

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)

APRIL 2001 UPDATED 20.June.2001

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
2001/04/01	00:47:48.6	52.040N	161.310E	33.0N	5.4			SZGRF
2001/04/01	00:48:46.7	52.744N	153.004E	479	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 00:59:28.0	72.6	23.1	0.7	23	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/01	08:28:44.4	72.990N	7.290E	22.1	4.0			SZGRF
2001/04/01	08:28:15.7	75.699N	9.386E	10G	4.2			NEIC

Norwegian Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 08:33:51.7	26.0	359.0			4.0		
	e pP	Z 08:33:56.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/01	08:37:36.6	34.170S	55.720E	25.2	5.4			SZGRF
2001/04/01	08:37:33.9	34.381S	55.488E	10G	5.4	5.2		NEIC

Southwest Indian Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 08:50:45.5	92.8	144.8	1.5	27	5.4		
	e pP	Z 08:50:52.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/01	08:56:16.2	18.520N	73.570E	33.0N	4.8			SZGRF
2001/04/01	08:56:50.5	23.502N	70.456E	10G	4.7			NEIC

Southern India

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:06:07.4	52.6	97.2	1.1	12	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/01	13:36:30.6	51.550N	159.770E	33.0N	5.6			SZGRF
2001/04/01	13:36:19.3	49.129N	156.250E	33N	4.9	4.8		NEIC

Off east coast of Kamchatka Peninsula, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:48:10.8	76.7	22.7	1.0	56	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/01	14:51:10.8	0.860S	35.060W	25.8	5.3			SZGRF
2001/04/01	14:51:45.7	4.267N	32.475W	10G	4.8	4.6		NEIC

South Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 15:01:43.6	58.5	233.9	1.2	23	5.3		
	e pP	Z 15:01:50.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/01	15:28:31.8	0.210N	34.300W	33.0N	4.9			SZGRF
2001/04/01	15:28:58.1	4.514N	32.446W	10G	4.6			NEIC

North Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 15:38:54.9	58.2	234.1	1.4	13	4.9		
	e	15:39:01.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/02	02:47: 1.5	43.830N	150.880E	33.0N	4.9			SZGRF
2001/04/02	02:47:02.3	43.698N	147.634E	33N	4.6			NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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./2001/bul0104.txt

Thu Apr 23 08:38:25 2020

3

GRA1 e P Z 02:59:08.3 79.2 30.5 0.7 12 4.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/02	18:54:59.8	62.120N	125.470W	33.0N	5.0			SZGRF
2001/04/02	18:54:57.5	64.369N	131.147W	10G	4.8	3.9		NEIC

Northwest Territories, Canada

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:05:23.8	62.2	342.6	0.8	9	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/02	19:54: 3.7	39.510N	146.650E	33.0N	5.5	5.1		SZGRF
2001/04/02	19:54:18.4	40.705N	141.646E	64D	5.2			NEIC

Off east coast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	Z 20:06:11.9			1.0	20	5.2		
	e pP	Z 20:06:28.9							
	e PP	Z 20:09:04.2							
	e S	Z 20:15:58.9							
	e SS	Z 20:21:46.3							
	e L	Z 20:41:55.2			18.0	1083		5.2	
GRA1	e P	Z 20:06:23.7	79.7	35.9	1.0	32	5.5		
	e S	N 20:16:17.8							
	e SS	N 20:22:04.2							
	e L	Z 20:43:10.0			22.0	885		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/03								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKP)	Z 03:36:49.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/03	14:57: 1.8	33.340N	140.410E	29.7	5.4	5.0		SZGRF
2001/04/03	14:57:10.5	34.920N	138.051E	30D	5.1	4.8		NEIC

Southeast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 15:09:37.5	83.2	41.4	0.7	24	5.4		

e pP Z 15:09:46.2
 e L Z 15:51:22.4 18.0 532 5.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/03	17:02:6.2			N				SZGRF
2001/04/03	17:01:47.7	35.150N	27.820E	22	4.0			NEIC

Dodecanese Islands, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:06:04.3	18.9	133.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/03	17:37:27.4	35.870N	42.350E	33.0N	5.1	4.2		SZGRF
2001/04/03	17:36:34.1	32.450N	47.985E	33N	5.1	4.5		NEIC

Iraq

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 17:42:44.5	30.4	109.9					
BRG	e P	Z 17:42:50.0	31.0	113.3					
WET	e P	Z 17:42:50.0	31.0	109.4					
CLL	i P	+ Z 17:42:56.1			1.1	22	5.0		
	e S	E 17:48:06.6							
	e SS	E 17:50:23.1							
	e L	Z 18:00:17.9			18.0	629		4.3	
FUR	e P	Z 17:42:56.9	31.7	106.2					
RUE	e P	Z 17:42:56.6	31.7	115.5					
GRA1	e P	Z 17:43:01.5	32.2	108.4	0.9	40	5.1		
	e L	Z 17:57:48.0			18.4	656		4.2	
MOX	e P	Z 17:43:01.3	32.2	110.3					
CLZ	e P	Z 17:43:12.2	33.4	110.7					
BFO	e P	Z 17:43:14.6	33.6	103.4					
TNS	e P	Z 17:43:17.5	34.0	106.3					
BSEG	e P	Z 17:43:19.4	34.2	113.5					
IBBN	e P	Z 17:43:27.3	35.1	108.4					
BUG	e P	Z 17:43:27.1	35.1	106.8					
WLF	e P	Z 17:43:28.2	35.3	103.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/03								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 21:39:21.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/03	23:08:29.2			N				SZGRF
2001/04/03	23:08:35.9	27.788N	86.087E	33N	4.6			NEIC

Nepal-India border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:18:41.2	59.7	81.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/04	01:16:21.3	45.900N	151.500E	33.0N	5.3			SZGRF
2001/04/04	01:16:30.2	44.553N	147.344E	136D	4.7			NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:28:18.9	78.3	30.3	1.2	35	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/04								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 01:43:46.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/04	07:44:10.7	5.181S	132.421E	33N	5.9	6.0		NEIC

Aru Islands, Indonesia, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e Pdiff	Z 07:59:02.6							
	e PP	Z 08:03:27.6							
	e SKSdf	E 08:09:54.5							
	e Sdiff	E 08:11:09.2							
	e SP	Z 08:12:50.9							
	e PS	E 08:13:10.9							
	e SS	N 08:19:19.7							
	e SKKSdf	R 08:20:49.7							
	e SSS	N 08:23:48.0							
	e LV	Z 08:39:55.1							
	e L	Z 08:59:00.8			18.0	4496		6.1	
GRA1	e Pdiff	Z 07:59:03.8	113.7	68.5					
	e PP	Z 08:03:34.7							
	e SKSdf	Z 08:09:58.1							

e	08:13:07.6										
e L	Z 09:00:25.0			20.7	4809				6.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/04	08:36:29.0	53.490N	165.830W	33.0N	5.4			SZGRF
2001/04/04	08:36:18.4	52.546N	168.427W	33N	4.6			NEIC

Fox Islands, Aleutian Islands, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 08:48:17.7	77.8	359.8	1.5	54	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/04	10:53:26.0	20.101S	173.507W	33N	4.7			NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 11:13:15.8	150.2	9.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/04	11:13:18.1	35.680N	68.840E	33.0N	5.1			SZGRF
2001/04/04	11:13:25.3	36.488N	66.228E	15D	4.9			NEIC

Hindu Kush, Afghanistan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 11:21:18.1	41.3	87.1	0.9	31	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/05	13:54:36.6	17.540N	60.230W	33.0N	5.6			SZGRF
2001/04/05	13:54:23.8	15.877N	60.854W	33N	4.9	4.5		NEIC

Leeward Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 14:05:12.3	66.4	267.0	1.3	47	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/06								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 01:30:46.3							

e 01:30:49.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/06	03:26: 4.0	34.240N	27.800E	22.8	4.2			SZGRF
2001/04/06	03:26:33.0	36.182N	26.899E	151	4.0			NEIC

Eastern Mediterranean Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 03:30:10.7	15.9	137.8					
WET	e P	Z 03:30:17.1	16.5	136.5					
GRA1	e P	Z 03:30:30.6	17.7	134.0			4.2		
CLL	e P	Z 03:30:36.1	18.1	141.4					
MOX	e P	Z 03:30:37.1	18.2	136.9					
BFO	e P	Z 03:30:37.2	18.3	124.9					
TNS	e P	Z 03:30:48.7	19.3	129.5					
WLF	e P	Z 03:30:57.5	20.2	124.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/06	09:33:08.5	53.641N	35.149W	10G	4.9	4.9		NEIC

North Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BUG	e P	Z 09:38:44.0	25.5	291.8					
TNS	e P	Z 09:38:52.2	26.7	294.4	1.9	86	5.2		
	e PP	Z 09:39:31.4							
CLZ	e P	Z 09:38:56.6	27.1	292.0	1.9	62	5.0		
	e PP	Z 09:39:36.4							
BFO	e P	Z 09:38:59.1	27.4	297.7	2.0	70	5.1		
	e PP	Z 09:39:42.7							
STU	e P	Z 09:39:01.6	27.7	297.1					
MOX	e P	Z 09:39:06.0	28.3	294.5	2.5	106	5.2		
	e PP	Z 09:39:54.0							
GRA1	e P	Z 09:39:09.0	28.5	296.0	1.9	83	5.2		
	e PP	Z 09:39:52.7							
	e L	Z 09:49:39.5			18.4	1664		4.7	
RUE	e P	Z 09:39:11.2	28.8	292.1					
	e PP	Z 09:40:00.9							
CLL	e P	Z 09:39:10.5	28.9	293.8					
	e PP	Z 09:39:59.6							
FUR	e P	Z 09:39:14.4	29.2	298.4					
	e PP	Z 09:40:04.0							
BRG	e P	Z 09:39:17.6	29.6	294.8					
	e PP	Z 09:40:04.0							
WET	e P	Z 09:39:18.9	29.7	297.2	1.8	43	5.0		
	e PP	Z 09:40:12.2							

./2001/bul0104.txt

Thu Apr 23 08:38:25 2020

8

GEC2 e P Z 09:39:25.3 30.3 297.9 1.6 23 4.8
e PP Z 09:40:19.5

Date Origin Time Lat Long Depth mb Ms ML Source
2001/04/06 09:58:13.8 53.638N 35.200W 10G 4.8
North Atlantic Ocean

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
GRA1 e (P) Z 10:04:17.9 28.5 296.0
e 10:04:32.2
e S E 10:08:45.1
e L Z 10:14:51.4 18.5 1002 4.5

Date Origin Time Lat Long Depth mb Ms ML Source
2001/04/06 23:06:49.7 10.270S 102.130E 33.0N 5.6 SZGRF
2001/04/06 23:07:09.6 4.247S 101.667E 33N 5.5 4.9 NEIC
Southwest of Sumatera, Indonesia

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
GRA1 e P Z 23:20:24.5 93.5 92.4 1.1 15 5.6

Date Origin Time Lat Long Depth mb Ms ML Source
2001/04/07 03:46:30.8 50.580N 160.670E 33.0N 5.6 4.9 SZGRF
2001/04/07 03:46:26.6 49.255N 156.201E 33N 5.0 4.7 NEIC
East of Kuril Islands, Russia

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
GRA1 e P Z 03:58:17.4 76.6 22.6 1.3 59 5.6
e 04:10:10.8
e L Z 04:38:21.5 18.7 566 4.9

Date Origin Time Lat Long Depth mb Ms ML Source
2001/04/07 12:13:46.9 23.760N 142.690E 33.0G 5.3 5.4 SZGRF
2001/04/07 12:13:27.9 21.789N 143.315E 33N 5.5 5.5 NEIC
Volcano Islands, Japan, region

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML
CLL i P + Z 12:26:48.7 1.3 20 5.4
e 12:26:58.8
e PP Z 12:30:35.9
e S T 12:38:00.9

	e SP	Z	12:39:19.2								
	e SS	T	12:44:25.1								
	e LV	Z	13:00:16.4								
	e L	Z	13:13:49.9			20.0	3313		5.8		
GRA1	e P	Z	12:27:05.9	96.9	43.9	1.4	18		5.3		
	e PP	Z	12:30:54.5								
	e		12:39:39.2								
	e SS	N	12:44:48.3								
	e L	Z	13:18:54.4			18.5	1197		5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/07	23:17:38.1	27.534S	176.198W	33N	5.5	5.8		NEIC
Kermadec Islands region								

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	CLL	e PKPdf	Z 23:37:28.5			1.2	12			
		e PKPbc	Z 23:37:37.5			0.9	20			
		e PKPab	Z 23:37:55.2			1.0	29			
		e PP	Z 23:41:31.6							
		e SKSdf	Z 23:44:29.7							
		e PPP	R 23:45:02.3							
		e SKKSac	N 23:48:22.4							
		e ScPPKP	R 23:52:04.7							
		e PPS	Z 23:54:54.0							
		e SS	E 00:01:11.1							
		e SSS	E 00:07:16.3							
		e SSSS	N 00:10:46.9							
		e LV	Z 00:31:04.8							
		e L	Z 00:57:01.9			18.0	3470		6.2	
GRA1	e PKPdf	Z	23:37:31.3	157.1	17.1					
	e PKPab	Z	23:38:02.5							
	e PP	Z	23:41:41.0							
	e SKSdf	E	23:44:23.2							
	e SKKSac	E	23:48:19.1							
	e		23:52:03.8							
	e SS	E	00:01:39.9							
	e L	Z	01:19:04.6			18.5	2284		6.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/08	06:11:39.0			N				SZGRF
2001/04/08	06:12:27.8	38.380N	22.181E	33N	4.6			NEIC
Crete, Greece								

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z 06:15:52.5	13.8	141.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/08	10:54:38.2	18.510S	68.470E	33.0N	5.2			SZGRF
2001/04/08	10:54:10.1	25.075S	67.711E	10G	5.1			NEIC

Mid-Indian Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 11:07:09.9	90.0	131.0	1.4	20	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/08	11:57:45.2	0.480S	99.660E	33.0N	5.5			SZGRF
2001/04/08	11:57:25.6	4.352S	102.252E	65D	5.4			NEIC

Southern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 12:10:38.7	94.0	92.0	1.8	54	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/08								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 12:53:10.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/08	13:04:15.7	20.179S	176.048W	33N	4.6			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKP)	Z 13:24:02.7	149.9	13.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/08	18:26:50.8			N				SZGRF

Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 18:31:55.3							

./2001/bul0104.txt

Thu Apr 23 08:38:25 2020

11

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/08	19:26:51.0	11.320S	65.610E	33.0N	5.2			SZGRF
2001/04/08	19:26:43.7	11.796S	65.998E	10G	5.0	4.2		NEIC

Mid-Indian Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	Z 19:38:42.7	77.9	125.1	1.2	22	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/08	23:05: 2.7	36.760N	72.220E	33.0N	4.6			SZGRF
2001/04/08	23:05:10.9	37.135N	70.195E	33N	4.8	3.9		NEIC

Afghanistan-Tajikistan border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:13:14.9	43.4	83.6			4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/09	01:03:20.7			N				SZGRF

Southern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:14:42.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/09	01:13: 5.5			N				SZGRF
2001/04/09	01:13:05.8	37.148N	70.142E	33N	4.3			NEIC

Afghanistan-Tajikistan border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:21:08.9	43.4	83.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/09	06:09:43.7	17.887S	178.360W	500G	4.3			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i PKP e	Z 06:28:32.3 06:28:36.0	147.3	17.0					

./2001/bul0104.txt

Thu Apr 23 08:38:25 2020

12

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/09	09:00:56.9	32.686S	73.084W	11G	6.2	6.3		NEIC

Off coast of central Chile

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pdiff	Z	09:15:34.8	111.0	243.7					
	e PKiKP	Z	09:19:34.9							
	e PP	Z	09:20:09.1							
	e Sdiff	N	09:27:50.3							
	e SP	Z	09:29:39.0							
	e SS	N	09:35:38.7							
CLL	e L	Z	10:06:00.7			19.1	10030		6.4	
	e Pdiff	Z	09:15:38.2			9.2	1098			
	i PKP	- Z	09:19:37.3			1.2	36			
	e PP	Z	09:20:16.7							
	e		09:26:25.2							
	e SKKSac	R	09:27:22.7							
	e Sdiff	T	09:27:58.7							
	e PS	Z	09:29:56.6							
	i PKKPbc	Z	09:30:25.6							
	i PKKPab	Z	09:30:35.1							
	e SS	T	09:36:10.0							
	e L	Z	10:07:03.2			20.0	14825		6.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/09	19:55:46.5	20.750S	12.610W	33.0N	5.0			SZGRF
2001/04/09	19:56:01.3	17.242S	14.127W	10G	5.0	4.6		NEIC

Southern Mid-Atlantic Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	20:07:16.7	70.6	205.7			5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/10	01:03:49.2	36.250N	145.380E	33.0N	4.9			SZGRF
2001/04/10	01:03:53.9	35.337N	140.139E	50D	4.9			NEIC

Off east coast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	01:16:21.5	83.7	39.7	1.4	12	4.9		
	e		01:16:31.8							
	e		01:16:45.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/10	03:16:35.8			N				SZGRF

Off coast of Chiapas, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:29:27.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/10	06:25:31.4			N				SZGRF
2001/04/10	06:25:03.1	49.838N	29.068W	10G	4.3			NEIC

Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:30:36.9	25.7	286.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/10								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKP)	Z 10:42:14.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/10	14:00: 8.8	34.090N	26.130E	33.0N	4.4			SZGRF
2001/04/10	14:00:07.6	34.302N	26.168E	33N	4.5	4.2		NEIC

Crete, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 14:04:09.0	17.2	143.0	1.4	11	3.8		
FUR	e P	Z 14:04:15.0	17.8	135.9	1.5	123	4.8		
WET	e P	Z 14:04:16.1	17.8	141.6	0.9	14	4.1		
BRG	e P	Z 14:04:26.8	18.8	147.1	1.0	7	3.9		
GRA1	e P	Z 14:04:29.0	18.9	138.9	1.5	74	4.7		
BFO	e P	Z 14:04:32.5	19.3	130.1	1.2	24	4.3		
MOX	e P	Z 14:04:36.7	19.5	141.5					
CLL	e P	Z 14:04:34.4	19.5	145.7	1.5	17	4.1		
RUE	e P	Z 14:04:43.3	20.2	149.1					
TNS	e P	Z 14:04:46.0	20.5	134.2	1.5	75	4.8		
CLZ	e P	Z 14:04:49.0	20.9	140.9	1.2	16	4.2		
WLF	e P	Z 14:04:54.1	21.3	128.7	1.1	26	4.5		
BUG	e P	Z 14:05:00.7	21.9	134.2	0.8	20	4.6		
IBBN	e P	Z 14:05:04.5	22.3	136.6	1.3	46	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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./2001/bul0104.txt

Thu Apr 23 08:38:25 2020

14

2001/04/10	21:13:37.2	46.510N	153.430E	33.0N	4.7				SZGRF
2001/04/10	21:13:39.1	45.160N	149.365E	74D	4.6				NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:25:34.8	78.4	28.7	0.9	8	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/10	22:04:14.7			N				SZGRF
2001/04/10	22:03:49.0	49.600N	29.260W	10G	4.2			NEIC

Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 22:09:25.0	25.9	285.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/10	22:07:54.2	22.560N	96.540E	33.0				SZGRF
2001/04/10	22:08:14.3	24.605N	94.985E	104D	5.1			NEIC

Myanmar

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 22:19:03.2	67.6	77.9					
	e	22:19:32.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/11								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:27:14.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/11	02:45:34.9	51.950N	163.020E	33.0N	4.9			SZGRF
2001/04/11	02:45:34.8	52.073N	160.487E	33N	4.8			NEIC

Off east coast of Kamchatka Peninsula, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 02:57:16.7	74.9	19.0	1.2	12	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2001/04/11

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 05:06:42.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/11	07:08:36.0	49.150N	174.060E	33.0N	4.9			SZGRF
2001/04/11	07:09:00.3	52.180N	160.323E	33N	4.7			NEIC

South of Aleutian Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 07:20:42.8	74.8	19.0	1.5	23	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/11	08:24:42.3			N				SZGRF
2001/04/11	08:25:27.5	34.890N	22.918E	33N	4.6			NEIC

Egypt

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 08:29:26.9	17.1	145.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/11	09:23:18.5			N				SZGRF
2001/04/11	09:23:40.3	34.755N	80.445E	33N	4.4			NEIC

Xizang

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:32:46.0	51.4	79.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/11	23:08:11.5			N				SZGRF
2001/04/11	23:07:50.5	35.760N	28.370E	5G	3.5			NEIC

Dodecanese Islands, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:12:11.0	18.7	131.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/12	07:01:45.4	36.350N	142.230E	33.0N	5.7			SZGRF

./2001/bul0104.txt

Thu Apr 23 08:38:25 2020

17

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 20:14:38.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/12	20:25:13.3	11.910N	82.290W	33.0N	5.1			SZGRF
2001/04/12	20:25:10.0	12.113N	86.723W	122D	5.1			NEIC

North of Panama

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:37:36.6	85.8	283.9	1.3	14	5.1		
	e	20:38:07.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/12	23:59:39.7			N				SZGRF

Kamchatka Peninsula, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:10:51.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/13	01:04:37.4	29.580N	54.740E	33.0N	4.8			SZGRF
2001/04/13	01:04:26.7	28.253N	54.882E	33N	5.1			NEIC

Southern Iran

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 01:11:55.4	39.4	106.5	0.9	17	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/13	02:09:22.6	31.140N	50.020E	33.0N	4.8			SZGRF
2001/04/13	02:08:39.6	28.260N	54.587E	33N	4.5			NEIC

Northern and central Iran

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 02:16:06.4	39.2	106.7	1.3	19	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/13	14:32:51.0	15.498S	172.528W	33N	4.9	5.1		NEIC

Samoa Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	14:52:28.4	145.7	6.4					
	e		14:52:38.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/13	15:33:53.6	59.663S	25.412W	33N	5.2	6.0		NEIC

South Sandwich Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (Pdiff)	Z	15:48:33.2	113.3	199.2					
	e PP	Z	15:53:18.6							
	e		15:53:41.3							
	e PPP	Z	15:56:29.4							
	e Sdiff	E	16:01:06.5							
	e SP	Z	16:02:53.8							
	e SS	N	16:08:56.3							
	e L	Z	16:34:41.5			21.8	1812		5.6	
CLL	e Pdiff	Z	15:48:44.8							
	e PKPdf	Z	15:52:32.5							
	e PP	Z	15:53:31.3							
	e PPP	Z	15:56:05.0							
	e SKSac	N	15:59:08.8							
	e Sdiff	E	16:01:19.2							
	e SKSP	Z	16:03:14.8							
	e SS	E	16:09:27.3							
	e SSS	N	16:13:27.8							
	e L	Z	16:36:06.3			22.0	2645		5.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/13								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	16:36:21.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/13	23:16:15.8	42.370N	147.200E	33.0N	5.7	5.4		SZGRF
2001/04/13	23:16:17.6	42.762N	145.286E	33N	5.2	5.1		NEIC

Off southeast coast of Hokkaido, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	23:28:11.6			1.0	131	6.0		
	e pP	Z	23:28:22.0							
	e sP	Z	23:28:28.2							

	e PP	Z	23:31:01.8								
	e S	E	23:37:57.7								
	e PS	E	23:38:15.3								
	e (SS)	N	23:42:59.6								
	e SSS	N	23:46:57.8								
	e L	Z	00:06:05.6			18.0	4921		5.9		
GRA1	e P	Z	23:28:23.3	79.2	32.5	1.2	96		5.7		
	e		23:28:34.0								
	e PP	Z	23:31:32.3								
	e S	N	23:38:19.5								
	e SS	N	23:44:14.8								
	e L	Z	00:06:55.6			19.3	1841		5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/14	02:20:0.5	54.680N	124.450W	19.1	5.4	4.5		SZGRF
2001/04/14	02:20:12.1	56.084N	119.431W	17D	5.2	4.7		NEIC

British Columbia, Canada

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	02:30:59.7			1.5	19	5.1		
	e pP	Z	02:31:04.9							
	e PcP	Z	02:31:35.1							
	e PP	Z	02:33:18.5							
	e S	N	02:39:47.3							
	e SS	N	02:44:01.5							
	e LV	Z	02:51:34.8							
	e L	Z	03:02:19.7			18.0	902		5.0	
GRA1	e P	+ Z	02:31:06.5	66.6	332.5	1.7	50	5.4		
	e pP	Z	02:31:11.9							
	e S	N	02:39:58.8							
	e L	Z	03:00:10.8			20.0	280		4.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/14	08:51:15.8	17.202S	168.400E	33N	5.3	5.3		NEIC

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKPdf)	Z	09:10:47.3	142.7	37.7					
	e (PKiKP)	Z	09:10:50.7							
	e		09:14:41.4							
	e SS	E	09:32:31.3							
	e L	Z	10:14:27.9			20.6	304		5.0	

./2001/bul0104.txt

Thu Apr 23 08:38:25 2020

20

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/14								
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb MS ML
	GRA1	e PKP	Z 10:34:42.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/14								
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb MS ML
	GRA1	e PKP	Z 13:35:04.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/14	23:27:33.7	30.480N	141.940E	33.0N	5.9	6.0		SZGRF
2001/04/14	23:27:30.2	30.201N	141.761E	33N	6.1	5.8		NEIC

Southeast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 23:40:08.5	85.7	43.1	1.4	294	6.2		
	e	23:51:43.6							
BSEG	e P	Z 23:40:09.9	86.0	40.5	1.4	277	6.2		
	e	23:51:48.1							
BRG	e P	Z 23:40:13.7	86.8	43.1	1.6	103	5.7		
	e	23:51:53.5							
CLL	e P	Z 23:40:13.9	86.9	42.5	1.6	127	5.8		
	e PP	Z 23:43:40.3							
	e SKSac	R 23:50:37.5							
	e S	T 23:50:53.3							
	e PS	N 23:51:54.1							
	e SS	T 23:56:38.7							
	e L	Z 00:21:01.6			18.0	6800		6.1	
CLZ	e P	Z 23:40:17.6	87.6	40.5	1.2	176	6.3		
	e	23:52:04.3							
MOX	e P	Z 23:40:19.3	88.0	41.4	1.5	112	6.0		
	e	23:52:09.7							
IBBN	e P	Z 23:40:20.4	88.2	38.5	1.2	212	6.3		
	e	23:52:13.3							
GEC2	e P	Z 23:40:21.1	88.4	42.9	1.3	36	5.4		
	e	23:52:13.8							
WET	e P	Z 23:40:22.2	88.5	42.3	1.6	58	5.6		
	e	23:52:16.9							
GRA1	e P	Z 23:40:24.0	88.8	41.1	1.7	123	5.9		
	e PP	Z 23:43:56.8							
	e S	E 23:50:59.2							
	e	23:52:21.4							

	e SS	E	23:57:10.4								
BUG	e P	Z	23:40:25.2	89.1	38.1	1.2	59	5.7			
TNS	e P	Z	23:40:26.9	89.6	39.0	2.2	176	5.9			
	e		23:52:30.4								
FUR	e P	Z	23:40:28.8	90.0	41.1	1.5	215	6.1			
	e		23:52:34.5								
STU	e P	Z	23:40:30.6	90.4	39.5	1.2	112	6.1			
	e		23:52:39.0								
WLF	e P	Z	23:40:33.6	90.9	37.2	1.4	78	5.8			
	e		23:52:45.3								
BFO	e P	Z	23:40:33.7	91.1	38.9	1.4	178	6.2			
	e		23:52:48.0								
GRA1	e L	Z	00:24:19.5	88.8	41.1	18.7	5758	6.0			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source			
2001/04/15											
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML	
	GRA1	e PKPab	Z 05:53:45.8								

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source			
2001/04/15											
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML	
	GRA1	e PKPdf	Z 11:46:39.7								

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/15	13:37:10.3	35.890N	70.760E	33.0N	4.8			SZGRF
2001/04/15	13:37:17.2	35.732N	69.812E	96D	4.7			NEIC

Hindu Kush, Afghanistan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z 13:45:08.1			1.0	8	4.4		
	e pP	Z 13:45:29.9							
	e sP	Z 13:45:40.6							
	e PP	Z 13:46:58.3							
	e PcS	Z 13:50:54.5							
GRA1	e P	Z 13:45:19.3	44.0	85.4	1.3	15	4.8		
	e	13:45:51.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2001/04/15

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 15:41:44.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/16	21:53:50.8	12.130N	94.040W	33.0N	4.9	4.7		SZGRF
2001/04/16	21:54:00.7	13.248N	91.197W	33N	5.1	4.6		NEIC

Off coast of Chiapas, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 22:06:49.0	87.7	287.9	1.2	11	4.9		
	e	22:06:58.2							
	e	22:07:10.6							
	e S	E 22:17:18.9							
	e SS	E 22:23:25.1							
	e L	Z 22:48:21.8			18.7	267		4.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/17	00:40:0.2	36.180N	140.930E	33.0N	5.1			SZGRF
2001/04/17	00:39:54.0	35.557N	140.775E	33N	4.7			NEIC

Near east coast of eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:52:24.1	83.8	39.1			5.1		
	e	00:52:34.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/17	01:42:11.1	20.765S	70.466W	33N	5.1	5.1		NEIC

Near coast of northern Chile

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pdiff	Z 01:55:55.2	100.5	250.2					
	e PP	Z 02:00:02.2							
	e	02:06:40.8							
	e Sdiff	N 02:07:35.9							
	e PS	E 02:09:12.1							
	e SS	E 02:14:35.0							
	e L	E 02:38:22.6			20.7	736		5.2	
CLL	e Pdiff	Z 01:56:04.8							
	e PP	Z 02:00:15.6							
	e PKP	Z 02:00:29.4							
	e SKSac	R 02:06:42.3							

e Sdiff	T	02:07:46.0									
e PS	R	02:09:25.5									
e SS	T	02:14:45.1									
e L	Z	02:39:14.2			22.0		1836		5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/17	04:38:55.9			N				SZGRF
2001/04/17	04:39:00.7	6.206S	22.817E	10G	4.9			NEIC

Zaire

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:48:45.2	56.8	166.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/17	04:53:31.3	46.390N	153.510E	33.0N	5.4			SZGRF
2001/04/17	04:53:37.0	45.624N	149.860E	92D	4.9			NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:05:29.6	78.1	28.2	1.2	49	5.4		
	e	05:05:33.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/17	05:08:37.1	37.130N	66.560E	33.0N	5.1			SZGRF
2001/04/17	05:08:21.2	36.959N	66.744E	42D	5.1	4.6		NEIC

Afghanistan-Tajikistan border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:16:18.1	41.3	86.2	1.7	60	5.1		
	e	05:16:27.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/17	11:17: 0.2	34.320N	73.060E	278.9	4.7			SZGRF
2001/04/17	11:17:18.2	36.539N	70.690E	272D	4.8			NEIC

Pakistan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 11:25:04.1	44.1	83.9			4.7		
	e pP	Z 11:26:01.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/17	17:58:08.6	27.400S	176.279W	33N	5.4	5.2		NEIC

Kermadec Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPdf	Z	18:17:58.8			1.2	10			
	i PKPbc	Z	18:18:08.3			1.0	20			
	e PKPab	Z	18:18:24.3			1.2	26			
GRA1	e PKPdf	Z	18:18:02.0	157.0	17.2					
	e PKPab	Z	18:18:32.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/17	21:54: 5.0	50.980N	178.860E	33.0N	5.9	5.2		SZGRF
2001/04/17	21:54:02.7	51.354N	179.848W	33N	5.7	5.5		NEIC

Rat Islands, Aleutian Islands, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML	
RGN	e P	+ Z	22:05:36.7	73.5	8.5	0.8	329	6.4			
BSEG	e P	+ Z	22:05:41.3	74.4	6.6	0.9	224	6.2			
RUE	e P	+ Z	22:05:47.5	75.5	8.7	1.4	234	6.1			
IBBN	e P	+ Z	22:05:51.4	76.1	4.9	1.1	576	6.6			
CLZ	e P	+ Z	22:05:53.0	76.4	6.5	1.2	262	6.2			
CLL	e P	+ Z	22:05:53.8			1.2	56	5.6			
	e PP	Z	22:08:51.1								
	e PPP	Z	22:10:42.9								
	e S	T	22:15:40.3								
	e PS	Z	22:16:21.5								
	e SS	N	22:21:00.5								
	e L	Z	22:42:13.0			20.0	3424		5.7		
	BRG	e P	+ Z	22:05:56.0	77.1	8.8	1.1	85	5.8		
	MOX	e P	+ Z	22:05:58.6	77.5	7.3	1.4	137	5.9		
	TNS	e P	+ Z	22:06:02.5	78.2	5.3	1.0	107	5.8		
GRA1	e P	+ Z	22:06:04.8	78.5	7.0	1.1	127	5.9			
	e PP	Z	22:09:02.0								
	e		22:11:04.3								
	e S	N	22:16:01.9								
	e SS	N	22:21:21.8								
WLF	e L	Z	22:45:42.0			21.6	1285		5.2		
	e P	+ Z	22:06:06.6	78.9	3.8	1.0	61	5.5			
	WET	e P	+ Z	22:06:06.4	78.9	8.1	1.1	47	5.3		
	GEC2	e P	+ Z	22:06:07.4	79.1	8.6	1.1	48	5.3		
	STU	e P	+ Z	22:06:09.9	79.6	5.7	1.2	126	5.7		
	FUR	e P	+ Z	22:06:12.5	80.0	7.0	1.1	142	5.9		
	BFO	e P	+ Z	22:06:12.5	80.1	5.2	1.2	95	5.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/17	23:25:32.5	51.120N	178.980E	33.0N	5.3			SZGRF
2001/04/17	23:25:29.6	51.424N	179.856W	33N	5.1	4.6		NEIC

Rat Islands, Aleutian Islands, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	23:37:03.6	73.5	8.5	0.8	96	5.9		
BSEG	e P	+ Z	23:37:08.4	74.3	6.6	0.8	65	5.7		
RUE	e P	Z	23:37:14.1	75.5	8.7	0.8	32	5.5		
IBBN	e P	Z	23:37:18.5	76.1	4.9	0.8	100	6.0		
CLZ	e P	+ Z	23:37:20.3	76.4	6.5	0.9	51	5.7		
CLL	e P	Z	23:37:21.0	76.7	8.2	0.8	17	5.2		
BUG	e P	Z	23:37:22.7	77.0	4.6	0.7	18	5.3		
BRG	e P	Z	23:37:23.1	77.0	8.8	0.8	14	5.1		
MOX	e P	Z	23:37:25.8	77.5	7.3	1.0	24	5.3		
TNS	e P	Z	23:37:29.7	78.1	5.3	0.8	34	5.4		
GRA1	e P	+ Z	23:37:31.6	78.4	7.0	0.9	22	5.2		
WLF	e P	Z	23:37:33.7	78.8	3.8	1.0	17	5.0		
WET	e P	Z	23:37:33.5	78.8	8.1	1.2	14	4.9		
GEC2	e P	+ Z	23:37:34.6	79.1	8.6	0.8	9	4.7		
STU	e P	Z	23:37:37.1	79.5	5.7	1.1	30	5.1		
FUR	e P	Z	23:37:39.2	80.0	7.0	1.0	34	5.4		
BFO	e P	Z	23:37:39.4	80.0	5.2	1.1	18	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/18	02:07:21.0	21.296S	113.301W	10G	5.1	4.8		NEIC

Southern East Pacific Rise

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	02:26:29.5	128.2	282.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/18	08:14:47.2	42.600N	148.990E	33.0N	5.0			SZGRF
2001/04/18	08:14:50.6	43.538N	147.465E	33N	4.8			NEIC

Off southeast coast of Hokkaido, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	08:26:56.9	79.2	30.7	1.1	18	5.0		
	e		08:27:09.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/18	13:01:22.0	51.580N	155.230E	33.0N	5.9	4.5		SZGRF

2001/04/18 13:01:08.4 49.291N 155.812E 71D 5.2 NEIC
Northwest of Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	+ Z	13:12:26.6	71.5	24.8	0.9	193	6.2		
BSEG	i P	+ Z	13:12:34.0	72.8	22.8	1.0	76	5.8		
RUE	e P	+ Z	13:12:36.8	73.3	24.8	1.0	152	6.1		
CLL	i P	+ Z	13:12:43.8	74.5	24.1	1.0	158	6.1		
BRG	i P	+ Z	13:12:44.6	74.7	24.7	1.2	68	5.7		
CLZ	i P	+ Z	13:12:45.6	74.7	22.6	1.1	189	6.1		
IBBN	i P	+ Z	13:12:46.0	74.8	20.9	1.1	142	6.0		
MOX	i P	+ Z	13:12:49.7	75.5	23.2	1.2	113	5.8		
BUG	e P	+ Z	13:12:51.1	75.8	20.6	0.9	60	5.6		
GRA1	i P	+ Z	13:12:55.9	76.5	22.9	1.2	173	6.0		
	e L	Z	13:48:59.5			20.8	281		4.5	
WET	i P	+ Z	13:12:56.1	76.5	23.8	1.2	148	5.9		
GEC2	i P	+ Z	13:12:55.9	76.6	24.3	1.5	82	5.5		
TNS	i P	+ Z	13:12:56.4	76.6	21.2	0.8	90	5.9		
STU	e P	+ Z	13:13:02.8	77.8	21.5	1.2	124	5.9		
FUR	e P	+ Z	13:13:03.4	77.9	22.8	1.1	159	6.0		
BFO	i P	+ Z	13:13:06.1	78.4	21.0	1.2	88	5.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/18	15:17:18.5	8.000N	75.480W	33.0N	4.7			SZGRF
2001/04/18	15:17:08.3	8.228N	74.823W	43D	4.9			NEIC

Northern Colombia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	15:29:34.4	81.2	272.4			4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/18	19:28:54.8	35.830N	71.140E	33.0N	5.0			SZGRF
2001/04/18	19:29:00.4	36.366N	71.293E	109*	4.6			NEIC

Pakistan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	19:37:05.9	44.6	83.7			5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/18	23:31:38.8	27.524S	176.297W	33N	5.2	5.4		NEIC

Kermadec Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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Thu Apr 23 08:38:25 2020

27

CLL	e PKPdf	Z	23:51:29.4				1.4	10			
	e PKPbc	Z	23:51:38.0				1.0	10			
	e		23:51:48.5								
	e PKPab	Z	23:51:56.0								
	e pPKPab	Z	23:52:06.1								
	e PP	Z	23:55:41.1								
	e L	Z	01:10:41.3				18.0	1054		5.7	
GRA1	e PKP	Z	23:52:02.9	157.1	17.3						
	e		23:52:13.1								

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/19								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 00:42:54.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/19	00:44: 7.0	16.510S	65.770E	33.0N	5.4			SZGRF
2001/04/19	00:44:10.2	14.744S	66.238E	10G	4.9			NEIC

Mid-Indian Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:56:23.0	80.5	126.6	1.9	66	5.4		
	e PcP	Z 00:56:29.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/19	02:40:39.0	7.449S	155.967E	30?	5.7	5.3		NEIC

Bougainville - Solomon Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPdf	Z 02:59:40.6			0.9	23			
	e PP	Z 03:01:41.2							
	e PPP	Z 03:04:16.8							
	e Sdiff	E 03:09:38.6							
	e SP	Z 03:11:42.2							
	e SPP	Z 03:13:02.3							
	e SS	E 03:18:51.9							
	e SSS	E 03:23:41.8							
	e SSSS	N 03:26:57.0							
	e L	Z 04:00:38.6			20.0	1660		5.7	
GRA1	e PKPdf	Z 02:59:43.1	128.5	47.0					
	e PP	Z 03:01:47.9							
	e	03:02:02.8							

e				03:13:27.6							
e	SS	N		03:18:38.9							
e	L	Z		04:02:20.3	19.9			714		5.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/19	03:13:29.3	7.412S	155.924E	33N	6.0	5.7		NEIC

Bougainville - Solomon Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 03:32:34.7	128.5	47.0					
	e PP	Z 03:34:39.0							
	e L	Z 04:29:32.4			21.9	933		5.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/19								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 06:29:34.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/19	20:05:02.7	7.313S	155.916E	33N	5.3	4.8		NEIC

Bougainville - Solomon Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 20:24:07.3	128.4	47.0					
	e	20:24:16.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/19	20:58:28.3	7.288S	155.936E	33N	5.8	6.0		NEIC

Bougainville - Solomon Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPdf	+ Z 21:17:29.8			1.1	59			
	e	21:17:40.2							
	e	Z 21:17:51.5							
	e PP	Z 21:19:24.1							
	e Sdiff	N 21:27:24.2							
	e PSKS	Z 21:29:27.1							
	e PPS	Z 21:30:51.0							
	e SKKSdf	Z 21:34:21.4							
	e SS	N 21:36:31.0							

	e SSS	N	21:41:42.5							
	e (SSSS)	E	21:45:24.2							
	e L	Z	22:18:36.7			20.0	6969	6.3		
GRA1	e PKPdf	Z	21:17:34.3	128.4	46.9					
	e PP	Z	21:19:40.6							
	e		21:20:49.7							
	e		21:31:21.1							
	e SS	N	21:36:38.1							
	e L	Z	22:05:16.0			20.5	2832	5.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/19	21:43:45.2	7.373S	155.829E	33N	6.0	6.6		NEIC
Bougainville - Solomon Islands region								

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	CLL	e PKPdf	Z 22:02:45.5			1.1	53			
		e	22:02:56.1							
		e PP	Z 22:04:30.8							
		e	22:06:00.4							
		e	Z 22:16:23.9							
		e SS	N 22:21:47.2							
		e SSS	E 22:26:42.1							
		e SSSS	E 22:30:36.0							
		e L	Z 23:03:52.3			18.0	22562	6.9		
GRA1	e PKPdf	Z	22:02:50.1	128.4	47.1					
	e		22:03:01.1							
	e PP	Z	22:04:53.2							
	e		22:05:03.4							
	e SS	N	22:22:08.4							
	e L	Z	23:03:27.3			19.6	9041	6.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/19	21:57:00.7	7.216S	155.990E	33N	4.9			NEIC
Bougainville - Solomon Islands region								

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKPdf	Z 22:16:04.5	128.3	46.8					
		e	22:16:14.0							
		e PP	Z 22:18:08.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/20	00:18:23.2	34.940N	26.010E	10.0G				SZGRF
2001/04/20	00:18:11.3	33.655N	25.457E	10G	4.7			NEIC

Crete, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 00:22:14.9	17.5	145.7					
WET	e P	Z 00:22:22.9	18.1	144.3					
GRA1	e P	Z 00:22:34.7	19.2	141.4	1.4	24			
BFO	e P	Z 00:22:39.1	19.5	132.6					
MOX	e P	Z 00:22:41.1	19.8	143.9					
CLL	e P	Z 00:22:41.5	19.8	148.1					
TNS	e P	Z 00:22:54.5	20.7	136.6					
WLF	e P	Z 00:23:04.3	21.4	131.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/20								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:51:37.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/20	10:05:30.1	43.150N	146.200E	33.0N	4.8			SZGRF
2001/04/20	10:05:32.3	42.911N	145.104E	82?	4.6			NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:17:32.1	79.0	32.5	1.2	17	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/20	10:29: 6.9	55.100N	161.000W	33.0N	5.2			SZGRF
2001/04/20	10:29:13.5	56.294N	157.886W	63	4.9			NEIC

Alaska Peninsula, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:40:45.5	73.6	353.7			5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/20	19:20:54.5	7.531S	155.884E	33N	5.4	5.4		NEIC

Bougainville - Solomon Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPdf	+ Z 19:39:55.5			0.8	7			
	e PP	Z 19:41:57.7							

e				19:43:22.1								
e PPP		Z		19:44:29.2								
e PS		E		19:51:56.8								
e PPS		Z		19:53:30.0								
e SS		N		19:59:05.4								
e SSS		E		20:03:50.3								
e L		Z		20:41:05.7				20.0	1041		5.5	
GRA1 e PKP		Z		19:39:59.7	128.5	47.1						
e PP		Z		19:42:08.9								
e				19:43:26.0								
e				19:52:12.6								
e				19:53:40.7								
e SS		N		19:59:37.9								
e L		Z		20:43:18.1				19.4	619		5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source				
2001/04/20												
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML		
	GRA1	e PKP	Z 22:38:22.7									

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source				
2001/04/20												
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML		
	GRA1	e PKP	Z 23:29:50.7									

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source				
2001/04/20												
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML		
	GRA1	e PKP	Z 23:52:43.2									

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source				
2001/04/21	04:10:20.9	7.525S	156.058E	33N	5.1	4.8		NEIC				
Bougainville - Solomon Islands region												
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML		
	GRA1	e PKP	Z 04:29:26.9	128.6	47.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/21	08:27:15.1	16.780S	173.760W	600G	3.9			NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 08:45:58.2	146.8	8.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/21								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 15:54:45.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/21	16:22:19.0	26.950N	139.770E	33.0N	5.2			SZGRF
2001/04/21	16:23:07.8	29.197N	139.231E	400G	4.4			NEIC

Bonin Islands, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 16:35:19.1	88.6	43.5	1.5	17	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/21	17:18:52.0	41.540N	113.360W	33.0N	5.9	5.0		SZGRF
2001/04/21	17:18:56.9	42.925N	111.395W	5	5.3	4.7		NEIC

Utah, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:30:40.0	74.7	320.2	1.8	166	5.9		
	e SS	N 17:45:37.6							
	e L	Z 18:02:22.7			18.2	608		5.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/21	18:15:46.8	29.103S	67.554W	128D	5.2			NEIC

La Rioja Province, Argentina

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (Pdiff)	Z 18:29:36.6	105.1	242.6					
	e PP	Z 18:33:56.3							
	e	18:43:00.0							
CLL	e PKPdf	Z 18:33:56.9							

e PP	Z	18:34:10.4									
e SKSac	E	18:40:19.8									
e PS	Z	18:43:21.0									
e L	Z	19:18:25.5			18.0		548			5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/21	18:17:35.7			N				SZGRF
BRAZIL								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 18:30:13.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/21								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 22:22:32.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/22	03:34:33.0	8.230N	82.690W	33.0N	4.7			SZGRF
2001/04/22	03:34:36.6	7.356N	78.533W	10G	4.7			NEIC
Panama-Costa Rica border region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:47:11.7	84.2	274.6	1.1	7	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/22	06:23:27.8	20.756S	178.863W	600G	4.2			NEIC
Fiji Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 06:42:12.8	150.0	19.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/22	07:48:54.7	20.212S	174.118W	33N	4.9			NEIC
Tonga Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 08:08:44.8	150.2	10.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/22	12:50:13.9	59.000N	158.090W	33.0N	5.2			SZGRF
2001/04/22	12:50:05.0	57.436N	155.109W	56D	4.6			NEIC

Bristol Bay, Alaska, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:01:28.6	72.3	352.3	1.9	37	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/22								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:59:30.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/22								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 15:48:04.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/23	00:38:51.9			N				SZGRF

Bristol Bay, Alaska, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z 00:43:57.7							
BRG	e P	Z 00:43:40.3							
BSEG	e P	Z 00:44:16.5							
CLL	e P	Z 00:43:49.1							
GEC2	e P	Z 00:43:27.3							
MOX	e P	Z 00:43:50.8							
WET	e P	Z 00:43:33.8							
WLF	e P	Z 00:44:15.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/23	13:54:34.2	30.410N	137.950E	33.0N	5.7			SZGRF
2001/04/23	13:55:27.7	33.006N	136.572E	416D	5.2			NEIC

Southeast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	- Z	14:07:06.1			0.9	155	6.2		
	e pP	Z	14:08:09.8							
	e (PP)	Z	14:09:32.2							
	e (SSS)	Z	14:29:06.4							
GRA1	e P	Z	14:07:16.6	84.2	43.4	1.2	66	5.7		
	e PP	Z	14:10:38.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/23	16:35:41.9	13.740N	50.700E	33.0N	5.4			SZGRF
2001/04/23	16:35:35.6	13.265N	50.443E	10G	5.2	4.8		NEIC

Eastern Gulf of Aden

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	16:44:06.0	46.7	126.8					
WET	e P	Z	16:44:10.6	47.3	126.1					
FUR	e P	Z	16:44:13.4	47.6	123.6					
BRG	e P	Z	16:44:14.8	47.8	128.6					
GRA1	e P	Z	16:44:19.7	48.5	124.7	1.3	40	5.4		
	e PP	Z	16:46:16.7							
	e S	N	16:51:25.6							
	e ScS	E	16:54:03.2							
	e SS	E	16:55:16.8							
CLL	i P	- Z	16:44:20.5			1.1	34	5.3		
	e PcP	Z	16:45:46.9							
	e PP	Z	16:46:18.8							
	e S	E	16:51:27.2							
	e L	Z	17:06:19.5			20.0	422		4.4	
MOX	e P	Z	16:44:22.9	48.8	125.8					
RUE	e P	Z	16:44:23.2	48.9	129.5					
STU	e P	Z	16:44:24.8	49.1	121.9					
BFO	e P	Z	16:44:27.1	49.4	120.7					
CLZ	e P	Z	16:44:32.8	50.2	125.3					
TNS	e P	Z	16:44:34.0	50.3	122.1					
WLF	e P	Z	16:44:41.7	51.3	119.4					
BSEG	e P	Z	16:44:41.7	51.4	126.6					
IBBN	e P	Z	16:44:44.7	51.8	122.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/24	09:54:31.6	19.385S	173.794W	20D	5.4	5.4		NEIC

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z	10:14:13.7							

./2001/bul0104.txt

Thu Apr 23 08:38:25 2020

38

2001/04/25 21:02:42.4
South of Jawa, Indonesia

9.038S 106.523E 33N 5.6 4.9 NEIC

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pdiff	Z 21:16:25.9	100.3	91.9					
	e PP	Z 21:20:34.3							
	e	21:29:18.3							
	e SS	N 21:35:05.9							

Date Origin Time Lat Long Depth mb Ms ML Source
2001/04/25

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 22:12:22.4							

Date Origin Time Lat Long Depth mb Ms ML Source
2001/04/26

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z 07:15:39.6			0.8	20			
	e PKPab	Z 07:15:43.5							
GRA1	e PKP	Z 07:15:45.0							

Date Origin Time Lat Long Depth mb Ms ML Source
2001/04/26

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 07:46:48.0							

Date Origin Time Lat Long Depth mb Ms ML Source
2001/04/26

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:09:41.2							

Date Origin Time Lat Long Depth mb Ms ML Source
2001/04/26 16:08:28.8 1.040S 103.420E 33.0N 5.0 SZGRF
Southern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (Pdiff)	Z 19:13:31.1							
	e PS	E 19:26:29.1							
	e SS	E 19:31:51.7							
	e L	Z 19:54:41.4			20.9	1095		5.3	
CLL	e PP	Z 19:17:38.2							
	e SP	Z 19:26:30.5							
	e PPS	Z 19:27:18.3							
	e SS	E 19:32:00.4							
	e L	Z 19:53:24.6			22.0	1611		5.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/26	21:00:54.8	19.240N	99.260E	33.0N	4.6	4.5		SZGRF

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:12:28.7	74.2	78.7			4.6		
	e L	Z 21:33:44.8			21.2	293		4.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/27	00:49:35.3	50.730N	175.140E	33.0N	5.0			SZGRF
2001/04/27	00:49:33.8	51.342N	179.539W	46	4.7			NEIC

Rat Islands, Aleutian Islands, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:01:34.4	78.6	6.8	1.6	29	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/27								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 02:15:10.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/27	04:10:20.5			N				SZGRF

Rat Islands, Aleutian Islands, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:22:23.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/27	18:58:47.6	15.780N	147.299E	52D	5.3			NEIC

Mariana Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (Pdiff)	Z 19:12:49.0	103.9	43.5					
	e PP	Z 19:17:11.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/27	19:52:21.4	52.680N	157.880E	33.0N	4.8			SZGRF
2001/04/27	19:52:24.2	53.251N	160.054E	100G	4.2			NEIC

Kamchatka Peninsula, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:03:53.0	73.7	18.8	1.2	12	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/28	00:05:23.4	31.610N	24.210E	10.0G	4.7			SZGRF
2001/04/28	00:06:00.4	34.910N	22.966E	33N	4.7			NEIC

Near coast of Libya

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 00:09:43.8	15.5	150.4					
FUR	e P	Z 00:09:47.1	15.8	142.5					
WET	e P	Z 00:09:49.8	16.1	148.7					
GRA1	e P	Z 00:10:02.0	17.1	145.4	1.3	48	4.7		
CLL	e P	Z 00:10:09.5	17.9	152.5					
TNS	e P	Z 00:10:17.9	18.6	139.9					
CLZ	e P	Z 00:10:25.0	19.2	147.0					
RGN	e P	Z 00:10:41.2	20.8	157.2					
BSEG	e P	Z 00:10:42.3	21.0	149.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/28	04:41:47.4	22.684S	173.361E	33N	5.2			NEIC

Southeast of Loyalty Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z 05:01:32.9	149.6	34.0					

./2001/bul0104.txt

Thu Apr 23 08:38:25 2020

42

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/28	04:49:52.9	18.028S	177.023W	352D	6.2			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML	
CLL	e PKPdf	Z 05:08:52.9			1.0	649				
	e PKPbc	Z 05:08:55.4								
	e PKPab	Z 05:08:58.8			1.1	4211				
	e pPKPbc	Z 05:10:22.3								
	e sPKPbc	Z 05:10:53.1								
	e PP	Z 05:12:06.0								
	e pPP	Z 05:13:34.1								
	e SKKS	Z 05:18:31.5								
	e SKKP	Z 05:19:53.1								
	e PSKS	Z 05:21:48.3								
	e SPP	Z 05:24:16.2								
	e SS	E 05:30:44.7								
	e sSS	E 05:32:58.4								
	e PPKKKKP	Z 05:45:16.1			1.4	16				
	GRA1	e PKPbc	Z 05:08:56.5	147.6	14.8					
		e pPKP	Z 05:10:28.5							
		e PP	Z 05:12:27.0							
e		05:19:42.6								
e SKKSdf		N 05:24:47.5								
e SS	E 05:30:57.6									

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/28	05:27:18.7	20.810S	175.040E	33.0N				SZGRF
2001/04/28	05:27:13.8	22.158S	173.311E	33N	5.6			NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z 05:47:01.4	149.1	33.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/28	10:38: 2.6	29.910N	87.740E	33.0N	5.3			SZGRF
2001/04/28	10:37:56.6	28.856N	87.215E	33N	5.2			NEIC

Xizang

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	- Z 10:47:50.6	58.2	81.2	0.9	18	5.1		
BSEG	e P	- Z 10:48:00.2	59.5	81.8	0.9	42	5.5		
GRA1	e P	- Z 10:48:01.1	59.7	80.0	1.5	40	5.2		
	e	10:48:04.3							
CLZ	e P	- Z 10:48:02.0	59.8	80.6	0.8	50	5.6		

./2001/bul0104.txt

Thu Apr 23 08:38:25 2020

43

TNS e P - Z 10:48:12.1 61.3 78.3 0.9 20 5.0

Date Origin Time Lat Long Depth mb Ms ML Source
2001/04/28 21:54:51.2 23.030S 179.531W 529D 4.6
South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 22:13:36.3							
	e PKPbc	Z 22:13:42.5			0.9	71			
	e PKPab	Z 22:13:50.4			0.9	52			
	e	22:15:23.3							
	e pPKPbc	Z 22:15:48.9							
GRA3	e PKPdf	Z 22:13:40.1	151.9	21.6					
	e PKPbc	Z 22:13:46.6							
	e PKPab	Z 22:13:58.7							
GRA1	e pPKPab	Z 22:15:56.4	152.0	21.5					

Date Origin Time Lat Long Depth mb Ms ML Source
2001/04/29 01:40: 6.3 41.820N 145.040E 33.0N 4.9 SZGRF
2001/04/29 01:40:12.7 42.046N 142.524E 66D 4.6 NEIC
Hokkaido, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:52:12.4	78.8	34.7	1.3	19	4.9		

Date Origin Time Lat Long Depth mb Ms ML Source
2001/04/29 02:41:45.3 17.462S 167.820E 33N 5.1 5.0
Vanuatu Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 03:01:14.4	142.7	38.7					

Date Origin Time Lat Long Depth mb Ms ML Source
2001/04/29 10:38:33.2 24.820N 91.060E 33.0N 4.7 SZGRF
2001/04/29 10:39:04.6 28.660N 87.006E 33N 4.7 NEIC
India-Bangladesh border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:49:09.9	59.7	80.3			4.7		
	e	10:49:13.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/29								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:01:44.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/29	21:27: 2.8	17.590N	102.100W	33.0N	5.3	5.5		SZGRF
2001/04/29	21:26:58.1	18.824N	104.358W	33N	5.2	5.5		NEIC

Near coast of Michoacan, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	+ Z 21:39:49.8	88.4	300.6	1.1	22	5.4		
TNS	e P	+ Z 21:39:54.3	89.2	299.2	1.3	21	5.2		
CLZ	e P	+ Z 21:39:55.4	89.5	300.7	1.2	23	5.3		
CLL	e P	Z 21:40:02.3			1.1	11	5.1		
	e PP	Z 21:43:42.3							
	e SKKSac	R 21:50:37.5							
	e S	T 21:51:00.9							
	e PS	Z 21:52:17.5							
	e SS	E 21:57:29.9							
	e SSS	E 22:01:05.2							
	e LV	Z 22:10:20.9							
	e L	Z 22:22:26.4			22.0	2424		5.6	
GRA1	e P	+ Z 21:40:03.0	91.0	301.4	1.6	51	5.6		
	e PP	Z 21:43:37.7							
	e	21:50:29.6							
	e PS	E 21:52:22.8							
	e SS	Z 21:57:04.7							
	e	21:58:16.2							
	e	22:01:08.0							
	e L	Z 22:20:58.6			21.6	1817		5.5	
GEC2	e P	+ Z 21:40:10.6	92.9	303.2	1.4	14	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/30	02:02: 9.1	44.880N	147.240E	33.0N	6.0	5.0		SZGRF
2001/04/30	02:02:02.3	43.899N	147.389E	47D	5.7	4.9		NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	+ Z 02:13:36.7	74.1	32.6	1.4	305	6.3		
BSEG	e P	+ Z 02:13:45.1	75.5	30.5	1.1	162	6.0		
RUE	e P	+ Z 02:13:46.0	75.7	32.6	1.2	232	6.1		

CLL	i P	+ Z	02:13:52.6				1.1	220	6.2	
	e sP	Z	02:14:17.3							
	e PP	Z	02:16:50.9							
	e S	E	02:23:37.3							
	e SS	Z	02:28:48.6							
	e L	Z	02:51:45.5				20.0	1437		5.3
BRG	e P	+ Z	02:13:53.1	77.0	32.5		1.4	110	5.8	
CLZ	e P	+ Z	02:13:55.5	77.3	30.2		1.3	312	6.3	
IBBN	e P	+ Z	02:13:57.3	77.7	28.5		1.1	222	6.2	
MOX	e P	+ Z	02:13:58.7	78.0	30.9		1.5	164	6.0	
GEC2	e P	+ Z	02:14:03.0	78.8	32.1		1.9	101	5.6	
WET	e P	+ Z	02:14:03.9	78.8	31.6		1.5	186	6.0	
GRA1	e P	+ Z	02:14:04.5	78.9	30.6		1.5	281	6.2	
	e		02:14:29.2							
	e PP	Z	02:17:11.0							
	e S	E	02:23:53.6							
	e L	Z	02:53:49.5				20.0	688		5.0
TNS	e P	+ Z	02:14:06.3	79.3	28.8		1.4	154	5.8	
FUR	e P	+ Z	02:14:11.3	80.2	30.5		1.5	241	5.9	
STU	e P	+ Z	02:14:11.8	80.4	29.2		1.6	201	5.8	
WLF	e P	+ Z	02:14:12.9	80.5	27.2		1.8	136	5.6	
BFO	e P	+ Z	02:14:15.2	81.0	28.6		1.9	216	5.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/30	08:06:27.5	22.990S	175.870W					GRSN
2001/04/30	08:06:35.6	22.792S	176.637W	33N	4.8			NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z 08:26:24.4	150.9	17.0	1.0	23			
	e PKPab	Z 08:26:30.4							
GRA1	e PKP	Z 08:26:28.9	152.4	15.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/30								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 17:59:33.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/30	21:42:21.7	30.367S	178.061W	53D	5.0			NEIC

Kermadec Islands, New Zealand

./2001/bul0104.txt

Thu Apr 23 08:38:25 2020

46

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPab	Z	22:02:52.8	159.4	23.4					
	e		22:02:57.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/04/30								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	23:01:04.7							

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-analysis).

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