

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

=====

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

MARCH 2002      UPDATED 06.May.2002

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	
2002/03/01	06:57:51.5	52.590N	165.650W	33.0N	5.4			SZGRF	
2002/03/01	06:57:48.7	52.650N	166.661W	33N	5.1			NEIC	
South of Aleutian Islands									
Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 07:09:45.3	77.6	358.7	1.1	35	5.4		
Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source	
2002/03/01	09:21:01.1	18.862S	175.566W	228D	4.8			NEIC	
Tonga Islands									
Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	Z 09:40:18.0			0.8	59			
	e pPKPbc	Z 09:41:17.3							
GRA1	e PKPbc	Z 09:40:23.5	148.7	12.4					
	e PKPab	Z 09:40:27.9							
Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source	
2002/03/01	09:55:05.5	33.124S	179.394W	33N	5.2	5.1		NEIC	
South of Kermadec Islands									
Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 10:15:02.2	161.7	29.4					
	e	10:15:49.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/01								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 13:20:17.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/01	14:04: 6.7	52.020N	153.730E	33.0N	5.2			SZGRF
2002/03/01	14:04:50.0	52.044N	152.594E	457	4.7			NEIC

Northwest of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 14:15:14.3	69.5	23.7	0.8	14	5.1		
RUE	e P	Z 14:15:17.0	69.9	25.5	0.8	31	5.5		
CLL	e P	Z 14:15:23.8	71.2	24.9	0.8	26	5.4		
CLZ	e P	Z 14:15:25.7	71.4	23.4	0.9	24	5.3		
IBBN	e P	Z 14:15:26.6	71.5	21.9	1.1	32	5.4		
MOX	e P	Z 14:15:30.0	72.1	24.0	1.1	14	5.0		
BUG	e P	Z 14:15:31.7	72.5	21.5	0.7	17	5.3		
GRA1	e P	Z 14:15:36.0	73.1	23.7	0.7	28	5.4		
WET	e P	Z 14:15:36.4	73.2	24.5	0.7	15	5.1		
GEC2	e P	Z 14:15:36.0	73.2	25.0	0.7	8	4.8		
TNS	e P	Z 14:15:36.9	73.3	22.1	0.6	21	5.3		
STU	e P	Z 14:15:43.7	74.5	22.4	0.7	18	5.2		
FUR	e P	Z 14:15:43.9	74.5	23.5	0.9	31	5.3		
BFO	e P	Z 14:15:46.6	75.1	21.8	0.9	16	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/02	11:39:34.6	40.380N	140.270E	33.0N	4.8			SZGRF
2002/03/02	11:39:28.2	40.572N	141.982E	33N	4.7			NEIC

Eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 11:51:37.9	79.9	35.8	1.0	11	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/02	22:12:57.3	32.8N	48.2E	33	4.9			NEIC

Western Iran

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e P	Z 22:19:34.4							
FUR	e P	Z 22:19:18.4							

GRA1	e P	Z	22:19:23.1			2.0	91		
WET	e P	Z	22:19:12.3						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/03	07:16:36.1	45.140S	73.280W	33.0N		5.8		SZGRF
2002/03/03	07:16:19.4	45.825S	75.832W	33N	5.3	5.6		NEIC

Southern Chile

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PP	Z 07:36:46.6	121.6	234.8					
	e SKKSac	E 07:43:51.9							
	e PS	E 07:46:44.8							
	e SS	E 07:53:12.6							
	e L	Z 08:23:50.4			21.1	2323		5.8	
CLL	e PKPdf	Z 07:35:13.8			1.3	7			
	e	07:35:21.2			1.7	23			
	e PP	Z 07:36:58.5							
	e PPP	Z 07:39:31.7							
	e PS	Z 07:46:51.8							
	e PPS	Z 07:48:19.2							
	e SS	T 07:53:43.0							
	e SSS	T 07:58:13.3							
	e LQ	T 08:09:07.1							
	e LR	Z 08:13:47.5							
	e L	Z 08:24:53.2			22.0	5265		6.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/03	12:08:17.2	37.470N	70.870E	246.0G	6.1			SZGRF
2002/03/03	12:08:12.3	36.471N	70.401E	252D	6.2			NEIC

Afghanistan-Tajikistan border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 12:15:42.4	42.1	87.4					
	e PcS	Z 12:21:13.2							
RUE	e P	Z 12:15:42.1	42.2	89.0					
	e PcS	Z 12:21:13.1							
GEC2	e P	Z 12:15:44.8	42.4	85.0					
CLL	i P	+ Z 12:15:46.4	42.7	87.2	1.4	383	5.9		
	i	12:15:57.6			10.1	64157			
	e	12:16:01.0			12.6	38589			
	e	12:16:18.5			19.1	10438			
	e pP	Z 12:16:48.2							
	e	12:17:08.5							
	e sP	Z 12:17:16.8							
	e PP	Z 12:17:42.9			14.4	40486			

	e PPP	Z	12:18:23.9								
	e sPP	Z	12:18:47.3								
	e S	T	12:21:58.9								
	e sS	T	12:23:19.8								
	e SS	T	12:25:35.3								
	e LR	Z	12:28:46.1								
	e L	Z	12:31:22.6			20.0	78339		6.6		
WET	e P	Z	12:15:48.9	42.9	84.8						
MOX	e P	Z	12:15:54.2	43.6	85.5						
	e PcS	Z	12:21:18.9								
GRB2	e PcS	Z	12:21:20.3	43.7	84.1						
GRA1	e P	Z	12:15:57.7	44.0	84.2	1.3	586		6.1		
	e		12:16:08.3			2.3	16237				
	e pP	Z	12:16:53.8								
	e sP	Z	12:17:15.9								
	e S	N	12:22:20.5								
	e sS	N	12:23:40.6								
	e SS	N	12:25:41.3								
FUR	e P	Z	12:15:58.0	44.1	82.6						
BSEG	e P	Z	12:15:59.0	44.2	87.9						
CLZ	e P	Z	12:15:59.5	44.3	85.8						
	e PcS	Z	12:21:22.3								
STU	e P	Z	12:16:08.1	45.4	81.9						
	e PcS	Z	12:21:26.5								
TNS	e P	Z	12:16:10.5	45.7	82.8						
	e PcS	Z	12:21:28.3								
IBBN	e P	Z	12:16:11.6	45.9	84.3						
	e PcS	Z	12:21:28.7								
BFO	e P	Z	12:16:12.5	46.0	80.9						
BUG	e P	Z	12:16:14.8	46.3	83.1						
	e PcS	Z	12:21:30.1								

Date 2002/03/04 Origin Time 06:53:57.9 Lat 17.4S Long 168.1E Depth 33 mb 5.1 Ms ML Source NEIC  
 Vanuatu Islands

Sta BFO Phase e PKP Time Z 07:13:33.0 Dist BAz T[s] A[nm] mb MS ML

Date 2002/03/04 Origin Time 16:07:29.0 Lat 16.834S Long 173.613W Depth 33N mb 5.2 Ms 4.6 ML Source NEIC  
 Tonga Islands

Sta CLL Phase i PKP Time Z 16:27:04.7 Dist BAz T[s] A[nm] mb MS ML

	i	pPKP	Z	16:27:29.5							
GRA1	e	PKP	Z	16:27:11.3	146.9	8.5					
	e			16:27:35.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/04	18:01:40.6	4.6S	153.0E	33	5.1			NEIC
New Britain region, P.N.G.								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 18:20:39.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/04	20:21:30.6	29.870N	142.990E	33.0N	5.5	5.1		SZGRF
2002/03/04	20:21:21.2	28.415N	143.295E	33N	5.5	5.3		NEIC
Southeast of Honshu, Japan								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 20:34:10.5	87.9	42.8	1.3	52	5.5		
BSEG	e P	Z 20:34:11.4	88.2	40.1	1.6	105	5.7		
BRG	e P	Z 20:34:15.5	89.0	42.9	1.2	20	5.3		
CLL	e P	Z 20:34:15.4	89.1	42.1	1.0	32	5.6		
CLZ	e P	Z 20:34:19.1	89.8	40.1	1.5	72	5.7		
MOX	e P	Z 20:34:20.9	90.2	41.1					
IBBN	e P	Z 20:34:22.0	90.4	38.0					
GEC2	e P	Z 20:34:22.5	90.6	42.7	1.0	8	4.9		
WET	e P	Z 20:34:23.9	90.8	42.0	1.5	18	5.1		
GRA1	e P	Z 20:34:25.5	91.1	40.8	1.6	95	5.8		
	e L	E 21:17:25.9			19.5	632		5.1	
BUG	e P	Z 20:34:25.7	91.3	37.7	1.3	40	5.5		
FUR	e P	Z 20:34:30.5	92.2	40.8	1.1	40	5.7		
STU	e P	Z 20:34:32.2	92.6	39.2	1.4	60	5.7		
WLF	e P	Z 20:34:35.2	93.1	36.8	1.4	41	5.6		
BFO	e P	Z 20:34:35.2	93.3	38.6	1.5	50	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/04	20:37:23.8	29.600N	142.420E	33.0N	5.1			SZGRF
2002/03/04	20:37:14.6	28.403N	143.229E	33N	5.2			NEIC
Southeast of Honshu, Japan								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:50:18.7	91.0	40.8	0.8	11	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/05	17:07:46.0	11.520S	26.130E	30.2	5.3			SZGRF
2002/03/05	17:07:42.2	11.805S	24.685E	10G	5.2			NEIC

Zaire

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e P	Z	17:17:57.0	61.1	165.0					
GEC2	e P	Z	17:17:59.3	61.4	167.7	1.4	22	4.8		
WET	e P	Z	17:18:02.0	61.8	166.9	1.8	55	5.5		
BFO	e P	Z	17:18:02.2	61.9	161.8	1.5	23	5.2		
STU	e P	Z	17:18:04.0	62.1	162.8					
GRA1	e P	Z	17:18:07.3	62.6	165.1	1.1	50	5.6		
	e pP	Z	17:18:15.8							
BRG	e P	Z	17:18:11.9	63.4	168.2	1.8	28	5.1		
MOX	e P	Z	17:18:12.9	63.5	165.7	1.5	22	5.1		
WLF	e P	Z	17:18:13.7	63.6	159.7					
TNS	e P	Z	17:18:14.0	63.6	162.2	1.3	57	5.5		
CLL	e P	Z	17:18:15.8	63.9	167.3	1.5	27	5.2		
CLZ	e P	Z	17:18:22.1	64.8	164.5	1.1	16	5.1		
RUE	e P	Z	17:18:22.6	65.0	168.2					
BUG	e P	Z	17:18:23.7	65.0	161.1	1.2	33	5.4		
IBBN	e P	Z	17:18:28.4	65.8	161.8					
BSEG	e P	Z	17:18:34.9	66.9	164.7	1.5	59	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/05	21:16:09.6	6.171N	124.284E	31G	6.3	7.2		NEIC

Mindanao, Philippine Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	21:29:42.2	97.3	69.9					
BRG	e P	Z	21:29:43.8	97.7	70.2					
CLL	e Pdiff	Z	21:29:44.3	98.1	69.4	1.8	202			
	e		21:30:08.6							
	e		21:32:57.3							
	e PP	Z	21:33:48.8							
	e SKSac	E	21:40:21.5							
	e S	N	21:41:10.9							
	e PS	Z	21:42:34.7							
	e SS	E	21:48:04.8							
	e SSS	E	21:51:37.4							
	e SSSS	N	21:55:05.9							
	e LR	Z	22:04:02.7							
	e L	Z	22:19:27.9			20.0	86499		7.2	
GEC2	e P	Z	21:29:48.0	98.6	70.3	1.4	79	6.2		
BSEG	e P	Z	21:29:48.6	98.7	66.8	1.2	114	6.5		
WET	e P	Z	21:29:49.9	99.0	69.6	1.7	146	6.4		

./2002/bul0203.txt

Thu Apr 23 08:38:25 2020

7

MOX	e P	Z	21:29:50.8	99.2	68.3	1.6	215	6.6
CLZ	e P	Z	21:29:52.1	99.5	67.1	1.7	657	7.0
GRA1	e P	Z	21:29:54.9	99.8	68.2	1.7	211	6.5
	e PP	Z	21:34:04.0					
	e S	N	21:41:22.3					
	e SS	N	21:48:20.7					
	e L	E	22:22:33.9			20.3	81115	7.2
FUR	e P	Z	21:29:56.9	100.3	68.5			
IBBN	e P	Z	21:29:58.3	100.7	64.9			
TNS	e P	Z	21:30:01.7	101.2	65.8	1.5	176	6.4
BFO	e P	Z	21:30:05.9	102.1	66.1	1.7	98	6.2
WLF	e P	Z	21:30:10.7	102.8	64.0			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/06	17:20:59.0	16.2S	173.9W	125	4.6			NEIC
Tonga Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 17:40:27.0	146.3						
	e	17:40:31.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/07	00:07:12.5	48.740N	147.520E	431.9	5.6			SZGRF
2002/03/07	00:07:07.3	47.944N	146.892E	442	5.2			NEIC
Sea of Okhotsk								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 00:17:46.2	71.7	29.0					
RUE	e P	Z 00:17:47.5	71.9	31.0	1.3	117	5.7		
CLL	i P	- Z 00:17:54.5	73.2	30.3	0.8	87	5.8		
	e PcP	Z 00:18:10.2							
	e pP	Z 00:19:30.6							
BRG	e P	Z 00:17:54.9	73.3	30.8					
CLZ	e P	Z 00:17:57.1	73.5	28.7	1.3	107	5.7		
IBBN	e P	Z 00:17:58.5	73.9	27.1	0.9	69	5.8		
MOX	e P	Z 00:18:00.5	74.2	29.3	1.0	38	5.5		
BUG	e P	Z 00:18:03.6	74.8	26.7	1.1	70	5.7		
GEC2	e P	Z 00:18:05.5	75.1	30.4	1.0	19	5.2		
WET	e P	Z 00:18:06.1	75.1	29.9	1.1	69	5.7		
GRA1	i P	Z 00:18:06.4	75.2	29.0	0.8	92	6.0		
	e pP	Z 00:19:41.3							
TNS	e P	Z 00:18:08.0	75.5	27.3	1.0	40	5.5		
FUR	e P	Z 00:18:13.6	76.5	28.8	1.1	113	5.9		
STU	e P	Z 00:18:13.9	76.6	27.6	1.2	67	5.7		
WLF	e P	Z 00:18:14.3	76.7	25.8	1.3	19	5.1		

BFO e P Z 00:18:17.4 77.2 27.0 1.2 53 5.5

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/07	05:06:54.7	16.000N	96.930W	33.0N				SZGRF
2002/03/07	05:07:15.5	14.710N	91.375W	115D	4.7			NEIC

Oaxaca, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 05:19:46.8	86.7	289.0					
	e pP	Z 05:20:18.7							
CLL	e P	Z 05:19:48.4			0.7	3	4.8		
	e pP	Z 05:20:21.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/07	07:10:13.2	1.2S	24.4W	10		5.1		NEIC

Central Mid-Atlantic ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 07:20:16.6	59.4						
	e S	E 07:28:02.6							
	e L	Z 07:45:22.4			20.0	1114			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/07	22:51:41.4	22.4S	66.0W	262	4.6			NEIC

Jujuy province, Argentina

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 23:04:54.6	99.1		1.3	19			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/08	04:43:16.9	22.019S	179.619W	608D	4.8			NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 05:01:54.7	147.2	17.2					
	e PKPab	Z 05:01:57.8							
RUE	e PKPab	Z 05:01:59.1	147.8	23.8					
CLL	e PKPdf	Z 05:01:53.3							
	i PKPbc	Z 05:01:59.2			0.6	27			
	i PKPab	Z 05:02:05.8			0.9	14			
	e pPKPbc	Z 05:04:17.0							



./2002/bul0203.txt

Thu Apr 23 08:38:25 2020

9

CLZ	e	PKPbc	Z	05:01:59.4	149.2	18.3
GRA1	e	PKPbc	Z	05:02:03.1	151.0	21.1
	e	PKPab	Z	05:02:14.6		
	e	pPKPbc	Z	05:04:21.3		
TNS	e	PKPbc	Z	05:02:03.6	151.1	15.6
GEC2	e	PKPbc	Z	05:02:03.6	151.2	26.3
	e	PKPab	Z	05:02:14.5		
BFO	e	PKPab	Z	05:02:22.0	152.9	16.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/08	18:28:4.5	7.310N	123.490E	33.0N	6.0	5.8		SZGRF
2002/03/08	18:27:53.4	5.846N	124.272E	23D	5.6	5.7		NEIC

Mindanao, Philippine Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e	Pdiff	Z	18:41:30.8		1.3	20		
	e	PP	Z	18:45:25.8					
	e	PPP	Z	18:47:48.1					
	e	SKSac	R	18:52:04.4					
	e	PS	R	18:54:22.7					
	e	SS	R	18:59:51.9					
	e	SSS	R	19:03:47.7					
	e	LR	Z	19:15:51.6					
	e	L	Z	19:33:41.1		18.0	4269		6.0
	GRA1	e	P	Z	18:41:39.3	100.0	68.4	1.9	56
e		PP	Z	18:45:47.6					
e		SP	Z	18:54:36.7					
e		SS	E	19:00:22.9					
e		L	Z	19:28:51.5		21.5	3616		5.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/08	20:56:30.0	17.901S	178.897W	600G	4.2			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e	PKP	Z	21:15:09.2	147.2	18.0			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/09	02:41:51.5	4.0N	31.4W	10	4.7			NEIC

Central Mid-Atlantic ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e	P	Z	02:51:46.9		1.5	28	5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/09	03:39:17.8	17.945S	178.928W	500G	4.6			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	03:57:53.2	143.3	14.8					
RUE	e PKPbc	Z	03:57:55.6	144.1	20.9					
CLZ	e PKPbc	Z	03:58:00.0	145.3	15.7					
MOX	e PKPbc	Z	03:58:02.1	146.2	18.3					
TNS	e PKPbc	Z	03:58:04.8	147.2	13.0					
GRA1	e PKPbc	Z	03:58:05.2	147.2	18.0					
WET	e PKPbc	Z	03:58:05.3	147.4	21.2					
GEC2	e PKPbc	Z	03:58:05.5	147.4	22.7					
STU	e PKPbc	Z	03:58:08.1	148.5	14.9					
FUR	e PKPbc	Z	03:58:08.6	148.7	18.9					
BFO	e PKPbc	Z	03:58:09.6	149.0	13.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/09	12:27:11.6	56.081S	27.494W	118D	5.6	5.2		NEIC

South Sandwich Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e SKSac	N	12:51:55.0	110.6	201.9					
	e SP	Z	12:55:25.4							
	e SS	E	13:01:18.8							
CLL	e SP	Z	12:55:45.6							
	e SS	R	13:02:07.3							
	e SSS	R	13:06:31.1							
	e LQ	T	13:12:13.9							
	e LR	Z	13:20:56.3							
	e L	Z	13:26:55.0			20.0	816		5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/10	05:24: 8.6	20.000N	122.900E	33.0N	5.8	5.7		SZGRF
2002/03/10	05:24:09.6	20.175N	122.111E	33N	5.3	5.3		NEIC

Philippine Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	05:36:55.9	87.3	61.4	1.8	91	5.8		
	e L	Z	06:18:31.3			19.1	2587		5.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/10	12:38:29.6	34.340N	16.900E	10.0G				SZGRF
2002/03/10	12:39:38.3	39.013N	15.647E	300G	4.3			NEIC

Central Mediterranean Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	12:41:56.2	9.9	171.2					
WET	e Pn	Z	12:42:00.6	10.3	167.9					
BFO	i Pn	Z	12:42:05.3	10.7	147.8					
GRA1	e Pn	Z	12:42:11.9	11.1	161.9					
BRG	e Pn	Z	12:42:21.4	11.9	173.6					
MOX	e Pn	Z	12:42:22.5	12.0	164.7					
TNS	e Pn	Z	12:42:26.5	12.3	152.8					
CLL	e Pn	Z	12:42:28.5	12.4	170.4					
WLF	e Pn	Z	12:42:29.1	12.6	144.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/11	01:46:24.6	31.230N	142.240E	33.0N	6.0	5.6		SZGRF
2002/03/11	01:46:20.7	30.631N	141.561E	33N	5.9	5.6		NEIC

Southeast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	01:58:57.0	85.2	43.0	1.6	365	6.4		
BSEG	e P	Z	01:58:58.2	85.5	40.5	1.3	206	6.1		
BRG	e P	Z	01:59:02.4	86.3	43.1	1.9	229	6.0		
CLL	i P	+ Z	01:59:02.2	86.4	42.4	1.9	340	6.1		
	e PP	Z	02:02:25.9							
	e S	T	02:09:35.0							
	e SS	T	02:15:18.0							
	e LQ	T	02:24:43.6							
	e LR	Z	02:27:59.1							
	e L	Z	02:45:35.2			18.0	4786		5.9	
CLZ	e P	Z	01:59:06.1	87.1	40.4	1.6	163	5.9		
MOX	e P	Z	01:59:07.9	87.5	41.3	1.9	125	5.9		
IBBN	e P	Z	01:59:08.9	87.8	38.4	1.7	353	6.4		
GEC2	e P	Z	01:59:09.6	87.9	42.8	1.8	45	5.5		
WET	e P	Z	01:59:10.8	88.1	42.2	2.4	228	6.1		
GRA1	i P	Z	01:59:12.5	88.4	41.0	1.3	88	5.9		
	e PP	Z	02:02:38.5							
	e S	E	02:09:47.4							
	e L	Z	02:41:33.1			20.6	2407		5.6	
BUG	e P	Z	01:59:13.0	88.6	38.0					
TNS	e P	Z	01:59:15.5	89.1	38.9	4.3	1305	6.5		
FUR	e P	Z	01:59:17.8	89.5	41.0	1.1	67	5.8		
STU	e P	Z	01:59:19.2	89.9	39.5					
WLF	e P	Z	01:59:22.1	90.5	37.2	1.8	130	6.0		

./2002/bul0203.txt

Thu Apr 23 08:38:25 2020

12

BFO e P Z 01:59:22.3 90.6 38.8 1.7 137 6.0

Date Origin Time Lat Long Depth mb Ms ML Source  
2002/03/11 13:13:28.8 21.558S 168.697E 33N 4.8  
Loyalty Islands

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e PKP Z 13:33:08.9 146.7 40.5

Date Origin Time Lat Long Depth mb Ms ML Source  
2002/03/11 20:07: 7.3 27.110N 53.410E 33.0N 4.8  
2002/03/11 20:06:37.1 25.233N 56.131E 10G 5.1  
Southern Iran

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GEC2 e P Z 20:14:18.3 40.5 110.0 1.2 9 4.3  
BRG e P Z 20:14:23.0 41.1 112.4  
WET e P Z 20:14:22.7 41.1 109.5 0.8 9 4.5  
FUR e P Z 20:14:28.7 41.8 106.9  
GRA1 e P Z 20:14:33.2 42.3 108.4 1.1 41 5.0  
CLZ e P Z 20:14:44.2 43.5 109.8 0.9 26 4.9  
BFO e P Z 20:14:46.7 43.7 104.3 1.9 46 4.9  
TNS e P Z 20:14:48.6 44.2 106.3 1.4 24 4.7  
BSEG e P Z 20:14:49.4 44.3 111.7 1.2 34 4.9  
BUG e P Z 20:14:57.4 45.2 106.3  
WLF e P Z 20:14:58.5 45.5 103.6 1.6 29 4.8

Date Origin Time Lat Long Depth mb Ms ML Source  
2002/03/11 23:25:54.8 38.920N 97.580E 33.0N 5.0  
2002/03/11 23:26:50.0 42.397N 85.903E 33N 4.5  
Qinghai, China

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e P Z 23:35:53.4 50.2 68.0 1.0 16 5.0

Date Origin Time Lat Long Depth mb Ms ML Source  
2002/03/12 05:53:28.7 17.4S 178.6W 500 4.3  
Fiji Islands region

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e PKPbc Z 06:12:15.7 146.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/12	20:51:25.9	16.120N	93.400E	33.0N	5.1			SZGRF
2002/03/12	20:51:14.7	13.957N	93.119E	33N	4.8	4.3		NEIC

Bay of Bengal

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	21:02:40.5	72.4	89.3	0.9	12	5.0		
RUE	e P	Z	21:02:41.0	72.5	89.7	1.6	84	5.6		
GEC2	e P	Z	21:02:41.8	72.6	88.5	0.8	10	5.0		
CLL	e P	Z	21:02:43.7	73.0	88.8	1.0	8	4.8		
WET	e P	Z	21:02:44.8	73.1	88.0	1.0	14	5.0		
MOX	e P	Z	21:02:49.3	73.9	87.5	0.9	9	4.9		
GRA1	e P	Z	21:02:51.3	74.2	86.9	1.3	22	5.1		
FUR	e P	Z	21:02:51.0	74.2	86.5	0.7	12	5.1		
BSEG	e P	Z	21:02:53.3	74.5	87.4	1.0	22	5.2		
CLZ	e P	Z	21:02:53.6	74.6	86.9	0.9	10	5.0		
TNS	e P	Z	21:03:01.0	75.9	85.0	0.9	8	4.8		
IBBN	e P	Z	21:03:02.7	76.2	85.0	2.0	103	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/14	16:08:45.1	53.030N	174.950W	47.1	5.4	5.4		SZGRF
2002/03/14	16:08:31.4	51.556N	173.076W	33N	5.5	5.4		NEIC

Andreanof Islands, Aleutian Islands, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	i P	Z	16:20:10.1	74.5	2.2	1.3	72	5.3		
RUE	i P	Z	16:20:17.5	75.8	4.4	1.2	91	5.7		
IBBN	i P	Z	16:20:19.1	76.1	0.5	1.3	129	5.5		
CLZ	i P	Z	16:20:22.2	76.6	2.2	1.2	74	5.3		
BUG	i P	Z	16:20:24.2	77.0	0.2	1.4	60	5.1		
CLL	i P	+ Z	16:20:23.9	77.0	3.9	1.1	51	5.6		
	e		16:20:28.0							
	i pP	Z	16:20:37.2							
	e PP	R	16:23:22.5							
	e S	T	16:30:07.6							
	e SKSac	Z	16:30:30.4							
	e SS	R	16:35:21.6							
	e LR	Z	16:45:43.9							
	e L	Z	16:56:23.6			20.0	1898		5.4	
BRG	i P	Z	16:20:25.4	77.4	4.5	1.2	76	5.7		
MOX	i P	Z	16:20:28.2	77.7	3.0	1.2	59	5.5		
TNS	i P	Z	16:20:31.4	78.2	1.0	1.2	53	5.1		
GRA1	i P	Z	16:20:33.8	78.7	2.7	1.2	133	5.8		
	e pP	Z	16:20:47.3							

	e S	N	16:30:22.7							
	e SS	N	16:35:30.7							
	e L	Z	17:03:28.1			18.7	1665		5.4	
WET	i P	Z	16:20:36.0	79.2	3.8	1.6	65	5.5		
GEC2	i P	Z	16:20:37.3	79.4	4.3	1.2	34	5.4		
STU	i P	Z	16:20:38.9	79.7	1.4	1.4	84	5.5		
BFO	i P	Z	16:20:41.4	80.1	0.9	1.2	46	5.3		
FUR	i P	Z	16:20:42.3	80.2	2.7	1.2	73	5.6		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2002/03/14 17:22:27.1 18.1S 175.3W 260 4.9  
 Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	+ Z	17:41:39.1			0.9	58			
	e pPKPbc	Z	17:42:46.4							
GRA1	e PKPbc	Z	17:41:44.9							
	e PKPab	Z	17:41:48.3							

Date Origin Time Lat Long Depth mb Ms ML Source  
 2002/03/14 21:14:13.6 27.130N 14.520W 33.0N 4.2  
 Canary Islands, Spain, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e PP	Z	21:20:53.0	27.6	222.8					
BFO	e PP	Z	21:20:55.6	27.6	228.2					
STU	e PP	Z	21:21:05.1	28.4	228.9					
TNS	e PP	Z	21:21:13.6	29.0	225.8					
FUR	e PP	Z	21:21:13.0	29.0	232.9					
BUG	e PP	Z	21:21:17.2	29.3	222.4					
GRA1	e PP	Z	21:21:27.4	30.0	230.7					
	e SS	N	21:27:31.0							
	e L	Z	21:34:27.2			21.8	647		4.2	
IBBN	e PP	Z	21:21:27.9	30.2	222.1					
WET	e PP	Z	21:21:34.6	30.5	233.8					
GEC2	e PP	Z	21:21:37.2	30.7	235.4					
MOX	e PP	Z	21:21:39.7	30.8	230.0					
CLZ	e PP	Z	21:21:41.3	31.0	226.7					
CLL	e PP	Z	21:21:53.6	31.9	231.2					
BRG	e PP	Z	21:21:55.9	32.1	233.0					
BSEG	e PP	Z	21:21:56.4	32.4	224.2					
RUE	e PP	Z	21:22:06.9	33.0	230.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/15	01:20:19.4	52.860N	158.620E	33.0N		5.1		SZGRF
2002/03/15	01:20:04.4	49.650N	156.075E	48*	4.9			NEIC

Near east coast of Kamchatka Peninsula, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:31:51.0	76.2	22.6	1.0	17			
	e	01:32:19.9							
	e L	Z 02:08:30.6			21.8	1187		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/16	16:22:55.6	43.400N	145.110E	33.0N	5.0			SZGRF
2002/03/16	16:22:56.4	42.525N	143.503E	76D	4.7			NEIC

Hokkaido, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 16:34:54.3	78.8	33.8	0.9	14	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/16	20:50:04.7	6.2S	151.4E	56	5.6			NEIC

New Britain region, P.N.G.

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKP	Z 21:09:05.7							
BRG	e PKP	Z 21:08:57.4							
BSEG	e PKP	Z 21:08:57.1							
BUG	e PKP	Z 21:09:02.8							
CLL	i PKPdf	Z 21:08:57.6			1.4	48			
	e pPKPdf	Z 21:09:13.3							
	e PP	Z 21:10:41.6							
	e PKKP	Z 21:18:46.9			1.1	10			
	e PS	R 21:20:50.4							
	e PPS	R 21:21:55.8							
	e SS	R 21:27:57.8							
	e SSS	R 21:32:04.7							
	e LR	Z 21:49:46.5							
	e L	Z 22:01:55.1			22.0	816		5.3	
CLZ	e PKP	Z 21:08:59.9							
FUR	e PKP	Z 21:09:03.2							
GEC2	e PKP	Z 21:08:59.9							
GRA1	e PKP	Z 21:09:01.6							
	e	21:09:17.9							
	e L	Z 22:05:51.1			20.5	752			
IBBN	e PKP	Z 21:09:01.4							
MOX	e PKP	Z 21:08:59.9							

RUE	e	PKP	Z	21:08:55.7
STU	e	PKP	Z	21:09:04.5
TNS	e	PKP	Z	21:09:03.6
WET	e	PKP	Z	21:09:00.6
WLF	e	PKP	Z	21:09:07.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/16	21:52:31.5	9.330N	79.590W	33.0N	5.1			SZGRF
2002/03/16	21:52:26.0	8.967N	78.898W	10G	4.8			NEIC

Panama

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 22:04:55.9	83.3	275.9	0.8	12	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17	02:48:33.0	53.040N	173.810W	44.9	5.4			SZGRF
2002/03/17	02:48:20.7	51.460N	173.204W	33N	5.2	4.7		NEIC

Andreanof Islands, Aleutian Islands, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	i P	Z 02:59:59.7	74.6	2.3	1.0	36	5.5		
RUE	i P	Z 03:00:06.7	75.9	4.5	1.6	100	5.6		
IBBN	i P	Z 03:00:09.1	76.2	0.6	1.3	77	5.6		
CLZ	i P	Z 03:00:11.5	76.7	2.3	0.7	38	5.5		
CLL	i P	Z 03:00:13.1	77.1	4.0	0.8	27	5.4		
BUG	i P	Z 03:00:13.5	77.1	0.3	1.0	18	5.2		
BRG	i P	Z 03:00:15.9	77.5	4.6	0.8	35	5.6		
MOX	i P	Z 03:00:18.1	77.8	3.1	0.8	28	5.5		
TNS	i P	Z 03:00:20.7	78.3	1.1	0.8	26	5.4		
GRA1	i P	Z 03:00:23.9	78.8	2.8	0.8	63	5.8		
	e pP	Z 03:00:36.8							
WET	i P	Z 03:00:25.8	79.3	3.9	0.8	14	5.1		
GEC2	i P	Z 03:00:27.2	79.5	4.4	0.8	16	5.2		
STU	i P	Z 03:00:28.4	79.7	1.5	0.7	28	5.4		
BFO	i P	Z 03:00:31.0	80.2	1.0	0.9	20	5.1		
FUR	i P	Z 03:00:31.7	80.3	2.8	0.8	29	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17	03:12:26.5	51.120N	170.810W	33.0N	4.9			SZGRF
2002/03/17	03:12:25.2	51.405N	173.264W	33N	4.5			NEIC

Fox Islands, Aleutian Islands, United States

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



GRA1	e P	Z	03:24:28.7	78.8	2.9	0.9	12	4.9
	e		03:24:42.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17	03:14:27.5	51.780N	171.000W	33.0N	4.9			SZGRF
2002/03/17	03:14:22.6	51.447N	173.239W	33N	4.5			NEIC

Fox Islands, Aleutian Islands, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:26:25.9	78.8	2.8	0.8	10	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17	03:46:35.9	39.600N	83.590E	33.0N	4.9			SZGRF

Southern Xinjiang, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:55:30.5	50.4	72.3	1.2	21	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	04:07:09.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17	03:57:58.4	52.920N	173.310W	33.0N	5.7	5.4		SZGRF
2002/03/17	03:57:47.2	51.464N	173.271W	33N	5.5	5.3		NEIC

Andreanof Islands, Aleutian Islands, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	04:09:25.9	74.6	2.3	1.0	69	5.7		
RUE	e P	Z	04:09:33.3	75.9	4.5	1.3	125	5.8		
IBBN	e P	Z	04:09:35.4	76.2	0.7	0.8	93	5.9		
CLZ	e P	Z	04:09:38.1	76.6	2.3	1.2	103	5.8		
CLL	i P	Z	04:09:39.6	77.1	4.0	0.7	48	5.7		
	e pP	Z	04:09:52.2							
	e PP	Z	04:12:26.6							
	e PPP	Z	04:14:48.2							
	e S	T	04:19:30.9							
	e PS	R	04:20:11.1							
	e SS	R	04:24:36.5							

	e LQ	T	04:30:23.9								
	e LR	Z	04:36:25.4								
	e L	Z	04:53:09.6			20.0	1369		5.3		
BUG	e P	Z	04:09:39.9	77.1	0.3	1.1	31	5.4			
BRG	e P	Z	04:09:42.1	77.5	4.6	0.8	84	5.9			
MOX	e P	Z	04:09:44.2	77.8	3.1	1.0	59	5.7			
TNS	e P	Z	04:09:47.0	78.3	1.1	0.8	59	5.7			
GRA1	i P	Z	04:09:50.1	78.8	2.9	1.2	162	6.0			
	e L	Z	04:54:16.9			18.3	1732		5.4		
WET	e P	Z	04:09:52.3	79.3	3.9	0.9	33	5.5			
GEC2	e P	Z	04:09:53.5	79.5	4.4	1.1	39	5.5			
STU	e P	Z	04:09:54.8	79.7	1.6	0.8	72	5.7			
BFO	e P	Z	04:09:57.3	80.2	1.0	1.0	49	5.5			
FUR	e P	Z	04:09:57.9	80.3	2.9	1.0	64	5.6			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17	09:01:1.9	12.720N	91.180W	33.0N	5.3			SZGRF
2002/03/17	09:00:59.5	12.505N	87.970W	69D	5.0			NEIC

Off coast of central America

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:13:49.7	86.3	285.0	1.5	22	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17	10:18:27.1	15.294S	173.260W	40D	4.9	4.7		NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i PKP	Z 10:38:03.5	145.4	7.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17	17:51:47.1	23.589S	179.846E	527D	4.5			NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 18:10:34.4							
	i PKPbc	+ Z 18:10:40.0			0.8	72			
	e PKPab	Z 18:10:48.7			0.8	22			
	e pPKPbc	Z 18:12:42.2							
	e pPKPab	Z 18:12:45.8							
GRA1	e PKPbc	Z 18:10:45.0	152.4	23.0					
	e PKPab	Z 18:10:58.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17	19:33:34.1	45.143S	34.760E	10G	5.5	5.7		NEIC

Prince Edward Islands, South Africa, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML			
GRA1	e Pdiff	Z 19:47:04.2	97.0	163.5								
	e PP	Z 19:50:59.0										
	e SKSac	N 19:57:46.7										
	e PS	N 19:59:50.5										
	e SS	N 20:04:52.1										
	e L	Z 20:32:40.6										
CLL	e Pdiff	Z 19:47:16.8	22.0		22.0	2331		5.6				
	e PP	Z 19:51:11.1										
	e SKSac	R 19:57:57.7										
	e Sdiff	T 19:58:35.9										
	e PS	R 20:00:08.7										
	e SS	R 20:05:23.8										
	e LR	Z 20:20:39.9										
	e L	Z 20:32:29.3								20.0	3779	5.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17	20:50:32.7	33.237S	179.750W	33N	5.5	5.3		NEIC

South of Kermadec Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPdf	Z 21:10:27.5			1.2	19			
	e	21:10:40.3							
	i PKPab	Z 21:11:07.4							
GRA1	e PKPdf	Z 21:10:29.4	161.7	30.4	0.9	50			
	e PKPab	Z 21:11:16.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17	21:43:30.9	37.1S	179.7W	33	5.6			NEIC

East of North Island, N.Z.

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKP	Z 22:03:28.6							
	e	22:04:13.6							
CLL	e PKPdf	Z 22:03:29.7			1.2	54			
	e pPKPdf	Z 22:03:40.6							
	i PKPab	Z 22:04:19.3							
	e pPKPab	Z 22:04:29.8							
CLZ	e PKP	Z 22:03:30.1							

	e			22:04:21.9				
GEC2	e PKP	Z		22:03:30.8				
	e			22:04:26.4				
GRA1	e PKP	Z		22:03:31.3	165.2			
	e			22:04:28.6				
TNS	e PKP	Z		22:03:31.9				
	e			22:04:30.3				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17	22:13:18.4	36.9S	179.9W	33	5.5			NEIC
East of North Island, N.Z.								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKP	Z	22:33:15.1							
	e		22:34:00.0							
CLL	e PKPpdf	Z	22:33:16.9							
	e pPKPpdf	Z	22:33:27.8							
	i PKPab	Z	22:34:06.2			1.2	17			
	e pPKPab	Z	22:34:16.9							
CLZ	e PKP	Z	22:33:18.1							
	e		22:34:08.9							
GEC2	e PKP	Z	22:33:18.6							
GRA1	e PKP	Z	22:33:19.6	164.9						
	e		22:34:15.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/17	23:38:10.0	18.660S	178.000W	33.0N				SZGRF
2002/03/17	23:39:18.0	17.939S	179.547W	600G	4.6			NEIC
Fiji Islands region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	23:57:44.5	143.2	15.8					
RUE	e PKPbc	Z	23:57:46.8	143.9	21.9					
IBBN	e PKPbc	Z	23:57:50.8	145.2	12.2					
CLL	e PKPpdf	Z	23:57:49.2	145.2	21.2					
	e PKPbc	Z	23:57:50.9							
CLZ	e PKPbc	Z	23:57:51.2	145.2	16.7					
BRG	e PKPpdf	Z	23:57:49.8	145.4	23.0					
	e PKPbc	Z	23:57:51.5							
MOX	e PKPpdf	Z	23:57:50.8	146.1	19.3					
	e PKPbc	Z	23:57:53.5							
	e PKPab	Z	23:57:55.7							
GRA1	e PKPbc	Z	23:57:56.6	147.1	19.1					
TNS	e PKPbc	Z	23:57:56.1	147.1	14.1					
	e PKPab	Z	23:57:59.9							

./2002/bul0203.txt

Thu Apr 23 08:38:25 2020

21

WLF	e PKPdf	Z	23:57:54.5	147.9	10.3
	e PKPbc	Z	23:57:58.8		
STU	e PKPdf	Z	23:57:54.6	148.4	16.0
	e PKPbc	Z	23:57:59.4		
FUR	e PKPbc	Z	23:57:59.8	148.5	20.0
	e PKPab	Z	23:58:06.3		
BFO	e PKPbc	Z	23:58:00.8	148.9	14.6
	e PKPab	Z	23:58:07.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/18	00:40:52.2	18.0S	179.4W	550	4.1			NEIC
Fiji Islands region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z	00:59:28.8			0.6	45			
GRA1	e PKPbc	Z	00:59:34.4	147.2						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/18	03:09:58.4	18.450S	68.470W	33.0N	5.8			SZGRF
2002/03/18	03:09:57.1	20.353S	68.840W	93D	5.5			NEIC
Chile-Bolivia border region								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:23:29.5	99.2	249.3	1.5	37	5.8		
	e PP	Z	03:27:26.6							
CLL	e Pdiff	Z	03:23:36.3			1.2	9			
	e pPdiff	Z	03:23:52.9							
	e PP	Z	03:27:43.4							
	e SKSac	R	03:34:09.4							
	e PS	Z	03:36:39.7							
	e LR	Z	03:57:26.6							
	e L	Z	04:03:32.8			22.0	248		4.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/18	22:24:36.0	4.8S	102.2E	33	5.3			NEIC
Southern Sumatra, Indonesia								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z	22:37:53.7	94.3		1.4	25			
	e		22:38:09.3							

./2002/bul0203.txt

Thu Apr 23 08:38:25 2020

22

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/19	04:58:23.5	23.5S	179.6W	518	4.9			NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z 05:17:17.4			0.9	49			
	i PKPab	Z 05:17:26.1			0.7	20			
	i pPKPbc	Z 05:19:19.2							
GRA1	e PKPab	Z 05:17:34.6	152.5						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/19	22:14:14.7	6.468S	129.959E	147D	5.6			NEIC

Banda Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e sPdiff	Z 22:29:28.3							
	i PKP	Z 22:32:33.7			1.1	11			
	e PP	Z 22:33:18.5							
	e pPP	Z 22:33:45.8							
	e sPP	Z 22:33:59.3							
	e SKSac	R 22:39:01.8							
	e Sdiff	T 22:40:42.7							
	e SP	Z 22:42:31.3							
	e PKKPab	Z 22:43:38.5							
	e SS	R 22:48:48.0							
	e SSS	N 22:52:54.5							
	e LR	Z 23:08:51.0							
	e L	Z 23:22:51.7			20.0	709			
GRA1	e PKP	Z 22:32:37.2	113.3	71.5					
	e PP	Z 22:33:35.9							
	e SKSac	E 22:39:11.7							
	e SP	Z 22:42:49.9							
	e PKKPab	Z 22:43:31.4							
	e SS	N 22:49:01.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/19								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 22:43:23.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/20	00:50:54.9	45.720N	16.000E	10.0G			2.9	SZGRF

2002/03/20 00:51:09.0 46.631N 15.260E 10G  
Northwestern Balkan Peninsula

NEIC

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 00:51:49.8	2.4	154.1					2.9
	e Sn	N 00:52:28.7							
	e Sg	N 00:52:47.1							
WET	e Pn	Z 00:51:57.1	3.0	146.7					
	e Sn	N 00:52:40.2							
GRA1	e Sn	E 00:53:06.4	4.1	137.1					
	e Sg	E 00:53:39.5							
MOX	e Pn	Z 00:52:20.0	4.7	147.7					
CLL	e Pn	Z 00:52:22.8	4.9	161.6					
	e Sg	E 00:54:03.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/20	04:00:36.4	32.380N	140.120E	33.0N	5.6	5.7		SZGRF
2002/03/20	04:00:21.8	30.573N	141.880E	33N	5.5	5.7		NEIC

Southeast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z 04:13:05.1	88.6	40.8	1.4	62	5.6		
	e	Z 04:13:25.4							
	e (PP)	Z 04:16:55.0							
	e S	T 04:23:47.1							
	e PS	Z 04:24:35.3							
	e SS	R 04:29:26.8							
	e LQ	T 04:38:26.6							
	e LR	Z 04:41:55.1							
	e L	Z 05:01:32.9							
	e L	Z 04:55:43.1							
GRA1	e P	Z 04:13:15.1	88.6	40.8	1.4	62	5.6		6.0
	e PP	Z 04:16:49.1							
	e S	E 04:24:02.2							
e L	Z 04:55:43.1				19.5	2702		5.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/20	11:40:20.8	23.2S	179.9W	327	4.8			NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	Z 11:59:30.9			0.9	38			
	i PKPab	Z 11:59:40.3							
					0.8	14			

./2002/bul0203.txt

Thu Apr 23 08:38:25 2020

24

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/21	23:07:59.4	17.644S	178.707W	600G	4.2			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKP	Z 23:26:25.5	143.0	14.4					
CLZ	e PKP	Z 23:26:32.2	145.1	15.2					
CLL	e PKP	Z 23:26:31.1	145.1	19.7					
TNS	e PKP	Z 23:26:36.7	146.9	12.6					
GRA1	e PKP	Z 23:26:38.0	147.0	17.5					
GEC2	e PKP	Z 23:26:37.5	147.2	22.2					
FUR	e PKP	Z 23:26:41.0	148.4	18.4					
BFO	e PKP	Z 23:26:41.4	148.8	13.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/22	02:02:14.7	37.530N	70.770E	33.0N	5.0			SZGRF
2002/03/22	02:02:13.4	37.446N	70.156E	33N	4.9			NEIC

Afghanistan-Tajikistan border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 02:10:15.8	43.2	83.2	1.4	40	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/22	12:21:10.8	18.5S	178.3E	558	4.6			NEIC

Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 12:39:46.4			1.0	7			
	i PKPbc	+ Z 12:39:47.9			0.9	147			
	e	12:42:35.0							
GRA1	e PKPbc	Z 12:39:53.6							
	e PKPab	Z 12:39:57.5							
	e	12:42:03.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/22	13:53:29.8	20.4S	178.3W	600	4.1			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	Z 14:12:10.0			0.8	22			



./2002/bul0203.txt

Thu Apr 23 08:38:25 2020

25

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/22	17:36:54.0	4.597N	126.334E	33N	5.4	4.9		NEIC

Talau Islands, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z 17:50:40.8			1.1	38	5.8		
	e PS	Z 18:03:42.1							
	e LR	Z 18:28:31.5							
	e L	Z 18:41:30.8			20.0	339		4.9	
GRA1	e Pdiff	Z 17:50:48.4	102.3	67.5					
	e	17:51:08.5							
	e L	Z 18:39:43.5			22.0	347			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/23	03:30:16.6	16.0S	178.0W	500	4.8			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKP	Z 03:49:05.7							
GEC2	e PKP	Z 03:49:01.3							
GRA1	e PKP	Z 03:49:01.2	145.5						
	e	03:50:45.9							
TNS	e PKP	Z 03:49:00.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/23	05:15:51.5	1.4N	128.0E	117	5.7			NEIC

Halmahera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e Pdiff	Z 05:29:44.6			1.6	27			
	e PP	Z 05:33:49.3							
	e pPP	Z 05:34:41.9							
	e SP	Z 05:43:12.3							
	e pPPS	Z 05:44:31.4							
	e SS	Z 05:48:44.6							
	e SSS	Z 05:52:31.3							
	e LR	Z 06:06:48.3							
	e L	Z 06:21:42.4			20.0	278		4.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/23	21:58:52.6	34.4N	24.0E	10	4.1			NEIC

Crete, Greece

./2002/bul0203.txt

Thu Apr 23 08:38:25 2020

26

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 22:03:06.0			1.4	31			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/24	05:55:13.0	16.7S	172.0E	33	5.2			NEIC

Vanuatu

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKPdf	Z 06:14:50.9							
FUR	e PKPdf	Z 06:14:48.4							
GRA1	e PKPdf	Z 06:14:44.9	143.5						
STU	e PKPdf	Z 06:14:49.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/24	08:03:18.3	13.7S	167.2E	199	4.8			NEIC

Vanuatu

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 08:22:24.4	139.0						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/24	14:35:58.6	23.610N	45.870W	33.0N	5.1	5.0		SZGRF
2002/03/24	14:35:55.9	24.347N	46.334W	10G	5.1	5.1		NEIC

Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 14:44:34.5	47.7	257.8					
BUG	e P	Z 14:44:42.4	48.8	257.3					
BFO	e P	Z 14:44:43.2	48.8	260.9	1.2	34	5.3		
TNS	e P	Z 14:44:46.2	49.2	259.3	1.2	31	5.1		
IBBN	e P	Z 14:44:45.9	49.2	257.0					
STU	e P	Z 14:44:47.5	49.5	261.2					
CLZ	e P	Z 14:44:57.8	50.7	259.7	1.3	28	5.0		
FUR	e P	Z 14:44:57.6	50.8	263.4					
GRA1	e P	Z 14:44:58.6	50.9	262.1	1.2	24	5.0		
	e L	Z 15:03:20.4			18.5	1279		5.0	
BSEG	e P	Z 14:45:00.0	51.1	258.0	1.2	53	5.4		
MOX	e P	Z 14:45:01.4	51.3	261.7					
WET	e P	Z 14:45:05.9	51.9	263.9	1.2	24	5.0		
CLL	i P	- Z 14:45:09.6	52.2	262.4	1.1	24	5.0		
	e	14:45:17.4							
	e S	R 14:52:30.3							
	e SS	Z 14:56:13.1							

	e LQ	T	14:58:06.7								
	e LR	Z	15:00:28.5								
	e L	Z	15:01:51.0			22.0	2207		5.2		
GEC2	e P	Z	14:45:09.7	52.4	264.8	1.3	31		5.1		
BRG	e P	Z	14:45:12.5	52.8	263.5						
RUE	e P	Z	14:45:13.2	52.9	262.1	1.0	32		5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/25	06:18:13.5	49.4N	155.7E	33	5.0			NEIC

Kuril Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:30:01.8			1.4	25			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/25	06:28:20.0	21.5S	178.9W	600	4.5			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKPbc	Z 06:47:11.4							
BSEG	e PKPbc	Z 06:46:57.7							
CLL	e PKPdf	Z 06:46:57.4							
	i PKPbc	- Z 06:47:02.5			0.9	56			
	e PKPab	Z 06:47:07.8			0.7	19			
CLZ	e PKPbc	Z 06:47:03.1							
GEC2	e PKPbc	Z 06:47:07.8							
GRA1	e PKPbc	Z 06:47:07.7	150.7						
TNS	e PKPbc	Z 06:47:07.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/25	13:58:47.5	37.270N	131.900E	33.0N	5.4			SZGRF
2002/03/25	13:58:14.8	33.668N	132.400E	41D	4.6			NEIC

Sea of Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 14:10:45.8	81.7	46.0	1.4	56	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/25	14:56:44.0	35.740N	68.460E	33.0N	6.0	5.9		SZGRF
2002/03/25	14:56:33.4	36.011N	69.371E	8G	6.0	6.2		NEIC

Hindu Kush, Afghanistan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	i P	+ Z	15:04:26.2	41.8	88.7	1.3	357	5.9		
RUE	i P	+ Z	15:04:26.3	41.9	90.4	1.1	397	6.1		
GEC2	i P	+ Z	15:04:28.3	42.0	86.3	1.3	139	5.5		
CLL	i P	+ Z	15:04:30.4	42.4	88.5	0.9	126	5.6		
	e PP	Z	15:06:11.9							
	e S	E	15:10:48.1							
	e SS	Z	15:13:58.7							
	e LR	Z	15:17:43.7							
	e L	Z	15:25:38.2			18.0	43604		6.4	
WET	i P	+ Z	15:04:32.5	42.5	86.0	3.0	923	6.0		
MOX	i P	+ Z	15:04:38.7	43.3	86.7	1.4	273	5.8		
GRA1	i P	+ Z	15:04:41.7	43.6	85.4	1.6	825	6.2		
	e PP	Z	15:06:29.6							
	e S	Z	15:11:09.4							
	e SS	Z	15:14:21.8							
	e L	E	15:24:40.4			20.9	15361		5.9	
FUR	i P	+ Z	15:04:41.6	43.7	83.9	1.1	306	5.9		
BSEG	i P	+ Z	15:04:43.9	43.9	89.2	1.2	487	6.1		
CLZ	i P	+ Z	15:04:43.9	44.0	87.1	1.2	368	6.0		
STU	i P	+ Z	15:04:52.2	45.0	83.1	1.3	299	6.1		
TNS	i P	+ Z	15:04:54.7	45.3	84.0	1.2	233	6.0		
IBBN	i P	+ Z	15:04:56.6	45.5	85.6	1.0	542	6.4		
BFO	i P	+ Z	15:04:56.4	45.6	82.1	1.4	253	6.0		
BUG	i P	+ Z	15:04:59.3	45.9	84.4	1.3	388	6.3		
WLF	i P	+ Z	15:05:07.6	46.8	81.9	1.0	238	6.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/25	15:46:18.5	37.890N	68.810E	10.8	5.1			SZGRF
2002/03/25	15:46:00.0	35.954N	69.270E	10G	5.1	4.9		NEIC

Afghanistan-Tajikistan border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	15:54:07.8	43.5	85.6	1.3	54	5.1		
	e pP	Z	15:54:10.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/25	17:49:41.0	36.300N	70.520E	33.0N	5.0			SZGRF
2002/03/25	17:49:38.9	35.996N	69.231E	10G	4.9			NEIC

Hindu Kush, Afghanistan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	Z	17:57:46.6	43.5	85.6	1.3	41	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/25	21:45: 9.1	35.540N	69.370E	33.0N	4.9			SZGRF
2002/03/25	21:45:04.7	35.956N	69.196E	10G	4.9	3.9		NEIC

Hindu Kush, Afghanistan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:53:12.6	43.5	85.6	1.1	27	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/26	00:55:25.7	36.690N	70.010E	14.9	5.0			SZGRF
2002/03/26	00:55:20.1	36.070N	69.197E	10G	4.9	4.0		NEIC

Hindu Kush, Afghanistan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 01:03:11.5	41.6	88.8					
	e pP	Z 01:03:15.0							
CLL	e P	Z 01:03:16.0	42.2	88.5					
MOX	e P	Z 01:03:24.1	43.1	86.8					
GRA1	e P	Z 01:03:26.8	43.4	85.5	1.4	48	5.0		
	e pP	Z 01:03:31.3							
BSEG	e P	Z 01:03:28.9	43.8	89.3					
	e pP	Z 01:03:33.0							
CLZ	e P	Z 01:03:29.6	43.8	87.1					
	e pP	Z 01:03:33.9							
IBBN	e P	Z 01:03:42.0	45.4	85.6					
	e pP	Z 01:03:45.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/26	03:45:46.1	22.650N	124.670E	33.0N	6.1	7.1		SZGRF
2002/03/26	03:45:49.1	23.466N	124.063E	33N	5.9	6.6		NEIC

Southeast of Taiwan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 03:58:13.1	83.0	60.1	1.4	206	6.2		
BRG	e P	Z 03:58:16.6	83.7	60.1	2.6	566	6.3		
CLL	i P	+ Z 03:58:17.3	84.0	59.4	1.6	194	6.1		
	e PP	Z 04:01:39.9							
	e S	T 04:08:44.7							
	e SS	R 04:14:19.7							
	e	04:18:31.2							
	e LQ	T 04:24:17.7							
	e L	Z 04:41:05.2			18.0	85466		7.2	
BSEG	e P	Z 03:58:18.4	84.0	57.6	1.9	339	6.3		

GEC2	e P	Z	03:58:22.2	84.8	59.7	1.4	77	5.7
MOX	e P	Z	03:58:23.5	85.1	58.3	1.8	259	6.1
CLZ	e P	Z	03:58:24.0	85.1	57.5	1.4	294	6.2
WET	e P	Z	03:58:24.2	85.2	59.1	2.1	308	6.1
GRA1	e P	Z	03:58:27.4	85.8	58.0	1.7	368	6.2
	e S	N	04:09:02.1					
	e L	Z	04:41:40.7			18.3	74509	7.1
IBBN	e P	Z	03:58:28.9	86.2	55.5	1.3	232	6.1
FUR	e P	Z	03:58:31.1	86.6	57.9	1.9	516	6.5
BUG	e P	Z	03:58:32.4	86.9	55.1	1.9	279	6.3
TNS	e P	Z	03:58:33.2	87.0	55.9	2.2	295	6.2
STU	e P	Z	03:58:34.7	87.4	56.4	1.5	134	5.9
BFO	e P	Z	03:58:37.9	88.1	55.8	2.0	212	6.0
WLF	e P	Z	03:58:40.4	88.5	54.2	1.5	85	5.7

Date Origin Time Lat Long Depth mb Ms ML Source  
 2002/03/26 05:32:33.3 26.4S 178.1E 651 4.5 NEIC  
 South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 05:51:42.2							

Date Origin Time Lat Long Depth mb Ms ML Source  
 2002/03/26 10:15:10.7 18.9S 169.1E 130 5.1 NEIC  
 Vanuatu Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 10:34:31.6	144.4						

Date Origin Time Lat Long Depth mb Ms ML Source  
 2002/03/26 16:54:25.2 36.940N 70.460E 9.4 4.7 SZGRF  
 2002/03/26 16:54:19.5 35.997N 69.215E 10G 4.9 NEIC  
 Hindu Kush, Afghanistan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:02:27.5	43.5	85.6	1.4	22	4.7		
	e pP	Z 17:02:30.0							

Date Origin Time Lat Long Depth mb Ms ML Source  
 2002/03/27 08:53: 2.6 35.850N 68.560E 10.1 5.9 5.0 SZGRF  
 2002/03/27 08:52:51.9 35.940N 69.312E 10G 5.8 5.2 NEIC

Hindu Kush, Afghanistan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	09:00:44.6	41.8	88.8	1.0	240	5.9		
RUE	e P	Z	09:00:44.6	41.9	90.5	1.0	326	6.0		
	e pP	Z	09:00:47.3							
GEC2	e P	Z	09:00:46.5	42.0	86.4	1.2	79	5.3		
	e pP	Z	09:00:49.3							
CLL	i P	+ Z	09:00:48.8	42.4	88.6	1.0	170	5.7		
	e PP	Z	09:02:32.1							
	e S	T	09:07:09.9							
	e SS	N	09:10:16.1							
	e LQ	T	09:11:53.6							
	e LR	R	09:13:13.0							
	e L	Z	09:21:55.8			18.0	5735		5.5	
WET	e P	Z	09:00:50.6	42.5	86.2	1.9	93	5.2		
MOX	e P	Z	09:00:56.8	43.3	86.9	1.4	225	5.7		
GRA1	i P	+ Z	09:01:00.3	43.6	85.6	1.3	464	6.1		
	e PP	Z	09:02:48.0							
	e S	Z	09:07:33.5							
	e SS	Z	09:10:45.3							
	e L	Z	09:20:52.0			22.0	2280		5.0	
FUR	e P	Z	09:01:00.2	43.7	84.0	1.3	279	5.8		
BSEG	e P	Z	09:01:02.1	43.9	89.3	1.0	306	6.0		
	e pP	Z	09:01:04.6							
CLZ	e P	Z	09:01:02.4	44.0	87.2	1.5	426	5.9		
	e pP	Z	09:01:05.2							
STU	e P	Z	09:01:10.7	45.0	83.2	1.8	454	6.1		
TNS	e P	Z	09:01:13.2	45.3	84.1	1.2	132	5.8		
	e pP	Z	09:01:15.9							
IBBN	e P	Z	09:01:14.9	45.6	85.7	1.0	499	6.4		
BFO	e P	Z	09:01:14.9	45.6	82.2	1.1	140	5.8		
	e pP	Z	09:01:17.7							
BUG	e P	Z	09:01:17.8	45.9	84.5	1.1	256	6.2		
WLF	e P	Z	09:01:25.6	46.8	82.0	1.1	242	6.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/27	09:41:26.5	38.440N	68.410E	33.0N	4.7			SZGRF
2002/03/27	09:41:03.9	36.112N	69.241E	10G	4.6			NEIC

Tajikistan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	09:49:11.1	43.4	85.4	1.2	19	4.7		

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

2002/03/27	12:15:29.8	47.270N	147.680E	33.0N	5.3				SZGRF
2002/03/27	12:15:24.3	44.952N	147.581E	121D	5.1				NEIC

Northwest of Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P		Z 12:26:54.3	74.6	29.9	1.2	32	5.3		
CLL	i P	+	Z 12:27:02.1	76.1	31.3	1.0	50	5.6		
	e pP		Z 12:27:31.7							
BRG	e P		Z 12:27:02.6	76.1	31.8					
CLZ	e P		Z 12:27:04.9	76.4	29.6	1.1	38	5.4		
IBBN	e P		Z 12:27:06.5	76.8	28.0					
MOX	e P		Z 12:27:08.2	77.1	30.3					
BUG	e P		Z 12:27:11.5	77.7	27.6					
GEC2	e P		Z 12:27:12.9	77.9	31.4	1.1	11	4.9		
WET	e P		Z 12:27:13.6	78.0	31.0	1.1	38	5.4		
GRA1	i P		Z 12:27:14.1	78.0	30.0	1.0	53	5.6		
TNS	e P		Z 12:27:15.8	78.4	28.2	1.2	27	5.2		
FUR	e P		Z 12:27:21.0	79.3	29.8					
STU	e P		Z 12:27:21.5	79.5	28.6	0.9	28	5.4		
BFO	e P		Z 12:27:25.0	80.1	28.0	1.1	18	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/27	20:04:46.6	40.6N	63.4E	16	4.5			NEIC

Northwestern Uzbekistan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P		Z 20:12:01.5	37.1		1.2	20			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/28	00:23:11.2	12.4S	167.0E	241	4.9			NEIC

Santa Cruz Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf		Z 00:42:08.6	137.7						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/28	01:46:23.3	20.3S	173.8W	33	4.9			NEIC

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP		Z 02:06:13.0							



Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/28	03:56:42.3	35.4N	140.8E	33	4.4			NEIC

near E coast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 04:09:12.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/28	04:56:33.3	21.370S	65.760W	138.8	6.0			SZGRF
2002/03/28	04:56:21.7	21.601S	68.130W	122D	6.3			NEIC

Southern Bolivia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 05:09:40.0	96.8	244.3	1.3	104	6.1		
BFO	e P	Z 05:09:42.9	97.5	245.7	1.4	35	5.7		
BUG	e P	Z 05:09:45.9	98.2	245.4	1.2	94	6.2		
STU	e P	Z 05:09:46.0	98.2	246.4	1.4	77	6.0		
TNS	e P	Z 05:09:47.1	98.3	246.1	1.1	44	6.0		
IBBN	e P	Z 05:09:48.9	98.8	245.8	1.2	151	6.5		
FUR	e P	Z 05:09:51.1	99.2	247.8	1.5	117	6.3		
	e PP	Z 05:13:51.0							
GRA1	e P	Z 05:09:53.8	99.8	248.0	1.4	47	6.0		
	e pP	Z 05:10:29.2							
	e PP	Z 05:13:54.1							
	e SKSac	E 05:20:20.7							
	e SKS	R 05:20:23.9							
	e Sdiff	N 05:21:15.6							
	e SP	Z 05:22:45.1							
	e SS	E 05:28:07.3							
CLZ	e P	Z 05:09:55.1	100.1	247.7	1.6	89	6.2		
MOX	e P	Z 05:09:56.5	100.4	248.4	1.5	36	5.9		
	e PP	Z 05:14:00.0							
WET	e P	Z 05:09:57.2	100.6	249.1	1.4	35	5.9		
BSEG	e P	Z 05:09:58.1	100.8	248.0	1.1	35	6.0		
	e PP	Z 05:14:04.2							
GEC2	e P	Z 05:09:58.8	101.0	249.6	1.4	21	5.7		
CLL	i Pdiff	+ Z 05:10:01.1	101.4	249.6	1.7	56			
	e pPdiff	Z 05:10:35.2							
	e PP	Z 05:14:07.4							
	e pPP	Z 05:14:40.1							
	e SKSac	R 05:20:30.7							
	e Sdiff	T 05:21:27.2							
	e sSdiff	N 05:22:31.1							
	e SP	Z 05:23:06.4							
	e PPS	E 05:23:48.2							
	e PKKPab	Z 05:26:34.0			1.8	42			

	e SS	T	05:28:31.5								
	e LQ	T	05:38:01.9								
	e LR	Z	05:44:34.6								
	e L	Z	05:50:48.7			22.0	4744		6.0		
BRG	e P	Z	05:10:02.7	101.8	250.2	1.7	48	5.8			
	e PP	Z	05:14:11.0								

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/28	05:48:31.0	21.910N	44.360W	19.2	5.8			SZGRF
2002/03/28	05:48:24.9	22.559N	45.006W	10G	5.4	5.5		NEIC

Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 05:57:08.6	48.1	255.0	1.5	108	5.8		
BFO	e P	Z 05:57:16.8	49.2	258.0	1.4	173	5.9		
BUG	e P	Z 05:57:17.6	49.3	254.5	1.6	150	5.8		
TNS	e P	Z 05:57:20.9	49.7	256.6	1.5	136	5.7		
IBBN	e P	Z 05:57:21.5	49.8	254.2	1.5	216	5.9		
STU	e P	Z 05:57:21.5	49.9	258.4	1.2	107	5.6		
FUR	e P	Z 05:57:31.7	51.1	260.7	2.9	1366	6.4		
CLZ	e P	Z 05:57:32.4	51.3	257.0	1.3	95	5.6		
GRA1	e P	Z 05:57:33.0	51.3	259.4	1.5	189	5.8		
	e pP	Z 05:57:38.3							
BSEG	e P	Z 05:57:35.9	51.7	255.3	1.5	357	6.1		
MOX	e P	Z 05:57:36.1	51.8	259.0	1.5	102	5.5		
WET	e P	Z 05:57:40.0	52.3	261.3	1.6	128	5.6		
CLL	e P	Z 05:57:43.2	52.8	259.7	1.2	75	5.5		
GEC2	e P	Z 05:57:43.7	52.8	262.2	1.5	128	5.6		
BRG	e P	Z 05:57:47.3	53.3	260.9	2.1	255	5.8		
RUE	e P	Z 05:57:48.4	53.4	259.5	1.3	209	6.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/28	05:50:41.7	21.710N	44.560W	16.8	5.5			SZGRF
2002/03/28	05:50:37.5	22.565N	45.053W	10G	5.2			NEIC

Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 05:59:21.4	48.2	255.0					
BFO	e P	Z 05:59:29.5	49.2	258.1	1.5	96	5.5		
BUG	e P	Z 05:59:29.9	49.3	254.5					
TNS	e P	Z 05:59:33.7	49.7	256.6	1.5	73	5.4		
IBBN	e P	Z 05:59:34.3	49.8	254.3					
STU	e P	Z 05:59:34.1	49.9	258.5	0.9	37	5.3		
FUR	e P	Z 05:59:44.5	51.1	260.7					
CLZ	e P	Z 05:59:45.1	51.3	257.0	1.5	75	5.4		

./2002/bul0203.txt

Thu Apr 23 08:38:25 2020

35

GRA1	e P	Z	05:59:45.7	51.4	259.5	1.5	131	5.6
	e pP	Z	05:59:50.3					
BSEG	e P	Z	05:59:48.5	51.7	255.4	1.5	227	5.9
MOX	e P	Z	05:59:48.9	51.8	259.1			
WET	e P	Z	05:59:52.6	52.3	261.3	1.7	84	5.4
CLL	e P	Z	05:59:55.9	52.8	259.8			
GEC2	e P	Z	05:59:56.4	52.8	262.2	1.6	73	5.4
BRG	e P	Z	06:00:00.1	53.3	260.9			
RUE	e P	Z	06:00:01.1	53.5	259.6	1.7	194	5.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/29	16:04:02.2	44.687N	17.340E	10G				NEIC
Northwestern Balkan Peninsula								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 16:05:16.1	4.8	147.7					
	e Sn	Z 16:06:09.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/30								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKP	Z 00:26:58.1							
BRG	e PKP	Z 00:26:49.0							
BSEG	e PKP	Z 00:26:41.4							
CLL	e PKP	Z 00:26:48.2							
GEC2	e PKP	Z 00:26:54.3							
GRA1	e PKP	Z 00:26:53.9							
IBBN	e PKP	Z 00:26:47.8							
TNS	e PKP	Z 00:26:53.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/30	06:00:00.8	16.9S	177.2W	33	4.8			NEIC
Fiji Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 06:19:41.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/30	06:17:54.0	22.470N	69.160E	33.0N	4.6			SZGRF
2002/03/30	06:17:49.2	23.402N	70.370E	33N	4.5			NEIC

Southern India

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:27:04.1	52.6	97.4	0.9	7	4.6		
	e	06:27:10.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/30	06:37:59.0	16.566S	177.328W	33N	4.6			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 06:57:38.8	146.2	14.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/30	08:57:25.8	4.8S	103.1E	33	4.9			NEIC

Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:10:47.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/30	14:18:49.2	17.4S	178.8W	557	4.2			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	Z 14:37:24.8			1.2	42			
GRA1	e PKP	Z 14:37:30.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/30	20:19:05.4	19.1S	178.4W	400	3.8			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKP	Z 20:37:53.7							
CLL	e PKP	Z 20:37:59.2							
GEC2	e PKP	Z 20:38:04.2							
GRA1	e PKP	Z 20:38:04.2							

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

2002/03/30 21:08:26.1 18.122S 174.941W 33N 4.4 NEIC  
Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKP	Z 21:28:03.0	146.2	13.7					
GRA1	e PKP	Z 21:28:08.1	148.0	11.1					
GEC2	e PKP	Z 21:28:09.2	148.5	15.9					
BFO	e PKP	Z 21:28:11.9	149.7	6.2					

Date Origin Time Lat Long Depth mb Ms ML Source  
2002/03/31 03:31:23.7 15.8S 69.5W 198 4.5 NEIC  
Peru-Bolivia border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 03:44:32.4							
GRA1	e P	Z 03:44:30.0							

Date Origin Time Lat Long Depth mb Ms ML Source  
2002/03/31 06:52:46.0 23.190N 123.140E 33.0N 6.9 7.7 SZGRF  
2002/03/31 06:52:51.1 24.477N 122.203E 33N 6.3 7.3 NEIC  
Southwestern Ryukyu Islands, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	i P	+ Z 07:05:06.3	81.2	60.9	3.2	5586	7.2		
BRG	i P	+ Z 07:05:09.8	81.9	60.8	2.3	1464	6.8		
CLL	i P	+ Z 07:05:11.1	82.2	60.2	2.0	924	6.7		
	e	07:05:26.4							
	e PP	Z 07:08:24.6							
	e PPP	Z 07:10:28.7							
	e PPPP	Z 07:11:49.0							
	e S	T 07:15:22.7							
	e SKSac	R 07:15:35.0							
	e PS	Z 07:16:26.8							
	e SS	R 07:20:56.2							
	e PKKPbc	Z 07:23:37.6							
	e SSS	R 07:25:05.6							
	e LQ	T 07:28:48.0							
	e P'P'df	Z 07:31:39.9							
	e LR	R 07:33:04.2							
	e SKPPKP	Z 07:35:05.4							
BSEG	i P	+ Z 07:05:11.7	82.2	58.5	3.4	3812	7.1		
GEC2	i P	+ Z 07:05:15.8	83.0	60.4	1.0	173	6.2		
MOX	i P	+ Z 07:05:16.7	83.3	59.1	2.6	1658	6.8		
CLZ	i P	+ Z 07:05:17.7	83.3	58.3	2.5	2994	7.1		
WET	i P	+ Z 07:05:17.8	83.3	59.9	2.5	2003	6.9		

GRA1	i P	+ Z	07:05:21.0	84.0	58.7	2.1	2292	6.9		
	e PP	Z	07:08:39.4							
	e PPP	Z	07:10:36.5							
	e PPPP	Z	07:12:21.8							
	e S	E	07:15:48.7							
	e SS	N	07:21:27.7							
	e PKKPBc	Z	07:23:37.5							
	e P'P'	Z	07:31:40.8							
	e		07:34:59.6							
	e L	Z	07:47:11.9			19.4	271863		7.7	
IBBN	i P	+ Z	07:05:22.9	84.4	56.4	2.2	2837	7.0		
FUR	i P	+ Z	07:05:24.9	84.7	58.6	1.8	2153	7.0		
BUG	i P	+ Z	07:05:26.4	85.1	55.9	1.8	1050	6.7		
TNS	i P	+ Z	07:05:26.9	85.2	56.7	2.7	2578	6.9		
STU	i P	+ Z	07:05:28.4	85.6	57.2	2.7	2410	6.9		
BFO	i P	+ Z	07:05:31.9	86.3	56.5	2.1	976	6.8		
WLF	i P	+ Z	07:05:34.7	86.7	55.0	1.7	752	6.7		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2002/03/31 08:25:44.4 14.910S 174.790W 33N 4.4  
 Samoa Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
TNS	e PKP	Z 08:45:15.9	144.6	5.4					
GRA1	e PKP	Z 08:45:17.4	144.9	10.1					
BFO	e PKP	Z 08:45:21.7	146.5	5.5					

Date Origin Time Lat Long Depth mb Ms ML Source  
 2002/03/31 14:09:31.5 5.0S 153.3E 33 5.0  
 New Ireland region, P.N.G.

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 14:28:30.8	125.1						

Date Origin Time Lat Long Depth mb Ms ML Source  
 2002/03/31 19:06: 5.2 49.560N 54.150W 33.0N 4.9  
 Newfoundland, Canada

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 19:13:24.4	38.8	290.8					
TNS	e P	Z 19:13:27.5	39.1	294.1					
GRA1	e P	Z 19:13:45.5	41.0	295.9					
	e L	Z 19:24:27.1			18.2	1619		4.9	

CLL	e P	Z	19:13:47.2				1.8	42	5.0
	e PP	Z	19:14:35.8						
	e S	E	19:18:33.3						
	e LR	Z	19:21:15.2						
	e L	Z	19:25:19.5				18.0	1650	4.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/31	21:23:24.3	38.090N	68.320E	33.0N	4.6			SZGRF
2002/03/31	21:23:07.1	36.130N	69.167E	33N	4.6			NEIC

Tajikistan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:31:10.0	43.4	85.4	1.1	14	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/31	22:49:12.3	53.330N	35.820W	33.0N	4.9	5.0		SZGRF
2002/03/31	22:49:09.4	53.858N	35.322W	10G	5.1	5.2		NEIC

North Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e P	Z 22:54:41.1	25.5	290.8					
BUG	e P	Z 22:54:42.6	25.6	292.3					
WLF	e P	Z 22:54:43.2	25.6	295.4					
BSEG	e P	Z 22:54:50.1	26.4	288.6					
TNS	e P	Z 22:54:52.0	26.7	294.9					
CLZ	e P	Z 22:54:56.7	27.2	292.5					
BFO	e P	Z 22:54:59.3	27.5	298.2					
MOX	e P	Z 22:55:07.3	28.4	295.0					
GRA1	e P	Z 22:55:08.6	28.6	296.5	1.4	30	4.9		
	e L	Z 23:05:51.4			18.1	3783		5.0	
CLL	e P	Z 22:55:11.4	28.9	294.3	1.0	18	4.9		
	e PP	Z 22:56:00.1							
	e S	E 23:00:04.0							
	e LR	Z 23:02:40.0							
	e L	Z 23:06:50.3			18.0	3317		5.0	
FUR	e P	Z 22:55:15.1	29.3	298.9					
BRG	e P	Z 22:55:17.3	29.6	295.3					
WET	e P	Z 22:55:20.8	29.8	297.7					
GEC2	e P	Z 22:55:25.8	30.4	298.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/03/31	23:09:55.2	14.990N	93.230W	33.0N	5.4			SZGRF
2002/03/31	23:09:53.1	14.302N	92.501W	33N	5.1	5.1		NEIC

Near coast of Chiapas, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:22:40.5	87.7	289.6	1.5	30	5.4		

#### 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