P	Z	22:04:30.9	75.1	26.1	2.0	17	4.7
MOX	e P	Z	22:04:31.1	75.1	25.6	1.0	7	4.6
UBBA	e P	Z	22:04:32.7	75.4	24.6	0.7	4	4.7
BUG	e P	Z	22:04:33.5	75.5	22.9	0.8	13	5.1
ROTZ	e P	Z	22:04:35.1	75.7	25.8	1.0	7	4.8
GRA1	e P	Z	22:04:36.9	76.1	25.2	1.0	17	5.1
WET	e P	Z	22:04:37.1	76.1	26.2	1.2	13	4.9
GEC2	e P	Z	22:04:36.9	76.1	26.6	0.8	4	4.5
TNS	e P	Z	22:04:38.2	76.3	23.5	0.7	12	5.1
RJOB	e P	Z	22:04:44.3	77.4	26.0	1.1	8	4.7
WLF	e P	Z	22:04:44.6	77.4	22.0	0.8	8	4.9
FUR	e P	Z	22:04:44.4	77.5	25.1	1.4	23	5.1
STU	e P	Z	22:04:44.4	77.5	23.9	0.9	14	5.1
BFO	e P	Z	22:04:47.7	78.1	23.3	0.8	10	5.0

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/19 00:00:56.9 44.167N 11.614E 10.0G 3.8 SZGRF  
 Northern Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RJOB	e Pn	Z 00:01:53.0	3.7	193.4					3.7
FUR	e Pn	Z 00:01:57.0	4.0	176.5					4.1
BFO	e Pn	Z 00:02:06.3	4.7	150.2					3.8
	e Sn	E 00:02:57.2							
GEC2	e Pn	Z 00:02:08.4	4.9	197.8					3.5
	e Sn	N 00:03:01.8							
WET	e Pn	Z 00:02:10.8	5.1	190.4					3.6
	e Sn	N 00:03:04.3							
GRA1	e Pn	Z 00:02:16.1	5.5	177.1					4.1
TANN	e Pn	Z 00:02:27.0	6.3	185.6					
TNS	e Pn	Z 00:02:29.8	6.4	159.3					
MOX	e Pn	Z 00:02:29.7	6.5	180.0					
	e Sn	E 00:03:37.9							
WLF	e Pn	Z 00:02:33.7	6.6	143.8					

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/19 04:42:43.4 16.096S 172.936W 33.0N  
 Samoa Islands region

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

CLZ	e	PKPbc	Z	05:02:13.2	144.2	5.4
CLL	e	PKPbc	Z	05:02:14.6	144.5	9.8
BRG	e	PKPbc	Z	05:02:14.8	144.8	11.5
UBBA	e	PKPbc	Z	05:02:16.2	145.2	4.9
MOX	e	PKPbc	Z	05:02:16.5	145.3	7.7
TANN	e	PKPbc	Z	05:02:17.1	145.4	9.2
TNS	e	PKPbc	Z	05:02:18.8	145.9	2.4
ROTZ	e	PKPbc	Z	05:02:19.6	146.1	8.9
GRA1	e	PKPbc	Z	05:02:19.9	146.2	7.2
WLF	e	PKPbc	Z	05:02:20.9	146.4	358.4
GEC2	e	PKPbc	Z	05:02:21.5	146.8	11.7
FUR	e	PKPbc	Z	05:02:24.0	147.7	7.6
BFO	e	PKPbc	Z	05:02:23.9	147.7	2.3

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/19 11:10:23.3 11.690N 94.920E 25.2 4.4  
 Andaman Islands, India, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 11:22:04.1	75.3	89.5	0.9	4	4.4		
GEC2	e P	Z 11:22:05.2	75.5	88.8	0.7	5	4.7		
FBE	e P	Z 11:22:06.1	75.7	89.0	0.8	4	4.6		
CLL	e P	Z 11:22:07.4	75.9	88.9	0.7	2	4.4		
WET	e P	Z 11:22:08.1	76.0	88.2	0.8	2	4.2		
WERN	e P	Z 11:22:09.7	76.3	88.1	0.8	2	4.2		
ROHR	e P	Z 11:22:09.8	76.3	88.1	0.8	1	3.9		
ROTZ	e P	Z 11:22:10.5	76.4	87.9	1.1	4	4.5		
GRA1	e P	Z 11:22:14.2	77.1	87.1	0.9	3	4.4		
	e pP	Z 11:22:21.4							
BSEG	e P	Z 11:22:16.2	77.4	87.4	1.0	7	4.7		
CLZ	e P	Z 11:22:16.7	77.5	86.9	0.8	5	4.7		
IBBN	e P	Z 11:22:25.6	79.0	85.0	0.9	9	4.8		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/19 11:51:54.9 22.990N 144.410E 35.0 4.6  
 Volcano Islands, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
MOX	e L	Z 12:51:16.2	95.4	42.7	20.0	213		4.6	
GRA1	e PP	Z 12:09:13.4	96.3	42.5					
	e L	Z 12:53:24.0			18.3	240		4.7	

Date Origin Time Lat Long Depth mb Ms ML Source

2010/09/20 02:12:35.5 57.861N 163.431E 33.0G 5.0 SZGRF  
 Near east coast of Kamchatka Peninsula, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e P	Z 02:23:32.2	68.1	15.1	1.1	12	5.0		
CLL	e P	Z 02:23:32.2	68.2	16.4	1.1	17	5.2		
BRG	e P	Z 02:23:33.5	68.4	16.9	1.3	13	5.0		
MOX	e P	Z 02:23:38.1	69.1	15.6	1.0	8	4.9		
TANN	e P	Z 02:23:38.6	69.1	16.0	1.4	14	5.0		
UBBA	e P	Z 02:23:38.7	69.2	14.8	1.7	15	5.0		
ROTZ	e P	Z 02:23:43.0	69.8	15.8	1.1	12	5.0		
GRA1	e P	Z 02:23:44.5	70.0	15.3	0.9	16	5.2		
WET	e P	Z 02:23:45.8	70.3	16.1	1.1	13	5.0		
GEC2	e P	Z 02:23:45.9	70.4	16.5	1.1	9	4.8		
STU	e P	Z 02:23:51.4	71.3	14.1	0.8	9	5.0		
FUR	e P	Z 02:23:53.1	71.5	15.2	1.4	26	5.2		
RJOB	e P	Z 02:23:53.8	71.6	16.0	0.9	14	5.1		
BFO	e P	Z 02:23:54.6	71.8	13.6	1.2	12	4.9		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/20 03:10:34.1 45.394N 14.552E 10.0G 3.2 SZGRF  
 Northwestern Balkan Peninsula

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RJOB	e Pn	Z 03:11:16.3	2.6	152.1					2.9
	e Sn	E 03:11:47.5							
GEC2	e Pn	Z 03:11:27.4	3.5	170.2					2.9
	e Sn	N 03:12:06.6							
WET	e Pn	Z 03:11:33.0	3.9	162.5					3.4
	e Sn	N 03:12:16.1							
BFO	e Pn	Z 03:11:49.8	5.2	122.3					3.4
TANN	e Sn	E 03:12:47.1	5.2	163.6					3.2
MOX	e Pn	Z 03:11:55.9	5.6	158.4					
	e Sn	N 03:12:54.7							
CLL	e Pn	Z 03:12:02.1	6.0	169.5					

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/21 02:09:15.1 34.726N 26.532E 10.0G 3.8 GSRC  
 Crete, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 02:13:40.5	18.7	137.4	0.9	6	3.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/21	07:57:37.4	25.648N	94.408E	33.0N	4.9			SZGRF

Myanmar-India border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 08:08:11.5	64.5	80.0	0.7	5	4.9		
GEC2	e P	Z 08:08:15.0	65.1	78.9	0.5	4	4.9		
WET	e P	Z 08:08:17.9	65.5	78.4	0.6	4	4.8		
TANN	e P	Z 08:08:18.4	65.5	78.7	0.7	4	4.7		
WERD	e P	Z 08:08:18.7	65.6	78.6	0.7	3	4.6		
ROHR	e P	Z 08:08:18.9	65.7	78.5	0.7	2	4.5		
PLN	e P	Z 08:08:19.1	65.7	78.5	0.6	3	4.7		
ROTZ	e P	Z 08:08:20.6	65.8	78.2	0.7	10	5.2		
CLZ	e P	Z 08:08:24.7	66.5	77.8	0.6	8	5.1		
TNS	e P	Z 08:08:34.3	68.1	75.8	0.8	6	4.9		
WLF	e P	Z 08:08:44.8	69.7	73.9	0.8	17	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/21	12:51:03.0	34.749N	26.771E	10.0N	4.0			SZGRF

Crete, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 12:55:16.5	18.8	136.8	1.5	16	4.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/21	14:42:11.7	15.763N	95.009W	52.0G	5.0			NEIC

Near coast of Oaxaca, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 14:54:45.8	85.0	288.6	0.7	12	5.2		
	e pP	Z 14:54:55.3							
IBBN	e P	Z 14:54:46.1	85.1	289.6	0.9	14	5.2		
TNS	e P	Z 14:54:51.8	86.2	290.3	1.0	32	5.4		
NRDL	e P	Z 14:54:53.6	86.4	291.4	0.9	13	5.1		
CLZ	e P	Z 14:54:55.7	86.8	291.7	1.2	19	5.1		
BFO	e P	Z 14:54:55.7	86.8	290.3	1.6	10	4.7		
UBBA	e P	Z 14:54:56.8	87.0	291.4	2.2	38	5.1		
MOX	e P	Z 14:55:01.3	88.0	292.7	0.9	8	5.0		
GRA1	e P	Z 14:55:02.5	88.1	292.4	0.7	13	5.4		
PLN	e P	Z 14:55:03.1	88.3	293.1	1.1	8	4.9		
WERD	e P	Z 14:55:03.6	88.4	293.2	1.5	11	4.9		
CLL	e P	Z 14:55:04.1	88.5	293.7	1.0	6	4.8		
MANZ	e P	Z 14:55:04.4	88.5	293.1	0.8	4	4.7		
TANN	e P	Z 14:55:04.5	88.6	293.3	1.2	9	4.9		
	e pP	Z 14:55:12.4							

WERN	e P	Z	14:55:05.0	88.6	293.3	0.9	9	5.0
ROTZ	e P	Z	14:55:05.1	88.7	293.1	1.2	6	4.7
WET	e P	Z	14:55:08.5	89.3	293.7	0.9	6	4.8
GEC2	e P	Z	14:55:09.3	89.9	294.3	1.0	5	4.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/21	19:26: 8.2	28.427N	142.724E	34.0G	4.9			NEIC

Bonin Islands, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:39:08.8	90.8	41.2	1.6	10	4.9		
	e pP	Z 19:39:18.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/21	20:14:51.6	40.980N	140.720E	33.0G	4.8			SZGRF

Eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 20:26:37.9	76.0	36.3	0.9	10	5.0		
BRG	e P	Z 20:26:43.6	77.1	38.3	0.9	5	4.7		
CLL	e P	Z 20:26:43.5	77.1	37.8	1.5	23	5.1		
NRDL	e P	Z 20:26:44.6	77.2	36.0	1.3	11	4.8		
CLZ	e P	Z 20:26:47.3	77.7	36.1	0.9	10	5.0		
TANN	e P	Z 20:26:48.9	78.0	37.3	1.3	5	4.5		
MOX	e P	Z 20:26:49.8	78.2	36.8	1.2	9	4.8		
IBBN	e P	Z 20:26:50.1	78.2	34.4	1.7	44	5.2		
ROTZ	e P	Z 20:26:52.8	78.6	37.1	1.2	10	4.7		
GEC2	e P	Z 20:26:52.8	78.8	37.9	0.9	4	4.5		
WET	e P	Z 20:26:54.0	78.9	37.4	1.1	9	4.7		
GRA1	e P	Z 20:26:55.0	79.1	36.4	1.2	28	5.1		
TNS	e P	Z 20:26:58.1	79.7	34.6	1.2	7	4.4		
RJOB	e P	Z 20:27:00.2	80.0	37.2	1.0	10	4.7		
FUR	e P	Z 20:27:01.4	80.3	36.3	1.1	17	5.0		
STU	e P	Z 20:27:03.0	80.6	35.0	1.1	10	4.8		
BFO	e P	Z 20:27:06.3	81.3	34.3	1.2	15	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/24	19:01:35.5	9.328S	71.973W	160.4N	5.7			SZGRF

Peru-Brazil border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:14:29.4	92.7	258.8	1.5	44	5.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/24	21:41: 1.2	17.140S	171.860W	33.0N				SZGRF

Tonga Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e PKPbc	Z 22:00:34.8	145.3	3.7					
CLL	e PKPbc	Z 22:00:35.9	145.6	8.2					
KSP	e PKPbc	Z 22:00:36.2	145.7	13.9					
BRG	e PKPbc	Z 22:00:36.6	145.9	9.9					
FBE	e PKPbc	Z 22:00:37.3	146.0	8.9					
MOX	e PKPbc	Z 22:00:38.3	146.4	6.0					
WERD	e PKPbc	Z 22:00:38.9	146.5	7.2					
TANN	e PKPbc	Z 22:00:39.8	146.5	7.5					
MANZ	e PKPbc	Z 22:00:40.6	147.0	7.0					
ROTZ	e PKPbc	Z 22:00:40.6	147.2	7.2					
GRA1	e PKPbc	Z 22:00:41.4	147.4	5.5					
GEC2	e PKPbc	Z 22:00:42.8	148.0	10.1					
BFO	e PKPbc	Z 22:00:45.2	148.8	0.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/26	09:34: 6.6	8.520S	151.790E	166.9N				SZGRF

D'Entrecasteaux Islands, Papua New Guinea, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPdf	Z 09:52:47.7	125.1	48.9					
BRG	e PKPdf	Z 09:52:47.9	125.3	54.4					
CLL	e PKPdf	Z 09:52:48.2	125.5	53.2					
NRDL	e PKPdf	Z 09:52:49.5	126.2	49.4					
CLZ	e PKPdf	Z 09:52:50.4	126.5	50.1					
GEC2	e PKPdf	Z 09:52:50.5	126.6	55.3					
MOX	e PKPdf	Z 09:52:50.4	126.6	52.1					
ROTZ	e PKPdf	Z 09:52:51.3	126.8	53.2					
WET	e PKPdf	Z 09:52:51.1	126.8	54.3					
IBBN	e PKPdf	Z 09:52:51.8	127.3	46.9					
GRA1	e PKPdf	Z 09:52:52.0	127.4	52.2					
RJOB	e PKPdf	Z 09:52:52.4	127.7	55.1					
TNS	e PKPdf	Z 09:52:54.3	128.4	48.9					
STU	e PKPdf	Z 09:52:55.2	129.0	50.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/26	10:32:15.1	15.741S	166.514W	33.0N				SZGRF

Samoa Islands region

./2010/bul1009.txt

Thu Apr 23 08:38:25 2020

40

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z 10:51:51.0	146.0	356.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/26	12:12:30.0	9.200S	135.900E	33.0G		5.5		SZGRF

Arafura Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKPdf	Z 12:31:15.7	117.0	70.0					
CLL	e PKPdf	Z 12:31:16.5	117.4	69.0					
GEC2	e PKPdf	Z 12:31:17.4	117.8	70.8					
TANN	e PKPdf	Z 12:31:17.8	118.0	68.9					
WET	e PKPdf	Z 12:31:18.3	118.2	69.9					
MOX	e PKPdf	Z 12:31:18.4	118.4	68.1					
	e L	Z 13:25:20.9			21.8	1593		5.6	
CLZ	e PKPdf	Z 12:31:19.5	118.7	66.3					
RJOB	e PKPdf	Z 12:31:19.2	118.7	70.6					
GRA1	e PKPdf	Z 12:31:20.1	119.0	68.2					
	e L	Z 13:24:18.4			21.6	1021		5.4	
FUR	e PKPdf	Z 12:31:21.1	119.6	69.0					
TNS	e PKPdf	Z 12:31:22.6	120.5	65.4					
STU	e PKPdf	Z 12:31:22.9	120.6	66.8					
BUG	e PKPdf	Z 12:31:22.7	120.6	63.6					
BFO	e PKPdf	Z 12:31:24.4	121.3	66.3					
WLF	e PKPdf	Z 12:31:26.4	122.0	63.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/26	17:19:23.2	23.430S	178.180W	586.7				SZGRF

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 17:39:12.0	148.8	15.2					
NRDL	e PKPbc	Z 17:39:15.7	150.3	15.5					
IBBN	e PKPbc	Z 17:39:16.9	150.8	11.2					
CLL	e PKPbc	Z 17:39:17.1	150.8	21.4					
CLZ	e PKPbc	Z 17:39:17.4	150.8	16.3					
BRG	e PKPbc	Z 17:39:17.9	151.0	23.4					
BUG	e PKPbc	Z 17:39:19.1	151.7	10.6					
MOX	e PKPbc	Z 17:39:19.3	151.7	19.3					
TANN	e PKPbc	Z 17:39:19.6	151.8	21.0					
ROTZ	e PKPbc	Z 17:39:21.2	152.4	20.9					
TNS	e PKPbc	Z 17:39:21.7	152.7	13.4					
GRA1	e PKPbc	Z 17:39:21.9	152.7	19.1					
	e pPKPbc	Z 17:41:36.8							
WET	e PKPbc	Z 17:39:22.0	152.9	22.7					

./2010/bull1009.txt

Thu Apr 23 08:38:25 2020

41

GEC2	e	PKPbc	Z	17:39:22.2	152.9	24.5
WLF	e	PKPbc	Z	17:39:24.1	153.5	9.0
STU	e	PKPbc	Z	17:39:24.5	154.0	15.6
FUR	e	PKPbc	Z	17:39:24.9	154.2	20.2
RJOB	e	PKPbc	Z	17:39:24.8	154.2	23.6
BFO	e	PKPbc	Z	17:39:25.7	154.6	14.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/26	18:28:2.5	52.500N	178.500E	264.3N	5.9			SZGRF

Rat Islands, Aleutian Islands, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 18:39:06.9	73.1	7.5	0.9	200	6.2		
NRDL	e P	Z 18:39:14.9	74.6	7.3	1.0	105	5.8		
IBBN	e P	Z 18:39:17.1	74.9	5.8	1.0	327	6.3		
CLZ	e P	Z 18:39:18.8	75.2	7.4	1.2	203	6.1		
CLL	e P	Z 18:39:19.7	75.5	9.1	1.0	83	5.8		
BUG	e P	Z 18:39:21.6	75.8	5.5	1.0	119	6.0		
BRG	e P	Z 18:39:21.7	75.8	9.6	1.0	71	5.7		
MOX	e P	Z 18:39:24.4	76.3	8.2	1.0	89	5.8		
TANN	e P	Z 18:39:25.5	76.4	8.7	1.3	69	5.6		
TNS	e P	Z 18:39:28.2	76.9	6.2	1.0	108	5.9		
ROTZ	e P	Z 18:39:29.3	77.1	8.5	1.1	71	5.7		
GRA1	e P	Z 18:39:30.3	77.2	7.9	1.0	151	6.1		
WET	e P	Z 18:39:32.3	77.6	8.9	1.2	64	5.6		
WLF	e P	Z 18:39:32.3	77.6	4.8	1.0	92	5.9		
GEC2	e P	Z 18:39:33.3	77.8	9.4	1.0	51	5.6		
STU	e P	Z 18:39:35.6	78.3	6.6					
FUR	e P	Z 18:39:38.2	78.8	7.9	1.1	153	5.9		
BFO	e P	Z 18:39:38.4	78.8	6.1	1.1	82	5.7		
RJOB	e P	Z 18:39:40.0	79.0	8.8	0.9	60	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/27	00:09:11.4	57.312N	29.247W	10.0G	4.8			SZGRF

North Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:14:26.7	24.8	303.4	1.0	19	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/27	00:16:22.6	57.686N	32.920W	10.0G	5.3			SZGRF

Reykjanes Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:21:53.5	26.8	304.3	1.1	74	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/27	00:28:33.8	57.439N	29.507W	10.0G	4.5			SZGRF

North Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:33:57.7	25.0	303.7	0.9	10	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/27	04:36:32.1	10.812N	97.177E	33.0N	4.6			SZGRF

Andaman Islands, India, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:48:34.0	79.2	86.0	0.7	4	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/27	11:23:21.6	31.940N	48.830E	33.0G	5.6	5.0		SZGRF

Western Iran

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 11:29:32.7	31.2	109.7	0.8	26	5.2		
RJOB	e P	Z 11:29:34.5	31.5	106.9	0.7	49	5.5		
BRG	e P	Z 11:29:37.4	31.8	113.0	0.9	54	5.5		
WET	e P	Z 11:29:37.5	31.8	109.2	0.9	69	5.6		
ROTZ	e P	Z 11:29:43.7	32.5	109.4	0.8	61	5.6		
TANN	e P	Z 11:29:44.1	32.5	110.6	0.9	11	4.8		
CLL	e P	Z 11:29:43.8	32.5	112.6	1.0	106	5.7		
FUR	e P	Z 11:29:44.0	32.6	106.0	0.9	287	6.2		
GRA1	e P	Z 11:29:48.4	33.0	108.2	0.8	179	6.1		
	e L	Z 11:47:40.0			21.5	2343		4.9	
MOX	e P	Z 11:29:48.7	33.1	110.0	1.0	38	5.3		
	e L	Z 11:48:17.7			20.2	3855		5.1	
STU	e P	Z 11:29:56.3	34.0	104.8	0.9	19	5.0		
CLZ	e P	Z 11:29:59.0	34.3	110.3	0.8	192	6.1		
BFO	e P	Z 11:30:01.4	34.5	103.3	0.9	20	5.1		
NRDL	e P	Z 11:30:02.6	34.6	110.9	0.9	234	6.1		
TNS	e P	Z 11:30:04.1	34.9	106.1	1.0	49	5.4		
BSEG	e P	Z 11:30:05.3	35.1	113.1	1.3	109	5.6		
IBBN	e P	Z 11:30:13.5	35.9	108.1	1.3	458	6.1		
BUG	e P	Z 11:30:13.6	36.0	106.5	0.9	105	5.7		
WLF	e P	Z 11:30:15.4	36.2	103.0	0.9	79	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/27	16:13:43.5	44.600N	145.650E	104.7N	5.1			SZGRF

Hokkaido, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 16:25:12.1	74.4	31.3	0.9	34	5.4		
NRDL	e P	Z 16:25:19.2	75.7	31.0	0.8	9	5.0		
CLL	e P	Z 16:25:19.1	75.7	32.7	0.8	39	5.6		
BRG	e P	Z 16:25:19.5	75.8	33.3	0.8	9	5.0		
CLZ	e P	Z 16:25:22.3	76.1	31.1	0.7	23	5.4		
IBBN	e P	Z 16:25:24.0	76.5	29.4	0.8	40	5.6		
TANN	e P	Z 16:25:24.8	76.7	32.2	0.9	4	4.6		
MOX	e P	Z 16:25:25.1	76.8	31.7	0.7	9	5.0		
ROTZ	e P	Z 16:25:28.6	77.3	32.0	1.0	10	4.9		
BUG	e P	Z 16:25:28.9	77.5	29.0	0.8	22	5.3		
GEC2	e P	Z 16:25:29.5	77.6	32.8	0.7	6	4.8		
WET	e P	Z 16:25:30.2	77.6	32.4	0.9	17	5.2		
GRA1	e P	Z 16:25:30.8	77.7	31.4	0.8	28	5.5		
TNS	e P	Z 16:25:32.8	78.1	29.6	0.7	12	5.1		
RJOB	e P	Z 16:25:37.2	78.8	32.1	0.8	14	5.1		
FUR	e P	Z 16:25:37.5	79.0	31.2	0.8	26	5.3		
STU	e P	Z 16:25:38.5	79.2	30.0	0.8	25	5.2		
WLF	e P	Z 16:25:40.6	79.4	28.1	0.8	9	4.8		
BFO	e P	Z 16:25:42.0	79.8	29.4	0.8	11	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/28	12:31: 9.7	24.283N	126.867E	33.0G	5.3	4.3		SZGRF

Ryukyu Islands, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 12:43:54.4	86.7	55.4	1.0	23	5.3		
	e L	Z 13:26:55.9			18.6	102		4.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/28	23:43:56.6	38.871S	23.660W	10.0G	4.8			SZGRF

South Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:57:15.3	93.8	206.5	0.7	3	4.8		

./2010/bul1009.txt

Thu Apr 23 08:38:25 2020

44

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/28	23:45:38.8	11.436N	92.259E	33.0G	5.3			SZGRF

Andaman Islands, India, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:57:23.5	75.5	89.3	1.5	34	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/29	03:01:57.7	36.796N	141.341E	33.0N	5.3			SZGRF

Near east coast of eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:14:19.7	82.9	38.1	1.3	25	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/29	04:22:17.7	26.010N	146.340E	282.2N	5.5			SZGRF

North Pacific Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 04:34:57.8	92.4	41.6	0.8	13	5.4		
CLL	e P	Z 04:34:58.0	92.5	40.9	0.8	12	5.4		
NRDL	e P	Z 04:34:58.9	92.7	38.5	1.1	15	5.3		
CLZ	e P	Z 04:35:01.2	93.1	38.7	1.0	18	5.5		
TANN	e P	Z 04:35:02.3	93.4	40.5	1.4	35	5.5		
MOX	e P	Z 04:35:03.1	93.6	39.8	0.9	9	5.1		
ROTZ	e P	Z 04:35:04.9	94.0	40.3	0.9	15	5.3		
WET	e P	Z 04:35:05.6	94.2	40.8	0.9	2	4.5		
GRA1	e P	Z 04:35:07.1	94.4	39.5	1.1	31	5.7		
TNS	e P	Z 04:35:09.9	95.1	37.2	1.2	18	5.4		
FUR	e P	Z 04:35:11.9	95.6	39.6	0.8	13	5.5		
STU	e P	Z 04:35:14.0	96.0	37.9	0.7	18	5.7		
WLF	e P	Z 04:35:15.9	96.5	35.4	1.2	44	6.0		
BFO	e P	Z 04:35:16.9	96.7	37.3	1.3	64	6.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/29	05:36:41.2	46.099N	11.771E	10.0G			2.8	SZGRF

Northern Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WTTA	e Pn	Z 05:37:00.6	1.2	175.4					2.7
	e Sg	E 05:37:17.5							
KBA	e Pn	Z 05:37:06.1	1.5	228.4					2.5
	e Sg	E 05:37:27.3							

DAVA	e Pn	Z	05:37:11.1	1.8	131.8		
RJOB	e Pn	Z	05:37:12.1	1.8	203.5	2.9	
	e Sg	N	05:37:37.7				
OBKA	e Pn	Z	05:37:15.6	2.0	258.9	2.7	
MOA	e Pn	Z	05:37:19.6	2.4	225.1	2.6	
BFO	e Pn	Z	05:37:29.1	3.2	132.4	2.8	
	e Sn	E	05:38:08.4				
ROTZ	e Pn	Z	05:37:35.8	3.7	184.7	3.2	
	e Sn	E	05:38:17.6				
MOX	e Sn	E	05:38:38.9	4.5	178.6	3.3	
TNS	e Pn	Z	05:37:49.7	4.7	150.5		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/29 08:00:1.1 37.930N 141.220E 33.0G 5.8 5.1  
 Near east coast of eastern Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	08:12:02.7	78.9	37.4	1.7	186	5.8		
BRG	e P	Z	08:12:07.7	79.9	39.6	2.0	207	5.7		
CLL	e P	Z	08:12:07.6	79.9	39.0	1.9	269	5.8		
NRDL	e P	Z	08:12:09.0	80.1	37.1	1.5	90	5.5		
CLZ	e P	Z	08:12:11.5	80.5	37.2	1.8	213	5.9		
TANN	e P	Z	08:12:13.0	80.8	38.5	1.5	70	5.5		
MOX	e P	Z	08:12:13.7	81.0	38.0	1.6	107	5.6		
	e L	Z	08:49:58.1			18.7	1060		5.2	
IBBN	e P	Z	08:12:14.3	81.1	35.4	1.8	247	5.9		
ROTZ	e P	Z	08:12:16.6	81.5	38.3	1.6	178	5.9		
WET	e P	Z	08:12:17.4	81.7	38.7	1.8	140	5.8		
GRA1	e P	Z	08:12:18.9	81.9	37.6	1.9	416	6.2		
	e L	Z	08:50:22.7			19.1	808		5.1	
BUG	e P	Z	08:12:18.7	82.0	35.0	1.9	99	5.6		
TNS	e P	Z	08:12:22.0	82.5	35.7	1.3	53	5.6		
RJOB	e P	Z	08:12:23.3	82.8	38.5	1.6	76	5.7		
FUR	e P	Z	08:12:24.7	83.1	37.5	1.5	183	6.1		
STU	e P	Z	08:12:26.3	83.4	36.1	1.2	101	5.9		
WLF	e P	Z	08:12:29.0	83.8	34.1	2.1	310	6.2		
BFO	e P	Z	08:12:29.8	84.1	35.5	1.9	274	6.2		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/29 11:33:34.3 4.860N 94.090E 55.6N 5.3  
 Off west coast of northern Sumatra, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	11:45:38.3	80.0	94.6	0.9	17	5.0		
RJOB	e P	Z	11:45:40.9	80.6	93.2	1.0	23	5.2		

WET	e P	Z	11:45:41.5	80.6	93.5	0.9	26	5.3
CLL	e P	Z	11:45:41.1	80.6	93.9	0.9	13	5.0
TANN	e P	Z	11:45:43.1	80.9	93.4	1.0	10	4.8
ROTZ	e P	Z	11:45:44.3	81.1	93.1	0.9	23	5.2
MOX	e P	Z	11:45:45.9	81.5	92.7	0.8	8	4.8
FUR	e P	Z	11:45:46.3	81.6	92.1	0.8	23	5.4
GRA1	e P	Z	11:45:47.6	81.7	92.3	0.9	37	5.5
CLZ	e P	Z	11:45:50.2	82.3	91.9	0.9	25	5.3
BSEG	e P	Z	11:45:50.7	82.4	92.2	0.9	33	5.5
NRDL	e P	Z	11:45:51.4	82.5	91.8	1.2	31	5.4
STU	e P	Z	11:45:53.6	83.0	90.6	0.8	12	5.2
TNS	e P	Z	11:45:56.5	83.5	90.2	1.0	25	5.4
BFO	e P	Z	11:45:56.4	83.6	89.9	0.8	17	5.3
IBBN	e P	Z	11:45:58.5	83.9	89.9	0.8	26	5.5
BUG	e P	Z	11:46:00.1	84.2	89.4	0.8	28	5.5
WLF	e P	Z	11:46:04.4	85.0	88.4	1.2	35	5.5

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/29 17:10:52.4 4.967S 133.828E 33.0G 6.8  
 Irian Jaya, Indonesia, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKPdf	Z 17:29:28.9	112.4	69.1					
CLL	e PKPdf	Z 17:29:27.8	112.7	68.1					
BSEG	e PKPdf	Z 17:29:31.3	113.2	64.6					
TANN	e PKPdf	Z 17:29:30.3	113.4	68.0					
WET	e PKPdf	Z 17:29:31.2	113.6	68.8					
MOX	e PKPdf	Z 17:29:32.5	113.8	67.1					
	e L	Z 18:26:03.4			21.2	28030		6.8	
NRDL	e PKPdf	Z 17:29:30.4	113.9	65.0					
CLZ	e PKPdf	Z 17:29:33.4	114.0	65.5					
RJOB	e PKPdf	Z 17:29:31.3	114.2	69.3					
GRA1	e PKPdf	Z 17:29:33.5	114.4	67.2					
	e L	Z 18:25:57.7			22.0	26821		6.8	
FUR	e PKPdf	Z 17:29:33.8	115.0	67.9					
TNS	e PKPdf	Z 17:29:35.7	115.8	64.5					
BUG	e PKPdf	Z 17:29:37.2	116.0	62.9					
STU	e PKPdf	Z 17:29:35.5	116.0	65.8					
BFO	e PKPdf	Z 17:29:36.7	116.7	65.2					
WLF	e PKPdf	Z 17:29:39.4	117.4	62.6					

Date Origin Time Lat Long Depth mb Ms ML Source  
 2010/09/29 18:51:42.1 33.296N 22.255E 33.0G 4.2  
 Central Mediterranean Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 18:55:57.2	18.3	149.4	0.9	18	4.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/29	18:49:26.9	17.230S	172.560W	33.0G				SZGRF

Tonga Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z 19:09:03.8	144.9	0.5					
CLL	e PKPbc	Z 19:09:05.6	145.6	9.4					
MOX	e PKPbc	Z 19:09:07.7	146.4	7.2					
TANN	e PKPbc	Z 19:09:08.7	146.6	8.7					
TNS	e PKPbc	Z 19:09:09.8	147.0	1.8					
ROTZ	e PKPbc	Z 19:09:10.9	147.2	8.4					
GRA1	e PKPbc	Z 19:09:11.4	147.4	6.7					
WLF	e PKPbc	Z 19:09:12.0	147.5	357.7					
WET	e PKPbc	Z 19:09:13.0	147.8	9.8					
BFO	e PKPbc	Z 19:09:15.6	148.9	1.6					
FUR	e PKPbc	Z 19:09:15.8	148.9	7.1					
RJOB	e PKPbc	Z 19:09:16.5	149.2	10.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/30	02:21:10.4	39.094N	91.449E	33.0G	4.8			SZGRF

Southern Xinjiang, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 02:30:45.8	55.5	68.1	1.3	15	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/30	03:53:52.0	37.387N	101.539E	33.0G	5.7	4.7		SZGRF

Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:04:13.3	62.6	63.5	2.9	173	5.7		
	e L	Z 04:49:44.8			20.0	490		4.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/30	04:31:40.5	37.676N	23.736E	39.7N		3.6		SZGRF

Southern Greece

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

GRA1	e P	Z	04:35:15.0	15.0	138.5	1.3	26		
	e L	Z	04:49:44.9			20.0	490	3.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/30	09:00:24.4	19.450N	121.030E	33.0G	5.3	5.6		SZGRF

Philippine Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	09:13:01.3	85.2	64.8	0.8	46	5.7		
CLL	e P	Z	09:13:02.7	85.6	64.1	0.8	32	5.5		
BSEG	e P	Z	09:13:04.4	85.8	62.2	0.9	54	5.7		
GEC2	e P	Z	09:13:06.2	86.2	64.4	0.7	11	5.1		
TANN	e P	Z	09:13:06.5	86.3	63.6					
WET	e P	Z	09:13:08.1	86.6	63.8	0.7	5	4.8		
NRDL	e P	Z	09:13:08.5	86.6	61.9	1.1	25	5.3		
MOX	e P	Z	09:13:08.4	86.6	63.0					
	e L	Z	09:56:30.6			20.0	2270		5.6	
ROTZ	e P	Z	09:13:08.7	86.7	63.4					
CLZ	e P	Z	09:13:09.5	86.8	62.1					
RJOB	e P	Z	09:13:11.6	87.2	63.7					
GRA1	e P	Z	09:13:11.9	87.3	62.6					
	e L	Z	09:56:45.2			19.5	2739		5.7	
IBBN	e P	Z	09:13:14.8	88.0	60.1					
FUR	e P	Z	09:13:14.8	88.0	62.6					
TNS	e P	Z	09:13:17.9	88.6	60.6					
BUG	e P	Z	09:13:17.8	88.6	59.7					
STU	e P	Z	09:13:19.9	88.9	61.1					
BFO	e P	Z	09:13:22.6	89.6	60.4					
WLF	e P	Z	09:13:25.3	90.2	58.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/30	09:54:12.0	4.910N	94.190E	55.4N	5.8			SZGRF

Off west coast of northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	10:06:15.7	80.0	94.5	1.4	92	5.5		
RJOB	e P	Z	10:06:18.1	80.6	93.1	0.9	46	5.5		
WET	e P	Z	10:06:18.8	80.6	93.4	0.9	64	5.6		
CLL	e P	Z	10:06:18.5	80.7	93.8	1.0	37	5.4		
TANN	e P	Z	10:06:20.4	80.9	93.2	1.1	35	5.3		
ROTZ	e P	Z	10:06:21.7	81.1	92.9	0.9	62	5.7		
MOX	e P	Z	10:06:23.3	81.5	92.6	0.9	33	5.5		
FUR	e P	Z	10:06:23.7	81.6	92.0	0.8	56	5.8		
GRA1	e P	Z	10:06:24.9	81.7	92.2	0.0	116	7.5		
CLZ	e P	Z	10:06:27.5	82.3	91.8	0.9	65	5.8		

BSEG	e P	Z	10:06:28.1	82.4	92.1	0.9	83	5.9
NRDL	e P	Z	10:06:28.8	82.5	91.7	1.1	56	5.7
STU	e P	Z	10:06:31.1	83.0	90.5	0.8	48	5.8
TNS	e P	Z	10:06:33.8	83.5	90.1	0.9	49	5.7
BFO	e P	Z	10:06:33.8	83.6	89.8	0.8	43	5.7
IBBN	e P	Z	10:06:35.9	83.9	89.8	0.8	85	6.0
BUG	e P	Z	10:06:37.4	84.2	89.3	0.9	71	5.9
WLF	e P	Z	10:06:41.7	85.0	88.3	1.1	59	5.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/30	12:47:22.6	37.581N	141.204E	33.0G	5.0			SZGRF

Near east coast of eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 12:59:29.2	82.2	37.8	0.8	9	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/30	13:32:38.9	1.130N	149.735E	33.0G				SZGRF

Eastern Caroline Islands, Micronesia, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 13:51:19.4	118.0	48.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2010/09/30	23:29:40.2	8.020S	71.220W	637.0	5.2			SZGRF

Western Brazil

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 23:42:31.4	88.1	255.2	0.9	51	5.9		
BFO	e P	Z 23:42:35.8	89.1	256.9	0.9	10	5.0		
BUG	e P	Z 23:42:36.4	89.2	256.0	1.0	12	5.1		
TNS	e P	Z 23:42:38.5	89.6	257.0	0.8	11	5.1		
IBBN	e P	Z 23:42:38.7	89.7	256.4	0.8	13	5.2		
STU	e P	Z 23:42:39.4	89.8	257.5	1.0	37	5.5		
FUR	e P	Z 23:42:45.1	91.0	259.1	1.0	29	5.6		
NRDL	e P	Z 23:42:45.8	91.1	258.3	1.0	8	5.0		
CLZ	e P	Z 23:42:45.7	91.2	258.5	0.9	5	4.9		
GRA1	e P	Z 23:42:46.3	91.3	259.1	0.9	8	5.1		
BSEG	e P	Z 23:42:47.4	91.5	258.5	0.9	21	5.5		
MOX	e P	Z 23:42:48.1	91.7	259.4	0.9	3	4.7		
ROTZ	e P	Z 23:42:49.8	91.9	259.8	0.9	12	5.2		
RJOB	e P	Z 23:42:49.2	91.9	260.2	0.9	21	5.5		
TANN	e P	Z 23:42:50.7	92.2	260.0	1.0	5	4.8		

WET	e P	Z	23:42:50.7	92.2	260.3	0.9	8	5.0
CLL	e P	Z	23:42:52.6	92.7	260.5	0.9	3	4.7
GEC2	e P	Z	23:42:52.8	92.7	260.9	0.8	11	5.3
BRG	e P	Z	23:42:55.4	93.2	261.2	1.1	13	5.3
	e pP	Z	23:45:11.3					

## Format description

=====

(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