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)

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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
2003/09/01								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	00:48:44.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/01	02:27:17.9	15.708S	172.803W	33N	4.5	4.4		NEIC

Samoa Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z	02:46:56.3	145.9	6.9					
	e PKPab	Z	02:47:06.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/01	14:56:31.4	35.765N	152.668E	33.0N				SZGRF

North Pacific Ocean

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z	15:09:18.4	88.0	30.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/01	15:11:51.6	14.205N	120.683E	410.2	5.7			SZGRF

Luzon, Philippine Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	15:24:53.9	91.2	66.1	2.3	84	5.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/01	15:13:12.7	11.422N	121.711E	33.0N	5.8	5.6		SZGRF
2003/09/01	15:13:07.0	12.076N	122.400E	21D	5.5	5.4		NEIC

Panay, Philippine Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	15:26:28.0	94.0	66.1	1.7	97	5.8		
	e S	N	15:37:35.5							
	e L	Z	16:13:47.9			20.2	2314		5.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/01	19:28:13.0	44.386N	7.276E	10.0G			3.6	SZGRF
2003/09/01	19:28:12.7	44.226N	7.506E	5G				NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	19:29:14.4	4.1	188.2					3.4
	e Sn	N	19:30:01.0							
WET	e Pn	Z	19:29:42.4	6.1	218.8					3.5
	e Sn	N	19:30:49.5							
GEC2	e Pn	Z	19:29:45.0	6.3	225.0					3.8
	e Sn	N	19:30:55.7							
TANN	e Sn	N	19:31:09.6	7.0	210.3					3.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/01	23:16:40.0	39.030N	75.630E	33.0N	6.1	5.7		SZGRF
2003/09/01	23:16:38.9	38.570N	75.265E	33N	5.4	5.5		NEIC

Southern Xinjiang, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	23:24:43.1	43.8	83.1	1.4	264	5.8		
RGN	e P	Z	23:24:44.2	43.8	84.9	1.3	923	6.4		
BRG	e P	Z	23:24:44.7	43.9	81.5	1.5	348	5.9		
GEC2	e P	Z	23:24:48.9	44.4	79.3	1.4	333	6.1		
CLL	i P	- Z	23:24:48.8	44.4	81.3	1.4	273	6.0		
	e PcP	Z	23:26:31.9							
	e PP	Z	23:26:41.4							
	e S	E	23:31:26.2							
	e SS	N	23:34:45.0							
	e LR	Z	23:38:27.4							

	e L	Z	23:46:44.0			20.0	12754		5.8
WET	e P	Z	23:24:52.6	44.9	79.1	1.4	238	5.9	
WERD	e P	Z	23:24:53.4	45.0	80.0	1.6	246	5.9	
MOX	e P	Z	23:24:56.5	45.4	79.7	1.6	286	6.1	
GRA1	e P	Z	23:25:00.8	45.8	78.6	1.6	672	6.4	
	e S	E	23:31:46.0						
	e SS	E	23:35:08.0						
	e L	Z	23:45:32.9			19.3	9027		5.7
GRFO	e P	Z	23:25:00.8	45.8	78.5	1.6	551	6.3	
CLZ	e P	Z	23:25:01.0	46.0	80.0	1.5	279	6.1	
FUR	e P	Z	23:25:02.7	46.1	77.1	1.3	512	6.4	
IBBN	e P	Z	23:25:12.6	47.5	78.7	1.6	576	6.4	
TNS	e P	Z	23:25:12.8	47.5	77.3	1.4	121	5.8	
BUG	e P	Z	23:25:16.3	47.9	77.6	1.5	320	6.2	
BFO	e P	Z	23:25:16.5	48.0	75.5	1.5	200	6.0	
WLF	e P	Z	23:25:25.1	49.0	75.3	1.2	273	6.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/02	00:04:16.5	36.719N	78.780E	33.0N	5.4			SZGRF
2003/09/02	00:04:34.3	38.598N	75.374E	10G	4.8			NEIC

Kashmir-Xinjiang border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	00:13:01.5	45.9	78.5	1.6	61	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/02	14:15:41.8	46.232N	152.527E	33.0N	5.2			SZGRF
2003/09/02	14:15:40.9	46.493N	152.704E	49D	4.5			NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	14:27:39.4	78.2	26.0	0.8	19	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/02	17:32:19.0	18.840S	177.630W	33.0N				SZGRF
2003/09/02	17:33:19.0	17.888S	178.753W	556D	4.8			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPbc	Z	17:51:52.3	144.0	20.6					
IBBN	e PKPbc	Z	17:51:55.9	145.2	10.9					
CLZ	e PKPbc	Z	17:51:55.9	145.3	15.4					
CLL	e PKPdf	Z	17:51:54.8	145.3	19.9	1.3	8			

	i PKPbc	+	Z	17:51:56.5			1.0	90
	e SKPbc		Z	17:54:44.3				
	e sPKPbc		Z	17:55:00.2				
BRG	e PKPbc		Z	17:51:57.1	145.5	21.7		
BUG	e PKPbc		Z	17:51:58.4	146.1	10.3		
MOX	e PKPbc		Z	17:51:58.9	146.2	17.9		
	e PKPab		Z	17:52:01.1				
WERD	e PKPbc		Z	17:51:59.4	146.3	19.2		
TNS	e PKPbc		Z	17:52:01.7	147.2	12.7		
	e PKPab		Z	17:52:04.9				
GRA1	e PKPbc		Z	17:52:02.3	147.2	17.7		
	e PKPab		Z	17:52:05.7				
WET	e PKPbc		Z	17:52:02.3	147.4	20.8		
GEC2	e PKPbc		Z	17:52:02.6	147.4	22.4		
	e PKPab		Z	17:52:06.6				
WLF	e PKPbc		Z	17:52:04.2	148.0	8.8		
	e PKPab		Z	17:52:08.7				
FUR	e PKPbc		Z	17:52:05.6	148.6	18.6		
	e PKPab		Z	17:52:11.6				
BFO	e PKPbc		Z	17:52:06.2	149.0	13.2		
	e PKPab		Z	17:52:11.7				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/02								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z	18:41:08.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/02	18:28:00.1	15.218S	173.248W	10G	6.1	6.6		NEIC

Fiji Islands region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	CLL	e PKPpre	Z	18:47:34.7	143.6	10.2					
		e PKPdf	Z	18:47:35.9			0.8	48			
		e PP	Z	18:50:59.3							
		e SKKSac	R	18:57:34.6							
		e SKSP	R	19:01:08.0							
		e PPPr	Z	19:02:20.0							
		e SS	T	19:09:33.7							
		e SSS	T	19:15:03.5							
		e LR	Z	19:36:33.4							
		e L	Z	19:54:35.2			20.0	9998		6.6	
	MOX	e PKPbc	Z	18:47:36.9	144.4	8.1					
	WERD	e PKPbc	Z	18:47:37.5	144.5	9.3					

TNS	e PKPbc	Z	18:47:39.0	145.0	2.9					
GRA1	e PKPbc	Z	18:47:40.6	145.3	7.6					
	e PP	Z	18:51:18.1							
	e SKKSac	E	18:57:56.7							
	e L	Z	19:52:14.0			20.7	12825		6.7	
WLF	e PKPbc	Z	18:47:41.3	145.5	359.0					
	e PP	Z	18:51:21.2							
WET	e PKPbc	Z	18:47:41.8	145.7	10.5					
GEC2	e PKPbc	Z	18:47:42.2	145.9	12.0					
FUR	e PP	Z	18:51:24.3	146.8	8.0					
BFO	e PKPbc	Z	18:47:45.0	146.9	2.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/02								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	19:19:05.9							
	e Sn	N	19:20:05.0							
WET	e Pn	Z	19:19:12.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/02	21:17:27.6	43.018N	14.584E	10.0G				SZGRF

Adriatic Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	21:18:53.6	5.9	173.7					
	e Sn	N	21:19:58.8							
WET	e Pn	Z	21:18:59.2	6.2	168.4					
	e Sn	E	21:20:08.0							
TANN	e Pn	Z	21:19:17.2	7.5	168.1					
MOX	e Pn	Z	21:19:20.8	7.9	164.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/03	01:05:09.9	15.206S	173.418W	33N	4.4			NEIC

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	01:24:45.9	145.3	7.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source

2003/09/03	01:26:54.4	37.411N	77.959E	33.0N	4.7		SZGRF
2003/09/03	01:27:07.6	38.442N	75.219E	33N	4.2		NEIC

Southern Xinjiang, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	01:35:32.2	45.9	78.7	1.1	6	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/03								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	04:10:57.7							
	e		04:11:10.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/03	06:14:41.3	39.697N	77.727E	33N	4.7			NEIC

Southern Xinjiang, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	06:23:10.1	46.7	75.7	1.3	19	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/03	09:33:25.0	17.565S	174.543W	33N	4.5			NEIC

Tonga

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	09:53:09.5	147.5	10.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/03	16:43:34.0	33.711N	70.638E	33.0N	4.7			SZGRF
2003/09/03	16:43:21.6	32.936N	71.707E	33N	4.5			NEIC

Pakistan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	16:51:53.0	47.0	87.1	1.0	9	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/03	20:08:59.8	45.661N	83.131E	33.0N	4.9			SZGRF
2003/09/03	20:08:48.9	44.291N	83.324E	33N	4.5			NEIC

Northern Xinjiang, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	20:17:25.7	47.6	67.4	0.9	9	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/03	23:30:04.7	15.600S	173.020W	33N	4.7			NEIC

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	23:49:42.2	145.7	7.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/04	00:04: 5.9	46.615N	15.019E	10.0G			2.2	SZGRF
2003/09/04	00:04:05.4	46.538N	14.879E	10G				NEIC

Northwestern Balkan Peninsula

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	00:04:45.3	2.4	160.6					2.2
	e Sg	E	00:05:21.3							
WET	e Pn	Z	00:04:52.5	2.9	152.0					2.3
	e Sg	N	00:05:38.0							
GRA1	e Sg	N	00:06:12.7	4.0	140.9					
TANN	e Sg	Z	00:06:19.4	4.2	156.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/04	01:06:32.7	41.220S	172.570E	214				NEIC

S Isl of New Zealand

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKP	Z	01:25:20.8	162.4	65.0					
	e SKSdf	Z	01:32:29.2							
CLL	e PKP	Z	01:25:19.4	162.7	62.2					
	e SKSdf	Z	01:32:28.3							
WERD	e PKP	Z	01:25:22.1	163.5	63.6					
	e SKSdf	Z	01:32:30.5							
MOX	e PKP	Z	01:25:21.6	163.8	61.7					
	e SKSdf	Z	01:32:30.4							
CLZ	e PKP	Z	01:25:19.2	163.9	55.8					
	e SKSdf	Z	01:32:28.2							
IBBN	e PKP	Z	01:25:18.9	164.9	49.0					
BUG	e PKP	Z	01:25:20.6	165.6	50.3					
	e SKSdf	Z	01:32:29.1							

WLF	e PKP	Z	01:25:24.1	167.3	53.5	
GRA1	e SKSdf	Z	01:32:32.4			
	e		01:32:43.7			
TNS	e SKSdf	Z	01:32:31.9			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/04								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z	05:13:59.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/04	07:20:45.0	30.157N	138.939E	33.0N	5.1			SZGRF

Southeast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	07:33:21.5	85.6	45.3	0.8	10	5.0		
CLL	e P	Z	07:33:21.6	85.7	44.6	1.0	20	5.2		
CLZ	e P	Z	07:33:25.9	86.4	42.6	1.0	17	5.1		
GEC2	e P	Z	07:33:28.3	87.1	45.0					
GRA1	e P	Z	07:33:30.5	87.7	43.2					
TNS	e P	Z	07:33:34.8	88.5	41.1	0.8	6	4.9		
BFO	e P	Z	07:33:41.9	89.9	41.0	0.9	12	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/04	08:40:41.8	47.860S	166.570E	33.0N				SZGRF
2003/09/04	08:40:44.7	45.260S	166.910E	24	5.8	5.2		NEIC

Off west coast of South Island, New Zealand

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKPdf	Z	09:00:40.9	161.2	83.2					
	e PKPab	Z	09:01:27.0							
	e PP	Z	09:05:10.4							
GEC2	e PKPdf	Z	09:00:40.9	161.5	89.0					
	e PKPab	Z	09:01:28.0							
	e PP	Z	09:05:09.1							
CLL	e PKPdf	Z	09:00:41.3	161.7	80.9					
	e PKPab	Z	09:01:28.8							
	e PP	Z	09:05:12.6							
WET	e PKPdf	Z	09:00:41.9	162.0	87.4					
	e PKPab	Z	09:01:30.7							
	e PP	Z	09:05:13.0							
WERD	e PKPdf	Z	09:00:41.8	162.3	82.8					

	e PKPab	Z	09:01:31.8			
MOX	e PKPdf	Z	09:00:41.9	162.7	81.5	
	e PKPab	Z	09:01:33.3			
GRA1	e PKPdf	Z	09:00:42.9	163.1	84.2	
	e PKPab	Z	09:01:35.2			
	e PP	Z	09:05:20.7			
CLZ	e PKPdf	Z	09:00:43.4	163.2	76.2	
	e PKPab	Z	09:01:36.0			
	e PP	Z	09:05:21.1			
TNS	e PKPdf	Z	09:00:43.3	164.8	79.3	
	e PKPab	Z	09:01:42.6			
BFO	e PKPdf	Z	09:00:44.2	165.1	86.2	
	e PKPab	Z	09:01:43.2			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/04	21:13:40.0	7.667N	84.223W	33.0N	5.0			SZGRF
2003/09/04	21:13:32.7	7.261N	82.226W	0G	4.7			NEIC

Off coast of Costa Rica

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	21:26:25.5	86.7	277.3	1.3	10	5.0		
	e		21:26:32.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/04	23:40:25.4	8.047N	79.670W	33.0N	5.4			SZGRF
2003/09/04	23:40:11.3	7.695N	82.201W	10G	5.3	5.3		NEIC

Panama

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	23:52:38.9	83.1	273.8	1.2	44	5.4		
BUG	e P	Z	23:52:41.6	83.7	274.4	1.3	28	5.2		
TNS	e P	Z	23:52:46.1	84.5	275.4	1.5	47	5.5		
BFO	e P	Z	23:52:46.1	84.6	275.5	1.2	26	5.3		
CLZ	e P	Z	23:52:51.2	85.5	276.8	1.1	48	5.6		
GRA1	e P	Z	23:52:55.1	86.3	277.6	1.0	55	5.7		
MOX	e P	Z	23:52:55.7	86.5	277.8	1.7	45	5.4		
WERD	e P	Z	23:52:58.1	86.9	278.4	1.4	38	5.4		
CLL	i P	Z	23:52:59.6	87.2	278.9	0.9	23	5.3		
	e S	E	00:03:38.4							
	e PS	E	00:04:38.4							
	e SS	E	00:09:29.5							
	e LQ	N	00:16:30.0							
	e LR	Z	00:21:02.0							
	e L	Z	00:31:50.8			18.0	1982		5.6	
WET	e P	Z	23:53:02.0	87.5	278.9	1.3	62	5.6		

BRG	e P	Z	23:53:02.8	87.9	279.6	1.5	42	5.3	
GEC2	e P	Z	23:53:03.8	88.1	279.5	1.3	30	5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/05	01:23: 6.8	5.920N	95.580E	124.2	5.9			SZGRF
2003/09/05	01:23:03.2	5.361N	95.914E	134D	5.7			NEIC

Northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	01:35:03.3	80.8	92.8	0.9	80	5.7		
	e S	T	01:44:58.2							
	e		02:05:00.7							
GEC2	e P	Z	01:35:03.9	80.8	92.3	1.1	132	5.9		
	e S	T	01:45:00.2							
	e sS	T	01:45:53.3							
RUE	e P	Z	01:35:04.1	81.0	93.0	0.9	294	6.3		
RGN	e P	Z	01:35:06.5	81.3	92.9	1.6	206	6.0		
CLL	i P	+ Z	01:35:06.1	81.4	92.2	1.1	72	5.6		
	e pP	Z	01:35:37.8							
	e sP	Z	01:35:52.4							
	e sPP	Z	01:38:50.4							
	e S	N	01:45:04.4							
	e sS	N	01:45:56.9							
	e PPS	Z	01:46:31.1							
	e LR	Z	02:02:00.7							
	e SKPPKP	Z	02:04:58.0							
	e L	Z	02:13:57.2			22.0	270		4.6	
WET	e P	Z	01:35:06.6	81.4	91.7	0.9	75	5.8		
	e S	T	01:45:05.8							
	e sS	T	01:45:57.8							
TANN	e S	T	01:45:07.6	81.7	91.6					
WERD	e P	Z	01:35:08.6	81.8	91.5	0.9	51	5.6		
	e		02:04:57.1							
MOX	e P	Z	01:35:10.9	82.2	91.0	0.9	50	5.6		
	e		02:04:55.3							
FUR	e P	Z	01:35:11.6	82.4	90.4	0.9	84	5.9		
	e		02:04:55.3							
GRA1	e P	Z	01:35:12.7	82.5	90.6	0.9	109	6.1		
	e pP	Z	01:35:44.2							
	e S	T	01:45:17.5							
	e		02:04:54.8							
GRFO	e		02:04:54.7	82.5	90.6					
CLZ	e P	Z	01:35:15.1	83.0	90.2	0.9	133	6.1		
	e		02:04:52.3							
TNS	e P	Z	01:35:21.4	84.3	88.5	0.9	64	5.8		
	e		02:04:47.6							
BFO	e P	Z	01:35:21.5	84.4	88.2	0.9	64	5.9		

IBBN	e P	Z	01:35:23.4	84.6	88.2	0.9	200	6.3	
BUG	e P	Z	01:35:24.9	85.0	87.7	0.9	148	6.2	
WLF	e P	Z	01:35:29.3	85.8	86.7	1.4	109	5.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/05								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	01:55:54.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/05								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	05:54:09.2							
	e		05:54:20.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/05	16:18: 0.0	3.194N	47.254E	25.2	4.6			SZGRF

Northeastern Somalia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	16:27:34.0	55.6	134.6	1.5	9	4.6		
	e pP	Z	16:27:40.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/05	23:29:54.2	33.492N	26.997E	10.0G		3.9		SZGRF

Eastern Mediterranean Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	23:34:06.6	18.3	142.3					
FUR	e P	Z	23:34:12.4	18.8	135.5					
WET	e P	Z	23:34:12.9	18.8	140.9					
GRA1	e P	Z	23:34:24.5	20.0	138.4					
	e L	Z	23:43:31.1			18.1	523		3.9	
BFO	e P	Z	23:34:29.9	20.4	129.9					
MOX	e P	Z	23:34:31.8	20.5	140.9					
CLL	e P	Z	23:34:31.7	20.5	144.9					
TNS	e P	Z	23:34:43.7	21.6	133.8					
CLZ	e P	Z	23:34:46.9	21.9	140.3					
WLF	e P	Z	23:34:51.6	22.3	128.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/06	02:08:13.6	4.679S	106.021W	10G	5.4	5.8		NEIC

Central East Pacific Rise

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PP	Z	02:27:22.1	110.9	288.4					
	e L	Z	03:06:19.5			21.7	1182		5.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/06								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	06:00:30.1							
	e pPKP	Z	06:00:42.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/06	06:06:51.7	55.674N	166.987E	100.0N	4.5			SZGRF

Komandorsky Islands, Russia, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	06:18:08.8	72.7	14.0	1.1	4	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/06								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	14:03:27.0							
	e L	Z	15:14:30.3			20.6	385		5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/06								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	14:55:59.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/06	15:46:59.9	57.320S	25.748W	33N	5.6	5.3		NEIC

South Sandwich Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PP	Z	16:06:07.9	111.3	200.4					
	e PKKP	Z	16:16:27.9							
	e L	Z	16:46:49.1			21.8	595		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/06								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	16:10:18.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/07	03:20:35.4	35.379N	87.820E	33.0N	4.5			SZGRF

Xizang

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:30:08.7	55.7	73.8	1.2	6	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/07	10:42:13.6	26.136N	125.788E	33.0N	5.4			SZGRF
2003/09/07	10:42:22.1	25.542N	124.698E	124D	5.1			NEIC

Northeast of Taiwan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	10:54:29.3	81.6	58.4	1.5	72	5.6		
BRG	e P	Z	10:54:32.3	82.4	58.3	1.1	16	5.2		
CLL	i P	+ Z	10:54:34.4	82.6	57.7	1.4	38	5.4		
	e pP	Z	10:55:06.3							
	e sP	Z	10:55:18.5							
	e (S)	Z	11:04:55.9							
	e LR	Z	11:22:50.6							
	e L	Z	11:31:29.7			20.0	134		4.3	
WERD	e P	Z	10:54:38.8	83.5	57.1	1.5	26	5.2		
NRDL	e P	Z	10:54:39.0	83.5	55.7	1.8	67	5.6		
GEC2	e P	Z	10:54:38.0	83.6	58.0	1.2	11	5.0		
CLZ	e P	Z	10:54:40.2	83.7	55.8	1.3	67	5.7		
MOX	e P	Z	10:54:39.9	83.7	56.6	1.4	22	5.2		
WET	e P	Z	10:54:40.9	83.9	57.4	1.7	14	4.9		
GRA1	e P	Z	10:54:43.9	84.5	56.2	1.5	79	5.7		
GRFO	e P	Z	10:54:43.9	84.5	56.2	1.5	65	5.6		

IBBN	e P	Z	10:54:44.8	84.8	53.9	1.1	77	5.8
FUR	e P	Z	10:54:48.0	85.3	56.2	1.2	85	5.7
BUG	e P	Z	10:54:48.4	85.5	53.4	1.3	70	5.6
TNS	e P	Z	10:54:49.3	85.6	54.2	1.4	35	5.3
BFO	e P	Z	10:54:54.5	86.8	54.1	1.4	42	5.4
WLF	e P	Z	10:54:56.9	87.2	52.5	1.3	45	5.5

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/07	11:16:59.8	4.770S	103.300E	33.0N	5.4			SZGRF
2003/09/07	11:16:58.8	5.644S	102.121E	33N	5.6	5.2		NEIC

Southern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	11:30:11.4	93.2	94.9	1.1	15	5.3		
BRG	e P	Z	11:30:12.3	93.2	95.0	1.1	15	5.2		
WET	e P	Z	11:30:14.1	93.8	94.3	1.1	15	5.3		
CLL	e P	Z	11:30:14.1	93.9	94.2	1.1	10	5.2		
WERD	e P	Z	11:30:16.8	94.2	93.7	1.1	12	5.2		
	e PP	Z	11:34:05.5							
MOX	e P	Z	11:30:17.4	94.7	93.2	1.2	13	5.3		
GRA1	e P	Z	11:30:18.5	94.9	93.0	1.5	30	5.6		
CLZ	e P	Z	11:30:22.6	95.5	92.1	1.2	25	5.7		
NRDL	e P	Z	11:30:23.1	95.7	91.9	1.2	18	5.6		
	e PP	Z	11:34:13.1							
TNS	e P	Z	11:30:28.2	96.7	90.8	1.0	11	5.6		
IBBN	e P	Z	11:30:28.7	97.1	90.0	1.2	23	5.8		
BUG	e PP	Z	11:34:28.9	97.4	89.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/07	13:16:02.7	22.559S	172.123E	33N	5.5			NEIC

Southeast of the Loyalty Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	13:35:48.6	149.0	35.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/07	13:19:20.0	22.494S	172.138E	33N	5.8	6.4		NEIC

Southeast of Loyalty Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z	13:38:59.6	147.0	37.2					
	e		13:39:31.1							
	e SS	T	14:01:34.1							

	e SSS	T	14:06:54.7					
	e LQ	T	14:22:36.3					
	e LR	Z	14:28:51.3					
	e L	Z	14:44:00.6			22.0	9850	6.5
GRA1	e PKP	Z	13:39:05.4	148.9	35.8			
	e L	Z	14:45:52.9			21.7	5520	6.3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/07	13:42:55.0	15.666S	167.090E	33N	5.1			NEIC

South Pacific Ocean

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	14:02:18.8	140.7	38.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/07								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	14:06:00.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/08								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKP	Z	00:25:45.7							
CLL	e PKP	Z	00:25:45.0							
CLZ	e PKP	Z	00:25:45.6							
GRA1	e PKP	Z	00:25:50.3							
WERD	e PKP	Z	00:25:47.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/08								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	05:04:40.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/08	05:24:28.3	19.800S	178.840W	638.5				SZGRF

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPbc	Z	05:42:59.1	146.6	15.4					
	e PKPab	Z	05:43:02.4							
IBBN	e PKPab	Z	05:43:04.8	147.1	11.5					
CLL	e PKPbc	Z	05:43:00.8	147.1	20.9					
	e PKPab	Z	05:43:04.5							
CLZ	e PKPbc	Z	05:43:00.7	147.2	16.1					
	e PKPab	Z	05:43:05.0							
BRG	e PKPbc	Z	05:43:01.2	147.3	22.7					
	e PKPab	Z	05:43:05.5							
	e pPKPbc	Z	05:45:25.4							
MOX	e PKPbc	Z	05:43:03.1	148.1	18.8					
	e PKPab	Z	05:43:08.5							
	e pPKPbc	Z	05:45:27.6							
WERD	e PKPbc	Z	05:43:03.3	148.1	20.1					
	e PKPab	Z	05:43:08.9							
TNS	e PKPbc	Z	05:43:05.8	149.0	13.4					
	e PKPab	Z	05:43:12.8							
	e pPKPbc	Z	05:45:30.6							
GRA1	e PKPbc	Z	05:43:06.1	149.0	18.6					
	e PKPab	Z	05:43:13.1							
	e pPKPbc	Z	05:45:30.5							
WET	e PKPbc	Z	05:43:06.3	149.2	21.9					
	e PKPab	Z	05:43:13.3							
	e pPKPbc	Z	05:45:30.5							
GEC2	e PKPbc	Z	05:43:06.3	149.3	23.6					
	e pPKPbc	Z	05:45:30.6							
WLF	e PKPbc	Z	05:43:08.0	149.9	9.4					
	e PKPab	Z	05:43:16.4							
	e pPKPbc	Z	05:45:33.7							
BFO	e PKPbc	Z	05:43:09.8	150.9	14.0					
	e PKPab	Z	05:43:20.1							
	e pPKPbc	Z	05:45:34.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/08	06:26:31.2	8.405S	110.332E	45D	5.5	5.4		NEIC

Jawa, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PP	Z	06:44:20.2	100.5	90.4					
RUE	e PP	Z	06:44:21.2	100.6	90.0					
GEC2	e Pdiff	Z	06:40:15.1	100.7	90.6					
	e PP	Z	06:44:21.4							
CLL	e Pdiff	Z	06:40:19.4	101.1	89.6					
	e PP	Z	06:44:29.9							
	e PPP	Z	06:46:41.3							

		e SKSac	E	06:50:50.7					
		e SKKSac	E	06:51:19.1					
		e PPS	Z	06:54:19.5					
		e LR	Z	07:16:15.2					
		e L	Z	07:35:29.2			20.0	891	5.3
	WET	e PP	Z	06:44:26.5	101.2	89.9			
	MOX	e PP	Z	06:44:32.1	102.0	88.6			
	FUR	e PP	Z	06:44:34.5	102.3	88.9			
	GRA1	e Pdiff	Z	06:40:23.3	102.3	88.5			
		e PP	Z	06:44:35.4					
		e L	Z	07:22:32.4			32.8	1630	5.3
	NRDL	e PP	Z	06:44:39.7	102.9	87.0			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/08								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKP	Z	16:43:25.2							
CLL	e PKP	Z	16:43:24.8							
CLZ	e PKP	Z	16:43:25.2							
GRA1	e PKP	Z	16:43:29.6							
TNS	e PKP	Z	16:43:30.2							
WERD	e PKP	Z	16:43:27.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/08	23:32:56.8	21.730S	178.860W	33.0N				SZGRF

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPbc	Z	23:52:37.6	147.8	22.4					
CLL	e PKPbc	Z	23:52:41.5	149.0	21.8					
	e PKPab	Z	23:52:45.2							
CLZ	e PKPbc	Z	23:52:41.5	149.0	16.8					
BRG	e PKPbc	Z	23:52:41.9	149.2	23.7					
	e PKPab	Z	23:52:46.6							
MOX	e PKPbc	Z	23:52:43.9	149.9	19.7					
WERD	e PKPbc	Z	23:52:43.9	150.0	21.1					
GRA1	e PKPbc	Z	23:52:46.8	150.9	19.5					
TNS	e PKPbc	Z	23:52:46.1	150.9	14.1					
	e PKPab	Z	23:52:53.7							
GEC2	e PKPbc	Z	23:52:46.8	151.1	24.7					
FUR	e PKPbc	Z	23:52:49.2	152.3	20.6					
	e PKPab	Z	23:52:59.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/09	00:01:36.9	37.371N	142.934E	33.0N	4.8			SZGRF

Off east coast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	00:13:59.5	83.1	36.7	1.2	8	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/09								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z	04:58:44.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/09	13:01:46.7	23.899S	179.861E	500G	4.7			NEIC

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPbc	Z	13:20:41.3	150.4	19.2					
CLL	i PKPbc	+ Z	13:20:42.2	150.8	25.2	0.8	28			
	i pPKPbc	Z	13:22:50.7							
BRG	e PKPbc	Z	13:20:42.9	150.9	27.2					
CLZ	e PKPbc	Z	13:20:42.7	150.9	20.1					
MOX	e PKPbc	Z	13:20:44.3	151.7	23.2					
WERD	e PKPbc	Z	13:20:44.2	151.7	24.6					
GRA1	e PKPbc	Z	13:20:47.7	152.7	23.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/10	08:26:46.0	0.414S	98.689E	33.0N	5.5			SZGRF
2003/09/10	08:26:59.1	2.120N	96.873E	33N	5.3			NEIC

Southern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	08:39:30.9	84.5	93.5	1.1	10	5.0		
	e PP	Z	08:42:55.1							
	e S	T	08:49:55.4							
	e PS	R	08:50:53.0							
	e SS	T	08:55:33.9							
	e SSS	T	08:58:55.0							
	e L	Z	09:26:57.3			20.0	970		5.2	
GRA1	e P	Z	08:39:36.3	85.6	91.9	1.3	36	5.5		

e 08:39:45.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/10	19:31:49.7	42.436N	143.934E	90.9	5.3			SZGRF
2003/09/10	19:31:54.9	42.664N	143.896E	93D	4.7			NEIC

Hokkaido, Japan, region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	19:43:50.8	78.8	33.4	1.4	40	5.3		
		e PcP	Z	19:43:55.3							
		e pP	Z	19:44:14.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/10	22:54:52.8	22.777N	123.886E	33.0N	5.0			SZGRF
2003/09/10	22:55:04.5	22.608N	121.560E	104*	4.9			NEIC

Southeast of Taiwan

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	23:07:31.5	85.1	60.3	1.4	18	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/11	19:31:10.5	27.056N	56.299E	33.0N				SZGRF
2003/09/11	19:31:28.0	28.385N	54.023E	33N	4.6			NEIC

Southern Iran

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	19:38:51.4	38.7	107.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/11	21:58:34.3	7.830S	157.040E	33.0N		5.8		SZGRF
2003/09/11	21:58:26.2	8.185S	156.052E	10G	5.5			NEIC

Bougainville - Solomon Islands region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	RUE	e PKPdf	Z	22:17:33.9	126.1	48.6					
		e PP	Z	22:19:28.6							
	BRG	e PKPdf	Z	22:17:35.8	127.1	49.7					
		e PP	Z	22:19:35.8							
		e		22:20:49.8							
	CLL	e PKPdf	Z	22:17:33.1	127.3	48.4	1.2	25			
		e PP	Z	22:19:37.7							

		e PKSdf	Z	22:20:55.4					
		e SKKSac	R	22:26:29.9					
		e SP	R	22:29:34.2					
		e PPS	Z	22:31:08.4					
		e SS	R	22:36:54.2					
		e LR	Z	23:00:57.8					
		e L	Z	23:11:40.7			22.0	2823	5.9
	CLZ	e PKPdf	Z	22:17:37.9	128.1	45.2			
		e PP	Z	22:19:42.6					
		e		22:20:55.0					
	MOX	e PKPdf	Z	22:17:38.1	128.4	47.2			
		e PP	Z	22:19:44.1					
		e		22:20:56.8					
	GEC2	e PKPdf	Z	22:17:38.5	128.5	50.6			
		e PP	Z	22:19:45.2					
		e		22:20:58.2					
	WET	e PKPdf	Z	22:17:39.2	128.8	49.5			
		e PP	Z	22:19:46.9					
		e		22:20:59.2					
	IBBN	e PKPdf	Z	22:17:39.0	128.9	41.9			
		e PP	Z	22:19:46.7					
		e		22:20:59.0					
	GRA1	e PKPdf	Z	22:17:39.9	129.2	47.4			
		e PP	Z	22:19:49.5					
		e		22:21:01.2					
		e PPP	Z	22:22:31.4					
		e SP	Z	22:29:48.4					
		e SS	E	22:37:03.0					
		e L	Z	23:14:58.5			21.9	2023	5.8
	BUG	e PKPdf	Z	22:17:41.1	129.7	41.8			
		e PP	Z	22:19:52.0					
		e		22:21:02.8					
	TNS	e PKPdf	Z	22:17:41.8	130.1	43.9			
		e PP	Z	22:19:55.6					
		e		22:21:04.9					
	FUR	e PKPdf	Z	22:17:41.8	130.2	48.4			
		e PP	Z	22:19:56.2					
		e		22:21:05.5					
	BFO	e PKPdf	Z	22:17:44.1	131.5	44.9			
		e PP	Z	22:20:04.5					
		e		22:21:09.1					
	WLF	e PKPdf	Z	22:17:45.0	131.5	41.5			
		e PP	Z	22:20:05.1					
		e		22:21:09.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source

2003/09/12

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	02:37:39.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/12	06:55:55.9	5.262S	151.436E	52D	5.8	5.6		NEIC

New Britain, Papua New Guinea, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPdf	Z	07:14:46.1	121.4	51.8					
BRG	e PKPdf	Z	07:14:47.1	122.3	52.8					
CLL	e Pdiff	Z	07:11:21.5	122.5	51.6					
	i PKPdf	- Z	07:14:48.0			0.8	55			
	e pPKPdf	Z	07:15:01.2							
	e PP	Z	07:16:31.0							
	e PPP	Z	07:19:08.2							
	e PS	R	07:26:19.2							
	e pPS	E	07:26:43.1							
	e PPS	Z	07:27:58.2							
	e SS	R	07:33:05.5							
	e SSS	T	07:37:49.1							
	e LR	Z	07:54:27.2							
	e L	Z	08:08:22.7			22.0	2452		5.8	
NRDL	e PKPdf	Z	07:14:49.5	123.1	48.0					
WERD	e PKPdf	Z	07:14:49.5	123.4	51.3					
CLZ	e PKPdf	Z	07:14:49.7	123.4	48.6					
MOX	e PKPdf	Z	07:14:50.0	123.6	50.5					
GEC2	e PKPdf	Z	07:14:49.7	123.6	53.6					
WET	e PKPdf	Z	07:14:50.1	123.9	52.6					
IBBN	e PKPdf	Z	07:14:51.4	124.3	45.5					
GRA1	e PKPdf	Z	07:14:51.8	124.4	50.6					
	e PP	Z	07:16:38.2							
	e L	Z	08:09:29.3			20.9	1794		5.7	
BUG	e PKPdf	Z	07:14:53.1	125.1	45.4					
FUR	e PKPdf	Z	07:14:53.8	125.3	51.4					
TNS	e PKPdf	Z	07:14:53.6	125.4	47.3					
BFO	e PKPdf	Z	07:14:55.8	126.7	48.2					
WLF	e PKPdf	Z	07:14:56.7	126.8	45.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/12	09:03:06.3	0.081S	123.002E	95D	5.4			NEIC

Minahassa Peninsula, Sulawesi, Indonesia

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PP	Z	09:21:26.6	104.0	73.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/12	09:19:55.8	56.083N	164.037E	33N	4.7			NEIC

Bering Sea

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	09:31:19.6	71.8	15.6	1.0	6	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/12	12:33:44.8	37.909N	83.957E	33.0N	4.5			SZGRF
2003/09/12	12:34:20.1	40.284N	77.785E	21D	4.8	4.0		NEIC

Southern Xinjiang, China

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	12:42:48.9	46.4	75.0	1.0	6	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/12	15:41:17.5	31.766S	44.802E	10.0N	5.3	5.2		SZGRF
2003/09/12	15:40:44.8	36.121S	53.473E	10G	5.3	5.2		NEIC

South Indian Ocean

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	15:54:01.9	93.6	147.0	1.0	28	5.3		
		e L	Z	16:36:17.0			22.0	1086		5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/12								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z	17:08:50.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/13	03:56:15.2	58.989N	152.825W	33.0N	5.0			SZGRF
2003/09/13	03:56:00.0	60.180N	153.020W	127	4.9			NEIC

Kodiak Island, Alaska, United States, region

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

	GRA1	e	P	Z	04:07:27.3	69.4	351.7	0.8	10	5.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/13								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GEC2	e Pn	Z	07:51:22.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/13	13:45:53.2	35.197N	28.235E	95.0	5.3			SZGRF
2003/09/13	13:46:14.8	36.731N	26.896E	151	5.2			NEIC

Eastern Mediterranean Sea

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GEC2	e P	Z	13:49:47.8	15.5	136.7	0.9	159	5.1		
	WET	e P	Z	13:49:54.6	16.1	135.4	1.0	152	5.1		
	FUR	e P	Z	13:49:56.0	16.2	129.2	1.0	370	5.5		
	BRG	e P	Z	13:50:04.2	16.9	141.8	1.0	74	4.9		
	GRA1	e P	Z	13:50:07.6	17.2	132.9	1.0	196	5.3		
		e ScP	Z	13:58:02.1							
	WERD	e P	Z	13:50:08.2	17.2	137.1	0.9	126	5.1		
	CLL	i P	+ Z	13:50:11.8	17.6	140.5	0.8	106	5.0		
		e S	Z	13:53:28.1							
		i ScP	Z	13:58:02.7							
	MOX	e P	Z	13:50:13.1	17.7	136.0	1.0	151	5.2		
	BFO	e P	Z	13:50:14.7	17.9	123.7	0.6	157	5.4		
	RUE	e P	Z	13:50:18.4	18.2	144.5	1.1	480	5.6		
	TNS	e P	Z	13:50:26.0	18.9	128.5	1.2	430	5.6		
	CLZ	e P	Z	13:50:27.7	19.1	135.8	0.9	108	5.2		
	NRDL	e P	Z	13:50:33.5	19.7	136.6	1.5	81	4.9		
	WLF	e P	Z	13:50:35.5	19.8	123.0	0.9	147	5.4		
	RGN	e P	Z	13:50:38.4	20.1	146.8	0.7	184	5.6		
	BUG	e P	Z	13:50:40.0	20.2	128.9	1.3	133	5.2		
	IBBN	e P	Z	13:50:43.1	20.6	131.6	1.0	75	5.1		
	HLG	e P	Z	13:50:55.9	21.8	135.4	1.0	227	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/13	18:32:47.5	5.556S	82.330W	33.0N	5.1			SZGRF
2003/09/13	18:33:11.2	1.130S	78.006W	33N	4.9	4.5		NEIC

Off coast of northern Peru

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	18:46:14.0	90.4	268.7	1.4	9	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/13	20:42:19.4	3.694N	97.696E	33.0N	4.9			SZGRF
2003/09/13	20:42:21.9	4.644N	97.587E	33N	4.9	5.0		NEIC

Northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	20:54:51.4	84.1	89.8	1.2	10	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/14	00:13:50.8	15.650S	167.960E	33N	4.8			NEIC

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	00:33:19.5	141.1	37.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/14	13:09:25.1	21.907S	174.880W	33N	4.8			NEIC

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z	13:29:09.1	150.0	14.8					
	e PKPbc	Z	13:29:13.7			0.9	9			
	e PKPab	Z	13:29:20.3							
	e		13:29:24.3							
GRA1	e PKP	Z	13:29:11.9	151.8	12.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/14	13:17:06.8	16.849S	167.182E	36D	4.7			NEIC

Vanuatu Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	13:36:31.8	141.9	39.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/14	18:45:51.4	17.940N	120.450E	33.0N	5.6	5.3		SZGRF
2003/09/14	18:45:50.8	18.627N	121.010E	33N	5.4	5.1		NEIC

Luzon, Philippine Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	18:58:24.1	84.7	65.1	1.4	131	6.0		
RUE	e P	Z	18:58:27.1	85.3	65.3	1.6	188	6.0		
BRG	e P	Z	18:58:29.5	85.9	65.3	1.4	78	5.7		
CLL	i P	+ Z	18:58:30.7	86.2	64.6	1.6	98	5.7		
	e PP	Z	19:02:00.2							
	e SKSac	R	19:08:52.6							
	e S	E	19:09:05.5							
	e SP	Z	19:09:58.5							
	e SS	R	19:14:58.5							
	e L	Z	19:40:36.6			22.0	1608		5.4	
WERD	e P	Z	18:58:35.0	87.0	64.0	1.9	62	5.4		
WET	e P	Z	18:58:36.4	87.2	64.4	1.9	63	5.6		
NRDL	e P	Z	18:58:36.9	87.3	62.4	1.7	88	5.8		
MOX	e P	Z	18:58:36.3	87.3	63.5	1.8	51	5.5		
CLZ	e P	Z	18:58:37.5	87.4	62.6	1.4	32	5.5		
GRA1	e P	Z	18:58:39.4	87.9	63.2	1.7	30	5.4		
	e S	R	19:09:24.1							
	e SS	R	19:15:23.7							
	e L	Z	19:44:29.3			19.5	1183		5.3	
FUR	e P	Z	18:58:43.4	88.6	63.2	2.1	173	5.9		
IBBN	e P	Z	18:58:42.6	88.6	60.6	1.5	82	5.7		
TNS	e P	Z	18:58:46.2	89.3	61.1	1.3	15	5.1		
BUG	e P	Z	18:58:46.2	89.3	60.2	1.5	54	5.6		
BFO	e P	Z	18:58:50.1	90.2	61.0	1.5	25	5.3		
WLF	e P	Z	18:58:53.6	90.8	59.3	1.4	71	5.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/14	21:42:54.9	44.434N	11.511E	10.0G			5.6	SZGRF
2003/09/14	21:42:51.0	44.280N	11.486E	10G	5.2	5.2		NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e Pn	Z	21:43:53.0	3.9	177.8					5.8
	e Sn	N	21:44:35.7							
BFO	e Pn	Z	21:44:01.8	4.6	150.5					5.4
	e Sn	N	21:44:52.6							
WET	e Pn	Z	21:44:06.7	5.0	191.6					5.5
	e Sn	E	21:45:01.3							
GRA1	e Pn	Z	21:44:12.1	5.4	178.0					
	e Sn	N	21:45:11.7							
WERD	e Pn	Z	21:44:23.2	6.2	185.5					
TNS	e Pn	Z	21:44:25.1	6.3	159.7					
MOX	e Pn	Z	21:44:25.2	6.4	180.8					
	e Sn	N	21:45:35.2							
WLF	e Pn	Z	21:44:28.7	6.5	144.0					
	e Sn	N	21:45:42.8							

BRG	e Pn	Z	21:44:31.6	6.8	195.0	
CLL	e Pn	Z	21:44:35.8	7.1	188.8	
	e Sn	E	21:45:55.1			
CLZ	e Pn	Z	21:44:43.0	7.6	174.0	
BUG	e Pn	Z	21:44:45.7	7.7	156.9	
	e Sn	E	21:46:11.3			
NRDL	e Pn	Z	21:44:52.1	8.3	173.1	
RUE	e Pn	Z	21:44:52.7	8.3	191.4	
IBBN	e Pn	Z	21:44:54.6	8.4	161.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/14	21:56:14.5	44.303N	11.492E	10.0G			3.4	SZGRF

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e Sn	N	21:57:59.3	3.9	177.7					3.5
BFO	e Pn	Z	21:57:23.4	4.6	150.4					3.4
	e Sn	N	21:58:15.1							
WET	e Pn	Z	21:57:27.9	4.9	191.6					3.2
	e Sn	E	21:58:23.0							
MOX	e Pn	Z	21:57:48.0	6.3	180.8					
	e Sn	N	21:58:57.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/14	22:18:34.9	44.375N	11.502E	10.0G			3.3	SZGRF
2003/09/14	22:18:32.5	44.212N	11.548E	10G				NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	22:19:42.9	4.7	150.4					3.3
WET	e Pn	Z	22:19:47.4	5.0	191.0					
TNS	e Pn	Z	22:20:06.3	6.4	159.5					
MOX	e Pn	Z	22:20:06.3	6.4	180.4					
	e Sn	E	22:21:16.0							
CLL	e Pn	Z	22:20:17.3	7.2	188.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/14								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	22:25:54.3							
MOX	e Pn	Z	22:26:19.2							
WET	e Pn	Z	22:26:01.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/14								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	23:10:11.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/14	23:29:50.6	44.447N	11.392E	10.0G			3.4	SZGRF

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e Pn	Z	23:30:48.5	3.7	178.7					3.6
	e Sn	N	23:31:32.7							
BFO	e Pn	Z	23:30:57.4	4.4	150.3					3.3
	e Sn	N	23:31:47.4							
WET	e Sn	N	23:31:56.1	4.8	192.8					3.2
MOX	e Pn	Z	23:31:21.3	6.2	181.5					
	e Sn	E	23:32:29.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/14	23:36:42.2	44.397N	11.339E	10.0G			3.1	SZGRF

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	23:37:49.6	4.4	151.1					3.1
	e Sn	N	23:38:39.7							
WET	e Pn	Z	23:37:54.5	4.9	193.1					3.1
	e Sn	E	23:38:49.8							
MOX	e Pn	Z	23:38:14.4	6.3	181.8					
	e Sn	E	23:39:23.0							
BRG	e Pn	Z	23:38:19.8	6.7	196.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/14	23:45:41.9	44.428N	11.411E	10.0G			3.1	SZGRF

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e Pn	Z	23:46:39.8	3.7	178.5					
BFO	e Pn	Z	23:46:49.3	4.4	150.3					3.0
	e Sn	N	23:47:39.2							

WET	e Pn	Z	23:46:53.6	4.8	192.6			3.2
	e Sn	N	23:47:48.4					
GRA1	e Sn	N	23:47:59.2	5.3	178.5			
TANN	e Pn	Z	23:47:10.0	6.0	187.2			
MOX	e Pn	Z	23:47:13.7	6.2	181.3			
	e Sn	N	23:48:22.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/15	00:02:34.2	44.273N	11.538E	10.0G			4.0	SZGRF

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e Pn	Z	00:03:34.6	3.9	177.2					4.3
	e Sn	N	00:04:19.6							
BFO	e Pn	Z	00:03:43.4	4.6	150.2					3.9
	e Sn	N	00:04:35.6							
WET	e Pn	Z	00:03:48.3	5.0	191.2					3.9
	e Sn	N	00:04:44.1							
GRA1	e Pn	Z	00:03:53.7	5.4	177.6					
	e Sn	E	00:04:55.2							
TANN	e Pn	Z	00:04:04.7	6.2	186.2					
	e Sn	N	00:05:13.6							
TNS	e Pn	Z	00:04:06.7	6.3	159.4					
MOX	e Pn	Z	00:04:06.3	6.4	180.5					
	e Sn	E	00:05:17.2							
WLF	e Pn	Z	00:04:10.7	6.5	143.7					
BRG	e Pn	Z	00:04:13.5	6.8	194.7					
	e Sn	N	00:05:27.3							
CLL	e Pn	Z	00:04:17.7	7.1	188.5					
CLZ	e Pn	Z	00:04:24.0	7.6	173.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/15								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	06:21:09.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/15	06:28:14.2	34.799N	71.913E	33.0N	5.1			SZGRF
2003/09/15	06:28:49.1	36.653N	71.273E	300G	4.5			NEIC

Pakistan

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

	GRA1	e P	Z	06:36:34.4	44.4	83.4	1.3	28	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/15								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	BFO	e Pn	Z	12:11:43.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/15	12:14:28.1	1.798N	97.310E	33.0N	5.0			SZGRF
2003/09/15	12:14:32.6	2.637N	96.003E	33N	5.0			NEIC

Northern Sumatera, Indonesia

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	12:27:06.1	84.6	92.3	1.2	13	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/15	19:51:35.9	44.348N	11.482E	10.0G			3.3	SZGRF

Northern Italy

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	BFO	e Pn	Z	19:52:43.7	4.5	150.2					3.4
		e Sn	N	19:53:35.0							
	WET	e Pn	Z	19:52:48.6	4.9	191.8					3.3
		e Sn	N	19:53:43.6							
	TANN	e Pn	Z	19:53:05.4	6.1	186.6					
		e Sn	N	19:54:13.9							
	TNS	e Pn	Z	19:53:07.2	6.2	159.6					
		e Sn	N	19:54:17.5							
	MOX	e Pn	Z	19:53:08.4	6.3	180.9					
		e Sn	N	19:54:16.5							
	WLF	e Pn	Z	19:53:11.2	6.4	143.7					
	BRG	e Pn	Z	19:53:14.9	6.7	195.2					
		e Sn	E	19:54:27.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/16	08:00:33.7	28.938N	103.321E	33.0N	5.3			SZGRF
2003/09/16	08:00:42.0	29.484N	100.950E	33N	5.0			NEIC

Sichuan, China

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

	GRA1	e P	Z	08:11:40.1	67.8	70.1	0.6	15	5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/16	11:24:59.1	56.690N	111.460E	21.1	5.4	5.7		SZGRF
2003/09/16	11:24:52.0	56.055N	111.248E	10G	5.2	5.7		NEIC

Lake Baykal, Russia, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	11:33:57.2	50.9	45.5	1.0	81	5.6		
RUE	e P	Z	11:34:06.2	52.1	44.5	1.0	34	5.2		
BRG	e P	Z	11:34:14.1	53.2	43.8	1.2	60	5.4		
CLL	i P	+ Z	11:34:15.1	53.3	43.6	1.2	47	5.4		
	e PcP	Z	11:35:21.9							
	e PP	Z	11:36:19.8							
	e PPP	Z	11:37:25.5							
	e S	N	11:41:49.5							
	e SS	N	11:45:34.9							
	e L	Z	11:59:03.1			18.0	11757		6.0	
CLZ	e P	Z	11:34:20.6	54.0	42.6	1.2	44	5.4		
WERD	e P	Z	11:34:22.0	54.2	42.8	1.2	38	5.3		
MOX	e P	Z	11:34:23.0	54.4	42.6	1.1	49	5.5		
IBBN	e P	Z	11:34:25.1	54.8	41.7	0.9	33	5.4		
WET	e P	Z	11:34:27.4	55.0	42.4	1.2	52	5.4		
GRA1	e P	Z	11:34:29.7	55.3	42.0	1.5	63	5.4		
	e pP	Z	11:34:35.5							
	e PP	Z	11:36:46.7							
	e S	R	11:42:16.9							
	e SS	R	11:46:02.3							
	e L	Z	12:00:12.0			20.5	6191		5.7	
BUG	e P	Z	11:34:31.6	55.6	41.0	1.3	47	5.4		
TNS	e P	Z	11:34:34.9	56.1	41.0	1.1	24	5.1		
FUR	e P	Z	11:34:37.6	56.4	41.3	1.1	78	5.7		
WLF	e P	Z	11:34:45.2	57.4	39.8	0.6	9	5.0		
BFO	e P	Z	11:34:45.2	57.5	40.2	1.0	26	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/16	20:03:11.1	9.747N	85.358W	33.0N	5.2			SZGRF
2003/09/16	20:03:20.9	9.931N	84.480W	100G	4.8			NEIC

Off coast of Costa Rica

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	20:15:52.4	86.1	280.8	1.1	21	5.2		
CLL	i P	+ Z	20:15:56.2	87.0	282.0	1.0	22	5.3		
	e pP	Z	20:16:17.7							
	e sP	Z	20:16:29.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/16	21:49:31.4	43.371N	147.559E	33.0N	5.8			SZGRF
2003/09/16	21:49:29.0	43.977N	148.160E	25*	5.3	4.5		NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	22:01:23.0	77.4	31.4	1.0	98	5.9		
	e PP	Z	22:04:19.2							
	e LR	Z	22:28:20.5							
	e L	Z	22:39:34.3			20.0	209		4.5	
GRA1	e P	Z	22:01:34.8	79.1	30.0	0.9	112	5.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/16	23:21: 9.2	72.390N	19.200E	33.0N	4.3			SZGRF

Norwegian Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	23:25:20.8	18.0	5.8	1.1	75	4.7		
RUE	e P	Z	23:25:41.0	20.1	4.8	0.8	25	4.5		
IBBN	e P	Z	23:25:47.9	20.7	9.8	0.4	11	4.5		
CLZ	e P	Z	23:25:50.6	20.9	7.5	1.0	9	4.0		
CLL	e P	Z	23:25:52.1	21.3	5.2					
BUG	e P	Z	23:25:56.8	21.6	9.8	0.8	13	4.4		
BRG	e P	Z	23:25:54.5	21.6	4.3					
MOX	e P	Z	23:26:00.5	22.0	6.1	0.9	7	4.1		
WERD	e P	Z	23:26:02.3	22.2	5.5	1.0	8	4.1		
TNS	e P	Z	23:26:08.1	22.7	8.4	0.8	4	4.0		
GRA1	e P	Z	23:26:15.5	23.0	6.2	0.9	10	4.4		
	e		23:27:04.2							
WET	e P	Z	23:26:16.0	23.4	4.8	0.8	12	4.5		
WLF	e P	Z	23:26:15.4	23.5	9.9					
FUR	e P	Z	23:26:26.4	24.5	5.8					
BFO	e P	Z	23:26:26.3	24.6	7.9	1.0	4	4.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/17	01:09:35.6	28.771S	178.469W	200G	4.8			NEIC

Kermadec Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	01:29:43.8	157.8	23.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/17	01:27:14.8	4.399S	102.852E	33N	5.1	4.6		NEIC

Southern Sumatra, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	01:40:32.9	94.4	91.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/17	02:59:48.2	50.458N	103.785E	33.0N	4.4			SZGRF
2003/09/17	02:59:55.8	51.771N	101.442E	10G	4.6			NEIC

Tuva-Buryatia-Mongolia border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:09:18.6	53.3	50.5	1.0	4	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/17	12:27:24.6	44.390N	11.303E	10.0G			3.2	SZGRF
2003/09/17	12:27:23.4	44.351N	11.422E	10G				NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	12:28:31.8	4.5	150.7					3.2
	e Sn	N	12:29:22.3							
TNS	e Pn	Z	12:28:55.0	6.2	159.9					
MOX	e Pn	Z	12:28:56.2	6.3	181.3					
	e Sn	E	12:30:05.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/17	13:43:17.6	44.288N	11.411E	10.0G			3.4	SZGRF
2003/09/17	13:43:15.9	44.113N	11.607E	10G				NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	13:44:27.0	4.8	150.5					3.4
	e Sn	N	13:45:18.1							
TANN	e Pn	Z	13:44:47.4	6.3	185.6					
	e Sn	E	13:45:57.2							
MOX	e Pn	Z	13:44:50.8	6.5	180.1					
	e Sn	N	13:46:00.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/17	21:34:58.1	17.900S	65.110W	33.0G	5.8			SZGRF
2003/09/17	21:34:47.0	21.493S	68.397W	127D	5.9			NEIC

Central Bolivia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	21:48:04.0	96.8	244.6	1.1	126	6.2		
BFO	e P	Z	21:48:06.5	97.6	246.0	1.0	17	5.4		
BUG	e P	Z	21:48:09.9	98.2	245.6	1.0	100	6.2		
TNS	e P	Z	21:48:10.6	98.4	246.3	0.8	44	5.9		
IBBN	e P	Z	21:48:13.0	98.8	246.1	1.0	158	6.3		
FUR	e P	Z	21:48:15.4	99.3	248.1	1.5	62	5.7		
GRA1	e P	Z	21:48:17.7	99.8	248.3	1.0	31	5.7		
	e PP	Z	21:52:17.4							
	e SKSac	R	21:58:53.0							
	e SP	T	22:00:49.0							
	e SS	T	22:06:29.2							
CLZ	e P	Z	21:48:19.1	100.1	248.0	1.1	41	5.8		
MOX	e P	Z	21:48:20.1	100.4	248.7	1.6	32	5.6		
WET	e P	Z	21:48:20.8	100.6	249.4	1.1	20	5.6		
WERD	e P	Z	21:48:21.4	100.8	249.2	1.1	15	5.4		
CLL	e Pdiff	Z	21:48:24.7	101.5	249.8	0.9	18			
	e PP	Z	21:52:30.6							
	e SKSac	R	21:58:54.7							
	e Sdiff	T	21:59:50.4							
	e sSdiff	T	22:00:54.5							
	e SP	Z	22:01:20.3							
	e PPS	R	22:02:27.3							
	e SS	T	22:06:52.1							
	e SSS	T	22:10:50.5							
	e LR	Z	22:23:47.4							
	e L	Z	22:30:39.7			22.0	322		4.8	
BRG	e P	Z	21:48:26.6	101.9	250.5	0.8	5	5.2		
RUE	e P	Z	21:48:28.7	102.3	250.7	1.2	33	5.8		
RGN	e P	Z	21:48:30.4	102.8	250.7	0.9	35	6.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/18	18:29: 1.3	44.265N	11.313E	10.0G			3.3	SZGRF
2003/09/18	18:29:01.5	44.329N	11.436E	10G				NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	18:30:11.2	4.5	150.7					3.3
	e Sn	E	18:31:01.7							
WET	e Pn	Z	18:30:15.7	4.9	192.1					3.3
	e Sn	N	18:31:10.5							

	e Sg	E	18:31:42.4			
GRA1	e Sn	N	18:31:21.0	5.4	178.4	
TANN	e Pn	Z	18:30:31.8	6.1	186.9	
MOX	e Pn	Z	18:30:35.5	6.3	181.2	
	e Sn	E	18:31:43.8			
CLL	e Pn	Z	18:30:44.7	7.1	189.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/19								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
TANN	e Pn	Z	08:45:03.8	89.9	42.2					
GEC2	e Pn	Z	08:44:44.7	90.5	43.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/19	15:59:55.0	31.758N	142.167E	33.0N	4.8			SZGRF

Southeast of Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	16:12:40.5	87.7	40.0	1.5	8	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/19	19:44:19.1	45.640N	14.318E	10G				NEIC

Slovenia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	19:45:10.7	3.2	172.3					
	e Sn	N	19:46:01.7							
WET	e Pn	Z	19:45:14.3	3.6	163.9					
	e Sn	E	19:46:12.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/20	01:31:34.6	44.421N	11.371E	10.0G			2.8	SZGRF
2003/09/20	01:31:31.1	44.258N	11.490E	10G				NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	01:32:41.5	4.6	150.6					2.8
	e Sn	E	01:33:32.0							
GEC2	e Pn	Z	01:32:44.4	4.8	199.2					
	e Sn	N	01:33:39.0							

WET	e Sn	E	01:33:41.2	5.0	191.5
TNS	e Pn	Z	01:33:04.9	6.3	159.8
MOX	e Pn	Z	01:33:06.4	6.4	180.8
	e Sn	N	01:34:14.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/20	03:54:51.3	35.350N	140.520E	33.0G	5.6	5.2		SZGRF
2003/09/20	03:54:15.2	35.016N	140.163E	52D	5.3			NEIC

Near east coast of eastern Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	04:06:55.5	79.8	41.9	1.1	87	5.6		
RUE	e P	Z	04:07:03.3	81.1	42.0	1.3	98	5.7		
BRG	e P	Z	04:07:09.0	82.3	41.9	1.2	36	5.4		
CLL	i P	Z	04:07:08.2	82.3	41.3	1.0	56	5.8		
	e sP	Z	04:07:28.4							
	e PP	Z	04:09:56.1							
	e S	E	04:17:14.2							
	e sS	E	04:17:47.9							
	e SS	E	04:22:39.1							
	e SSS	N	04:26:07.9							
	e LR	Z	04:35:16.2							
	e L	Z	04:48:49.6			20.0	900		5.1	
NRDL	e P	Z	04:07:10.5	82.7	41.4	1.2	31	5.3		
GEC2	e P	Z	04:07:17.3	83.9	41.6	1.2	30	5.4		
WERD	e P	Z	04:07:14.2	83.4	40.4	1.5	40	5.4		
CLZ	e P	Z	04:07:13.0	83.0	39.5	1.1	54	5.7		
MOX	e P	Z	04:07:14.8	83.4	40.3	1.4	45	5.5		
WET	e P	Z	04:07:18.3	84.0	41.0	1.3	37	5.4		
IBBN	e P	Z	04:07:15.7	83.6	37.6	0.9	46	5.7		
GRA1	e P	Z	04:07:18.9	84.3	39.9	1.6	187	6.1		
	e		04:07:39.0							
	e S	N	04:16:54.3							
	e SS	N	04:23:18.1							
	e L	Z	04:49:01.9			18.5	875		5.2	
FUR	e P	Z	04:07:25.5	85.5	39.9	1.1	66	5.8		
BUG	e P	Z	04:07:20.2	84.5	37.2	1.3	48	5.6		
TNS	e P	Z	04:07:23.1	85.0	38.0	1.4	47	5.5		
BFO	e P	Z	04:07:30.5	86.6	37.8	1.4	70	5.6		
WLF	e P	Z	04:07:30.1	86.5	37.9	1.5	101	5.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/20	10:11:45.2	16.920S	175.156W	290D	4.4			NEIC

Gilbert Islands, Kiribati, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z	10:30:50.0	145.1	13.7	1.0	32			
	e pPKPbc	Z	10:32:06.7							
GRA1	e PKP	Z	10:30:55.6	146.8	11.2					
	e		10:32:08.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/20	11:50:25.5	35.024N	6.929E	33.0N				SZGRF
2003/09/20	11:50:49.9	36.816N	7.247E	10G	4.3			NEIC

Northern Algeria

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	11:54:00.7	13.2	194.1	0.9	7			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/20	13:59:45.1	36.050N	74.000E	33.0N	5.1			SZGRF
2003/09/20	13:59:45.0	36.007N	73.493E	33N	4.9			NEIC

Northwestern Kashmir

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z	14:07:55.5	44.4	85.7	1.2	33	5.2		
RUE	e P	Z	14:07:55.0	44.4	87.2	0.7	24	5.3		
GEC2	e P	Z	14:07:57.9	44.7	83.4	0.9	6	4.5		
CLL	e P	Z	14:07:59.4	44.9	85.4	0.8	10	4.8		
WET	e P	Z	14:08:02.4	45.2	83.2	1.1	5	4.4		
WERD	e P	Z	14:08:03.9	45.4	84.1	0.8	11	4.9		
MOX	e P	Z	14:08:07.2	45.9	83.8	1.2	18	5.0		
GRA1	e P	Z	14:08:10.9	46.2	82.6	1.3	48	5.5		
FUR	e P	Z	14:08:12.2	46.4	81.2	0.9	32	5.5		
CLZ	e P	Z	14:08:12.2	46.5	84.0	1.4	35	5.3		
NRDL	e P	Z	14:08:13.2	46.6	84.4	0.9	17	5.2		
TNS	e P	Z	14:08:23.0	47.9	81.2	1.2	11	4.8		
IBBN	e P	Z	14:08:24.4	48.1	82.6	0.9	27	5.4		
BFO	e P	Z	14:08:25.4	48.3	79.4	1.0	7	4.6		
BUG	e P	Z	14:08:27.4	48.5	81.4	1.1	26	5.2		
WLF	e P	Z	14:08:35.4	49.5	79.2	1.1	31	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/20								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	16:35:28.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/20	21:35: 3.1	60.067N	146.086W	33.0N	4.7			SZGRF
2003/09/20	21:35:16.0	63.467N	147.700W	3	4.2			NEIC

Southern Alaska, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	21:46:03.8	65.6	349.8	0.8	4	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/21	06:43:42.3	45.841N	8.034E	5				NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	06:44:19.9	2.5	184.7					
	e Sn	N	06:44:48.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/21	07:09:40.9	19.863S	12.869W	33.0N	4.6			SZGRF

Southern Mid-Atlantic Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	07:21:06.3	72.8	203.7	1.2	6	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/21								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z	08:10:34.0							
	e		08:11:23.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/21	12:13:10.7	49.317N	154.133E	33.0N	5.3			SZGRF
2003/09/21	12:13:18.3	48.633N	153.357E	150	4.7			NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z	12:24:42.9	74.5	26.0	0.9	24	5.2		
CLZ	e P	Z	12:24:45.1	74.7	24.4	1.1	26	5.2		
IBBN	e P	Z	12:24:46.1	74.9	22.8	0.6	21	5.4		

WERD	e P	Z	12:24:48.9	75.4	25.4				
MOX	e P	Z	12:24:48.8	75.4	25.0	1.2	21	5.0	
BUG	e P	Z	12:24:51.0	75.8	22.4	3.6	324	5.9	
GRA1	e P	Z	12:24:55.0	76.4	24.7	0.7	41	5.6	
WET	e P	Z	12:24:55.2	76.5	25.6	1.0	18	5.2	
GEC2	e P	Z	12:24:55.0	76.5	26.1				
TNS	e P	Z	12:24:56.3	76.7	23.0	0.7	20	5.3	
FUR	e P	Z	12:25:02.5	77.8	24.6				
BFO	e P	Z	12:25:05.2	78.4	22.7	0.7	12	5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/21	18:16:23.0	21.403N	96.448E	33.0N	6.5	6.9		SZGRF
2003/09/21	18:16:13.1	19.896N	95.731E	10G	6.1	6.9		NEIC

Myanmar

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	18:27:24.2	69.5	83.7					
RGN	e P	Z	18:27:24.7	69.6	84.1	0.6				
BRG	e P	Z	18:27:24.8	69.6	83.2	1.4	625	6.6		
GEC2	e P	Z	18:27:27.5	70.0	82.3					
CLL	i P	Z	18:27:27.7	70.1	82.7	1.4	348	6.3		
	e PP	Z	18:30:02.9							
	e PPP	Z	18:31:45.3							
	e PPPP	Z	18:32:39.3							
	e S	E	18:36:41.9							
	e SS	E	18:41:22.8							
	e SSS	N	18:44:37.5							
	e LR	Z	18:50:18.4							
	e PKPPKPdf	Z	18:55:30.9							
	e L	Z	19:02:36.1			22.0	113380		7.1	
WET	e P	Z	18:27:30.6	70.5	81.8	1.6	564	6.4		
WERD	e P	Z	18:27:31.5	70.7	81.9					
MOX	e P	Z	18:27:33.9	71.1	81.4	1.3	368	6.4		
GRA1	e P	Z	18:27:36.9	71.5	80.8	1.5	766	6.6		
	e S	N	18:36:47.2							
	e L	Z	19:01:54.0			21.9	75127		6.9	
CLZ	e P	Z	18:27:37.7	71.7	80.9	1.5	838	6.6		
FUR	e P	Z	18:27:37.6	71.7	80.3	1.4	497	6.4		
NRDL	e P	Z	18:27:38.3	71.7	80.9	1.5	915	6.7		
HLG	e P	Z	18:27:44.2	72.7	79.7	0.6				
TNS	e P	Z	18:27:46.5	73.1	78.9	1.4	384	6.3		
IBBN	e P	Z	18:27:46.6	73.2	79.1	0.7				
BFO	e P	Z	18:27:48.5	73.6	78.3					
BUG	e P	Z	18:27:49.3	73.6	78.4	1.3	491	6.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/21	18:31:27.3	21.628N	96.501E	33.0N	4.9			SZGRF
2003/09/21	18:31:16.9	19.832N	95.542E	10G				NEIC

Myanmar

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	18:42:27.8	69.4	83.9					
BRG	e P	Z	18:42:28.5	69.5	83.4					
GEC2	e P	Z	18:42:31.2	69.9	82.5					
WET	e P	Z	18:42:34.3	70.4	82.0	1.0	10	4.9		
GRA1	e P	Z	18:42:40.3	71.4	81.0	1.5	24	5.1		
CLZ	e P	Z	18:42:41.2	71.6	81.1					
NRDL	e P	Z	18:42:41.7	71.7	81.1					
TNS	e P	Z	18:42:50.1	73.1	79.1	1.0	8	4.8		
IBBN	e P	Z	18:42:50.2	73.1	79.2					
BFO	e P	Z	18:42:52.2	73.5	78.5					
WLF	e P	Z	18:42:59.9	74.6	77.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/21	18:41:41.8	19.198N	96.700E	33.0N	4.6			SZGRF

Myanmar

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	18:53:06.3	72.6	80.6	0.9	4	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/21	19:14:42.8	19.271N	94.842E	33.0N	5.4			SZGRF
2003/09/21	19:14:38.5	20.110N	95.375E	10G	5.2			NEIC

Myanmar

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	19:25:59.8	71.1	80.9	3.4	99	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/21	20:43:39.8	19.918N	93.521E	33.0N	5.0			SZGRF
2003/09/21	20:43:24.5	19.675N	95.490E	10G	4.8			NEIC

Myanmar

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	20:54:48.8	71.5	81.1	1.4	17	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/21	23:15: 8.6	2.057S	13.507W	33.0N	5.1	5.8		SZGRF
2003/09/21	23:15:11.6	1.130S	13.984W	10G	5.1	5.4		NEIC

North of Ascension Island

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	23:24:44.0	55.2	211.2	1.1	25	5.1		
	e S	N	23:32:29.5							
	e L	Z	23:47:29.8			20.5	8530		5.8	
CLL	e P	Z	23:25:01.7	57.0	212.7	1.5	31	5.1		
	e PcP	Z	23:25:56.2							
	e PP	Z	23:27:05.3							
	e S	N	23:32:58.1							
	e LR	Z	23:42:45.4							
	e L	Z	23:48:39.2			20.0	5863		5.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/22								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	01:58:54.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/22	04:45:39.3	19.660N	71.010W	33.0N		6.8		SZGRF
2003/09/22	04:45:36.4	19.847N	70.666W	10G	6.2	6.6		NEIC

Dominican Republic region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z	04:56:29.5	66.6	273.5					
BUG	e P	Z	04:56:33.4	67.2	273.6					
IBBN	e P	Z	04:56:34.9	67.4	273.6					
TNS	e P	Z	04:56:38.7	68.0	275.0					
	e S	E	05:05:41.5							
	e L	Z	05:22:19.3			19.8	64850		6.9	
BFO	e P	Z	04:56:38.8	68.1	275.7					
	e S	E	05:05:39.9							
	e L	Z	05:20:41.7			21.9	44002		6.7	
NRDL	e P	Z	04:56:43.7	68.8	275.4					
CLZ	e P	Z	04:56:45.4	69.1	275.8					
	e S	N	05:05:52.2							
	e L	Z	05:22:11.1			21.8	25371		6.4	
GRA1	e P	Z	04:56:49.8	69.8	277.2					
	e S	E	05:06:00.0							
	e L	Z	05:23:14.7			20.2	85275		7.0	
MOX	e P	Z	04:56:51.0	70.0	277.2					

		e S	N	05:06:02.4						
		e L	Z	05:24:56.3			18.7	74647		7.0
	FUR	e P	Z	04:56:51.3	70.1	277.8				
	WERD	e P	Z	04:56:53.6	70.4	277.8				
	CLL	i P	- Z	04:56:55.4	70.7	278.0	2.0	778	6.5	
		e PP	Z	04:59:29.0						
		e PPP	Z	05:01:10.7						
		e S	E	05:06:09.7						
		e PPS	E	05:06:54.4						
		e SS	E	05:10:56.5						
		e SSS	Z	05:14:14.9						
		e LR	Z	05:18:56.6						
		e L	Z	05:23:44.8			22.0	38604		6.6
		e PKPPKP	Z	05:24:47.7						
	WET	e P	Z	04:56:57.3	71.0	278.6				
		e S	E	05:06:13.9						
		e L	Z	05:23:36.1			20.4	57024		6.8
	RUE	e P	Z	04:56:57.5	71.1	278.2				
	BRG	e P	Z	04:56:59.7	71.4	278.8				
	GEC2	e P	Z	04:57:00.7	71.6	279.3				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/22	05:30: 0.2	15.983N	72.025W	33.0N	5.5			SZGRF
2003/09/22	05:30:17.9	19.943N	70.492W	10G	5.1			NEIC

Caribbean Sea

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	05:41:30.3	69.7	277.2	2.6	137	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/22	07:55:17.2	20.272N	94.129E	33.0N	5.1			SZGRF
2003/09/22	07:55:09.2	20.018N	95.938E	56*	4.7			NEIC

Myanmar

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	08:06:27.1	71.5	80.6	1.6	25	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/22	09:09:42.1	68.771N	14.308W	33.0N	4.5			SZGRF

Iceland region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	09:14:42.0	22.8	336.2	0.7	11	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/22	10:51: 0.4	18.999N	95.380E	33.0N	5.2			SZGRF
2003/09/22	10:51:01.4	19.969N	96.015E	49*	4.8			NEIC

Myanmar

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	11:02:20.8	71.6	80.5	1.3	25	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/22	20:45:58.9	76.190N	2.180E	33.0N		4.3		SZGRF
2003/09/22	20:45:16.9	80.309N	1.763W	10G	5.2	4.7		NEIC

Greenland Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e P	Z	20:51:11.4	28.1	355.8					
CLZ	e P	Z	20:51:17.5	28.7	355.8					
BUG	e P	Z	20:51:19.5	29.0	356.9					
CLL	i P	- Z	20:51:22.7	29.4	355.0	1.4	98	5.4		
	e		20:51:30.9							
	e S	N	20:56:14.9							
	e SS	E	20:58:32.1							
	e LR	Z	20:59:35.0							
	e L	Z	21:03:30.5			20.0	813		4.4	
BRG	e P	Z	20:51:27.3	29.9	354.8					
MOX	e P	Z	20:51:28.5	30.0	355.5					
WERD	e P	Z	20:51:30.7	30.2	355.3					
TNS	e P	Z	20:51:30.8	30.3	356.6					
WLF	e P	Z	20:51:35.3	30.8	357.4					
GRA1	e P	Z	20:51:37.0	30.9	355.8					
	e L	Z	21:03:02.2			21.7	892		4.3	
WET	e P	Z	20:51:42.9	31.6	355.3					
GEC2	e P	Z	20:51:46.2	31.9	355.1					
BFO	e P	Z	20:51:47.7	32.2	356.8					
FUR	e P	Z	20:51:50.6	32.5	355.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/22	23:17:57.9	25.778S	65.790E	33.0N	5.4			SZGRF
2003/09/22	23:17:53.5	23.959S	69.588E	10G	5.2			NEIC

Southwest Indian Ridge

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

	GRA1	e P	Z	23:30:52.8	90.0	128.9	1.1	29	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/23								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z	09:31:37.7							
		e		09:31:45.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/23								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z	10:02:06.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/23	16:10:33.6	22.101S	11.709W	33.0N	5.5			SZGRF
2003/09/23	16:10:22.3	22.976S	13.640W	10G	5.1	4.6		NEIC

Southern Mid-Atlantic Ridge

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	16:22:10.0	76.0	203.5	2.2	100	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/24	01:08:26.4	19.935N	121.356E	37.5	4.7			SZGRF
2003/09/24	01:08:31.9	21.862N	120.745E	33N	4.6			NEIC

Philippine Islands region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	01:21:08.5	85.2	61.4	1.0	6	4.7		
		e pP	Z	01:21:19.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/24								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z	07:02:51.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/24								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	19:18:39.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/24	20:56:59.9	36.500N	135.960E	373.9	5.3			SZGRF
2003/09/24	20:56:54.9	35.300N	135.238E	373D	5.4			NEIC

Sea of Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	21:08:18.9	78.5	45.3	1.5	61	5.5		
BRG	e P	Z	21:08:24.4	79.6	45.2	1.2	12	4.8		
CLL	i P	- Z	21:08:24.6	79.7	44.6	1.0	29	5.2		
	e pP	Z	21:09:50.4							
	e sP	Z	21:10:28.1							
	e PP	Z	21:11:31.4							
	e S	R	21:17:54.0							
	e SS	R	21:23:15.0							
CLZ	e P	Z	21:08:29.1	80.4	42.8	0.8	26	5.2		
	e pP	Z	21:09:54.2							
GEC2	e P	Z	21:08:32.2	81.1	44.8	1.3	17	4.9		
IBBN	e P	Z	21:08:32.3	81.2	41.0	0.9	32	5.4		
WET	e P	Z	21:08:33.7	81.3	44.2	1.2	14	4.9		
GRA1	e P	Z	21:08:35.9	81.6	43.1	1.2	69	5.6		
	e pP	Z	21:10:00.7							
	e PP	Z	21:11:47.1							
BUG	e P	Z	21:08:36.7	82.0	40.5	1.2	30	5.3		
TNS	e P	Z	21:08:39.2	82.5	41.2	1.1	23	5.2		
FUR	e P	Z	21:08:41.1	82.7	43.0	1.0	57	5.7		
	e pP	Z	21:10:06.7							
WLF	e P	Z	21:08:46.4	83.8	39.6	1.3	42	5.5		
BFO	e P	Z	21:08:46.5	83.9	41.0	1.1	40	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/25	04:58:36.1	19.679N	95.949E	33.0N				SZGRF
2003/09/25	04:58:29.8	19.816N	95.631E	10G	4.8			NEIC

Myanmar

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	05:09:55.6	71.5	80.9	1.2	12			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/25	18:43: 7.7	34.390N	35.550W	33.0N	4.8			SZGRF
2003/09/25	18:43:05.8	35.310N	35.862W	10G	5.1	5.0		NEIC

Northern Mid-Atlantic Ridge

Sta	Phase			Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P		Z	18:49:49.0	33.6	260.8	1.0	25	5.1		
BUG	e P		Z	18:49:57.9	34.6	259.3	1.2	18	4.9		
BFO	e P		Z	18:49:59.8	34.8	264.7	1.3	26	5.0		
IBBN	e P		Z	18:50:02.1	35.1	258.5	1.3	62	5.3		
TNS	e P		Z	18:50:02.7	35.1	262.1	1.6	44	5.0		
NRDL	e P		Z	18:50:15.0	36.5	260.5	1.3	44	5.0		
CLZ	e P		Z	18:50:15.1	36.6	261.6	1.2	34	5.0		
GRA1	e P		Z	18:50:17.2	36.8	265.2	1.2	28	4.9		
MOX	e P		Z	18:50:20.1	37.2	264.3	1.0	16	4.7		
WERD	e P		Z	18:50:23.6	37.6	265.2	1.1	11	4.5		
WET	e P		Z	18:50:25.7	37.9	267.3	1.1	9	4.4		
CLL	i P	-	Z	18:50:27.8	38.1	264.6	1.1	17	4.7		
	e PP		Z	18:51:57.6							
	e S		E	18:56:28.7							
	e SS		N	18:59:15.5							
	e LR		Z	19:01:06.3							
	e L		Z	19:03:22.4			20.0	3660		5.2	
GEC2	e P		Z	18:50:29.7	38.4	268.3	1.7	30	4.6		
BRG	e P		Z	18:50:32.5	38.7	266.0	1.1	13	4.5		
RUE	e P		Z	18:50:33.5	38.7	263.8	1.4	70	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/25	19:50: 7.5	42.020N	144.720E	33.0N	7.3	8.8		SZGRF
2003/09/25	19:50:06.2	41.775N	143.904E	27G	7.0	8.1		NEIC

Hokkaido, Japan, region

Sta	Phase			Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P		Z	20:01:47.5	74.9	35.9	1.1	4319	7.5		
RUE	e P		Z	20:01:56.3	76.4	35.9	1.2	3834	7.3		
HLG	e P		Z	20:01:59.3	76.9	32.1	1.1	3032	7.2		
CLL	i P	+	Z	20:02:02.7	77.6	35.2	0.9	1425	7.1		
	e PP		Z	20:05:17.2							
	e PPP		Z	20:07:01.3							
	e S		T	20:11:53.7							
	e SS		R	20:17:15.8							
	e LQ		T	20:24:15.5							
	e LR		Z	20:27:24.9							
	e L		Z	20:39:32.2			20.0	8108720		9.1	
BRG	e P		Z	20:02:02.9	77.6	35.8	1.7	3769	7.2		
	e S		T	20:11:53.4							

NRDL	e P	Z	20:02:02.8	77.6	33.4	1.6	3874	7.3	
CLZ	e P	Z	20:02:05.7	78.1	33.5	1.9	7915	7.5	
IBBN	e P	Z	20:02:08.3	78.6	31.8	2.2	12920	7.7	
MOX	e P	Z	20:02:08.7	78.6	34.2	2.3	8183	7.4	
	e S	T	20:12:07.1						
	e L	Z	20:40:12.4			20.4	4645483		8.8
GEC2	e P	Z	20:02:12.7	79.3	35.4	2.1	4142	7.2	
	e S	T	20:12:14.8						
WET	e P	Z	20:02:12.7	79.4	34.9	2.1	6814	7.4	
	e S	T	20:12:15.4						
BUG	e P	Z	20:02:12.8	79.5	31.4	2.0	5478	7.3	
GRA1	e P	Z	20:02:14.3	79.6	33.9	2.0	15049	7.8	
	e		20:29:28.4						
	e L	Z	20:40:51.1			21.1	5177236		8.8
GRFO	e P	Z	20:02:14.2	79.6	33.9				
TNS	e P	Z	20:02:16.6	80.1	32.1	1.5	2503	7.1	
FUR	e P	Z	20:02:21.0	80.8	33.8	1.2	2698	7.1	
WLF	e P	Z	20:02:23.5	81.3	30.5	2.6	7784	7.2	
BFO	e P	Z	20:02:25.3	81.7	31.8	2.0	6328	7.2	
	e S	T	20:12:37.4						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/25	20:10: 7.9	42.117N	143.617E	33.0N	5.6			SZGRF
2003/09/25	20:10:02.3	41.809N	143.744E	33N	5.6			NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	20:22:09.9	79.5	34.0	1.1	68	5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/25	20:57:22.1	42.149N	142.072E	34.6				SZGRF
2003/09/25	20:57:13.2	41.748N	143.600E	33N	5.6			NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	21:09:20.6	79.5	34.1	1.0	107			
	e pP	Z	21:09:30.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/25	21:02:57.9	41.765N	143.125E	33.0N	5.8			SZGRF
2003/09/25	21:02:52.6	41.769N	144.200E	33N	5.4			NEIC

Hokkaido, Japan, region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z	21:15:00.6	79.7	33.7	1.1	131	5.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/25	21:08: 5.2	42.820N	143.820E	33.0N	6.6	7.6		SZGRF
2003/09/25	21:08:00.0	41.755N	143.626E	33N	6.3	7.3		NEIC

Hokkaido, Japan, region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	RUE	e P	Z	21:19:48.8	76.3	36.1	1.4	1340	6.8		
	CLL	i P	+ Z	21:19:55.3	77.5	35.4	1.2	845	6.8		
		e		21:20:05.8							
		e PP	Z	21:23:02.6							
		e S	R	21:29:49.9							
		e ScS	T	21:30:03.2							
		e LR	Z	21:46:46.1							
		e L	Z	21:56:49.7			22.0	497756		7.8	
	BRG	e P	Z	21:19:55.6	77.5	36.0	1.4	528	6.5		
	NRDL	e P	Z	21:19:55.9	77.6	33.6	1.4	574	6.5		
	CLZ	e P	Z	21:19:58.8	78.0	33.7	1.3	1119	6.8		
	WERD	e P	Z	21:20:00.7	78.5	34.9	1.5	488	6.4		
	IBBN	e P	Z	21:20:01.1	78.5	32.0	1.2	780	6.7		
	MOX	e P	Z	21:20:01.4	78.6	34.4	1.4	525	6.5		
	GEC2	e P	Z	21:20:05.3	79.3	35.6	2.3	867	6.5		
	WET	e P	Z	21:20:06.1	79.3	35.1	1.1	527	6.6		
	BUG	e P	Z	21:20:05.4	79.4	31.6	1.3	791	6.7		
	GRA1	e P	Z	21:20:07.2	79.5	34.1	1.3	1300	6.9		
		e L	Z	21:57:03.5			22.0	323793		7.6	
	TNS	e P	Z	21:20:09.5	80.0	32.3	1.4	565	6.5		
	FUR	e P	Z	21:20:13.7	80.7	34.0	1.1	926	6.7		
	WLF	e P	Z	21:20:16.2	81.3	30.7	1.4	537	6.4		
	BFO	e P	Z	21:20:18.1	81.7	32.0	1.8	1030	6.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/25	22:20:23.2	41.846N	143.669E	33.0N	5.7			SZGRF
2003/09/25	22:20:20.5	41.972N	143.776E	33N	5.2			NEIC

Hokkaido, Japan, region

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	CLL	i P	- Z	22:32:14.8	77.7	35.3	0.9	82	5.8		
		e pP	Z	22:32:25.2							
	GRA1	e P	Z	22:32:26.5	79.4	33.9	1.0	90	5.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/25	22:24:34.0	42.352N	146.764E	33.0N	4.9			SZGRF
2003/09/25	22:24:36.6	42.348N	143.582E	33N	4.7			NEIC

Off southeast coast of Hokkaido, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:36:40.9	79.0	33.8	0.9	15	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/25	23:11:45.0	42.771N	144.496E	33.0N	5.0			SZGRF
2003/09/25	23:11:40.9	42.780N	144.959E	33N	4.8	6.3		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	23:23:45.5	79.1	32.7	1.2	20	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	00:13:28.9	22.439S	175.242W	33N	5.3	5.6		NEIC

Tonga region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKP	Z	00:33:15.5	149.2	16.4					
NRDL	e PKP	Z	00:33:16.8	149.7	9.8					
IBBN	e PKP	Z	00:33:18.3	150.0	5.6					
CLZ	e PKP	Z	00:33:19.0	150.3	10.5					
CLL	e PKPdf	Z	00:33:13.2	150.4	15.6	1.5	20			
	i PKPbc	+ Z	00:33:19.1			1.0	98			
	e pPKPbc	Z	00:33:29.1							
BRG	e PKP	Z	00:33:19.9	150.7	17.5					
BUG	e PKP	Z	00:33:20.1	150.9	4.8					
MOX	e PKP	Z	00:33:21.1	151.3	13.3					
WERD	e PKP	Z	00:33:21.2	151.4	14.7					
TNS	e PKP	Z	00:33:22.2	152.1	7.3					
GRA1	e PKP	Z	00:33:23.4	152.3	12.9					
WET	e PKP	Z	00:33:23.8	152.5	16.4					
GEC2	e PKP	Z	00:33:24.0	152.7	18.2					
WLF	e PKP	Z	00:33:24.3	152.8	2.8					
FUR	e PKP	Z	00:33:26.7	153.8	13.7					
BFO	e PKP	Z	00:33:27.0	154.0	7.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	01:08:22.4	41.599N	142.041E	33.0N	4.6			SZGRF

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	01:08:16.5	41.971N	143.992E	33N	4.5			NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	01:20:23.6	79.4	33.7	0.9	6	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	01:39:19.5	42.073N	142.435E	34.5	5.1			SZGRF
2003/09/26	01:39:11.2	41.686N	144.045E	33N	4.8			NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	01:51:19.4	79.7	33.8	1.1	22	5.1		
	e pP	Z	01:51:29.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	02:35:16.5	42.720N	145.070E	33.0N	5.8			SZGRF
2003/09/26	02:35:12.9	41.978N	144.455E	33N	5.4	5.4		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	02:47:02.3	76.4	35.5	1.1	142	6.0		
CLL	i P	+ Z	02:47:08.8	77.6	34.8	0.9	144	6.1		
	e PP	Z	02:50:03.1							
	e L	Z	03:25:13.3			20.0	14132		6.3	
NRDL	e P	Z	02:47:09.2	77.6	33.0	1.9	149	5.8		
BRG	e P	Z	02:47:09.1	77.6	35.4	1.4	86	5.7		
CLZ	e P	Z	02:47:12.1	78.1	33.1	1.8	245	6.0		
IBBN	e P	Z	02:47:14.2	78.6	31.3	1.3	144	5.9		
WERD	e P	Z	02:47:14.5	78.6	34.2	1.2	57	5.6		
MOX	e P	Z	02:47:14.9	78.7	33.8	1.4	96	5.6		
GEC2	e P	Z	02:47:18.9	79.4	35.0	1.4	65	5.5		
WET	e P	Z	02:47:19.7	79.4	34.4	1.0	99	5.8		
BUG	e P	Z	02:47:18.9	79.5	30.9	1.0	78	5.7		
GRA1	e P	Z	02:47:20.5	79.6	33.4	2.4	251	5.8		
TNS	e P	Z	02:47:22.8	80.1	31.6	1.5	83	5.5		
FUR	e P	Z	02:47:27.0	80.9	33.3	0.9	152	6.0		
WLF	e P	Z	02:47:29.3	81.3	30.0	1.1	52	5.5		
BFO	e P	Z	02:47:31.4	81.8	31.4	1.0	44	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	03:29:10.2	42.005N	143.701E	33.0N	5.2			SZGRF
2003/09/26	03:29:05.4	41.649N	143.731E	33N	5.1			NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	03:41:01.5	78.0	35.5	0.9	36	5.5		
	e pP	Z	03:41:10.8							
	e L	Z	04:18:29.1			22.0	2404		5.5	
GRA1	e P	Z	03:41:12.9	79.6	34.1	1.0	34	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	03:51:37.5	42.076N	145.290E	33.0N	5.4			SZGRF
2003/09/26	03:51:35.6	42.075N	144.711E	33N	5.2	5.3		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	04:03:42.9	79.6	33.2	1.3	67	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	04:35:21.0	82.810N	19.993W	33.0N	4.6			SZGRF
2003/09/26	04:35:15.9	83.579N	4.316W	10G	4.8			NEIC

Near north coast of Kalaallit Nunaat

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	04:42:04.9	34.2	356.9	1.1	9	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	04:43:45.7	46.820N	143.800E	33.0N	5.5			SZGRF
2003/09/26	04:44:17.9	46.258N	143.017E	347	5.2			NEIC

Sakhalin Island, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	04:55:08.2	72.1	34.2	1.8	138	5.8		
NRDL	e P	Z	04:55:15.2	73.4	31.9	1.5	46	5.4		
CLL	i P	+ Z	04:55:15.0	73.4	33.5	1.0	62	5.6		
	e PcP	Z	04:55:29.4							
BRG	e P	Z	04:55:15.5	73.4	34.1	1.0	17	5.0		
CLZ	e P	Z	04:55:18.3	73.8	32.0	1.5	104	5.6		
IBBN	e P	Z	04:55:20.2	74.3	30.4	1.4	76	5.5		
WERD	e P	Z	04:55:21.1	74.3	33.0	1.1	21	5.1		
MOX	e P	Z	04:55:21.4	74.4	32.6	1.4	42	5.3		
BUG	e P	Z	04:55:25.3	75.2	29.9	1.3	56	5.4		
GEC2	e P	Z	04:55:25.9	75.2	33.6	1.5	36	5.2		
WET	e P	Z	04:55:26.6	75.2	33.1	1.4	68	5.5		
GRA1	e P	Z	04:55:27.2	75.4	32.2	1.2	83	5.7		

TNS	e P	Z	04:55:29.5	75.8	30.5	1.5	59	5.5
FUR	e P	Z	04:55:34.3	76.6	32.0	1.7	189	6.0
WLF	e P	Z	04:55:36.6	77.0	29.0	1.7	68	5.5
BFO	e P	Z	04:55:38.6	77.5	30.2	1.4	69	5.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	06:27: 1.7	43.050N	145.080E	33.0N	6.1	6.2		SZGRF
2003/09/26	06:26:57.1	42.190N	144.638E	33N	5.8	5.6		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	06:38:37.9	74.7	35.2	1.5	358	6.2		
RUE	e P	Z	06:38:46.0	76.3	35.2	1.4	390	6.3		
HLG	e P	Z	06:38:48.3	76.8	31.4	1.0	189	6.2		
CLL	e P	Z	06:38:52.3	77.5	34.6	1.8	452	6.3		
NRDL	e P	Z	06:38:52.9	77.5	32.8	1.7	216	6.0		
BRG	e P	Z	06:38:52.9	77.5	35.1	1.6	204	6.0		
CLZ	e P	Z	06:38:55.7	78.0	32.9	1.5	338	6.3		
IBBN	e P	Z	06:38:57.8	78.4	31.1	1.5	280	6.2		
WERD	e P	Z	06:38:58.3	78.5	34.0	1.8	233	6.0		
MOX	e P	Z	06:38:58.6	78.5	33.6	1.6	200	6.0		
GEC2	e P	Z	06:39:02.7	79.3	34.7	1.7	185	5.8		
BUG	e P	Z	06:39:02.5	79.3	30.7	1.6	260	6.0		
WET	e P	Z	06:39:03.4	79.3	34.2	1.8	404	6.2		
GRA1	e P	Z	06:39:04.2	79.5	33.2	1.5	473	6.3		
	e PP	Z	06:42:03.1							
	e S	E	06:49:10.2							
	e L	Z	07:17:35.6			19.2	11075		6.2	
TNS	e P	Z	06:39:06.4	80.0	31.4	1.5	166	5.7		
FUR	e P	Z	06:39:10.8	80.7	33.1	1.6	511	6.2		
WLF	e P	Z	06:39:13.3	81.2	29.8	3.1	1297	6.4		
BFO	e P	Z	06:39:15.1	81.6	31.2	1.3	166	5.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	18:53:59.3	36.730N	21.668E	33.0N				SZGRF
2003/09/26	18:54:06.8	38.659N	23.526E	33N	4.7			NEIC

Southern Greece

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	18:57:34.4	14.1	136.9	1.6	13			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	20:38:20.4	41.740N	145.200E	33.0N	6.0	6.6		SZGRF

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	20:38:22.0	41.982N	144.540E	33N	5.7		5.7	NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	20:50:03.4	74.9	35.4	1.1	195	6.1		
RUE	e P	Z	20:50:11.3	76.4	35.4	1.4	344	6.3		
CLL	i P	+ Z	20:50:17.9	77.6	34.7	1.0	240	6.3		
	e PP	Z	20:53:15.6							
	e PPP	Z	20:55:05.2							
	e S	E	21:00:09.1							
	e SS	E	21:05:12.4							
	e L	Z	21:28:22.9			18.0	34222		6.7	
NRDL	e P	Z	20:50:18.1	77.7	32.9	1.2	87	5.8		
BRG	e P	Z	20:50:18.1	77.7	35.3	1.1	89	5.8		
CLZ	e P	Z	20:50:21.0	78.1	33.0	1.4	304	6.2		
IBBN	e P	Z	20:50:23.0	78.6	31.3	1.3	266	6.1		
WERD	e P	Z	20:50:23.5	78.6	34.2	1.1	84	5.7		
MOX	e P	Z	20:50:23.8	78.7	33.7	1.4	138	5.8		
GEC2	e P	Z	20:50:27.8	79.4	34.9	1.3	100	5.6		
BUG	e P	Z	20:50:27.8	79.5	30.9	1.1	146	5.8		
WET	e P	Z	20:50:28.6	79.5	34.4	1.1	190	6.0		
GRA1	e P	Z	20:50:29.4	79.6	33.4	1.1	300	6.1		
	e PP	Z	20:53:32.1							
	e S	E	21:00:38.7							
	e L	Z	21:29:32.3			18.1	25418		6.6	
TNS	e P	Z	20:50:31.7	80.1	31.6	1.3	124	5.8		
FUR	e P	Z	20:50:36.0	80.9	33.2	1.0	275	6.3		
WLF	e P	Z	20:50:38.6	81.4	30.0	1.3	68	5.6		
BFO	e P	Z	20:50:40.4	81.8	31.3	1.7	260	6.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	21:03:20.1	15.732S	174.462W	127?	4.8			NEIC

Tonga

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	21:22:45.9	145.7	9.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	22:11:35.4	41.670N	143.950E	33.0N	4.9			SZGRF
2003/09/26	22:11:32.4	41.981N	144.530E	33N	4.8			NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:23:40.2	79.6	33.4	1.0	14	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/26	23:35:37.6	40.660N	77.180E	35.9	5.3	5.1		SZGRF
2003/09/26	23:35:33.5	40.254N	77.091E	30D	5.1	4.9		NEIC

Kyrgyzstan-Xinjiang border region

Sta	Phase			Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P		Z	23:43:40.0	43.8	79.9	0.7	17	4.9		
BRG	e P		Z	23:43:42.0	44.0	78.4	0.8	30	5.1		
CLL	i P	+	Z	23:43:45.5	44.5	78.2	0.8	34	5.3		
	i pP		Z	23:43:55.3							
	e PP		Z	23:45:37.9							
	e S		T	23:50:19.9							
	e SS		T	23:53:40.7							
	e LQ		T	23:56:13.3							
	e LR		Z	23:58:22.7							
	e L		Z	00:03:49.2			18.0	1708		5.0	
GEC2	e P		Z	23:43:47.2	44.6	76.2	0.9	54	5.5		
WET	e P		Z	23:43:50.7	45.1	76.0	0.9	26	5.2		
WERD	e P		Z	23:43:50.9	45.1	76.9	1.0	23	5.1		
	e PcP		Z	23:45:29.6							
MOX	e P		Z	23:43:53.9	45.5	76.6	0.9	22	5.2		
GRA1	e P		Z	23:43:58.4	46.0	75.5	0.8	78	5.8		
	e pP		Z	23:44:08.1							
	e PcP		Z	23:45:34.1							
CLZ	e P		Z	23:43:57.9	46.0	77.0	0.9	17	5.1		
NRDL	e P		Z	23:43:58.3	46.0	77.4	1.2	66	5.5		
	e PP		Z	23:45:43.1							
FUR	e P		Z	23:44:01.0	46.4	74.1	0.8	81	5.8		
IBBN	e P		Z	23:44:09.1	47.5	75.7	0.9	39	5.5		
TNS	e P		Z	23:44:10.0	47.6	74.3	0.9	16	5.1		
BUG	e P		Z	23:44:13.2	48.0	74.6	1.4	40	5.4		
BFO	e P		Z	23:44:14.4	48.2	72.6	0.9	22	5.3		
	e PcP		Z	23:45:40.2							
WLF	e P		Z	23:44:22.5	49.2	72.4	1.0	36	5.4		
GRA1	e L		Z	00:04:37.7	46.0	75.5	19.1	2340		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	00:07:35.6	23.710S	177.120W	632.4				GRSN

South of Fiji Islands

Sta	Phase			Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf		Z	00:26:13.9	151.3	19.6					
	i PKPbc	+	Z	00:26:19.0			1.1	30			
	e pPKPbc		Z	00:28:42.3							
GRA1	e PKP		Z	00:26:23.3	153.3	17.2					

e pPKP Z 00:28:47.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	00:58: 7.0	41.700N	144.379E	33.0N	4.5			SZGRF

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	01:10:12.5	79.8	33.6	1.2	8	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	02:14: 1.3	41.773N	147.166E	33.0N	5.0			SZGRF

Off southeast coast of Hokkaido, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	02:26:11.6	80.7	31.7	1.3	22	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	02:58:12.5	41.794N	144.610E	24.6	4.5			SZGRF

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	03:10:17.9	79.8	33.4	1.0	7	4.5		
	e pP	Z	03:10:25.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	03:56:45.6	41.909N	143.470E	33.0N	5.0			SZGRF
2003/09/27	03:56:40.2	41.737N	144.145E	33N	4.8			NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	04:08:48.3	79.7	33.7	1.4	28	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	04:30:45.9	16.210S	176.276E	33N	5.0	4.5		NEIC

Fiji region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	04:50:20.0	144.4	25.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	05:05:49.4							
	e		05:05:54.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	08:06:20.0	42.514N	144.231E	33.0N	5.7			SZGRF
2003/09/27	08:06:19.8	42.741N	144.258E	49	5.5	4.6		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	08:18:09.6	77.2	34.6	0.8	41	5.6		
	e sP	Z	08:18:28.6							
GRA1	e P	Z	08:18:21.3	78.9	33.2	1.8	134	5.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	10:50:30.0	42.307N	144.081E	33.0N	5.1			SZGRF

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	11:02:31.9	79.2	33.5	1.4	31	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	11:33:40.2	50.490N	85.590E	33.0N	6.6	7.3		SZGRF
2003/09/27	11:33:24.9	49.999N	87.852E	16D	6.5	7.5		NEIC

Southwestern Siberia, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	11:41:31.6	43.7	63.8	1.1	1508	6.6		
RUE	e P	Z	11:41:37.2	44.4	62.1	1.1	1386	6.6		
BRG	e P	Z	11:41:42.4	45.0	60.8	1.1	432	6.1		
CLL	i P	Z	11:41:44.9	45.3	60.7	0.7	958	6.9		
	e PP	Z	11:43:47.7							
	e S	N	11:48:33.3							
	e SS	N	11:51:50.8							
	e L	Z	12:01:56.5			22.0	237168		7.1	
WERD	e P	Z	11:41:51.4	46.1	59.7	1.0	434	6.3		
GEC2	e P	Z	11:41:51.7	46.2	59.0	1.1	359	6.2		
NRDL	e P	Z	11:41:54.0	46.3	60.3	1.4	1187	6.6		
MOX	e P	Z	11:41:53.7	46.4	59.5	1.0	691	6.5		

CLZ	e P	Z	11:41:54.3	46.5	59.9	1.1	540	6.4	
WET	e P	Z	11:41:54.3	46.5	58.9	1.1	524	6.4	
HLG	e P	Z	11:41:58.2	46.6	60.5				
GRA1	e P	Z	11:41:59.7	47.1	58.6	1.1	1482	6.9	
	e S	R	11:49:17.3						
	e L	Z	12:01:16.3			21.9	364483		7.3
IBBN	e P	Z	11:42:03.2	47.6	59.0	1.2	1186	6.8	
FUR	e P	Z	11:42:05.8	47.9	57.4	1.1	1547	7.0	
BUG	e P	Z	11:42:08.9	48.4	58.1	1.2	1073	6.9	
TNS	e P	Z	11:42:09.1	48.4	57.7	1.1	725	6.7	
BFO	e P	Z	11:42:16.6	49.5	56.3	1.1	480	6.5	
WLF	e P	Z	11:42:21.9	49.9	56.2	1.2	592	6.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	13:16:58.6	50.750N	86.130E	33.0N	5.5			SZGRF
2003/09/27	13:16:43.4	50.056N	87.935E	10G	5.4			NEIC

Southwestern Siberia, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	13:24:57.0	44.4	62.0	1.8	265	5.7		
BRG	e P	Z	13:25:02.1	45.1	60.7	1.5	73	5.2		
CLL	e P	Z	13:25:04.5	45.4	60.6	0.7	44	5.3		
WERD	e P	Z	13:25:11.1	46.2	59.6	1.7	70	5.3		
	e PP	Z	13:27:00.8							
GEC2	e P	Z	13:25:11.6	46.2	58.9	1.4	27	5.0		
	e PcP	Z	13:26:46.0							
	e PP	Z	13:27:01.2							
NRDL	e P	Z	13:25:12.6	46.3	60.2	1.6	158	5.7		
MOX	e P	Z	13:25:13.3	46.4	59.4	1.5	71	5.4		
	e PcP	Z	13:26:46.7							
CLZ	e P	Z	13:25:14.0	46.5	59.8	1.5	61	5.3		
	e PP	Z	13:27:05.2							
WET	e P	Z	13:25:13.9	46.5	58.8	1.5	56	5.3		
	e PP	Z	13:27:04.9							
GRA1	e P	Z	13:25:19.5	47.1	58.5	2.1	441	6.1		
IBBN	e P	Z	13:25:22.9	47.7	58.9	1.4	76	5.6		
	e PcP	Z	13:26:51.6							
FUR	e P	Z	13:25:25.5	47.9	57.3	1.2	103	5.8		
	e PP	Z	13:27:18.0							
BUG	e P	Z	13:25:28.9	48.4	58.0	1.3	73	5.7		
TNS	e P	Z	13:25:28.9	48.4	57.6	1.3	51	5.5		
	e PcP	Z	13:26:55.0							
	e PP	Z	13:27:21.1							
BFO	e P	Z	13:25:36.5	49.5	56.2	1.3	46	5.4		
	e PP	Z	13:27:33.4							
WLF	e P	Z	13:25:40.8	49.9	56.1	1.3	57	5.4		
	e PcP	Z	13:27:00.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	13:38:58.0	51.725N	86.223E	33.0N	5.0			SZGRF
2003/09/27	13:38:01.5	49.891N	87.927E	10G	4.6			NEIC

Southwestern Siberia, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	13:46:50.9	44.5	62.2	1.5	61	5.1		
BRG	e P	Z	13:46:55.6	45.1	60.9	1.9	36	4.8		
CLL	e P	Z	13:46:58.6	45.4	60.8	0.8	18	4.8		
WERD	e P	Z	13:47:04.9	46.2	59.8	1.6	24	4.9		
GEC2	e P	Z	13:47:05.6	46.3	59.1	1.6	22	4.8		
NRDL	e P	Z	13:47:06.8	46.4	60.4	1.3	25	5.0		
MOX	e P	Z	13:47:06.8	46.5	59.6	1.4	28	5.0		
WET	e P	Z	13:47:08.1	46.6	59.0	1.5	28	5.0		
CLZ	e P	Z	13:47:08.2	46.6	60.0	1.4	16	4.8		
GRA1	e P	Z	13:47:13.6	47.2	58.7	1.4	67	5.5		
FUR	e P	Z	13:47:19.3	48.0	57.5	1.5	57	5.4		
BUG	e P	Z	13:47:21.7	48.5	58.1	1.2	22	5.2		
TNS	e P	Z	13:47:22.5	48.5	57.8	1.3	20	5.1		
BFO	e P	Z	13:47:30.1	49.6	56.4	1.2	12	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	15:31:37.8	50.680N	86.020E	33.0N	5.0			SZGRF
2003/09/27	15:31:22.2	50.100N	87.865E	10G	4.9			NEIC

Southwestern Siberia, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	15:39:35.6	44.3	62.0	1.5	67	5.2		
BRG	e P	Z	15:39:40.2	45.0	60.7	0.9	8	4.4		
CLL	e P	Z	15:39:43.2	45.3	60.6	0.7	19	4.9		
WERD	e P	Z	15:39:49.9	46.1	59.6	0.8	6	4.6		
GEC2	e P	Z	15:39:50.2	46.1	58.8	1.5	18	4.8		
NRDL	e P	Z	15:39:51.7	46.3	60.2	1.3	23	5.0		
MOX	e P	Z	15:39:52.1	46.4	59.4	1.0	12	4.8		
CLZ	e P	Z	15:39:52.6	46.4	59.8	2.9	87	5.2		
WET	e P	Z	15:39:52.8	46.5	58.7	1.3	16	4.8		
GRA1	e P	Z	15:39:58.3	47.1	58.4	1.1	31	5.2		
IBBN	e P	Z	15:40:01.5	47.6	58.9	0.8	15	5.1		
FUR	e P	Z	15:40:04.4	47.9	57.3	0.9	21	5.3		
BUG	e P	Z	15:40:07.6	48.3	57.9	1.4	22	5.1		
TNS	e P	Z	15:40:07.4	48.3	57.6	1.5	24	5.1		
BFO	e P	Z	15:40:15.0	49.4	56.2	1.4	11	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	15:49: 9.9	49.840N	88.620E	33.0N	5.0			SZGRF
2003/09/27	15:49:05.5	49.957N	88.244E	10G	4.8			NEIC

Tuva-Buryatia-Mongolia border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	15:57:21.0	44.6	62.0	0.8	37	5.4		
BRG	e P	Z	15:57:26.5	45.3	60.7	1.3	10	4.7		
CLL	e P	Z	15:57:28.5	45.6	60.6	0.9	17	5.1		
WERD	e P	Z	15:57:35.1	46.4	59.5	1.0	7	4.7		
GEC2	e P	Z	15:57:35.5	46.4	58.9	1.0	7	4.7		
NRDL	e P	Z	15:57:37.1	46.5	60.2	1.1	20	5.2		
MOX	e P	Z	15:57:37.0	46.7	59.4	1.0	13	5.0		
CLZ	e P	Z	15:57:38.0	46.7	59.8	1.5	22	5.1		
WET	e P	Z	15:57:38.4	46.7	58.7	1.0	8	4.8		
GRA1	e P	Z	15:57:43.2	47.4	58.4	1.1	17	5.1		
IBBN	e P	Z	15:57:46.8	47.9	58.8	0.8	37	5.6		
FUR	e P	Z	15:57:49.2	48.2	57.3	0.9	26	5.3		
BUG	e P	Z	15:57:52.4	48.6	57.9	1.0	22	5.2		
TNS	e P	Z	15:57:52.7	48.6	57.6	1.0	15	5.0		
BFO	e P	Z	15:58:00.5	49.7	56.2	1.0	5	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	16:07:41.1	42.965N	146.481E	33.0N	4.7			SZGRF
2003/09/27	16:07:38.9	42.270N	144.322E	33N	5.0	5.1		NEIC

Off southeast coast of Hokkaido, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	16:19:44.5	79.3	33.4	1.6	18	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	16:53:15.6	50.420N	85.830E	33.0N	5.1			SZGRF
2003/09/27	16:52:59.0	49.892N	88.314E	10G	4.6			NEIC

Southwestern Siberia, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	17:01:14.9	44.7	62.0					
BRG	e P	Z	17:01:20.4	45.3	60.7					
CLL	e P	Z	17:01:22.6	45.6	60.6					
WERD	e P	Z	17:01:29.1	46.5	59.6					
GEC2	e P	Z	17:01:29.4	46.5	58.9					
NRDL	e P	Z	17:01:31.0	46.6	60.2					
MOX	e P	Z	17:01:31.4	46.7	59.4					
CLZ	e P	Z	17:01:32.2	46.8	59.8					

WET	e P	Z	17:01:32.0	46.8	58.8				
GRA1	e P	Z	17:01:37.4	47.4	58.5	1.3	25	5.1	
IBBN	e P	Z	17:01:41.0	47.9	58.9				
FUR	e P	Z	17:01:44.0	48.2	57.3				
BUG	e P	Z	17:01:47.4	48.7	58.0				
TNS	e P	Z	17:01:46.9	48.7	57.6				
BFO	e P	Z	17:01:54.3	49.8	56.2				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	17:01:23.2	46.499N	13.016E	10.0G			2.6	SZGRF

Austria

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
KBA	e Pg	Z	17:01:33.5	0.6	201.3					1.8
	e Sg	N	17:01:43.1							
WTTA	e Pg	Z	17:01:43.4	1.2	128.5					
	e Sg	N	17:02:00.3							
MOA	e Pg	Z	17:01:53.2	1.6	212.6					2.1
DAVA	e Sg	N	17:02:36.4	2.3	109.0					2.8
GEC2	e Pg	Z	17:02:05.1	2.4	191.4					2.4
	e Sg	E	17:02:39.1							
GRA1	e Pg	Z	17:02:26.9	3.4	158.8					3.2
	e Sg	E	17:03:14.3							
TANN	e Pg	Z	17:02:35.2	3.9	174.4					
	e Sg	Z	17:03:28.4							
WERD	e Sg	N	17:03:29.0	4.0	172.9					2.9
MOX	e Sg	E	17:03:36.5	4.2	166.9					3.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	18:52:58.2	50.510N	86.710E	26.5	6.5	6.9		SZGRF
2003/09/27	18:52:46.8	50.054N	87.756E	10G	6.1	6.6		NEIC

Southwestern Siberia, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	19:00:54.7	43.6	63.8	1.2	1310	6.5		
RUE	e P	Z	19:00:59.9	44.3	62.1	1.2	872	6.3		
BRG	e P	Z	19:01:05.2	45.0	60.8	1.1	209	5.8		
CLL	e P	Z	19:01:07.4	45.3	60.7	1.2	202	6.1		
WERD	e P	Z	19:01:14.3	46.1	59.7	1.3	243	6.0		
GEC2	e P	Z	19:01:14.7	46.1	58.9	1.4	291	6.0		
NRDL	e P	Z	19:01:16.0	46.2	60.3	1.5	859	6.6		
MOX	e P	Z	19:01:16.5	46.3	59.5	1.2	404	6.3		
CLZ	e P	Z	19:01:17.1	46.4	59.9	1.4	423	6.3		
WET	e P	Z	19:01:17.3	46.4	58.8	1.4	401	6.3		
	e PP	Z	19:03:10.3							

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
HLG	e P	Z	19:01:18.4	46.5	60.5	1.2	1211	6.8		
GRA1	e P	Z	19:01:22.6	47.1	58.5	1.4	737	6.5		
	e pP	Z	19:01:29.7							
	e PP	Z	19:03:16.0							
	e S	R	19:08:20.6							
	e SS	T	19:11:43.7							
	e L	Z	19:20:38.5			18.4	112143		6.9	
IBBN	e P	Z	19:01:25.8	47.6	59.0	1.3	798	6.7		
FUR	e P	Z	19:01:28.7	47.8	57.4	1.1	696	6.7		
	e PP	Z	19:03:25.6							
BUG	e P	Z	19:01:31.6	48.3	58.1	1.3	647	6.6		
TNS	e P	Z	19:01:31.8	48.3	57.7	1.3	379	6.4		
BFO	e P	Z	19:01:39.7	49.4	56.3	1.5	323	6.1		
WLF	e P	Z	19:01:43.9	49.8	56.2	2.0	814	6.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	20:30:31.8	50.530N	87.720E	33.0N	5.3			SZGRF
2003/09/27	20:30:24.0	49.994N	87.861E	10G	5.3	5.3		NEIC

Southwestern Siberia, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	20:38:37.6	44.4	62.1	1.1	77	5.4		
BRG	e P	Z	20:38:42.8	45.0	60.8	1.5	35	5.1		
	e PcP	Z	20:40:23.1							
	e PP	Z	20:40:25.6							
CLL	e P	Z	20:38:45.2	45.3	60.7	1.1	47	5.3		
	e PcP	Z	20:40:25.4							
	e PP	Z	20:40:29.9							
WERD	e P	Z	20:38:52.0	46.2	59.7	1.4	25	5.1		
	e PcP	Z	20:40:26.9							
	e PP	Z	20:40:37.7							
GEC2	e P	Z	20:38:52.5	46.2	59.0	1.2	23	5.1		
	e PcP	Z	20:40:26.6							
	e PP	Z	20:40:38.7							
NRDL	e P	Z	20:38:53.6	46.3	60.3	1.3	57	5.4		
MOX	e P	Z	20:38:54.2	46.4	59.5	1.2	44	5.4		
	e PcP	Z	20:40:27.2							
	e PP	Z	20:40:43.3							
CLZ	e P	Z	20:38:54.9	46.5	59.9	1.5	36	5.2		
WET	e P	Z	20:38:54.8	46.5	58.9	1.2	32	5.2		
	e PcP	Z	20:40:28.5							
	e PP	Z	20:40:40.8							
GRA1	e P	Z	20:39:00.4	47.1	58.6	1.3	94	5.8		
GRFO	e P	Z	20:39:00.4	47.1	58.6					
IBBN	e P	Z	20:39:03.5	47.6	59.0	1.1	55	5.6		
FUR	e P	Z	20:39:06.4	47.9	57.4	1.2	75	5.7		
	e PcP	Z	20:40:33.5							

	e PP	Z	20:40:58.9					
BUG	e P	Z	20:39:09.3	48.4	58.1	1.2	60	5.6
TNS	e P	Z	20:39:09.5	48.4	57.7	1.1	32	5.3
	e PcP	Z	20:40:35.8					
	e PP	Z	20:41:00.7					
BFO	e P	Z	20:39:17.4	49.5	56.3	1.5	46	5.3
WLF	e P	Z	20:39:20.9	49.9	56.2	1.4	31	5.1
	e PcP	Z	20:40:40.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	21:03: 8.1	37.051N	71.003E	33.0N	4.4			SZGRF

Afghanistan-Tajikistan border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	21:11:12.7	44.0	83.1	0.9	7	4.4		
	e		21:11:33.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	21:10:51.6	51.080N	82.990E	33.0N	4.5			SZGRF

Southwestern Siberia, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	21:18:33.8	41.2	63.2	1.3	29	4.9		
BRG	e P	Z	21:18:39.4	41.8	61.6	1.6	12	4.4		
CLL	e P	Z	21:18:41.6	42.1	61.6	0.8	12	4.7		
WERD	e P	Z	21:18:48.1	42.9	60.5	0.8	3	4.1		
GEC2	e P	Z	21:18:48.4	42.9	59.6	1.0	3	4.0		
NRDL	e P	Z	21:18:50.8	43.1	61.4	1.2	16	4.6		
MOX	e P	Z	21:18:50.4	43.2	60.4	0.9	7	4.4		
WET	e P	Z	21:18:51.1	43.3	59.5	1.0	4	4.1		
CLZ	e P	Z	21:18:51.0	43.3	60.9	1.0	6	4.3		
GRA1	e P	Z	21:18:56.4	43.9	59.4	1.0	12	4.6		
IBBN	e P	Z	21:19:00.6	44.5	60.1	1.3	17	4.8		
FUR	e P	Z	21:19:02.0	44.7	58.0	0.7	11	4.9		
TNS	e P	Z	21:19:05.7	45.2	58.6	1.1	8	4.6		
BUG	e P	Z	21:19:05.8	45.2	59.1	1.3	13	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	22:12: 4.3	27.912N	127.517E	33.0N	5.0			SZGRF
2003/09/27	22:12:00.9	28.878N	128.279E	10G	5.4	5.4		NEIC

Ryukyu Islands, Japan

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

CLL	i P	-	Z	22:24:23.6	82.0	53.2	1.4	21	5.1	
	e PP		Z	22:27:27.1						
	e PPP		Z	22:29:23.8						
	e S		N	22:34:38.5						
	e L		Z	23:04:45.8			18.0	12051		6.3
GRA1	e P		Z	22:24:31.9	83.6	51.7	1.2	13	5.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	22:23:18.2	41.622N	143.834E	85.7	5.5			SZGRF
2003/09/27	22:23:19.8	42.203N	142.845E	33N	5.2			NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:35:22.9	78.8	34.4	0.8	50	5.5		
	e pP	Z	22:35:45.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	23:04:42.3	42.346N	145.263E	33.0N	5.0			SZGRF
2003/09/27	23:04:39.4	42.121N	144.540E	33N	5.0			NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	23:16:46.3	79.5	33.3	0.8	15	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/27	23:36:11.4	45.300N	150.170E	33.0G	5.9	5.9		SZGRF
2003/09/27	23:36:06.8	44.649N	150.330E	33N	5.8	5.4		NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	23:47:44.1	74.3	30.3	1.3	612	6.5		
RUE	e P	Z	23:47:53.4	75.9	30.3	1.2	379	6.4		
NRDL	e P	Z	23:47:59.5	77.0	27.8	1.2	139	5.9		
CLL	e P	Z	23:48:00.1	77.2	29.6	1.2	288	6.3		
BRG	e P	Z	23:48:00.6	77.3	30.2	1.3	117	5.9		
CLZ	e P	Z	23:48:02.6	77.5	28.0	1.3	322	6.3		
IBBN	e P	Z	23:48:04.1	77.8	26.3	1.2	225	6.2		
WERD	e P	Z	23:48:05.9	78.2	29.1	2.3	390	6.1		
MOX	e P	Z	23:48:06.1	78.2	28.7	2.2	403	6.2		
BUG	e P	Z	23:48:08.7	78.7	25.8	1.4	151	5.9		
GEC2	e P	Z	23:48:11.0	79.1	29.8	1.3	51	5.4		
WET	e P	Z	23:48:11.5	79.1	29.3	1.3	114	5.7		
GRA1	e P	Z	23:48:12.0	79.2	28.3	1.3	162	5.9		

	e		23:48:27.8							
TNS	e	P	Z	23:48:13.4	79.5	26.5	1.3	69	5.5	
FUR	e	P	Z	23:48:18.9	80.5	28.2	1.2	112	5.6	
WLF	e	P	Z	23:48:19.7	80.7	25.0	1.5	109	5.6	
BFO	e	P	Z	23:48:22.6	81.2	26.3	1.3	58	5.4	
GRA1	e	L	Z	00:26:55.0	79.2	28.3	19.4	5560		5.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28	00:23:22.1	44.725N	143.299E	33.0N	5.2	4.7		SZGRF
2003/09/28	00:23:06.8	42.257N	143.258E	33N	5.0	4.8		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e	P Z	00:34:52.4	75.7	36.1	0.9	31	5.3		
CLL	i	P + Z	00:34:58.9	76.9	35.4	0.9	36	5.4		
BRG	e	P Z	00:34:59.3	77.0	36.0	1.0	13	4.9		
NRDL	e	P Z	00:34:59.4	77.0	33.7	0.9	9	4.8		
CLZ	e	P Z	00:35:02.3	77.4	33.8	1.0	31	5.4		
WERD	e	P Z	00:35:04.7	77.9	34.9	1.1	13	5.0		
IBBN	e	P Z	00:35:04.6	77.9	32.0	1.0	30	5.4		
MOX	e	P Z	00:35:05.1	78.0	34.4	1.0	14	5.0		
GEC2	e	P Z	00:35:08.9	78.7	35.6	1.0	11	4.9		
WET	e	P Z	00:35:09.8	78.8	35.1	1.0	18	5.2		
BUG	e	P Z	00:35:09.3	78.8	31.6	0.9	22	5.3		
GRA1	e	P Z	00:35:10.8	78.9	34.1	0.9	43	5.6		
	e	L Z	01:13:05.4			18.5	376		4.7	
TNS	e	P Z	00:35:13.1	79.5	32.3	1.1	16	5.1		
FUR	e	P Z	00:35:17.3	80.2	33.9	0.9	40	5.6		
WLF	e	P Z	00:35:20.5	80.7	30.7					
BFO	e	P Z	00:35:21.8	81.1	32.0	1.1	18	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28	02:50:10.3	37.244N	85.977E	33.0N	4.8			SZGRF

Southern Xinjiang, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e	P Z	02:59:26.8	53.3	73.2	0.9	8	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28	02:59:19.5	42.267N	142.896E	33.0N	4.7			SZGRF

Hokkaido, Japan, region

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

	GRA1	e	P		Z	03:11:19.3	78.8	34.3	0.8	6	4.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28	03:26:34.7	48.413N	96.375E	33.0N	4.8			SZGRF
2003/09/28	03:27:08.2	49.902N	88.079E	10G	4.6			NEIC

Mongolia

	Sta	Phase			Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e	P	Z	03:35:46.0	47.3	58.6	1.1	13	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28	03:59:48.2	47.017N	149.946E	44.9	5.5	5.7		SZGRF
2003/09/28	03:59:31.6	44.536N	150.615E	33N	5.1	5.1		NEIC

Northwest of Kuril Islands, Russia

	Sta	Phase			Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	RUE	e	P	Z	04:11:19.2	76.1	30.1	1.3	152	5.9		
	NRDL	e	P	Z	04:11:25.2	77.2	27.7	1.4	62	5.4		
	CLL	i	P	+ Z	04:11:25.8	77.4	29.5	1.1	84	5.8		
		e	pP	Z	04:11:38.7							
		e	PP	Z	04:14:20.7							
		e	PPP	Z	04:16:13.0							
		e	S	T	04:21:13.1							
		e	SKSac	Z	04:21:30.5							
		e	SS	R	04:26:29.5							
		e	SSS	R	04:29:43.6							
		e	LQ	T	04:36:00.1							
		e	LR	Z	04:37:17.6							
		e	L	Z	04:49:48.5			18.0	2375		5.6	
	BRG	e	P	Z	04:11:26.5	77.5	30.1	1.5	54	5.4		
	CLZ	e	P	Z	04:11:28.5	77.7	27.8	1.3	118	5.9		
	IBBN	e	P	Z	04:11:29.8	78.0	26.1	1.3	81	5.7		
	WERD	e	P	Z	04:11:31.8	78.4	29.0	2.5	181	5.8		
	MOX	e	P	Z	04:11:31.9	78.4	28.5	1.4	48	5.4		
	BUG	e	P	Z	04:11:34.7	78.9	25.7	1.3	54	5.5		
	GEC2	e	P	Z	04:11:36.9	79.3	29.7	1.2	23	5.2		
	WET	e	P	Z	04:11:37.4	79.3	29.2	1.3	47	5.5		
	GRA1	e	P	Z	04:11:37.7	79.4	28.2	1.3	68	5.6		
		e	pP	Z	04:11:50.6							
		e	S	E	04:21:35.0							
		e	L	Z	04:50:20.8			19.5	3210		5.7	
	TNS	e	P	Z	04:11:39.3	79.7	26.4	1.3	32	5.3		
	FUR	e	P	Z	04:11:44.5	80.7	28.1	1.0	43	5.4		
	BFO	e	P	Z	04:11:48.2	81.4	26.2	1.2	22	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28	04:18: 9.3	45.227N	144.952E	33.0N	5.6			SZGRF
2003/09/28	04:17:53.9	42.605N	144.703E	33N	5.2	5.1		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	04:29:40.4	75.9	35.0	1.5	159	5.8		
NRDL	e P	Z	04:29:47.3	77.2	32.5	1.9	112	5.6		
CLL	i P	+ Z	04:29:46.8	77.2	34.3	1.0	86	5.8		
	e pP	Z	04:29:58.1							
	e L	Z	05:07:46.2			18.0	1877		5.5	
BRG	e P	Z	04:29:47.3	77.2	34.9	2.8	280	5.8		
CLZ	e P	Z	04:29:50.2	77.6	32.6	1.5	137	5.9		
IBBN	e P	Z	04:29:52.2	78.1	30.9	1.1	82	5.8		
WERD	e P	Z	04:29:52.7	78.1	33.7	1.3	36	5.3		
MOX	e P	Z	04:29:53.0	78.2	33.3	1.5	66	5.5		
GEC2	e P	Z	04:29:57.2	78.9	34.5	1.2	26	5.2		
BUG	e P	Z	04:29:57.0	79.0	30.5	1.1	54	5.6		
WET	e P	Z	04:29:57.9	79.0	34.0	1.2	67	5.6		
GRA1	e P	Z	04:29:58.7	79.1	32.9	1.1	92	5.8		
TNS	e P	Z	04:30:00.9	79.6	31.2	1.3	38	5.4		
FUR	e P	Z	04:30:05.3	80.4	32.8	1.1	89	5.7		
BFO	e P	Z	04:30:09.8	81.3	30.9	1.3	37	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28	08:41: 2.5	48.124N	85.991E	33.0N	4.7			SZGRF
2003/09/28	08:40:54.1	50.019N	87.852E	10G	4.6			NEIC

Kazakhstan-Xinjiang border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	08:49:31.3	47.1	58.5	0.8	5	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28	11:09:15.1	48.148N	86.166E	33.0N	4.7			SZGRF
2003/09/28	11:09:06.9	49.987N	88.194E	10G	4.6			NEIC

Kazakhstan-Xinjiang border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	11:17:44.6	47.3	58.4	1.0	7	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28	14:14:17.1	45.913N	143.612E	33.0N	5.0			SZGRF
2003/09/28	14:13:52.5	41.933N	144.535E	33N	4.7	4.9		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	Z	14:25:48.9	77.7	34.8	1.0	32	5.4		
	e pP	Z	14:25:58.5							
	e L	Z	15:03:54.3			20.0	551		4.9	
BRG	e P	Z	14:25:49.1	77.7	35.3					
CLZ	e P	Z	14:25:52.1	78.2	33.0	1.2	19	5.0		
IBBN	e P	Z	14:25:54.1	78.6	31.3					
WERD	e P	Z	14:25:54.5	78.6	34.2					
MOX	e P	Z	14:25:54.9	78.7	33.7	1.3	11	4.7		
GEC2	e P	Z	14:25:58.9	79.5	34.9					
WET	e P	Z	14:25:59.7	79.5	34.4	0.9	15	5.1		
BUG	e P	Z	14:25:58.8	79.5	30.9					
GRA1	e P	Z	14:26:00.6	79.7	33.4	0.8	19	5.3		
TNS	e P	Z	14:26:03.0	80.2	31.6	1.1	11	4.9		
FUR	e P	Z	14:26:07.1	80.9	33.3					
BFO	e P	Z	14:26:12.0	81.8	31.3	1.0	7	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28	16:51:12.9	44.408N	145.577E	21.0	5.3	5.4		SZGRF
2003/09/28	16:50:58.0	41.880N	145.139E	33N	5.1	5.0		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e P	Z	17:02:56.0	77.9	32.6					
CLL	i P	+ Z	17:02:55.6	77.9	34.4	1.0	41	5.5		
BRG	e P	Z	17:02:56.1	78.0	34.9					
CLZ	e P	Z	17:02:59.0	78.4	32.7	1.1	38	5.4		
IBBN	e P	Z	17:03:00.9	78.9	30.9					
WERD	e P	Z	17:03:01.4	78.9	33.8					
MOX	e P	Z	17:03:01.5	79.0	33.4	1.4	30	5.2		
GEC2	e P	Z	17:03:05.9	79.7	34.6	1.2	18	5.1		
BUG	e P	Z	17:03:05.8	79.8	30.5					
WET	e P	Z	17:03:06.7	79.8	34.0	1.1	33	5.4		
GRA1	e P	Z	17:03:07.6	79.9	33.0	1.1	44	5.5		
	e pP	Z	17:03:13.2							
	e sP	Z	17:03:16.7							
	e S	E	17:13:09.7							
	e L	Z	17:41:23.6			18.8	1861		5.4	
TNS	e P	Z	17:03:09.5	80.4	31.2	1.4	25	5.0		
FUR	e P	Z	17:03:14.0	81.2	32.9					
BFO	e P	Z	17:03:18.4	82.1	31.0	1.4	30	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28	19:44:23.5	53.383N	81.016E	33.0N	4.8			SZGRF
2003/09/28	19:43:33.3	50.093N	88.081E	10G	4.7			NEIC

Southwestern Siberia, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	19:51:47.8	44.4	61.9					
BRG	e P	Z	19:51:53.0	45.1	60.6					
CLL	i P	+ Z	19:51:55.3	45.4	60.5					
WERD	e P	Z	19:52:02.1	46.2	59.5					
GEC2	e P	Z	19:52:02.5	46.3	58.8					
NRDL	e P	Z	19:52:03.6	46.4	60.1					
MOX	e P	Z	19:52:04.3	46.5	59.3					
CLZ	e P	Z	19:52:05.0	46.6	59.7					
WET	e P	Z	19:52:04.9	46.6	58.7					
GRA1	e P	Z	19:52:10.4	47.2	58.4	1.1	24	4.8		
IBBN	e P	Z	19:52:13.6	47.7	58.8					
FUR	e P	Z	19:52:16.4	48.0	57.2					
BUG	e P	Z	19:52:19.4	48.4	57.9					
TNS	e P	Z	19:52:19.6	48.4	57.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	20:51:22.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28	21:00: 6.6	44.550N	145.159E	34.0	5.2			SZGRF
2003/09/28	20:59:51.6	41.988N	144.702E	33N	4.8	5.1		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z	21:11:47.9	77.7	34.6					
NRDL	e P	Z	21:11:48.4	77.7	32.8					
BRG	e P	Z	21:11:48.3	77.7	35.2					
CLZ	e P	Z	21:11:51.2	78.2	32.9					
IBBN	e P	Z	21:11:53.2	78.6	31.2					
WERD	e P	Z	21:11:53.7	78.7	34.0					
MOX	e P	Z	21:11:54.1	78.7	33.6	1.8	35	5.2		
GEC2	e P	Z	21:11:58.1	79.5	34.8					
BUG	e P	Z	21:11:58.0	79.5	30.8					
WET	e P	Z	21:11:58.9	79.5	34.3					

GRA1	e P	Z	21:11:59.7	79.7	33.2	1.9	93	5.6	
	e sP	Z	21:12:13.5						
TNS	e P	Z	21:12:01.9	80.2	31.4	1.2	13	4.9	
FUR	e P	Z	21:12:06.3	80.9	33.1				
BFO	e P	Z	21:12:10.8	81.8	31.2	1.8	32	4.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/28	21:29:57.1	44.597N	145.279E	33.0N	5.1	5.0		SZGRF
2003/09/28	21:29:42.9	42.099N	144.678E	33N	5.1	4.6		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z	21:41:38.4	77.6	34.6	0.9	31	5.4		
NRDL	e P	Z	21:41:38.9	77.6	32.8					
BRG	e P	Z	21:41:38.8	77.6	35.1	1.2	13	4.9		
CLZ	e P	Z	21:41:41.8	78.1	32.9	1.3	36	5.4		
IBBN	e P	Z	21:41:43.8	78.5	31.1					
WERD	e P	Z	21:41:44.2	78.6	34.0					
MOX	e P	Z	21:41:44.5	78.6	33.6	1.2	16	5.0		
GEC2	e P	Z	21:41:48.7	79.4	34.7	1.1	11	4.9		
BUG	e P	Z	21:41:48.4	79.4	30.7					
WET	e P	Z	21:41:49.4	79.4	34.2	1.1	29	5.3		
GRA1	e P	Z	21:41:50.2	79.6	33.2	1.2	49	5.5		
	e L	Z	22:20:22.5			19.2	686		5.0	
TNS	e P	Z	21:41:52.4	80.1	31.4	1.2	12	4.9		
FUR	e P	Z	21:41:56.8	80.8	33.1					
BFO	e P	Z	21:42:01.3	81.7	31.2	1.2	17	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/29	02:36:54.5	42.670N	145.520E	8.5	6.2	7.1		SZGRF
2003/09/29	02:36:53.0	42.424N	144.382E	25G	6.0	6.3		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	02:48:32.4	74.4	35.3	1.3	512	6.4		
RUE	e P	Z	02:48:41.0	76.0	35.3	1.3	508	6.5		
CLL	i P	+ Z	02:48:47.6	77.2	34.6	1.1	404	6.5		
	e pP	Z	02:49:02.8							
	e PP	Z	02:51:45.7							
	e PPP	Z	02:53:33.7							
	e S	T	02:58:33.4							
	e sS	T	02:58:59.7							
	e PS	N	02:59:14.7							
	e SS	E	03:03:45.9							
	e LR	Z	03:14:04.8							

	e L	Z	03:26:37.2			20.0	94521		7.1
NRDL	e P	Z	02:48:47.6	77.2	32.8	1.6	351	6.2	
BRG	e P	Z	02:48:47.8	77.2	35.2	1.4	220	6.1	
CLZ	e P	Z	02:48:50.8	77.7	32.9	1.2	438	6.4	
IBBN	e P	Z	02:48:52.9	78.1	31.2	1.3	448	6.3	
WERD	e P	Z	02:48:53.1	78.2	34.0	1.8	390	6.1	
MOX	e P	Z	02:48:53.6	78.2	33.6	1.5	283	6.1	
GEC2	e P	Z	02:48:57.7	79.0	34.8	1.6	245	5.9	
BUG	e P	Z	02:48:57.7	79.0	30.8	1.1	244	6.1	
WET	e P	Z	02:48:58.4	79.0	34.3	1.1	281	6.1	
GRA1	e P	Z	02:48:59.4	79.2	33.2	1.2	504	6.3	
	e		02:49:14.4						
	e PP	Z	02:52:02.4						
	e S	R	02:59:25.0						
	e SS	R	03:05:02.2						
	e L	Z	03:27:47.0			18.3	86500		7.1
TNS	e P	Z	02:49:01.4	79.7	31.5	1.4	234	5.9	
FUR	e P	Z	02:49:05.9	80.4	33.1	1.2	488	6.4	
WLF	e P	Z	02:49:08.1	80.9	29.9	1.3	184	5.9	
BFO	e P	Z	02:49:10.1	81.3	31.2	1.8	578	6.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/29	04:47:40.9	43.192N	147.078E	33.0N	5.0			SZGRF
2003/09/29	04:47:43.4	45.245N	150.008E	33N	5.0			NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	04:59:44.3	78.5	28.3	0.9	18	5.0		
	e		04:59:58.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/29	07:50: 2.1	42.815N	143.852E	33.0N	5.4	5.4		SZGRF
2003/09/29	07:49:56.9	42.357N	143.991E	33N	5.5	4.8		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	08:02:01.2	79.1	33.5	1.4	51	5.4		
	e		08:02:15.5							
	e PP	Z	08:04:58.2							
	e S	R	08:11:58.3							
	e L	Z	08:40:43.8			19.0	1745		5.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/29	14:22:22.9	43.490N	144.250E	33.0N	5.6	5.9		SZGRF
2003/09/29	14:22:14.3	42.035N	144.342E	33N	5.3	5.0		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	14:34:03.5	76.3	35.5	1.6	162	5.8		
CLL	i P	+ Z	14:34:10.0	77.5	34.8	1.0	63	5.7		
	e		14:34:24.0							
	e PP	Z	14:37:06.6							
	e PPP	Z	14:38:52.6							
	e S	E	14:44:01.4							
	e PS	Z	14:44:41.2							
	e (SS)	N	14:49:49.6							
	e L	Z	15:12:02.5			18.0	7248		6.0	
NRDL	e P	Z	14:34:10.2	77.5	33.0	1.7	77	5.5		
BRG	e P	Z	14:34:10.2	77.5	35.4	1.3	42	5.4		
CLZ	e P	Z	14:34:13.2	78.0	33.1	1.6	141	5.9		
IBBN	e P	Z	14:34:15.5	78.5	31.4	1.5	111	5.8		
WERD	e P	Z	14:34:15.5	78.5	34.3	1.6	60	5.5		
MOX	e P	Z	14:34:15.9	78.6	33.8	1.5	59	5.5		
GEC2	e P	Z	14:34:20.2	79.3	35.0	1.5	42	5.4		
WET	e P	Z	14:34:20.8	79.4	34.5	1.5	103	5.7		
BUG	e P	Z	14:34:20.2	79.4	31.0	1.8	117	5.7		
GRA1	e P	Z	14:34:21.7	79.5	33.5	1.6	197	5.9		
	e		14:34:36.0							
	e PP	Z	14:37:24.7							
	e S	T	14:44:20.7							
	e ScS	T	14:44:41.8							
	e L	Z	15:13:20.9			18.6	5347		5.9	
TNS	e P	Z	14:34:23.8	80.0	31.7	1.5	56	5.4		
FUR	e P	Z	14:34:28.4	80.8	33.3	1.7	221	5.8		
WLF	e P	Z	14:34:31.0	81.3	30.1	1.7	86	5.4		
BFO	e P	Z	14:34:32.6	81.7	31.4	1.2	55	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/29	15:27:10.4	50.380N	87.260E	33.0N	5.2			SZGRF
2003/09/29	15:27:01.0	49.977N	87.852E	10G	5.1	4.4		NEIC

Southwestern Siberia, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	15:35:15.3	44.4	62.2	0.9	50	5.3		
BRG	e P	Z	15:35:20.4	45.0	60.8	0.8	10	4.8		
CLL	e P	Z	15:35:22.7	45.3	60.8	0.6	33	5.4		
WERD	e P	Z	15:35:29.3	46.2	59.7	1.4	23	5.0		
GEC2	e P	Z	15:35:29.9	46.2	59.0	0.9	10	4.8		
	e PcP	Z	15:37:04.4							
	e PP	Z	15:37:15.8							

NRDL	e P	Z	15:35:31.1	46.3	60.3	1.2	37	5.3
MOX	e P	Z	15:35:31.6	46.4	59.5	1.2	28	5.2
	e PcP	Z	15:37:05.5					
CLZ	e P	Z	15:35:32.3	46.5	59.9	0.8	11	4.9
	e PP	Z	15:37:19.0					
WET	e P	Z	15:35:32.2	46.5	58.9	1.3	19	5.0
GRA1	e P	Z	15:35:37.8	47.1	58.6	1.2	52	5.5
	e PP	Z	15:37:26.4					
IBBN	e P	Z	15:35:40.9	47.7	59.0	1.1	44	5.5
	e PP	Z	15:37:33.4					
FUR	e P	Z	15:35:44.0	47.9	57.4	0.5	23	5.6
BUG	e P	Z	15:35:47.1	48.4	58.1	1.1	29	5.3
TNS	e P	Z	15:35:46.9	48.4	57.7	1.1	21	5.2
	e PP	Z	15:37:38.2					
BFO	e P	Z	15:35:54.6	49.5	56.3	1.1	11	4.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/29	16:02:35.3	47.770N	152.360E	150.9	6.1			SZGRF
2003/09/29	16:02:45.9	48.321N	153.113E	118D	5.4			NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	16:13:59.1	71.7	26.9	1.4	453	6.4		
HLG	e P	Z	16:14:09.0	73.4	23.3	1.2	277	6.2		
RUE	e P	Z	16:14:09.0	73.4	26.9	1.5	264	6.1		
NRDL	e P	Z	16:14:13.9	74.4	24.5	1.3	122	5.8		
CLL	e P	Z	16:14:15.0	74.7	26.2	1.2	198	6.0		
BRG	e P	Z	16:14:16.0	74.8	26.8	1.5	109	5.7		
CLZ	e P	Z	16:14:17.3	74.9	24.6	1.3	275	6.2		
IBBN	e P	Z	16:14:18.1	75.1	23.0	1.1	199	6.2		
WERD	e P	Z	16:14:21.3	75.7	25.7	1.4	156	5.9		
MOX	e P	Z	16:14:21.2	75.7	25.3	1.3	145	6.0		
BUG	e P	Z	16:14:23.2	76.1	22.6	1.1	196	6.1		
GRA1	e P	Z	16:14:27.1	76.6	24.9	1.1	316	6.4		
	e pP	Z	16:15:04.1							
GRFO	e P	Z	16:14:27.1	76.6	24.9	1.1	255	6.3		
WET	e P	Z	16:14:27.3	76.7	25.9	1.3	198	6.1		
GEC2	e P	Z	16:14:27.0	76.7	26.4	1.4	84	5.7		
TNS	e P	Z	16:14:28.2	76.9	23.3	1.0	156	6.1		
WLF	e P	Z	16:14:34.9	78.0	21.8	1.1	108	5.8		
FUR	e P	Z	16:14:34.6	78.0	24.8	1.1	282	6.2		
BFO	e P	Z	16:14:37.8	78.7	23.0	1.1	191	6.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/29	17:31:19.7	42.211N	147.162E	33.0N	5.2			SZGRF

2003/09/29 17:31:18.8 41.444N 143.972E 33N 4.6 NEIC
Off southeast coast of Hokkaido, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	17:43:28.0	79.9	34.0	1.5	40	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/29	21:22:22.3	42.334N	142.691E	33.0N	5.9	5.6		SZGRF
2003/09/29	21:22:11.4	41.410N	144.099E	33N	5.3	5.2		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	21:34:09.8	78.3	35.4	0.9	72	5.7		
	e PP	Z	21:37:04.9							
	e S	E	21:44:04.1							
	e PS	Z	21:44:45.5							
	e (SS)	N	21:50:02.8							
	e LR	Z	22:00:08.5							
	e L	Z	22:08:51.3			22.0	2935		5.6	
GRA1	e P	Z	21:34:21.4	80.0	33.9	1.4	160	5.9		
	e S	R	21:44:34.2							
	e L	Z	22:10:09.1			21.0	3040		5.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/29	21:33:24.9	41.591N	143.407E	33.0N	4.9			SZGRF
2003/09/29	21:33:21.2	41.513N	143.789E	33N	4.8			NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	21:45:29.0	79.8	34.1	1.4	24	4.9		
	e		21:45:44.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/29	22:09:29.3	42.450N	142.602E	33.0N	6.0			SZGRF
2003/09/29	22:09:18.2	41.417N	144.153E	33N	5.4	5.0		NEIC

Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	22:21:16.7	78.3	35.3	1.3	171	5.9		
	e PP	Z	22:24:10.8							
	e LR	Z	22:51:10.4							
	e L	Z	22:59:05.4			20.0	1304		5.3	
GRA1	e P	Z	22:21:27.6	80.0	33.9	1.3	230	6.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/29	23:07:08.3	5.431S	151.580E	33N	5.2			NEIC

New Britain region, P.

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	23:26:05.7	124.6	50.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/29	23:24:24.7	41.984N	146.572E	33.0N	5.3			SZGRF
2003/09/29	23:24:25.6	41.974N	144.645E	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	e P	Z	23:36:32.9	79.7	33.3	1.0	30	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/30	02:01: 5.5	22.540S	178.000W	601.4				SZGRF
2003/09/30	02:01:05.4	22.206S	179.686W	589D	4.9			NEIC

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPdf	Z	02:19:42.3	148.0	24.0					
	e PKPbc	Z	02:19:46.5							
	e PKPab	Z	02:19:51.3							
NRDL	e PKPdf	Z	02:19:43.1	148.8	17.7					
	e PKPbc	Z	02:19:48.3							
CLL	e PKPdf	Z	02:19:44.0	149.3	23.5					
	e PKPbc	Z	02:19:49.6							
	e PKPab	Z	02:19:56.4							
	e pPKPbc	Z	02:22:07.1							
IBBN	e PKPbc	Z	02:19:49.5	149.4	13.6					
	e PKPab	Z	02:19:57.0							
	e pPKPbc	Z	02:22:06.9							
CLZ	e PKPdf	Z	02:19:44.4	149.4	18.5					
	e PKPbc	Z	02:19:49.8							
	e PKPab	Z	02:19:57.3							
BRG	e PKPdf	Z	02:19:44.2	149.4	25.4					
	e PKPbc	Z	02:19:50.1							
	e PKPab	Z	02:19:58.0							
MOX	e PKPdf	Z	02:19:45.5	150.2	21.4					
	e PKPbc	Z	02:19:51.8							
	e PKPab	Z	02:20:00.2							

WERD	e PKPdf	Z	02:19:45.7	150.2	22.8	
	e PKPbc	Z	02:19:51.9			
	e PKPab	Z	02:20:00.7			
BUG	e PKPdf	Z	02:19:46.0	150.3	13.1	
	e PKPbc	Z	02:19:51.7			
	e PKPab	Z	02:20:00.6			
	e pPKPbc	Z	02:22:10.0			
GRA1	e PKPdf	Z	02:19:47.2	151.2	21.3	
	e PKPbc	Z	02:19:54.3			
	e PKPab	Z	02:20:05.1			
	e pPKPbc	Z	02:22:12.3			
TNS	e PKPdf	Z	02:19:47.2	151.3	15.8	
	e PKPbc	Z	02:19:54.1			
	e PKPab	Z	02:20:04.8			
	e pPKPbc	Z	02:22:11.9			
WET	e PKPdf	Z	02:19:46.6	151.3	24.8	
	e PKPbc	Z	02:19:54.2			
	e PKPab	Z	02:20:05.9			
	e pPKPbc	Z	02:22:11.9			
GEC2	e PKPdf	Z	02:19:46.6	151.3	26.5	
	e PKPbc	Z	02:19:54.0			
	e PKPab	Z	02:20:05.7			
WLF	e PKPdf	Z	02:19:48.4	152.2	11.6	
	e PKPbc	Z	02:19:56.2			
	e PKPab	Z	02:20:08.6			
FUR	e PKPdf	Z	02:19:49.0	152.6	22.5	
	e PKPbc	Z	02:19:57.1			
	e PKPab	Z	02:20:10.9			
BFO	e PKPdf	Z	02:19:49.6	153.1	16.6	
	e PKPbc	Z	02:19:58.0			
	e PKPab	Z	02:20:12.6			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/30	08:01:44.4	59.880S	34.110W	33.0N				SZGRF
2003/09/30	08:01:33.0	60.338S	33.264W	10G	5.3	5.8		NEIC

Scotia Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e SP	Z	08:30:37.7	113.8	201.0					
WLF	e SP	Z	08:30:46.1	114.5	200.2					
TNS	e SP	Z	08:30:56.2	115.6	201.4					
GEC2	e Pdiff	Z	08:16:31.9	115.6	203.6					
	e SP	Z	08:30:57.6							
WET	e SP	Z	08:30:57.7	115.7	203.3					
GRA1	e Pdiff	Z	08:16:33.3	115.7	202.6					
	e SP	Z	08:30:57.9							
BUG	e SP	Z	08:31:06.2	116.4	201.0					

MOX	e	SP	Z	08:31:08.3	116.7	203.0			
IBBN	e	SP	Z	08:31:14.6	117.3	201.4			
BRG	e	SP	Z	08:31:16.2	117.5	204.2			
CLZ	e	SP	Z	08:31:16.3	117.5	202.6			
CLL	e	PKPdf	Z	08:20:19.4	117.7	203.8	1.2	8	
	e	PP	Z	08:21:39.4					
	e	SP	Z	08:31:17.3					
	e	SKSP	Z	08:31:22.3					
	e	PPS	Z	08:32:31.7					
	e	SS	T	08:37:46.1					
	e	SSS	T	08:41:49.7					
	e	LR	Z	08:58:13.3					
	e	L	Z	09:03:26.1			22.0	1495	5.6
NRDL	e	SP	Z	08:31:21.1	118.1	202.6			
RUE	e	SP	Z	08:31:28.5	118.9	204.4			
HLG	e	SP	Z	08:31:28.7	119.1	201.9			
RGN	e	SP	Z	08:31:43.6	120.7	204.7			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/30	08:27:53.4	50.314N	79.217E	33.0N	4.9			SZGRF
2003/09/30	08:27:05.8	50.054N	87.949E	10G	4.8			NEIC

Eastern Kazakhstan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	08:35:42.8	47.2	58.5	1.0	27	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/30	14:08:40.8	29.140S	177.420W	33.0N		6.9		SZGRF
2003/09/30	14:08:41.5	30.317S	177.427W	33N	5.8	6.5		NEIC

Kermadec Islands, New Zealand

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PKPdf	Z	14:28:33.4	157.1	16.9					
	e PP	Z	14:32:36.6							
CLL	e PKPdf	Z	14:28:34.8	157.6	24.2					
	e PKPab	Z	14:29:07.4			1.2	75			
	e pPKPab	Z	14:29:16.5							
	e PP	Z	14:32:52.7							
	e PPP	Z	14:36:27.7							
	e		14:43:26.3							
	e PPS	Z	14:46:14.9							
	e SS	T	14:52:44.1							
	e SSS	T	14:58:45.9							
	e L	Z	15:48:06.9			20.0	9642			6.6

IBBN	e PKPdf	Z	14:28:33.8	157.7	11.9					
	e PP	Z	14:32:39.8							
CLZ	e PKPdf	Z	14:28:34.1	157.7	18.0					
	e PP	Z	14:32:40.2							
BRG	e PKPdf	Z	14:28:33.9	157.8	26.7					
	e PP	Z	14:32:40.3							
MOX	e PKPdf	Z	14:28:34.9	158.6	21.8					
	e PP	Z	14:32:44.5							
WERD	e PKPdf	Z	14:28:34.9	158.6	23.6					
BUG	e PP	Z	14:32:44.7	158.6	11.2					
GRA1	e PKPdf	Z	14:28:36.2	159.6	21.8					
	e PKPab	Z	14:29:16.7							
	e PP	Z	14:32:49.8							
	e L	Z	16:02:33.8			19.0	15311		6.9	
GRFO	e PKPdf	Z	14:28:36.1	159.6	21.8					
TNS	e PKPdf	Z	14:28:36.4	159.6	14.7					
	e PP	Z	14:32:50.1							
WET	e PKPdf	Z	14:28:36.0	159.6	26.3					
	e PP	Z	14:32:50.7							
GEC2	e PKPdf	Z	14:28:35.9	159.6	28.6					
	e PP	Z	14:32:50.8							
WLF	e PKPdf	Z	14:28:37.7	160.5	9.3					
	e PP	Z	14:32:55.5							
BFO	e PKPdf	Z	14:28:37.9	161.5	15.8					
	e PP	Z	14:32:59.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/30	15:05:45.3	37.315N	70.111E	104.6				SZGRF
2003/09/30	15:05:29.5	36.402N	71.603E	100G	4.7			NEIC

Afghanistan-Tajikistan border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	15:13:36.2	44.8	83.4					
	e pP	Z	15:14:01.0							
	e sP	Z	15:14:11.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/30	15:22:31.6	30.528S	177.152W	33N	5.4	6.0		NEIC

Kermadec Islands, New Zealand

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z	15:42:28.0	157.9	23.9					
	e PKPdif	Z	15:42:41.7							
	e PKPab	Z	15:42:58.2							
GRA1	e PKPdf	Z	15:42:29.4	159.8	21.3					

		e PKPab	Z	15:43:08.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/30	16:46:11.6	37.970N	21.800E	10				NEIC

Greece

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e Pn	Z	16:49:39.1	14.0	143.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/30								

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKPab	Z	19:24:34.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/30	19:37:50.9	47.200S	167.650E	33.0N		5.7		SZGRF
2003/09/30	19:37:53.5	45.472S	167.215E	33N	5.2	5.4		NEIC

Off west coast of South Island, New Zealand

	Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	RUE	e PKPdf	Z	19:57:51.0	161.3	78.6					
		e PKPab	Z	19:58:37.0							
	BRG	e PKPdf	Z	19:57:51.2	161.5	83.5					
		e PKPab	Z	19:58:37.4							
		e PP	Z	20:02:21.6							
	GEC2	e PKPdf	Z	19:57:51.1	161.8	89.4					
		e PKPab	Z	19:58:37.9							
	CLL	e PKPdf	Z	19:57:51.4	162.0	81.2					
		e PKPab	Z	19:58:38.6							
		e PP	Z	20:02:24.3							
	WET	e PKPdf	Z	19:57:52.1	162.3	87.8					
		e PKPab	Z	19:58:40.6							
	WERD	e PKPdf	Z	19:57:52.3	162.6	83.2					
		e PKPab	Z	19:58:41.6							
	MOX	e PKPdf	Z	19:57:52.5	163.0	81.8					
	GRA1	e PKPdf	Z	19:57:52.5	163.3	84.5					
		e PKPab	Z	19:58:45.3							
		e L	Z	21:20:35.7			20.1	1080		5.7	
	FUR	e PP	Z	20:02:29.9	163.4	89.7					
	NRDL	e PKPdf	Z	19:57:52.3	163.5	74.0					
		e PKPab	Z	19:58:46.3							
		e PP	Z	20:02:33.3							

CLZ	e PKPdf	Z	19:57:53.4	163.5	76.4	
	e PP	Z	20:02:32.2			
IBBN	e PP	Z	20:02:40.3	164.9	71.2	
TNS	e PKPab	Z	19:58:52.9	165.0	79.7	
BFO	e PKPdf	Z	19:57:54.5	165.3	86.7	
	e PKPab	Z	19:58:53.6			
WLF	e PKPdf	Z	19:57:56.1	166.6	79.0	
	e PP	Z	20:02:48.6			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/30	20:36:52.9	4.425N	96.278E	33.0N	5.0			SZGRF

Northern Sumatera, Indonesia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	20:49:17.4	83.4	90.9	1.0	11	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/30	21:39:19.3			N				SZGRF
2003/09/30	21:39:18.0	30.250S	177.487W	33N	5.5	5.4		NEIC

Kermadec Islands, New Zealand

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
NRDL	e PP	Z	22:03:16.0	157.1	17.0					
CLL	e PKPdf	Z	21:59:12.9	157.5	24.3					
	e PKPdif	Z	21:59:20.9							
	e PKPab	Z	21:59:42.9							
	e pPKPab	Z	21:59:51.4							
	e PP	Z	22:03:22.5							
	e PPS	Z	22:16:36.5							
	e L	Z	23:20:25.4			20.0	754		5.5	
IBBN	e PKPdf	Z	21:59:06.8	157.6	12.0					
	e PKPab	Z	21:59:43.9							
	e PP	Z	22:03:16.0							
CLZ	e PP	Z	22:03:19.1	157.6	18.1					
BRG	e PKPab	Z	21:59:45.0	157.7	26.8					
	e PP	Z	22:03:19.1							
MOX	e PP	Z	22:03:24.7	158.5	21.9					
BUG	e PP	Z	22:03:21.6	158.5	11.3					
GRA1	e PKPdf	Z	21:59:12.3	159.5	21.9					
	e PKPab	Z	21:59:52.4							
	e PP	Z	22:03:30.3							
TNS	e PKPab	Z	21:59:51.0	159.5	14.8					
GEC2	e PKPab	Z	21:59:53.4	159.6	28.7					
	e PP	Z	22:03:35.3							

WLF	e PKPab	Z	21:59:55.9	160.4	9.4	
	e PP	Z	22:03:38.4			
FUR	e PKPab	Z	21:59:57.8	160.9	23.7	
	e PP	Z	22:03:39.0			
BFO	e PP	Z	22:03:40.8	161.4	15.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/09/30	22:45:13.5	44.177N	10.582E	10.0G				SZGRF
2003/09/30	22:45:15.9	44.056N	10.575E	25				NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	22:46:20.5	4.5	159.2					
	e Sn	N	22:47:10.6							
GEC2	e Sn	N	22:47:27.6	5.3	205.4					
WET	e Pn	Z	22:46:30.9	5.3	198.1					
	e Sn	N	22:47:28.8							
TNS	e Pn	Z	22:46:44.8	6.3	166.0					
MOX	e Sn	N	22:48:01.1	6.6	186.5					

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

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

EPICENTER LINES:

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

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

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

COMMENT LINE:

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

REGION LINE:

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

PHASE LINE:

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