

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

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

MARCH 2001 UPDATED 02.May.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
2001/03/01	03:12:18.0	46.036N	94.072E	33N	5.0			NEIC
Mongolia								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:21:34.3	52.8	59.9	1.1	43	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/01	03:59:57.5	22.321S	170.412E	33N	5.1	5.1		NEIC
Southeast of Loyalty Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 04:19:44.1	148.1	38.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/01	04:08:15.1	22.230S	170.430E	33N	4.9			NEIC
Southeast of Loyalty Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 04:27:58.9	148.0	38.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/01	04:54:57.3	22.210S	170.210E	33N	4.9			NEIC
Southeast of Loyalty Islands								

./2001/bul0103.txt

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Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 05:14:40.6	147.9	38.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/01	16:37:47.9	23.090N	122.280E	18.6	5.4			SZGRF
2001/03/01	16:37:50.7	23.839N	121.130E	33N	5.1	4.9		NEIC

Taiwan region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 16:50:21.0	83.9	59.9			5.4		
	e PcP	Z 16:50:23.9							
	e pP	Z 16:50:26.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/01								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 19:00:53.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/01								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 20:40:00.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/01								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 20:44:21.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/02	11:53:19.0	34.880N	26.280E	33.0G	4.2			SZGRF

Crete, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 11:57:12.3	16.8	141.7	0.9	6	3.7		
WET	e P	Z 11:57:18.5	17.3	140.4	1.6	24	4.1		
BRG	e P	Z 11:57:28.8	18.3	146.1					

./2001/bul0103.txt

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2001/03/03 22:56: 3.6 23.540N 93.140E 55.8 5.6 SZGRF
2001/03/03 22:55:59.1 23.885N 93.699E 55D 5.3 NEIC
Myanmar-India border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	23:06:38.1	65.3	82.4					
BRG	e P	Z	23:06:38.7	65.4	81.8					
GEC2	e P	Z	23:06:42.0	65.8	80.7					
CLL	i P	- Z	23:06:41.9			1.1	34	5.5		
	e pP	Z	23:06:57.4							
	e sP	Z	23:07:04.3							
	e SS	Z	23:20:58.7							
	e L	Z	23:38:58.4			22.0	244		4.4	
WET	e P	Z	23:06:45.1	66.3	80.3					
MOX	e P	Z	23:06:48.3	66.9	80.0					
BSEG	e P	Z	23:06:50.3	67.1	80.4					
GRA1	e P	Z	23:06:51.7	67.3	79.3			5.6		
	e pP	Z	23:07:06.8							
	e S	N	23:14:43.8							
CLZ	e P	Z	23:06:52.2	67.4	79.6					
FUR	e P	Z	23:06:52.9	67.5	78.8					
IBBN	e P	Z	23:07:01.4	68.9	77.8					
TNS	e P	Z	23:07:01.6	68.9	77.6					
BUG	e P	Z	23:07:04.3	69.4	77.2					
BFO	e P	Z	23:07:04.0	69.4	76.8					
WLF	e P	Z	23:07:11.8	70.5	75.7					

Date Origin Time Lat Long Depth mb Ms ML Source
2001/03/04 07:54:22.7 22.923N 70.415E 10G 4.8 4.3 ML NEIC
Southern India

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	08:03:43.2	53.0	97.8	1.5	34	5.0		
	e pP	Z	08:03:48.1							
	e sP	Z	08:03:51.2							
	e L	Z	08:31:24.6			19.9	197		4.2	

Date Origin Time Lat Long Depth mb Ms ML Source
2001/03/04 15:38:29.9 45.020N 27.620E G
2001/03/04 15:38:45.9 45.525N 26.232E 151 4.6 NEIC
Romania

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	15:40:55.6	9.1	106.6					
	e S	Z	15:42:46.4							

WET	e P	Z	15:41:03.4	9.7	106.8
	e S	Z	15:42:56.5		
BRG	e P	Z	15:41:03.2	9.8	118.4
	e S	Z	15:42:58.4		
CLL	e P	Z	15:41:12.6	10.5	118.3
	e S	Z	15:43:15.4		
FUR	e P	Z	15:41:14.4	10.5	98.9
	e S	Z	15:43:20.9		
RUE	e P	Z	15:41:14.8	10.7	125.5
	e S	Z	15:43:20.4		
GRA1	e P	Z	15:41:18.7	10.9	106.7
	e		15:41:29.6		
	e S	Z	15:43:27.5		
MOX	e P	Z	15:41:22.1	11.0	112.1
	e S	Z	15:43:32.0		
CLZ	e P	Z	15:41:37.6	12.2	114.9
	e S	Z	15:43:58.8		
BFO	e P	Z	15:41:39.6	12.5	96.3
	e S	Z	15:44:06.5		
TNS	e P	Z	15:41:43.2	12.8	104.7
	e S	Z	15:44:14.9		
BSEG	e P	Z	15:41:54.4	13.2	123.0
	e S	Z	15:44:23.1		
BUG	e P	Z	15:42:01.4	13.8	107.9
	e S	Z	15:44:39.1		
IBBN	e P	Z	15:42:01.5	13.9	112.0
	e S	Z	15:44:38.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/05	11:08:32.3	28.320N	128.430E	33.0N	6.0			SZGRF
2001/03/05	11:08:35.0	28.602N	128.963E	80D	5.3			NEIC

Ryukyu Islands, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	11:20:45.6	81.2	53.5	2.1	434	6.1		
BSEG	e P	Z	11:20:49.2	82.0	51.1	1.8	265	6.1		
BRG	e P	Z	11:20:49.9	82.1	53.4	1.4	75	5.6		
CLL	i P	+ Z	11:20:51.0			1.2	136	6.0		
	e pP	Z	11:21:17.0							
	e PP	Z	11:24:27.1							
	e S	E	11:30:58.4							
	e LV	Z	11:48:16.9							
	e L	Z	12:02:25.3			18.0	952		5.2	
CLZ	e P	Z	11:20:55.9	83.3	50.9	0.9	207	6.3		
MOX	e P	Z	11:20:56.5	83.4	51.7	2.0	199	6.0		
WET	e P	Z	11:20:57.6	83.7	52.5	2.2	207	6.0		
GRA1	e P	Z	11:21:00.7	84.2	51.4	1.4	195	6.2		

	e PP	Z	11:24:10.6						
	e SS	Z	11:38:14.1						
	e		11:43:25.7						
IBBN	e P	Z	11:21:00.2	84.2	49.0	0.9	193	6.3	
BUG	e P	Z	11:21:04.0	85.0	48.6	1.5	167	6.0	
FUR	e P	Z	11:21:05.1	85.1	51.3	1.7	317	6.3	
TNS	e P	Z	11:21:05.5	85.3	49.4	1.7	74	5.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/05	15:50:22.7	36.110N	86.600E	33.0N	5.5	6.0		SZGRF
2001/03/05	15:50:06.7	34.356N	86.889E	33N	5.4	5.8		NEIC

Southern Xinjiang, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 15:59:30.5	53.6	79.0	0.8	52	5.5		
BRG	e P	Z 15:59:32.3	53.8	78.0	1.0	47	5.4		
CLL	i P	Z 15:59:32.3							
	e PP	Z 16:01:30.5							
	e S	E 16:07:03.8							
	e SS	Z 16:10:56.4							
	e L	Z 16:27:01.3			22.0	20481		6.1	
WET	e P	Z 15:59:40.3	54.9	76.0	1.1	50	5.4		
MOX	e P	Z 15:59:43.1	55.3	76.2	1.1	34	5.3		
BSEG	e P	Z 15:59:43.6	55.3	77.6	1.1	44	5.4		
CLZ	e P	Z 15:59:46.7	55.8	76.2	1.1	68	5.6		
GRA1	e P	Z 15:59:47.2	55.8	75.3	1.1	87	5.7		
	e PP	Z 16:01:54.9							
	e	16:03:09.2							
	e S	Z 16:07:39.6							
	e SS	Z 16:11:25.9							
	e L	Z 16:27:31.4			18.0	11497		6.0	
FUR	e P	Z 15:59:49.7	56.1	74.4	1.2	145	5.9		
IBBN	e P	Z 15:59:56.9	57.2	74.7	1.4	74	5.5		
TNS	e P	Z 15:59:57.9	57.3	73.9	1.0	29	5.3		
BUG	e P	Z 16:00:00.6	57.7	73.8	1.3	56	5.4		
BFO	e P	Z 16:00:01.8	58.0	72.6	1.1	35	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/05	21:49:35.9	47.090N	158.510E	33.0N	4.7			SZGRF
2001/03/05	21:49:43.1	48.218N	154.948E	33N	4.7			NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 22:01:37.8	77.2	23.8			4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/06	01:08:11.7	20.572S	175.735W	33N	5.0	4.8		NEIC
Tonga Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 01:28:01.1	150.4	13.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/06								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z 05:44:26.3			1.1	31	5.2		
GRFO	i P	+ Z 05:44:37.1			0.9	21	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/06	09:17:35.9	54.601S	157.260E	10G	5.9	5.8		NEIC
Macquarie Island, Australia, region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPab	Z 09:38:09.9	158.8	116.4					
	e PP	Z 09:41:54.8							
	e SS	N 10:01:46.3							
	e L	Z 10:57:15.5			21.7	1236	5.7		
CLL	e PKPdf	Z 09:37:40.7							
	e PKPab	Z 09:38:07.0							
	e PP	Z 09:41:50.1							
	e PPP	Z 09:45:15.4							
	e PPPr	Z 09:50:39.2							
	e SKKS	Z 09:51:53.3							
	e PPS	E 09:55:10.6							
	e SS	Z 10:02:34.4							
	e SSS	Z 10:07:48.7							
	e SSSS	Z 10:12:17.4							
	e L	Z 10:55:49.1			20.0	1702	5.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/07								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKP)	Z 00:07:52.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/07								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 10:33:56.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/07								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 12:39:43.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/07	18:11:00.0	7.450S	11.580W	30.1	5.1	5.5		SZGRF
2001/03/07	18:10:57.6	7.189S	12.940W	10G	5.3	5.6		NEIC

Ascension Island region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z 18:20:52.7	58.6	204.9	1.0	15	5.0		
FUR	e P	Z 18:20:58.3	59.3	208.2	1.1	44	5.4		
TNS	e P	Z 18:21:05.1	60.3	204.6	0.9	18	5.1		
GRA1	e P	Z 18:21:07.2	60.6	207.8	0.9	13	4.9		
	e pP	Z 18:21:15.5							
	e PcP	Z 18:21:47.9							
	e PP	Z 18:23:23.1							
	e	18:29:20.8							
	e SS	Z 18:33:16.8							
	e L	Z 18:45:16.1			21.9	3538		5.5	
WET	e P	Z 18:21:07.9	60.7	209.7	1.2	23	5.1		
MOX	e P	Z 18:21:14.2	61.6	207.9	1.1	17	4.8		
CLZ	e P	Z 18:21:19.3	62.3	206.3					
BRG	e P	Z 18:21:19.7	62.5	210.4					
CLL	i P	- Z 18:21:22.5			2.9	121			
	e PcP	Z 18:21:57.3							
	e PP	Z 18:23:49.3							
	e PPP	Z 18:25:05.6							
	e S	Z 18:29:46.8							
	e SS	Z 18:33:46.0							
	e SSS	E 18:36:26.2							
	e LV	Z 18:41:01.6							
	e L	Z 18:46:19.0			22.0	3838		5.5	
RUE	e P	Z 18:21:28.2	63.9	209.8	1.1	31	5.3		
BSEG	e P	Z 18:21:31.3	64.2	205.8	1.0	27	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source			
2001/03/07											
		Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
		CLL	i PKPbc	Z 18:41:37.5			0.9	42			
			i PKPab	Z 18:41:41.8			0.9	17			
		GRA1	e PKP	Z 18:41:43.0							
			e	18:41:50.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/08	06:07:42.1	53.500N	160.130E	33.0N	5.0			SZGRF
2001/03/08	06:07:42.5	53.437N	160.114E	80*	4.5			NEIC

Near east coast of Kamchatka Peninsula, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:19:12.1	73.6	18.7			5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/08	11:37:25.2	29.842S	178.117W	33N	5.2	5.0		NEIC

Kermadec Islands, New Zealand

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPab	Z 11:57:56.8	158.9	23.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/08	15:28:44.0	30.272S	178.341W	300G	4.7			NEIC

Kermadec Islands, New Zealand

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 15:48:47.4	159.3	23.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/08	20:50:17.6	36.280N	71.560E	184.9	4.9			SZGRF
2001/03/08	20:50:33.9	36.544N	70.948E	185D	4.9			NEIC

Afghanistan-Tajikistan border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:58:28.7	44.3	83.7			4.9		

e pP Z 20:59:09.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/08	21:11:17.9	5.360S	105.000E	33.0N	5.6			SZGRF
2001/03/08	21:11:24.4	5.342S	102.318E	33N	5.7	5.3		NEIC

Sunda Strait, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 21:24:37.1	93.1	94.6	2.0	89	5.8		
WET	e P	Z 21:24:39.4	93.7	93.9	1.4	26	5.5		
CLL	e P	Z 21:24:39.2	93.7	93.9	1.1	16	5.3		
MOX	e P	Z 21:24:43.3	94.6	92.9	1.6	22	5.4		
GRA1	e P	Z 21:24:44.4	94.8	92.6	1.4	40	5.8		
CLZ	e P	Z 21:24:47.1	95.4	91.8	1.2	17	5.6		
BSEG	e P	Z 21:24:47.8	95.5	91.5	1.3	23	5.6		
TNS	e P	Z 21:24:52.4	96.6	90.5	1.3	24	5.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/09	01:06:58.8	31.340N	71.180E	33.0N	5.4	4.7		SZGRF
2001/03/09	01:07:09.4	32.445N	69.472E	33N	5.0	5.1		NEIC

Pakistan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:15:32.4	45.9	89.3	1.3	41	5.4		
	e S	E 01:22:51.5							
	e L	Z 01:38:24.9			19.3	828		4.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/09	08:07:38.9	20.479S	178.092W	500G	4.3			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 08:26:23.8			1.1	7			
	i PKPbc	- Z 08:26:27.8			0.9	28			
	i PKPab	Z 08:26:32.3			0.8	12			
GRA1	e PKP	Z 08:26:33.2	149.9	17.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/09	21:41:53.1	20.290S	170.310W	33.0G	5.2	5.2		SZGRF
2001/03/09	21:41:52.0	19.135S	173.182W	10G	5.4	5.2		NEIC

Tonga Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 22:01:33.4	145.1	5.8					
RUE	e PKPbc	Z 22:01:36.7	146.2	11.9					
IBBN	e PKPbc	Z 22:01:38.7	146.8	1.6					
CLZ	e PKPbc	Z 22:01:39.8	147.2	6.2					
CLL	e PKPbc	Z 22:01:40.6	147.5	10.9					
BUG	e PKPbc	Z 22:01:41.1	147.7	0.8					
BRG	e PKPbc	Z 22:01:41.8	147.8	12.7					
MOX	e PKPdf	Z 22:01:39.2	148.3	8.6					
	e PKPbc	Z 22:01:42.4							
TNS	e PKPbc	Z 22:01:44.4	148.9	3.0					
GRA1	e PKPdf	Z 22:01:41.7	149.2	8.2					
	e PKPbc	Z 22:01:45.5							
	e L	Z 23:08:41.8			19.5	404		5.2	
WLF	e PKPbc	Z 22:01:46.5	149.5	358.8					
WET	e PKPbc	Z 22:01:46.4	149.6	11.4					
GEC2	e PKPdf	Z 22:01:41.5	149.8	13.0					
	e PKPbc	Z 22:01:46.7							
STU	e PKPbc	Z 22:01:48.3	150.3	4.5					
FUR	e PKPbc	Z 22:01:49.0	150.7	8.6					
BFO	e PKPdf	Z 22:01:42.2	150.8	2.9					
	e PKPbc	Z 22:01:48.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/10	00:20: 0.4	26.160N	94.990E	33.0N	4.9			SZGRF
2001/03/10	00:20:14.2	27.909N	91.856E	10G	4.7			NEIC

Northeastern India

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:30:47.0	63.3	77.5			4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/10	11:21: 0.3	35.400N	26.320E	10.0G	5.0	4.1		SZGRF
2001/03/10	11:20:57.8	35.083N	26.366E	33N	4.3			NEIC

Crete, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 11:24:52.0	16.6	141.2					
WET	e P	Z 11:24:57.4	17.2	139.8					
BRG	e P	Z 11:25:10.7	18.2	145.6					
GRA1	e P	Z 11:25:11.2	18.3	137.2	1.9	205	5.0		
	e S	Z 11:28:34.4							
	e L	Z 11:34:01.6			19.5	996		4.1	
BFO	e P	Z 11:25:18.3	18.8	128.2					

	e S	Z	11:28:51.7		
CLL	e P	Z	11:25:17.5	18.9	144.2
MOX	e P	Z	11:25:17.7	18.9	139.9
RUE	e P	Z	11:25:25.3	19.6	147.8
	e S	Z	11:29:05.9		
TNS	e P	Z	11:25:30.1	20.0	132.5
	e S	Z	11:29:13.2		
CLZ	e P	Z	11:25:32.3	20.3	139.4
	e S	Z	11:29:21.1		
WLF	e P	Z	11:25:39.4	20.7	127.0
BUG	e P	Z	11:25:44.2	21.3	132.6
IBBN	e P	Z	11:25:48.7	21.7	135.1
BSEG	e P	Z	11:25:49.4	21.9	142.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/10								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 11:32:19.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/11	00:50:39.4	25.190S	170.640W	229.9				SZGRF
2001/03/11	00:50:41.0	25.296S	177.950W	231D	5.5			NEIC
South of Tonga Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e PKPdf	Z 01:09:59.0	149.6	20.4					
	e PKPbc	Z 01:10:04.1							
	e PKPab	Z 01:10:09.8							
	e pPKPbc	Z 01:11:01.9							
BSEG	e PKPdf	Z 01:10:00.6	150.7	15.4					
	e PKPbc	Z 01:10:06.7							
	e PKPab	Z 01:10:13.7							
	e pPKPbc	Z 01:11:04.6							
RUE	e PKPdf	Z 01:10:01.7	151.4	22.6					
	e PKPbc	Z 01:10:08.4							
	e pPKPbc	Z 01:11:06.3							
IBBN	e PKPdf	Z 01:10:03.2	152.6	11.3					
	e PKPbc	Z 01:10:11.0							
	e pPKPbc	Z 01:11:08.9							
CLL	i PKPdf	+ Z 01:10:02.8			1.2	56			
	i PKPbc	+ Z 01:10:11.1			0.8	166			
	e	01:10:16.9							
	e PKPab	Z 01:10:22.6			1.2	116			
	e pPKPbc	Z 01:11:08.4							

	e pPKPab	Z	01:11:21.1			
CLZ	e PKPpdf	Z	01:10:03.5	152.7	16.6	
	e PKPbc	Z	01:10:11.4			
	e pPKPbc	Z	01:11:09.1			
BRG	e PKPpdf	Z	01:10:03.6	152.8	24.1	
	e PKPbc	Z	01:10:11.6			
	e pPKPbc	Z	01:11:09.3			
BUG	e PKPpdf	Z	01:10:04.3	153.6	10.6	
	e PKPbc	Z	01:10:12.7			
MOX	e PKPpdf	Z	01:10:04.6	153.6	19.8	
	e PKPbc	Z	01:10:12.9			
GRA1	e PKPpdf	Z	01:10:06.2	154.6	19.6	
	e PKPab	Z	01:10:31.8			
TNS	e PKPpdf	Z	01:10:06.0	154.6	13.6	
	e PKPbc	Z	01:10:15.2			
	e PKPab	Z	01:10:30.7			
WET	e PKPpdf	Z	01:10:06.0	154.7	23.4	
	e PKPab	Z	01:10:32.1			
GEC2	e PKPpdf	Z	01:10:06.1	154.8	25.3	
	e PKPab	Z	01:10:32.0			
WLF	e PKPpdf	Z	01:10:07.4	155.4	8.9	
	e PKPab	Z	01:10:34.6			
STU	e PKPpdf	Z	01:10:07.7	155.9	16.0	
	e PKPab	Z	01:10:36.3			
FUR	e PKPpdf	Z	01:10:07.7	156.0	20.9	
	e PKPab	Z	01:10:37.3			
BFO	e PKPpdf	Z	01:10:08.2	156.4	14.3	
	e PKPab	Z	01:10:38.6			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/11	07:06:37.3	0.020S	85.530E	33.0N	4.6			SZGRF
2001/03/11	07:06:03.3	4.282S	89.061E	10G	4.9	4.9		NEIC

South Indian Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 07:18:43.4	85.5	102.1			4.6		
	e	07:18:47.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/11	12:37:01.8	18.943S	173.266W	33N	4.7	4.9		NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 12:56:49.7	149.0	8.3					

Jawa, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e Pdiff	Z 23:48:37.6	96.9	92.7					
GEC2	e Pdiff	Z 23:48:38.1	97.0	92.8					
CLL	i Pdiff	Z 23:48:39.7			1.7	27			
	e pPdiff	Z 23:48:58.5							
	e PP	Z 23:52:35.7							
	e Sdiff	N 00:00:02.7							
	e PS	Z 00:01:38.3							
	e SS	N 00:06:45.6							
	e L	Z 00:44:05.4			20.0	1518		5.5	
WET	e Pdiff	Z 23:48:40.6	97.5	92.1					
MOX	e Pdiff	Z 23:48:44.2	98.4	90.9					
GRA1	e Pdiff	Z 23:48:46.3	98.6	90.8					
	e PP	Z 23:52:46.2							
CLZ	e Pdiff	Z 23:48:46.9	99.2	89.8					
BSEG	e Pdiff	Z 23:48:47.5	99.2	89.4					
TNS	e Pdiff	Z 23:48:51.7	100.4	88.6					
BFO	e Pdiff	Z 23:48:53.6	100.5	88.8					
GRA1	e L	Z 00:38:12.6	98.6	90.8	20.5	354		4.8	

Date Origin Time Lat Long Depth mb Ms ML Source
 2001/03/13

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:08:24.7							

Date Origin Time Lat Long Depth mb Ms ML Source
 2001/03/13 11:18:29.2 52.070N 162.130E 33.0N 5.1 SZGRF
 2001/03/13 11:18:19.9 49.483N 156.090E 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 11:30:09.4	76.3	22.6			5.1		

Date Origin Time Lat Long Depth mb Ms ML Source
 2001/03/13

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 13:23:48.8							
	e	13:23:52.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/13	14:41:34.8	19.118S	168.704E	33N	4.8			NEIC

Vanuatu Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 15:01:08.3	144.5	38.6					
	e	15:01:20.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/13	20:05:1.8	18.030N	119.710E	33.0N	5.4	5.6		SZGRF
2001/03/13	20:04:58.0	18.812N	121.206E	33N	5.6	5.4		NEIC

Philippine Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z 20:17:39.3			1.5	110	5.8		
	e PP	Z 20:20:57.9							
	e SKSac	Z 20:28:01.3							
	e PS	Z 20:29:15.2							
	e L	Z 21:02:30.5			18.0	1916		5.5	
GRA1	e P	Z 20:17:47.3	87.9	62.9			5.4		
	e PP	Z 20:21:22.4							
	e S	Z 20:28:35.8							
	e L	Z 21:00:33.3			20.4	2322		5.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/13								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 21:33:52.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/14	07:09:52.0	43.630N	8.080E	10.0G			3.7	SZGRF
2001/03/14	07:09:44.6	43.296N	7.592E	10G				NEIC

Corsica, France

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z 07:11:01.8	5.1	186.1					3.7
	e Sn	N 07:11:55.7							
TNS	e Pn	Z 07:11:28.8	7.0	185.2					
	e Sn	N 07:12:41.6							
GEC2	e Pn	Z 07:11:27.2	7.0	219.6					

	e Sn	N	07:12:39.1						
MOX	e Sn	N	07:12:59.1	7.8	202.0				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/14	12:34:38.7	32.431S	179.934W	300G	4.8			NEIC
South of Kermadec Islands								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPab	+ Z	12:54:38.5			1.6	58			
GRA1	e PKP	Z	12:54:48.2	160.8	29.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/14	18:56:18.7	0.434N	121.927E	108D	5.9			NEIC
Minahassa Peninsula, Sulawesi, Indonesia								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e Pdiff	Z	19:09:55.5	100.6	75.2					
BRG	e Pdiff	Z	19:09:56.5	100.9	75.6					
CLL	i Pdiff	+ Z	19:09:58.3			2.4	71			
	e pPdiff	Z	19:10:28.2							
	e sPdiff	Z	19:10:42.8							
	e pPP	Z	19:14:37.7							
	e SKSac	E	19:20:23.1							
	e SP	Z	19:22:56.5							
	e SS	E	19:28:28.1							
	e SSS	E	19:32:36.4							
	e SKKSdf	N	19:32:59.7							
	e LV	Z	19:46:05.8							
GEC2	e Pdiff	Z	19:09:58.9	101.5	75.8					
WET	e Pdiff	Z	19:10:00.6	102.0	75.1					
BSEG	e Pdiff	Z	19:10:03.2	102.2	72.0					
MOX	e Pdiff	Z	19:10:03.7	102.4	73.8					
CLZ	e Pdiff	Z	19:10:04.6	102.8	72.5					
GRA1	e Pdiff	Z	19:10:06.6	102.9	73.6					
	e pPdiff	Z	19:10:36.9							
	e sPdiff	Z	19:10:50.2							
	e PP	Z	19:14:26.1							
	e SKSac	E	19:20:32.2							
	e		19:23:13.8							
	e SS	E	19:28:58.2							
	e SKKSdf	E	19:32:48.8							
FUR	e Pdiff	Z	19:10:07.8	103.3	74.0					
IBBN	e Pdiff	Z	19:10:12.1	104.1	70.2					
STU	e Pdiff	Z	19:10:12.5	104.4	72.2					
TNS	e Pdiff	Z	19:10:13.2	104.4	71.3					

BUG	e Pdiff	Z	19:10:14.2	104.7	70.0
BFO	e Pdiff	Z	19:10:14.4	105.1	71.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/15	00:39:12.6	8.810N	94.150E	33.0N	4.9			SZGRF
2001/03/15	00:39:11.0	8.721N	93.905E	33N	5.4	4.9		NEIC

Nicobar Islands, India, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:51:12.2	78.6	89.9			4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/15	01:22:52.7	10.500N	94.140E	33.0N	5.5	5.4		SZGRF
2001/03/15	01:22:42.0	8.679N	94.009E	24D	5.6	5.9		NEIC

Andaman Islands, India, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 01:34:35.1	77.0	92.2	1.5	73	5.6		
GEC2	e P	Z 01:34:35.4	77.1	91.5	1.4	60	5.5		
RUE	e P	Z 01:34:36.0	77.2	92.4	1.1	124	5.9		
CLL	i P	- Z 01:34:38.1			1.6	136	5.8		
	e	01:38:03.4							
	e S	E 01:44:23.3							
	e SS	Z 01:49:58.9							
	e LV	Z 01:59:29.9							
	e L	Z 02:15:24.2			18.0	3628		5.7	
WET	e P	Z 01:34:38.2	77.7	91.0	1.4	52	5.5		
MOX	e P	Z 01:34:42.9	78.5	90.3	1.6	59	5.5		
FUR	e P	Z 01:34:44.1	78.7	89.6	1.3	54	5.5		
GRA1	e P	Z 01:34:45.1	78.7	89.8	1.1	50	5.6		
	e S	N 01:44:34.3							
	e SS	N 01:49:55.8							
	e L	Z 02:14:20.6			20.7	1957		5.4	
CLZ	e P	Z 01:34:47.6	79.3	89.6	1.1	48	5.5		
BSEG	e P	Z 01:34:47.9	79.3	89.9	1.2	117	5.9		
STU	e P	Z 01:34:52.1	80.1	88.1	1.2	39	5.3		
TNS	e P	Z 01:34:54.6	80.5	87.8	1.4	51	5.4		
BFO	e P	Z 01:34:55.0	80.7	87.4	1.2	32	5.2		
IBBN	e P	Z 01:34:56.4	80.9	87.6	1.2	114	5.7		
BUG	e P	Z 01:34:58.5	81.2	87.1	1.2	74	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/15	13:02:43.5	32.237S	71.318W	47D	6.3	5.6		NEIC

Near coast of central Chile

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pdiff	Z 13:17:05.3	109.6	242.9					
	e PKiKP	Z 13:21:08.8							
	e PP	Z 13:21:36.5							
	e SP	Z 13:31:00.6							
	e SS	N 13:36:58.1							
CLL	e L	Z 14:04:42.7			21.8	3439		5.9	
	e Pdiff	Z 13:17:16.3			23.3	88			
	e PKPdf	Z 13:21:11.8			0.7	13			
	e PP	Z 13:21:50.3							
	e SKSac	E 13:27:53.6							
	e Sdiff	N 13:29:30.6							
	e SP	Z 13:31:17.2							
	e PPS	Z 13:32:25.9							
	e SS	N 13:37:20.6							
	e SSS	Z 13:42:01.6							
	e L	Z 14:06:55.1			20.0	5060		6.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/16	00:01: 3.8	12.770N	92.720W	33.0N	5.6	5.9	ML	SZGRF
2001/03/16	00:01:18.9	12.998N	88.886W	52D	5.4			NEIC

Off coast of central America

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:13:55.8	86.5	286.0	1.7	69	5.6		
	e PP	Z 00:17:25.7							
	e S	E 00:24:30.1							
	e SS	E 00:30:34.7							
	e L	Z 00:47:52.3							
CLL	i P	- Z 00:13:58.9			21.8	4991		5.9	
	e pP	Z 00:14:13.0			1.2	18	5.1		
	e sP	Z 00:14:17.5							
	e PP	Z 00:17:25.5							
	e S	E 00:24:29.8							
	e PS	Z 00:25:47.8							
	e SS	Z 00:30:25.8							
	e (SSS)	E 00:34:22.9							
	e L	Z 00:52:21.0			18.0	2356		5.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/16	04:37:58.0	28.200N	98.390E	33.0N	5.0			SZGRF
2001/03/16	04:38:18.4	30.347N	94.977E	33N	5.0			NEIC

Myanmar-China border region

./2001/bul0103.txt

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Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:48:48.8	63.5	73.4			5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/16	04:36:10.1	20.149S	68.771W	115D	5.3			NEIC

Northern Chile

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 04:49:36.1	99.0	249.4					
	e pP	Z 04:50:09.7							
	e PP	Z 04:53:39.3							
CLL	e Pdiff	Z 04:50:06.8							
	e PP	Z 04:53:52.8							
	e SKSac	Z 05:00:12.2							
	e Sdiff	N 05:01:09.2							
	e SP	Z 05:02:38.0							
	e SS	N 05:08:14.7							
	e LV	Z 05:24:34.1							
	e L	Z 05:28:49.8			22.0	331		4.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/16	21:04:37.5	41.070N	26.840W	33.0N	4.6			SZGRF
2001/03/16	21:03:40.5	37.923N	32.339W	10G	4.8	4.7		NEIC

Azores Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:10:23.5	33.0	266.0			4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/16	23:58:40.5	38.520N	31.400W	33.0N	4.9			SZGRF
2001/03/16	23:58:29.2	37.977N	31.993W	10G	4.7	4.7		NEIC

Azores Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:05:04.7	32.8	265.8			4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/17	06:34: 5.7	42.750N	23.500W	33.0N	4.3			SZGRF
2001/03/17	06:32:46.4	37.665N	32.273W	10G	4.5			NEIC

Azores Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:39:24.7	33.1	265.5			4.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/17	07:24:29.9	47.270N	151.680E	101.0G	5.8			SZGRF
2001/03/17	07:24:24.3	46.779N	151.214E	102D	5.3			NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z 07:36:00.1			1.0	50	5.6		
	e PcP	Z 07:36:07.2			0.9	62			
	e S	E 07:45:30.4							
	e LV	Z 08:00:26.6							
	e L	Z 08:12:25.3			20.0	276		4.6	
GRA1	e P	Z 07:36:12.7	77.5	26.8	1.4	112	5.8		
	e	07:36:17.0							
	e S	N 07:45:54.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/17	08:32:30.7	42.240N	23.110W	33.0N	4.5			SZGRF
2001/03/17	08:31:11.3	37.614N	32.212W	10G	4.7	4.2		NEIC

Azores Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 08:37:49.7	33.1	265.4			4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/18	15:43: 4.7	11.700N	89.650W	33.0N	5.2	5.4		SZGRF
2001/03/18	15:43:20.6	12.354N	87.465W	100G	4.9			NEIC

Off coast of central America

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 15:55:51.8	86.1	284.6	0.8	9	5.2		
	e PP	Z 15:59:15.9							
	e S	E 16:06:14.1							
	e SS	E 16:12:16.3							
	e L	Z 16:29:33.9			21.3	1697		5.4	
CLL	i P	+ Z 15:55:54.9			0.7	9	5.0		
	e pP	Z 15:56:19.7							
	e sP	Z 15:56:30.9							
	e PP	Z 15:59:14.2							
	e SKSac	R 16:06:18.8							

e S	E	16:06:27.0									
e SS	Z	16:12:13.1									
e SSSS	Z	16:18:40.7									
e LV	Z	16:24:09.1									
e L	Z	16:32:35.1			22.0		1062		5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/18	22:10:55.2	49.840N	158.180E	33.0N	5.3			SZGRF
2001/03/18	22:10:51.2	49.193N	156.198E	33N	4.7			NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 22:22:42.5	76.6	22.7	1.0	25	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/19								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:43:47.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/19	02:53:35.2	50.350N	166.150W	33.0N	5.0			SZGRF
2001/03/19	02:53:40.1	51.972N	169.976W	33N	4.7			NEIC

South of Aleutian Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:05:41.4	78.3	0.8	1.4	25	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/19	05:52:17.1	3.914S	127.965E	40?	6.1	6.5		NEIC

Seram, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e Pdiff	Z 06:06:34.1			2.2	44			
	e PP	Z 06:11:18.0							
	e SKSac	E 06:17:22.1							
	e Sdiff	T 06:18:46.5							
	e PS	Z 06:20:19.3							
	e PPS	Z 06:21:43.8							
	e SS	E 06:26:53.5							
	e SSS	N 06:30:27.6							

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	e	SSSSS	N	06:36:57.7								
	e	LV	Z	06:44:14.7								
	e	L	Z	07:11:16.8			18.0	13099		6.5		
GRA1	e	Pdiff	Z	06:06:42.3	110.0	71.5						
	e	PP	Z	06:11:10.9								
	e	S	N	06:19:04.3								
	e	SS	N	06:27:05.4								
	e	L	Z	07:07:04.4			20.1	11161		6.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/19	05:56:57.1	3.965S	127.891E	33N	5.8			NEIC

Seram, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e Pdiff	Z 06:11:21.5	110.0	71.6					
	e SS	N 06:31:24.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/19								

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

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/19	20:06:55.9	23.110N	69.680E	33.0N	5.1			SZGRF
2001/03/19	20:06:48.2	23.386N	70.105E	10G	4.8	4.9		NEIC

Southern India

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:16:05.1	52.4	97.6	1.5	39	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/20								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKP)	Z 06:44:19.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/20	11:40:50.0	37.250N	140.730E	43.5	5.3			SZGRF

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2001/03/20 11:40:45.5
Eastern Honshu, Japan

36.393N 141.069E 61* 4.7 NEIC

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 11:53:08.6	83.2	38.5	0.9	19	5.3		
	e pP	Z 11:53:21.2							

Date Origin Time Lat Long Depth mb Ms ML Source
2001/03/21 20:47:33.9 4.505S 153.056E 33N 5.4 5.4 ML NEIC
New Ireland, Papua New Guinea, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 21:06:32.2	124.5	48.4					
	e L	Z 22:06:32.1			19.5	864		5.4	

Date Origin Time Lat Long Depth mb Ms ML Source
2001/03/21

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 23:05:49.3							

Date Origin Time Lat Long Depth mb Ms ML Source
2001/03/22 06:21:24.5 40.100N 32.660E 33.0N 4.2 SZGRF
2001/03/22 06:21:17.5 38.732N 30.924E 5G 4.4 NEIC
Turkey

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:25:31.2	17.8	120.6	1.4	30	4.2		

Date Origin Time Lat Long Depth mb Ms ML Source
2001/03/22 14:02:35.2 41.320N 32.860E 33.0N 4.3 SZGRF
2001/03/22 14:02:27.1 40.929N 33.157E 33N 4.3 NEIC
Turkey

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 14:06:10.3	15.8	112.7	1.1	9			
WET	e P	Z 14:06:17.0	16.4	112.3	1.1	17	4.1		
CLL	e P	Z 14:06:29.3	17.3	119.0	1.5	24	4.1		
GRA1	e P	Z 14:06:34.0	17.6	111.4	1.5	37	4.3		
MOX	e P	Z 14:06:34.8	17.8	114.8	1.3	25	4.2		
CLZ	e P	Z 14:06:48.8	19.0	116.0	1.1	11	4.0		

BFO	e P	Z	14:06:48.8	19.0	103.6	1.4	54	4.6
TNS	e P	Z	14:06:57.6	19.5	108.9	1.2	16	4.1
BSEG	e P	Z	14:07:00.0	20.0	121.1	1.1	42	4.6
BUG	e P	Z	14:07:09.3	20.6	110.5	1.5	61	4.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/22	19:12: 2.1	36.190N	73.020E	33.0N	4.9			SZGRF
2001/03/22	19:12:16.7	36.301N	71.099E	113*	5.0			NEIC

Northwestern Kashmir

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:20:21.1	44.5	83.9	0.8	11	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/23								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 01:24:44.3							
	e	01:25:04.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/23	05:24:27.3	32.970N	44.120E	33.0N	5.3	4.5		SZGRF
2001/03/23	05:24:12.2	32.921N	46.647E	33N	5.0	5.0		NEIC

Iraq

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 05:30:13.6	29.2	110.7					
WET	e P	Z 05:30:18.6	29.8	110.3					
BRG	e P	Z 05:30:18.3	29.8	114.3	1.1	24	4.9		
FUR	e P	Z 05:30:25.3	30.5	106.9	0.8	128	5.8		
CLL	e P	Z 05:30:24.0	30.6	113.9	1.2	36	5.1		
RUE	e P	Z 05:30:26.2	30.6	116.6	0.9	40	5.2		
GRA1	e P	Z 05:30:28.5	31.0	109.3	0.9	51	5.3		
	e S	N 05:35:32.0							
	e L	Z 05:44:18.1			19.9	1114		4.5	
MOX	e P	Z 05:30:30.7	31.1	111.2					
RGN	e P	Z 05:30:38.0	31.8	119.0	1.0	222	6.0		
STU	e P	Z 05:30:37.9	32.0	105.6	0.8	14	4.9		
CLZ	e P	Z 05:30:39.9	32.3	111.6	0.9	37	5.3		
BFO	e P	Z 05:30:41.3	32.5	104.1	1.2	17	4.9		
TNS	e P	Z 05:30:45.1	32.9	107.1					
BSEG	e P	Z 05:30:47.7	33.1	114.5	1.1	105	5.7		
IBBN	e P	Z 05:30:55.3	33.9	109.3	0.9	42	5.4		

BUG	e P	Z	05:30:54.8	34.0	107.6				
WLF	e P	Z	05:30:57.2	34.2	103.9	1.0	23	5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/23	11:30:16.2	44.630N	148.200E	33.0N	6.3	6.2		SZGRF
2001/03/23	11:30:10.6	44.126N	148.036E	33N	5.9	5.7		NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	i P	+ Z	11:41:46.7	74.1	32.0	1.3	541	6.4		
BSEG	i P	+ Z	11:41:54.8	75.5	29.9	1.3	329	6.2		
RUE	i P	+ Z	11:41:55.9	75.7	32.0	1.4	654	6.6		
CLL	i P	+ Z	11:42:02.6	76.9	31.4	1.0	395	6.5		
	e pP	Z	11:42:17.9							
	e sP	Z	11:42:25.4							
	e PP	Z	11:44:42.5							
	e PPP	Z	11:46:46.0							
	e SKSac	R	11:51:35.4							
	e ScS	T	11:51:45.1							
	e S	E	11:51:45.9							
	e SS	E	11:56:47.4							
	e SSS	E	12:00:40.2							
	e L	Z	12:19:58.4			18.0	9754		6.2	
BRG	i P	+ Z	11:42:03.1	77.0	31.9	1.4	290	6.2		
CLZ	i P	+ Z	11:42:05.5	77.3	29.7	1.2	574	6.6		
IBBN	i P	+ Z	11:42:07.2	77.7	28.0	1.1	399	6.5		
MOX	i P	+ Z	11:42:08.7	78.0	30.4	1.5	450	6.4		
BUG	i P	+ Z	11:42:12.0	78.6	27.6	1.3	433	6.3		
GEC2	i P	+ Z	11:42:13.4	78.8	31.6	1.3	162	5.9		
WET	i P	+ Z	11:42:14.0	78.8	31.1	1.2	390	6.3		
GRA1	i P	+ Z	11:42:14.6	78.9	30.0	1.2	605	6.5		
	e		11:42:29.0							
	e PP	Z	11:45:12.9							
	e S	Z	11:52:30.9							
	e L	Z	12:21:39.9			18.8	9390		6.2	
TNS	i P	+ Z	11:42:16.2	79.3	28.3	1.3	288	6.1		
FUR	i P	+ Z	11:42:21.3	80.2	29.9	1.5	726	6.4		
STU	i P	+ Z	11:42:22.0	80.4	28.6	1.2	296	6.1		
WLF	i P	+ Z	11:42:22.7	80.5	26.7	2.2	688	6.2		
BFO	i P	+ Z	11:42:25.3	81.0	28.0	1.2	239	6.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/23	13:38:38.7			N				SZGRF
2001/03/23	13:38:39.2	59.621N	146.444W	33N	4.6			NEIC

Off coast of southeastern Alaska, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 13:49:46.8	69.2	348.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/23								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKP)	Z 13:55:38.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/23	19:28:31.0	35.970N	71.480E	33.0N	5.1			SZGRF
2001/03/23	19:28:57.1	38.674N	68.196E	33N	4.9			NEIC

Pakistan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:36:43.2	41.3	83.1	1.1	28	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/23	20:31:22.7	29.140N	54.740E	33.0N	4.6			SZGRF

Southern Iran

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:38:43.3	38.6	105.6	1.1	17	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/23	20:53:27.8	18.915S	174.119W	33N	5.4	4.9		NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 21:13:15.5	148.9	9.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/24	05:31:26.1	48.270N	25.910W	33.0N	4.9			SZGRF
2001/03/24	05:30:52.3	47.929N	30.733W	10G	5.0	4.6		NEIC

Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:36:39.7	27.3	282.6	2.8	115	4.9		

e 05:36:50.2

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/24	06:28: 8.0	36.830N	134.200E	75.1	6.4	7.0		SZGRF
2001/03/24	06:27:51.7	34.066N	132.531E	33N	6.4	6.5		NEIC

Sea of Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	i P	- Z 06:39:45.1	77.2	47.9	1.5	616	6.5		
RUE	i P	- Z 06:39:51.7	78.4	47.9	1.6	919	6.7		
BSEG	i P	- Z 06:39:54.0	78.9	45.6	1.0	193	6.2		
BRG	i P	- Z 06:39:57.0	79.4	47.7	1.9	618	6.4		
CLL	i P	- Z 06:39:57.7			1.2	677	6.6		
	e	06:40:03.0							
	e sP	Z 06:40:26.0							
	e PP	Z 06:42:57.9							
	e pPP	Z 06:43:12.9							
	e PPPP	Z 06:46:04.3							
	e S	E 06:49:56.6							
	e ScS	T 06:50:24.6							
	e SS	E 06:54:58.0							
	e SSSS	E 07:01:01.1							
	e PKPPKP	Z 07:06:44.7							
	e L	Z 07:18:53.7			18.0	94333		7.2	
CLZ	i P	- Z 06:40:02.3	80.3	45.4	1.7	793	6.5		
MOX	i P	- Z 06:40:03.6	80.6	46.1	1.8	574	6.3		
GEC2	i P	- Z 06:40:05.0	80.9	47.3	1.6	213	5.8		
WET	i P	- Z 06:40:06.3	81.1	46.8	1.8	506	6.2		
IBBN	i P	- Z 06:40:05.8	81.1	43.5	1.8	543	6.2		
GRA1	i P	- Z 06:40:08.6	81.4	45.7	1.6	1849	6.8		
	e	06:40:14.1							
	e pP	Z 06:40:28.6							
	e sP	Z 06:40:37.4							
	e PP	Z 06:43:12.6							
	e pPP	Z 06:43:33.7							
	e	06:46:56.1							
	e S	E 06:50:18.4							
	e SS	E 06:55:20.2							
	e PKKPdf	Z 06:58:40.5							
	e PKPPKP	Z 07:06:45.6							
	e L	Z 07:20:27.1			19.3	63572		7.0	
BUG	i P	- Z 06:40:10.3	82.0	43.1	1.5	390	6.2		
TNS	i P	- Z 06:40:12.7	82.3	43.8	1.4	363	6.2		
FUR	i P	- Z 06:40:14.1	82.5	45.6	1.5	1739	6.9		
STU	i P	- Z 06:40:16.3	83.0	44.2	1.5	923	6.7		
BFO	i P	- Z 06:40:19.8	83.8	43.6	1.6	1326	6.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/24	21:24:40.8	39.800N	144.120E	32.1	5.5	5.0		SZGRF
2001/03/24	21:24:33.3	38.502N	143.200E	33N	5.2	4.6		NEIC

Off east coast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	21:36:30.5	77.5	38.0	1.1	249	6.2		
RUE	e P	Z	21:36:37.3	79.0	38.0	1.1	56	5.6		
BSEG	e P	Z	21:36:37.6	79.1	35.7	1.0	36	5.3		
BRG	e P	Z	21:36:43.5	80.2	37.9					
CLL	i P	+ Z	21:36:43.4			1.1	52	5.4		
	e pP	Z	21:36:52.5							
	e sP	Z	21:36:56.9							
	e PP	Z	21:39:45.8							
	e L	Z	22:15:37.8			18.0	1020		5.2	
CLZ	e P	Z	21:36:46.7	80.7	35.6	1.3	67	5.4		
MOX	e P	Z	21:36:49.1	81.3	36.3	1.3	32	5.2		
IBBN	e P	Z	21:36:49.3	81.3	33.7	1.2	39	5.3		
GEC2	e P	Z	21:36:52.5	81.9	37.6	1.3	16	4.9		
WET	e P	Z	21:36:53.4	82.0	37.1	1.4	40	5.3		
BUG	e P	Z	21:36:53.9	82.2	33.3	1.2	22	5.2		
GRA1	e P	Z	21:36:54.8	82.2	36.0	1.1	71	5.7		
	e pP	Z	21:37:03.8							
	e sP	Z	21:37:08.2							
	e PP	Z	21:39:54.8							
	e S	N	21:46:56.2							
	e		21:47:17.6							
	e L	Z	22:18:39.6			19.8	600		5.0	
TNS	e P	Z	21:36:57.2	82.8	34.1	1.2	23	5.2		
FUR	e P	Z	21:37:00.8	83.4	35.9	1.2	75	5.8		
STU	e P	Z	21:37:02.1	83.7	34.5	1.4	59	5.6		
BFO	e P	Z	21:37:05.3	84.4	33.9	1.2	71	5.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/25	07:13:56.5	14.700N	58.020E	33.0N	4.9			SZGRF
2001/03/25	07:14:08.6	14.178N	53.404E	10G	5.1	3.8		NEIC

Arabian Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z	07:22:58.6							
	e PcP	Z	07:24:22.4							
GRA1	e P	Z	07:22:59.6	49.3	120.9	0.8	14	4.9		

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Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/25	08:05:30.2	14.310N	58.420E	33.0N	5.4			SZGRF
2001/03/25	08:05:33.0	14.164N	53.360E	10G	5.1	4.2		NEIC

Arabian Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 08:14:37.4	49.3	120.9	1.7	88	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/25	09:12:28.0	19.930S	169.630E	33N	4.5			NEIC

Vanuatu Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 09:32:04.7	145.6	37.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/25								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 12:03:59.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/25	20:40:55.7	35.190N	134.370E	43.3	5.3			SZGRF
2001/03/25	20:40:51.6	34.092N	132.545E	42D	5.1			NEIC

Western Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:53:07.9	81.4	45.7	1.2	42	5.3		
	e pP	Z 20:53:20.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/26	11:20:47.1			N				SZGRF
2001/03/26	11:20:44.1	34.063N	23.486E	33N	4.3			NEIC

Near coast of Libya

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 11:24:52.7	18.0	145.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2001/03/27 03:29:55.7 52.240N 173.730W 33.0N 5.1 SZGRF
2001/03/27 03:29:49.0 51.919N 170.119W 33N 4.4 NEIC
Andreanof Islands, Aleutian Islands, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:41:51.1	78.4	0.8	1.3	22	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/27	11:05:06.7	15.142S	173.471W	33N	4.5			NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 11:24:43.3	145.2	8.0					
	e	11:24:59.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/27	18:28:07.1	31.321S	179.912E	377	5.0			NEIC

Kermadec Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 18:47:18.3			1.6	20			
	e PKPbc	Z 18:47:31.0							
	i PKPab	Z 18:47:54.0			0.8	67			
	e pPKP2	Z 18:49:25.5							
GRA1	e PKP	Z 18:48:03.6	159.8	29.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/28	16:34:47.9	31.630N	48.960E	33.0G	5.5			SZGRF
2001/03/28	16:34:21.8	29.694N	51.157E	33N	5.2	4.7		NEIC

Western Iran

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z 16:41:06.7	34.2	110.1					
BRG	e P	Z 16:41:11.9	34.8	113.1					
WET	e P	Z 16:41:12.0	34.8	109.6					
FUR	e P	Z 16:41:18.6	35.5	106.6					
CLL	e P	Z 16:41:18.2	35.5	112.6					
RUE	e P	Z 16:41:18.5	35.6	115.0					
GRA1	e P	Z 16:41:23.0	36.0	108.6	0.9	63	5.5		
MOX	e P	Z 16:41:23.5	36.1	110.2					
CLZ	e P	Z 16:41:33.7	37.3	110.4					
BFO	e P	Z 16:41:35.6	37.5	103.9					
TNS	e P	Z 16:41:38.6	37.9	106.4					

BSEG	e P	Z	16:41:40.1	38.1	112.9
IBBN	e P	Z	16:41:48.2	38.9	108.2
BUG	e P	Z	16:41:48.0	39.0	106.7
WLF	e P	Z	16:41:49.3	39.2	103.5

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/28								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKP)	Z 17:33:58.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/29	06:54:15.9	13.300N	93.070W	33.0N	5.7	5.7		SZGRF
2001/03/29	06:54:28.1	13.032N	89.019W	33N	5.3	5.1		NEIC

Off coast of Chiapas, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 07:07:07.0	86.6	286.2	1.8	93	5.7		
	e PP	Z 07:10:31.5							
	e S	E 07:17:34.9							
	e SS	E 07:23:43.7							
	e L	Z 07:41:01.6			21.9	2891		5.7	
CLL	e P	Z 07:07:10.8			1.3	22	5.1		
	e PP	Z 07:10:42.2							
	e S	E 07:17:40.2							
	e PPS	Z 07:19:07.9							
	e SS	E 07:23:51.6							
	e LV	Z 07:35:19.8							
	e L	Z 07:38:35.0			18.0	1084		5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/29								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKP)	Z 22:05:26.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/29								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 22:24:04.1							

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 16:56:01.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/30								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 20:46:22.9							
	e	Z 20:47:10.8							
CLL	i PKPbc	+ Z 20:46:19.1			1.1	12			
	i PKPab	Z 20:46:26.1			0.8	12			
	e pPKPbc	Z 20:47:11.8							
	e pPKPab	Z 20:47:15.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/30	21:09:49.4			N				SZGRF
2001/03/30	21:09:43.8	36.858N	139.263E	10G	5.0			NEIC

Eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:22:08.1	82.0	39.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/31	02:26:16.7	3.140N	100.120E	33.0N	5.2			SZGRF
2001/03/31	02:26:31.4	4.062N	96.117E	33N	5.1	4.4		NEIC

Northern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 02:38:58.5	83.6	91.3	0.9	16	5.2		
	e	Z 02:39:12.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/31	06:54:16.0	29.170S	68.129W	103D	5.6			NEIC

La Rioja Province, Argentina

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (Pdiff)	Z 07:08:16.0	105.5	242.9					
	e PP	Z 07:12:35.2							
	e	Z 07:13:10.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/31	07:56:33.3	51.740N	176.070W	33.0N	5.1			SZGRF
2001/03/31	07:56:26.7	51.102N	176.878W	33N	4.9	4.3		NEIC

Andreanof Islands, Aleutian Islands, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 08:08:30.9	79.0	5.2	0.9	18	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/31	17:47:45.6	31.830S	14.700W	33.0N	5.2			SZGRF

Southern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 18:00:16.7	84.7	201.9	1.3	20	5.2		
	e	18:00:27.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/31	17:55:0.8	49.690N	159.880E	33.0N	5.5			SZGRF
2001/03/31	17:54:59.2	49.174N	156.094E	33N	4.9			NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 18:06:51.0	76.6	22.7	1.1	43	5.5		
	e	18:07:05.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/31	18:03:24.9	49.540N	159.800E	33.0N	5.5			SZGRF
2001/03/31	18:03:24.8	49.247N	156.144E	33N	5.0	4.9		NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 18:15:15.8	76.6	22.7	0.9	39	5.5		
	e	18:15:29.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/31	18:30:47.3	50.900N	154.870E	33.0N	5.5			SZGRF
2001/03/31	18:30:32.6	49.149N	156.174E	33N	5.0	5.0		NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	18:41:55.5	71.7	24.6	1.0	66	5.7		
BSEG	e P	Z	18:42:02.5	73.0	22.6	1.1	30	5.3		
RUE	e P	Z	18:42:05.4	73.5	24.6	1.1	39	5.4		
CLL	i P	+ Z	18:42:12.2			0.9	45	5.6		
	e pP	Z	18:42:26.5							
	e L	Z	19:21:24.0			20.0	960		5.1	
CLZ	e P	Z	18:42:13.9	74.9	22.4	0.9	45	5.6		
BRG	e P	Z	18:42:13.3	74.9	24.5	1.3	24	5.2		
IBBN	e P	Z	18:42:14.9	75.1	20.8	0.9	47	5.6		
MOX	e P	Z	18:42:18.3	75.7	23.0	0.9	27	5.3		
BUG	e P	Z	18:42:19.8	76.0	20.4	1.0	35	5.3		
GRA1	e P	Z	18:42:24.3	76.7	22.7	0.8	80	5.8		
WET	e P	Z	18:42:24.5	76.8	23.7	0.8	39	5.5		
GEC2	e P	Z	18:42:24.5	76.8	24.2	0.7	13	5.0		
TNS	e P	Z	18:42:25.0	76.9	21.0	0.8	56	5.6		
STU	e P	Z	18:42:31.4	78.0	21.4	0.9	37	5.5		
FUR	e P	Z	18:42:31.6	78.1	22.6	0.9	52	5.7		
BFO	e P	Z	18:42:34.6	78.6	20.8	0.9	30	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/03/31	19:43:22.1	10.790S	14.330W	33.0N	4.9			SZGRF
2001/03/31	19:43:24.1	10.433S	13.171W	10G	5.2	4.8		NEIC

Ascension Island region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	19:53:56.0	63.8	206.9	1.0	8	4.9		
	e PP	Z	19:56:18.3							

Format description

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

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

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

EPICENTER LINES:

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

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

COMMENT LINE:

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

REGION LINE:

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

PHASE LINE:

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