

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

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

FEBRUARY 2004 UPDATED 25.NOVEMBER.2004

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

(Format description at the end of the bulletin)

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/01	11:41:14.7	31.640S	179.698E	355D	5.2			NEIC
Kermadec Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPab	Z 12:00:57.9	156.4	23.1					
RUE	e PKPdf	Z 12:00:27.6	156.8	31.7					
	e PKPab	Z 12:00:59.6							
CLL	e PKPab	Z 12:01:04.8	158.0	31.6					
BRG	e PKPdf	Z 12:00:28.5	158.1	34.1					
	e PKPab	Z 12:01:04.9							
CLZ	e PKPab	Z 12:01:06.4	158.3	25.3					
IBBN	e PKPab	Z 12:01:07.1	158.5	19.0					
WERD	e PKPdf	Z 12:00:29.4	159.0	31.2					
	e PKPab	Z 12:01:09.4							
MOX	e PKPdf	Z 12:00:29.7	159.0	29.4					
	e PKPab	Z 12:01:09.6							
GUNZ	e PKPab	Z 12:01:10.6	159.1	31.4					
UBBA	e PKPab	Z 12:01:09.4	159.4	25.6					
GEC2	e PKPdf	Z 12:00:30.3	159.8	36.7					
	e PKPab	Z 12:01:13.2							
GRA1	e PKPab	Z 12:01:14.2	160.0	29.8					
TNS	e PKPab	Z 12:01:14.9	160.3	22.6					
FUR	e PKPab	Z 12:01:20.5	161.3	32.2					
WLF	e PKPdf	Z 12:00:33.2	161.3	17.4					
	e PKPab	Z 12:01:19.7							
STU	e PKPab	Z 12:01:20.0	161.4	26.2					
BFO	e PKPab	Z 12:01:22.1	162.1	24.5					

GRA1 e PKP Z 00:25:26.2

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/03

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
GRA1 e PKP Z 00:47:09.1

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/03

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
BRG e PKP Z 07:45:28.0
CLL e PKP Z 07:45:27.2
GUNZ e PKP Z 07:45:31.0
MOX e PKP Z 07:45:29.7
TANN e PKP Z 07:45:30.4
WERD e PKP Z 07:45:30.3

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/03 22:04:43.3 6.178S 68.940E 33.0N 4.9 SZGRF
Chagos Archipelago region

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
GRA1 e P Z 22:16:20.9 74.8 119.4 1.0 11 4.9
e 22:16:33.6

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/03 23:10: 2.2 2.986S 138.739E 33.0N 5.4 SZGRF
2004/02/03 23:09:30.0 3.709S 140.385E 33N 5.7 5.5 NEIC
Irian Jaya, Indonesia

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
RUE e PP Z 23:29:07.5 114.4 61.6
BRG e PP Z 23:29:13.3 115.1 62.4
e SP Z 23:39:00.4
CLL e Pdiff Z 23:24:18.6 115.4 61.4
e PP Z 23:29:08.8
e PPPP Z 23:33:30.8
e SP R 23:38:54.3
e SS R 23:45:31.7

	e LR	Z	00:06:41.1								
	e L	Z	00:19:23.7			22.0	1289		5.5		
BSEG	e PP	Z	23:29:24.6	115.5	57.8						
	e SP	Z	23:39:03.0								
GEC2	e PP	Z	23:29:29.7	116.2	63.1						
	e SP	Z	23:39:08.6								
MOX	e PP	Z	23:29:32.3	116.5	60.4						
	e SP	Z	23:39:15.1								
HLG	e PP	Z	23:29:24.5	116.5	55.3						
CLZ	e PP	Z	23:29:27.4	116.6	58.7						
	e SP	Z	23:39:14.4								
GRA1	e PP	Z	23:29:30.2	117.2	60.4						
	e SP	Z	23:39:21.1								
GRFO	e SP	Z	23:39:20.9	117.2	60.4						
IBBN	e SP	Z	23:39:26.0	117.7	56.0						
FUR	e PP	Z	23:29:42.1	117.9	61.2						
	e SP	Z	23:39:27.3								
BUG	e PP	Z	23:29:40.2	118.4	55.9						
	e SP	Z	23:39:31.5								
TNS	e PP	Z	23:29:37.9	118.5	57.6						
	e SP	Z	23:39:32.8								
STU	e PP	Z	23:29:39.9	118.8	59.0						
	e SP	Z	23:39:34.9								
BFO	e PP	Z	23:29:47.6	119.5	58.4						
WLF	e PP	Z	23:29:47.7	120.0	55.6						
	e SP	Z	23:39:44.4								
GRA1	e L	Z	00:20:32.8	117.2	60.4	21.3	970		5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/04	03:24: 2.8	23.645N	122.359E	33.0N	5.7	5.1		SZGRF
2004/02/04	03:24:01.7	23.357N	121.984E	33N	5.4	5.0		NEIC

Taiwan region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:36:33.8	84.7	59.6	1.2	62	5.7		
	e	03:36:48.0							
	e S	E 03:46:59.8							
	e L	Z 04:18:02.1			19.9	720		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/04	05:18:45.0	26.134S	63.515W	560D	5.0			NEIC

Salta Province, Argentina

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PP	Z 05:35:42.5	100.5	241.8					

e SKSac R 05:41:21.2

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/04	06:08:20.9	40.190N	142.590E	33.0N				SZGRF
2004/02/04	06:08:26.2	40.143N	141.690E	63D	5.3			NEIC

Near east coast of eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 06:20:14.1	77.0	38.2	0.7	66			
BSEG	e P	Z 06:20:14.3	77.1	36.1	1.1	78			
BRG	e P	Z 06:20:20.5	78.2	38.1	1.0	40			
CLL	i P	+ Z 06:20:20.4	78.2	37.6	1.0	74	5.7		
	e pP	Z 06:20:37.3							
	e L	Z 06:56:21.9			20.6	228		4.5	
NRDL	e P	Z 06:20:21.3	78.3	35.7	1.0	29			
CLZ	e P	Z 06:20:24.1	78.7	35.8	1.1	80			
WERD	e P	Z 06:20:25.8	79.2	37.0	1.4	44			
GUNZ	e P	Z 06:20:26.2	79.2	37.0	1.1	43			
MOX	e P	Z 06:20:26.4	79.3	36.5	1.3	50			
IBBN	e P	Z 06:20:26.5	79.3	34.1	1.1	82			
UBBA	e P	Z 06:20:27.7	79.7	35.5	1.6	42			
GEC2	e P	Z 06:20:29.8	79.9	37.7	1.0	36			
GRA1	e P	Z 06:20:32.0	80.2	36.2	1.0	147			
BUG	e P	Z 06:20:31.1	80.2	33.6	1.1	48			
TNS	e P	Z 06:20:34.4	80.8	34.3	1.2	48			
FUR	e P	Z 06:20:38.1	81.4	36.1	1.0	127			
STU	e P	Z 06:20:39.5	81.7	34.7	0.9	100			
WLF	e P	Z 06:20:41.6	82.1	32.7	2.1	182			
BFO	e P	Z 06:20:42.8	82.4	34.1	1.0	65			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/04	11:59:55.3	9.360N	81.620W	44.3	5.6	6.4		SZGRF
2004/02/04	11:59:48.0	8.403N	82.888W	29D	5.7	5.9		NEIC

Panama

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 12:12:10.2	83.0	274.7	1.3	51	5.5		
BUG	e P	Z 12:12:12.7	83.5	275.4	1.3	50	5.5		
IBBN	e P	Z 12:12:14.2	83.8	275.7	1.8	108	5.7		
TNS	e P	Z 12:12:17.3	84.4	276.4	1.3	53	5.6		
BFO	e P	Z 12:12:17.5	84.5	276.5	1.3	26	5.3		
STU	e P	Z 12:12:20.6	85.1	277.1	1.6	93	5.8		
BSEG	e P	Z 12:12:20.9	85.1	277.5	1.6	89	5.7		
NRDL	e P	Z 12:12:21.3	85.2	277.5	1.4	60	5.6		
UBBA	e P	Z 12:12:20.6	85.3	277.6	1.5	40	5.4		

CLZ	e P	Z	12:12:22.8	85.4	277.8	1.4	73	5.7		
GRA1	e P	Z	12:12:27.1	86.2	278.6	1.6	108	5.8		
	e		12:12:36.4							
	e PP	Z	12:16:02.3							
	e S	N	12:22:53.9							
	e SS	N	12:29:00.5							
	e L	Z	12:45:17.6			21.5	15208		6.4	
MOX	e P	Z	12:12:27.2	86.3	278.8	1.5	48	5.5		
FUR	e P	Z	12:12:28.2	86.5	278.7	1.4	57	5.6		
WERD	e P	Z	12:12:29.7	86.8	279.3	1.5	63	5.6		
GUNZ	e P	Z	12:12:30.0	86.8	279.4	1.4	59	5.6		
CLL	i P	- Z	12:12:31.0	87.1	279.8	1.6	110	5.7		
	e pP	Z	12:12:40.4							
	e PP	Z	12:15:52.2							
	e SKSac	R	12:22:53.9							
	e S	T	12:23:06.6							
	e SP	R	12:24:07.0							
	e		12:25:54.6							
	e SS	R	12:28:58.7							
	e SSS	Z	12:32:28.1							
	e LR	Z	12:40:30.7							
	e L	Z	12:49:08.2			18.0	6470		6.1	
RUE	e P	Z	12:12:32.6	87.4	280.4	1.8	170	5.9		
BRG	e P	Z	12:12:34.3	87.8	280.6	1.6	88	5.6		
GEC2	e P	Z	12:12:35.3	88.0	280.5	1.4	54	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/05	00:33:33.1	50.608N	92.400E	33.0N	4.7			SZGRF
2004/02/05	00:33:41.4	50.034N	88.278E	10G	4.6			NEIC

Tuva-Buryatia-Mongolia border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:42:19.1	47.3	58.3	0.8	6	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/05	03:12:14.8	6.770S	129.530E	158D	5.0			NEIC

Banda Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 03:30:33.0	113.2	72.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/05	21:05:14.4	2.030S	135.450E	33.0N		7.2		SZGRF

2004/02/05 21:05:04.7 3.579S 135.489E 29* 6.1 7.1 NEIC
 Irian Jaya, Indonesia, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e SP	Z	21:33:42.3	111.0	64.9					
RUE	e Pdiff	Z	21:19:42.3	111.7	66.0					
	e PP	Z	21:24:18.5							
	e SP	Z	21:33:43.9							
BRG	e Pdiff	Z	21:19:43.5	112.2	66.7					
	e PP	Z	21:24:23.3							
	e SP	Z	21:33:52.8							
CLL	e Pdiff	Z	21:19:48.3	112.6	65.7					
	e pPdiff	Z	21:19:56.7							
	e PP	Z	21:24:26.5							
	e PPP	Z	21:26:53.2							
	e SKSac	R	21:30:21.4							
	e Sdiff	T	21:32:04.5							
	e SP	R	21:33:56.9							
	e		21:36:31.2							
	e SKKPdf	Z	21:38:13.4							
	e SS	T	21:40:05.7							
	e SSS	T	21:44:11.0							
	e SSSS	T	21:47:30.3							
	e LQ	T	21:54:57.5							
	e LR	Z	21:59:50.8							
	e L	Z	22:19:10.1			20.0	50857		7.1	
BSEG	e PP	Z	21:24:28.0	112.9	62.3					
	e SP	Z	21:33:59.0							
GEC2	e PP	Z	21:24:30.6	113.1	67.3					
WET	e PP	Z	21:24:32.8	113.5	66.5					
	e SP	Z	21:34:01.4							
MOX	e PP	Z	21:24:32.8	113.6	64.8					
	e SP	Z	21:34:03.4							
CLZ	e PP	Z	21:24:35.5	113.8	63.2					
	e SP	Z	21:34:06.2							
HLG	e PP	Z	21:24:35.4	114.0	60.0					
	e SP	Z	21:34:04.0							
GRA1	e Pdiff	Z	21:19:54.0	114.3	64.8					
	e PP	Z	21:24:38.0							
	e Sdiff	T	21:32:26.2							
	e SP	Z	21:34:08.9							
	e SS	T	21:40:34.7							
	e SSS	T	21:44:29.7							
	e L	Z	22:18:07.1			20.5	61259		7.2	
UBBA	e PP	Z	21:24:37.5	114.5	63.2					
	e SP	Z	21:34:10.9							
FUR	e PP	Z	21:24:42.2	114.9	65.5					
	e SP	Z	21:34:18.4							
IBBN	e PP	Z	21:24:42.2	115.0	60.6					

TNS	e PP	Z	21:24:47.5	115.6	62.1
BUG	e PP	Z	21:24:47.5	115.7	60.5
STU	e PP	Z	21:24:48.6	115.9	63.4
BFO	e PP	Z	21:24:52.8	116.6	62.8
WLF	e PP	Z	21:24:58.3	117.2	60.2

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/06	19:11: 9.4	13.570N	105.693W	33.0N	5.3			SZGRF
2004/02/06	19:11:40.2	18.506N	102.526W	83*	5.0			NEIC

Off coast of Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:24:33.8	90.3	299.8	1.4	12	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/07	02:42:51.2	5.140S	133.490E	33.0N		7.6		SZGRF
2004/02/07	02:42:35.4	3.942S	134.987E	10G	6.2	7.5		NEIC

Aru Islands, Indonesia, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PP	Z 03:02:04.8	111.7	66.7					
BRG	e PP	Z 03:02:08.7	112.2	67.4					
	e PS	R 03:11:44.3							
	e SS	T 03:17:50.4							
CLL	e Pdiff	Z 02:57:16.9	112.6	66.4					
	e PKiKP	Z 03:01:12.2							
	e PP	Z 03:02:00.2							
	e PPPP	R 03:05:56.2							
	e SKSac	R 03:08:03.7							
	e Sdiff	T 03:09:41.2							
	e PS	E 03:11:37.5							
	e PKKPab	Z 03:12:09.7							
	e PPS	Z 03:12:46.2							
	e SS	T 03:17:38.9							
	e SSS	T 03:21:46.1							
	e LQ	T 03:34:59.9							
	e LR	Z 03:37:27.5							
	e L	Z 03:55:15.5			22.0	176329		7.6	
BSEG	e PP	Z 03:02:15.1	112.9	63.0					
GEC2	e PP	Z 03:02:17.8	113.1	68.0					
	e PS	R 03:11:54.8							
	e SS	T 03:17:59.0							
TANN	e SS	T 03:18:05.2	113.3	66.3					
WET	e PP	Z 03:02:19.2	113.5	67.1					
MOX	e PP	Z 03:02:19.5	113.6	65.4					

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 21:29:41.2							
	e pPKP	Z 21:29:48.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/07	21:27:37.7	4.037S	133.942E	10G	5.6	5.1		NEIC

Irian Jaya, Indonesia, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e Pdiff	Z 21:42:16.2	112.1	67.4					
	e PKiKP	Z 21:46:12.4							
	e PP	Z 21:46:57.0							
	e PPP	R 21:49:20.1							
	e SS	R 22:02:52.5							
	e LR	Z 22:22:41.0							
	e L	Z 22:39:21.7			20.0	992		5.4	
GRA1	e PP	Z 21:47:27.9	113.7	66.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/07	23:40:52.2	12.200N	45.420W	23.7	5.6	4.6		SZGRF
2004/02/07	23:40:59.0	13.454N	44.841W	10G	5.6	4.8		NEIC

Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z 23:50:37.2	55.8	250.2	2.2	134	5.6		
BUG	e P	Z 23:50:40.9	56.3	247.2	2.6	353	5.9		
TNS	e P	Z 23:50:42.9	56.6	249.1	2.3	158	5.6		
IBBN	e P	Z 23:50:45.2	57.0	247.2	2.2	263	5.9		
	e pP	Z 23:50:52.1							
FUR	e P	Z 23:50:50.3	57.7	252.9	2.1	286	5.9		
	e pP	Z 23:50:56.8							
GRA1	e P	Z 23:50:52.8	58.1	251.9	1.9	81	5.4		
	e pP	Z 23:50:59.5							
	e L	Z 00:10:59.5	58.1	251.9	19.8	465		4.6	
NRDL	e P	Z 23:50:55.4	58.4	249.3	2.0	156	5.7		
MOX	e P	Z 23:50:56.9	58.6	251.7	2.3	101	5.4		
WET	e P	Z 23:50:59.2	59.0	253.7	2.2	108	5.5		
GUNZ	e P	Z 23:50:59.2	59.0	252.5	2.0	90	5.5		
WERD	e P	Z 23:50:59.5	59.0	252.4	2.4	120	5.5		
BSEG	e P	Z 23:50:59.3	59.0	248.6	2.3	358	6.0		
GEC2	e P	Z 23:51:01.9	59.4	254.6	2.1	88	5.2		
CLL	e P	Z 23:51:04.0	59.7	252.6	2.3	131	5.4		
BRG	e P	Z 23:51:06.9	60.1	253.6	2.3	133	5.4		
RUE	e P	Z 23:51:09.6	60.5	252.6	1.9	232	6.1		

RGN	e PP	Z	09:18:06.4	111.0	65.1				
BRG	e PP	Z	09:18:14.5	112.2	67.0				
	e SS	T	09:33:53.1						
CLL	e Pdiff	Z	09:13:31.4	112.6	66.0				
	e PKiKP	Z	09:17:29.1						
	e PP	Z	09:18:14.7						
	e SKSac	R	09:24:08.2						
	e Sdiff	T	09:25:55.3						
	e PS	R	09:27:50.8						
	e PKKPab	Z	09:28:23.1						
	e PPS	T	09:28:58.0						
	e SS	T	09:33:51.7						
	e SSS	T	09:38:22.2						
	e LQ	T	09:48:35.6						
	e LR	Z	09:54:08.5						
	e L	Z	10:13:04.1			20.0	37500		7.0
BSEG	e PP	Z	09:18:20.9	112.9	62.5				
GEC2	e PP	Z	09:18:21.9	113.1	67.5				
	e SS	T	09:34:06.5						
TANN	e SS	T	09:34:06.5	113.2	65.8				
WET	e PP	Z	09:18:23.4	113.5	66.7				
MOX	e PP	Z	09:18:22.0	113.6	65.0				
	e SS	T	09:34:13.9						
NRDL	e PP	Z	09:18:23.5	113.7	62.9				
CLZ	e PP	Z	09:18:26.8	113.8	63.4				
	e Sdiff	T	09:26:06.6						
GRA1	e SS	T	09:34:22.8	114.3	65.0				
	e L	Z	10:11:58.4			20.0	38949		7.0
UBBA	e PP	Z	09:18:29.9	114.5	63.5				
TNS	e PP	Z	09:18:39.8	115.6	62.3				
	e SS	T	09:34:43.5						
STU	e PP	Z	09:18:41.0	115.8	63.6				
BFO	e PP	Z	09:18:44.7	116.6	63.0				
	e SS	T	09:34:55.4						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/08	10:30:11.5	42.310N	148.289E	42.1	5.1			SZGRF
2004/02/08	10:30:19.7	42.969N	145.850E	60*	4.9			NEIC

Off southeast coast of Hokkaido, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:42:20.0	79.2	32.0	1.1	20	5.1		
	e pP	Z 10:42:32.1							
	e sP	Z 10:42:37.1							

./2004/bul0402.txt

Thu Apr 23 08:38:25 2020

13

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/08	11:38:12.6	1.850N	66.505E	33.0N	5.0			SZGRF
2004/02/08	11:37:38.0	3.279S	68.153E	10G	4.9			NEIC

Carlsberg Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 11:49:01.8	72.0	118.4	1.0	11	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/08	22:14:26.8	23.651S	177.369W	136?	5.3			NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPdf	Z 22:33:59.2	149.2	13.8					
	e PKPbc	Z 22:34:03.7							
RUE	e PKPdf	Z 22:34:00.9	149.9	20.7					
	e PKPbc	Z 22:34:06.2							
NRDL	e PKPdf	Z 22:34:02.6	150.6	14.1					
	e PKPbc	Z 22:34:08.2							
IBBN	e PKPbc	Z 22:34:09.7	151.1	9.7					
CLZ	e PKPdf	Z 22:34:04.3	151.2	14.8					
	e PKPbc	Z 22:34:09.8							
CLL	e PKPdf	Z 22:34:03.8	151.2	20.0					
	e PKPbc	Z 22:34:09.3							
BRG	e PKPdf	Z 22:34:04.3	151.4	22.0					
	e PKPbc	Z 22:34:09.8							
BUG	e PKPbc	Z 22:34:11.4	152.0	9.1					
MOX	e PKPbc	Z 22:34:11.6	152.1	17.8					
WERD	e PKPbc	Z 22:34:11.9	152.2	19.3					
GUNZ	e PKPbc	Z 22:34:12.2	152.2	19.4					
TNS	e PKPdf	Z 22:34:08.4	153.0	11.8					
	e PKPbc	Z 22:34:14.2							
GRA1	e PKPdf	Z 22:34:08.1	153.1	17.6					
	e PKPbc	Z 22:34:14.2							
GEC2	e PKPbc	Z 22:34:14.3	153.3	23.1					
STU	e PKPbc	Z 22:34:16.9	154.4	14.0					
BFO	e PKPbc	Z 22:34:17.9	154.9	12.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/09	00:04:26.8	29.039N	114.856W	33.0N	5.2			SZGRF
2004/02/09	00:04:08.6	23.648N	108.887W	10G	5.3	4.8		NEIC

Baja California, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:17:13.3	89.5	307.6	1.5	19	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/09	03:48:18.9	36.662N	22.747E	10.0G		4.1		SZGRF
2004/02/09	03:48:14.5	36.019N	22.568E	33N	4.9			NEIC

Southern Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 03:51:32.4	14.4	149.9					
	e L	Z 03:58:06.5			18.9	1331		4.0	
WET	e P	Z 03:51:38.8	14.9	148.1					
	e L	Z 03:58:48.6			18.8	1522		4.1	
GRA1	e L	Z 03:59:11.9	16.0	144.6	20.3	1656		4.2	
BRG	e P	Z 03:51:56.9	16.1	154.1					
GUNZ	e P	Z 03:51:58.1	16.1	148.9					
BFO	e P	Z 03:51:59.2	16.2	134.4					
WERD	e P	Z 03:51:59.6	16.2	148.9					
MOX	e P	Z 03:52:04.7	16.6	147.5					
	e L	Z 03:59:27.4			18.2	1191		4.1	
CLL	e P	Z 03:52:04.9	16.7	152.2					
TNS	e P	Z 03:52:15.0	17.5	138.9					
CLZ	e P	Z 03:52:23.1	18.0	146.5					
BSEG	e P	Z 03:52:41.3	19.8	149.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/09	09:04: 9.7	28.101N	111.088W	33.0N	4.9	5.3		SZGRF
2004/02/09	09:03:46.6	24.746N	112.528W	10G	5.1	5.0		NEIC

Gulf of California, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:16:51.5	90.4	311.0	1.6	18	4.9		
	e L	Z 09:57:39.7			21.5	1341		5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/09								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 18:54:27.6							
	e PKPab	Z 18:54:36.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/10	04:06: 5.5	50.520N	160.861E	71.4	4.9			SZGRF

2004/02/10 04:06:15.6 52.381N 159.037E 77D 4.9 NEIC
East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:17:47.6	74.3	19.7	1.1	12	4.9		
	e pP	Z 04:18:06.8							

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/10 05:39:11.4 29.862N 86.937E 33.0N 5.0 SZGRF
Xizang

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:49:06.8	58.8	79.3	1.1	17	5.0		

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/10 17:48:21.4 30.951N 58.490E 49.6 4.3 SZGRF
Northern and central Iran

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:55:49.2	39.8	100.0	1.2	10	4.3		
	e pP	Z 17:56:02.3							

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/10 20:33:43.5 58.980N 151.670W 33.0N 6.2 SZGRF
2004/02/10 20:33:51.0 59.383N 151.983W 60 5.4 NEIC
Kodiak Island, Alaska, United States, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 20:44:30.4	65.8	350.2	0.8	201	6.4		
IBBN	e P	Z 20:44:38.9	67.1	349.0	0.6	177	6.5		
NRDL	e P	Z 20:44:39.0	67.2	350.2	0.7	122	6.2		
RUE	e P	Z 20:44:41.6	67.6	352.2	0.6	399	6.8		
CLZ	e P	Z 20:44:43.9	67.9	350.4	0.6	368	6.8		
BUG	e P	Z 20:44:43.5	67.9	348.8	0.8	237	6.5		
CLL	e P	Z 20:44:47.9	68.6	351.9	0.9	97	6.0		
UBBA	e P	Z 20:44:48.7	68.8	350.3	0.6	54	5.9		
BRG	e P	Z 20:44:51.1	69.2	352.4	0.8	112	6.1		
MOX	e P	Z 20:44:51.6	69.2	351.1	0.6	261	6.5		
TNS	e P	Z 20:44:51.8	69.2	349.5	0.7	124	6.2		
WERD	e P	Z 20:44:53.0	69.4	351.5	1.0	68	5.8		
WLF	e P	Z 20:44:53.3	69.5	348.3	1.2	95	5.8		
GUNZ	e P	Z 20:44:53.8	69.5	351.5	0.9	91	5.9		
GRA1	e P	Z 20:44:57.2	70.1	351.0	0.7	183	6.3		

STU	e P	Z	20:45:01.2	70.8	350.0	0.8	120	6.1
WET	e P	Z	20:45:01.6	70.8	351.9	1.5	105	5.7
BFO	e P	Z	20:45:03.1	71.1	349.6	0.8	84	5.9
GEC2	e P	Z	20:45:03.6	71.1	352.4	0.7	97	6.0
FUR	e P	Z	20:45:06.2	71.6	351.1	0.7	283	6.5

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/10	22:08:38.4	43.509N	147.158E	33.0N	5.1			SZGRF
2004/02/10	22:08:36.8	43.181N	147.452E	53*	5.1			NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 22:20:40.4	79.6	30.9	0.9	24	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/11	00:52:0.1	33.791N	31.429E	33.0N	4.2			SZGRF
2004/02/11	00:52:31.2	35.765N	29.388E	48	3.8			NEIC

Eastern Mediterranean Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:56:49.6	19.2	129.7	0.8	8	4.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/11	05:28:26.1	3.646S	135.527E	26	5.5	5.5		NEIC

Irian Jaya, Indonesia, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PP	Z 05:48:11.0	114.4	64.8					
	e L	Z 06:15:55.6			21.2	986		5.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/11	08:15:8.6	32.410N	35.610E	33.0G	5.5	4.4		SZGRF
2004/02/11	08:15:03.9	31.678N	35.534E	27	5.1	4.8		NEIC

Dead Sea region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 08:20:13.7	23.8	128.2	1.4	311	5.7		
FUR	e P	Z 08:20:22.2	24.7	123.1	1.7	238	5.4		
BRG	e P	Z 08:20:24.9	24.9	132.1	1.7	230	5.4		
GUNZ	e P	Z 08:20:29.5	25.4	128.6	1.8	181	5.5		
WERD	e P	Z 08:20:29.8	25.5	128.7	1.7	190	5.5		

GRA1	e P	Z	08:20:30.1	25.6	125.7	1.2	46	5.1		
	e pP	Z	08:20:39.0							
	e L	Z	08:32:29.7			19.5	1112		4.4	
CLL	e P	Z	08:20:31.4	25.7	131.2	1.8	212	5.6		
MOX	e P	Z	08:20:34.3	25.9	127.9	1.4	380	5.9		
RUE	e P	Z	08:20:34.8	26.1	134.2	1.1	138	5.5		
STU	e P	Z	08:20:37.4	26.2	121.1	1.1	189	5.6		
BFO	e P	Z	08:20:39.2	26.4	119.1	1.2	257	5.7		
CLZ	e P	Z	08:20:45.4	27.3	127.9	1.9	158	5.4		
TNS	e P	Z	08:20:46.3	27.3	122.4	1.5	58	5.1		
NRDL	e P	Z	08:20:50.7	27.8	128.4	1.4	60	5.1		
WLF	e P	Z	08:20:55.7	28.3	118.4	1.6	144	5.5		
BUG	e P	Z	08:20:58.1	28.6	122.7	1.8	86	5.3		
BSEG	e P	Z	08:20:57.8	28.6	130.8	1.9	97	5.3		
IBBN	e P	Z	08:21:00.5	28.8	124.7	2.3	260	5.7		

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/11

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
GRA1 e PKP Z 10:34:16.7

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/11 10:39:59.7 23.850S 178.330W 551.5
2004/02/11 10:39:58.9 24.193S 179.848E 543 4.9
South of Fiji Islands

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
BSEG e PKPdf Z 10:58:42.0 149.2 18.9
e PKPbc Z 10:58:46.4
e PKPab Z 10:58:53.4
RUE e PKPbc Z 10:58:47.8 149.8 25.9
e pPKPbc Z 11:00:55.8
NRDL e PKPbc Z 10:58:49.6 150.6 19.4
e pPKPbc Z 11:00:57.9
CLL e PKPdf Z 10:58:43.7 151.1 25.4
i PKPbc Z 10:58:50.6 0.8 103
e PKPab Z 10:59:00.7
e pPKPpdf Z 11:00:53.5
e pPKPbc Z 11:00:58.5
BRG e PKPbc Z 10:58:51.0 151.2 27.4
e pPKPbc Z 11:00:59.4
CLZ e PKPbc Z 10:58:51.3 151.2 20.2
e pPKPbc Z 11:00:59.7
IBBN e PKPbc Z 10:58:51.6 151.2 15.1

	e PKPab	Z	10:59:01.6						
	e pPKPbc	Z	11:00:59.5						
MOX	e PKPbc	Z	10:58:52.7	152.0	23.4				
	e PKPab	Z	10:59:05.2						
	e pPKPbc	Z	11:01:01.2						
WERD	e PKPbc	Z	10:58:52.9	152.0	24.8				
	e pPKPbc	Z	11:01:01.3						
GUNZ	e PKPbc	Z	10:58:53.3	152.1	24.9				
	e PKPab	Z	10:59:05.3						
	e pPKPbc	Z	11:01:01.6						
GRA1	e PKPbc	Z	10:58:54.8	153.0	23.3				
	e PKPab	Z	10:59:09.3						
WET	e PKPdf	Z	10:58:47.3	153.0	27.0				
	e PKPbc	Z	10:58:54.9						
	e PKPab	Z	10:59:09.8						
GEC2	e PKPdf	Z	10:58:47.2	153.0	28.8				
	e PKPbc	Z	10:58:55.1						
	e pPKPbc	Z	11:01:03.4						
TNS	e PKPdf	Z	10:58:47.7	153.1	17.6				
	e PKPbc	Z	10:58:55.2						
	e PKPab	Z	10:59:09.3						
	e pPKPbc	Z	11:01:03.4						
WLF	e PKPbc	Z	10:58:57.5	154.1	13.2				
	e PKPab	Z	10:59:14.2						

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/12

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
GRA1 e PKP Z 01:15:26.8

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/12 09:13:31.8 44.661N 12.114E 10.0G 4.1 SZGRF
Northern Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 09:14:36.6	4.3	195.2					4.0
	e Sn	N 09:15:26.7							
WET	e Pn	Z 09:14:39.2	4.5	186.9					3.9
	e Sn	N 09:15:31.8							
GRA1	e Sn	N 09:15:44.3	5.1	172.8					4.5
GUNZ	e Pn	Z 09:14:56.1	5.7	181.6					
TANN	e Pn	Z 09:14:57.2	5.8	182.5					
WERD	e Pn	Z 09:14:58.0	5.8	181.4					
MOX	e Sn	N 09:16:05.6	6.0	176.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/12	09:20:47.1	33.510N	46.840E	33.0N	5.1			SZGRF
2004/02/12	09:20:58.7	33.616N	45.998E	88	4.6			NEIC

Iran-Iraq border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 09:26:49.6	29.0	114.1	1.3	11	4.5		
FUR	e P	Z 09:26:55.3	29.7	106.5	1.1	57	5.3		
CLL	e P	Z 09:26:55.7	29.7	113.7	1.0	10	4.6		
GRA1	e P	Z 09:27:00.4	30.2	109.0	1.0	34	5.2		
RGN	e P	Z 09:27:04.6	31.0	119.1	1.2	93	5.6		
CLZ	e P	Z 09:27:11.3	31.4	111.4	0.8	19	5.1		
BSEG	e P	Z 09:27:19.2	32.2	114.5	1.3	26	5.0		
IBBN	e P	Z 09:27:26.9	33.1	109.2	0.9	30	5.2		
WLF	e P	Z 09:27:27.2	33.3	103.6	0.9	22	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/12	11:44:08.5	21.606S	175.408E	21	5.4	4.8		NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 12:03:57.2	149.3	29.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/12	13:47:34.0	19.351S	173.428W	33	5.4	5.8		NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKP	Z 14:07:08.7	145.3	6.2					
NRDL	e PKP	Z 14:07:12.9	146.7	6.1					
CLL	i PKPbc	+ Z 14:07:15.6	147.6	11.4					
	e PKPab	Z 14:07:18.8							
	e PP	R 14:10:58.6							
	e PPP	R 14:14:02.9							
	e SKSP	N 14:21:17.7							
	e SS	T 14:29:43.6							
	e SSS	T 14:35:18.1							
	e L	Z 15:20:50.0			18.0	2680		6.1	
BRG	e PKP	Z 14:07:16.5	147.9	13.2					
MOX	e PKP	Z 14:07:17.6	148.5	9.1					
WERD	e PKP	Z 14:07:18.5	148.6	10.4					

./2004/bul0402.txt

Thu Apr 23 08:38:25 2020

20

GUNZ	e PKP	Z	14:07:18.7	148.7	10.5							
GRA1	e PKP	Z	14:07:21.5	149.4	8.7							
	e L	Z	15:15:19.3			19.9	1986			5.9		
WLF	e PKP	Z	14:07:22.1	149.7	359.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/12								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 15:12:41.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/12	15:34:15.3	22.000S	170.181E	10	5.1	4.6		NEIC
SE of the Loyalty Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPbc	Z 15:53:53.9							
	e	15:54:12.4							
GRA1	e PKP	Z 15:54:00.5	147.7	38.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/13	00:41:57.8	14.930N	55.180E	33.0N	5.6	4.7		SZGRF
2004/02/13	00:41:40.9	13.683N	57.043E	20	5.3	5.0		NEIC
Arabian Sea								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 00:50:32.9	50.0	119.4	2.4	83	5.4		
WET	e P	Z 00:50:37.2	50.6	118.8	2.3	53	5.2		
BRG	e P	Z 00:50:40.4	50.9	121.1	2.2	80	5.4		
FUR	e P	Z 00:50:41.6	51.1	116.5	1.7	139	5.7		
GUNZ	e P	Z 00:50:45.2	51.5	119.1	2.6	272	5.8		
WERD	e P	Z 00:50:44.9	51.5	119.2	2.9	284	5.8		
CLL	e P	Z 00:50:46.3	51.6	120.5	2.6	292	5.8		
	e PcP	Z 00:51:59.6							
	e PP	Z 00:52:44.1							
	e PPP	Z 00:53:49.1							
	e S	E 00:58:06.3							
	e SSS	N 01:03:13.7							
	e LR	Z 01:07:31.0							
	e L	Z 01:16:45.4			22.0	766		4.7	
RUE	e P	Z 00:50:47.6	51.8	122.1	2.5	267	5.7		
GRA1	e P	Z 00:50:46.7	51.8	117.5	1.5	41	5.1		
	e L	Z 01:14:51.4			21.9	829		4.7	

./2004/bul0402.txt

Thu Apr 23 08:38:25 2020

21

MOX	e P	Z	00:50:49.2	52.0	118.6	2.0	96	5.4
BFO	e P	Z	00:50:55.5	52.9	113.8	3.0	243	5.6
CLZ	e P	Z	00:50:58.8	53.3	118.1	2.7	306	5.8
NRDL	e P	Z	00:51:01.9	53.7	118.3	2.8	493	5.9
BSEG	e P	Z	00:51:05.8	54.3	119.4	2.8	235	5.6
WLF	e P	Z	00:51:09.1	54.8	112.6	2.6	176	5.5
IBBN	e P	Z	00:51:10.8	54.9	115.9	2.3	264	5.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/13	05:33:40.5	17.330S	175.480W	211.1				SZGRF
2004/02/13	05:33:40.2	16.369S	174.612W	197	4.7			NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e PKPbc	Z 05:52:51.3	144.0	3.9					
CLZ	e PKPbc	Z 05:52:51.7	144.3	8.2					
CLL	e PKPbc	Z 05:52:52.2	144.5	12.7					
BRG	e PKPbc	Z 05:52:53.3	144.8	14.3					
BUG	e PKPbc	Z 05:52:53.7	144.9	3.1					
MOX	e PKPbc	Z 05:52:55.1	145.4	10.6					
WERD	e PKPbc	Z 05:52:55.6	145.5	11.8					
GUNZ	e PKPbc	Z 05:52:56.1	145.5	11.8					
TNS	e PKPbc	Z 05:52:57.8	146.1	5.3					
GRA1	e PKPbc	Z 05:52:58.1	146.3	10.1					
	e pPKPbc	Z 05:53:51.8							
WET	e PKPbc	Z 05:52:59.2	146.7	13.2					
	e pPKPbc	Z 05:53:52.8							
WLF	e PKPbc	Z 05:52:59.9	146.7	1.3					
GEC2	e PKPbc	Z 05:52:59.8	146.8	14.7					
	e pPKPbc	Z 05:53:53.2							
FUR	e PKPbc	Z 05:53:02.9	147.8	10.7					
BFO	e PKPbc	Z 05:53:02.7	147.9	5.3					
	e pPKPbc	Z 05:53:56.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/13	13:35:50.1	43.040N	145.791E	53	4.3			NEIC

Hokkaido, Japan region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:47:51.3	79.1	32.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/13	16:06:48.6	44.395N	148.960E	42	4.5			NEIC

Kuril Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 16:18:49.7	79.0	29.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/13	21:32:48.8	36.447S	4.999W	33.0N	5.3	4.5		SZGRF

South Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:45:32.8	87.3	193.0	1.6	42	5.3		
	e L	Z 22:24:47.2			20.1	188		4.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/14	10:30:20.3	34.521N	74.331E	33.0N	5.3	5.1		SZGRF
2004/02/14	10:30:22.1	34.777N	73.199E	11	5.4	5.2		NEIC

Southwestern Kashmir

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 10:38:38.7	45.0	87.2	1.1	41	5.4		
GEC2	e P	Z 10:38:40.9	45.3	85.0	1.4	23	5.0		
CLL	i P	+ Z 10:38:42.4	45.5	87.0	0.9	21	5.1		
	e PcP	Z 10:40:21.4							
	e PP	Z 10:40:33.5							
	e PPP	Z 10:41:10.3							
	e S	T 10:45:25.4							
	e SS	Z 10:49:05.9							
	e LQ	T 10:52:42.3							
	e LR	R 10:55:59.2							
	e L	Z 11:00:25.7			18.0	1887		5.1	
WET	e P	Z 10:38:44.5	45.8	84.8					
	e PcP	Z 10:40:21.2							
GUNZ	e P	Z 10:38:47.2	46.0	85.5					
WERD	e P	Z 10:38:47.1	46.0	85.6					
MOX	e P	Z 10:38:50.4	46.5	85.3	1.3	27	5.2		
GRA1	e P	Z 10:38:53.9	46.8	84.1	1.4	44	5.4		
	e S	N 10:45:48.1							
	e L	Z 11:02:15.5			18.7	1778		5.1	
FUR	e P	Z 10:38:54.3	46.9	82.7	1.3	82	5.7		
BSEG	e P	Z 10:38:55.1	47.0	87.4					
CLZ	e P	Z 10:38:55.7	47.1	85.5					
NRDL	e P	Z 10:38:56.8	47.2	85.9					
STU	e P	Z 10:39:04.0	48.2	81.9					
	e PcP	Z 10:40:29.0							

./2004/bul0402.txt

Thu Apr 23 08:38:25 2020

23

TNS	e P	Z	10:39:06.3	48.5	82.7				
	e PcP	Z	10:40:31.5						
IBBN	e P	Z	10:39:07.6	48.7	84.0				
BFO	e P	Z	10:39:07.9	48.9	80.9	1.3	22	4.9	
	e PcP	Z	10:40:33.2						
BUG	e P	Z	10:39:10.6	49.1	82.9				
WLF	e P	Z	10:39:18.4	50.1	80.6				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/14	11:57: 6.4	35.923N	73.450E	33.0N	5.3	4.8		SZGRF
Northwestern Kashmir								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 12:05:13.6	44.4	85.8	0.7	31	5.4		
RUE	e P	Z 12:05:13.3	44.4	87.3					
GEC2	e P	Z 12:05:15.8	44.7	83.6	1.6	21	4.8		
CLL	e P	Z 12:05:17.6	45.0	85.5					
WET	e P	Z 12:05:19.9	45.2	83.3	1.6	17	4.7		
GUNZ	e P	Z 12:05:22.1	45.5	84.1					
WERD	e P	Z 12:05:22.0	45.5	84.2					
MOX	e P	Z 12:05:25.3	45.9	83.9	1.5	44	5.3		
GRA1	e P	Z 12:05:28.8	46.3	82.7	1.7	112	5.6		
	e L	Z 12:28:50.2			18.9	952		4.8	
BSEG	e P	Z 12:05:30.0	46.4	86.1	0.6	30	5.6		
FUR	e P	Z 12:05:29.2	46.4	81.3	1.5	85	5.6		
CLZ	e P	Z 12:05:30.6	46.5	84.1	1.5	54	5.4		
NRDL	e P	Z 12:05:31.7	46.6	84.6					
STU	e P	Z 12:05:39.4	47.7	80.5					
TNS	e P	Z 12:05:41.2	47.9	81.3					
IBBN	e P	Z 12:05:42.6	48.1	82.7					
BFO	e P	Z 12:05:43.3	48.3	79.5	1.0	11	4.9		
BUG	e P	Z 12:05:45.5	48.5	81.6					
WLF	e P	Z 12:05:53.6	49.5	79.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/14								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 15:46:49.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/15	00:01:30.8	19.473S	171.695E	46.3				SZGRF
2004/02/15	00:01:30.7	20.016S	169.207E	46	5.3	4.7		NEIC

Vanuatu Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPbc	Z 00:20:54.3	142.4	39.8					
BSEG	e PKPbc	Z 00:20:54.0	142.4	33.7					
BRG	e PKPbc	Z 00:20:57.6	143.5	41.4					
CLL	e PKPbc	Z 00:20:57.5	143.6	39.7					
CLZ	e PKPbc	Z 00:21:00.0	144.1	35.4					
WERD	e PKPbc	Z 00:21:01.2	144.5	39.4					
GUNZ	e PKPbc	Z 00:21:01.6	144.6	39.5					
	e pPKPbc	Z 00:21:15.5							
MOX	e PKPbc	Z 00:21:01.5	144.6	38.2					
IBBN	e PKPbc	Z 00:21:01.3	144.6	31.1					
GEC2	e PKPbc	Z 00:21:03.3	145.1	42.9					
WET	e PKPbc	Z 00:21:03.9	145.3	41.5					
BUG	e PKPbc	Z 00:21:04.0	145.5	31.0					
GRA1	e PKPbc	Z 00:21:04.6	145.5	38.5					
TNS	e PKPbc	Z 00:21:06.6	146.2	33.8					
FUR	e PKPbc	Z 00:21:08.2	146.7	40.0					
STU	e PKPbc	Z 00:21:09.1	147.1	36.2					
WLF	e PKPbc	Z 00:21:10.5	147.4	30.6					
BFO	e PKPbc	Z 00:21:10.6	147.8	35.2					

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/15

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 08:15:31.3							

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/15

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKP	Z 11:38:04.4							
BSEG	e PKP	Z 11:37:59.6							
CLL	e PKP	Z 11:38:03.8							
CLZ	e PKP	Z 11:38:04.8							

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/15 12:52:48.1 42.530N 144.210E 33.0N 5.0 4.6
2004/02/15 12:52:52.4 42.502N 142.929E 48 4.8 4.7
Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	13:04:33.1	75.4	36.2					
BSEG	e P	Z	13:04:33.2	75.4	34.1	0.9	17	5.2		
CLL	e P	Z	13:04:39.6	76.6	35.5	0.8	20	5.3		
CLZ	e P	Z	13:04:43.0	77.1	33.9	0.9	19	5.2		
WERD	e P	Z	13:04:45.3	77.6	35.0					
IBBN	e P	Z	13:04:45.3	77.6	32.2					
GUNZ	e P	Z	13:04:45.9	77.6	35.0					
MOX	e P	Z	13:04:45.6	77.7	34.5	0.7	6	4.9		
GEC2	e P	Z	13:04:49.6	78.4	35.7	0.7	5	4.7		
WET	e P	Z	13:04:50.5	78.4	35.2	0.9	10	4.9		
BUG	e P	Z	13:04:50.1	78.5	31.7	0.8	14	5.0		
GRA1	e P	Z	13:04:51.4	78.6	34.2	0.8	26	5.3		
	e L	Z	13:47:00.2			22.0	283		4.6	
GRFO	e P	Z	13:04:51.4	78.6	34.2					
TNS	e P	Z	13:04:53.9	79.1	32.4	1.2	9	4.6		
FUR	e P	Z	13:04:58.0	79.8	34.0	0.9	22	5.2		
STU	e P	Z	13:04:59.0	80.1	32.7	0.9	17	5.1		
BFO	e P	Z	13:05:02.4	80.8	32.1	1.0	8	4.8		

Date Origin Time Lat Long Depth mb Ms ML Source
 2004/02/15 15:43:31.6 21.280S 170.210E 33.0N
 Southeast of Loyalty Islands SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKPbc	Z	16:03:04.4	145.1	40.9					
CLL	e PKPbc	Z	16:03:04.4	145.1	39.1					
NRDL	e PKPbc	Z	16:03:05.1	145.2	33.8					
CLZ	e PKPbc	Z	16:03:06.8	145.7	34.7					
WERD	e PKPbc	Z	16:03:07.8	146.1	38.9					
GUNZ	e PKPbc	Z	16:03:08.2	146.1	39.0					
IBBN	e PKPbc	Z	16:03:07.9	146.1	30.3					
MOX	e PKPbc	Z	16:03:07.9	146.2	37.7					
GEC2	e PKPbc	Z	16:03:09.6	146.7	42.6					
WET	e PKPbc	Z	16:03:10.1	146.8	41.0					
GRA1	e PKPbc	Z	16:03:10.9	147.1	37.9					
TNS	e PKPbc	Z	16:03:12.5	147.7	33.1					
FUR	e PKPbc	Z	16:03:14.3	148.3	39.5					
STU	e PKPbc	Z	16:03:14.9	148.6	35.6					
WLF	e PKPbc	Z	16:03:16.3	148.9	29.7					
BFO	e PKPbc	Z	16:03:16.3	149.3	34.6					

Date Origin Time Lat Long Depth mb Ms ML Source
 2004/02/15 19:37:52.2 28.840N 50.550E 33.0N 4.5
 2004/02/15 19:37:39.0 27.768N 52.259E 58 4.6
 SZGRF
 NEIC

Persian Gulf

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WET	e P	Z	19:44:41.9	36.9	110.7	1.1	5	4.4		
BRG	e P	Z	19:44:42.5	36.9	114.0	0.7	3	4.3		
FUR	e P	Z	19:44:48.6	37.6	107.9	0.9	27	5.1		
CLL	e P	Z	19:44:48.7	37.6	113.5					
GRA1	e P	Z	19:44:52.4	38.1	109.7	1.0	12	4.7		
CLZ	e P	Z	19:45:03.8	39.3	111.3	0.9	13	4.7		
BFO	e P	Z	19:45:04.7	39.5	105.2	1.0	6	4.3		
NRDL	e P	Z	19:45:07.2	39.7	111.7					
TNS	e P	Z	19:45:08.6	40.0	107.5	0.6	5	4.4		
WLF	e P	Z	19:45:18.5	41.2	104.6	0.8	7	4.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/15	19:55:44.5	19.490S	178.090W	33.0N				SZGRF
2004/02/15	19:56:53.6	17.776S	178.662W	618	4.5			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	20:15:17.0	143.2	14.4					
RUE	e PKPbc	Z	20:15:19.5	144.0	20.4					
NRDL	e PKPbc	Z	20:15:21.6	144.6	14.5					
IBBN	e PKPbc	Z	20:15:23.1	145.1	10.7					
CLZ	e PKPbc	Z	20:15:23.7	145.2	15.2					
CLL	e PKPbc	Z	20:15:23.6	145.2	19.7					
BRG	e PKPbc	Z	20:15:24.3	145.4	21.5					
MOX	e PKPbc	Z	20:15:26.0	146.1	17.7					
WERD	e PKPbc	Z	20:15:26.5	146.2	19.0					
GUNZ	e PKPbc	Z	20:15:26.6	146.2	19.1					
TNS	e PKPbc	Z	20:15:28.5	147.1	12.5					
	e PKPab	Z	20:15:32.4							
GRA1	e PKPbc	Z	20:15:29.1	147.1	17.5					
	e PKPab	Z	20:15:33.0							
WET	e PKPbc	Z	20:15:29.3	147.3	20.6					
	e PKPab	Z	20:15:33.8							
GEC2	e PKPbc	Z	20:15:29.4	147.4	22.2					
WLF	e PKPbc	Z	20:15:31.4	147.9	8.6					
STU	e PKPbc	Z	20:15:31.8	148.4	14.4					
FUR	e PKPbc	Z	20:15:32.4	148.6	18.4					
	e PKPab	Z	20:15:38.9							
BFO	e PKPbc	Z	20:15:33.1	148.9	13.0					
	e PKPab	Z	20:15:40.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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./2004/bul0402.txt

Thu Apr 23 08:38:25 2020

27

2004/02/15 23:23:16.6
2004/02/15 23:23:17.1
Southern Xinjiang, China

37.050N 78.570E 33.0N 5.2
36.778N 78.396E 40 5.1

SZGRF
NEIC

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 23:31:43.7	46.8	82.7					
BRG	e P	Z 23:31:45.1	47.0	81.4	1.6	52	5.4		
GEC2	e P	Z 23:31:49.2	47.5	79.3	1.1	19	5.1		
CLL	e P	Z 23:31:48.7	47.5	81.1					
WET	e P	Z 23:31:52.9	47.9	79.1	1.5	26	5.2		
GUNZ	e P	Z 23:31:53.8	48.1	79.8					
WERD	e P	Z 23:31:53.6	48.1	79.9					
MOX	e P	Z 23:31:56.7	48.5	79.6	1.4	19	4.9		
BSEG	e P	Z 23:31:58.8	48.7	81.5	1.6	47	5.3		
GRA1	e P	Z 23:32:00.8	48.9	78.5	1.4	54	5.4		
CLZ	e P	Z 23:32:01.0	49.0	79.8					
FUR	e P	Z 23:32:02.6	49.2	77.2	0.9	50	5.5		
STU	e P	Z 23:32:11.4	50.4	76.4	1.1	26	5.1		
IBBN	e P	Z 23:32:12.2	50.5	78.3					
TNS	e P	Z 23:32:12.5	50.5	77.1	0.9	8	4.6		
BUG	e P	Z 23:32:15.8	51.0	77.3					
BFO	e P	Z 23:32:15.9	51.0	75.5	2.6	78	5.2		
WLF	e P	Z 23:32:24.4	52.1	75.2					

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/16 07:38:28.9 19.262S 173.591W 55 5.2
Tonga NEIC

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 07:58:07.7	147.6	11.7					
	i PKPbc	Z 07:58:09.1							
	e SS	T 08:20:37.3							
	e SSS	R 08:26:11.9							
	e L	Z 09:08:23.8			18.0	703		5.5	
GRA1	e PKPdf	Z 07:58:12.0	149.3	8.9					

Date Origin Time Lat Long Depth mb Ms ML Source
2004/02/16

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 09:07:03.8							
	e	09:07:14.4							

./2004/bul0402.txt

Thu Apr 23 08:38:25 2020

28

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/16	14:44:38.2	0.618N	101.877E	15.0	5.6			SZGRF
2004/02/16	14:44:37.1	0.428S	100.666E	33	5.3	4.5		NEIC

Northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	14:57:26.1	88.3	92.8	1.0	34	5.7		
GEC2	e P	Z	14:57:26.4	88.3	92.6	1.6	76	5.8		
RUE	e P	Z	14:57:26.9	88.4	92.7	1.0	145	6.3		
CLL	e P	Z	14:57:28.6	88.9	92.1	1.2	45	5.6		
WET	e P	Z	14:57:29.0	88.9	92.0	1.6	65	5.6		
GUNZ	e P	Z	14:57:30.9	89.3	91.6	1.4	44	5.5		
WERD	e P	Z	14:57:30.8	89.3	91.5	1.5	40	5.4		
MOX	e P	Z	14:57:33.0	89.7	91.0	1.5	54	5.5		
FUR	e P	Z	14:57:33.5	89.9	90.7					
GRA1	e P	Z	14:57:34.5	90.0	90.7	1.2	49	5.6		
	e pP	Z	14:57:38.2							
	e sP	Z	14:57:41.6							
CLZ	e P	Z	14:57:36.8	90.5	90.0	1.3	45	5.5		
BSEG	e P	Z	14:57:36.8	90.6	90.0	1.2	32	5.4		
NRDL	e P	Z	14:57:37.7	90.7	89.8	1.4	47	5.6		
STU	e P	Z	14:57:40.0	91.3	89.2					
TNS	e P	Z	14:57:42.5	91.7	88.6	1.1	32	5.5		
BFO	e P	Z	14:57:42.5	91.9	88.5	1.0	12	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/16								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z	18:15:34.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/17	01:03:27.3	20.055S	170.280E	33.0N				SZGRF

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKPbc	Z	01:22:55.8	144.0	39.9					
CLL	e PKPbc	Z	01:22:55.8	144.0	38.2					
CLZ	e PKPbc	Z	01:22:58.2	144.6	33.8					
WERD	e PKPbc	Z	01:22:59.4	145.0	37.9					
IBBN	e PKPbc	Z	01:22:59.6	145.0	29.5					
GUNZ	e PKPbc	Z	01:22:59.9	145.0	38.0					
MOX	e PKPbc	Z	01:22:59.7	145.1	36.7					
WET	e PKPbc	Z	01:23:01.8	145.8	39.9					
BUG	e PKPbc	Z	01:23:02.6	145.9	29.3					

./2004/bul0402.txt

Thu Apr 23 08:38:25 2020

29

GRA1	e	PKPbc	Z	01:23:03.2	146.0	36.9
TNS	e	PKPbc	Z	01:23:05.0	146.6	32.1
FUR	e	PKPbc	Z	01:23:06.5	147.2	38.4
STU	e	PKPbc	Z	01:23:07.5	147.5	34.5
WLF	e	PKPbc	Z	01:23:08.8	147.8	28.8
BFO	e	PKPbc	Z	01:23:09.3	148.2	33.5

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/17								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e	PKPdf	Z	01:32:08.4	70.5	276.9			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/17	07:46:35.7	44.935N	146.896E	43.4	5.6	5.2		SZGRF
2004/02/17	07:46:27.5	43.169N	145.803E	41	5.3	5.5		NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	P	Z	07:58:09.9	75.7	31.8	0.9	92	5.8
RUE	e	P	Z	07:58:10.5	75.8	34.0	1.1	90	5.7
NRDL	e	P	Z	07:58:17.3	77.0	31.5	1.1	38	5.5
CLL	i	P	- Z	07:58:17.7	77.0	33.3	1.0	116	6.0
	e	pP	Z	07:58:29.9					
	e	sP	Z	07:58:34.6					
	e	PP	Z	08:01:16.0					
	e	PPP	Z	08:03:04.1					
	e	S	T	08:07:56.4					
	e	SS	R	08:13:17.9					
	e	SSS	R	08:16:38.7					
	e	LQ	T	08:21:41.8					
	e	LR	Z	08:25:23.0					
	e	L	Z	08:36:32.6			18.0	1812	
BRG	e	P	Z	07:58:17.5	77.1	33.9	1.2	43	5.4
CLZ	e	P	Z	07:58:20.0	77.5	31.6	1.0	77	5.8
IBBN	e	P	Z	07:58:21.9	77.9	29.9	0.9	116	6.0
WERD	e	P	Z	07:58:22.9	78.0	32.7	1.4	36	5.3
GUNZ	e	P	Z	07:58:23.4	78.1	32.8	1.2	34	5.4
MOX	e	P	Z	07:58:23.2	78.1	32.3	1.8	86	5.6
BUG	e	P	Z	07:58:26.8	78.8	29.5	1.0	71	5.7
GEC2	e	P	Z	07:58:27.5	78.9	33.5	1.3	39	5.4
WET	e	P	Z	07:58:28.1	78.9	33.0	1.1	51	5.6
GRA1	e	P	Z	07:58:28.7	79.0	31.9	1.0	84	5.8
	e	pP	Z	07:58:41.1					
	e	sP	Z	07:58:46.4					

	e L	Z	08:38:06.6			18.0	1121		5.2
TNS	e P	Z	07:58:30.8	79.5	30.2	1.0	30	5.3	
FUR	e P	Z	07:58:35.4	80.3	31.8	1.1	86	5.7	
STU	e P	Z	07:58:36.0	80.5	30.5	0.9	48	5.4	
WLF	e P	Z	07:58:37.6	80.7	28.6	2.3	162	5.5	
BFO	e P	Z	07:58:39.9	81.2	29.9	1.0	34	5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/17								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z 23:02:42.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/18								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:23:32.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/18	10:59:26.8	25.952N	111.057W	33.0N	5.4	6.0		SZGRF
2004/02/18	10:59:20.2	23.713N	108.799W	10	5.3	5.6		NEIC

Baja California, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 11:12:17.1	89.4	307.6	1.4	37	5.4		
	e S	E 11:23:16.8							
	e L	Z 11:51:12.6			21.2	5524		6.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/18	12:12:37.8	18.417S	171.353W	33.0N				SZGRF
2004/02/18	12:12:36.8	19.222S	173.590W	55	5.2			NEIC

Tonga Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 12:32:08.7	145.2	6.5					
RUE	e PKPbc	Z 12:32:12.2	146.3	12.6					
NRDL	e PKPbc	Z 12:32:12.8	146.6	6.4					
CLZ	e PKPbc	Z 12:32:15.1	147.2	6.9					
CLL	e PKPbc	Z 12:32:15.9	147.5	11.6					
BRG	e PKPbc	Z 12:32:16.6	147.8	13.4					

./2004/bul0402.txt

Thu Apr 23 08:38:25 2020

31

MOX	e	PKPbc	Z	12:32:17.7	148.3	9.4
WERD	e	PKPbc	Z	12:32:18.3	148.4	10.7
GUNZ	e	PKPbc	Z	12:32:18.6	148.5	10.7
GRA1	e	PKPbc	Z	12:32:21.3	149.3	8.9
GRFO	e	PKPbc	Z	12:32:20.8	149.3	8.9
WLF	e	PKPbc	Z	12:32:21.2	149.6	359.5
WET	e	PKPbc	Z	12:32:21.4	149.6	12.1
GEC2	e	PKPbc	Z	12:32:21.8	149.8	13.8
BFO	e	PKPbc	Z	12:32:23.8	150.9	3.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/18	21:28:32.4	45.826N	151.709E	33.0N	5.0			SZGRF
Kuril Islands, Russia								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:40:30.8	78.5	26.9	1.0	14	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/19	01:38:50.5	4.968S	152.744E	55	5.0			NEIC
New Britain region, P.N.G.								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 01:57:45.3	124.8	49.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/19	04:09:58.5	36.620N	28.710E	67	4.3			NEIC
Dodecanese Islands, Greece								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e (P)	Z 04:13:45.5	16.4	132.6					
WET	e (P)	Z 04:13:52.4	17.0	131.5					
GRA1	e (P)	Z 04:14:05.8	18.2	129.4					
CLL	e (P)	Z 04:14:08.3	18.5	136.6					
MOX	e (P)	Z 04:14:11.0	18.6	132.3					
BFO	e (P)	Z 04:14:16.2	19.0	120.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/19	08:53:38.8	20.414S	178.611W	635	4.4			NEIC
Fiji region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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./2004/bul0402.txt

Thu Apr 23 08:38:25 2020

32

CLL	i PKPbc	- Z	09:12:15.0	147.8	20.8	0.9	20
	e PKPab	Z	09:12:19.2			0.6	8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/19	09:11:35.9	24.167N	97.266E	33.0N	5.0			SZGRF
2004/02/19	09:11:44.2	25.640N	96.806E	46	4.9			NEIC

Myanmar-China border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:22:40.5	68.0	75.8	1.1	10	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/20	01:34:26.3	43.313N	13.441E	10.0G				SZGRF
2004/02/20	01:34:24.8	43.161N	13.441E	15A				NEIC

Central Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e Pn	Z 01:35:43.8	5.2	162.4					
GEC2	e Pn	Z 01:35:48.1	5.7	181.9					
	e Sn	E 01:36:50.7							
WET	e Pn	Z 01:35:52.0	6.0	176.1					
	e Sn	N 01:36:57.8							
BFO	e Sn	N 01:37:04.3	6.3	143.5					
GRA1	e Sn	E 01:37:15.1	6.7	166.0					
GUNZ	e Pn	Z 01:36:09.7	7.2	173.6					
WERD	e Pn	Z 01:36:10.6	7.3	173.5					
MOX	e Pn	Z 01:36:13.0	7.6	169.9					
	e Sn	N 01:37:33.8							
BRG	e Sn	N 01:37:37.6	7.7	182.7					
CLL	e Pn	Z 01:36:20.8	8.2	177.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/20	05:58:44.9	11.646S	166.354E	84D	5.6			NEIC

Santa Cruz Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	06:21:17.3	133.6	33.3					
BRG	e PKPdf	Z 06:17:55.4	134.8	39.7					
	e	06:21:21.0							
CLL	e PKPdf	Z 06:17:54.9	134.8	38.3	2.9	225			
	e PP	Z 06:20:29.7							
	e SKPbc	Z 06:21:21.0							
	e SP	Z 06:30:21.7							

	e PPS	Z	06:32:17.8							
	e SS	T	06:38:19.2							
	e SSS	Z	06:43:40.4							
	e LR	Z	07:02:11.7							
	e L	Z	07:11:34.3			22.0	990		5.5	
CLZ	e PKPdf	Z	06:17:56.8	135.4	34.6					
WERD	e PKPdf	Z	06:17:56.7	135.8	37.9					
	e		06:21:23.6							
GUNZ	e PKPdf	Z	06:17:57.5	135.8	38.0					
UBBA	e PKPdf	Z	06:17:57.3	136.3	34.7					
	e PP	Z	06:20:39.4							
GEC2	e PKPdf	Z	06:17:58.4	136.4	40.8					
WET	e PKPdf	Z	06:17:58.8	136.5	39.5					
GRA1	e PKPdf	Z	06:17:59.4	136.8	37.0					
	e		06:21:33.4							
	e L	Z	07:23:18.5			21.2	779		5.4	
WLF	e PKPdf	Z	06:18:03.1	138.6	30.1					
	e PP	Z	06:20:54.1							
BFO	e PP	Z	06:20:55.6	139.0	34.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/20	11:18:27.2	49.740N	150.390E	590.5	5.7			SZGRF
2004/02/20	11:18:27.7	50.605N	149.873E	532D	5.0			NEIC

Northwest of Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	11:28:40.5	68.8	27.9	0.7	164	6.3		
BSEG	e P	Z	11:28:48.4	70.1	26.0	0.9	45	5.6		
RUE	e P	Z	11:28:50.3	70.5	27.8	0.9	99	6.0		
NRDL	e P	Z	11:28:56.2	71.5	25.6	0.9	42	5.6		
CLL	i P	- Z	11:28:57.4	71.7	27.2	1.0	167	6.1		
	e PcP	Z	11:29:11.6							
	e pP	Z	11:30:49.9							
	e		11:30:57.6							
BRG	e P	Z	11:28:58.1	71.8	27.7	0.9	37	5.5		
CLZ	e P	Z	11:28:59.6	72.0	25.7	1.1	108	5.9		
	e pP	Z	11:31:03.0							
WERD	e P	Z	11:29:03.4	72.7	26.7	1.7	91	5.5		
MOX	e P	Z	11:29:03.4	72.7	26.3	1.1	58	5.5		
GUNZ	e P	Z	11:29:03.8	72.8	26.7	0.8	52	5.6		
BUG	e P	Z	11:29:05.7	73.1	23.8	0.7	50	5.6		
GRA1	e P	Z	11:29:09.4	73.7	25.9	0.7	127	6.1		
WET	e P	Z	11:29:09.4	73.7	26.8	0.8	52	5.6		
	e pP	Z	11:31:10.1							
GEC2	e P	Z	11:29:09.0	73.7	27.3	0.7	26	5.4		
FUR	e P	Z	11:29:16.8	75.0	25.8	0.9	96	5.9		
WLF	e P	Z	11:29:16.9	75.1	22.9	0.9	20	5.3		

STU	e P	Z	11:29:16.8	75.1	24.6	1.0	74	5.8
BFO	e P	Z	11:29:20.2	75.7	24.0	1.1	65	5.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/20	15:02:55.1	13.967S	170.774E	584*	4.3			NEIC

Vanuatu Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPdf	Z 15:21:09.3	137.2	28.5					
WET	e PKPdf	Z 15:21:19.3	140.4	35.0					
WLF	e PKPdf	Z 15:21:19.6	142.1	24.8					
BFO	e PKPdf	Z 15:21:19.6	142.7	28.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/21	02:34:42.5	58.433S	14.751W	10G	6.2	6.5		NEIC

Southwestern Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e Pdiff	Z 02:49:27.3	111.7	195.3					
	e PKiKP	Z 02:53:16.7							
	e PP	Z 02:53:59.7							
	e PPP	Z 02:56:22.0							
	e SKSac	R 02:59:59.5							
	e Sdiff	T 03:01:47.9							
	e PS	R 03:03:35.0							
	e PKKPab	Z 03:04:27.2							
	e PPS	R 03:04:39.4							
	e SS	T 03:09:40.2							
	e SSS	T 03:13:56.2							
	e SSSS	E 03:16:58.9							
	e LQ	T 03:19:58.1							
	e LR	Z 03:27:54.5							
	e L	Z 03:37:50.7			20.0	5081		6.1	
WLF	e PP	Z 02:53:53.7	109.4	191.4					
GEC2	e PP	Z 02:53:49.8	109.8	195.4					
WET	e PP	Z 02:53:52.0	109.9	195.0					
GRA1	e Pdiff	Z 02:49:23.8	110.2	194.1					
	e PP	Z 02:53:51.0							
	e SKSac	R 03:00:07.6							
	e Sdiff	T 03:01:32.0							
	e PS	R 03:03:18.4							
	e PKKPdf	Z 03:04:32.4							
	e SS	R 03:09:27.6							
	e L	Z 03:35:07.9			20.9	4395		6.0	
GUNZ	e PP	Z 02:53:53.7	111.0	194.8					

MOX e PP Z 02:53:59.1 111.2 194.4

Date Origin Time Lat Long Depth mb Ms ML Source
 2004/02/21 06:28:29.5 4.411S 152.897E 10A 5.1
 New Britain, Papua New Guinea, region

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
 GRA1 e PKP Z 06:47:29.7 124.4 48.5

Date Origin Time Lat Long Depth mb Ms ML Source
 2004/02/21 18:08:50.3 51.110N 160.526E 33.0N 5.0
 Off east coast of Kamchatka Peninsula, Russia

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
 GRA1 e P Z 18:20:33.8 75.9 19.3 1.2 15 5.0

Date Origin Time Lat Long Depth mb Ms ML Source
 2004/02/22 06:46:21.0 2.870S 101.090E 43.3 6.8 5.3 SZGRF
 2004/02/22 06:46:26.9 1.527S 100.460E 42G 6.3 5.8 NEIC
 Southern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 06:59:18.0	89.0	93.7	1.7	1285	6.9		
GEC2	e P	Z 06:59:18.1	89.0	93.4	1.8	1399	6.9		
RUE	e P	Z 06:59:18.8	89.2	93.6	1.5	2418	7.3		
WET	e P	Z 06:59:20.7	89.6	92.8	1.7	1116	6.9		
RGN	e P	Z 06:59:20.8	89.6	93.2	1.5	1226	7.0		
CLL	i P	- Z 06:59:20.8	89.6	92.9	1.4	467	6.5		
	e pP	Z 06:59:32.6							
	e PP	Z 07:03:01.0							
	e PPP	Z 07:05:01.6							
	e SKSac	R 07:09:46.1							
	e S	T 07:10:10.4							
	e sS	T 07:10:27.9							
	e PS	R 07:11:17.8							
	e SS	R 07:16:08.4							
	e SSS	E 07:19:52.4							
	e SSSS	N 07:23:11.1							
	e L	Z 07:44:00.4			22.0	1845		5.5	
GUNZ	e P	Z 06:59:22.7	90.0	92.4	1.5	450	6.6		
WERD	e P	Z 06:59:22.6	90.0	92.4	1.5	378	6.5		
MOX	e P	Z 06:59:24.8	90.4	91.9	1.7	835	6.8		
FUR	e P	Z 06:59:24.8	90.6	91.6	1.6	783	6.8		

	e PP	Z	07:03:06.9								
GRA1	e P	Z	06:59:26.1	90.7	91.6	1.7	1276	7.0			
	e pP	Z	06:59:38.8								
	e PP	Z	07:03:24.3								
	e SKSac	R	07:09:52.0								
	e S	T	07:10:47.9								
	e L	Z	07:48:29.4			20.3	1176		5.3		
CLZ	e P	Z	06:59:28.5	91.3	90.9	1.8	963	6.9			
BSEG	e P	Z	06:59:28.7	91.3	90.8	1.6	706	6.8			
NRDL	e P	Z	06:59:29.5	91.4	90.7	2.0	1199	7.0			
STU	e P	Z	06:59:31.6	92.0	90.1	2.1	917	6.8			
BFO	e P	Z	06:59:33.8	92.6	89.4	1.7	335	6.4			
BUG	e P	Z	06:59:37.1	93.2	88.5	2.4	698	6.7			
WLF	e P	Z	06:59:41.0	94.0	87.7	2.0	527	6.6			
	e PP	Z	07:03:29.4								

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/22	08:04: 7.8	35.534N	72.618E	33.0N	4.6			SZGRF
2004/02/22	08:03:56.0	34.806N	73.327E	10G	4.6			NEIC

Pakistan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 08:12:28.0	46.9	84.0	1.4	9	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/22								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z 09:24:10.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/22	10:49:32.6	37.340N	132.600E	33.0N	5.0			SZGRF

Sea of Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 11:01:22.9	76.7	45.8	0.8	5	4.7		
CLL	e P	Z 11:01:22.9	76.8	45.2	0.9	19	5.2		
CLZ	e P	Z 11:01:27.5	77.6	43.5	1.1	14	5.0		
GEC2	e P	Z 11:01:30.9	78.2	45.3	1.3	9	4.7		
GRA1	e P	Z 11:01:34.0	78.8	43.8	0.7	12	5.0		
FUR	e P	Z 11:01:39.9	79.9	43.6	0.8	22	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/22	12:56:41.0	22.158S	178.193W	33.0N				SZGRF
2004/02/22	12:57:52.2	21.825S	179.200W	672*	4.6			NEIC

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	13:16:22.2	147.1	16.4					
RUE	e PKPbc	Z	13:16:24.0	147.8	23.0					
NRDL	e PKPbc	Z	13:16:25.6	148.5	16.7					
CLL	e PKPbc	Z	13:16:27.1	149.0	22.4					
	e PKPab	Z	13:16:33.4							
CLZ	e PKPbc	Z	13:16:27.6	149.1	17.5					
BRG	e PKPbc	Z	13:16:27.7	149.2	24.3					
BUG	e PKPbc	Z	13:16:29.4	150.0	12.1					
	e PKPab	Z	13:16:36.7							
MOX	e PKPbc	Z	13:16:29.4	150.0	20.4					
WERD	e PKPbc	Z	13:16:29.6	150.0	21.7					
	e PKPab	Z	13:16:37.5							
GUNZ	e PKPbc	Z	13:16:29.6	150.1	21.8					
GRA1	e PKPbc	Z	13:16:31.7	150.9	20.2					
	e PKPab	Z	13:16:41.9							
WET	e PKPbc	Z	13:16:32.2	151.0	23.7					
	e PKPab	Z	13:16:42.5							
GEC2	e PKPbc	Z	13:16:32.0	151.1	25.4					
WLF	e PKPbc	Z	13:16:34.4	151.8	10.6					
STU	e PKPbc	Z	13:16:35.2	152.2	16.9					
	e PKPab	Z	13:16:46.8							
FUR	e PKPab	Z	13:16:48.1	152.4	21.3					
BFO	e PKPbc	Z	13:16:35.7	152.8	15.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/22	14:20:36.8	14.170N	50.830E	33.0N	4.5	4.1		SZGRF

Eastern Arabian Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	14:28:57.9	46.1	125.7	0.8	2	4.1		
BRG	e P	Z	14:29:06.9	47.2	127.5	0.8	2	4.3		
GRA1	e P	Z	14:29:12.6	47.9	123.6	0.8	4	4.6		
	e S	E	14:36:11.2							
	e L	Z	14:56:22.3			21.0	203		4.1	
CLL	e P	Z	14:29:12.3	47.9	126.8	0.7	2	4.4		
MOX	e P	Z	14:29:14.3	48.3	124.8	1.0	4	4.5		
BFO	e P	Z	14:29:19.2	48.8	119.5	1.0	10	4.8		
CLZ	e P	Z	14:29:25.0	49.6	124.3	0.9	4	4.4		
WLF	e P	Z	14:29:33.9	50.7	118.3	0.8	9	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/22	20:16:11.0	39.816N	74.293E	33.0N	4.3			SZGRF
Southern Xinjiang, China								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:24:19.5	44.5	77.7	0.9	3	4.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/22	21:08: 0.4	35.753N	72.625E	231.8	4.9			SZGRF
Pakistan								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:16:19.5	45.8	83.5	1.1	13	4.9		
	e pP	Z 21:17:08.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/22	23:17:15.2	18.460N	145.347E	200D	5.5			NEIC
Mariana Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PP	Z 23:34:52.2	100.7	43.9					
	e PKKP	Z 23:46:52.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/23	07:18:39.1	4.944N	94.652E	33.0N	4.9			SZGRF
2004/02/23	07:18:37.6	7.217N	93.736E	64?	5.1			NEIC
Off west coast of northern Sumatera, Indonesia								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 07:30:56.1	79.7	91.0	1.1	12	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/23								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 13:13:46.0							

./2004/bul0402.txt

Thu Apr 23 08:38:25 2020

39

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/23	15:16:23.3	16.831S	179.574W	33.0N				SZGRF

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKP	Z	15:35:52.6	144.1	20.8					
MOX	e PKP	Z	15:35:55.8	145.0	18.9					
WERD	e PKP	Z	15:35:56.3	145.1	20.1					
GUNZ	e PKP	Z	15:35:56.8	145.1	20.2					
GRA1	e PKP	Z	15:35:59.9	146.0	18.7					
WET	e PKP	Z	15:36:01.4	146.1	21.7					
GEC2	e PKP	Z	15:36:00.5	146.2	23.3					
BFO	e PKP	Z	15:36:03.3	147.8	14.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/23	15:38:32.1	37.660N	72.320E	33.0G	5.3			SZGRF
2004/02/23	15:38:40.1	37.561N	71.932E	91	5.1			NEIC

Tajikistan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	15:46:25.9	42.4	86.6	0.9	62	5.3		
BRG	e P	Z	15:46:26.6	42.4	85.0	1.2	74	5.3		
GEC2	e P	Z	15:46:29.8	42.8	82.6	1.6	44	4.9		
CLL	i P	- Z	15:46:31.4	43.0	84.8	1.3	61	5.2		
	e		15:46:59.2							
	e SS	Z	15:56:15.4							
	e L	Z	16:06:48.4			20.3	175		4.0	
WET	e P	Z	15:46:33.7	43.3	82.4	1.4	31	4.9		
GUNZ	e P	Z	15:46:35.4	43.5	83.3	1.2	38	5.0		
WERD	e P	Z	15:46:35.3	43.5	83.4	1.2	36	5.0		
MOX	e P	Z	15:46:38.6	43.9	83.1	1.3	51	5.1		
GRA1	e P	Z	15:46:42.4	44.3	81.9	1.3	118	5.7		
BSEG	e P	Z	15:46:42.4	44.4	85.6	1.2	70	5.5		
FUR	e P	Z	15:46:43.4	44.5	80.4	1.1	66	5.5		
CLZ	e P	Z	15:46:43.7	44.6	83.5	1.4	80	5.5		
NRDL	e P	Z	15:46:44.6	44.6	83.9	1.3	95	5.6		
STU	e P	Z	15:46:53.0	45.8	79.6	1.6	83	5.5		
BFO	e P	Z	15:46:58.2	46.4	78.7	1.3	38	5.4		
BUG	e P	Z	15:46:59.0	46.5	80.9	1.3	71	5.6		
WLF	e P	Z	15:47:07.2	47.5	78.5	1.2	72	5.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/23	16:04:45.8	15.963S	174.056W	33.0N		6.4		SZGRF
2004/02/23	16:04:49.4	14.666S	175.665W	31G	5.7	6.3		NEIC

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPbc	Z	16:24:13.1	141.9	9.1					
CLZ	e PKPbc	Z	16:24:15.0	142.5	9.6					
CLL	e PKPpre	Z	16:24:18.0	142.7	13.9					
	e PKPdf	Z	16:24:20.6			1.1	31			
	e PP	Z	16:27:20.3							
	e SKSac	R	16:31:27.1							
	e SS	T	16:46:05.2							
	e SSS	T	16:51:26.5							
	e LQ	T	17:04:02.6							
	e LR	Z	17:12:25.7							
	e L	Z	17:23:53.8			22.0	5818		6.3	
BUG	e PKPbc	Z	16:24:15.8	143.1	4.7					
MOX	e PKPbc	Z	16:24:17.3	143.5	11.9					
GUNZ	e PKPbc	Z	16:24:15.4	143.7	13.1					
GRA1	e PKPbc	Z	16:24:21.7	144.5	11.5					
	e SS	E	16:46:35.8							
	e L	Z	17:33:05.9			20.6	6087		6.4	
WET	e PKPbc	Z	16:24:22.0	144.8	14.4					
GEC2	e PKPbc	Z	16:24:22.4	145.0	15.9					
WLF	e PKPbc	Z	16:24:22.6	145.0	3.1					
STU	e PKPbc	Z	16:24:24.5	145.7	8.4					
FUR	e PKPbc	Z	16:24:26.2	146.0	12.1					
BFO	e PKPbc	Z	16:24:26.2	146.2	7.0					

Date Origin Time Lat Long Depth mb Ms ML Source
 2004/02/24 01:19:17.4 25.264S 179.230E 640? 4.5 NEIC
 South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKP	Z	01:37:59.8	150.2	20.5					
NRDL	e PKP	Z	01:38:02.6	151.6	21.0					
CLL	e PKP	Z	01:38:03.6	151.9	27.2					
BRG	e PKP	Z	01:38:03.8	152.0	29.3					

Date Origin Time Lat Long Depth mb Ms ML Source
 2004/02/24 02:14:44.3 2.433S 27.785E 33.0N 4.8 SZGRF
 2004/02/24 02:14:33.9 3.400S 29.572E 10A 4.8 NEIC
 Zaire

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	02:24:05.8	55.4	157.6	1.7	16	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/24	02:27:45.0	34.896N	4.304W	10.0G	6.3	6.0		SZGRF
2004/02/24	02:27:48.1	35.178N	3.903W	13D	6.2	6.4		NEIC

Morocco

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e Pn	Z	02:31:37.7	16.2	210.7					
	e L	Z	02:37:43.5			21.5	85094		5.9	
STU	e P	Z	02:31:42.3	16.7	220.2					
	e S	Z	02:34:54.5							
	e L	Z	02:40:45.7			21.1	70343		5.9	
FUR	e P	Z	02:31:49.1	17.2	226.4	1.5	3146	6.2		
	e L	Z	02:37:45.3			21.4	95458		6.0	
GRA1	e P	Z	02:32:01.8	18.2	223.0	1.5	2080	6.1		
	e S	N	02:35:30.5							
	e L	Z	02:39:10.0			18.1	51348		5.9	
WET	e P	Z	02:32:04.8	18.6	227.7	2.2	2024	6.0		
	e L	Z	02:38:39.0			21.1	88968		6.0	
MOX	e P	Z	02:32:11.5	19.1	221.9	1.5	1141	5.9		
	e L	Z	02:39:39.0			18.3	87130		6.1	
GUNZ	e P	Z	02:32:12.9	19.2	224.0					
WERD	e P	Z	02:32:13.4	19.3	223.8					
	e S	N	02:35:53.2							
HLG	e P	Z	02:32:29.4	20.7	208.2	1.3	3234	6.5		
	e L	Z	02:41:10.3			20.6	74139		6.1	
BSEG	e P	Z	02:32:35.0	21.2	213.7	1.8	6186	6.7		
	e S	N	02:36:30.2							
	e L	Z	02:40:15.2			18.3	73814		6.1	
RUE	e P	Z	02:32:36.1	21.4	222.9	1.2	2063	6.4		
	e L	Z	02:41:08.0			18.1	75477		6.1	
RGN	e P	Z	02:32:50.1	22.8	218.7	1.5	1693	6.4		
	e L	Z	02:41:11.0			19.3	44192		5.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/24	05:21:27.0	40.746N	15.831E	10.0G				SZGRF

Southern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
ARSA	e Pn	Z	05:23:01.8	6.5	177.9					
	e Sn	E	05:24:14.6							
KBA	e Pn	Z	05:23:02.8	6.6	163.3					
WTTA	e Pn	Z	05:23:11.7	7.2	153.7					
MOA	e Pn	Z	05:23:11.4	7.2	170.5					
	e Sn	N	05:24:31.3							
DAVA	e Pn	Z	05:23:20.3	7.8	144.7					

./2004/bul0402.txt

Thu Apr 23 08:38:25 2020

42

GEC2	e Pn	Z	05:23:24.8	8.2	168.7
	e Sn	N	05:24:54.0		
WET	e Pn	Z	05:23:30.6	8.7	165.0
	e Sn	Z	05:25:03.1		
TANN	e Sn	N	05:25:35.5	9.9	165.1
MOX	e Pn	Z	05:23:54.4	10.3	161.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/24	06:58:40.3	16.818S	26.105E	33.0N	4.7			SZGRF

Zambia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	07:09:35.4	67.8	164.6	1.0	5	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/24	08:11:1.8	22.100S	178.360W	33.0G				SZGRF
2004/02/24	08:12:08.9	20.566S	178.564W	609?	4.7			NEIC

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	08:30:42.3	145.9	15.0					
HLG	e PKPbc	Z	08:30:43.0	146.0	10.8					
NRDL	e PKPbc	Z	08:30:46.1	147.4	15.2					
	e PKPab	Z	08:30:50.2							
CLL	e PKPdf	Z	08:30:43.7	148.0	20.7					
	i PKPbc	- Z	08:30:47.7			0.8	83			
	i PKPab	Z	08:30:52.1			0.6	37			
CLZ	e PKPbc	Z	08:30:48.0	148.0	15.9					
BRG	e PKPbc	Z	08:30:48.3	148.1	22.6					
	e PKPab	Z	08:30:53.4							
BUG	e PKPbc	Z	08:30:49.4	148.8	10.6					
MOX	e PKPbc	Z	08:30:49.8	148.9	18.7					
	e PKPab	Z	08:30:56.2							
WERD	e PKPbc	Z	08:30:50.3	148.9	20.0					
	e PKPab	Z	08:30:56.5							
GUNZ	e PKPbc	Z	08:30:50.5	149.0	20.1					
	e PKPab	Z	08:30:57.1							
GRA1	e PKPbc	Z	08:30:52.0	149.9	18.5					
	e PKPab	Z	08:31:00.9							
WET	e PKPbc	Z	08:30:52.5	150.0	21.8					
	e PKPab	Z	08:31:01.5							
GEC2	e PKPbc	Z	08:30:52.9	150.1	23.5					
	e PKPab	Z	08:31:01.6							
WLF	e PKPbc	Z	08:30:54.9	150.7	9.0					
	e PKPab	Z	08:31:03.9							

./2004/bul0402.txt

Thu Apr 23 08:38:25 2020

43

STU	e	PKPbc	Z	08:30:55.5	151.1	15.2
FUR	e	PKPbc	Z	08:30:55.7	151.3	19.5
	e	PKPab	Z	08:31:06.8		
BFO	e	PKPbc	Z	08:30:56.2	151.7	13.7
	e	PKPab	Z	08:31:07.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/24	11:04:48.0	35.414N	4.092W	15G	4.4			NEIC

Strait of Gibraltar

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e (P)	Z 11:08:34.0	15.9	220.0					
GUNZ	e (P)	Z 11:09:12.7	19.1	224.8					
CLL	e (P)	Z 11:09:21.2	20.1	224.3					
BSEG	e (P)	Z 11:09:32.6	21.1	214.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/24	20:21:39.5	36.132N	98.204E	0.0G	5.4			SZGRF

Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:31:58.0	61.5	66.6	1.4	36	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/25	05:21: 7.8	33.951N	3.954W	10.0G				SZGRF
2004/02/25	05:21:14.8	35.150N	3.974W	11D	4.5			NEIC

Morocco

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z 05:25:06.8	16.0	219.2					
WLF	e Pn	Z 05:25:10.4	16.3	210.8					
GRA1	e Pn	Z 05:25:33.3	18.3	223.1					
WET	e P	Z 05:25:37.0	18.7	227.8					
GEC2	e P	Z 05:25:38.1	18.9	230.1					
MOX	e P	Z 05:25:41.5	19.2	222.0					
NRDL	e P	Z 05:25:52.0	20.0	215.5					
CLL	e P	Z 05:25:52.8	20.2	223.6					
BRG	e P	Z 05:25:55.3	20.4	226.3					
BSEG	e P	Z 05:26:04.6	21.3	213.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/25	08:56: 8.7	54.334N	162.685E	33.0N	5.8	5.1		SZGRF
2004/02/25	08:56:08.7	54.624N	162.770E	38	5.2	5.1		NEIC

Near east coast of Kamchatka Peninsula, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	09:07:24.9	71.5	18.0	2.0	246	6.0		
	e pP	Z	09:07:35.8							
	e PP	Z	09:09:57.6							
	e S	Z	09:16:44.1							
	e SS	Z	09:22:05.2							
	e SSS	Z	09:24:58.6							
	e LR	Z	09:30:29.1							
	e L	Z	09:44:31.5			18.0	1702		5.4	
GRA1	e P	Z	09:07:37.0	73.0	16.8	1.7	189	5.8		
	e S	E	09:17:00.1							
	e L	Z	09:41:58.3			19.1	961		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/25	11:53: 7.0	15.276N	94.747W	33.0N	5.4			SZGRF
2004/02/25	11:53:13.0	13.902N	91.959W	52	4.8			NEIC

Near coast of Oaxaca, Mexico

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	12:05:55.7	87.7	288.9	2.0	40	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/25	12:44:49.7	34.134N	4.000W	10.0G		4.5		SZGRF
2004/02/25	12:44:57.1	35.216N	4.040W	10D	4.9			NEIC

Morocco

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	12:48:44.4	16.0	219.4					
	e L	Z	12:57:54.6			18.0	3359		4.6	
WLF	e Pn	Z	12:48:49.7	16.3	211.1					
STU	e Pn	Z	12:48:54.6	16.7	220.6					
FUR	e Pn	Z	12:48:59.6	17.2	226.8					
	e L	N	12:58:03.2			18.0	5266		4.9	
BUG	e L	Z	12:55:15.2	18.1	211.0	18.8	3209		4.7	
GRA1	e P	Z	12:49:11.2	18.3	223.3					
	e S	E	12:52:46.0							
	e L	Z	12:57:40.3			18.7	1559		4.4	
WET	e P	Z	12:49:16.6	18.7	228.0					
GEC2	e P	Z	12:49:19.9	18.9	230.3					
	e L	Z	12:56:04.8			21.9	2466		4.5	

IBBN	e P	Z	12:49:24.2	19.0	210.8				
MOX	e P	Z	12:49:20.7	19.1	222.3				
WERD	e P	Z	12:49:23.2	19.3	224.1				
CLZ	e P	Z	12:49:28.5	19.6	217.4				
	e S	E	12:53:13.5						
	e L	Z	12:57:24.0			18.4	2070		4.5
CLL	e P	Z	12:49:35.4	20.2	223.9				
	e S	E	12:53:29.5						
	e L	Z	13:00:00.5			18.0	1750		4.5
BRG	e P	Z	12:49:35.6	20.3	226.6				
	e L	Z	12:59:16.1			18.2	1344		4.4
HLG	e L	Z	12:59:49.1	20.7	208.5	18.6	1395		4.4
BSEG	e P	Z	12:49:44.0	21.2	214.0				
	e L	Z	12:59:06.9			21.2	1696		4.4
RUE	e P	Z	12:49:45.7	21.4	223.3				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/25	16:52:29.8	21.970S	174.620W	57.4		5.5		SZGRF
2004/02/25	16:52:31.7	20.676S	175.062W	55D	5.7			NEIC

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	17:12:07.3	146.5	9.1					
RUE	e PKPbc	Z	17:12:10.1	147.5	15.5					
	e pPKPbc	Z	17:12:26.8							
NRDL	e PKPbc	Z	17:12:11.3	147.9	9.1					
IBBN	e PKPbc	Z	17:12:12.3	148.3	5.0					
CLZ	e PKPdf	Z	17:12:09.5	148.5	9.8					
	e PKPab	Z	17:12:16.7							
CLL	e PKPdf	Z	17:12:09.3	148.7	14.6					
	e PKPbc	Z	17:12:13.4							
	e pPKPbc	Z	17:12:30.2							
BRG	e PKPdf	Z	17:12:10.0	149.0	16.5					
	e PKPbc	Z	17:12:14.3							
BUG	e PKPbc	Z	17:12:14.2	149.2	4.3					
MOX	e PKPdf	Z	17:12:10.9	149.6	12.4					
	e PKPbc	Z	17:12:15.5							
	e PKPab	Z	17:12:21.1							
	e pPKPbc	Z	17:12:32.5							
WERD	e PKPdf	Z	17:12:10.6	149.7	13.7					
	e PKPbc	Z	17:12:16.0							
GUNZ	e PKPdf	Z	17:12:11.5	149.7	13.8					
	e PKPbc	Z	17:12:16.2							
GRA1	e PKPdf	Z	17:12:12.5	150.6	12.0					
	e PKPbc	Z	17:12:18.3							
	e PKPab	Z	17:12:25.6							
	e pPKPbc	Z	17:12:35.0							

	e L	Z	18:23:35.6			21.7	747	5.5		
WET	e PKPdf	Z	17:12:12.5	150.8	15.4					
	e PKPbc	Z	17:12:18.6							
	e PKPab	Z	17:12:28.2							
GEC2	e PKPdf	Z	17:12:12.6	151.0	17.1					
	e PKPbc	Z	17:12:19.0							
WLF	e PKPbc	Z	17:12:19.5	151.0	2.3					
STU	e PKPdf	Z	17:12:13.9	151.7	8.4					
	e PKPbc	Z	17:12:20.7							
	e PKPab	Z	17:12:31.7							
FUR	e PKPdf	Z	17:12:14.7	152.0	12.7					
	e PKPbc	Z	17:12:21.2							
	e PKPab	Z	17:12:31.2							
	e pPKPbc	Z	17:12:38.3							
BFO	e PKPbc	Z	17:12:21.3	152.2	6.8					
	e PKPab	Z	17:12:31.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/25	18:22:21.4	15.601N	94.877W	33.0N	5.2			SZGRF
2004/02/25	18:22:23.0	13.937N	91.917W	36D	5.2	5.5		NEIC

Near coast of Oaxaca, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 18:35:09.2	87.7	288.9	1.5	19	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/25	18:52:35.7	14.393N	91.958W	33.0N	4.8			SZGRF
2004/02/25	18:52:32.5	13.822N	92.035W	37	4.9			NEIC

Guatemala

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:05:19.6	87.8	288.9	1.3	11	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/25	22:01:48.0	35.324N	31.325E	10.0G	4.6	3.6		SZGRF
2004/02/25	22:02:01.3	36.103N	30.700E	48	4.5			NEIC

Cyprus region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 22:06:06.4	17.8	129.4	1.0	12	4.0		
	e S	E 22:09:43.7							
WET	e P	Z 22:06:12.3	18.4	128.4	1.6	40	4.4		
	e S	E 22:09:52.5							

FUR	e P	Z	22:06:15.0	18.7	123.0	0.7	16	4.3	
BRG	e P	Z	22:06:19.8	19.0	134.4	1.2	14	4.1	
GUNZ	e P	Z	22:06:25.2	19.5	130.1	1.0	27	4.4	
WERD	e P	N	22:06:24.6	19.5	130.3	1.9	32		
	e S	E	22:10:15.2						
GRA1	e P	Z	22:06:25.6	19.6	126.5	1.0	40	4.7	
	e L	Z	22:13:27.7			21.5	300		3.6
CLL	e P	Z	22:06:27.3	19.8	133.4	1.9	69	4.7	
MOX	e P	Z	22:06:30.2	20.0	129.4	1.2	62	4.8	
STU	e P	Z	22:06:31.9	20.2	120.9	0.9	90	5.1	
BFO	e P	Z	22:06:34.7	20.5	118.4	1.6	33	4.4	
CLZ	e P	Z	22:06:43.8	21.3	129.5	1.1	44	4.8	
NRDL	e P	Z	22:06:50.0	21.9	130.3	1.2	36	4.8	
WLF	e P	Z	22:06:55.9	22.4	118.0	1.1	78	5.2	
BUG	e P	Z	22:06:57.3	22.7	123.5	1.2	48	4.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/26	04:13:57.9	37.721N	38.558E	10.0G	4.8			SZGRF
2004/02/26	04:14:03.9	37.940N	38.141E	40	4.7			NEIC

Turkey

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 04:18:40.8	20.7	112.6	0.9	33	4.8		
WET	e P	Z 04:18:48.7	21.3	112.2	1.5	46	4.7		
BRG	e P	Z 04:18:51.7	21.4	117.7	1.5	39	4.6		
FUR	e P	Z 04:18:55.4	22.0	107.7	1.0	57	5.1		
GUNZ	e P	Z 04:18:56.9	22.1	114.2	1.1	17	4.5		
CLL	e P	Z 04:18:56.7	22.1	117.3	0.9	21	4.6		
WERD	e P	Z 04:18:58.9	22.2	114.4	1.9	48	4.7		
GRA1	e P	Z 04:19:00.9	22.5	111.2	1.0	77	5.2		
MOX	e P	Z 04:19:03.5	22.7	113.9	1.2	16	4.4		
STU	e P	Z 04:19:08.8	23.5	106.6	1.1	51	5.2		
CLZ	e P	Z 04:19:12.6	23.9	114.7	1.1	21	4.8		
BFO	e P	Z 04:19:16.1	23.9	104.6	1.1	34	5.0		
BSEG	e P	Z 04:19:22.5	24.8	118.7	1.3	46	5.0		
BUG	e P	Z 04:19:28.8	25.5	109.8	1.2	29	4.9		
IBBN	e P	Z 04:19:30.1	25.5	112.2					
WLF	e P	Z 04:19:31.7	25.6	105.0	1.2	32	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/26	04:33: 6.0	23.660N	124.140E	60.2	5.6	4.6		SZGRF
2004/02/26	04:33:09.9	24.142N	123.064E	58D	5.4			NEIC

Southwestern Ryukyu Islands, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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RUE	e P	Z	04:45:24.9	81.9	60.5	1.2	73	5.8	
BRG	e P	Z	04:45:27.8	82.6	60.4	0.9	17	5.3	
CLL	e P	Z	04:45:28.7	82.9	59.7	1.5	60	5.6	
BSEG	e P	Z	04:45:29.9	82.9	58.0	1.1	35	5.5	
	e pP	Z	04:45:47.2						
WERD	e P	Z	04:45:33.4	83.7	59.1	1.1	25	5.3	
GUNZ	e P	Z	04:45:33.9	83.7	59.2	1.0	37	5.6	
GEC2	e P	Z	04:45:34.2	83.8	60.0	1.0	60	5.8	
NRDL	e P	Z	04:45:35.4	83.8	57.7	1.2	34	5.4	
MOX	e P	Z	04:45:34.9	84.0	58.7	1.1	27	5.4	
CLZ	e P	Z	04:45:35.6	84.0	57.8	1.2	86	5.9	
WET	e P	Z	04:45:35.9	84.1	59.4	1.6	56	5.5	
GRA1	e P	Z	04:45:39.2	84.7	58.3	1.5	105	5.7	
	e pP	Z	04:45:55.4						
	e L	Z	05:19:12.6			20.2	228		4.6
IBBN	e P	Z	04:45:40.8	85.1	55.9	1.0	71	5.8	
FUR	e P	Z	04:45:43.2	85.5	58.2	1.1	110	5.9	
	e pP	Z	04:45:59.5						
BUG	e P	Z	04:45:44.3	85.9	55.5	1.2	101	5.8	
STU	e P	Z	04:45:47.1	86.3	56.7	1.1	43	5.7	
BFO	e P	Z	04:45:49.0	87.0	56.1	1.8	71	5.7	
WLF	e P	Z	04:45:52.0	87.5	54.5	1.1	78	5.9	
	e pP	Z	04:46:09.1						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/26	12:06:22.8	30.737N	3.909W	10.0G	5.0	3.8		SZGRF
2004/02/26	12:07:03.6	35.165N	4.064W	10D	4.8	4.4		NEIC

Morocco

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	12:10:53.3	16.0	219.4					
WLF	e Pn	Z	12:10:57.1	16.3	211.1					
STU	e Pn	Z	12:11:01.3	16.7	220.6					
FUR	e P	Z	12:11:05.8	17.3	226.8	1.3	152	5.2		
BUG	e P	Z	12:11:18.0	18.2	211.0	0.9	38	4.8		
GRA1	e P	Z	12:11:18.5	18.3	223.3	1.1	75	5.0		
	e L	Z	12:21:29.2			18.8	324		3.8	
UBBA	e P	Z	12:11:23.8	18.7	218.4	2.0	75	4.9		
WET	e P	Z	12:11:21.3	18.7	228.0	1.7	56	4.7		
	e S	E	12:15:06.9							
GEC2	e P	Z	12:11:23.7	18.9	230.3	1.3	58	4.9		
	e S	E	12:15:10.2							
IBBN	e P	Z	12:11:29.2	19.1	210.8	1.1	74	5.1		
MOX	e P	Z	12:11:28.1	19.2	222.2	1.6	70	4.9		
GUNZ	e P	Z	12:11:29.0	19.3	224.3	1.1	39	4.9		
WERD	e P	Z	12:11:29.3	19.3	224.1	1.0	27	4.7		
CLZ	e P	Z	12:11:34.9	19.6	217.4	1.4	65	5.0		

	e S	E	12:15:28.5						
NRDL	e P	Z	12:11:39.1	20.0	215.7	1.2	50	4.9	
CLL	e P	Z	12:11:39.8	20.3	223.8	1.1	101	5.3	
BRG	e P	Z	12:11:40.5	20.4	226.5	1.2	71	5.1	
BSEG	e P	Z	12:11:51.3	21.3	214.0	1.2	110	5.5	
RUE	e P	Z	12:11:52.6	21.4	223.2	1.0	80	5.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/26	13:35:16.1	27.772S	176.582W	10G	5.4	5.5		NEIC

Kermadec Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 13:55:10.7	157.3	18.1					
	e PKPab	Z 13:55:43.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/26	17:26:25.9	11.163N	117.527E	33.0N	5.2	5.2		SZGRF
2004/02/26	17:25:59.1	8.295N	123.557E	35*	5.2	4.8		NEIC

Philippine Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:39:30.5	97.7	67.4	1.9	22	5.2		
	e L	Z 18:27:51.9			19.8	915		5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/26	20:32:39.5	18.912S	62.432E	33.0N	5.5			SZGRF
2004/02/26	20:32:17.7	17.644S	66.772E	10G	5.3	5.9		NEIC

Mauritius - Reunion region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 20:44:47.4	81.5	129.6	1.5	28	5.0		
WET	e P	Z 20:44:50.5	82.1	129.0	1.7	35	5.1		
FUR	e P	Z 20:44:52.8	82.3	127.6	1.9	317	6.0		
BRG	e P	Z 20:44:55.1	82.6	130.0	2.0	89	5.4		
GUNZ	e P	Z 20:44:57.4	83.1	128.7	1.7	100	5.7		
WERD	e P	Z 20:44:57.5	83.2	128.6	1.8	67	5.5		
GRA1	e P	Z 20:44:57.5	83.2	127.7	1.8	132	5.8		
	e	20:45:07.3							
	e S	T 20:55:08.3							
	e SS	T 21:00:35.0							
CLL	e P	Z 20:44:53.4	83.4	129.3	1.6	41	5.4		
	e	20:45:09.1							
	e PP	R 20:47:46.0							

	e S	T	20:55:05.4								
	e SS	T	21:00:31.3								
	e SSS	T	21:04:13.4								
	e LQ	T	21:06:29.1								
	e LR	Z	21:06:47.9								
	e L	Z	21:23:15.4			22.0	1395		5.3		
MOX	e P	Z	20:45:00.2	83.6	128.1	1.5	48		5.4		
RUE	e P	Z	20:45:01.3	83.7	130.0						
STU	e P	Z	20:45:00.1	83.8	126.0	1.7	91		5.6		
BFO	e P	Z	20:45:00.2	84.0	125.3	1.6	64		5.6		
CLZ	e P	Z	20:45:07.0	85.0	127.2	1.6	55		5.5		
NRDL	e P	Z	20:45:10.9	85.5	127.0	1.7	43		5.4		
WLF	e P	Z	20:45:09.1	85.9	123.6	1.8	72		5.6		
BSEG	e P	Z	20:45:15.5	86.3	127.3	1.4	34		5.4		
BUG	e P	Z	20:45:13.1	86.3	124.6	2.0	152		5.9		

Date Origin Time Lat Long Depth mb Ms ML Source

2004/02/26

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

GRA1 e P Z 23:19:19.2

Date Origin Time Lat Long Depth mb Ms ML Source

2004/02/27 00:59:01.3 35.179N 4.000W 15A 4.4 NEIC

Strait of Gibraltar

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

GRA1 e P Z 01:03:20.1 18.3 223.2

Date Origin Time Lat Long Depth mb Ms ML Source

2004/02/27 01:42:55.6 51.650N 163.021E 33.0N 4.8 SZGRF

2004/02/27 01:42:30.3 50.339N 176.226W 30A 4.7 NEIC

Off east coast of Kamchatka Peninsula, Russia

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

GRA1 e P Z 01:54:39.1 79.8 4.8 1.3 10 4.8

Date Origin Time Lat Long Depth mb Ms ML Source

2004/02/27 02:49:39.6 37.540N 143.960E 33.0N 4.9 SZGRF

2004/02/27 02:49:40.1 38.421N 141.337E 137* 4.3 NEIC

Off east coast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:02:03.5	81.5	37.3	0.9	7	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/27	03:12:37.6	35.155N	3.942W	15A	4.0			NEIC

Morocco

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:16:53.8	18.3	223.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/27	06:14:33.1	34.123S	112.477W	10G	5.2	5.4		NEIC

Southern East Pacific Rise

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 06:33:56.1	136.5	268.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/27	09:50: 4.8	26.863S	10.889W	33.0N	5.3			SZGRF
2004/02/27	09:50:44.8	18.380S	12.530W	10G	4.2			NEIC

Southern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:02:06.0	71.2	203.8	1.5	42	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/27	12:53:35.0	31.389N	86.065E	33.0N	4.7			SZGRF
2004/02/27	12:53:16.6	28.129N	87.789E	87	4.7			NEIC

Xizang

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:03:19.2	60.5	80.2	1.3	11	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/27	13:45: 2.4	24.201S	8.065W	33.0N	4.9			SZGRF
2004/02/27	13:45:25.9	18.810S	12.484W	10G	4.5			NEIC

South Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:56:45.9	71.7	203.6	1.5	17	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/27	16:07:20.9	39.279N	146.078E	33.0N	5.0			SZGRF

Off east coast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 16:19:40.9	82.6	33.6	1.0	11	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/27	16:50:42.6	35.194N	3.927W	0G	4.5			NEIC

Strait of Gibraltar

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 16:54:57.1	18.2	223.0	1.4	19	4.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/27	17:22:17.1	25.159S	179.269W	461?	5.0			NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z 17:41:24.5	154.1	22.2					
	e PKPab	Z 17:41:40.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/28	01:27:2.3	44.397N	142.460E	42.3	4.8			SZGRF
2004/02/28	01:26:46.4	42.340N	144.777E	47	4.8			NEIC

Hokkaido, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:38:49.6	79.4	33.0	0.8	7	4.8		
	e pP	Z 01:39:01.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/28	04:25:15.6	46.008N	156.059E	33.0N	4.3			SZGRF
2004/02/28	04:25:35.3	45.313N	148.428E	159	4.2			NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:37:19.7	78.0	29.2	0.9	4	4.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/28	05:24:14.7	17.340S	11.180W	99.8N	5.8	4.8		SZGRF
2004/02/28	05:23:53.9	18.705S	12.526W	10A	5.7	5.0		NEIC

Southern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z 05:35:00.7	69.6	201.1	1.5	83	5.8		
FUR	e P	Z 05:35:04.8	70.2	204.0	1.6	148	6.0		
STU	e P	Z 05:35:04.6	70.2	201.9	1.8	103	5.8		
WLF	e P	Z 05:35:06.1	70.3	198.8	1.6	207	6.1		
GEC2	e P	Z 05:35:12.8	71.5	206.2	1.7	103	5.7		
WET	e P	Z 05:35:12.8	71.5	205.4	1.6	115	5.8		
GRA1	e P	Z 05:35:13.3	71.6	203.7	1.7	209	6.0		
	e L	Z 06:05:19.2			21.0	572		4.8	
BUG	e P	Z 05:35:17.6	72.3	199.7	1.9	126	5.7		
GUNZ	e P	Z 05:35:18.6	72.5	204.7	1.4	72	5.6		
MOX	e P	Z 05:35:19.0	72.5	204.0	1.6	83	5.6		
WERD	e P	Z 05:35:19.0	72.5	204.6	1.5	84	5.6		
IBBN	e P	Z 05:35:23.5	73.2	200.1	1.6	217	6.0		
CLZ	e P	Z 05:35:24.1	73.3	202.6	1.6	77	5.6		
BRG	e P	Z 05:35:24.0	73.4	206.1	1.9	100	5.6		
CLL	e P	Z 05:35:24.9	73.5	205.2	1.8	79	5.5		
NRDL	e P	Z 05:35:28.1	73.9	202.3	1.6	167	5.9		
RUE	e P	Z 05:35:32.3	74.8	205.8	1.5	124	5.8		
BSEG	e P	Z 05:35:35.2	75.2	202.3	1.5	149	5.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/28	09:33:25.9	34.573N	142.609E	33.0N				SZGRF
2004/02/28	09:33:35.6	36.857N	141.911E	31D	4.8			NEIC

Off east coast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:46:00.3	83.1	37.7	1.1	19			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/28	10:24: 1.6	44.112N	148.412E	33.0N	4.7			SZGRF
2004/02/28	10:24:04.9	44.321N	148.241E	60	4.6			NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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GRA1	e P	Z	10:36:02.9	78.8	29.8	1.1	10	4.7
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Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/28								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z 23:00:23.2							
	e Sn	N 23:01:20.6							
GRA1	e Pn	Z 23:01:18.6							
	e Sn	E 23:02:33.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/29	00:22:28.7	30.849N	50.324E	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 00:29:15.9	34.7	108.0	1.1	7	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2004/02/29	19:12:25.0	17.488N	61.059W	33.0N	4.8			SZGRF
2004/02/29	19:12:24.5	17.718N	61.615W	44	4.6			NEIC

Leeward Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:23:04.5	65.5	268.9	1.2	8	4.8		

Format description

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(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