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

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

APRIL 2002 UPDATED 10.June.2002

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

(Format desciption at the end of the bulletin)

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/01								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z	00:35:42.0			0.7	2			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/01								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	06:33:04.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/01	14:42:17.1	48.600N	148.290E	33.0N	5.2			SZGRF
2002/04/01	14:42:58.0	48.070N	147.124E	454D	4.6			NEIC

Northwest of Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	14:53:35.4	71.7	28.8	1.0	18	5.2		
RUE	e P	Z	14:53:36.7	71.9	30.7					
CLL	i P	+ Z	14:53:43.6	73.2	30.1	0.9	43	5.5		
	e pP	Z	14:55:21.2							
BRG	e P	Z	14:53:44.1	73.2	30.6					
CLZ	e P	Z	14:53:46.2	73.5	28.5					
IBBN	e P	Z	14:53:47.6	73.8	26.9					
MOX	e P	Z	14:53:49.7	74.2	29.1					
BUG	e P	Z	14:53:52.7	74.7	26.5					

	GEC2	e	P		Z	14:53:54.7	75.1	30.2	0.8	8	4.8
	WET	e	P		Z	14:53:55.3	75.1	29.7			
	GRA1	i	P	+	Z	14:53:55.6	75.1	28.8	0.8	42	5.5
	TNS	e	P		Z	14:53:57.2	75.5	27.1	0.9	15	5.1
	FUR	e	P		Z	14:54:02.7	76.4	28.6			
	STU	e	P		Z	14:54:03.0	76.6	27.4	1.0	21	5.2
	BFO	e	P		Z	14:54:06.6	77.2	26.8	1.0	14	5.1

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/01	19:59:32.4	29.483S	71.069W	67D	6.2			NEIC

Near coast of central Chile

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e Pdiff	Z	20:13:46.1	107.4	244.7					
		e PP	Z	20:18:08.6							
		e SKSac	E	20:24:21.0							
		e SP	Z	20:27:29.6							
		e PS	E	20:27:31.0							
		e PKKPdf	Z	20:29:20.4							
		e SS	N	20:33:08.6							
		e L	Z	21:01:44.0			21.0	4260		6.0	
	CLL	e Pdiff	Z	20:13:52.5			2.2	40			
		e pPdiff	Z	20:14:15.3							
		e PKPdf	Z	20:17:55.4							
		e pPKPdf	Z	20:18:17.0							
		e SKSac	R	20:24:23.4							
		e Sdiff	T	20:25:55.6							
		e SP	Z	20:27:45.3							
		e PKKPab	Z	20:29:14.1							
		e pPKKPab	Z	20:29:34.2							
		e SS	T	20:33:32.6							
		e SSS	N	20:38:22.3							
		e LR	Z	20:51:34.2							
		e L	Z	21:00:24.5			22.0	6620		6.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/02	17:09:57.8	49.6S	116.0W	10		5.6		NEIC

Southern East Pacific rise

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z	17:29:40.4	146.4	249.0					
		e L	Z	18:26:53.7			21.6	1332			
	CLL	e PKPbc	Z	17:29:44.2			1.3	24			
		e PP	Z	17:33:14.5							
		e SKKSac	R	17:40:04.3							

	e		17:43:35.0					
	e PPS	Z	17:46:01.3					
	e SS	Z	17:52:23.6					
	e LQ	T	18:14:54.5					
	e LR	Z	18:21:34.0					
	e L	Z	18:31:06.2			20.0	1308	5.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/03	23:42:21.7	43.440N	141.670E	33.0N	5.6	5.4		SZGRF
2002/04/03	23:42:13.3	41.656N	141.853E	72D	5.1			NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	23:53:55.0	75.7	37.4	1.5	133	5.7		
BSEG	e P	Z	23:53:55.0	75.8	35.2	0.9	58	5.6		
CLL	e P	Z	23:54:00.5	77.0	36.7	0.9	53	5.7		
	e PP	Z	23:56:58.4							
	e S	T	00:03:37.2							
	e sS	T	00:04:20.2							
	e (SS)	Z	00:09:25.7							
	e LQ	T	00:16:53.4							
	e LR	Z	00:19:33.6							
	e L	Z	00:30:56.6			20.0	2199		5.5	
BRG	e P	Z	23:54:01.7	76.9	37.2	1.4	46	5.4		
CLZ	e P	Z	23:54:05.0	77.5	35.0	0.9	61	5.8		
IBBN	e P	Z	23:54:07.4	78.0	33.3	0.8	77	5.9		
MOX	e P	Z	23:54:07.7	78.0	35.7	1.2	35	5.4		
WET	e P	Z	23:54:12.2	78.7	36.3	1.0	50	5.6		
BUG	e P	Z	23:54:12.6	78.9	32.8	1.1	54	5.6		
GRA1	e P	Z	23:54:13.3	78.9	35.3	1.0	103	5.9		
TNS	e P	Z	23:54:15.8	79.5	33.5	1.1	33	5.4		
FUR	e P	Z	23:54:19.6	80.2	35.2	0.9	108	5.9		
STU	e P	Z	23:54:20.8	80.4	33.9	0.8	63	5.7		
WLF	e P	Z	23:54:23.3	80.8	31.9	2.3	128	5.5		
BFO	e P	Z	23:54:25.5	81.1	33.3	1.2	43	5.3		
GRA1	e S	E	00:04:40.8	78.9	35.3					
	e L	Z	00:32:21.7			20.0	1772		5.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/03								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	04:16:08.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/03	11:59:50.1	33.910N	24.950E	33.0N	4.5			SZGRF

Central Mediterranean Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	12:03:48.8	17.1	146.6	0.8	10	4.0		
WET	e P	Z	12:03:54.7	17.7	145.1	1.4	39	4.4		
GRB3	e P	Z	12:04:01.5	18.2	142.9					
GRB4	e P	Z	12:04:03.5	18.4	142.6					
GRA4	e P	Z	12:04:04.6	18.6	142.5					
GRA1	e P	Z	12:04:06.7	18.7	142.2	1.1	45	4.6		
BRG	e P	Z	12:04:06.2	18.8	150.5					
MOX	e P	Z	12:04:13.5	19.4	144.7					
CLL	e P	Z	12:04:13.2	19.4	148.9	1.0	16	4.2		
RUE	e P	Z	12:04:23.1	20.2	152.3					
TNS	e P	Z	12:04:23.9	20.3	137.2	1.2	28	4.4		
BUG	e P	Z	12:04:40.1	21.7	137.0					
BSEG	e P	Z	12:04:47.4	22.5	146.8	1.0	76	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/03	18:06:12.9	25.170N	123.350E	9.7	5.0	5.1		SZGRF
2002/04/03	18:06:11.3	24.396N	121.836E	33N	5.0	4.7		NEIC

Northeast of Taiwan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	18:18:40.6	83.8	59.0					
	e L	Z	19:00:31.3			19.6	823		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/04	15:44:59.3	28.580N	52.590E	33.0N	4.9			SZGRF
2002/04/04	15:44:31.9	27.010N	55.343E	16D	4.7			NEIC

Southern Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	15:52:12.1	40.5	107.4	0.8	19	4.9		
	e		15:52:16.9							
	e P	Z	15:52:12.1			0.8	19	4.9		
	e		15:52:16.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/05								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z	13:16:53.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/05	18:40:41.0	33.460N	54.010E	33.0N	5.1	4.3		SZGRF
2002/04/05	18:40:18.8	32.008N	55.975E	33N	5.2	4.3		NEIC

Northern and central Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	i P	Z	18:47:17.3	35.7	102.2	1.4	46	5.2		
BRG	i P	Z	18:47:20.4	36.0	105.2	1.5	16	4.7		
WET	i P	Z	18:47:21.7	36.3	101.9	1.2	28	5.1		
RUE	i P	Z	18:47:25.3	36.6	107.1	1.1	76	5.5		
CLL	i P	+ Z	18:47:26.6	36.7	104.8	1.1	85	5.4		
	e S	R	18:53:06.4							
	e SS	T	18:55:45.6							
	e L	Z	19:07:08.5			22.0	648		4.4	
MOX	e P	Z	18:47:31.6	37.4	102.6	1.3	17	4.8		
GRA1	i P	Z	18:47:33.0	37.5	101.0	1.4	56	5.3		
	e L	Z	19:07:07.0			20.0	513		4.3	
CLZ	i P	Z	18:47:41.5	38.4	102.9	1.2	62	5.3		
STU	e P	Z	18:47:41.3	38.6	98.0	0.9	28	5.0		
BSEG	i P	Z	18:47:45.7	39.0	105.4	1.3	69	5.2		
BFO	e P	Z	18:47:47.5	39.1	96.8	1.5	19	4.6		
TNS	i P	Z	18:47:48.4	39.3	99.2	1.2	52	5.2		
IBBN	i P	Z	18:47:55.5	40.1	101.0	1.5	87	5.3		
BUG	i P	Z	18:47:56.2	40.2	99.6	1.4	47	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/05	22:09:26.4	69.980N	12.540W	33.0N	5.0			SZGRF
2002/04/05	22:09:21.6	67.630N	18.700W	10G	4.3			NEIC

Jan Mayen Island region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:14:30.8	23.3	331.3	2.7	128	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/05	22:09:58.7	69.980N	12.840W	33.0N	4.6			SZGRF

Jan Mayen Island region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:15:03.7	23.3	339.3	1.7	37	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/05	22:14:14.3	68.230N	18.920W	33.0N	4.6			SZGRF

Iceland region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:19:23.8	23.7	332.4	1.6	30	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/05	22:19:19.2	68.420N	18.510W	33.0N	5.2			SZGRF
2002/04/05	22:19:18.0	67.570N	18.698W	10G	4.3			NEIC

Iceland region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:24:28.5	23.2	331.2	2.9	206	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/05	23:02:29.2	15.2S	173.5W	33		5.5		NEIC

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e PKP	Z	23:22:11.3							
GEC2	e PKP	Z	23:22:08.3							
GRA1	e PKP	Z	23:22:07.0	145.4	8.0					
TNS	e PKP	Z	23:22:05.4							
CLL	e PKPdf	Z	23:22:00.4			0.8	7			
	e PP	Z	23:25:13.9							
	e SS	T	23:43:53.2							
	e LQ	T	00:01:26.2							
	e LR	Z	00:10:06.8							
	e L	Z	00:29:09.8			20.0	1114		5.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/06								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e PKP	Z	02:04:59.0							
GEC2	e PKP	Z	02:04:55.7							
GRA1	e PKP	Z	02:04:54.7							
WET	e PKP	Z	02:04:55.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/06								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	16:27:07.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/07	01:41:25.4	61.1S	154.5E	10		6.1		NEIC

Balleny Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z	02:01:40.0	156.6	133					
CLL	e PKPab	Z	02:01:53.8			1.1	6			
	e		02:15:58.9							
	e PPS	R	02:18:50.8							
	e SS	T	02:25:27.5							
	e SPSP	Z	02:26:47.3							
	e SSS	Z	02:31:16.1							
	e SSS2	N	02:41:27.1							
	e LR	Z	02:57:36.3							
	e L	Z	03:17:45.4			22.0	2411		6.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/07								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	07:51:17.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/07	08:41:16.4	61.160N	152.350W	33.0N	5.2			SZGRF
2002/04/07	08:41:03.4	61.799N	150.729W	66D	4.5			NEIC

Southern Alaska, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	08:52:15.1	67.6	350.9	1.2	17	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/07								

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

		GRA1	e	PKP	Z	12:28:57.8						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/07	13:10:45.8	51.850N	176.560W	33.0N	4.8			SZGRF
2002/04/07	13:10:38.8	51.152N	178.199W	33N	4.7			NEIC

Andreanof Islands, Aleutian Islands, United States

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e	P	Z 13:22:42.6	78.8	6.0	0.9	9	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/07								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e	PKP	Z 17:20:51.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/07	22:50:31.2	38.384N	45.261E	42				PDE

Armenia-Azerbaijan-Iran boarder region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	CLL	e	P	Z 22:56:05.6							
	GEC2	e	P	Z 22:55:52.4							
	GRA1	e	P	Z 22:56:10.0							
	WET	e	P	Z 22:55:58.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/08	01:20:46.8	42.310N	20.470E	10.0G			4.5	SZGRF
2002/04/08	01:20:47.9	42.439N	19.799E	10G	4.6			NEIC

Northwestern Balkan Peninsula

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	ARSA	e	Pn	Z 01:22:14.9	5.7	146.3					
	KBA	e	Pn	E 01:22:27.6	6.5	133.0					
		e	Sn	N 01:23:44.8							4.4
	MOA	e	Pn	Z 01:22:29.5	6.7	142.2					4.5
		e	Sn	N 01:23:45.8							
	GEC2	e	Pn	Z 01:22:43.3	7.7	144.1					
	WET	e	Pn	Z 01:22:51.5	8.3	141.7					4.3
	FUR	e	Pn	Z 01:22:51.8	8.3	130.6					
	DAVA	e	Pn	Z 01:22:55.6	8.5	121.0					

	e Sn	N	01:24:33.3			
GRC1	e Pn	Z	01:22:57.4	8.7	135.6	
GRA1	e Pn	Z	01:23:07.0	9.4	137.5	
BFO	e Pn	Z	01:23:14.2	10.0	122.0	
TNS	e Pn	Z	01:23:29.8	11.0	130.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/08	03:55:51.9	72.920N	8.260E	33.0N	5.0			SZGRF
2002/04/08	03:55:38.0	73.748N	8.547E	10G	4.7	4.8		NEIC

Norwegian Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	04:00:57.0	24.1	358.2	1.9	96	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/08	03:48:54.7	50.999S	139.263E	10G	5.7	6.0		NEIC

South of Australia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e PKPdf	Z	04:08:34.0	145.7	114.7					
CLL	e PKPdf	Z	04:08:38.3			1.3	126			
	e PP	Z	04:12:07.5							
	e SKSP	Z	04:22:18.8							
	e PPS	R	04:25:02.5							
	e SS	T	04:31:10.4							
	e SSP	Z	04:31:48.2							
	e SSS	T	04:36:39.6							
	e SSSS	E	04:40:44.5							
	e LQ	T	04:52:32.2							
	e LR	Z	04:59:23.4							
	e L	Z	05:20:49.8			20.0	3668		6.2	
GRA1	e PKPdf	Z	04:08:40.3	147.5	112.7					
	e SS	N	04:31:04.0							
	e L	Z	05:17:59.6			21.7	5543		6.3	
BFO	e PKPdf	Z	04:08:43.1	148.7	113.7					
BSEG	e PKPdf	Z	04:08:45.8	149.4	105.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/08	16:34:28.5	28.150N	52.100E	33.0N	4.6			SZGRF
2002/04/08	16:34:06.8	27.082N	55.234E	60*	4.9			NEIC

Southern Iran

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

GEC2	e P	Z	16:41:26.1	38.6	108.9	0.6	3	4.3	
BRG	e P	Z	16:41:30.5	39.2	111.5				
WET	e P	Z	16:41:30.5	39.2	108.4				
RUE	e P	Z	16:41:37.2	39.9	113.1				
CLL	e P	Z	16:41:36.8	39.9	111.0				
FUR	e P	Z	16:41:36.8	39.9	105.7				
GRA1	e P	Z	16:41:41.3	40.4	107.4	0.7	26	5.1	
CLZ	e P	Z	16:41:51.6	41.6	108.9	0.7	30	5.1	
BFO	e P	Z	16:41:53.6	41.9	103.1	1.8	15	4.3	
TNS	e P	Z	16:41:56.6	42.3	105.3	1.0	8	4.3	
WLF	e P	Z	16:42:06.9	43.6	102.6				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/08	23:55:34.2	17.130N	95.230W	31.5	5.0	4.4		SZGRF
2002/04/08	23:55:26.3	15.634N	94.522W	33N	5.1	4.5		NEIC

Oaxaca, Mexico

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	Z	00:08:17.3	87.9	292.0	1.0	14	5.0		
	e pP	Z	00:08:26.5							
	e L	Z	00:46:00.0			22.0	158		4.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/10								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	02:25:21.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/10	07:11:03.9	17.972S	178.143W	600G	4.5			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKP	Z	07:29:31.5	143.4	13.6					
CLL	i PKPbc -	Z	07:29:38.3			0.9	57			
TNS	e PKP	Z	07:29:43.3	147.3	11.7					
GRA1	e PKP	Z	07:29:43.5	147.4	16.7					
GEC2	e PKP	Z	07:29:44.1	147.7	21.4					
BFO	e PKP	Z	07:29:47.8	149.2	12.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/10	10:09:21.1	20.797S	169.232E	33N	5.3	5.7		NEIC

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z	10:28:53.2			0.9	78			
	e PKPbc	Z	10:28:54.9			0.9	78			
	e		10:29:06.5							
	e PP	Z	10:32:13.0							
	e SKSP	Z	10:42:19.7							
	e PPS	Z	10:44:39.3							
	e SSS	T	10:57:15.6							
	e LR	Z	11:19:01.6							
	e L	Z	11:35:51.6			22.0	1832		5.8	
GRA1	e PKPbc	Z	10:28:59.9	146.3	39.1					
	e PP	Z	10:32:21.7							
	e L	Z	11:37:22.1			20.2	1563		5.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/10	10:51:12.8	20.740S	169.273E	33N	4.9			NEIC

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	11:10:52.2	146.2	39.0					
	e		11:11:01.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/10								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	21:03:09.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/11								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	00:26:18.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/11	12:04:23.0	41.190N	142.390E	33.0N	5.1			SZGRF
2002/04/11	12:04:13.5	40.138N	142.751E	33N	4.8			NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	12:16:26.9	80.6	35.5	0.9	25	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/11	20:19:42.6	39.030N	73.890E	33.0N	4.9			SZGRF
2002/04/11	20:19:41.2	39.477N	74.012E	33N	4.6			NEIC

Tajikistan-Xinjiang border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	20:27:52.7	44.5	78.3	1.0	16	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/11	21:56:56.4	14.386S	167.623E	10G	5.9	6.2		NEIC

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z	22:16:21.6	139.8	36.9					
	e PP	Z	22:19:22.7							
	e L	Z	23:22:01.9			21.6	2371		5.9	
CLL	e PKPpre	Z	22:16:14.9							
	e PKPdf	Z	22:16:24.7							
	e PP	Z	22:19:14.1							
	e PKS	N	22:19:57.9							
	e SS	T	22:37:33.6							
	e L	Z	23:20:52.9			22.0	2665		5.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/12	04:00:28.2	35.920N	69.720E	33.0N	5.9	5.7		SZGRF
2002/04/12	04:00:23.5	35.914N	69.228E	10G	5.8	5.9		NEIC

Hindu Kush, Afghanistan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	04:08:16.2	41.8	90.6	1.0	231	5.9		
RGN	e P	Z	04:08:17.8	42.2	92.5	1.0	694	6.3		
CLL	e P	Z	04:08:20.0			1.0	135	5.6		
	e PP	Z	04:10:03.6							
	e S	T	04:14:42.2							
	e SS	Z	04:17:49.2							
	e LQ	T	04:19:34.9							
	e LR	Z	04:20:56.9							
	e L	Z	04:29:29.1			18.0	21479		6.1	
WET	e P	Z	04:08:22.4	42.5	86.2	2.0	140	5.3		

MOX	e	P	Z	04:08:28.1	43.2	86.9	1.2	144	5.6
GRA1	e	P	Z	04:08:31.6	43.5	85.7	1.5	532	6.1
	e	PP	Z	04:10:18.7					
	e	S	N	04:15:04.0					
	e	SS	Z	04:18:21.9					
	e	L	E	04:28:32.6			19.8	9562	5.7
FUR	e	P	Z	04:08:31.3	43.6	84.1	1.6	388	5.9
STU	e	P	Z	04:08:41.9	44.9	83.3	1.1	138	5.8
TNS	e	P	Z	04:08:44.5	45.3	84.2	1.3	136	5.8
IBBN	e	P	Z	04:08:46.2	45.5	85.8	1.4	570	6.4
WLF	e	P	Z	04:08:56.9	46.8	82.1	1.2	182	6.1

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/12	16:26:37.3	38.620N	66.310E	33.0N	5.2			SZGRF
2002/04/12	16:26:00.7	35.824N	69.183E	10G	4.9			NEIC

Southeastern Uzbekistan

Sta	Phase			Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i	P	+ Z	16:33:58.6			1.6	33	4.8		
	e	S	T	16:40:20.2							
	e	SS	T	16:43:27.6							
	e	SS	Z	16:43:35.3							
	e	LQ	T	16:45:58.3							
	e	LR	Z	16:46:38.0							
	e	L	Z	16:55:27.0			18.0	762		4.6	
GRA1	i	P	Z	16:34:09.8	43.6	85.8	2.0	114	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/13	06:18:27.0	54.580N	159.230E	33.0N	5.4			SZGRF
2002/04/13	06:18:17.9	53.101N	159.639E	81	4.7			NEIC

Near east coast of Kamchatka Peninsula, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	P	Z 06:29:26.7	70.0	19.0	1.5	53	5.6		
RUE	e	P	Z 06:29:30.5	70.6	20.9	1.0	64	5.7		
CLL	e	P	Z 06:29:37.4	71.9	20.3	0.9	43	5.6		
CLZ	e	P	Z 06:29:38.7	71.9	18.8	1.1	60	5.7		
IBBN	e	P	Z 06:29:38.7	72.0	17.3	0.7	42	5.7		
BRG	e	P	Z 06:29:38.8	72.1	20.8	1.0	16	5.1		
BUG	e	P	Z 06:29:43.8	72.9	16.9	1.1	37	5.4		
GRA1	e	P	Z 06:29:49.9	73.8	19.1	0.9	56	5.7		
TNS	e	P	Z 06:29:49.7	73.9	17.5	0.9	24	5.3		
WET	e	P	Z 06:29:50.7	74.0	20.0	0.9	25	5.4		
GEC2	e	P	Z 06:29:50.6	74.1	20.5	1.2	19	5.1		
STU	e	P	Z 06:29:56.8	75.1	17.8	1.2	26	5.1		

FUR	e P	Z	06:29:57.7	75.2	19.0	1.3	44	5.3	
BFO	e P	Z	06:29:59.9	75.7	17.3	1.1	26	5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/13	15:35:59.8	1.1N	125.3E	33	5.4			NEIC

Northern Molucca Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i Pdiff	+ Z	15:49:56.3			1.6	28			
	e PP	Z	15:54:15.5							
	e PS	Z	16:03:21.6							
	e		16:13:43.3							
	e L	Z	16:38:29.5			22.0	270		4.7	
GRA1	e PKP	Z	15:50:03.7	104.5	71.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/13								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	23:04:06.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/14	02:04:23.0	37.990N	73.280E	116.9	5.7			SZGRF
2002/04/14	02:04:28.1	38.608N	73.290E	178D	5.2			NEIC

Tajikistan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	02:12:08.4	42.6	84.4	1.3	115	5.4		
BRG	e P	Z	02:12:09.7	42.7	82.8	1.0	120	5.6		
GEC2	e P	Z	02:12:13.5	43.1	80.5	1.1	54	5.2		
CLL	i P	+ Z	02:12:14.3	43.2	82.6	0.7	81	5.5		
	e pP	Z	02:12:42.2							
	e sP	Z	02:12:55.0							
	e PP	Z	02:14:00.6							
	e sPP	Z	02:14:34.0							
	e S	T	02:18:32.8							
	e sS	T	02:19:17.2							
	e SS	T	02:21:50.6							
	e LQ	T	02:24:33.5							
	e LR	Z	02:25:19.9							
	e L	Z	02:31:50.0			20.0	398			
WET	e P	Z	02:12:17.3	43.6	80.3	1.2	73	5.5		
MOX	e P	Z	02:12:21.6	44.1	81.0	1.0	66	5.5		

BSEG	e P	Z	02:12:24.5	44.5	83.4	0.9	117	5.9
GRA1	i P	Z	02:12:25.8	44.6	79.8	1.1	169	6.0
	e pP	Z	02:12:52.9					
	e sP	Z	02:13:05.7					
CLZ	e P	Z	02:12:26.3	44.7	81.4	1.4	129	5.8
FUR	e P	Z	02:12:27.2	44.8	78.3	0.9	151	6.0
STU	e P	Z	02:12:36.6	46.0	77.6	1.3	109	5.8
TNS	e P	Z	02:12:37.9	46.2	78.5	1.0	33	5.4
IBBN	e P	Z	02:12:38.1	46.2	80.0	1.4	227	6.1
BFO	e P	Z	02:12:41.3	46.7	76.7	1.1	56	5.6
BUG	e P	Z	02:12:41.7	46.7	78.9	1.2	104	5.8
WLF	e P	Z	02:12:50.3	47.8	76.5	1.0	67	5.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/14								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	04:19:09.5			1.8	20			
	e		04:19:18.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/14								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z	06:43:37.7							
	e		06:43:47.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/14	11:16:38.9	8.630N	46.710W	12.7	5.0			SZGRF

North Atlantic Ocean

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	11:27:02.8	63.0	250.1	1.7	21	5.0		
	e pP	Z	11:27:06.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/15	08:09:58.4	34.090N	25.360E	33.0N	4.9	3.7		SZGRF
2002/04/15	08:10:06.1	34.661N	24.590E	33N	4.7			NEIC

Crete, Greece

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

	GEC2	i	P	Z	08:13:57.1	16.3	146.4	0.6	68	4.9	
	FUR	i	P	Z	08:14:01.5	16.7	138.9	1.1	155	5.0	
	WET	i	P	Z	08:14:03.1	16.9	144.9	1.2	98	4.8	
	GRA1	i	P	Z	08:14:15.0	17.9	141.9	1.0	146	5.1	
		e	L	Z	08:21:55.3			18.9	346		3.7
	BRG	i	P	Z	08:14:14.4	18.0	150.5	2.0	129	4.8	
	STU	e	P	Z	08:14:15.3	18.1	135.4	0.6	33	4.7	
	BFO	i	P	Z	08:14:18.4	18.2	132.6	1.1	47	4.6	
	MOX	e	P	Z	08:14:21.4	18.6	144.5	0.7	36	4.7	
	CLL	i	P	Z	08:14:21.8	18.6	148.9	0.9	55	4.8	
	RUE	i	P	Z	08:14:30.9	19.4	152.3	1.0	60	4.8	
	TNS	e	P	Z	08:14:32.3	19.5	136.8	0.9	60	4.8	
	CLZ	i	P	Z	08:14:37.0	20.0	143.8	1.2	56	4.8	
	WLF	i	P	Z	08:14:40.2	20.2	131.1	1.1	58	4.8	
	BUG	i	P	Z	08:14:47.4	20.9	136.7	1.1	64	5.0	
	IBBN	i	P	Z	08:14:51.7	21.3	139.1	1.1	89	5.1	
	BSEG	i	P	Z	08:14:54.4	21.7	146.8	1.1	167	5.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/15	19:09:23.2	17.7S	178.3W	604	4.1			NEIC

Fiji Islands region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	CLL	i PKPbc	- Z	19:27:55.7			0.9	22			
	GRA1	e PKP	Z	19:28:01.6	147.2	17.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/15	22:21: 9.0	48.440N	163.070E	33.0N	4.9			SZGRF
2002/04/15	22:21:09.2	46.643N	153.672E	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	22:33:09.5	78.3	25.3	0.9	11	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/16	07:43: 1.8	43.090N	17.860E	10.0G			4.2	SZGRF
2002/04/16	07:42:58.3	43.036N	17.896E	10G				NEIC

Northwestern Balkan Peninsula

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	WET	e Pn	Z	07:44:43.6	7.0	148.5					4.1
		e Sn	N	07:45:58.5							
	BFO	e Pn	Z	07:45:01.9	8.5	124.9					4.4

	e Sn	E	07:46:36.1			
	e Sg	N	07:47:31.3			
MOX	e Pn	Z	07:45:06.6	8.7	148.2	
	e Sn	N	07:46:40.8			
TNS	e Pn	Z	07:45:19.6	9.7	134.4	
	e Sn	N	07:47:01.4			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/16	13:25:43.4	54.320N	174.940W	33.0N	5.3			SZGRF
2002/04/16	13:25:25.4	52.047N	170.062W	33N	4.8			NEIC

Bering Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	13:37:26.9	78.3	0.8	1.1	30	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/17	00:14:57.5	31.7N	140.4E	63	4.7			NEIC

Southeast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	- Z	00:27:28.7			1.0	30	5.4		
	e pP	Z	00:27:47.4							
	e sP	Z	00:28:00.1							
GRA1	e (P)	Z	00:27:39.6	87.3	41					
	e		00:27:56.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/17	06:42:50.1	39.480N	17.620E	10.0G		4.2		SZGRF
2002/04/17	06:42:53.1	39.788N	16.768E	10G	4.8			NEIC

Southern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	06:45:09.7	9.3	165.3					
	e Sn	E	06:46:52.6							
WET	e Pn	Z	06:45:14.8	9.8	162.1					
	e Sn	E	06:47:07.2							
GRC1	e Pn	Z	06:45:17.5	9.9	156.0					
GRB1	e Pn	Z	06:45:21.7	10.3	157.4					
BFO	e Pn	Z	06:45:26.8	10.5	141.6					
GRA1	e L	Z	06:51:02.6	10.7	156.3	18.6	2548	4.2		
MOX	e Pn	Z	06:45:38.8	11.4	159.6					
CLL	e Pn	Z	06:45:43.0	11.8	165.7					
TNS	e Pn	Z	06:45:46.3	12.0	147.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/17	08:47:39.4	27.760N	54.180E	33.0N	5.2	4.4		SZGRF

Southern Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	08:54:50.1	37.5	109.2	1.6	62	5.1		
BRG	e P	Z	08:54:54.0	38.0	111.9	1.0	24	4.9		
WET	e P	Z	08:54:54.7	38.1	108.7	1.5	78	5.2		
CLL	i P	Z	08:55:00.1	38.7	111.4	1.2	64	5.2		
	e (PP)	Z	08:56:43.2							
	e (PcP)	Z	08:57:06.0							
	e S	T	09:01:05.6							
	e LQ	T	09:06:55.5							
	e LR	Z	09:08:31.6							
	e L	Z	09:14:17.7			20.0	458		4.3	
RUE	e P	Z	08:54:59.5	38.8	113.6	1.0	68	5.2		
FUR	e P	Z	08:55:01.1	38.8	106.0	1.8	230	5.5		
GRA1	e P	Z	08:55:05.3	39.3	107.7	1.3	167	5.5		
	e L	Z	09:14:35.9			19.8	599		4.4	
MOX	e P	Z	08:55:05.3	39.3	109.2	1.0	17	4.6		
STU	e P	Z	08:55:12.6	40.3	104.7	2.1	87	5.0		
CLZ	e P	Z	08:55:14.9	40.5	109.3	1.1	110	5.5		
TNS	e P	Z	08:55:20.7	41.1	105.6	1.3	123	5.5		
BSEG	e P	Z	08:55:20.0	41.2	111.5	1.1	64	5.3		
IBBN	e P	Z	08:55:28.4	42.1	107.2	1.2	101	5.4		
BUG	e P	Z	08:55:29.0	42.2	105.8	1.1	106	5.5		
WLF	e P	Z	08:55:30.9	42.4	102.8	1.2	45	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/17	10:30:43.8	23.770S	178.750E	500.0G				GRSN
2002/04/17	10:30:39.0	24.3S	180.0E	476	4.2			NEIC

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z	10:49:38.2	150.4	27.1	0.7	36			
	i PKPab	Z	10:49:48.5			0.7	11			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/17	16:42:23.0	24.7S	176.4W	33	5.1			NEIC

South of Fiji Islands

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

CLL	e	PKPdf		Z	17:02:09.4		1.5	16
	i	PKPbc	+	Z	17:02:16.9		1.0	47
	i	PKPab		Z	17:02:26.9		1.1	27
	e	pPKPbc		Z	17:02:38.5			
	e	pPKPab		Z	17:02:47.2			
GRA1	e	PKPdf		Z	17:02:21.1			
	e	PKPbc		Z	17:02:35.8			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/18	05:02:50.5	16.680N	99.980W	33.0N	5.7	6.2		SZGRF
2002/04/18	05:02:47.0	16.945N	100.816W	33N	5.4	6.0		NEIC

Near coast of Guerrero, Mexico

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	05:15:48.4	90.6	297.5	2.4	127	5.7		
	e PP	Z	05:19:27.3							
	e S	N	05:26:42.0							
	e SS	E	05:33:06.9							
	e L	Z	05:59:03.3			19.7	8888		6.2	
CLL	e P	Z	05:15:50.6			1.7	19	5.1		
	e		05:16:53.3							
	e PP	Z	05:19:27.8							
	e		05:20:24.2							
	e S	R	05:26:53.7							
	e SP	Z	05:27:54.9							
	e PPS	Z	05:28:48.9							
	e		05:29:40.2							
	e SS	R	05:33:13.2							
	e LQ	T	05:41:50.4							
	e LR	Z	05:46:28.7							
	e L	Z	06:06:03.5			18.0	7745		6.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/18	14:17:27.4	60.7S	25.7W	33		5.6		NEIC

South Sandwich Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e Pdiff	R	14:32:14.2							
	e PKPdf	Z	14:36:07.6							
	e PP	Z	14:37:13.5							
	e PPP	Z	14:39:45.8							
	e SKSac	R	14:43:01.4							
	e Sdiff	T	14:45:03.7							
	e PS	R	14:47:01.2							
	e PPS	Z	14:48:12.4							

e SS	T	14:53:19.3					
e LQ	T	15:04:00.8					
e LR	Z	15:12:21.3					
e L	Z	15:21:35.7			20.0	1604	5.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/18	16:08:36.6	27.535S	70.600W	62D	6.2			NEIC

Near coast of northern Chile

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e Pdiff	Z	16:22:28.3	102.8	242.2					
BFO	e Pdiff	Z	16:22:31.1	103.4	243.5					
	e PP	Z	16:26:42.3							
STU	e Pdiff	Z	16:22:34.1	104.1	244.1					
BUG	e Pdiff	Z	16:22:34.3	104.2	243.4					
TNS	e Pdiff	Z	16:22:34.4	104.3	244.0					
	e PP	Z	16:26:49.5							
IBBN	e Pdiff	Z	16:22:37.5	104.9	244.0					
FUR	e Pdiff	Z	16:22:39.0	105.1	245.4					
	e PP	Z	16:26:55.3							
GRA1	e Pdiff	Z	16:22:41.8	105.7	245.8					
	e pPdiff	Z	16:22:58.8							
	e PP	Z	16:26:59.2							
	e SKSac	N	16:33:27.8							
	e Sdiff	N	16:34:40.4							
	e SP	Z	16:36:10.6							
	e SS	N	16:41:49.6							
	e L	Z	17:07:52.4			21.5	7666		6.2	
CLZ	e Pdiff	Z	16:22:44.1	106.1	245.7					
WET	e Pdiff	Z	16:22:44.8	106.5	246.7					
CLL	e Pdiff	Z	16:22:49.1			1.6	18			
	e pPdiff	Z	16:23:07.8							
	e PP	Z	16:27:16.9							
	e SKSac	R	16:33:24.3							
	e Sdiff	T	16:34:42.5							
	e PS	Z	16:36:37.2							
	e PKKPbc	Z	16:38:29.4							
	e PKKPab	Z	16:38:46.2							
	e SS	R	16:42:15.6							
	e LQ	T	16:52:24.6							
	e LR	Z	16:59:09.1							
	e L	Z	17:08:37.5			22.0	12608		6.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/18	17:58:33.4	47.600N	151.900E	33.0N	5.1			SZGRF

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/18	17:58:39.4	45.881N	149.647E	160*	4.3			NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	18:10:23.2	77.8	28.2	0.9	13	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/18	20:56:48.3	40.630N	15.910E	10.0G				SZGRF
2002/04/18	20:56:50.5	40.714N	15.708E	33N	4.4			NEIC

Southern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	20:58:48.3	8.3	169.3					
	e Sn	E	21:00:19.6							
WET	e Pn	Z	20:58:53.6	8.7	165.6					
	e Sn	N	21:00:28.5							
BFO	e Pn	Z	20:59:01.8	9.2	142.7					
GRA1	e Pn	Z	20:59:05.2	9.5	159.0					
	e Sn	N	21:00:49.1							
MOX	e Pn	Z	20:59:16.5	10.3	162.4					
	e Sn	N	21:01:08.6							
TNS	e Pn	Z	20:59:24.5	10.8	149.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/18	22:12:50.2	34.170N	75.720E	33.0N	5.2			SZGRF
2002/04/18	22:12:58.1	35.312N	74.499E	33N	4.6			NEIC

Eastern Kashmir

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:21:32.5	47.3	82.6	1.6	43	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/19	00:16:47.8	11.060N	96.030E	15.2	5.1			SZGRF
2002/04/19	00:16:48.9	9.761N	93.543E	33N	5.1	4.7		NEIC

Andaman Islands, India, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	00:28:44.6	77.6	89.5	0.7	11	5.1		
	e pP	Z	00:28:48.7							
	e sP	Z	00:28:51.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/19	13:46:52.8	36.500N	49.510E	33.0N	5.0			SZGRF
2002/04/19	13:46:49.6	36.574N	49.853E	33N	5.1	4.4		NEIC

Western Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	13:52:48.3	28.9	101.5	1.6	94	5.1		
	e		13:52:53.6							
	e PcP	Z	13:55:56.3							
BRG	e P	Z	13:52:50.7	29.2	105.3	0.9	8	4.5		
WET	e P	Z	13:52:53.3	29.5	101.2	0.9	29	5.0		
CLL	i P	+ Z	13:52:57.2	29.9	105.0	1.1	58	5.3		
	e		13:53:02.0							
	e PcP	Z	13:55:59.5							
	e S	E	13:57:54.2							
	e SS	Z	13:59:54.6							
	e LR	Z	14:02:18.8							
	e L	Z	14:06:15.0			20.0	533		4.2	
FUR	e P	Z	13:53:01.4	30.4	98.0	1.0	47	5.1		
MOX	e P	Z	13:53:02.8	30.6	102.5	0.9	11	4.5		
GRA1	e P	Z	13:53:04.5	30.7	100.5	1.9	108	5.1		
	e PcP	Z	13:56:02.0							
CLZ	e P	Z	13:53:13.0	31.6	103.1	1.0	67	5.3		
	e		13:53:18.5							
STU	e P	Z	13:53:13.5	31.8	97.1	1.0	42	5.1		
BSEG	e P	Z	13:53:17.7	32.2	106.3	1.8	70	5.2		
	e PcP	Z	13:56:06.2							
TNS	e P	Z	13:53:20.3	32.5	98.7	1.0	26	5.0		
	e PcP	Z	13:56:07.0							
IBBN	e P	Z	13:53:28.1	33.3	101.3	1.5	103	5.5		
BUG	e P	Z	13:53:29.4	33.4	99.5	1.0	68	5.4		
WLF	e P	Z	13:53:32.8	33.9	95.9	0.9	11	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/20	08:48: 5.5	23.800N	122.100E	14.9	5.4			SZGRF
2002/04/20	08:48:00.5	22.792N	121.668E	33N	4.9			NEIC

Taiwan region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	09:00:35.2	85.0	60.1	1.4	36	5.4		
	e pP	Z	09:00:39.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/20	09:35:39.6	28.390N	53.390E	33.0N	4.8			SZGRF
2002/04/20	09:35:13.8	27.345N	56.715E	33N	4.6			NEIC

Southern Iran

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	09:42:57.6	41.1	105.7	0.9	16	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/20	10:50:52.2	44.220N	73.250W	13.2	5.4			SZGRF
2002/04/20	10:50:45.1	44.467N	73.690W	11D	5.1	4.3		NEIC

New York, United States

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	i P	Z	11:00:19.1	54.9	299.7	1.1	49	5.4		
		e pP	Z	11:00:22.8							
	CLL	i P	+ Z	11:00:19.9			0.9	15	5.0		
		e pP	Z	11:00:24.3							
		e PcP	Z	11:01:20.3							
		e SS	Z	11:12:00.0							
		e LQ	T	11:16:07.9							
		e LR	Z	11:17:30.2							
		e L	Z	11:22:38.0			18.0	424		4.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/20	15:59:57.6	16.414S	173.235E	33N	6.0	5.5		NEIC

Fiji Islands region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	CLL	e PKPpre	Z	16:19:21.6							
		i PKPdf	Z	16:19:26.7			1.1	36			
		e PP	Z	16:22:39.1							
		e Sdiff	T	16:31:00.3							
		e SS	T	16:41:07.4							
		e SSS	N	16:46:25.2							
		e LQ	T	16:57:00.5							
		e LR	Z	17:06:46.6							
		e L	Z	17:19:03.8			22.0	1074			
	GRA2	e PKPbc	Z	16:19:29.1	143.7	30.2					
	GRB1	e PKPbc	Z	16:19:29.3	143.8	30.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/20	21:30:41.2	43.730N	142.370E	33.0N	5.0			SZGRF

Hokkaido, Japan, region

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

BSEG	e	P		Z	21:42:14.9	74.1	33.9	0.9	21	5.2
RUE	e	P		Z	21:42:14.5	74.1	36.0	0.9	18	5.1
CLL	i	P	+	Z	21:42:20.9	75.3	35.3	0.9	21	5.3
	e	pP		Z	21:42:40.6					
	e				21:42:59.8					
	e	LR		Z	22:07:48.3					
	e	L		Z	22:19:19.2			20.0	218	4.5
BRG	e	P		Z	21:42:21.2	75.4	35.8	0.8	4	4.7
CLZ	e	P		Z	21:42:24.5	75.8	33.6	0.8	16	5.2
IBBN	e	P		Z	21:42:26.9	76.3	32.0	0.8	20	5.3
MOX	e	P		Z	21:42:27.2	76.4	34.3	1.0	7	4.8
GEC2	e	P		Z	21:42:30.7	77.1	35.4	0.7	3	4.5
WET	e	P		Z	21:42:31.7	77.2	34.9	0.9	11	5.0
BUG	e	P		Z	21:42:31.7	77.2	31.5	0.9	14	5.1
GRA1	i	P		Z	21:42:32.9	77.3	33.9	0.8	20	5.3
TNS	e	P		Z	21:42:35.3	77.8	32.2	0.9	6	4.7
FUR	e	P		Z	21:42:39.2	78.6	33.8	0.8	17	5.2
STU	e	P		Z	21:42:40.4	78.8	32.5	0.8	16	5.1
BFO	e	P		Z	21:42:44.0	79.5	31.9	0.9	7	4.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/20	22:53:49.2	45.100N	12.920E	10.0G				SZGRF

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	22:54:46.3	3.8	188.4					
	e Sn	E	22:55:33.3							
GRC1	e Sg	N	22:55:55.1	4.0	165.7					
WET	e Pn	Z	22:54:49.4	4.0	179.6					
	e Sn	E	22:55:35.5							
GRA1	e Pg	Z	22:55:17.0	4.7	165.3					
	e Sg	E	22:56:20.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/21								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	05:49:46.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/21	17:57:16.7	45.770N	7.550E	10.0G				SZGRF
2002/04/21	17:57:15.7	45.685N	7.746E	14				NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	17:57:58.6	2.7	188.8					
	e Sg	N	17:58:39.6							
FUR	e Pn	Z	17:58:09.9	3.5	225.5					
	e Sn	E	17:58:52.7							
TNS	e Pn	Z	17:58:24.6	4.6	186.2					
GRA1	e Sn	N	17:59:21.5	4.6	211.6					
	e Sg	N	17:59:42.9							
WET	e Pn	Z	17:58:31.3	4.9	227.0					
	e Sn	E	17:59:25.6							
	e Sg	E	17:59:53.5							
GEC2	e Pn	Z	17:58:33.9	5.1	234.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/21								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	18:18:16.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/21	22:24:06.4	5.8S	80.9W	33		5.2		NEIC

Near coast of Northern Peru

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z	22:37:39.8			19.2	268			
	e PP	Z	22:41:27.6							
	e SKSac	E	22:48:23.2							
	e S	N	22:48:55.9							
	e PS	E	22:50:25.8							
	e SS	E	22:55:45.6							
	e SSS	E	22:59:19.5							
	e LR	Z	23:10:30.7							
	e L	Z	23:19:30.9			20.0	655		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/22								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	02:15:21.6							
	e		02:15:36.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/23								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	15:24:31.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/24	07:08:24.0	51.840N	178.790W	33.0N	5.5	4.9		SZGRF

Andreanof Islands, Aleutian Islands, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	07:19:56.5	74.0	5.8	1.0	81	5.7		
RUE	e P	Z	07:20:03.0	75.2	8.0	0.9	72	5.8		
IBBN	e P	Z	07:20:06.5	75.7	4.2	0.8	120	6.1		
CLZ	e P	Z	07:20:08.5	76.0	5.8	0.8	85	5.9		
CLL	e P	Z	07:20:09.5	76.4	7.5	1.5	52	5.4		
BUG	e P	Z	07:20:11.0	76.6	3.8	0.8	55	5.7		
BRG	e P	Z	07:20:11.6	76.7	8.0	1.1	43	5.5		
MOX	e P	Z	07:20:14.2	77.1	6.6	1.1	43	5.5		
TNS	e P	Z	07:20:17.6	77.8	4.6	0.8	51	5.7		
GRA1	e P	Z	07:20:20.2	78.1	6.3	1.0	81	5.8		
	e L	Z	07:58:32.9			20.5	564		4.9	
WLF	e P	Z	07:20:21.7	78.4	3.1	1.0	34	5.3		
WET	e P	Z	07:20:22.1	78.5	7.3	1.1	24	5.1		
GEC2	e P	Z	07:20:23.1	78.8	7.8	0.9	18	5.1		
STU	e P	Z	07:20:25.1	79.2	5.0	0.9	38	5.3		
BFO	e P	Z	07:20:27.8	79.6	4.5	1.0	33	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/24	10:51:36.1	41.370N	22.810E	10.0G		4.8		SZGRF
2002/04/24	10:51:50.9	42.410N	21.420E	10G	5.6			NEIC

Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	10:53:56.5	8.4	137.2					
	e L	Z	10:57:13.8			21.7	11859		4.7	
WET	e Pn	Z	10:54:04.6	9.0	135.4					
FUR	e Pn	Z	10:54:07.0	9.2	125.2					
	e Sn	Z	10:56:02.0							
BRG	e Pn	Z	10:54:16.1	9.9	146.0					
	e L	Z	10:57:45.2			20.5	9231		4.7	
GRA1	e Pn	Z	10:54:19.0	10.1	132.0					
	e Sn	Z	10:56:23.0							
	e L	Z	10:58:08.7			20.1	15792		5.0	

	CLL	e Pn	Z	10:54:25.8	10.6	143.9					
	MOX	e Pn	Z	10:54:26.4	10.6	137.0					
	STU	e Pn	Z	10:54:27.1	10.6	122.1					
	BFO	e Pn	Z	10:54:30.3	10.9	118.0					
		e L	Z	10:58:38.0			22.0	12868		4.9	
	TNS	e Pn	Z	10:54:43.2	11.9	126.2					
		e L	Z	10:59:33.9			19.0	10132		4.9	
	CLZ	e Pn	Z	10:54:46.4	12.0	137.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/24								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z	11:19:55.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/24	11:24:18.7	41.540N	21.320E	10.0G				SZGRF
2002/04/24	11:24:24.4	42.485N	21.336E	10G	4.5			NEIC

Northwestern Balkan Peninsula

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GEC2	e Pn	Z	11:26:27.4	8.3	137.2					
		e Sn	E	11:28:08.4							
	WET	e Pn	Z	11:26:35.3	8.9	135.4					
		e Sn	E	11:28:20.0							
	MOX	e Pn	Z	11:26:57.1	10.5	137.0					
	BFO	e Pn	Z	11:27:01.2	10.8	117.9					
	TNS	e Pn	Z	11:27:16.5	11.8	126.2					
		e Sn	N	11:29:24.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/24	19:48: 7.1	34.120N	46.490E	10.0G		4.6		SZGRF
2002/04/24	19:48:07.0	34.543N	47.334E	33N	5.2	5.2		NEIC

Western Iran

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GEC2	e P	Z	19:54:01.6	28.6	107.4					
	BRG	e P	Z	19:54:06.2	29.1	111.2					
	WET	e P	Z	19:54:06.8	29.2	107.0					
	CLL	e P	Z	19:54:12.6	29.8	110.8					
	FUR	e P	Z	19:54:13.8	29.9	103.7					
	GRA1	e P	Z	19:54:18.2	30.4	106.2	1.2	58			
		e S	E	19:59:17.3							

	e L	Z	20:10:37.0			18.5	1673	4.7
STU	e P	Z	19:54:26.6	31.4	102.6			
CLZ	e P	Z	19:54:28.3	31.5	108.7			
	e S	N	19:59:38.0					
	e L	Z	20:09:52.0			20.1	1302	4.6
TNS	e P	Z	19:54:34.6	32.2	104.1			
	e L	Z	20:11:16.1			18.9	1218	4.6
BSEG	e P	Z	19:54:35.2	32.3	111.7			
IBBN	e P	Z	19:54:43.7	33.2	106.5			
BUG	e P	Z	19:54:43.9	33.2	104.7			
WLF	e P	Z	19:54:45.3	33.5	101.0			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/24	20:10: 8.8	34.320N	46.040E	33.0N	5.0			SZGRF
2002/04/24	20:10:01.4	34.465N	47.340E	33N	4.8			NEIC

Western Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	20:16:12.2	30.4	106.3	1.4	36	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/24	23:37:40.7	41.050N	22.610E	10.0G		3.1		SZGRF
2002/04/24	23:37:58.1	42.535N	21.558E	10G	4.4			NEIC

Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	23:40:03.5	8.4	136.1					
	e Sn	N	23:41:50.1							
WET	e Pn	Z	23:40:11.4	8.9	134.4					
	e Sn	N	23:42:05.4							
GRA1	e Pn	Z	23:40:25.8	10.1	131.1					
	e L	Z	23:44:24.1			18.4	209		3.1	
CLL	e Pn	Z	23:40:33.2	10.5	143.1					
MOX	e Pn	Z	23:40:32.7	10.6	136.2					
TNS	e Pn	Z	23:40:50.3	11.8	125.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/25	01:46: 0.8	36.740N	72.420E	33.0N	5.1			SZGRF
2002/04/25	01:46:02.9	37.395N	72.632E	67*	4.9			NEIC

Afghanistan-Tajikistan border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	01:53:58.2	43.0	84.7	1.0	37	5.1		

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	01:54:01.4	43.4	82.4	1.6	18	4.5		
CLL	e P	Z	01:54:02.1	43.5	84.5	0.9	24	4.9		
WET	e P	Z	01:54:05.3	43.9	82.2	1.2	11	4.4		
MOX	e P	Z	01:54:10.2	44.5	82.8	1.1	20	5.0		
GRA1	e P	Z	01:54:14.1	44.8	81.6	1.2	45	5.3		
BSEG	e P	Z	01:54:13.9	44.9	85.2	0.9	39	5.4		
FUR	e P	Z	01:54:15.1	45.0	80.1	0.9	40	5.3		
CLZ	e P	Z	01:54:15.2	45.1	83.2	1.5	42	5.3		
STU	e P	Z	01:54:24.7	46.3	79.4	1.2	22	5.2		
TNS	e P	Z	01:54:26.5	46.5	80.3	1.2	13	4.9		
IBBN	e P	Z	01:54:27.2	46.6	81.7	1.4	76	5.6		
BFO	e P	Z	01:54:29.3	46.9	78.4	1.0	14	5.1		
BUG	e P	Z	01:54:30.6	47.1	80.6	1.2	28	5.3		
WLF	e P	Z	01:54:38.8	48.1	78.3	1.1	17	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/25	03:43:31.3	41.400N	21.290E	10.0G				SZGRF
2002/04/25	03:43:34.8	42.545N	21.827E	10G	4.5			NEIC

Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	03:45:42.3	8.5	135.0					
	e Sn	E	03:47:21.2							
WET	e Pn	Z	03:45:50.4	9.1	133.3					
MOX	e Pn	Z	03:46:12.4	10.7	135.3					
BFO	e Pn	Z	03:46:13.8	11.1	116.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/25	17:41:55.9	44.340N	42.440E	33.0N	4.7			SZGRF
2002/04/25	17:41:25.0	41.736N	44.853E	33N	4.7	4.3		NEIC

Western Caucasus

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	17:46:28.3	22.9	96.3					
BRG	e P	Z	17:46:29.1	23.0	101.3					
WET	e P	Z	17:46:33.8	23.4	96.3					
CLL	e P	Z	17:46:36.3	23.7	101.3					
GRC1	e P	Z	17:46:42.7	24.3	94.7					
FUR	e P	Z	17:46:44.9	24.4	92.7					
GRA1	e P	Z	17:46:45.4	24.6	96.0	2.2	77	4.7		
CLZ	e P	Z	17:46:53.2	25.4	99.7					
STU	e P	Z	17:47:00.7	25.8	92.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/25	22:34:27.3			N				SZGRF

Western Caucasus

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z	22:39:41.8							
BSEG	e P	Z	22:40:00.5							
CLZ	e P	Z	22:39:48.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/26								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	02:33:20.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/26	07:15:23.3	55.430N	159.720E	33.0N	6.6	5.5		SZGRF
2002/04/26	07:15:08.0	53.614N	160.477E	33N	5.7	5.4		NEIC

Kamchatka Peninsula, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	07:26:11.5	68.5	20.2	1.0	1584	7.2		
BSEG	e P	Z	07:26:18.5	69.6	18.4	1.0	532	6.7		
RUE	e P	Z	07:26:22.5	70.3	20.2	1.0	958	7.0		
CLL	i P	+ Z	07:26:30.0	71.6	19.6	1.0	892	6.8		
	e PP	Z	07:29:04.5							
	e PPP	N	07:31:02.1							
	e S	N	07:35:44.1							
	e SS	N	07:40:35.2							
	e LR	Z	07:50:17.3							
	e L	Z	08:01:28.8			22.0	2645		5.5	
CLZ	e P	Z	07:26:30.8	71.6	18.2	1.0	1053	6.9		
BRG	e P	Z	07:26:31.1	71.8	20.1	1.1	304	6.3		
MOX	e P	Z	07:26:35.7	72.5	18.8	1.1	454	6.5		
BUG	e P	Z	07:26:35.8	72.6	16.3	1.0	488	6.6		
GRA1	i P	+ Z	07:26:42.0	73.5	18.4	0.9	722	6.8		
	e L	Z	08:02:36.5			21.6	2902		5.5	
TNS	e P	Z	07:26:41.8	73.5	16.9	0.9	315	6.4		
WET	e P	Z	07:26:42.8	73.7	19.3	0.9	428	6.6		
GEC2	e P	Z	07:26:43.0	73.8	19.8	0.8	177	6.2		
STU	e P	Z	07:26:48.8	74.8	17.2	1.2	462	6.5		
FUR	e P	Z	07:26:50.0	74.9	18.3	1.0	498	6.6		
BFO	e P	Z	07:26:52.2	75.4	16.6	1.2	348	6.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/26	15:06:39.9	27.3S	176.9W	33	5.3			NEIC

Kermadec Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z	15:26:30.7							
	e (PKPab)	Z	15:26:56.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/26	16:06: 5.0	13.280N	145.010E	33.0N		7.3		SZGRF
2002/04/26	16:06:08.1	13.404N	144.599E	86	6.6			NEIC

Mariana Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e Pdiff	Z	16:19:55.4	101.7	48.8					
BSEG	e Pdiff	Z	16:19:57.8	102.3	45.5					
BRG	e Pdiff	Z	16:19:59.5	102.7	49.2					
CLL	e Pdiff	Z	16:19:59.6	102.9	48.3					
	e PP	Z	16:24:22.0							
	e PPP	Z	16:26:28.9							
	e SKSac	R	16:30:36.0							
	e SKKSac	R	16:31:14.2							
	e Sdiff	T	16:31:33.3							
	e SP	Z	16:33:20.5							
	e PPS	Z	16:34:18.0							
	e SS	R	16:39:03.2							
	e LQ	T	16:55:32.0							
	e LR	Z	16:56:07.3							
	e L	Z	17:10:31.8			22.0	121029		7.4	
CLZ	e Pdiff	Z	16:20:04.4	103.7	45.8					
MOX	e Pdiff	Z	16:20:05.2	104.0	47.2					
GEC2	e Pdiff	Z	16:20:06.0	104.2	49.3					
WET	e Pdiff	Z	16:20:07.2	104.4	48.5					
IBBN	e Pdiff	Z	16:20:07.7	104.5	43.4					
GRA1	e Pdiff	Z	16:20:09.2	104.8	47.0					
	e PP	Z	16:24:30.6							
	e SKSac	N	16:30:46.0							
	e PS	N	16:34:03.1							
	e SS	N	16:39:31.6							
	e L	Z	17:11:09.0			20.9	95338		7.3	
BUG	e Pdiff	Z	16:20:11.3	105.3	43.1					
TNS	e Pdiff	Z	16:20:13.2	105.7	44.4					
FUR	e Pdiff	Z	16:20:13.6	105.8	47.3					
STU	e Pdiff	Z	16:20:15.9	106.4	45.4					
BFO	e Pdiff	Z	16:20:19.0	107.1	44.7					
WLF	e Pdiff	Z	16:20:20.0	107.1	42.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/27								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	CLL	e PKPdf	Z	00:51:20.2							
		e PKPbc	Z	00:51:27.6			0.9	12			
		e PKPab	Z	00:51:41.8			0.7	9			
		e pPKPdf	Z	00:53:47.6							
		e pPKPbc	Z	00:53:53.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/28	09:06:47.4	46.230N	6.750E	10.0G			2.6	SZGRF
2002/04/28	09:06:45.3	46.252N	6.609E	10G				NEIC

Switzerland

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	BFO	e Pn	Z	09:07:23.1	2.4	210.0					2.6
		e Sg	E	09:08:01.4							
	WLF	e Sg	N	09:08:38.8	3.4	174.7					
	TNS	e Sg	E	09:08:58.0	4.2	197.8					
	GRA1	e Pg	Z	09:08:13.0	4.6	223.7					
		e Sg	E	09:09:14.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/28	13:23:48.1	23.990N	123.580E	33.0N	5.2			SZGRF
2002/04/28	13:23:49.2	24.194N	122.712E	33N	5.2			NEIC

Southwestern Ryukyu Islands, Japan

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	13:36:21.2	84.5	58.5	1.0	16	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/28	17:01:45.6	36.520N	33.980W	33.0N	4.8			SZGRF
2002/04/28	17:00:35.4	31.529N	41.151W	10G	4.7	4.6		NEIC

Azores Islands region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	17:08:34.4	42.7	265.0	1.2	16	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/29	00:14:45.1	17.0S	178.8W	532	4.5			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPbc	Z	00:33:21.8			1.1	48			
GRA1	e PKPbc	Z	00:33:28.0	146.4	18					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/29	15:14: 8.8	46.110N	8.770E	10.0G			3.8	SZGRF
2002/04/29	15:14:06.9	45.986N	8.684E	10G				NEIC

Switzerland

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	15:14:45.3	2.4	174.0					3.6
	e Sn	N	15:15:11.6							
	e Sg	E	15:15:21.6							
FUR	e Pn	Z	15:14:53.6	2.8	220.0					
STU	e Pn	Z	15:14:51.1	2.8	187.2					4.0
WLF	e Pn	Z	15:15:09.7	4.1	154.3					
	e Sn	N	15:15:55.5							
	e Sg	N	15:16:15.0							
GRA1	e Pn	Z	15:15:08.0	4.1	205.6					3.9
	e Sn	E	15:15:54.0							
WET	e Pn	Z	15:15:12.4	4.2	223.4					
	e Sn	E	15:15:58.2							
TNS	e Pn	Z	15:15:11.5	4.2	177.8					3.9
GEC2	e Pn	Z	15:15:15.9	4.4	231.8					
	e Sn	E	15:16:03.1							
MOX	e Pn	Z	15:15:20.5	5.0	203.8					
	e Sn	E	15:16:17.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/30								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	06:46:17.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2002/04/30	21:24:50.7	44.050N	11.710E	10.0G			3.7	SZGRF
2002/04/30	21:24:53.8	44.426N	11.714E	10G	4.1			NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
DAVA	e Sn	N	21:26:27.6	3.1	155.3					
BFO	e Pn	Z	21:26:03.7	4.5	147.9					3.7
	e Sn	N	21:26:57.6							
GEC2	e Pn	Z	21:26:04.7	4.6	197.9					3.5
	e Sn	E	21:27:00.8							
WET	e Pn	Z	21:26:07.0	4.8	190.0					3.6
	e Sn	N	21:27:04.1							
GRA1	e Pn	Z	21:26:13.9	5.3	176.2					4.1
	e Sn	N	21:27:17.4							
TNS	e Pn	Z	21:26:26.7	6.2	157.9					
MOX	e Pn	Z	21:26:25.7	6.2	179.4					

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

In general all regional and teleseismic events clearly recorded with GRF-Array stations and stronger events recorded with stations of the German Regional Seismological Network (GRSN) are included in this bulletin.
Additionally, some selected events are analysed more comprehensively at CLL-station and included in the bulletin (ISOP-analysis).
Each event is reported by several EPICENTER LINES with possible COMMENT LINES, a REGION LINE and a block of PHASE LINES.

EPICENTER LINES:

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

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

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

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

PHASE LINE:

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