



Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/01	15:06:1.2	43.207N	15.073E	10.0G			3.3	SZGRF

Adriatic Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
ARSA	e Pn	Z 15:07:02.3	4.1	184.6					
MOA	e Pn	Z 15:07:12.2	4.7	172.8					3.3
	e Sn	E 15:08:05.8							
GEC2	e Pn	Z 15:07:25.7	5.7	169.9					
	e Sn	N 15:08:28.0							
WET	e Pn	Z 15:07:31.0	6.1	164.8					
	e Sn	N 15:08:38.6							
WERD	e Pn	Z 15:07:49.9	7.5	164.3					
MOX	e Pn	Z 15:07:53.4	7.8	161.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/01								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 18:23:41.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/01	19:03:12.0	63.600S	166.100W	33.0N		6.2		GSRC-M

Pacific-Antarctic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 19:23:13.2	166.0	184.9					
	e PKPab	Z 19:24:14.2							
	e PP	Z 19:28:01.3							
	e L	Z 20:50:19.1			20.9	3552		6.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/01	19:44:48.6	13.400S	112.800W	33.0N				GSRC-M

Central East Pacific Rise

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 20:03:41.8	121.9	288.2					

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/02	00:07:10.7	33.592N	139.265E	33.0N	4.3			SZGRF

Southeast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:19:42.4	84.8	41.2	0.8	2	4.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/02								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 01:50:01.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/02	02:36:55.4	5.070S	102.670E	33.0N	5.6	4.7		SZGRF

Southern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 02:50:06.3	93.1	94.2	1.8	71	5.8		
GEC2	e P	Z 02:50:06.2	93.1	94.1	1.9	101	5.9		
	e PP	Z 02:53:48.1							
RUE	e P	Z 02:50:07.5	93.3	94.0	1.5	105	6.0		
WET	e P	Z 02:50:08.8	93.7	93.5	1.4	41	5.6		
CLL	e P	Z 02:50:08.7	93.7	93.4	1.4	26	5.4		
WERD	e P	Z 02:50:10.7	94.1	93.0	1.3	22	5.3		
	e PP	Z 02:53:57.4							
MOX	e P	Z 02:50:12.8	94.6	92.4	1.3	26	5.5		
	e PP	Z 02:54:00.8							
GRA1	e P	Z 02:50:14.1	94.8	92.2	1.5	59	5.8		
	e PP	Z 02:54:02.7							
	e L	Z 03:41:04.0			21.1	290		4.7	
CLZ	e P	Z 02:50:16.6	95.4	91.3	1.4	35	5.6		
BSEG	e P	Z 02:50:17.1	95.5	91.1	1.3	29	5.5		
	e PP	Z 02:54:07.6							
NRDL	e P	Z 02:50:17.6	95.6	91.1	1.6	43	5.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/02								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 04:03:10.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/02	10:50:50.9	0.639S	13.017W	33.0N	4.4			SZGRF

North of Ascension Island

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 11:00:15.4	54.5	210.3	0.9	4	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/03	05:33:41.5	37.220N	28.240E	33.0G		4.1		SZGRF

Turkey

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 05:37:23.5	15.7	132.4					
	e S	E 05:40:25.1							
	e L	Z 05:43:46.4			13.2	685		4.0	
WET	e P	Z 05:37:30.1	16.3	131.3					
	e S	Z 05:40:37.6							
	e L	Z 05:44:07.7			11.3	598		4.0	
FUR	e S	N 05:40:44.8	16.5	125.2					
	e L	Z 05:44:21.2			10.5	783		4.2	
BRG	e P	Z 05:37:41.0	17.0	137.8					
GRA1	e P	Z 05:37:45.0	17.5	129.1					
	e S	E 05:41:06.0							
	e S	Z 05:41:09.0							
	e L	Z 05:44:55.5			13.4	604		4.0	
CLL	e P	Z 05:37:48.1	17.7	136.6					
	e S	E 05:41:10.8							
MOX	e P	Z 05:37:49.4	17.9	132.2					
	e S	Z 05:41:15.8							
	e L	Z 05:45:14.9			9.5	636		4.2	
STU	e P	Z 05:37:50.1	18.0	122.8					
	e S	Z 05:41:16.9							
	e L	Z 05:45:14.9			13.2	620		4.1	
BFO	e P	Z 05:37:53.2	18.3	120.1					
	e S	Z 05:41:21.8							
CLZ	e P	Z 05:38:05.5	19.3	132.3					
	e S	Z 05:41:43.2							
NRDL	e P	Z 05:38:09.8	19.8	133.1					
	e S	N 05:41:54.4							
BUG	e P	Z 05:38:18.5	20.5	125.6					
BSEG	e P	Z 05:38:19.8	20.8	136.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/03	09:41:18.4	36.530N	27.570E	33.0G				SZGRF

Dodecanese Islands, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 09:45:02.3	15.9	135.4					
	e S	Z 09:48:06.2							
WET	e P	Z 09:45:07.6	16.5	134.2					
FUR	e S	Z 09:48:18.1	16.7	128.2					
BRG	e P	Z 09:45:21.3	17.3	140.6					
GUNZ	e P	Z 09:45:24.6	17.6	135.8					
GRA1	e P	Z 09:45:24.8	17.7	131.9					
	e S	Z 09:48:48.8							
WERD	e P	Z 09:45:25.3	17.7	136.0					
CLL	e P	Z 09:45:27.6	18.1	139.3					
	e S	Z 09:48:53.5							
STU	e S	Z 09:48:56.6	18.1	125.6					
MOX	e P	Z 09:45:28.5	18.2	134.9					
	e S	Z 09:48:56.9							
BFO	e S	Z 09:49:00.3	18.4	122.8					
CLZ	e P	Z 09:45:44.0	19.6	134.8					
	e S	Z 09:49:23.8							
NRDL	e P	Z 09:45:49.8	20.1	135.5					
	e S	Z 09:49:38.2							
WLF	e P	Z 09:45:53.9	20.3	122.2					
	e S	Z 09:49:38.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/03	13:11:37.9	37.170N	27.940E	33.0G		4.3		SZGRF

Turkey

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 13:15:17.1	15.6	133.2					
	e S	Z 13:18:17.2							
	e L	Z 13:21:49.5							
WET	e P	Z 13:15:24.2	16.2	132.0	20.2	1565		4.2	
	e S	Z 13:18:32.3							
	e L	Z 13:22:09.8							
FUR	e L	Z 13:22:03.9	16.4	126.0	18.7	1875		4.3	
BRG	e P	Z 13:15:34.3	16.9	138.6	22.0	2112			4.3
	e S	Z 13:18:51.2							
	e L	Z 13:21:43.3							
GRA1	e P	Z 13:15:39.4	17.4	129.8	21.6	1997		4.3	
	e S	Z 13:19:00.0							
	e L	Z 13:21:59.5							
CLL	e P	Z 13:15:43.3	17.7	137.4	21.0	1642		4.3	
	e S	Z 13:19:07.6							
MOX	e P	Z 13:15:44.5	17.8	132.9					
	e S	Z 13:19:08.8							
BFO	e P	Z 13:15:48.4	18.1	120.7					

	e S	Z	13:19:16.4		
CLZ	e P	Z	13:16:00.5	19.2	133.0
	e S	Z	13:19:36.6		
NRDL	e P	Z	13:16:07.2	19.8	133.8
	e S	N	13:19:49.2		
WLF	e P	Z	13:16:10.3	20.0	120.3
	e S	E	13:19:54.8		
BUG	e P	Z	13:16:13.8	20.4	126.3
BSEG	e P	Z	13:16:15.4	20.7	136.9
	e S	N	13:20:06.8		
IBBN	e S	E	13:20:08.7	20.7	129.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/04	03:01:10.3	36.630N	27.440E	33.0G	5.0	4.9		SZGRF
Dodecanese Islands, Greece								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	03:04:52.5	15.8	135.6	1.5	216	5.1		
	e L	Z	03:11:24.4			20.3	5193		4.7	
WET	e P	Z	03:04:59.6	16.4	134.3	1.4	128	4.9		
	e L	Z	03:12:24.5			15.3	9456		5.1	
FUR	e P	Z	03:05:01.6	16.5	128.3	1.2	135	4.9		
	e S	N	03:08:12.5							
	e L	Z	03:11:06.3			27.1	8230		4.8	
BRG	e P	Z	03:05:09.7	17.2	140.7					
	e S	N	03:08:25.9							
	e L	Z	03:12:09.4			19.6	6965		4.9	
GUNZ	e P	Z	03:05:13.2	17.5	135.9					
GRA1	e P	Z	03:05:15.3	17.5	132.0	1.2	132	4.9		
	e S	E	03:08:36.7							
	e L	Z	03:11:41.5			21.1	5290		4.8	
WERD	e P	Z	03:05:14.9	17.6	136.1					
CLL	e P	Z	03:05:18.7	17.9	139.4					
	e S	N	03:08:44.2							
MOX	e P	Z	03:05:20.0	18.0	135.0					
	e S	N	03:08:47.3							
BFO	e P	Z	03:05:22.5	18.2	122.9	1.2	70	4.7		
	e S	N	03:08:52.3							
	e L	Z	03:12:41.7			23.5	5822		4.8	
RUE	e S	N	03:08:52.0	18.5	143.4					
CLZ	e P	Z	03:05:34.6	19.4	134.9	1.3	158	5.1		
	e S	E	03:09:15.1							
	e L	Z	03:12:39.6			19.7	6337		4.9	
NRDL	e P	Z	03:05:40.8	20.0	135.6					
	e S	N	03:09:24.9							
RGN	e P	Z	03:05:45.5	20.4	145.8					
	e S	E	03:09:33.0							

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

7

BUG	e P	Z	03:05:47.1	20.6	128.1							
BSEG	e P	Z	03:05:50.7	21.0	138.7	2.7	932	5.6				
	e S	E	03:09:46.4									
	e L	Z	03:15:50.4			16.8	8113	5.2				
HLG	e P	Z	03:06:03.2	22.1	134.5							
	e S	N	03:10:04.0									

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source				
2004/08/04												

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 03:13:26.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source				
2004/08/04	03:49:37.4	37.080N	28.270E	33.0G				SZGRF				
Turkey												

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	E 03:53:20.4	15.8	132.6					
WET	e P	Z 03:53:27.9	16.4	131.5					
BRG	e P	Z 03:53:37.8	17.2	138.0					
GUNZ	e P	Z 03:53:41.7	17.5	133.3					
WERD	e P	Z 03:53:42.8	17.6	133.4					
GRA1	e P	Z 03:53:41.5	17.6	129.3					
	e S	N 03:57:03.9							
CLL	e P	Z 03:53:45.3	17.9	136.8					
	e S	N 03:57:10.5							
MOX	e P	Z 03:53:47.7	18.0	132.4					
	e S	N 03:57:12.0							
BFO	e P	Z 03:53:49.6	18.4	120.4					
	e S	N 03:57:18.4							
CLZ	e P	Z 03:54:02.0	19.4	132.5					
NRDL	e P	Z 03:54:06.8	20.0	133.3					
BUG	e P	Z 03:54:13.5	20.7	125.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source				
2004/08/04	03:46:56.1	30.094S	49.035E	33.0N	4.9			SZGRF				
South Indian Ocean												

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 03:59:29.8	85.0	149.8	1.2	5	4.6		
FUR	e P	Z 03:59:30.8	85.3	147.9	1.1	28	5.4		
WET	e P	Z 03:59:31.4	85.5	149.2	1.4	13	5.0		

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

8

BFO	e P	Z	03:59:36.3	86.5	145.6	1.5	16	4.9
STU	e P	Z	03:59:37.1	86.5	146.3	1.1	12	4.9
GRA1	e P	Z	03:59:36.4	86.6	147.9	1.4	22	5.1
BRG	e P	Z	03:59:38.5	86.7	150.1	1.2	5	4.5
GUNZ	e P	Z	03:59:38.2	86.8	148.8	1.4	20	5.1
WERD	e P	Z	03:59:38.3	86.8	148.8	1.6	20	5.0
MOX	e P	Z	03:59:38.6	87.2	148.2	1.6	18	4.9
CLL	e P	Z	03:59:40.8	87.4	149.4	1.2	12	4.9
CLZ	e P	Z	03:59:48.6	88.7	147.3	1.6	12	5.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/04								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BUG	e PKP	Z 04:06:55.3							
GEC2	e PKP	Z 04:06:49.6							
GRA1	e PKP	Z 04:06:51.8							
GUNZ	e PKP	Z 04:06:51.7							
RGN	e PKP	Z 04:06:51.7							
WERD	e PKP	Z 04:06:52.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/04	04:19:43.6	36.456N	28.915E	33.0G		4.3		SZGRF
Dodecanese Islands, Greece								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 04:23:32.3	16.6	132.5					
	e S	E 04:26:38.9							
	e L	Z 04:28:13.4							
WET	e P	Z 04:23:40.0	17.2	131.4					
	e S	E 04:26:55.7							
	e L	E 04:28:34.0							
BRG	e P	Z 04:30:33.5			21.1	1531		4.2	
	e P	Z 04:23:49.0	18.0	137.6					
	e S	E 04:27:10.1							
GUNZ	e L	Z 04:29:58.9			21.2	2020		4.4	
	e P	Z 04:23:55.6	18.3	133.1					
	e P	Z 04:23:56.8	18.4	133.2					
WERD	e P	Z 04:23:56.8	18.4	133.2					
	e P	Z 04:23:54.4	18.4	129.3					
	e S	E 04:27:18.6							
GRA1	e L	Z 04:31:19.4			19.9	1600		4.3	
	e P	Z 04:23:58.8	18.7	136.5					
	e S	N 04:27:24.5							
CLL	e L	Z 04:30:19.6			22.0	1902		4.3	
	e P	Z 04:24:00.6	18.8	132.2					
	e P	Z 04:24:00.6	18.8	132.2					



./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

9

	e L	Z	04:30:48.2			19.6	1758	4.4
STU	e P	Z	04:24:00.8	18.9	123.2			
	e L	Z	04:31:16.1			19.8	2139	4.5
BFO	e P	Z	04:24:03.2	19.2	120.6			
	e S	Z	04:27:37.2					
	e L	Z	04:31:24.4			20.2	1565	4.3
RUE	e P	Z	04:24:06.8	19.2	140.4			
	e L	Z	04:30:38.1			21.8	1419	4.2
CLZ	e P	Z	04:24:15.3	20.2	132.3			
	e L	Z	04:31:18.5			19.5	1898	4.5
NRDL	e P	Z	04:24:21.3	20.8	133.0			
	e S	N	04:28:08.6					
	e L	Z	04:31:22.7			21.3	1315	4.3
RGN	e P	Z	04:24:23.7	21.0	143.0			
	e L	Z	04:33:28.8			20.7	1359	4.3
WLF	e P	Z	04:24:24.2	21.1	120.1			
BUG	e P	Z	04:24:28.3	21.5	125.8			
BSEG	e P	Z	04:24:30.4	21.7	136.1			
	e S	N	04:28:25.1					
	e L	Z	04:32:27.1			21.6	1072	4.2
IBBN	e P	Z	04:24:31.6	21.7	128.4			
	e L	Z	04:33:32.1			21.6	1682	4.4

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/04 04:26:0.2 33.250N 28.920E 121.3N 4.6  
 Eastern Mediterranean Sea SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 04:30:15.8	19.3	138.3	2.3	78	4.5		
BRG	e P	Z 04:30:31.6	20.7	142.4	1.0	15	4.3		
GUNZ	e P	Z 04:30:33.7	21.0	138.2	1.1	46	4.7		
GRA1	e P	Z 04:30:33.5	21.0	134.8	0.9	14	4.3		
WERD	e P	Z 04:30:35.1	21.1	138.3	0.9	20	4.5		
CLL	e P	Z 04:30:38.9	21.5	141.2	0.8	18	4.4		
CLZ	e P	Z 04:30:54.6	22.9	136.9	1.3	24	4.6		
NRDL	e P	Z 04:30:59.8	23.5	137.5	1.9	45	4.7		
RGN	e P	Z 04:31:02.9	24.0	146.4	1.1	58	5.0		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/04 09:48:42.0 53.780N 159.056E 33.0N 5.5 5.1  
 Near east coast of Kamchatka Peninsula, Russia SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 09:59:46.4	69.2	19.1	1.8	106	5.7		
RUE	e P	Z 09:59:50.5	69.9	21.0					

NRDL	e P	Z	09:59:54.6	70.6	18.8					
CLL	e P	Z	09:59:57.3	71.1	20.4	1.5	62	5.5		
CLZ	e P	Z	09:59:58.4	71.2	18.9	1.6	92	5.7		
IBBN	e P	Z	09:59:58.6	71.2	17.4					
BRG	e P	Z	09:59:58.5	71.3	20.9	1.9	47	5.3		
MOX	e P	Z	10:00:03.0	72.1	19.5	1.6	50	5.4		
WERD	e P	Z	10:00:03.5	72.1	19.9					
GUNZ	e P	Z	10:00:03.9	72.2	19.9					
GRA1	e P	Z	10:00:09.1	73.0	19.2	1.7	111	5.7		
	e L	Z	10:38:36.6			18.2	878			5.1
WET	e P	Z	10:00:10.1	73.2	20.1	1.7	67	5.4		
GEC2	e P	Z	10:00:10.1	73.3	20.5	1.6	38	5.2		
STU	e P	Z	10:00:16.5	74.3	17.9					
FUR	e P	Z	10:00:17.4	74.5	19.1	1.3	50	5.4		
BFO	e P	Z	10:00:19.6	74.9	17.4					

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/04 11:03:46.1 54.105N 158.492E 48.7 5.7 5.4  
 Kamchatka Peninsula, Russia SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	11:14:40.7	67.6	21.2	1.4	276	6.3		
BSEG	e P	Z	11:14:48.0	68.8	19.4	1.7	170	6.0		
RUE	e P	Z	11:14:51.4	69.5	21.2	1.2	118	5.9		
NRDL	e P	Z	11:14:56.1	70.2	19.1	1.6	76	5.6		
CLL	e P	Z	11:14:58.5	70.7	20.6	1.4	96	5.8		
CLZ	e P	Z	11:14:59.8	70.8	19.1	1.5	154	5.9		
IBBN	e P	Z	11:15:00.0	70.8	17.7	2.2	353	6.1		
BRG	e P	Z	11:14:59.8	70.9	21.1	1.3	42	5.4		
MOX	e P	Z	11:15:04.5	71.6	19.7	1.8	96	5.6		
WERD	e P	Z	11:15:04.9	71.7	20.1	1.5	76	5.6		
GUNZ	e P	Z	11:15:05.4	71.7	20.1	1.7	98	5.7		
BUG	e P	Z	11:15:05.1	71.8	17.3	2.0	164	5.8		
GRA1	i P	Z	11:15:10.7	72.6	19.4	1.7	153	5.9		
	e pP	Z	11:15:24.6							
	e L	Z	11:53:37.8			18.5	1735			5.4
WET	e P	Z	11:15:11.5	72.8	20.3	1.6	95	5.7		
GEC2	e P	Z	11:15:11.6	72.9	20.7	1.5	49	5.4		
WLF	e P	Z	11:15:16.8	73.7	16.5	2.1	162	5.7		
STU	e P	Z	11:15:17.6	73.9	18.2	1.8	66	5.4		
FUR	e P	Z	11:15:18.6	74.1	19.3	1.9	203	5.8		
BFO	e P	Z	11:15:21.0	74.5	17.6	2.0	92	5.5		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/04 14:18:51.5 36.790N 27.930E 33.0G 4.8 4.9  
 SZGRF

Dodecanese Islands, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 14:22:33.5	15.9	134.0	1.4	100	4.7		
	e S	Z 14:25:37.5							
WET	e P	Z 14:22:42.1	16.5	132.9	1.6	109	4.7		
	e S	Z 14:25:52.7							
FUR	e P	Z 14:22:44.5	16.7	126.9					
BRG	e P	Z 14:22:51.8	17.3	139.3	1.0	62	4.7		
	e S	Z 14:26:12.5							
GRA1	e P	Z 14:22:56.3	17.7	130.6	1.0	43	4.5		
	e S	Z 14:26:23.1							
CLL	e L	Z 14:30:09.5			13.8	4693		4.9	
	e P	Z 14:23:00.2	18.0	138.1	0.8	50	4.7		
MOX	e S	Z 14:26:23.5							
	e P	Z 14:23:02.0	18.1	133.6	1.1	66	4.7		
STU	e S	Z 14:26:27.0							
	e P	Z 14:23:02.2	18.1	124.3					
BFO	e S	Z 14:26:32.0							
	e P	Z 14:23:05.2	18.4	121.6					
RUE	e S	Z 14:26:33.2							
	e P	Z 14:23:06.1	18.6	142.1	0.8	69	4.9		
CLZ	e S	Z 14:26:38.7							
	e P	Z 14:23:18.0	19.5	133.6					
NRDL	e P	Z 14:23:24.8	20.1	134.4	1.4	84	4.8		
	e S	Z 14:27:09.8							
RGN	e P	Z 14:23:25.9	20.4	144.6					
	e S	Z 14:27:13.3							
IBBN	e P	Z 14:23:33.7	21.0	129.6					
	e S	Z 14:27:29.3							
BSEG	e P	Z 14:23:34.1	21.0	137.5	2.3	419	5.4		
HLG	e P	Z 14:23:44.0	22.2	133.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/04	16:45:28.2	19.470S	178.060W	33.0N				SZGRF

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 17:05:00.3	144.9	13.8					
RUE	e PKPbc	Z 17:05:03.0	145.7	20.1					
NRDL	e PKPbc	Z 17:05:05.0	146.4	14.0					
IBBN	e PKPbc	Z 17:05:06.6	146.9	10.1					
CLZ	e PKPbc	Z 17:05:07.2	147.0	14.7					
CLL	e PKPbc	Z 17:05:07.1	147.0	19.4					
BRG	e PKPbc	Z 17:05:07.9	147.2	21.2					
WERD	e PKPbc	Z 17:05:10.0	147.9	18.6					
GUNZ	e PKPbc	Z 17:05:10.4	148.0	18.7					

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

12

GRA1	e	PKPbc	Z	17:05:12.9	148.9	17.1
	e	PKPab	Z	17:05:15.7		
GEC2	e	PKPbc	Z	17:05:13.3	149.1	22.0
WLF	e	PKPbc	Z	17:05:15.0	149.6	7.9
	e	PKPab	Z	17:05:18.9		
FUR	e	PKPbc	Z	17:05:16.1	150.3	18.0
	e	PKPab	Z	17:05:22.2		
BFO	e	PKPbc	Z	17:05:17.1	150.7	12.4
	e	PKPab	Z	17:05:23.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/04	20:05:41.6	55.172N	154.874E	33.0N	4.9			SZGRF

Sea of Okhotsk

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	20:16:33.0	67.1	21.1	1.3	17	5.1		
NRDL	e P	Z	20:16:41.1	68.5	20.7					
CLL	e P	Z	20:16:43.7	68.9	22.2	1.1	15	5.2		
CLZ	e P	Z	20:16:44.9	69.0	20.8	1.2	16	5.1		
BRG	e P	Z	20:16:44.8	69.1	22.7	1.4	9	4.8		
MOX	e P	Z	20:16:49.0	69.8	21.3	1.5	8	4.6		
WERD	e P	Z	20:16:50.2	69.9	21.7					
GUNZ	e P	Z	20:16:50.5	69.9	21.7					
BUG	e P	Z	20:16:50.8	70.0	19.0					
GRA1	e P	Z	20:16:55.4	70.8	21.0	1.6	33	5.2		
WET	e P	Z	20:16:56.6	70.9	21.8	1.0	9	4.8		
GEC2	e P	Z	20:16:56.4	71.0	22.3	1.4	8	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/04	21:15:27.6	53.902N	158.279E	33.0N	5.5	5.5		SZGRF

Near east coast of Kamchatka Peninsula, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	21:26:30.3	69.0	19.6	1.4	94	5.8		
RUE	e P	Z	21:26:33.6	69.6	21.4					
NRDL	e P	Z	21:26:38.4	70.4	19.3					
CLL	e P	Z	21:26:40.8	70.9	20.8	1.2	92	5.8		
CLZ	e P	Z	21:26:42.1	70.9	19.3	1.3	121	5.9		
IBBN	e P	Z	21:26:42.3	71.0	17.9					
BRG	e P	Z	21:26:42.1	71.0	21.3	1.3	43	5.4		
MOX	e P	Z	21:26:46.8	71.8	19.9	1.3	43	5.4		
WERD	e P	Z	21:26:47.1	71.8	20.3					
GUNZ	e P	Z	21:26:47.6	71.9	20.3					
BUG	e P	Z	21:26:47.4	71.9	17.5					
GRA1	i P	Z	21:26:53.0	72.8	19.6	1.1	67	5.7		

	e S	N	21:36:22.7							
	e L	Z	22:05:05.0			19.2	2355		5.5	
WET	e P	Z	21:26:53.7	72.9	20.5	1.3	62	5.6		
GEC2	e P	Z	21:26:53.8	73.0	20.9	1.2	32	5.3		
FUR	e P	Z	21:27:00.9	74.2	19.5	1.0	40	5.4		
BFO	e P	Z	21:27:03.3	74.7	17.8	1.1	21	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/04	22:56:10.0	52.457N	160.566E	33.0N	4.7			SZGRF

Off east coast of Kamchatka Peninsula, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	23:07:23.5	70.8	18.7	1.1	9	4.8		
CLL	e P	Z	23:07:34.3	72.7	20.0					
CLZ	e P	Z	23:07:35.3	72.7	18.5	1.5	19	5.0		
BRG	e P	Z	23:07:35.4	72.9	20.5					
MOX	e P	Z	23:07:40.0	73.6	19.1	1.2	6	4.5		
WERD	e P	Z	23:07:40.4	73.7	19.5					
BUG	e P	Z	23:07:41.0	73.7	16.6					
GUNZ	e P	Z	23:07:40.5	73.7	19.5					
GRA1	e P	Z	23:07:46.2	74.6	18.8	1.5	19	4.9		
WET	e P	Z	23:07:46.8	74.8	19.7	1.4	11	4.7		
GEC2	e P	Z	23:07:47.2	74.9	20.2	1.4	8	4.5		
FUR	e P	Z	23:07:54.2	76.0	18.7					
BFO	e P	Z	23:07:55.6	76.5	17.0	1.1	6	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/05	01:46:40.0	14.000N	149.250E	33.0G		5.4		SZGRF

Mariana Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e PP	Z	02:04:45.4	102.0	43.6					
BSEG	e PP	Z	02:04:58.8	103.6	41.0					
BRG	e PP	Z	02:05:04.3	104.3	44.8					
CLL	e Pdiff	Z	02:00:45.0	104.4	43.9					
	e PP	Z	02:05:04.8							
	e L	Z	02:50:50.7			19.8	1430		5.5	
NRDL	e PP	Z	02:05:08.6	104.8	41.0					
CLZ	e PP	Z	02:05:10.0	105.2	41.4					
MOX	e PP	Z	02:05:14.2	105.5	42.7					
	e L	Z	02:51:32.5			20.1	1083		5.4	
GEC2	e PP	Z	02:05:15.1	105.9	44.9					
WET	e PP	Z	02:05:16.8	106.0	44.2					
GRA1	e Pdiff	Z	02:00:55.4	106.4	42.6					
	e PP	Z	02:05:20.3							

	e L	Z	02:51:59.4				19.2	1321	5.5
FUR	e PP	Z	02:05:28.1	107.5	42.9				
STU	e PP	Z	02:05:32.8	108.0	40.9				
BFO	e PP	Z	02:05:34.8	108.7	40.2				
	e L	Z	02:57:50.4				18.3	967	5.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/05	07:13:38.7	37.077N	27.661E	23.0G	3.7			kan

Turkey

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 07:17:26.1	15.5	134.1	0.9	5	3.6		
BRG	e P	Z 07:17:44.0	16.9	139.4	0.7	4	3.7		
GUNZ	e P	Z 07:17:47.6	17.2	134.6					
WERD	e P	Z 07:17:47.8	17.3	134.7	0.9	7	3.8		
CLL	e P	Z 07:17:51.2	17.6	138.2	0.9	8	3.8		
MOX	e P	Z 07:17:50.6	17.8	133.7	1.0	6	3.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/05	10:30: 6.0	36.882N	27.756E	13.0G	4.1			kan

Dodecanese Islands, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 10:33:53.5	15.7	134.3	1.0	10	3.9		
WET	e P	Z 10:34:02.1	16.3	133.1	1.5	16	3.9		
BRG	e P	Z 10:34:13.5	17.1	139.5	0.9	14	4.1		
GUNZ	e P	Z 10:34:16.9	17.4	134.8	0.9	29	4.4		
GRA1	e P	Z 10:34:17.1	17.5	130.8	0.8	9	4.0		
WERD	e P	Z 10:34:17.8	17.5	134.9	0.9	18	4.2		
CLL	e P	Z 10:34:20.9	17.8	138.3	0.9	18	4.2		
MOX	e P	Z 10:34:19.7	18.0	133.8	1.3	17	4.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/05	18:23:33.6	35.510N	140.290E	97.0	5.0			SZGRF

Near east coast of eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 18:35:36.8	80.5	41.6	0.9	21	5.2		
BSEG	e P	Z 18:35:37.5	80.7	39.2	1.2	18	5.0		
BRG	e P	Z 18:35:42.1	81.6	41.5	1.0	10	4.9		
	e pP	Z 18:36:07.8							
CLL	e P	Z 18:35:42.2	81.7	40.9	0.9	18	5.2		
NRDL	e P	Z 18:35:43.6	81.9	38.9	1.0	7	4.8		

CLZ	e P	Z	18:35:46.1	82.3	39.1	1.1	15	5.1
WERD	e P	Z	18:35:47.3	82.6	40.3	1.5	9	4.8
GUNZ	e P	Z	18:35:47.9	82.7	40.3	1.4	10	4.9
	e pP	Z	18:36:12.8					
MOX	e P	Z	18:35:47.8	82.7	39.8	1.2	6	4.7
IBBN	e P	Z	18:35:48.9	82.9	37.2	0.5	15	5.5
GEC2	e P	Z	18:35:50.3	83.2	41.2	1.1	5	4.7
WET	e P	Z	18:35:51.8	83.3	40.6	1.3	10	4.9
GRA1	e P	Z	18:35:52.9	83.6	39.5	1.1	23	5.3
STU	e P	Z	18:36:00.2	85.2	38.0	0.8	15	5.3
WLF	e P	Z	18:36:03.3	85.6	35.9	1.3	14	4.9
BFO	e P	Z	18:36:03.7	85.9	37.4	1.0	10	4.9

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/05 20:41:49.2 31.873N 46.394E 50.0G 4.7  
 Iraq gsrc-m

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WET	e P	Z 20:47:55.7	30.4	112.1	1.9	12	4.4		
FUR	e P	Z 20:48:01.8	31.0	108.7	0.5	14	5.2		
GRA1	e P	Z 20:48:07.3	31.6	111.0	1.1	18	4.9		
CLZ	e P	Z 20:48:18.9	32.9	113.2	0.7	5	4.6		
NRDL	e P	Z 20:48:23.0	33.3	113.8	0.9	3	4.3		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/05 21:51:21.3 22.990N 44.460W 33.0G 5.3 4.5  
 Northern Mid-Atlantic Ridge SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 21:59:53.1	47.5	254.9	1.9	105	5.6		
BFO	e P	Z 22:00:01.9	48.6	258.0	1.4	55	5.4		
BUG	e P	Z 22:00:02.0	48.6	254.4	1.4	42	5.3		
IBBN	e P	Z 22:00:06.8	49.2	254.1					
STU	e P	Z 22:00:06.7	49.2	258.3	1.3	49	5.4		
FUR	e P	Z 22:00:16.6	50.5	260.6	1.8	69	5.3		
NRDL	e P	Z 22:00:17.5	50.6	256.1	1.5	66	5.4		
CLZ	e P	Z 22:00:17.2	50.6	256.9	1.4	32	5.1		
GRA1	e P	Z 22:00:17.9	50.7	259.3	1.5	65	5.3		
	e	22:00:32.3							
	e S	E 22:07:38.5							
	e L	Z 22:17:15.2			20.8	540		4.5	
BSEG	e P	Z 22:00:20.5	51.1	255.2	1.3	78	5.5		
MOX	e P	Z 22:00:21.1	51.1	258.9	1.5	41	5.1		
WERD	e P	Z 22:00:23.4	51.5	259.7	2.1	63	5.2		
GUNZ	e P	Z 22:00:24.2	51.5	259.8	2.1	96	5.4		

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

16

WET	e P	Z	22:00:24.7	51.7	261.2	1.5	35	5.1
CLL	e P	Z	22:00:28.4	52.1	259.6	1.5	43	5.2
GEC2	e P	Z	22:00:28.9	52.1	262.1	1.4	56	5.3
BRG	e P	Z	22:00:32.3	52.6	260.7	2.0	74	5.3
RUE	e P	Z	22:00:34.1	52.8	259.4	1.2	88	5.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/05								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pg	Z 22:11:47.1							
	e Sg	N 22:12:05.8							
GEC2	e Pg	Z 22:12:29.6							
WLF	e Pg	Z 22:11:31.9							
	e Sg	N 22:11:40.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/06	00:59:29.3	15.800S	167.800E	80.0N				GSRC-M
Vanuatu Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 01:18:47.2	141.2	37.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/06	08:26:44.5	37.690N	137.720E	33.0N	4.6			SZGRF
Near west coast of eastern Honshu, Japan								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 08:38:45.7	78.7	42.1	0.7	4	4.6		
CLL	e P	Z 08:38:45.4	78.7	41.5	0.9	9	4.8		
CLZ	e P	Z 08:38:49.2	79.4	39.8	1.2	15	4.8		
WERD	e P	Z 08:38:50.6	79.7	41.0	0.9	5	4.4		
GUNZ	e P	Z 08:38:51.0	79.7	41.0	1.0	8	4.6		
MOX	e P	Z 08:38:51.2	79.8	40.5	0.9	6	4.5		
GEC2	e P	Z 08:38:53.4	80.3	41.7	1.0	5	4.5		
WET	e P	Z 08:38:54.8	80.4	41.2	0.8	3	4.4		
GRA1	e P	Z 08:38:56.7	80.7	40.1	0.6	18	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/06	08:50:43.1	34.836N	140.957E	33.0N	4.9			SZGRF
Near east coast of eastern Honshu, Japan								



Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:03:13.0	84.5	39.4	1.0	9	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/06								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 12:26:56.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/06	14:34:50.1	11.630N	94.530E	33.0N	4.9			SZGRF
Andaman Islands, India, region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 14:46:29.9	75.1	89.8	0.9	10	4.8		
RUE	e P	Z 14:46:30.5	75.2	90.1	0.6	26	5.4		
GEC2	e P	Z 14:46:31.0	75.3	89.1	0.9	10	4.8		
CLL	e P	Z 14:46:32.9	75.7	89.2	1.2	13	4.9		
WET	e P	Z 14:46:33.7	75.8	88.6	1.1	10	4.8		
GUNZ	e P	Z 14:46:35.9	76.1	88.5	0.9	7	4.8		
WERD	e P	Z 14:46:35.9	76.1	88.5	1.2	10	4.8		
MOX	e P	Z 14:46:38.1	76.6	88.0	1.3	8	4.7		
GRA1	e P	Z 14:46:40.4	76.8	87.4	1.0	10	4.9		
BSEG	e P	Z 14:46:42.2	77.2	87.7	1.1	21	5.2		
CLZ	e P	Z 14:46:42.4	77.3	87.3	1.1	17	5.1		
NRDL	e P	Z 14:46:43.1	77.4	87.2	1.4	22	5.1		
IBBN	e P	Z 14:46:51.3	78.9	85.3	0.8	15	5.1		
WLF	e P	Z 14:46:57.8	80.1	83.6	1.2	14	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/06	14:35:29.5	12.140N	94.120E	33.0G	5.9	5.2		SZGRF
Andaman Islands, India, region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 14:47:05.4	74.4	89.8	1.3	136	5.8		
RUE	e P	Z 14:47:05.8	74.5	90.1	1.3	246	6.1		
GEC2	e P	Z 14:47:06.5	74.6	89.1	1.0	84	5.7		
CLL	e P	Z 14:47:08.5	75.0	89.2	1.4	118	5.7		
WET	e P	Z 14:47:09.7	75.1	88.5	1.3	103	5.7		
GUNZ	e P	Z 14:47:11.5	75.5	88.4	1.3	112	5.8		
WERD	e P	Z 14:47:11.3	75.5	88.4	1.3	82	5.7		
MOX	e P	Z 14:47:14.0	75.9	87.9	1.4	110	5.8		

GRA1	e P	Z	14:47:16.0	76.2	87.4	1.4	163	6.0		
	e		14:47:23.4							
	e PP	Z	14:50:16.9							
	e S	N	14:57:03.6							
	e L	Z	15:25:20.5			21.9	1366		5.2	
FUR	e P	Z	14:47:17.0	76.2	87.1	1.5	154	5.9		
BSEG	e P	Z	14:47:17.7	76.6	87.7	1.2	206	6.1		
CLZ	e P	Z	14:47:17.9	76.6	87.3	1.4	188	6.0		
NRDL	e P	Z	14:47:19.2	76.8	87.2	1.5	221	6.1		
STU	e P	Z	14:47:24.2	77.6	85.7	1.1	62	5.6		
BFO	e P	Z	14:47:26.1	78.2	84.9	1.2	52	5.5		
IBBN	e P	Z	14:47:26.9	78.2	85.3	1.4	284	6.2		
BUG	e P	Z	14:47:28.9	78.6	84.8	1.3	227	6.0		
WLF	e P	Z	14:47:34.2	79.5	83.6	1.4	149	5.7		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/06 19:12: 3.1 5.390S 102.610E 33.0N 5.0  
 Southern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	19:25:14.9	93.3	94.4	1.5	14	5.2		
BRG	e P	Z	19:25:14.8	93.3	94.4	0.8	7	5.1		
WET	e P	Z	19:25:17.4	93.9	93.7	1.1	8	5.0		
CLL	e P	Z	19:25:17.5	94.0	93.7	1.1	7	4.9		
GUNZ	e P	Z	19:25:19.4	94.3	93.2	0.8	5	4.9		
WERD	e P	Z	19:25:19.4	94.3	93.2	0.8	5	4.9		
MOX	e P	Z	19:25:21.9	94.8	92.7	1.0	3	4.7		
GRA1	e P	Z	19:25:22.8	95.0	92.4	0.9	8	5.1		
CLZ	e P	Z	19:25:25.3	95.6	91.6	0.8	3	4.9		
BFO	e P	Z	19:25:30.8	96.9	90.4	1.0	3	4.9		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/06

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	20:43:42.8			0.9	2			

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/06

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	23:54:30.0							
	e		23:54:37.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/07	02:02:10.6	19.070N	79.872W	33.0N	4.9			SZGRF

Cuba region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	02:13:38.2	73.1	279.7					
IBBN	e P	Z	02:13:41.8	73.6	280.1					
BSEG	e P	Z	02:13:48.6	74.8	281.6	0.9	12	4.9		
NRDL	e P	Z	02:13:49.6	75.0	281.9					
CLZ	e P	Z	02:13:51.6	75.3	282.2	1.0	14	5.0		
GRA1	e P	Z	02:13:56.4	76.3	283.4	1.0	8	4.8		
	e		02:14:01.6							
MOX	e P	Z	02:13:56.7	76.3	283.5					
WERD	e P	Z	02:13:59.5	76.8	284.0					
GUNZ	e P	Z	02:13:59.4	76.8	284.1					
CLL	e P	Z	02:14:00.8	77.0	284.3					
WET	e P	Z	02:14:03.1	77.4	284.7	1.1	12	4.9		
BRG	e P	Z	02:14:04.3	77.7	285.1					
GEC2	e P	Z	02:14:06.5	78.0	285.4	1.2	9	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/07	09:30:30.0	52.948N	165.053W	33.0N	6.3	5.5		SZGRF

South of Aleutian Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	09:41:54.3	72.5	359.0	1.3	616	6.6		
HLG	e P	Z	09:41:55.8	72.7	355.5	1.5	828	6.7		
BSEG	e P	Z	09:41:57.5	73.0	357.1	1.2	392	6.4		
NRDL	e P	Z	09:42:05.5	74.5	357.0	1.2	317	6.2		
RUE	e P	Z	09:42:05.9	74.6	359.3	1.2	563	6.5		
IBBN	e P	Z	09:42:06.3	74.6	355.5	1.2	472	6.4		
CLZ	e P	Z	09:42:09.6	75.1	357.2	1.3	502	6.5		
BUG	e P	Z	09:42:10.6	75.4	355.2	1.3	375	6.4		
CLL	e P	Z	09:42:12.2	75.7	358.8	1.2	277	6.3		
BRG	e P	Z	09:42:14.9	76.2	359.4	1.3	305	6.3		
MOX	e P	Z	09:42:16.2	76.4	357.9	1.2	350	6.4		
WERD	e P	Z	09:42:17.5	76.6	358.4	1.3	189	6.1		
GUNZ	e P	Z	09:42:18.0	76.7	358.4	1.3	225	6.1		
WLF	e P	Z	09:42:20.9	77.1	354.6	1.3	295	6.3		
GRA1	i P	Z	09:42:21.7	77.3	357.7	1.2	580	6.6		
	e S	E	09:52:23.9							
	e P'P'	Z	10:09:07.4							
	e L	Z	10:15:11.3			23.3	2523		5.5	
WET	e P	Z	09:42:24.9	77.9	358.7	1.4	272	6.2		

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

20

STU	e P	Z	09:42:26.1	78.2	356.5	1.2	349	6.3
GEC2	e P	Z	09:42:26.2	78.2	359.2	1.2	260	6.1
BFO	e P	Z	09:42:28.2	78.6	355.9	1.2	236	6.1
FUR	e P	Z	09:42:30.0	78.8	357.7	1.2	567	6.5

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/07	11:49: 9.0	16.440N	95.460W	98.5	5.5	5.0		SZGRF

Oaxaca, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 12:01:33.4	84.8	289.4	1.4	100	5.9		
IBBN	e P	Z 12:01:33.2	84.8	290.4	1.1	95	5.9		
BUG	e P	Z 12:01:33.0	84.9	290.1	1.4	69	5.7		
BSEG	e P	Z 12:01:37.5	85.7	292.2	1.0	89	5.9		
NRDL	e P	Z 12:01:39.7	86.1	292.2	1.0	54	5.6		
CLZ	e P	Z 12:01:42.0	86.5	292.4	1.3	62	5.6		
BFO	e P	Z 12:01:41.4	86.6	291.1	1.1	31	5.3		
	e pP	Z 12:02:07.4							
STU	e P	Z 12:01:43.4	87.0	291.7	1.0	47	5.6		
MOX	e P	Z 12:01:46.9	87.7	293.4	2.0	68	5.6		
GRA1	e P	Z 12:01:48.6	87.8	293.2	1.4	46	5.6		
	e pP	Z 12:02:14.6							
	e PP	Z 12:05:11.6							
	e S	E 12:12:09.6							
	e L	Z 12:39:36.3			20.8	618		5.0	
WERD	e P	Z 12:01:49.3	88.2	294.0	1.2	18	5.3		
CLL	e P	Z 12:01:48.9	88.2	294.5	0.9	18	5.4		
GUNZ	e P	Z 12:01:49.9	88.2	294.0	1.2	21	5.4		
BRG	e P	Z 12:01:53.0	88.9	295.2	1.0	18	5.2		
	e PP	Z 12:05:18.9							
WET	e P	Z 12:01:54.0	89.0	294.4	1.0	14	5.2		
	e pP	Z 12:02:19.6							
GEC2	e P	Z 12:01:56.4	89.7	295.0	1.3	18	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/07	14:18:22.5	7.803S	98.929E	33.0N	6.2	4.9		SZGRF

Southwest of Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 14:31:31.4	92.7	98.7	1.4	333	6.6		
BRG	e P	Z 14:31:32.4	92.9	98.8	1.5	206	6.3		
RUE	e P	Z 14:31:33.9	93.2	98.6					
WET	e P	Z 14:31:34.0	93.3	98.1	1.2	170	6.4		
CLL	e P	Z 14:31:34.9	93.6	98.1	1.2	125	6.2		
	e PP	Z 14:35:19.6							

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

21

GUNZ	e P	Z	14:31:36.7	93.8	97.6						
WERD	e P	Z	14:31:36.6	93.9	97.6						
FUR	e P	Z	14:31:37.6	94.2	97.0	1.1	100	6.1			
MOX	e P	Z	14:31:38.8	94.3	97.0	1.3	131	6.1			
	e PP	Z	14:35:25.3								
GRA1	i P	Z	14:31:39.6	94.5	96.8	1.3	179	6.3			
	e SKSac	E	14:42:19.6								
	e SP	Z	14:43:55.9								
	e SS	E	14:48:53.2								
	e L	Z	15:14:27.3			19.6	423	4.9			
CLZ	e P	Z	14:31:43.1	95.2	96.0	1.2	128	6.2			
	e PP	Z	14:35:32.5								
NRDL	e P	Z	14:31:44.5	95.5	95.7						
	e PP	Z	14:35:34.0								
BSEG	e P	Z	14:31:44.5	95.5	95.7	1.4	107	6.1			
	e PP	Z	14:35:34.3								
STU	e P	Z	14:31:44.5	95.7	95.4						
BFO	e P	Z	14:31:46.6	96.2	94.8	1.8	62	5.8			
IBBN	e P	Z	14:31:50.8	96.9	93.9						
	e PP	Z	14:35:46.5								
BUG	e P	Z	14:31:51.6	97.1	93.6						
WLF	e P	Z	14:31:54.2	97.7	93.0						
	e PP	Z	14:35:50.3								

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/08								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:30:20.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/08	09:20:24.6	20.010S	178.090W	650.0G				SZGRF
Fiji Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 09:38:51.8	145.5	14.0					
RUE	e PKPbc	Z 09:38:53.7	146.3	20.4					
NRDL	e PKPbc	Z 09:38:55.5	146.9	14.2					
IBBN	e PKPbc	Z 09:38:56.9	147.4	10.2					
	e PKPab	Z 09:39:01.3							
CLZ	e PKPbc	Z 09:38:57.4	147.5	14.9					
CLL	e PKPbc	Z 09:38:57.0	147.5	19.7					
	e PKPab	Z 09:39:01.3							
BRG	e PKPbc	Z 09:38:57.7	147.7	21.5					
	e PKPab	Z 09:39:02.4							

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

22

BUG	e	PKPbc	Z	09:38:59.0	148.3	9.6
MOX	e	PKPbc	Z	09:38:59.5	148.4	17.6
WERD	e	PKPbc	Z	09:38:59.5	148.5	18.9
	e	PKPab	Z	09:39:05.7		
GUNZ	e	PKPbc	Z	09:38:59.9	148.5	19.0
	e	PKPab	Z	09:39:06.1		
GRA1	e	PKPbc	Z	09:39:02.3	149.4	17.4
	e	PKPab	Z	09:39:10.1		
	e	pPKPbc	Z	09:41:29.4		
WET	e	PKPbc	Z	09:39:02.1	149.6	20.7
	e	PKPab	Z	09:39:10.7		
GEC2	e	PKPbc	Z	09:39:02.2	149.7	22.3
	e	PKPab	Z	09:39:10.8		
WLF	e	PKPbc	Z	09:39:04.7	150.2	8.0
	e	PKPab	Z	09:39:13.3		
STU	e	PKPbc	Z	09:39:04.5	150.6	14.1
	e	PKPab	Z	09:39:14.5		
FUR	e	PKPbc	Z	09:39:04.7	150.8	18.3
	e	PKPab	Z	09:39:15.9		
BFO	e	PKPbc	Z	09:39:05.9	151.2	12.6
	e	PKPab	Z	09:39:16.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/08	10:34:45.1	26.740S	179.340W	33.0N				SZGRF
South of Fiji Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	PKPbc	Z 10:54:36.9	151.9	18.5					
	e	PKPab	Z 10:54:45.6							
CLL	e	PKPbc	Z 10:54:41.0	153.7	25.5					
	e	PKPab	Z 10:54:53.3							
BRG	e	PKPbc	Z 10:54:41.1	153.8	27.7					
	e	PKPab	Z 10:54:54.0							
CLZ	e	PKPbc	Z 10:54:41.3	153.9	20.0					
	e	PKPab	Z 10:54:54.3							
IBBN	e	PKPab	Z 10:54:54.3	153.9	14.5					
MOX	e	PKPab	Z 10:54:57.4	154.7	23.4					
GUNZ	e	PKPab	Z 10:54:58.1	154.7	25.1					
GRA1	e	PKPab	Z 10:55:01.9	155.7	23.4					
WET	e	PKPab	Z 10:55:02.0	155.7	27.3					
GEC2	e	PKPab	Z 10:55:01.9	155.7	29.3					
WLF	e	PKPab	Z 10:55:06.6	156.7	12.5					
STU	e	PKPab	Z 10:55:07.8	157.0	19.8					
FUR	e	PKPab	Z 10:55:08.1	157.0	24.9					
BFO	e	PKPab	Z 10:55:09.8	157.6	18.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/08	12:45:52.3	18.671N	93.521E	33.0N	5.2			SZGRF

Myanmar

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 12:56:54.5	69.1	86.2					
BRG	e P	Z 12:56:54.9	69.1	85.8	0.6	14	5.4		
GEC2	e P	Z 12:56:57.5	69.4	84.8	0.8	16	5.2		
CLL	e P	Z 12:56:57.7	69.7	85.2	1.4	21	5.1		
WET	e P	Z 12:57:00.4	69.9	84.3	1.2	15	5.0		
GUNZ	e P	Z 12:57:01.7	70.2	84.4					
WERD	e P	Z 12:57:01.4	70.2	84.4					
MOX	e P	Z 12:57:03.9	70.6	83.9	1.1	13	5.0		
GRA1	e P	Z 12:57:06.9	71.0	83.3	1.6	50	5.4		
BSEG	e P	Z 12:57:06.1	71.0	84.1	0.9	32	5.5		
CLZ	e P	Z 12:57:07.5	71.2	83.4	1.3	32	5.3		
NRDL	e P	Z 12:57:08.4	71.3	83.4					
STU	e P	Z 12:57:15.5	72.4	81.5					
IBBN	e P	Z 12:57:16.6	72.8	81.5					
BUG	e P	Z 12:57:19.1	73.2	80.9					
WLF	e P	Z 12:57:26.3	74.2	79.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/09								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 01:19:23.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/09	09:48:59.2	47.310N	152.030E	33.0N	5.0			SZGRF

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e P	Z 10:00:40.4	75.0	25.6	0.9	7	4.7		
CLL	e P	Z 10:00:41.9	75.3	27.4	0.7	17	5.3		
BRG	e P	Z 10:00:41.9	75.4	27.9	0.8	5	4.7		
CLZ	e P	Z 10:00:43.8	75.6	25.7	0.9	14	5.1		
WERD	e P	Z 10:00:47.6	76.3	26.8	1.5	13	4.9		
MOX	e P	Z 10:00:47.7	76.3	26.4	1.1	12	4.9		
GUNZ	e P	Z 10:00:48.2	76.3	26.8	1.0	9	4.9		
BUG	e P	Z 10:00:49.9	76.7	23.7	0.5	11	5.2		
GRA1	e P	Z 10:00:53.7	77.3	26.1	0.7	31	5.5		
WET	e P	Z 10:00:52.9	77.3	27.0	0.9	10	4.9		
GEC2	e P	Z 10:00:53.2	77.3	27.5	1.0	5	4.6		

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

24

BFO e P Z 10:01:04.0 79.3 24.1 1.2 20 4.9

Date Origin Time Lat Long Depth mb Ms ML Source  
2004/08/09 16:13:5.2 26.727N 128.056E 33.0G 4.4 4.7  
Ryukyu Islands, Japan

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e P Z 16:25:38.5 85.3 53.1 0.9 3 4.4  
e 16:25:48.7  
e L Z 17:20:01.5 20.9 328 4.7

Date Origin Time Lat Long Depth mb Ms ML Source  
2004/08/09 16:49:36.8 27.697N 130.848E 33.0N 4.9  
Ryukyu Islands, Japan

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e P Z 16:37:36.9 85.9 50.5 1.0 9 4.9

Date Origin Time Lat Long Depth mb Ms ML Source  
2004/08/09 16:49:42.8 27.838N 128.574E 33.0N 5.0  
Ryukyu Islands, Japan

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e P Z 17:02:13.5 84.6 52.1 1.0 9 5.0  
e 17:02:21.1

Date Origin Time Lat Long Depth mb Ms ML Source  
2004/08/09 20:36:24.9 N  
Ryukyu Islands, Japan GSRC-M

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e (P) Z 20:49:49.2

Date Origin Time Lat Long Depth mb Ms ML Source  
2004/08/10 01:47:39.5 36.540N 69.960E 217.2 5.5 5.1  
Hindu Kush, Afghanistan, region

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
BRG e P Z 01:55:08.1 41.8 87.7 1.2 82 5.3



	e pP	Z	01:55:53.3							
RUE	e P	Z	01:55:08.7	41.9	89.3	1.1	106	5.5		
GEC2	e P	Z	01:55:10.9	42.1	85.2	1.8	74	5.1		
RGN	e P	Z	01:55:11.7	42.2	91.2	0.5	269	6.2		
CLL	e P	Z	01:55:12.2	42.4	87.4	1.6	109	5.3		
WET	e P	Z	01:55:14.6	42.6	85.0	2.7	219	5.4		
GUNZ	e P	Z	01:55:17.4	42.9	85.9	1.7	100	5.3		
WERD	e P	Z	01:55:17.4	42.9	86.0	1.6	89	5.2		
MOX	e P	Z	01:55:20.1	43.3	85.7	1.8	140	5.4		
GRA1	e P	Z	01:55:23.5	43.6	84.4	2.4	618	5.9		
	e PP	E	01:57:10.2							
	e S	N	02:01:45.6							
	e L	Z	02:05:53.5			20.1	2519		5.1	
BSEG	e P	Z	01:55:24.8	43.9	88.2	1.0	101	5.5		
	e pP	Z	01:56:11.7							
CLZ	e P	Z	01:55:25.4	44.0	86.0	1.1	79	5.3		
NRDL	e P	Z	01:55:26.3	44.1	86.5	1.6	162	5.5		
	e pP	Z	01:56:13.1							
STU	e P	Z	01:55:34.5	45.1	82.1	1.1	73	5.5		
IBBN	e P	Z	01:55:38.4	45.6	84.6	0.9	90	5.8		
	e pP	Z	01:56:24.6							
BFO	e P	Z	01:55:38.2	45.7	81.1	1.1	27	5.2		
BUG	e P	Z	01:55:41.4	45.9	83.4	1.4	98	5.6		
	e pP	Z	01:56:27.8							
WLF	e P	Z	01:55:48.4	46.9	80.9	1.1	85	5.8		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/10 02:31: 0.9 28.198N 57.609E 33.0N 4.8 SZGRF  
 Southern Iran

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 02:38:26.8	39.3	105.3	0.9	16	4.6		
BRG	e P	Z 02:38:30.4	39.7	107.9	0.8	12	4.6		
WET	e P	Z 02:38:31.3	39.9	104.8	1.0	11	4.4		
RUE	e P	Z 02:38:36.0	40.4	109.5	0.6	25	5.0		
CLL	e P	Z 02:38:36.6	40.4	107.4	1.0	28	4.9		
MOX	e P	Z 02:38:41.9	41.1	105.3	0.8	8	4.5		
GRA1	e P	Z 02:38:41.9	41.1	103.9	0.9	37	5.1		
CLZ	e P	Z 02:38:51.2	42.2	105.4	0.9	42	5.2		
NRDL	e P	Z 02:38:53.9	42.5	105.9	1.0	21	4.8		
BSEG	e P	Z 02:38:55.8	42.8	107.6	0.8	13	4.7		
IBBN	e P	Z 02:39:05.0	43.8	103.4	1.0	34	5.0		
BUG	e P	Z 02:39:05.6	43.9	102.1	0.9	37	5.1		
WLF	e P	Z 02:39:07.8	44.3	99.3	0.8	19	4.9		

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

26

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/10	05:37: 6.4	3.100S	150.400E	19.0N				NEIC-M

New Ireland, Papua New Guinea, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 05:56:05.6	122.0	50.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/10	06:13:27.2	39.640N	142.770E	33.0N	6.0	5.2		SZGRF

Near east coast of eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z 06:25:15.5	76.4	37.7	0.9	263	6.4		
RUE	e P	Z 06:25:23.4	77.8	37.8	1.0	212	6.2		
BSEG	e P	Z 06:25:24.0	77.9	35.5	0.9	194	6.2		
BRG	e P	Z 06:25:30.0	79.0	37.7	0.9	116	5.9		
CLL	e P	Z 06:25:29.8	79.0	37.1	0.9	228	6.2		
NRDL	e P	Z 06:25:30.6	79.1	35.2	1.0	88	5.8		
CLZ	e P	Z 06:25:33.3	79.6	35.3	1.2	245	6.0		
WERD	e P	Z 06:25:35.3	80.0	36.5	1.0	87	5.6		
GUNZ	e P	Z 06:25:35.7	80.1	36.5	0.9	113	5.8		
MOX	e P	Z 06:25:35.8	80.1	36.1	1.0	108	5.7		
IBBN	e P	Z 06:25:35.8	80.1	33.5	0.9	200	6.1		
GEC2	e P	Z 06:25:39.1	80.7	37.3	0.9	78	5.7		
WET	e P	Z 06:25:40.0	80.8	36.8	1.1	144	5.9		
BUG	e P	Z 06:25:40.4	81.0	33.1	1.1	125	5.9		
GRA1	e P	Z 06:25:41.3	81.0	35.7	0.9	348	6.4		
	e SS	N 06:40:50.4							
	e L	Z 07:03:52.9			21.3	1107		5.2	
STU	e P	Z 06:25:48.9	82.5	34.2	0.9	247	6.5		
WLF	e P	Z 06:25:50.7	82.9	32.2					
BFO	e P	Z 06:25:52.2	83.2	33.6	1.0	117	6.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/10	06:24:32.8	19.585S	172.247W	33.0G				SZGRF

Tonga Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 06:44:07.6	145.6	4.3					
RUE	e PKPbc	Z 06:44:10.9	146.8	10.4					
NRDL	e PKPbc	Z 06:44:11.8	147.0	4.1					
IBBN	e PKPbc	Z 06:44:12.6	147.3	0.0					
CLZ	e PKPbc	Z 06:44:13.8	147.7	4.6					
CLL	e PKPbc	Z 06:44:14.4	148.0	9.4					
BUG	e PKPbc	Z 06:44:14.7	148.1	359.1					

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

27

BRG	e	PKPbc	Z	06:44:15.3	148.3	11.2
MOX	e	PKPbc	Z	06:44:16.2	148.8	7.0
WERD	e	PKPbc	Z	06:44:17.0	148.9	8.3
GUNZ	e	PKPbc	Z	06:44:16.4	149.0	8.4
GRA1	e	PKPbc	Z	06:44:19.1	149.8	6.5
WLF	e	PKPbc	Z	06:44:19.9	149.9	357.0
WET	e	PKPbc	Z	06:44:19.5	150.2	9.7
GEC2	e	PKPbc	Z	06:44:20.2	150.4	11.4
STU	e	PKPbc	Z	06:44:21.4	150.8	2.8
BFO	e	PKPbc	Z	06:44:22.5	151.3	1.1

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/10	10:26:24.4	28.182N	103.548E	33.0N	5.1	5.2		SZGRF

Sichuan, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 10:37:22.0	68.3	71.6	1.3	17	5.1		
CLL	e P	Z 10:37:24.3	68.7	71.1	1.0	15	5.2		
GEC2	e P	Z 10:37:27.1	69.1	70.7	0.8	10	5.1		
BSEG	e P	Z 10:37:29.5	69.4	70.1	1.1	20	5.2		
WERD	e P	Z 10:37:28.9	69.4	70.3					
GUNZ	e P	Z 10:37:29.2	69.4	70.3					
WET	e P	Z 10:37:29.7	69.5	70.2	1.0	8	4.8		
MOX	e P	Z 10:37:31.1	69.7	69.9	1.1	10	4.9		
NRDL	e P	Z 10:37:33.5	70.0	69.5					
CLZ	e P	Z 10:37:33.4	70.1	69.4	0.8	17	5.2		
GRA1	e P	Z 10:37:35.1	70.3	69.3	0.9	19	5.2		
	e L	Z 11:09:43.8			18.4	1399		5.2	
STU	e P	Z 10:37:44.0	71.9	67.6					
BUG	e P	Z 10:37:44.9	72.0	67.1	0.8	11	5.1		
BFO	e P	Z 10:37:47.8	72.6	66.9	1.1	17	5.1		
WLF	e P	Z 10:37:53.4	73.3	65.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/11								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pg	Z 08:14:57.8							
	e Sg	N 08:15:16.4							
WLF	e Pg	Z 08:14:43.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/11	13:47:42.9	15.923S	173.651W	33.0N				SZGRF

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z 14:07:11.2	143.6	2.3					
CLZ	e PKPbc	Z 14:07:11.9	143.9	6.6					
CLL	e PKPbc	Z 14:07:12.4	144.2	11.0					
BUG	e PKPbc	Z 14:07:13.8	144.5	1.5					
BRG	e PKPbc	Z 14:07:13.7	144.5	12.6					
MOX	e PKPbc	Z 14:07:15.5	145.0	8.9					
WERD	e PKPbc	Z 14:07:15.7	145.1	10.1					
GUNZ	e PKPbc	Z 14:07:16.0	145.2	10.1					
GRA1	e PKPbc	Z 14:07:18.8	146.0	8.4					
WLF	e PKPbc	Z 14:07:20.1	146.3	359.7					
WET	e PKPbc	Z 14:07:20.2	146.4	11.4					
GEC2	e PKPbc	Z 14:07:19.3	146.5	12.9					
BFO	e PKPbc	Z 14:07:22.6	147.6	3.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/11	15:48:27.4	38.173N	39.650E	33.0N	5.2	5.1		SZGRF

Turkey

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 15:53:12.5	21.5	110.0	1.2	105	5.1		
WET	e P	Z 15:53:18.4	22.1	109.7	1.5	96	5.0		
BRG	e P	Z 15:53:19.2	22.1	115.1	1.6	139	5.1		
FUR	e P	Z 15:53:26.6	22.8	105.4	1.2	520	5.9		
CLL	e P	Z 15:53:26.5	22.8	114.7	1.1	68	5.1		
GUNZ	e P	Z 15:53:27.0	22.9	111.7	1.0	87	5.2		
WERD	e P	Z 15:53:27.3	22.9	111.9	1.3	68	5.0		
RUE	e P	Z 15:53:28.7	22.9	118.3	1.7	226	5.4		
GRA1	e P	Z 15:53:31.4	23.3	108.8	1.3	525	5.9		
	e S	T 15:57:43.7							
	e L	Z 16:04:04.6			19.3	5991		5.1	
MOX	e P	Z 15:53:32.4	23.4	111.4	1.0	21	4.6		
STU	e P	Z 15:53:40.7	24.3	104.4	1.3	198	5.5		
CLZ	e P	Z 15:53:44.2	24.5	112.3	1.0	41	5.1		
BFO	e P	Z 15:53:45.9	24.7	102.5	1.5	114	5.4		
NRDL	e P	Z 15:53:47.2	24.9	113.2	1.1	20	4.8		
BSEG	e P	Z 15:53:52.9	25.4	116.3	1.2	70	5.3		
IBBN	e P	Z 15:53:59.9	26.2	109.9	1.4	70	5.1		
BUG	e P	Z 15:54:00.3	26.2	107.6	1.1	90	5.3		
WLF	e P	Z 15:54:00.9	26.4	102.9	1.1	92	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/11	23:02:26.8	3.200S	79.650W	33.0N	5.5			SZGRF

Near coast of Ecuador

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	23:15:22.1	89.7	264.7	1.2	50	5.6		
BUG	e P	Z	23:15:26.1	90.6	265.6	1.6	33	5.4		
BFO	e P	Z	23:15:27.5	91.0	266.4	1.2	7	4.9		
STU	e P	Z	23:15:31.1	91.6	267.0	1.0	18	5.3		
NRDL	e P	Z	23:15:34.6	92.4	267.9	1.5	26	5.3		
CLZ	e P	Z	23:15:35.4	92.5	268.0	1.3	34	5.6		
BSEG	e P	Z	23:15:34.8	92.6	268.1	1.6	24	5.4		
FUR	e P	Z	23:15:37.6	93.0	268.6	1.8	44	5.6		
GRA1	e P	Z	23:15:37.7	93.0	268.6	1.5	43	5.7		
MOX	e P	Z	23:15:38.4	93.3	268.9	1.2	19	5.4		
WERD	e P	Z	23:15:40.6	93.7	269.5	1.2	29	5.5		
GUNZ	e P	Z	23:15:40.5	93.7	269.5	1.3	29	5.5		
WET	e P	Z	23:15:41.8	94.1	269.8	1.5	30	5.4		
CLL	e P	Z	23:15:42.7	94.2	270.1	1.2	28	5.5		
RGN	e P	Z	23:15:43.2	94.3	270.6	1.6	185	6.2		
GEC2	e P	Z	23:15:44.6	94.6	270.4	2.0	16	5.1		
RUE	e P	Z	23:15:44.7	94.6	270.8	0.7	25	5.7		
BRG	e P	Z	23:15:45.3	94.7	270.8	1.1	26	5.6		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/12 15:59:19.8 12.040S 167.160E 33.0N  
 Santa Cruz Islands SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e PKPdf	Z	16:18:33.1	132.8	36.0					
	e PP	Z	16:20:58.9							
	e SKPdf	Z	16:21:42.1							
BSEG	e PKPdf	Z	16:18:35.0	134.3	32.5					
	e PP	Z	16:21:06.5							
	e SKPdf	Z	16:21:48.1							
RUE	e PKPdf	Z	16:18:34.4	134.3	37.7					
	e PP	Z	16:21:07.2							
	e SKPdf	Z	16:21:49.1							
HLG	e PKPdf	Z	16:18:36.0	134.8	29.2					
	e PP	Z	16:21:10.9							
	e SKPdf	Z	16:21:48.3							
BRG	e PKPdf	Z	16:18:37.0	135.5	38.9					
	e PP	Z	16:21:14.0							
	e SKPdf	Z	16:21:51.7							
CLL	e PKPdf	Z	16:18:36.8	135.5	37.4					
	e PP	Z	16:21:14.7							
	e SKPdf	Z	16:21:51.9							
NRDL	e PKPdf	Z	16:18:37.2	135.5	33.0					
	e PP	Z	16:21:15.1							

	e SKPdf	Z	16:21:52.4		
CLZ	e PKPdf	Z	16:18:38.5	136.0	33.7
	e PP	Z	16:21:17.8		
	e SKPdf	Z	16:21:53.8		
WERD	e PKPdf	Z	16:18:38.7	136.4	37.1
	e SKPdf	Z	16:21:54.8		
IBBN	e PKPdf	Z	16:18:38.6	136.5	30.0
	e PP	Z	16:21:18.1		
	e SKPdf	Z	16:21:54.9		
GUNZ	e PKPdf	Z	16:18:39.0	136.5	37.2
	e SKPdf	Z	16:21:54.7		
MOX	e PKPdf	Z	16:18:40.2	136.5	36.1
	e PP	Z	16:21:22.1		
	e SKPdf	Z	16:21:55.0		
GEC2	e PKPdf	Z	16:18:40.2	137.1	40.0
	e PP	Z	16:21:24.6		
	e SKPdf	Z	16:21:56.9		
WET	e PKPdf	Z	16:18:40.4	137.2	38.7
	e PP	Z	16:21:24.2		
	e SKPdf	Z	16:21:57.1		
BUG	e PKPdf	Z	16:18:40.7	137.4	29.8
	e PP	Z	16:21:26.2		
	e SKPdf	Z	16:21:57.7		
GRA1	e PKPdf	Z	16:18:40.8	137.5	36.1
	e PP	Z	16:21:26.4		
	e SKPdf	Z	16:21:58.7		
FUR	e PKPdf	Z	16:18:42.7	138.7	37.2
	e PP	Z	16:21:34.2		
	e SKPdf	Z	16:22:02.2		
STU	e PKPdf	Z	16:18:43.5	139.0	34.0
	e PP	Z	16:21:35.4		
	e SKPdf	Z	16:22:02.9		
WLF	e PKPdf	Z	16:18:44.1	139.3	29.2
	e PP	Z	16:21:38.3		
	e SKPdf	Z	16:22:03.4		
BFO	e PKPdf	Z	16:18:43.5	139.7	33.1
	e PP	Z	16:21:40.3		
	e SKPdf	Z	16:22:02.6		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/12 16:52:37.7 49.708N 85.235E 33.0N 4.8  
 Eastern Kazakhstan SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	17:00:56.8	45.8	60.1	0.8	8	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/13	10:48:45.0	31.158N	69.711E	33.0N	5.4	5.0		SZGRF

Pakistan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 10:56:58.3	45.2	93.8	0.8	25	5.2		
GEC2	e P	Z 10:56:58.6	45.2	91.6	1.0	26	5.1		
RUE	e P	Z 10:57:00.0	45.4	95.2	0.6	68	5.7		
WET	e P	Z 10:57:02.6	45.8	91.3	1.2	7	4.6		
CLL	e P	Z 10:57:03.1	45.8	93.5	1.1	30	5.2		
GUNZ	e P	Z 10:57:06.7	46.2	92.0	1.2	31	5.2		
WERD	e P	Z 10:57:06.7	46.2	92.1	1.3	28	5.1		
MOX	e P	Z 10:57:10.3	46.6	91.7	0.9	24	5.3		
GRA1	e P	Z 10:57:12.1	46.9	90.5	0.9	74	5.8		
	e L	Z 11:20:59.0			19.0	1456		5.0	
CLZ	e P	Z 10:57:16.5	47.4	91.8	1.2	74	5.7		
BSEG	e P	Z 10:57:17.6	47.6	93.7	1.1	66	5.7		
NRDL	e P	Z 10:57:18.0	47.6	92.2	1.0	44	5.5		
STU	e P	Z 10:57:21.8	48.2	88.1	1.0	54	5.6		
BFO	e P	Z 10:57:25.6	48.8	87.1	1.1	33	5.3		
IBBN	e P	Z 10:57:29.0	49.0	90.2	0.7	85	5.9		
BUG	e P	Z 10:57:31.2	49.4	89.0	1.0	57	5.6		
WLF	e P	Z 10:57:37.4	50.1	86.7	1.1	54	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/13	20:35:22.1	40.000N	40.000E	33.0N	4.1			GSRC-M

Turkey

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 20:39:53.6	20.6	105.5	1.0	11	4.1		
WET	e P	Z 20:40:04.5	21.2	105.2	1.3	13	4.1		
TANN	e P	Z 20:40:07.0	21.8	107.8	1.4	10	4.1		
GUNZ	e P	Z 20:40:07.7	21.9	107.5	1.1	13	4.3		
MOX	e P	Z 20:40:16.1	22.4	107.3	1.4	12	4.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/14	00:20:25.1	38.385N	39.234E	33.0N	4.7			kan

Turkey

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA2	e P	Z 00:25:26.6	22.8	109.0	1.7	43	4.7		





Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA2	e PKP	Z 23:36:29.8							
	e	23:36:42.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/14								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA2	e PKP	Z 23:56:51.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/15								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA2	e PKP	Z 00:08:49.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/15	01:15:26.2	14.688S	64.942E	33.0N	4.6			SZGRF
Mid-Indian Ridge								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA2	e P	Z 01:27:31.2	79.7	127.7	1.5	13	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/15	02:38:45.3	35.427N	17.578E	33.0N				SZGRF
Central Mediterranean Sea								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA2	e P	Z 02:42:19.6	14.9	160.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/15	03:38:46.9	17.481S	67.394E	33.0N	4.9			SZGRF
Mid-Indian Ridge								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA2	e P	Z 03:51:10.9	83.3	127.2	1.5	11	4.9		

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

34

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/15	04:41:45.4	43.559N	11.836E	10.0G			3.2	SZGRF

Central Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z 04:43:03.0	5.4	151.7					3.3
	e Sn	N 04:44:05.6							
GEC2	e Pn	Z 04:43:07.2	5.4	194.4					3.0
	e Sn	E 04:44:06.0							
WET	e Pn	Z 04:43:07.1	5.6	187.7					
MOX	e Pn	Z 04:43:30.7	7.1	178.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/15	05:26: 2.3	50.990N	48.650W	33.0N	4.4			SZGRF

North Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e P	Z 05:32:47.3	34.1	290.8	1.0	23	5.1		
BUG	e P	Z 05:32:47.0	34.2	291.8	1.0	14	4.8		
BSEG	e P	Z 05:32:54.6	35.0	289.9	0.9	26	5.2		
NRDL	e P	Z 05:32:57.7	35.4	291.7	1.2	15	4.7		
CLZ	e P	Z 05:33:02.1	35.8	292.7	1.3	13	4.6		
MOX	e P	Z 05:33:10.8	37.0	294.7	0.9	3	4.0		
WERD	e P	Z 05:33:15.4	37.5	295.2	1.1	4	4.0		
CLL	e P	Z 05:33:16.2	37.5	294.5	0.8	4	4.2		
GUNZ	e P	Z 05:33:16.3	37.5	295.3	1.1	6	4.2		
BRG	e P	Z 05:33:21.8	38.2	295.4	1.2	4	4.0		
GEC2	e P	Z 05:33:29.0	39.0	297.6	0.8	3	4.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/15	08:05: 2.4	11.540N	55.461E	33.0N	4.2			SZGRF

Socotra region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA2	e P	Z 08:14:13.0	52.6	120.8	0.8	3	4.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/15	15:35:35.5	43.198N	144.720E	33.0G	4.7			SZGRF

Hokkaido, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA2	e P	Z 15:47:34.3	78.6	32.7	0.8	6	4.7		
	e	15:47:45.2							



./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

36

1970/07/20 23:53: 1.2  
Northern and central Iran

30.041N 51.602E 33.0N 4.7

SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA2	e P	Z 01:30:30.8			0.8	10	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/16								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 21:47:36.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/16								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 23:25:47.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/17	03:01:54.5	41.886N	143.336E	42.9	5.1	4.9		SZGRF
Hokkaido, Japan, region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 03:13:38.8	76.1	34.1	1.2	31	5.3		
CLL	e P	Z 03:13:45.3	77.3	35.6	0.9	24	5.3		
	e pP	Z 03:13:56.2							
BRG	e P	Z 03:13:45.5	77.3	36.1	1.1	11	4.9		
NRDL	e P	Z 03:13:45.6	77.3	33.8	1.4	18	5.0		
CLZ	e P	Z 03:13:48.6	77.8	33.9	1.2	32	5.3		
WERD	e P	Z 03:13:50.8	78.3	35.0	1.4	12	4.7		
IBBN	e P	Z 03:13:51.0	78.3	32.2	1.1	28	5.2		
	e pP	Z 03:14:02.2							
GUNZ	e P	Z 03:13:50.9	78.3	35.0	1.0	11	4.8		
MOX	e P	Z 03:13:50.9	78.3	34.6	1.4	20	5.0		
GEC2	e P	Z 03:13:54.0	79.0	35.7	1.5	12	4.7		
WET	e P	Z 03:13:54.7	79.1	35.2	1.1	19	5.0		
	e pP	Z 03:14:07.1							
BUG	e P	Z 03:13:55.6	79.2	31.7	1.1	29	5.1		
GRA1	e P	Z 03:13:55.6	79.3	34.2	1.0	32	5.2		
	e pP	Z 03:14:08.0							
	e PP	Z 03:16:55.8							
	e L	Z 03:52:24.2			21.3	601		4.9	
FUR	e P	Z 03:14:03.5	80.5	34.1	1.0	36	5.4		

	e pP	Z	03:14:14.8								
BFO	e P	Z	03:14:07.3	81.4	32.2	1.6		25	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/17	03:25:55.1	42.132N	143.302E	36.9	4.5			SZGRF

Hokkaido, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:37:56.4	79.0	34.1	0.8	4	4.5		
	e pP	Z 03:38:07.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/17	04:16:21.6	42.210N	142.850E	33.0N	4.8			SZGRF

Hokkaido, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 04:28:05.3	75.6	34.3	0.9	13	5.1		
CLL	e P	Z 04:28:11.8	76.8	35.7	1.1	16	5.1		
BRG	e P	Z 04:28:12.3	76.8	36.3	0.9	6	4.7		
NRDL	e P	Z 04:28:12.4	76.9	34.0	1.1	7	4.7		
CLZ	e P	Z 04:28:15.2	77.3	34.0	0.7	10	5.1		
WERD	e P	Z 04:28:17.4	77.8	35.2	0.7	3	4.5		
GUNZ	e P	Z 04:28:17.9	77.9	35.2	0.7	5	4.7		
MOX	e P	Z 04:28:17.9	77.9	34.7	0.9	5	4.7		
GEC2	e P	Z 04:28:21.6	78.6	35.9	0.8	4	4.5		
WET	e P	Z 04:28:22.5	78.6	35.4	1.0	9	4.8		
GRA1	e P	Z 04:28:23.3	78.8	34.4	0.8	17	5.1		
BFO	e P	Z 04:28:34.8	81.0	32.3	1.1	7	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/17	04:25:13.4	42.010N	143.200E	33.0N	4.8			SZGRF

Hokkaido, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 04:36:59.9	75.9	34.1	1.3	16	5.0		
CLL	e P	Z 04:37:06.3	77.1	35.6	0.8	12	5.1		
BRG	e P	Z 04:37:06.5	77.1	36.2	1.1	7	4.7		
CLZ	e P	Z 04:37:09.5	77.6	33.9	0.8	14	5.1		
WERD	e P	Z 04:37:12.0	78.1	35.0	0.8	5	4.7		
GUNZ	e P	Z 04:37:12.4	78.2	35.0	0.7	5	4.7		
MOX	e P	Z 04:37:12.2	78.2	34.6	0.7	5	4.6		
GEC2	e P	Z 04:37:16.0	78.9	35.8	0.8	4	4.5		
WET	e P	Z 04:37:16.8	78.9	35.3	1.0	7	4.6		

BUG	e P	Z	04:37:16.9	79.0	31.8	0.9	10	4.8
GRA1	e P	Z	04:37:18.2	79.1	34.2	0.8	15	5.1
BFO	e P	Z	04:37:28.9	81.3	32.2	1.0	7	4.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/17	04:49:10.9	23.830S	177.880W	183.0				SZGRF

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPdf	Z 05:08:32.7	149.3	14.8					
	e PKPab	Z 05:08:42.4							
NRDL	e PKPdf	Z 05:08:35.8	150.7	15.1					
	e PKPab	Z 05:08:47.6							
IBBN	e PKPab	Z 05:08:50.7	151.2	10.7					
CLL	e PKPdf	Z 05:08:37.2	151.3	21.1					
	e PKPab	Z 05:08:50.9							
CLZ	e PKPdf	Z 05:08:37.4	151.3	15.9					
	e PKPab	Z 05:08:50.5							
BRG	e PKPdf	Z 05:08:36.6	151.5	23.1					
	e PKPab	Z 05:08:51.0							
BUG	e PKPab	Z 05:08:55.2	152.1	10.1					
MOX	e PKPab	Z 05:08:54.3	152.2	18.9					
WERD	e PKPab	Z 05:08:55.1	152.2	20.3					
GUNZ	e PKPab	Z 05:08:55.4	152.3	20.4					
GRA1	e PKPab	Z 05:08:59.5	153.2	18.7					
	e pPKPab	Z 05:09:45.8							
	e PP	Z 05:12:34.6							
WET	e PKPab	Z 05:08:59.9	153.3	22.3					
GEC2	e PKPab	Z 05:09:00.2	153.4	24.2					
WLF	e PKPab	Z 05:09:03.1	154.0	8.4					
FUR	e PKPab	Z 05:09:06.0	154.6	19.8					
BFO	e PKPab	Z 05:09:07.2	155.0	13.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/17	07:09:30.6	19.500S	178.280W	33.0N				SZGRF

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 07:29:03.0	144.9	14.2					
NRDL	e PKPbc	Z 07:29:07.4	146.4	14.4					
CLZ	e PKPbc	Z 07:29:09.6	147.0	15.1					
CLL	e PKPbc	Z 07:29:09.4	147.0	19.8					
BRG	e PKPbc	Z 07:29:10.3	147.2	21.6					
BUG	e PKPbc	Z 07:29:11.6	147.8	9.8					
MOX	e PKPbc	Z 07:29:12.0	147.9	17.7					

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

39

WERD	e	PKPbc	Z	07:29:12.5	147.9	19.0					
GUNZ	e	PKPbc	Z	07:29:12.7	148.0	19.1					
GRA1	e	PKPbc	Z	07:29:15.1	148.9	17.5					
	e	PKPab	Z	07:29:19.1							
GEC2	e	PKPbc	Z	07:29:15.4	149.1	22.4					
WLF	e	PKPbc	Z	07:29:17.5	149.6	8.3					
BFO	e	PKPbc	Z	07:29:19.4	150.7	12.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/18	03:55:50.0	52.183N	170.694W	33.0N	4.6			SZGRF
Fox Islands, Aleutian Islands, United States								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:07:46.2	78.1	1.2	1.0	5	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/18	05:56:51.8	35.947N	35.103E	10.0G	4.6			SZGRF
Jordan - Syria region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 06:01:27.6	20.3	121.5	1.3	35	4.4		
WET	e P	Z 06:01:33.7	20.9	120.8	1.1	59	4.8		
BRG	e P	Z 06:01:37.9	21.3	126.4	1.0	22	4.4		
GUNZ	e P	Z 06:01:44.0	21.8	122.6	1.2	42	4.8		
WERD	e P	Z 06:01:44.5	21.9	122.7	1.2	35	4.6		
CLL	e P	Z 06:01:45.4	22.0	125.7	1.5	31	4.5		
GRA1	e P	Z 06:01:45.8	22.1	119.4	1.0	17	4.4		
MOX	e P	Z 06:01:49.6	22.4	122.0	1.2	27	4.5		
BFO	e P	Z 06:01:58.1	23.2	112.3	1.4	42	4.8		
CLZ	e P	Z 06:02:02.3	23.7	122.5	1.0	27	4.7		
BSEG	e P	Z 06:02:13.9	24.9	126.2	1.2	23	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/18	07:07:34.5	7.627N	71.208W	33.0N	4.6			SZGRF
Venezuela								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 07:19:37.1	79.3	269.2	0.8	5	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/18	09:03: 9.2	16.520N	95.660W	62.5	5.7	4.8		SZGRF

Oaxaca, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 09:15:37.7	84.9	289.6	0.9	161	6.2		
IBBN	e P	Z 09:15:37.1	84.9	290.6	1.6	167	6.0		
BUG	e P	Z 09:15:37.3	84.9	290.3	1.7	152	5.9		
	e pP	Z 09:15:55.3							
	e S	R 09:26:00.6							
BSEG	e P	Z 09:15:42.2	85.7	292.4	1.2	93	5.8		
NRDL	e P	Z 09:15:44.3	86.2	292.4	1.2	58	5.6		
	e S	R 09:26:15.2							
CLZ	e P	Z 09:15:46.6	86.6	292.6	1.1	47	5.5		
	e pP	Z 09:16:04.1							
BFO	e P	Z 09:15:46.2	86.7	291.3	1.5	107	5.8		
	e S	R 09:26:18.5							
STU	e P	Z 09:15:48.7	87.0	291.9	0.9	98	5.9		
MOX	e P	Z 09:15:51.9	87.7	293.6	1.2	40	5.6		
	e pP	Z 09:16:09.3							
	e S	R 09:26:31.0							
GRA1	e P	Z 09:15:53.6	87.9	293.4	1.4	123	6.1		
	e pP	Z 09:16:10.6							
	e S	R 09:26:33.5							
	e L	E 09:52:46.7			21.8	456		4.8	
FUR	e P	Z 09:15:56.1	88.5	293.4	1.1	61	5.7		
WET	e P	Z 09:15:58.7	89.1	294.6	1.1	34	5.5		
	e S	R 09:26:44.3							
GEC2	e P	Z 09:16:01.3	89.7	295.2	0.9	11	5.1		
	e S	R 09:26:48.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/18	19:01:9.0	52.015N	160.494E	33.0N	4.4			SZGRF

Off east coast of Kamchatka Peninsula, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:12:47.5	75.0	19.0	1.2	5	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/18	23:06:37.5	36.000N	27.500E	33.0N	4.1			GSRC-M

Dodecanese Islands, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:10:47.4	18.1	133.1	1.0	17	4.1		



./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

41

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/19	06:06:10.1	44.984N	124.260W	33.0N	5.0			SZGRF

Near coast of Oregon, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:18:04.0	77.7	329.5	0.9	12	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/19	06:35:5.7	13.840N	123.062E	33.0N	5.4	5.3		SZGRF

Luzon, Philippine Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 06:48:03.8	90.3	66.4	0.9	41	5.6		
BRG	e P	Z 06:48:06.5	90.9	66.6	51.1	161970	7.6		
CLL	e P	Z 06:48:07.3	91.2	65.8	0.9	9	5.1		
BSEG	e P	Z 06:48:09.4	91.6	63.6	0.8	12	5.3		
GEC2	e P	Z 06:48:10.7	91.8	66.4	1.1	6	4.8		
WERD	e P	Z 06:48:11.2	92.0	65.3	0.8	4	4.8		
GUNZ	e P	Z 06:48:11.6	92.0	65.3	1.1	10	5.1		
MOX	e P	Z 06:48:12.4	92.3	64.8	1.1	10	5.1		
NRDL	e P	Z 06:48:12.6	92.3	63.5	1.3	15	5.2		
CLZ	e P	Z 06:48:13.9	92.5	63.7	0.9	15	5.5		
GRA1	e P	Z 06:48:15.8	92.9	64.5	1.4	24	5.4		
	e L	Z 07:34:31.0			18.9	952		5.3	
BFO	e P	Z 06:48:24.3	95.2	62.3	2.0	25	5.3		
WLF	e P	Z 06:48:25.7	95.9	60.5	1.9	73	5.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/19	11:40:36.6	36.760N	140.610E	33.0N	5.1			SZGRF

Near east coast of eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 11:52:43.5	79.7	38.4	1.2	30	5.2		
BRG	e P	Z 11:52:48.3	80.7	40.6	0.9	14	4.9		
CLL	e P	Z 11:52:48.2	80.7	40.0	0.9	32	5.2		
NRDL	e P	Z 11:52:49.7	80.9	38.1	1.4	21	4.9		
CLZ	e P	Z 11:52:52.0	81.3	38.2	1.1	31	5.2		
WERD	e P	Z 11:52:53.7	81.6	39.5	1.6	20	4.9		
GUNZ	e P	Z 11:52:53.7	81.7	39.5	0.9	11	4.9		
MOX	e P	Z 11:52:54.0	81.8	39.0	1.4	18	4.9		
IBBN	e P	Z 11:52:54.8	81.9	36.4	0.9	35	5.4		
GEC2	e P	Z 11:52:56.9	82.3	40.3	0.9	9	4.9		
WET	e P	Z 11:52:57.6	82.4	39.7	1.1	15	5.0		
GRA1	e P	Z 11:52:59.5	82.7	38.6	1.1	50	5.6		
STU	e P	Z 11:53:07.0	84.2	37.1	1.4	42	5.5		

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

42

BFO e P Z 11:53:10.1 84.9 36.5 1.1 26 5.4

Date Origin Time Lat Long Depth mb Ms ML Source  
2004/08/19 13:51:45.0 15.597N 54.621E 33.0N 4.7  
Owen Fracture Zone region

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e P Z 14:00:27.8 48.9 118.5 1.0 8 4.7

Date Origin Time Lat Long Depth mb Ms ML Source  
2004/08/20 05:36:9.9 51.890N 165.444W 33.0N 5.0  
South of Aleutian Islands

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
BSEG e P Z 05:47:43.3 74.1 357.3 1.2 21 5.0  
NRDL e P Z 05:47:51.2 75.5 357.2 1.2 15 5.0  
RUE e P Z 05:47:52.1 75.6 359.5 0.5 28 5.7  
CLZ e P Z 05:47:55.2 76.2 357.3 1.3 20 5.1  
CLL e P Z 05:47:57.9 76.8 359.0 1.0 10 4.9  
BRG e P Z 05:48:00.5 77.2 359.6 1.0 11 4.9  
MOX e P Z 05:48:01.6 77.4 358.1 0.9 12 5.0  
WERD e P Z 05:48:03.3 77.6 358.6 1.1 8 4.8  
WLF e P Z 05:48:06.3 78.2 354.7 1.6 34 5.1  
GRA1 e P Z 05:48:07.5 78.4 357.9 0.8 21 5.2  
WET e P Z 05:48:10.2 79.0 358.9 1.3 9 4.6  
GEC2 e P Z 05:48:11.8 79.3 359.5 0.9 9 4.7  
BFO e P Z 05:48:13.9 79.6 356.1 1.1 9 4.6

Date Origin Time Lat Long Depth mb Ms ML Source  
2004/08/20 07:34:53.0 24.948S 179.757E 551.5G  
South of Fiji Islands

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
BSEG e PKPbc Z 07:53:42.2 150.0 19.4  
e PKPab Z 07:53:49.7  
NRDL e PKPbc Z 07:53:45.3 151.4 19.9  
CLL e PKPbc Z 07:53:46.1 151.8 26.0  
e PKPab Z 07:53:57.1  
BRG e PKPbc Z 07:53:46.5 151.9 28.1  
e PKPab Z 07:53:58.2  
CLZ e PKPbc Z 07:53:46.7 151.9 20.8  
MOX e PKPab Z 07:54:01.4 152.7 24.0  
GRA1 e PKPab Z 07:54:06.3 153.7 24.0

WET e PKPab Z 07:54:06.3 153.7 27.7

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/20 11:12:12.2 36.227N 28.536E 33.0G 4.5  
 Dodecanese Islands, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 11:16:02.8	16.6	133.8					
WET	e Pn	Z 11:16:09.5	17.2	132.7					
FUR	e Pn	Z 11:16:11.6	17.4	126.9					
BRG	e P	Z 11:16:18.9	18.0	138.9	0.7	30	4.5		
GUNZ	e P	Z 11:16:22.5	18.3	134.3	0.6	16	4.3		
WERD	e P	Z 11:16:23.5	18.4	134.4	0.8	21	4.3		
GRA1	e P	Z 11:16:23.9	18.4	130.5	0.9	25	4.4		
CLL	e P	Z 11:16:26.9	18.7	137.7	0.8	51	4.8		
MOX	e P	Z 11:16:29.1	18.9	133.4	0.7	36	4.7		
STU	e P	Z 11:16:29.6	18.9	124.4	0.7	27	4.6		
BFO	e P	Z 11:16:32.5	19.1	121.8	0.8	17	4.3		
RUE	e P	Z 11:16:33.5	19.3	141.5	0.9	46	4.7		
CLZ	e P	Z 11:16:43.2	20.2	133.4	0.8	26	4.5		
NRDL	e P	Z 11:16:48.8	20.8	134.1	1.2	32	4.5		
BSEG	e P	Z 11:16:59.8	21.7	137.1	0.6	42	5.0		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/20

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKPbc	Z 15:45:27.0							
CLL	e PKPbc	Z 15:45:26.3							
CLZ	e PKPbc	Z 15:45:26.4							
GUNZ	e PKPbc	Z 15:45:28.9							
WERD	e PKPbc	Z 15:45:28.7							

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/20 15:42:16.1 61.426N 24.323W 33.0N 4.6 4.0  
 Iceland region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 15:46:40.8	19.7	306.2	1.2	60	4.7		
BUG	e P	Z 15:46:42.7	19.8	312.4	1.0	37	4.6		
NRDL	e P	Z 15:46:51.4	20.5	309.3	1.1	43	4.7		
WLF	e P	Z 15:46:54.2	20.6	316.3	1.9	60	4.6		
CLZ	e P	Z 15:46:56.3	21.0	310.6	1.2	72	4.9		

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 15:47:09.0	22.2	308.7	1.1	54	4.9		
MOX	e P	Z 15:47:10.8	22.4	312.5	1.6	26	4.4		
BFO	e P	Z 15:47:13.1	22.5	317.6	1.1	20	4.5		
CLL	e P	Z 15:47:13.3	22.6	311.0	1.6	32	4.6		
WERD	e P	Z 15:47:15.8	22.8	312.7	1.5	20	4.4		
GRA1	e P	Z 15:47:14.4	22.9	314.3	1.2	24	4.6		
	e L	Z 15:57:03.4			18.1	524		4.0	
GUNZ	e P	Z 15:47:17.1	22.9	312.8	0.8	8	4.3		
BRG	e P	Z 15:47:19.1	23.3	311.6	1.3	15	4.4		
WET	e P	Z 15:47:27.1	24.0	314.7	1.1	17	4.5		
GEC2	e P	Z 15:47:34.6	24.6	315.0	1.3	11	4.4		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/20 17:13:40.1 11.531N 126.526E 33.0N 5.2  
 Philippine Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:27:07.8	96.8	63.1	1.2	8	5.2		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/20 17:37:54.7 23.760N 123.230E 33.0N 5.5 4.8  
 Southwestern Ryukyu Islands, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 17:50:14.3	82.3	60.6	2.0	103	5.7		
BRG	e P	Z 17:50:17.5	83.0	60.5	1.4	24	5.2		
CLL	e P	Z 17:50:18.7	83.3	59.8	1.4	26	5.3		
BSEG	e P	Z 17:50:19.3	83.3	58.1	0.9	12	5.1		
WERD	e P	Z 17:50:23.2	84.1	59.3	1.8	51	5.4		
GEC2	e P	Z 17:50:23.4	84.1	60.1	1.0	20	5.3		
GUNZ	e P	Z 17:50:23.1	84.1	59.3	1.4	27	5.3		
NRDL	e P	Z 17:50:24.1	84.2	57.8	1.7	70	5.6		
MOX	e P	Z 17:50:24.5	84.4	58.8	1.5	20	5.1		
CLZ	e P	Z 17:50:25.1	84.4	57.9	1.4	76	5.7		
WET	e P	Z 17:50:24.9	84.5	59.6	1.8	38	5.3		
GRA1	e P	Z 17:50:28.8	85.1	58.4	1.7	129	5.9		
	e L	Z 18:34:24.3			21.1	388		4.8	
IBBN	e P	Z 17:50:30.4	85.5	56.0	1.0	36	5.5		
FUR	e P	Z 17:50:32.1	85.9	58.3	1.7	140	5.8		
BUG	e P	Z 17:50:33.4	86.3	55.6	1.4	53	5.5		
BFO	e P	Z 17:50:39.4	87.4	56.2	1.6	29	5.4		
WLF	e P	Z 17:50:42.0	87.9	54.6	1.7	51	5.6		

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

45

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/20	18:52: 8.1	63.079N	25.484W	33.0N	4.2			SZGRF

Iceland region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 18:57:18.8	23.8	317.9	2.0	15	4.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/20	20:33:18.3	38.220N	141.300E	33.0N	5.3	5.0		SZGRF

Near east coast of eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 20:45:18.6	78.5	39.5	1.2	60	5.5		
BSEG	e P	Z 20:45:19.0	78.7	37.2	1.1	43	5.4		
BRG	e P	Z 20:45:24.1	79.7	39.4	1.2	18	4.9		
CLL	e P	Z 20:45:24.5	79.7	38.8	1.1	45	5.3		
NRDL	e P	Z 20:45:26.2	79.9	36.9	1.6	40	5.1		
CLZ	e P	Z 20:45:28.0	80.3	37.0	1.2	38	5.3		
WERD	e P	Z 20:45:30.5	80.7	38.2	1.2	17	4.9		
GUNZ	e P	Z 20:45:30.6	80.7	38.2	1.1	21	5.1		
MOX	e P	Z 20:45:30.3	80.8	37.8	1.2	24	5.1		
GEC2	e P	Z 20:45:34.2	81.4	39.0	1.1	15	5.1		
WET	e P	Z 20:45:33.7	81.5	38.5	1.2	20	5.1		
GRA1	e P	Z 20:45:35.4	81.7	37.4	1.3	103	5.8		
	e L	Z 21:28:10.2			19.8	728		5.0	
BUG	e P	Z 20:45:36.0	81.8	34.8	1.5	62	5.5		
FUR	e P	Z 20:45:42.0	82.9	37.3	1.3	50	5.6		
STU	e P	Z 20:45:43.3	83.2	35.9	1.3	60	5.7		
WLF	e P	Z 20:45:45.6	83.6	33.9	1.3	48	5.6		
BFO	e P	Z 20:45:46.3	83.9	35.3	1.4	55	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/20	21:19:54.4	34.620N	141.830E	33.0N	5.4			SZGRF

Off east coast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 21:32:12.5	81.9	40.9	1.2	48	5.5		
BSEG	e P	Z 21:32:13.4	82.1	38.5	1.2	35	5.3		
BRG	e P	Z 21:32:18.0	83.0	40.9	1.3	20	5.2		
CLL	e P	Z 21:32:18.4	83.1	40.2	1.2	39	5.5		
NRDL	e P	Z 21:32:19.7	83.3	38.2	1.9	60	5.5		
CLZ	e P	Z 21:32:21.7	83.7	38.4	1.3	35	5.4		
WERD	e P	Z 21:32:23.3	84.0	39.7	1.2	14	5.0		
GUNZ	e P	Z 21:32:23.8	84.1	39.7	1.4	28	5.3		
MOX	e P	Z 21:32:23.7	84.1	39.2	1.7	41	5.4		



Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:09:05.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/21								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKPbc	Z 05:33:35.8							
BRG	e PKPbc	Z 05:33:26.6							
CLL	e PKPbc	Z 05:33:25.5							
CLZ	e PKPbc	Z 05:33:26.0							
GEC2	e PKPbc	Z 05:33:31.8							
IBBN	e PKPbc	Z 05:33:25.7							
WLF	e PKPbc	Z 05:33:34.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/21	11:33:40.0	22.100S	169.400E	10.0N				NEIR-M
Southeast of Loyalty Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKP	Z 11:53:15.4	144.3	41.0					
BSEG	e PKP	Z 11:53:15.8	144.5	34.7					
BRG	e PKP	Z 11:53:19.0	145.5	42.7					
CLL	e PKP	Z 11:53:19.1	145.5	41.0					
NRDL	e PKP	Z 11:53:19.7	145.7	35.5					
CLZ	e PKP	Z 11:53:21.0	146.1	36.5					
WERD	e PKP	Z 11:53:21.5	146.5	40.8					
GUNZ	e PKP	Z 11:53:21.8	146.5	40.9					
MOX	e PKP	Z 11:53:21.1	146.6	39.5					
IBBN	e PKP	Z 11:53:21.8	146.7	32.1					
GEC2	e PKP	Z 11:53:24.2	147.0	44.5					
WET	e PKP	Z 11:53:22.1	147.2	42.9					
GRA1	e PKP	Z 11:53:22.3	147.5	39.9					
BUG	e PKP	Z 11:53:25.1	147.6	32.0					
STU	e PKP	Z 11:53:29.5	149.0	37.6					
WLF	e PKP	Z 11:53:30.9	149.4	31.7					
BFO	e PKP	Z 11:53:30.8	149.7	36.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/21	20:12: 7.3	7.710S	36.010E	33.0N	4.9			SZGRF
Tanzania								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	20:22:08.8	59.8	154.2	1.1	17	5.0		
FUR	e P	Z	20:22:09.3	60.0	151.4	0.9	22	5.2		
WET	e P	Z	20:22:11.4	60.4	153.4	1.1	9	4.7		
STU	e P	Z	20:22:18.2	61.2	149.3	1.1	20	4.9		
GRA1	e P	Z	20:22:18.6	61.3	151.7	1.1	23	4.9		
BRG	e P	Z	20:22:20.2	61.6	155.0	1.2	6	4.3		
WERD	e P	Z	20:22:20.6	61.7	153.1	1.4	15	4.6		
MOX	e P	Z	20:22:23.8	62.1	152.4	1.3	8	4.8		
CLL	e P	Z	20:22:24.7	62.3	154.0	1.9	26	5.1		
WLF	e P	Z	20:22:29.4	63.0	146.4	1.4	19	5.0		
BUG	e P	Z	20:22:37.2	64.1	148.0	1.3	20	5.2		
NRDL	e P	Z	20:22:38.1	64.1	151.2	1.0	17	5.2		
BSEG	e P	Z	20:22:45.0	65.3	151.8	1.3	32	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/22	04:54:24.6	9.419N	78.745W	33.0N	4.9			SZGRF

Panama

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	05:06:45.9	82.8	276.1	1.7	29	5.2		
WERD	e P	Z	05:06:48.9	83.4	276.8	1.2	7	4.7		
GUNZ	e P	Z	05:06:47.5	83.4	276.9	1.7	15	4.9		
CLL	e P	Z	05:06:49.8	83.7	277.3	2.1	22	5.0		
WET	e P	Z	05:06:51.4	83.9	277.4	1.2	8	4.8		
BRG	e P	Z	05:06:53.9	84.4	278.0	1.2	7	4.8		
GEC2	e P	Z	05:06:54.4	84.5	278.1	1.1	6	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/22	10:36:23.6	36.072N	141.289E	35.5	4.6			SZGRF

Near east coast of eastern Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	10:48:48.3	83.5	38.5	0.8	3	4.6		
	e pP	Z	10:48:58.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/22	18:13:27.3	37.160N	70.850E	33.0N	4.7			SZGRF

Afghanistan-Tajikistan border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	18:21:17.1	42.0	86.3	1.1	15	4.6		
RUE	e P	Z	18:21:16.6	42.0	87.9	1.1	24	4.9		



GEC2	e P	Z	18:21:19.1	42.3	83.9	1.7	11	4.3
CLL	e P	Z	18:21:21.3	42.6	86.1	1.1	12	4.5
GUNZ	e P	Z	18:21:25.6	43.1	84.6	1.1	10	4.4
MOX	e P	Z	18:21:28.5	43.5	84.3	2.3	41	4.7
GRA1	e P	Z	18:21:32.3	43.8	83.1	0.9	9	4.5
FUR	e P	Z	18:21:33.0	44.0	81.5	10.6	4459	6.1
BSEG	e P	Z	18:21:33.5	44.0	86.8	2.5	101	5.1
CLZ	e P	Z	18:21:34.1	44.1	84.7	1.2	13	4.5
NRDL	e P	Z	18:21:34.3	44.2	85.2	1.2	12	4.5
BFO	e P	Z	18:21:48.0	45.9	79.8	1.7	13	4.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/23	00:57:21.6	24.888S	13.667W	33.0N	4.9	4.8		SZGRF
Southern Mid-Atlantic Ridge								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	01:09:16.0	77.8	203.0	1.2	12	4.9		
	e S	N	01:19:02.0							
	e SS	N	01:24:01.5							
	e L	Z	01:41:11.7			22.0	470		4.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/23	14:36:19.0	21.800S	176.370W	181.4				SZGRF
Fiji Islands region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	14:55:41.4	147.5	11.6					
RUE	e PKPbc	Z	14:55:43.6	148.3	18.2					
NRDL	e PKPdf	Z	14:55:41.2	148.9	11.7					
	e PKPbc	Z	14:55:45.0							
IBBN	e PKPbc	Z	14:55:46.2	149.3	7.5					
	e PKPab	Z	14:55:51.3							
	e pPKPbc	Z	14:56:33.4							
CLZ	e PKPdf	Z	14:55:42.2	149.5	12.4					
	e PKPbc	Z	14:55:46.8							
	e PKPab	Z	14:55:52.1							
	e pPKPbc	Z	14:56:33.7							
CLL	e PKPbc	Z	14:55:46.8	149.6	17.4					
	e pPKPbc	Z	14:56:33.7							
BRG	e PKPdf	Z	14:55:42.7	149.8	19.3					
	e PKPbc	Z	14:55:47.5							
	e PKPab	Z	14:55:53.1							
BUG	e PKPab	Z	14:55:54.7	150.2	6.8					
MOX	e PKPdf	Z	14:55:43.5	150.5	15.2					
	e PKPbc	Z	14:55:48.9							

	e PKPab	Z	14:55:55.7						
	e pPKPbc	Z	14:56:35.9						
WERD	e PKPdf	Z	14:55:43.7	150.6	16.6				
	e PKPbc	Z	14:55:49.2						
	e PKPab	Z	14:55:56.2						
	e pPKPbc	Z	14:56:36.3						
GUNZ	e PKPbc	Z	14:55:49.6	150.6	16.6				
	e PKPab	Z	14:55:56.7						
	e pPKPbc	Z	14:56:36.3						
GRA1	e PKPbc	Z	14:55:51.4	151.5	14.9				
	e PKPab	Z	14:56:00.4						
GEC2	e PKPbc	Z	14:55:51.9	151.8	20.1				
	e PKPab	Z	14:56:01.6						
	e pPKPbc	Z	14:56:39.0						
WLF	e PKPbc	Z	14:55:53.2	152.1	5.0				
	e PKPab	Z	14:56:03.1						
	e pPKPbc	Z	14:56:40.3						
STU	e PKPbc	Z	14:55:53.7	152.7	11.3				
	e PKPab	Z	14:56:05.0						
	e pPKPbc	Z	14:56:41.1						
FUR	e PKPab	Z	14:56:06.4	152.9	15.8				
	e pPKPbc	Z	14:56:42.2						
BFO	e PKPbc	Z	14:55:54.8	153.2	9.7				
	e PKPab	Z	14:56:07.2						

Date Origin Time Lat Long Depth mb Ms ML Source

2004/08/23

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKPbc	Z	15:47:28.2							
BSEG	e PKPbc	Z	15:47:23.5							
CLL	e PKPbc	Z	15:47:27.6							
CLZ	e PKPbc	Z	15:47:28.4							
GEC2	e PKPbc	Z	15:47:32.4							
GUNZ	e PKPbc	Z	15:47:30.6							
MOX	e PKPbc	Z	15:47:30.1							
NRDL	e PKPbc	Z	15:47:26.8							
WERD	e PKPbc	Z	15:47:30.0							

Date Origin Time Lat Long Depth mb Ms ML Source

2004/08/23

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKP	Z	23:08:07.3							
BRG	e PKP	Z	23:08:10.9							

CLL	e	PKP	Z	23:08:10.4
CLZ	e	PKP	Z	23:08:11.0
GEC2	e	PKP	Z	23:08:09.5
GUNZ	e	PKP	Z	23:08:13.7
TANN	e	PKP	Z	23:08:13.3
WERD	e	PKP	Z	23:08:13.1
WET	e	PKP	Z	23:08:11.5

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/24	04:39:49.5	15.450N	46.043W	33.0N	4.7			SZGRF

Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:49:34.4	57.3	254.5	1.6	13	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/24	10:05:41.5	32.750N	91.630E	33.0G	5.9	5.2		SZGRF

Xizang

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 10:15:28.3	57.5	77.0	1.3	102	5.7		
BRG	e P	Z 10:15:30.7	57.8	76.2	1.6	140	5.7		
CLL	e P	Z 10:15:34.1	58.3	75.8	1.7	140	5.7		
GEC2	e P	Z 10:15:35.6	58.5	74.8	1.4	174	5.9		
WET	e P	Z 10:15:38.6	58.9	74.4	1.9	202	5.8		
WERD	e P	Z 10:15:38.6	58.9	74.8	1.6	120	5.7		
GUNZ	e P	Z 10:15:38.6	58.9	74.8	1.5	162	5.8		
BSEG	e P	Z 10:15:41.1	59.2	75.4	1.1	108	5.8		
MOX	e P	Z 10:15:41.1	59.3	74.5	1.7	154	5.8		
NRDL	e P	Z 10:15:44.2	59.7	74.5	1.4	256	6.1		
CLZ	e P	Z 10:15:44.3	59.7	74.3	1.2	146	5.9		
GRA1	e P	Z 10:15:45.5	59.8	73.7	1.5	226	6.0		
	e	10:15:47.2							
	e PP	Z 10:17:59.5							
	e S	R 10:23:59.9							
	e SS	R 10:28:07.8							
	e L	Z 10:45:13.4			21.2	1847		5.2	
	e P'P'df	Z 10:45:13.8							
FUR	e P	Z 10:15:48.1	60.2	72.9	1.3	284	6.1		
IBBN	e P	Z 10:15:53.6	61.1	72.7	1.5	198	5.7		
STU	e P	Z 10:15:55.3	61.3	71.9	1.6	266	6.2		
BUG	e P	Z 10:15:57.8	61.7	72.0	1.7	168	6.0		
BFO	e P	Z 10:15:59.0	62.0	71.1	1.5	151	6.0		
WLF	e P	Z 10:16:05.9	62.9	70.3	1.4	260	6.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/24	12:38:50.5	38.634N	23.502E	14.0G	3.7			the-m

Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 12:42:20.4	14.1	137.0					
CLL	e P	Z 12:42:26.3	14.7	145.8	0.6	8			
CLZ	e P	Z 12:42:45.5	16.1	140.1	1.4	8	3.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/24								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 14:59:01.4							
	e Sn(?)	N 14:59:53.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/24								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 20:27:49.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/24	23:04:50.2	69.186N	16.542W	33.0N	4.5			SZGRF

Jan Mayen Island region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:09:58.9	23.6	335.6	0.4	7	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/25	02:22:19.0	62.250N	146.350W	33.0N	5.5	3.9		SZGRF

Central Alaska, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 02:32:40.6	62.4	348.0	1.1	20	5.2		
NRDL	e P	Z 02:32:49.7	63.8	348.0	1.1	22	5.3		
RUE	e P	Z 02:32:52.9	64.2	349.9	1.1	53	5.7		
BUG	e P	Z 02:32:53.9	64.4	346.7	1.0	33	5.5		
CLZ	e P	Z 02:32:54.7	64.4	348.2	1.1	41	5.6		

CLL	e P	Z	02:32:59.4	65.3	349.6	1.1	28	5.4
MOX	e P	Z	02:33:02.9	65.8	349.0	0.9	37	5.6
BRG	e P	Z	02:33:03.1	65.8	350.1	1.2	38	5.5
WLF	e P	Z	02:33:04.6	66.0	346.4	1.2	42	5.6
WERD	e P	Z	02:33:04.4	66.0	349.3	1.1	24	5.3
GUNZ	e P	Z	02:33:05.2	66.1	349.3	1.1	27	5.4
GRA1	e P	Z	02:33:08.8	66.6	348.8	1.1	35	5.5
	e PP	Z	02:35:23.9					
	e S	N	02:42:17.3					
	e L	Z	03:03:23.2			21.8	72	3.9
STU	e P	Z	02:33:12.6	67.3	347.9	0.7	11	5.2
WET	e P	Z	02:33:13.6	67.4	349.7	1.2	52	5.6
BFO	e P	Z	02:33:14.1	67.6	347.6	1.4	31	5.4
GEC2	e P	Z	02:33:15.8	67.8	350.1	1.2	27	5.4
FUR	e P	Z	02:33:18.0	68.2	349.0	1.0	61	5.8

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/25 03:59:24.0 G neic-m  
 Central Alaska, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 04:19:03.1							

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/25 05:19:12.0 43.893N 142.413E 33.0N 5.3 SZGRF  
 Hokkaido, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:31:03.0	77.2	33.8	0.8	18	5.3		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/25 13:53:28.8 35.673N 92.427E 33.0N 4.7 SZGRF  
 Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 14:03:20.9	58.3	70.6	1.0	9	4.7		
	e	14:03:27.0							

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/25

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 18:55:39.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/26	23:11:41.5	64.466N	86.590W	26.2				SZGRF

Northwest Territories, Canada

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:20:28.7	49.4	325.8					
	e pP	Z 23:20:35.8							
	e sP	Z 23:20:38.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/27	00:44:26.3	26.500S	67.500W	33.0N		5.7		SZGRF

Catamarca Province, Argentina

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PP	Z 01:02:22.1	100.8	242.1					
	e SP	Z 01:11:17.9							
STU	e PP	Z 01:02:25.3	101.5	242.7					
	e SP	Z 01:11:25.0							
BUG	e PP	Z 01:02:26.5	101.7	241.9					
IBBN	e SP	Z 01:11:44.1	102.3	242.4					
FUR	e SP	Z 01:11:35.0	102.5	244.0					
GRA1	e Pdiff	Z 00:58:18.7	103.1	244.3					
	e PP	Z 01:02:33.8							
	e SKSac	R 01:08:44.7							
	e SP	Z 01:11:40.6							
	e SS	T 01:17:32.9							
	e L	Z 01:46:46.0			19.0	2307		5.7	
CLZ	e PP	Z 01:02:42.6	103.6	244.2					
	e SP	Z 01:11:47.7							
NRDL	e PP	Z 01:02:38.0	103.7	244.1					
	e SP	Z 01:11:49.3							
MOX	e PP	Z 01:02:38.6	103.8	244.8					
	e SP	Z 01:11:48.0							
WET	e PP	Z 01:02:43.0	103.9	245.3					
	e SP	Z 01:11:49.7							
GEC2	e PP	Z 01:02:40.1	104.2	245.8					
	e SP	Z 01:11:52.5							
BSEG	e PP	Z 01:02:46.4	104.4	244.6					
	e SP	Z 01:11:51.7							
CLL	e PP	Z 01:02:45.9	104.8	245.9					
	e SP	Z 01:11:59.3							
BRG	e PP	Z 01:02:52.8	105.2	246.5					

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

55

	e SP	Z	01:12:02.0						
RUE	e PP	Z	01:02:55.9	105.7	246.8				
	e SP	Z	01:12:07.1						
RGN	e PP	Z	01:03:00.7	106.3	247.0				
	e SP	Z	01:12:12.9						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/27	21:47:36.0	43.957N	10.261E	10.0G			3.4	SZGRF

Central Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
DAVA	e Pn	Z 21:48:28.5	3.3	175.3					3.6
	e Sn	N 21:49:08.4							
WTTA	e Pn	Z 21:48:30.4	3.4	196.7					
KBA	e Pn	Z 21:48:34.8	3.8	215.8					3.5
OBKA	e Pn	Z 21:48:36.1	4.0	231.3					3.6
MOA	e Pn	Z 21:48:48.1	4.8	217.1					
ARSA	e Pn	Z 21:48:49.5	4.9	230.1					3.0
	e Sn	N 21:49:47.3							
GEC2	e Pn	Z 21:48:55.5	5.4	207.2					
	e Sn	N 21:49:56.5							
WET	e Sn	Z 21:49:56.9	5.5	200.1					
GUNZ	e Sn	N 21:50:24.2	6.6	193.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/27	23:59:59.9	44.793N	147.000E	33.0N	4.6			SZGRF

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:11:55.3	78.0	30.4	1.3	7	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/28								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 04:39:37.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/28								

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

GRA1 e PKP Z 05:33:56.6

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/28 09:08:39.6 5.585S 151.680E 33.0N  
 New Britain, Papua New Guinea, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPdf	Z 09:27:34.9	122.4	47.4					
BRG	e PKPdf	Z 09:27:34.8	122.7	52.7					
CLL	e PKPdf	Z 09:27:35.1	122.9	51.5					
NRDL	e PKPdf	Z 09:27:36.7	123.5	47.9					
WERD	e PKPdf	Z 09:27:36.7	123.8	51.2					
CLZ	e PKPdf	Z 09:27:37.4	123.8	48.5					
GUNZ	e PKPdf	Z 09:27:37.3	123.8	51.3					
MOX	e PKPdf	Z 09:27:37.2	124.0	50.4					
GEC2	e PKPdf	Z 09:27:37.3	124.0	53.5					
WET	e PKPdf	Z 09:27:38.4	124.3	52.5					
IBBN	e PKPdf	Z 09:27:39.2	124.7	45.4					
GRA1	e PKPdf	Z 09:27:38.8	124.8	50.5					
FUR	e PKPdf	Z 09:27:41.5	125.7	51.4					
STU	e PKPdf	Z 09:27:42.4	126.4	48.9					
BFO	e PKPdf	Z 09:27:43.3	127.1	48.2					
WLF	e PKPdf	Z 09:27:44.5	127.2	45.0					

Date Origin Time Lat Long Depth mb Ms ML Source  
 2004/08/28 09:08:47.3 17.362S 176.473W 33.0N  
 Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 09:28:14.2	143.0	10.8					
RUE	e PKPbc	Z 09:28:16.4	144.0	16.8					
NRDL	e PKPbc	Z 09:28:18.5	144.5	10.9					
CLZ	e PKPbc	Z 09:28:20.3	145.1	11.5					
CLL	e PKPbc	Z 09:28:20.5	145.2	16.0					
BRG	e PKPbc	Z 09:28:21.4	145.5	17.7					
MOX	e PKPbc	Z 09:28:23.3	146.1	13.9					
WERD	e PKPbc	Z 09:28:23.5	146.2	15.2					
GUNZ	e PKPbc	Z 09:28:23.9	146.3	15.2					
GRA1	e PKPbc	Z 09:28:26.3	147.1	13.6					
GEC2	e PKPbc	Z 09:28:26.9	147.4	18.3					
WLF	e PKPbc	Z 09:28:28.3	147.6	4.7					
BFO	e PKPbc	Z 09:28:30.3	148.8	8.9					



Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/28	13:41:29.8	34.715S	70.215W	10.0G		6.8		neic-m

Chile-Argentina border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e Pdiff	Z	13:55:54.5	108.0	237.1					
	e PP	Z	14:00:19.1							
BFO	e Pdiff	Z	13:55:55.8	108.5	238.1					
	e PP	Z	14:00:20.9							
STU	e Pdiff	Z	13:55:59.3	109.2	238.8					
	e PP	Z	14:00:23.7							
BUG	e Pdiff	Z	13:55:59.0	109.5	238.4					
	e PP	Z	14:00:29.8							
FUR	e Pdiff	Z	13:56:00.6	110.1	239.9					
	e PP	Z	14:00:35.7							
IBBN	e Pdiff	Z	13:56:02.5	110.2	239.0					
	e PP	Z	14:00:37.2							
GRA1	e Pdiff	Z	13:56:04.7	110.8	240.4					
	e PP	Z	14:00:41.5							
	e SKSac	R	14:06:44.4							
	e Sdiff	T	14:08:25.9							
	e PS	E	14:10:17.5							
	e PKKPab	Z	14:11:19.3							
	e SS	T	14:16:16.1							
	e SSS	T	14:20:13.2							
	e L	Z	14:48:41.8			19.2	26024		6.8	
HLG	e Pdiff	Z	13:56:09.2	111.3	239.7					
	e PP	Z	14:00:44.0							
CLZ	e Pdiff	Z	13:56:07.9	111.4	240.6					
	e PP	Z	14:00:44.5							
WET	e Pdiff	Z	13:56:06.4	111.5	241.3					
	e PP	Z	14:00:45.3							
MOX	e Pdiff	Z	13:56:08.5	111.5	241.0					
	e PP	Z	14:00:45.2							
NRDL	e Pdiff	Z	13:56:06.6	111.6	240.6					
	e PP	Z	14:00:47.6							
GEC2	e Pdiff	Z	13:56:17.2	111.8	241.7					
	e PP	Z	14:00:47.2							
BSEG	e Pdiff	Z	13:56:10.2	112.4	241.3					
	e PP	Z	14:00:51.1							
CLL	e Pdiff	Z	13:56:12.6	112.6	242.1					
	e PP	Z	14:00:53.5							
BRG	e Pdiff	Z	13:56:18.5	112.9	242.6					
	e PP	Z	14:00:55.9							
RUE	e Pdiff	Z	13:56:16.5	113.5	243.1					
	e PP	Z	14:01:01.5							
RGN	e Pdiff	Z	13:56:24.8	114.2	243.6					
	e PP	Z	14:01:03.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/28								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 15:08:06.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/28	16:09:35.1	8.700S	157.300E	10.0N				NEIC-M
Bougainville - Solomon Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 16:28:45.6	130.2	46.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/28	16:13:14.6	8.700S	157.200E	10.0N				NEIC-M
Bougainville - Solomon Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 16:32:25.8	130.2	46.4					
	e PP	Z 16:34:40.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/28	17:00:58.6	8.712S	157.195E	10.0G				neic-m
Bougainville - Solomon Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPdf	Z 17:20:04.6	127.6	43.0					
BRG	e PKPdf	Z 17:20:05.0	128.1	48.7					
CLL	e PKPdf	Z 17:20:04.9	128.3	47.4					
CLZ	e PKPdf	Z 17:20:07.1	129.1	44.2					
WERD	e PKPdf	Z 17:20:07.3	129.2	47.2					
GUNZ	e PKPdf	Z 17:20:07.4	129.2	47.2					
MOX	e PKPdf	Z 17:20:06.7	129.4	46.3					
GEC2	e PKPdf	Z 17:20:07.8	129.6	49.7					
WET	e PKPdf	Z 17:20:08.9	129.8	48.6					
GRA1	e PKPdf	Z 17:20:09.3	130.2	46.4					
GRFO	e PKPdf	Z 17:20:09.3	130.2	46.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
------	-------------	-----	------	-------	----	----	----	--------

2004/08/28 22:16:48.3  
Albania

41.201N 19.795E 10.0G

SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
OBKA	e Pn	Z	22:18:23.5	6.5	142.7					
ARSA	e Pn	Z	22:18:26.9	6.8	151.6					
KBA	e Pn	Z	22:18:36.3	7.5	139.5					
	e Sn	N	22:19:57.3							
MOA	e Pn	Z	22:18:40.5	7.7	147.4					
WTTA	e Pn	Z	22:18:49.2	8.4	133.1					
	e Sn	E	22:20:20.2							
GEC2	e Pn	Z	22:18:53.6	8.8	148.4					
	e Sn	E	22:20:29.5							
WET	e Pn	Z	22:19:00.8	9.3	145.9					
DAVA	e Pn	Z	22:19:02.3	9.3	127.0					
	e Sn	E	22:20:43.0							
MOX	e Pn	Z	22:19:24.2	11.0	145.9					

Date Origin Time Lat Long Depth mb Ms ML Source  
2004/08/28

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	23:34:00.9							

Date Origin Time Lat Long Depth mb Ms ML Source  
2004/08/29 06:08:23.6  
Ryukyu Islands, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	06:21:01.8	86.1	53.1	0.9	5	4.7		

Date Origin Time Lat Long Depth mb Ms ML Source  
2004/08/29 09:24:57.0  
Sicily, Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e P	Z	09:27:16.0	10.0	161.1					
GEC2	e P	Z	09:27:19.1	10.3	172.5					
WET	e P	Z	09:27:24.1	10.7	169.2					
BFO	e P	Z	09:27:27.5	11.0	149.6					
GRA1	e P	Z	09:27:33.7	11.5	163.3					
GUNZ	e P	Z	09:27:40.5	12.0	168.3					
WERD	e P	Z	09:27:42.0	12.1	168.3					

./2004/bul0408.txt

Thu Apr 23 08:38:25 2020

60

BRG	e P	Z	09:27:45.2	12.3	174.6
MOX	e P	Z	09:27:44.6	12.4	166.0
CLL	e P	Z	09:27:51.6	12.8	171.4
WLF	e P	Z	09:27:52.1	12.9	145.7
CLZ	e P	Z	09:28:02.8	13.7	163.1
BUG	e P	Z	09:28:07.2	14.1	152.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/29	23:29:44.3	3.952N	35.285W	33.0N	4.5			SZGRF

North Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:39:49.5	60.2	236.5	1.4	7	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/30	01:10:12.2	22.400S	170.130E	33.0N				SZGRF

Southeast of Loyalty Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 01:29:44.8	145.0	33.8					
BRG	e PKPbc	Z 01:29:48.3	146.0	41.9					
CLL	e PKPbc	Z 01:29:48.3	146.1	40.1					
NRDL	e PKPbc	Z 01:29:48.4	146.2	34.6					
CLZ	e PKPbc	Z 01:29:50.3	146.7	35.6					
WERD	e PKPbc	Z 01:29:51.2	147.0	39.9					
GUNZ	e PKPbc	Z 01:29:51.2	147.1	40.0					
MOX	e PKPbc	Z 01:29:51.3	147.2	38.6					
IBBN	e PKPbc	Z 01:29:51.6	147.2	31.1					
GEC2	e PKPbc	Z 01:29:52.5	147.6	43.7					
WET	e PKPbc	Z 01:29:53.8	147.8	42.1					
GRA1	e PKPbc	Z 01:29:54.4	148.1	39.0					
STU	e PKPbc	Z 01:29:58.3	149.6	36.6					
WLF	e PKPbc	Z 01:29:59.7	150.0	30.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/30	04:44:44.5	15.049N	93.224W	33.0N	5.3	4.5		SZGRF

Near coast of Chiapas, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:57:27.3	87.6	290.6	1.7	28	5.3		
	e	04:57:36.9							
	e L	Z 05:38:19.5			19.3	175	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/30	05:35:38.2	33.945N	116.926W	33.0N	4.7			SZGRF

Southern California, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:48:08.6	84.6	319.1	1.0	5	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/30	12:23:25.5	49.380N	156.190E	33.0N	6.3	5.9		SZGRF

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z 12:34:45.4	71.5	24.5	0.9	906	6.9		
BSEG	e P	Z 12:34:52.4	72.8	22.5	1.0	260	6.3		
RUE	e P	Z 12:34:55.4	73.3	24.5	0.9	594	6.6		
NRDL	e P	Z 12:35:00.3	74.1	22.2	1.1	196	6.0		
CLL	e P	Z 12:35:02.2	74.5	23.9	1.0	517	6.5		
CLZ	e P	Z 12:35:03.8	74.7	22.3	1.2	531	6.4		
BRG	e P	Z 12:35:03.3	74.7	24.4	1.3	237	6.1		
IBBN	e P	Z 12:35:04.9	74.8	20.7	1.5	400	6.2		
MOX	e P	Z 12:35:08.1	75.5	22.9	1.2	231	6.2		
WERD	e P	Z 12:35:08.2	75.5	23.4	1.5	426	6.3		
GUNZ	e P	Z 12:35:08.7	75.6	23.4					
BUG	e P	Z 12:35:09.8	75.8	20.3	1.5	318	6.2		
GRA1	e P	Z 12:35:14.0	76.5	22.6	1.3	545	6.5		
	e L	Z 13:13:59.3			18.7	5600		5.9	
WET	e P	Z 12:35:14.7	76.6	23.6	1.2	391	6.4		
GEC2	e P	Z 12:35:14.5	76.6	24.0	1.4	211	6.1		
STU	e P	Z 12:35:21.7	77.8	21.3	1.8	347	6.2		
FUR	e P	Z 12:35:21.9	77.9	22.5	1.5	458	6.4		
BFO	e P	Z 12:35:24.4	78.4	20.7	1.1	76	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/31	04:34:17.0	29.594N	54.011E	33.0N	4.2			SZGRF

Southern Iran

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:41:31.1	37.9	105.8	1.0	5	4.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/31	11:55:19.0	17.053S	168.579E	235.0G				neir

Vanuatu Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 12:08:45.6	142.6	37.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/31	11:52:13.2			N				SZGRF

Vanuatu Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKP	Z 12:12:10.9							
	e	12:12:33.2							
BRG	e PKP	Z 12:12:01.4							
BSEG	e PKP	Z 12:11:58.1							
	e	12:12:08.4							
CLL	e PKP	Z 12:12:01.1							
	e	12:12:13.6							
CLZ	e PKP	Z 12:12:02.7							
GEC2	e PKP	Z 12:12:05.0							
GRA1	e PKP	Z 12:12:06.6							
	e	12:12:23.3							
GUNZ	e PKP	Z 12:12:03.7							
	e	12:12:18.5							
MOX	e PKP	Z 12:12:03.6							
NRDL	e PKP	Z 12:12:01.2							
UBBA	e PKP	Z 12:12:04.9							
WERD	e PKP	Z 12:12:03.6							
WET	e PKP	Z 12:12:05.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/31								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKP	Z 13:38:03.3							
CLL	e PKP	Z 13:38:02.8							
CLZ	e PKP	Z 13:38:03.2							
GUNZ	e PKP	Z 13:38:05.4							
MOX	e PKP	Z 13:38:04.7							
TANN	e PKP	Z 13:38:05.8							
WERD	e PKP	Z 13:38:05.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/31	16:25:14.0	7.300N	126.900E	40.0N		5.6		NEIR-M

Mindanao, Philippine Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e SKSac	R	16:49:29.6	98.4	67.4					
CLL	e SKSac	R	16:49:27.2	98.7	66.6					
GEC2	e SKSac	R	16:49:29.9	99.3	67.5					
WET	e SKSac	R	16:49:33.2	99.7	66.8					
NRDL	e SKSac	R	16:49:37.8	99.9	64.0					
CLZ	e SKSac	R	16:49:38.8	100.0	64.3					
GRA1	e Pdiff	Z	16:38:59.8	100.4	65.4	1.1	17			
	e SKSac	R	16:49:36.9							
	e L	Z	17:28:50.5			19.5	1900		5.6	
BFO	e SKSac	R	16:49:45.9	102.7	63.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/31								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	17:43:35.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/31	18:17:20.9			N				SZGRF

Mindanao, Philippine Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKP	Z	18:37:10.8							
BRG	e PKP	Z	18:36:54.5							
BUG	e PKP	Z	18:37:03.3							
CLL	e PKP	Z	18:36:54.3							
CLZ	e PKP	Z	18:36:57.0							
GEC2	e PKP	Z	18:36:59.7							
GRA1	e PKP	Z	18:37:01.3							
GUNZ	e PKP	Z	18:36:58.2							
HLG	e PKP	Z	18:36:54.0							
MOX	e PKP	Z	18:36:57.8							
WERD	e PKP	Z	18:36:57.9							
WET	e PKP	Z	18:37:00.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/31								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	22:30:18.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/08/31	22:27: 2.3	30.609N	51.807E	33.0N	4.5			SZGRF

Northern and central Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:33:58.8	35.8	106.8	1.0	8	4.5		

## Format description

=====

(K. Klinge Email:klinge@szgrf.bgr.de and A. Schick)

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

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

## EPICENTER LINES:

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

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

## COMMENT LINE:

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



## REGION LINE:

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

## PHASE LINE:

Sta	Station code of the reported phase
Phase	Preceded flag for the sharpness of the onset of the phase
	e - emergent
	i - impulsive
	w - weak
	ISC phase code
	Flag for the direction of the first motion
	'+' - compression
	'-' - dilatation
	Component where the phase was picked
Time	Arrival time of the reported phase
Dist	Distance from the epicenter location with the highest priority to the station in kilometer
BAz	Backazimuth from the epicenter location with the highest priority to the station in degree
T[s]	Phase Period
A[nm]	Phase Amplitude
mb	Body wave magnitude
MS	Surface wave magnitude
ML	Local Richter magnitude