

## 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)

MAY 2001      UPDATED 12.July.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		
2001/05/01	06:00:50.9	35.780N	28.530E	10.0G	4.7	4.1		SZGRF		
2001/05/01	06:00:54.1	35.635N	27.491E	18D	5.2	4.7		NEIC		
Eastern Mediterranean Sea										
Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	06:04:49.4	16.6	137.4	1.3	82	4.7		
WET	e P	Z	06:04:56.2	17.2	136.2	1.2	90	4.8		
FUR	e P	Z	06:04:58.3	17.3	130.4	0.9	66	4.8		
BRG	e P	Z	06:05:05.9	18.1	142.2	2.0	84	4.5		
GRA1	e P	Z	06:05:10.2	18.4	133.8	2.0	238	5.0		
	e S	Z	06:08:37.3							
	e L	Z	06:12:28.4			21.8	1070		4.1	
STU	e P	Z	06:05:14.2	18.8	127.6	1.1	96	4.9		
CLL	i P	- Z	06:05:13.5			1.4	168	5.1		
	e S	E	06:08:42.2							
	e L	Z	06:12:11.5			20.0	1047		4.1	
	i ScP	Z	06:13:23.0			1.4	16			
MOX	e P	Z	06:05:14.6	18.9	136.6	1.6	133	4.9		
BFO	e P	Z	06:05:16.0	19.0	124.9	1.3	72	4.7		
RUE	e P	Z	06:05:20.2	19.4	144.6	1.2	121	5.0		
TNS	e P	Z	06:05:27.5	20.1	129.4	1.2	80	4.8		
CLZ	e P	Z	06:05:29.4	20.3	136.4	1.1	35	4.5		
WLF	e P	Z	06:05:37.2	20.9	124.1	1.1	39	4.7		
RGN	e P	Z	06:05:36.5	21.3	146.8	1.8	114	4.9		
BUG	e P	Z	06:05:41.3	21.4	129.7					
IBBN	e P	Z	06:05:44.8	21.8	132.2	1.3	30	4.5		
BSEG	e P	Z	06:05:45.5	21.9	139.9	1.0	13	4.3		

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Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/01	07:37:26.8	53.440N	158.930E	400.0G	4.9			SZGRF
2001/05/01	07:37:27.3	53.015N	154.385E	401D	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 07:48:16.1	72.7	22.2	1.1	16	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/01	13:01:34.4	32.650N	141.160E	33.0N	5.0			SZGRF
2001/05/01	13:01:42.2	34.234N	139.163E	33N	4.5			NEIC

Southeast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:14:14.1	84.3	40.9	1.1	16	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/01	16:44:0.6	15.190N	64.810W	33.0N	4.9			SZGRF
2001/05/01	16:44:29.3	16.965N	60.279W	69D	4.7			NEIC

Caribbean Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 16:55:06.2	65.2	267.3			4.9		
	e	16:55:24.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/01	19:14:44.8	6.150N	35.700W	33.0N	4.8			SZGRF
2001/05/01	19:14:45.6	7.390N	35.986W	10G	4.7	4.4		NEIC

Central Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:24:38.8	57.7	239.4	1.0	11	4.8		
	e	19:24:46.0							
	e	19:24:55.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/02	00:08:14.9	51.450N	164.050W	33.0N	4.4			SZGRF

South of Alaska

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:20:14.7	78.8	357.0			4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/02	02:06:1.7	49.900N	126.150W	33.0N	4.5	4.4		SZGRF

Vancouver Island, Canada, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 02:17:34.0	73.9	333.0			4.5		
	e	02:17:40.6							
	e L	Z 02:49:04.1			21.9	216		4.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/02	03:25:59.9	15.80S	174.10W	33N				NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 03:45:37.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/02	09:57:15.5	3.757N	148.506E	33N	5.5	4.9		NEIC

Eastern Caroline Islands, Micronesia, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKiKP	Z 10:15:55.2	115.1	48.4					
	e PP	Z 10:16:57.8							
	e L	Z 11:10:35.2			18.3	355		5.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/02	22:34:30.2	12.130N	94.010E	33.0N	5.3			SZGRF
2001/05/02	22:34:37.1	12.133N	93.530E	96*	5.2			NEIC

Andaman Islands, India, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	Z 22:46:15.2	75.8	87.9	1.1	26	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/03	04:24:45.2			N				SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:38:11.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/03	04:31:57.1	0.448N	126.365E	33N	5.7	5.4		NEIC

Northern Molucca Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e L	Z	05:46:37.6	104.3	72.3	20.3	581		5.1	
CLZ	e L	Z	05:41:01.9	105.3	68.8	21.7	1211		5.4	
CLL	e PP	Z	04:49:41.9							
	e SKSac	E	04:56:43.6							
	e PS	Z	04:59:28.7							
	e SS	E	05:05:03.4							
	e L	Z	05:37:11.4			22.0	1102		5.3	
GRA1	e (Pdiff)	Z	04:46:02.1	105.6	70.0					
	e		04:48:46.4							
	e PP	Z	04:50:32.0							
	e SS	E	05:05:18.8							
TNS	e L	Z	05:45:28.1	107.1	67.6	21.0	638		5.2	
BFO	e L	Z	05:44:15.3	107.9	68.0	21.8	889		5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/03	19:15:44.0	18.49N	39.14E	10G	4.4			NEIC

Red Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	19:23:07.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/03	23:35:30.6			G			3.9	SZGRF
2001/05/03	23:35:26.7	44.625N	17.672E	10G	4.7			NEIC

Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	23:36:43.7	5.0	145.7					3.5
	e Sg	N	23:38:09.7							
WET	e Pn	Z	23:36:53.7	5.6	142.3					3.8
	e Sg	N	23:38:27.4							
FUR	e Pn	Z	23:36:55.5	5.7	126.4					4.1
	e Sg	N	23:38:26.0							
GRC4	e Pn	Z	23:37:00.4	6.1	134.4					
GRA1	e Pn	Z	23:37:07.9	6.7	136.7					4.3
	e Sg	N	23:39:03.5							
CLL	e Sg	E	23:39:26.2	7.4	153.2					

BFO e Pn Z 23:37:16.3 7.4 116.5  
e Sg E 23:39:26.5

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/04	19:52:01.9	34.722N	22.744E	33N	4.7			NEIC

Central Mediterranean Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e L	Z 20:03:27.1	15.6	151.3	19.5	742		3.9	
FUR	e L	Z 20:03:48.7	15.9	143.4	19.9	1198		4.1	
WET	e L	Z 20:02:54.6	16.2	149.6	18.4	1156		4.1	
GRA1	e P	Z 19:56:03.0	17.2	146.2					
	e L	Z 20:04:20.8			19.1	943		4.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/05	05:21:16.0			N		5.1		SZGRF
2001/05/05	05:21:15.6	23.539S	111.847W	10G	5.5	5.1		NEIC

Easter Island region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 05:40:25.6	128.9	279.1					
	e PP	Z 05:42:30.3							
	e SS	N 05:59:50.7							
	e L	Z 06:44:23.2			18.2	354		5.1	
CLL	i PKPdf	Z 05:40:26.6			1.7	50			
	e PP	Z 05:42:25.7							
	e PKS	Z 05:43:56.1							
	e PS	Z 05:52:08.1							
	e PPS	Z 05:54:25.8							
	e SS	Z 06:00:04.5							
	e (SSS)	Z 06:05:15.7							
	e SSSS	Z 06:08:15.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/05	05:48:53.2	57.420N	159.540W	33.0N	5.3			SZGRF
2001/05/05	05:48:47.9	56.528N	156.591W	58	5.2			NEIC

Bristol Bay, Alaska, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:00:17.8	73.3	353.0	1.9	51	5.3		

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Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/05								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:51:32.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/05	11:27:16.8	14.790N	90.370W	129.5	5.3	5.0		SZGRF
2001/05/05	11:26:56.5	14.049N	91.740W	33N	5.2	4.9		NEIC

Guatemala

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 11:39:42.8	87.5	288.9	0.9	21	5.3		
	e pP	Z 11:40:15.8							
	e sP	Z 11:40:29.4							
	e PP	Z 11:43:00.6							
	e SS	N 11:55:50.8							
	e L	Z 12:15:15.3			21.2	586		5.0	
CLL	i P	- Z 11:39:45.4			0.9	9	5.1		
	e PP	Z 11:43:14.2							
	e PS	Z 11:51:40.7							
	e SS	Z 11:56:30.6							
	e SSS	Z 11:59:50.8							
	e LV	Z 12:08:38.5							
	e L	Z 12:18:56.1			22.0	581		5.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/05	13:35:47.9	22.540S	177.220W	439.0G				GRSN

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z 13:54:54.2	150.2	19.2	0.8	38			
	e PKPab	Z 13:55:00.0							
GRA1	e PKP	Z 13:54:59.1							
	e	13:55:09.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/05	15:26:47.8	14.280S	69.300W	33.0N	5.3			SZGRF
2001/05/05	15:26:57.4	16.787S	69.502W	196D	4.8			NEIC

Peru-Bolivia border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 15:40:06.8	96.9	252.1	1.0	13	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/05								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 15:51:49.4							
	e	15:51:55.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/05	18:07:3.8	15.690N	93.080W	33.0N	5.3	4.7		SZGRF
2001/05/05	18:06:55.9	14.846N	93.626W	33N	5.0	4.5		NEIC

Near coast of Chiapas, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 18:19:46.3	88.0	290.8	1.2	27	5.3		
	e S	N 18:30:20.3							
	e L	Z 18:59:43.9			20.3	300		4.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/06	00:12:12.6	24.577S	116.052W	10G	5.4	5.1		NEIC

Southern East Pacific Rise

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 00:31:30.2	132.3	281.8					
	e	00:31:37.2							
	e L	Z 01:25:59.7			22.0	333		5.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/06								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:37:41.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/06								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 02:25:44.7							
	e	02:25:50.2							

e 02:25:57.4  
e 02:26:06.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/06								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 04:27:45.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/06	05:19:49.8	18.210S	174.040W	225.2				GRSN
2001/05/06	05:19:46.5	18.317S	175.222W	212D	5.0			NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	i PKPbc	- Z 05:39:00.4	145.1	15.1					
IBBN	i PKPbc	- Z 05:39:03.2	145.9	5.1					
CLZ	e PKPdf	Z 05:39:02.2	146.2	9.6					
	i PKPbc	- Z 05:39:04.1							
CLL	e PKPdf	Z 05:39:02.5	146.4	12.2					
	i PKPbc	- Z 05:39:04.2			0.9	174			
	i	05:39:22.0							
	e pPKPbc	Z 05:40:00.2							
BRG	e PKPdf	Z 05:39:03.0	146.6	16.0					
	i PKPbc	- Z 05:39:05.4							
MOX	e PKPdf	Z 05:39:03.7	147.2	12.0					
	i PKPbc	- Z 05:39:06.8							
TNS	i PKPbc	- Z 05:39:09.0	148.0	6.6					
	e PKPab	Z 05:39:11.5							
GRA1	e PKPdf	Z 05:39:06.2	148.2	11.7					
	i PKPbc	- Z 05:39:09.8							
	e PKPab	Z 05:39:13.3							
	e pPKPbc	Z 05:40:03.6							
WET	i PKPbc	- Z 05:39:10.3	148.5	14.8					
GEC2	i PKPbc	- Z 05:39:10.7	148.6	16.4					
WLF	i PKPbc	- Z 05:39:11.1	148.6	2.5					
STU	e PKPdf	Z 05:39:07.5	149.3	8.2					
	i PKPbc	- Z 05:39:12.4							
FUR	e PKPdf	Z 05:39:08.0	149.7	12.3					
	i PKPbc	- Z 05:39:13.2							
	e PKPab	Z 05:39:18.4							
BFO	e PKPdf	Z 05:39:07.8	149.8	6.7					
	i PKPbc	- Z 05:39:13.4							
	e PKPab	Z 05:39:18.8							



Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/06	16:18:44.1	4.043N	95.037E	102?	4.6			NEIC
Off west coast of northern Sumatera, Indonesia								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 16:31:00.2	82.9	92.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/06								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PP	Z 20:57:37.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/06	22:51:53.7			N				SZGRF
2001/05/06	22:52:10.9	37.354N	72.339E	192*	4.7			NEIC
Afghanistan-Tajikistan border region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:00:08.2	44.7	81.8					
	e	23:00:12.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/06								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 23:08:12.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/07	00:00:37.6	14.959S	173.331W	33N	4.8	5.3		NEIC
Tonga Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 00:20:12.8	145.1	7.7					
	e	00:20:17.0							
	e	00:20:19.9							
	e	00:20:22.4							
	e L	Z 01:25:52.8			20.3	772		5.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/07	00:33:24.5	56.262S	143.197W	10G	5.5	5.8		NEIC

Pacific-Antarctic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML							
GRA1	e PKPdf	Z 00:53:27.5	163.4	237.0												
	e	00:53:32.7														
	e PKPab	Z 00:54:19.7														
	e PP	Z 00:58:04.6														
	e	01:01:59.5														
	e SKKSac	E 01:04:39.2														
	e SS	E 01:18:42.1														
	e L	Z 02:13:08.2														
	CLL	e PKPdf	Z 00:53:27.7									20.0	2873	6.1		
		e PKPab	Z 00:54:29.8													
e PP		Z 00:58:03.8														
e PPP		Z 01:02:09.3														
e SKKSac		N 01:05:18.4														
e PSKS		Z 01:08:34.5														
e SS		E 01:18:43.9														
e L		Z 02:10:25.2														

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/07								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 02:16:36.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/07								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 03:21:26.7							
	e	03:21:32.2							
	e	03:21:51.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/07	14:32:52.8	27.040N	127.950E	33.0N	5.7			SZGRF
2001/05/07	14:32:50.0	27.445N	128.303E	33N	5.3	5.1		NEIC

Ryukyu Islands, Japan

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Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z	14:45:25.2	84.8	52.5			5.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/07	21:27:23.7	42.580N	149.750E	33.0N	5.0			SZGRF
2001/05/07	21:27:32.2	42.518N	142.999E	33N	4.8	4.0		NEIC

Off southeast coast of Hokkaido, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	21:39:34.7	78.6	34.1	0.8	13	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/08	05:15:49.0	20.170N	102.710W	33.0N	5.3	5.4		SZGRF
2001/05/08	05:15:37.6	18.833N	103.967W	33N	5.2	4.9		NEIC

Jalisco, Mexico

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e P	+ Z	05:28:25.6	87.6	298.4	1.3	48	5.5		
WLF	e P	+ Z	05:28:27.7	88.0	297.2	1.4	21	5.1		
TNS	e P	+ Z	05:28:32.1	89.0	298.9	1.6	51	5.4		
CLZ	e P	+ Z	05:28:33.7	89.3	300.4	1.1	36	5.6		
MOX	e P	+ Z	05:28:39.2	90.5	301.4	1.4	22	5.2		
CLL	i P	Z	05:28:40.3			0.9	11	5.1		
	e PP	Z	05:32:15.0							
	e SKSac	R	05:39:14.8							
	e S	E	05:39:19.7							
	e PS	E	05:40:56.2							
	e SS	T	05:45:32.8							
	e SSS	Z	05:49:48.9							
	e SSSS	Z	05:52:38.2							
	e L	Z	06:10:58.8			18.0	1345		5.4	
GRA1	e P	+ Z	05:28:41.1	90.8	301.1	1.5	57	5.6		
	e		05:28:49.7							
	e PP	Z	05:32:12.8							
	e S	N	05:39:23.2							
	e		05:41:02.4							
	e L	Z	06:10:45.4			18.1	1197		5.4	
BRG	e P	+ Z	05:28:44.4	91.7	303.2	1.2	14	5.1		
WET	e P	+ Z	05:28:46.5	92.0	302.3	1.4	26	5.3		
GEC2	e P	+ Z	05:28:49.1	92.6	303.0	1.4	18	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/08	16:40:52.8	16.168S	173.068W	200G	4.4			NEIC



GRA1 e PKP Z 19:46:07.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/09								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 00:27:48.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/09								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKPdf)	Z 02:50:18.6							
	e PKPbc	Z 02:50:20.2							
	e (PKPab)	Z 02:50:24.6							
	e (pPKPbc)	Z 02:50:28.6							
CLL	e (PKPdf)	Z 02:50:20.1							
	i PKPbc	- Z 02:50:23.6			1.1	28			
	e pPKPbc	Z 02:50:32.9							
	e L	Z 03:54:00.3			22.0	313		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/09	12:24:36.8	0.980S	21.190W	33.0N	5.0			SZGRF
2001/05/09	12:24:47.2	0.124S	18.264W	10G	4.8	4.3		NEIC

Central Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 12:34:25.2	55.8	216.5			5.0		
	e PP	Z 12:36:26.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/09	15:47:44.1	54.270N	163.010W	42.0	6.3	4.8		SZGRF
2001/05/09	15:47:37.0	53.773N	164.249W	40D	5.7	5.0		NEIC

Unimak Island, Alaska, United States, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z 15:59:16.6			1.1	131	5.9		
	e pP	Z 15:59:29.1							
	e PP	Z 16:01:56.2							
	e SS	Z 16:13:46.2							
	e SSS	Z 16:17:30.6							

	e LV	Z	16:23:42.2							
	e L	Z	16:36:05.1			22.0	585		4.8	
GRA1	i P	+ Z	15:59:26.6	76.5	357.2			6.3		
	e pP	Z	15:59:38.7							
	e L	Z	16:40:11.9			20.3	468		4.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/09	17:38:26.4	10.355S	161.279E	68D	6.0			NEIC

Bougainville - Solomon Islands region

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	CLL	e PKPdf	Z 17:57:32.4			1.1	32			
		e pPKPdf	Z 17:57:50.5							
		e PP	Z 17:59:54.4							
		e pPP	Z 18:00:09.6							
		e SKP	Z 18:00:52.7							
		e sSKP	Z 18:01:23.9							
		e PS	E 18:10:05.0							
		e PPS	E 18:11:39.2							
		e SS	E 18:17:31.7							
		e sSS	E 18:18:02.3							
		e SSS	N 18:22:23.8							
		e L	Z 18:58:15.5			22.0	3160		6.0	
GRA1	e PKPdf	Z	17:57:37.0	133.5	42.6					
	e pPKPdf	Z	17:57:54.4							
	e PP	Z	18:00:03.5							
	e pPP	Z	18:00:22.8							
	e L	Z	18:57:17.2			21.2	2442		5.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/10	14:38:20.2	15.632S	177.965E	19D	5.0	4.5		NEIC

Fiji Islands

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKPab	Z 14:57:56.1	144.3	22.2					
		e PKPdf	Z 14:58:01.5							
		e (pPKPab)	Z 14:58:09.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/10								

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z 15:05:05.2							

e (pPKP) Z 15:05:09.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/11	04:11:53.4	16.361S	178.450E	33N	4.9			NEIC

Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 04:31:28.1	145.1	21.8					
	e (pPKP)	Z 04:31:32.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/11	04:25:14.8	43.080N	126.680W	33.0N	4.4	4.4		SZGRF
2001/05/11	04:25:00.4	43.588N	127.296W	10G	4.5	4.4		NEIC

Off coast of Oregon, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:37:22.3	79.9	330.8			4.4		
	e L	Z 05:16:02.1			18.3	142		4.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/11	04:43:25.6	21.400S	178.725W	600G	4.7			NEIC

Tonga Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 05:02:02.4							
	i PKPbc	- Z 05:02:07.2			1.2	92			
	i PKPab	Z 05:02:13.1							
	e pPKPbc	Z 05:04:22.2							
GRA1	e PKPdf	Z 05:02:06.5	150.6	19.1					
	i PKPbc	- Z 05:02:12.0							
	e PKPab	Z 05:02:21.5							
	e pPKPbc	Z 05:04:27.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/11	06:06:27.1	34.843S	108.053W	10G	5.0	4.8		NEIC

Southern East Pacific Rise

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 06:25:46.0	134.1	264.9					
	e pPKPdf	Z 06:25:52.8							
	e (SKP)	Z 06:29:21.0							

e				06:46:39.2								
e				06:51:10.7								
e				06:54:37.4								
e L		Z		07:11:33.4			45.2		508		4.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/11	10:41:20.2	17.875S	178.525W	600G	4.4			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z	10:59:55.6	147.2	17.3					
	i PKPbc	- Z	10:59:59.2							
	e PKPab	Z	11:00:02.9							
CLL	i PKPbc	- Z	10:59:53.4			0.8	71			
	e pPKPbc	Z	11:02:07.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/11	22:18:02.6	0.987N	98.736E	33N	5.4	4.6		NEIC

Northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z	22:30:51.8	87.6	91.3					
	e		22:30:57.1							
	e pP	Z	22:31:14.4							
	e		22:31:26.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/12	00:31:56.0	20.770S	170.620E	33N	4.8			NEIC

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	00:51:37.1	146.8	36.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/12	03:32:53.7	30.030N	131.760E	25.9	4.9	5.2		SZGRF
2001/05/12	03:32:55.9	30.494N	130.856E	33N	4.6	5.1		NEIC

Kyushu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:45:24.3	83.6	48.9			4.9		
	e (pP)	Z	03:45:31.8							



e L	Z	04:27:20.5	18.0	862	5.2
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Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/12	14:21:20.8	13.763N	91.303W	33N	4.7	4.5		NEIC

Near coast of Guatemala

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 14:34:07.3	87.4	288.4			4.7		
	e	14:34:39.5							
	e L	Z 15:10:26.8			19.7	249		4.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/12	18:42:43.0	49.210N	158.050E	48.9	5.2	4.6		SZGRF
2001/05/12	18:42:42.7	49.777N	156.535E	33N	5.1	4.3		NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 18:54:31.1	76.2	22.2			5.2		
	e pP	Z 18:54:45.1							
	e L	Z 19:32:41.7			19.0	258		4.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/13	04:03:26.0			N	4.6			SZGRF

Maldiv Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:14:56.9					4.6		
BEAM		04:14:56.9			1.1	7			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/13	11:01:16.1	44.410N	150.500E	33.0N	4.3			SZGRF
2001/05/13	11:01:24.9	44.190N	146.981E	94?	4.4			NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 11:13:19.4	78.5	30.7			4.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/13	18:12:45.5			N				SZGRF

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 18:25:43.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/13	23:17:31.3	28.240N	130.370E	33.0N	5.2	5.1		SZGRF
2001/05/13	23:17:32.1	27.855N	126.874E	33N	4.7	5.0		NEIC

Ryukyu Islands, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:30:04.9	83.8	53.3			5.2		
	e L	Z 00:10:25.2			19.5	735		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/14								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:24:47.2					4.0		
BEAM		01:24:47.2			0.9	3			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/14	02:32:38.4	27.109S	176.929W	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 02:52:27.3			1.7	29			
	i PKPbc	Z 02:52:36.8			1.0	24			
	e pPKPbc	Z 02:52:44.5							
	i PKPab	Z 02:52:51.6			0.9	22			
	e PP	Z 02:56:26.9							
	e PPS	Z 03:09:32.8							
	e L	Z 04:08:35.0			22.0	608		5.4	
GRA1	e PKPdf	Z 02:52:30.3	156.6	18.5					
	e	02:52:49.6							
	e PKPab	Z 02:52:59.7							
	e	02:53:05.3							
	e L	Z 04:01:31.4			22.0	562		5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/14	06:16:47.0	2.133S	100.147E	33N	4.8	4.4		NEIC

Southern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:29:50.0	90.9	92.2			5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/14	07:22:20.4	54.550N	142.420W	33.0N	4.8	4.6		SZGRF
2001/05/14	07:22:12.9	54.571N	142.797W	10G	4.8	4.7		NEIC

South of Alaska

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 07:33:49.8	73.5	344.6			4.8		
	e L	Z 08:06:50.1			20.0	333		4.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/14	18:05: 4.6	7.050S	15.110W	25.4	4.8	4.4		SZGRF
2001/05/14	18:05:04.1	7.307S	13.430W	10G	5.1	4.3		NEIC

Ascension Island region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 18:15:17.6	60.9	208.3			4.8		
	e pP	Z 18:15:24.4							
	e (sP)	Z 18:15:28.0							
	e L	Z 18:41:48.1			18.8	273		4.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/14								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 22:51:32.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/14	22:44:18.6	20.773S	178.655W	600G	4.4			NEIC

Tonga Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 23:03:00.4	150.0	18.7					
	i PKPbc	- Z 23:03:03.8							
	e PKPab	Z 23:03:12.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/15	23:53:19.9	27.662S	66.377W	177D	5.0			NEIC
Catamarca Province, Argentina								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PP	Z	00:11:15.0	103.4	242.8					
CLL	e PP	Z	00:11:18.1							
	e SKSac	R	00:17:34.9							
	e SKKSac	R	00:18:17.7							
	e Sdiff	E	00:18:42.2							
	e SP	Z	00:20:23.1							
	e SS	R	00:26:03.3							
	e LV	Z	00:42:57.7							
	e L	Z	00:55:10.0			22.0	215		4.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/16	00:26:21.1	4.219S	143.399E	129D	5.2			NEIC
New Guinea, Papua New Guinea								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PP	Z	00:46:19.8	119.3	57.9					
	e L	Z	01:36:54.0			18.1	116		4.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/16	11:00:13.2	30.020N	71.240E	20.9	5.1	4.1		SZGRF
2001/05/16	11:00:19.5	30.136N	69.867E	33N	5.2	4.8		NEIC
Pakistan								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z	11:08:55.4	47.6	91.4			5.1		
	e pP	Z	11:09:00.1							
	e sP	Z	11:09:03.3							
	e L	Z	11:30:51.6			21.0	212		4.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/16								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPab	- Z	12:07:07.8							
	e (pPKPab)	Z	12:07:22.1							
	e L	Z	13:16:31.9			21.5	71			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/16	13:10:42.4	30.160N	69.847E	14D	5.0			NEIC

Pakistan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:19:24.2	47.6	91.4			5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/16								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	+ Z 16:28:44.9					4.8		
BEAM		16:28:44.9			1.0	9			
GRA1	e L	Z 17:00:58.4			18.9	116		4.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/17	11:43:58.2	39.016N	15.470E	241D	4.9			NEIC

Southern Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	i P	- Z 11:46:14.2	9.6	160.1					
GEC2	i P	- Z 11:46:16.9	9.9	172.0					
	e (S)	Z 11:48:08.5							
GRC3	e	11:48:16.2	10.3	162.8					
GRC2	e	11:48:16.7	10.3	161.9					
WET	i P	- Z 11:46:21.4	10.3	168.7					
	e (S)	Z 11:48:17.0							
GRC1	e	11:48:19.1	10.4	162.7					
GRB5	e	11:48:20.9	10.5	163.5					
GRC4	e	11:48:20.5	10.5	162.9					
GRB2	e	11:48:23.8	10.6	163.8					
BFO	i P	- Z 11:46:26.1	10.6	148.5					
	e (S)	Z 11:48:24.5							
GRB3	e	11:48:25.2	10.7	164.4					
GRB1	e	11:48:27.0	10.7	163.9					
STU	i P	- Z 11:46:27.3	10.7	152.9					
GRB4	e	11:48:28.5	10.8	163.6					
GRA4	e	11:48:30.8	10.9	163.3					
GRA2	e	11:48:33.6	11.0	163.1					
GRA1	i P	- Z 11:46:31.6	11.1	162.6	0.9	598			
	e	11:48:35.5							
GRA3	e	11:48:35.5	11.1	163.1					
BRG	i P	- Z 11:46:42.1	11.9	174.2					

MOX	i P	- Z	11:46:42.3	11.9	165.4
TNS	i P	- Z	11:46:47.3	12.3	153.4
CLL	i P	- Z	11:46:48.9	12.4	171.0
WLF	i P	- Z	11:46:51.2	12.5	144.6
CLZ	i P	- Z	11:47:00.2	13.3	162.5
IBBN	i P	- Z	11:47:13.5	14.3	155.1

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/17								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 14:52:19.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/17								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 23:49:42.1							
	i PKPbc	- Z 23:49:49.9							
	e PKPab	Z 23:49:56.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/18	02:05:39.8	0.440N	97.040E	32.9	5.2	5.6		SZGRF
2001/05/18	02:05:33.9	0.510N	97.805E	33N	5.5	5.9		NEIC

Northern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 02:18:11.7	85.7	94.4	1.0	12	5.1		
	e L	Z 03:05:20.9			18.4	2389		5.6	
GEC2	e P	Z 02:18:11.6	85.7	94.1	1.1	23	5.3		
	e L	Z 03:02:15.0			22.0	2011		5.5	
RUE	e P	Z 02:18:12.8	86.0	94.4					
	e L	Z 03:07:09.1			19.3	1879		5.5	
WET	e P	Z 02:18:14.3	86.3	93.5	0.9	16	5.1		
	e L	Z 03:03:59.6			20.9	2189		5.5	
CLL	i P	+ Z 02:18:13.8			1.1	14	5.0		
	e pP	Z 02:18:21.9							
	e sP	Z 02:18:28.5							
	e PP	Z 02:21:21.2							
	e PPP	Z 02:23:41.0							
	e PPPP	Z 02:25:26.9							
	e S	T 02:28:46.5							
	e PS	Z 02:29:50.8							

	e SS	N	02:34:28.7								
	e L	Z	03:05:29.8			18.0	3041		5.7		
MOX	e P	Z	02:18:18.7	87.2	92.6						
	e S	N	02:28:57.2								
	e L	Z	03:06:15.5			19.9	2622		5.6		
FUR	e L	Z	03:03:17.4	87.3	92.2	21.5	2269		5.5		
GRA1	e P	Z	02:18:20.2	87.4	92.3	0.9	19	5.2			
	e pP	Z	02:18:28.6								
	e sP	Z	02:18:35.4								
	e PP	Z	02:21:28.0								
	e S	N	02:29:01.4								
	e L	Z	03:04:37.5			19.8	2690		5.7		
CLZ	e P	Z	02:18:22.8	88.0	91.7	0.9	29	5.6			
	e L	Z	03:05:00.4			21.5	2209		5.5		
STU	e P	Z	02:18:25.8	88.7	90.7						
	e L	Z	03:05:32.3			20.5	2682		5.6		
TNS	e P	Z	02:18:28.8	89.2	90.2	0.9	28	5.5			
	e S	N	02:29:16.1								
	e L	Z	03:07:37.3			18.9	2467		5.6		
BFO	e P	Z	02:18:28.5	89.3	90.1	0.9	9	5.0			
	e L	Z	03:05:53.6			20.3	2203		5.6		
IBBN	e P	Z	02:18:30.7	89.6	89.6						
	e L	Z	03:09:08.1			18.4	2257		5.6		
BUG	e P	Z	02:18:31.9	89.9	89.3	0.8	22	5.4			
WLF	e P	Z	02:18:35.6	90.7	88.4	1.2	26	5.3			
	e L	Z	03:08:27.3			19.1	1360		5.4		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/05/18 02:46:30.0 54.275N 169.077E 10G 5.2 NEIC  
 Komandorsky Islands, Russia, region

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
 GRA1 i P - Z 02:58:11.7 74.4 13.2 4.9

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/05/18 07:28:44.8 34.436N 136.164E 373D 4.6 NEIC  
 Western Honshu, Japan

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
 GRA1 i P - Z 07:40:31.1 82.8 43.0 4.8

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/05/18 10:59:45.4 7.447S 155.785E 33N 5.3 5.4 NEIC

Bougainville - Solomon Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 11:18:51.5	128.4	47.2					
	e PP	Z 11:20:58.5							
	e L	Z 12:16:10.9			19.7	564		5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/18								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 19:34:02.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/18								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 21:09:50.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/19								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 02:57:53.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/19	03:11: 9.1	36.760N	18.750E	10.0G		3.9		SZGRF
2001/05/19	03:11:17.1	39.185N	22.596E	14	4.8			NEIC

Central Mediterranean Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 03:14:03.3	11.6	143.3					
	e Sg	E 03:17:52.4							
	e L	Z 03:20:06.4			14.8	698		3.8	
WET	e Pn	Z 03:14:10.8	12.1	141.5					
	e Sg	E 03:18:06.4							
	e L	Z 03:20:34.0			16.0	1072		4.0	
GRA1	e Pn	Z 03:14:30.1	13.2	138.2					
	e L	Z 03:21:14.2			17.1	770		3.9	
BFO	e Pn	Z 03:14:27.4	13.7	126.4					
	e Sg	E 03:18:28.9							



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	e L	Z	03:20:51.6			16.3	507	3.7
MOX	e Pn	Z	03:14:31.5	13.8	141.8			
	e Sg	E	03:19:00.0					
	e L	Z	03:21:34.3			15.8	858	4.0
TNS	e Pn	Z	03:14:44.9	14.9	132.5			
	e Sg	N	03:19:12.4					
	e L	Z	03:21:23.0			16.0	1413	4.2
WLF	e Pn	Z	03:14:52.0	15.7	125.7			
	e L	Z	03:22:06.9			16.3	620	3.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/19	17:35:48.0	20.070S	178.920W	379.7				SZGRF
2001/05/19	17:36:25.8	19.863S	177.559W	365D	5.9			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	i PKPbc	- Z	17:55:18.6	144.3	17.7					
BSEG	i PKPpdf	- Z	17:55:20.6	145.4	13.1					
	i PKPbc	- Z	17:55:22.0							
RUE	i PKPpdf	- Z	17:55:22.4	146.2	19.4					
	i PKPbc	- Z	17:55:24.4							
IBBN	i PKPpdf	- Z	17:55:23.9	147.3	9.3					
	i PKPbc	- Z	17:55:27.3							
CLZ	i PKPpdf	- Z	17:55:24.5	147.4	13.9					
	i PKPbc	- Z	17:55:28.1							
	e PKPab	Z	17:55:30.7							
CLL	i PKPpdf	Z	17:55:24.2							
	i PKPbc	- Z	17:55:28.0			0.8	498			
	i PKPab	+ Z	17:55:31.0							
	e pPKPbc	Z	17:57:00.2							
	i SKP	Z	17:58:30.3							
	e PP	Z	17:59:02.1							
	e sPP	Z	18:01:02.6							
	e PPS	Z	18:11:47.7							
	e SS	E	18:17:26.2							
	e sSS	E	18:19:54.3							
	e sSSS	E	18:25:27.9							
BRG	i PKPbc	- Z	17:55:28.6	147.7	20.5					
	e PKPab	Z	17:55:32.2							
BUG	i PKPpdf	- Z	17:55:29.3	148.2	8.6					
	i PKPbc	- Z	17:55:33.2							
MOX	i PKPpdf	- Z	17:55:25.9	148.4	16.6					
	i PKPbc	- Z	17:55:30.4							
	e PKPab	Z	17:55:34.3							
TNS	i PKPpdf	- Z	17:55:27.4	149.3	11.1					
	i PKPbc	- Z	17:55:32.6							
	e PKPab	Z	17:55:37.5							

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GRA1	i	PKPdf	- Z	17:55:27.7	149.4	16.4
	i	PKPbc	- Z	17:55:33.1		
	e	PKPab	Z	17:55:38.8		
	e	pPKPbc	Z	17:57:05.3		
WET	i	PKPdf	- Z	17:55:27.5	149.5	19.6
	i	PKPbc	- Z	17:55:33.3		
	e	PKPab	Z	17:55:39.6		
GEC2	i	PKPdf	- Z	17:55:27.7	149.6	21.3
	i	PKPbc	- Z	17:55:33.5		
WLF	i	PKPbc	- Z	17:55:35.0	150.1	7.0
STU	i	PKPdf	- Z	17:55:29.2	150.6	13.0
	i	PKPbc	- Z	17:55:35.7		
	e	PKPab	Z	17:55:43.5		
FUR	i	PKPdf	- Z	17:55:29.4	150.8	17.2
	i	PKPbc	- Z	17:55:36.2		
	e	PKPab	Z	17:55:44.5		
BFO	i	PKPdf	- Z	17:55:29.9	151.1	11.5
	i	PKPbc	- Z	17:55:36.7		
	e	PKPab	Z	17:55:45.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/20	03:08:57.5			N	3.7			SZGRF
2001/05/20	03:09:37.6	38.415N	25.793E	10G	3.8			NEIC

Eastern Mediterranean Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:13:23.1	15.3	131.8			3.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/20	04:21:43.3	18.8N	104.2W	33N		6.3		NEIC

Near Coast of Jalisco, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	+ Z 04:34:47.4			1.3	13	5.1		
	e sP	Z 04:35:00.6							
	e PP	Z 04:38:29.3							
	e PPP	Z 04:40:36.2							
	e S	E 04:45:32.4							
	e PS	E 04:47:06.0							
	e SS	E 04:52:00.7							
	e SSS	E 04:56:15.4							
	e LV	Z 05:05:35.0							
	e L	Z 05:17:07.1			20.0	6810		6.1	
GRA1	i P	+ Z 04:34:47.8			2.1	95	5.8		
	e	04:35:05.1							

e				04:35:17.4								
e				04:35:29.7								
e PP	Z			04:38:28.2								
e L	Z			05:15:40.7	21.1		7320			6.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/20	16:30:29.8	81.178N	3.709W	10G	4.4			NEIC

North of Svalbard

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 16:37:05.9	31.9	355.7			4.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/20	17:21:24.0			N	3.8			SZGRF
2001/05/20	17:22:04.7	35.598N	23.464E	10G	4.2			NEIC

Eastern Mediterranean Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:26:03.2	16.7	143.1			3.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/20								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:03:23.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/21	01:24: 5.7	35.680N	69.350E	226.6	4.8			SZGRF
2001/05/21	01:24:01.0	36.478N	70.120E	223D	4.3			NEIC

Hindu Kush, Afghanistan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z 01:31:37.1			0.9	9	4.5		
	e ScP	Z 01:36:52.4							
	e SS	Z 01:41:15.3							
GRA1	i P	+ Z 01:31:48.7	43.8	84.4			4.8		
	e pP	Z 01:32:37.1							
	e (sP)	Z 01:33:02.3							
	e PcP	Z 01:33:28.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/21	04:09:27.9	70.500N	11.970W	33.0N	4.6	3.1		SZGRF
2001/05/21	04:09:17.5	71.033N	12.511W	10G	4.4	3.3		NEIC

Jan Mayen Island region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 04:14:35.0	24.0	341.2			4.6		
	e L	Z 04:23:31.9			20.9	76		3.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/21	05:25:25.5	42.080N	146.060E	33.0N	5.3	4.9		SZGRF
2001/05/21	05:25:22.5	41.002N	143.051E	33N	5.0	4.7		NEIC

Off southeast coast of Hokkaido, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 05:37:32.3	79.9	34.8			5.3		
	e L	Z 05:38:12.5							
	e L	Z 06:16:14.6			19.4	507		4.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/21	14:33:29.0	19.559N	70.085W	33N	4.7	4.2		NEIC

Dominican Republic region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 14:44:43.7	69.7	276.6					
	e L	Z 15:10:23.1			21.0	283		4.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/21	16:43:04.9	2.74N	95.37W	10G		5.1		NEIC

Galapagos Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PP	Z 17:01:06.7							
	e SKSac	E 17:07:38.7							
	e PS	Z 17:09:57.0							
	e PPS	Z 17:10:35.4							
	e SS	E 17:15:15.2							
	e L	Z 17:37:06.4			20.0	520		5.0	
GRA1	e PS	Z 17:09:43.0							
	e SS	Z 17:14:56.7							
	e L	Z 17:34:46.7			21.9	865		5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/21	23:15:45.7	29.925S	179.090W	226*	4.6			NEIC

Kermadec Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPab	Z 23:35:54.1	158.8	25.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/22	00:12:29.7	4.083S	152.518E	33N	5.0	4.5		NEIC

New Britain, Papua New Guinea, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 00:31:26.3	123.9	48.7					
	e pPKPdf	Z 00:31:34.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/22	09:15:17.7	36.647N	71.480E	188D	5.2			NEIC

Afghanistan-Tajikistan border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z 09:23:03.5			0.8	66	5.4		
	e sP	Z 09:23:58.2							
	e pPP	Z 09:25:20.3							
	e sPP	Z 09:25:48.1							
GRA1	i P	+ Z 09:23:15.0	44.5	83.2			5.8		
	e pP	Z 09:23:55.2							
	e sP	Z 09:24:14.7							
	e	09:25:35.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/22								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 18:36:54.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/22	19:13:20.3	46.040N	43.060E	33.0N	4.6			SZGRF

Ukraine - Moldova - Southwestern Russia region

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Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z	19:18:06.8	21.5	87.5			4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/23	00:01:45.9	17.032S	178.655W	300G	4.4			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	00:20:49.9	146.4	17.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/23	14:31:15.0	31.100N	52.320E	22.5	4.8	3.6		SZGRF
2001/05/23	14:31:13.6	29.910N	51.112E	33N	4.8	3.7		NEIC

Northern and central Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	+ Z	14:38:12.7	35.9	108.4			4.8		
	e pP	Z	14:38:18.5							
	e L	Z	14:57:14.8			18.5	97		3.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/23	15:11:26.8	35.141N	27.818E	33N	4.5			NEIC

Eastern Mediterranean Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z	15:15:46.8	18.9	134.0			4.3		
	e L	Z	15:23:21.9			20.8	170		3.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/23	15:35:23.3	17.625S	178.825W	569D	5.3			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z	15:54:01.2	146.9	17.7					
	i PKPbc	+ Z	15:54:04.5							
	e PKPab	Z	15:54:08.1							
	e pPKPbc	Z	15:56:18.5							
	e (pPKPab)	Z	15:56:25.0							

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Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/23	21:10:43.7	26.810N	101.800E	52.5	5.3	5.3		SZGRF
2001/05/23	21:10:45.0	27.802N	100.979E	33N	5.0	5.3		NEIC

Yunnan, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	21:21:40.5			1.2	25	5.3		
	e S	E	21:30:38.4							
	e SS	E	21:35:07.0							
	e SSS	Z	21:38:25.9							
	e L	Z	21:54:10.4			18.0	1855		5.4	
GRA1	e P	Z	21:21:51.3	69.0	71.3			5.3		
	e (pP)	Z	21:22:06.0							
	e		21:22:22.4							
	e		21:22:39.1							
	e		21:24:23.0							
	e S	E	21:30:57.2							
	e L	Z	21:54:17.6			18.4	1761		5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/24	00:21:15.7	30.261N	67.790E	33N	4.8			NEIC

Pakistan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	00:29:39.5	46.2	92.9			4.4		
	e L	Z	00:51:08.9			19.2	261		4.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/24								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:21:57.2							
	e L	Z	03:27:47.5			18.2	160		3.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/24	03:23:45.5	18.736S	12.225W	10G	4.5			NEIC

Southern Mid-Atlantic Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:35:07.9	71.5	203.4			4.4		

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Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source				
2001/05/24												
	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML	
	GRA1	e (PKPab)	Z	04:39:50.4								

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source				
2001/05/24												
	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML	
	GRA1	e PKPab	Z	05:24:07.9								
		e L	Z	06:35:22.1			20.4	156		4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source				
2001/05/24												
	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML	
	GRA1	e (PKPdf)	Z	06:17:01.2								

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source				
2001/05/24	09:41:31.5	27.271S	177.565W	33N	5.1			NEIC				
Kermadec Islands region												
	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML	
	GRA1	e PKPab	Z	10:01:52.4	156.6	20.0						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source				
2001/05/24												
	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML	
	GRA1	e PKPdf	Z	10:59:09.5								

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source				
2001/05/24	12:59:15.6	5.675S	150.906E	112?	5.3			NEIC				
New Britain, Papua New Guinea, region												
	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML	
	GRA1	i PKPdf	+ Z	13:18:04.1	124.5	51.4						
		e L	Z	14:11:50.8			20.7	141		4.6		





GRA1	i P	+ Z	23:51:41.8	80.0	35.6				4.9
	e		23:51:47.4						
	e (pP)	Z	23:51:56.3						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/25	00:41: 6.0	46.820N	148.500E	33.0N	6.4	6.9		SZGRF
2001/05/25	00:40:51.0	44.298N	148.407E	33N	6.1	6.7		NEIC

Northwest of Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML			
RGN	i P	+ Z	00:52:26.2	74.0	31.7	1.0	424	6.5					
	e L	Z	01:28:00.0								20.3	67401	6.9
BSEG	i P	+ Z	00:52:34.6	75.5	29.6	1.2	587	6.5					
	e L	Z	01:29:27.4								18.2	74009	7.0
RUE	i P	+ Z	00:52:35.4	75.7	31.7	1.1	464	6.4					
	e L	Z	01:30:26.9								18.6	77903	7.0
CLL	i P	+ Z	00:52:42.5	77.0	31.6	1.1	237	6.1					
	e		00:54:20.2								18.0	71286	7.0
	e PP	Z	00:55:42.3										
	e PPP	Z	00:57:38.9										
	e S	T	01:02:25.1										
	e PS	Z	01:02:56.6										
	e SS	R	01:07:35.7										
	e SSS	R	01:11:48.3										
	e L	Z	01:30:52.1								18.6	88508	7.1
	e L	Z	01:30:52.9								21.9	66046	6.9
BRG	i P	+ Z	00:52:42.8	77.3	29.4	1.0	461	6.5					
	e L	Z	01:30:52.9								18.6	88508	7.1
CLZ	i P	+ Z	00:52:45.1	77.6	27.7	1.1	561	6.6					
	e L	Z	01:30:11.9								21.9	66046	6.9
IBBN	i P	+ Z	00:52:46.7	77.9	30.1	1.2	275	6.3					
	e L	Z	01:31:50.8								18.5	79977	7.1
MOX	i P	+ Z	00:52:48.4	78.5	27.3	1.1	165	6.1					
	e L	Z	01:31:52.4								18.3	78794	7.1
BUG	i P	+ Z	00:52:51.4	78.8	31.2	1.3	131	5.9					
	e P	Z	00:52:53.1								18.6	71603	7.0
GEC2	i P	+ Z	00:52:53.1	78.8	30.7	1.1	357	6.4					
	e L	Z	01:31:43.4								18.6	71603	7.0
WET	i P	+ Z	00:52:53.6	78.8	30.7	1.1	357	6.4					
	e L	Z	01:32:10.8								18.0	95187	7.2
GRA1	i P	+ Z	00:52:54.0	78.9	29.7	1.1	1071	6.9					
	e S	N	01:02:53.6										
	e L	Z	01:28:55.5								21.5	53847	6.8
TNS	i P	+ Z	00:52:55.9	79.3	27.9	1.2	456	6.5					
	e L	Z	01:31:12.4								21.3	54798	6.8
FUR	i P	+ Z	00:53:00.9	80.2	29.6	1.2	456	6.5					
	e L	Z	01:30:33.9								21.8	65030	6.9
STU	i P	+ Z	00:53:01.3	80.3	28.3	1.2	421	6.5					
	e L	Z	01:31:30.3								19.9	40200	6.8

BFO	i P	+ Z	00:53:04.9	81.0	27.7	1.2	205	6.0		
	e L	Z	01:31:59.8			21.4	31301	6.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/25	00:54:50.4	44.080N	151.620E	33.0N	4.6			SZGRF
2001/05/25	00:54:51.8	44.153N	148.117E	33N	4.8			NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z 01:06:57.2	78.9	30.0			4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/25	01:26:16.1	44.210N	152.000E	33.0N	4.6			SZGRF

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	+ Z 01:38:22.9	80.1	27.4			4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/25	01:53:47.5	44.232N	148.105E	27D	5.2	5.9		NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 02:05:51.6	78.8	29.9			5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/25	01:58: 6.3			N	4.4			SZGRF

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 02:10:06.4					4.4		
BEAM		02:10:06.4			1.2	4			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/25	02:49: 8.5	44.100N	153.410E	36.7	5.3			SZGRF

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 03:01:17.5	80.6	26.5			5.3		



GRA1 e PKP Z 08:20:16.4  
e pPKP Z 08:20:35.1

Date Origin Time Lat Long Depth mb Ms ML Source  
2001/05/25 08:24:09.6 44.211N 148.352E 40\* 5.1 NEIC  
Kuril Islands, Russia

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 i P + Z 08:36:13.2 78.9 29.8 5.5

Date Origin Time Lat Long Depth mb Ms ML Source  
2001/05/25 13:36:32.8 Tristan da Cunha region

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e P Z 13:49:17.5  
BEAM 13:49:17.5 1.5 17 4.9  
GRA1 e pP Z 13:49:22.3  
e (sP) Z 13:49:25.9  
e L Z 14:24:00.8 20.3 311 4.7

Date Origin Time Lat Long Depth mb Ms ML Source  
2001/05/25 17:45:42.9 Sakhalin Island, Russia

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e P Z 17:56:50.4 68.7 28.0 5.0

Date Origin Time Lat Long Depth mb Ms ML Source  
2001/05/25

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e P Z 18:21:42.1  
BEAM 18:21:42.1 1.4 8 4.2

Date Origin Time Lat Long Depth mb Ms ML Source  
2001/05/25

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

GRA1	i P	- Z	22:25:50.8						5.1
BEAM			22:25:50.8		2.3		115		
GRA1	e pP	Z	22:25:59.5						
	e (PP)	Z	22:27:29.1						
	e L	Z	22:50:21.5		18.7		174		3.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/25								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPab	Z 22:43:28.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/26								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 02:53:54.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/26	04:04:11.2			N	4.5			SZGRF
2001/05/26	04:03:59.5	43.598N	150.189E	33N	4.4	3.8		NEIC
Kuril Islands, Russia								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:16:09.5	80.1	28.9			4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/26	05:20:10.8	46.980N	158.110E	33.0N	5.1	4.5		SZGRF
2001/05/26	05:20:14.6	47.093N	153.764E	33N	4.8	4.5		NEIC
East of Kuril Islands, Russia								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:32:12.7	77.9	25.0			5.1		
	e L	Z 06:11:31.5			19.6	242		4.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/26		35.330N	17.150E	33.0N				SZGRF
Central Mediterranean Sea								

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Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:05:24.4	15.0	161.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/26	10:57:26.8	20.242S	177.831W	414D	5.2			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 11:16:21.0							
	i PKPbc	- Z 11:16:24.8			1.0	142			
	e PKPab	Z 11:16:31.0							
	e pPKPbc	Z 11:18:04.0							
	e PP	Z 11:19:44.4							
	e PPP	Z 11:23:15.6							
	e SKKSac	N 11:26:09.5							
	e SKSP	Z 11:29:25.0							
	e SKKSdf	Z 11:31:45.0							
	e SS	Z 11:38:40.8							
	e sSS	N 11:41:16.8							
GRA1	e PKPdf	Z 11:16:25.9	149.7	17.0					
	i PKPbc	+ Z 11:16:30.3							
	e (PKPab)	Z 11:16:37.4							
	e pPKPbc	Z 11:18:11.3							
	e PP	Z 11:20:02.8							
	e L	Z 11:59:40.3			21.1	579		5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/26	11:58:15.5			N	4.9			SZGRF
2001/05/26	11:58:04.0	37.997N	74.123E	100G	4.6			NEIC

Southern Xinjiang, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 12:06:57.6	45.4	79.9			4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/26	13:29:59.6	18.090N	39.835E	10G	4.5			NEIC

Western Arabian Peninsula

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:37:27.4	39.0	133.7			4.3		
	e L	Z 14:01:07.3			34.1	204		3.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/26	14:51:22.9				5.1			SZGRF
2001/05/26	14:51:40.6	25.563N	95.049E	33N	4.9	3.9		NEIC

Myanmar

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 15:02:33.5	66.9	77.1			5.1		
	e pP	Z 15:02:54.5							
	e sP	Z 15:03:03.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/26								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKPab)	Z 17:08:01.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/26	23:15:33.8				4.7			SZGRF
2001/05/26	23:14:37.5	31.666N	63.741E	33N	4.6	3.5		NEIC

Northern and central Iran

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 23:22:34.4	42.7	94.7			4.7		
	e pP	Z 23:22:38.8							
	e sP	Z 23:22:40.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/27	00:27:43.2	49.850N	160.110E	19.8	5.1			SZGRF
2001/05/27	00:28:43.9	51.087N	151.519E	442	4.4			NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z 00:39:34.8	73.7	24.7			5.1		
	e (pP)	Z 00:39:40.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/27	07:59:23.1	45.060N	155.590E	33.0N	4.6			SZGRF
2001/05/27	07:59:26.3	43.981N	148.439E	33N	4.5			NEIC

East of Kuril Islands, Russia





BRG	e	PKP	Z	22:12:55.0
BSEG	e	PKP	Z	22:12:48.8
CLL	e	PKP	Z	22:12:54.3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/29	02:10:16.4	44.760N	148.730E	33.0N	5.4	4.2		SZGRF
2001/05/29	02:10:16.5	44.364N	148.441E	80D	5.0			NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 02:22:15.0	78.8	29.7			5.4		
	e L	Z 02:58:12.5			20.4	114		4.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/29	04:43:56.4	35.385N	27.749E	10G	4.9	4.7		NEIC

Eastern Mediterranean Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:48:17.8	18.7	133.7			4.7		
	i S	- N 04:51:45.7							
	e L	Z 04:55:51.9			22.0	1030		4.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/29	13:14:26.2	39.849N	41.533E	0	4.8			NEIC

Turkey

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:19:39.9	23.5	103.2			5.1		
	e S	Z 13:24:02.8							
	e L	Z 13:32:14.9			18.0	344		3.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/29	14:15:54.9	39.756N	41.996E	33N	4.7	3.6		NEIC

Turkey

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 14:21:06.4	23.8	102.9			5.1		
	e S	Z 14:25:29.7							
	e L	Z 14:35:45.4			19.5	105		3.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/29	19:03:39.6	4.991S	102.384E	33N	4.8			NEIC

Southern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:16:59.4	94.6	92.3			4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/29	22:53:14.5	38.730N	72.880E	117.2	4.3			SZGRF
2001/05/29	22:53:06.1	38.543N	73.624E	121D	4.5			NEIC

Tajikistan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 23:01:11.8	44.8	79.6			4.3		
	e pP	Z 23:01:38.5							
	e sP	Z 23:01:52.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/29	23:37:19.3	7.014S	155.012E	14G	5.7	6.4		NEIC

Bougainville - Solomon Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e Pdiff	Z 23:53:02.2							
	i PKPdf	Z 23:56:22.4			1.0	14			
	e	23:56:34.4							
	e PP	Z 23:58:14.8							
	e PKS	R 23:59:39.4							
	e PPP	Z 00:01:01.8							
	e PS	Z 00:08:11.0							
	e PPS	Z 00:09:47.9							
	e SS	T 00:15:14.9							
	e	00:16:25.0							
	e SSS	R 00:20:21.3							
	e L	Z 00:52:04.8			20.0	5634		6.2	
GRA1	e PKPdf	Z 23:56:26.5	127.7	47.8					
	e PP	Z 23:58:35.1							
	e L	Z 00:53:19.4			21.7	3541		6.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/30								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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GRA1 e PKP Z 00:48:42.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/30	04:51:50.7	7.571S	156.742E	405D	4.9			NEIC

Bougainville - Solomon Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 05:10:13.1	129.0	46.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/30								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 07:17:44.1							
	e L	Z 08:36:23.3			20.6	148			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/30	11:24:42.0	7.749N	36.695W	10G	4.7	4.3		NEIC

Central Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 11:34:35.9	57.8	240.3			5.0		
	e L	Z 11:55:06.6			21.5	54		3.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/30	15:19:04.8	83.125N	117.208E	10G	4.6	4.1		NEIC

North of Severnaya Zemlya

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 15:27:05.3	42.6	9.8					
	e L	Z 15:43:13.8			21.2	43		3.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/30	23:59:21.1	36.530N	139.520E	33.0N	5.3			SZGRF

Eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 00:11:40.5	82.4	39.5			5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/31	14:56:59.5			N	4.9			SZGRF
2001/05/31	14:57:00.4	37.164N	141.620E	33N	4.4			NEIC

Off east coast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 15:09:24.7	82.7	37.7			4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/05/31	15:27:05.4	60.571N	152.193W	88D	4.6			NEIC

Southern Alaska, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z 15:38:04.3	68.9	351.4			4.9		
	e pP	Z 15:38:31.9							
	e sP	Z 15:38:43.0							

#### Format description

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

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

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

#### EPICENTER LINES:

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

Date	Date of the event
Origin Time	Origin time of the event
Lat	Geographic latitude (N/S) of epicenter in degree

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

## COMMENT LINE:

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

## REGION LINE:

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

## PHASE LINE:

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