

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

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

FEBRUARY 2003 UPDATED 21.JANUARY.2004

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

(Format description at the end of the bulletin)

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source		
2003/02/01	09:24:42.6	44.910N	12.100E	10.0G			3.6	SZGRF		
Northern Italy										
Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
KBA	e Pn	Z	09:25:21.0	2.3	202.2					
WTTA	e Pn	Z	09:25:23.0	2.4	172.1					
DAVA	e Pn	Z	09:25:29.7	2.8	146.3					
MOA	e Pn	Z	09:25:34.1	3.3	207.7					
GEC2	e Pn	Z	09:25:44.5	4.1	196.1					
	e Sn	N	09:26:33.1							
WET	e Pn	Z	09:25:46.7	4.3	187.4					3.6
	e Sn	N	09:26:34.9							
BFO	e Pn	Z	09:25:47.7	4.3	141.5					
	e Sn	N	09:26:35.9							
GRA1	e Sn	N	09:26:48.8	4.8	172.6					
GUNZ	e Pn	Z	09:26:01.6	5.5	181.7					
TANN	e Sn	N	09:27:06.9	5.5	182.7					
MOX	e Sn	N	09:27:10.6	5.7	176.6					
Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source		
2003/02/01	13:47:45.3	7.790N	83.860W	33.0N	5.1	5.2		SZGRF		
2003/02/01	13:47:51.3	7.621N	81.747W	40?	4.9	5.0		NEIC		
Off coast of Costa Rica										
Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	14:00:29.2	86.1	277.2	1.4	22	5.1		
	e L	Z	14:33:13.6			21.1	908		5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/01	15:44:39.3			N	4.7			SZGRF
2003/02/01	15:45:05.4	57.496N	33.264W	10G	4.9			NEIC

North Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 15:50:49.0	27.0	303.9	1.8	21	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/01	16:31:0.4	16.820N	92.680W	217.4	5.5			SZGRF
2003/02/01	16:30:57.1	16.593N	92.780W	207D	5.5			NEIC

Chiapas, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 16:43:01.4	83.0	287.5	1.1	22	5.3		
BUG	e P	Z 16:43:01.5	83.2	288.1					
IBBN	e P	Z 16:43:02.3	83.2	288.4	1.5	49	5.5		
BSEG	e P	Z 16:43:07.0	84.1	290.2	1.1	65	5.8		
TNS	e P	Z 16:43:07.8	84.3	289.1	1.2	51	5.6		
BFO	e P	Z 16:43:09.8	84.8	289.2					
CLZ	e P	Z 16:43:11.1	84.8	290.4	1.1	44	5.6		
MOX	e P	Z 16:43:16.2	86.0	291.5	1.2	31	5.3		
GRA1	e P	Z 16:43:17.5	86.1	291.2	1.3	52	5.5		
	e pP	Z 16:44:10.9							
	e sP	Z 16:44:33.3							
RUE	e P	Z 16:43:18.6	86.6	293.0					
CLL	i P	+ Z 16:43:18.8	86.6	292.5	2.0	80	5.5		
	e	16:43:27.6							
	e pP	Z 16:44:12.3							
	e sP	Z 16:44:35.8							
	e PP	Z 16:46:47.2							
	e sPP	Z 16:47:55.0							
	e S	T 16:53:41.4							
	e sS	T 16:55:11.0							
	e SS	T 16:59:30.0							
	e LQ	T 17:06:11.3							
	e LR	Z 17:11:51.2							
TANN	e P	Z 16:43:19.0	86.6	292.1	1.4	52	5.5		
	e pP	Z 16:44:11.8							
BRG	e P	Z 16:43:21.9	87.3	293.2	2.1	89	5.5		
WET	e P	Z 16:43:23.1	87.3	292.5	1.9	61	5.4		
	e pP	Z 16:44:15.6							
GEC2	e P	Z 16:43:25.4	87.9	293.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/01	18:47:55.6	57.420N	33.290W	33.0N	5.2	5.3		SZGRF
2003/02/01	18:47:52.3	57.522N	33.353W	10G	5.2	5.5		NEIC

North Atlantic Ocean

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
IBBN	e P	Z	18:53:07.5	23.8	299.0	1.8	325	5.6		
BUG	e P	Z	18:53:07.9	24.0	300.6	3.3	1096	5.8		
WLF	e P	Z	18:53:12.8	24.3	304.0	1.3	80	5.1		
BSEG	e P	Z	18:53:13.0	24.4	296.2	1.9	214	5.6		
TNS	e P	Z	18:53:19.1	25.3	303.0	1.2	55	5.2		
CLZ	e P	Z	18:53:21.5	25.4	300.2	1.3	64	5.1		
BFO	e P	Z	18:53:29.7	26.3	306.2	1.3	32	4.8		
MOX	e P	Z	18:53:33.1	26.7	302.4	1.4	81	5.3		
RUE	e P	Z	18:53:36.3	26.9	299.7	1.2	52	5.1		
GRA1	e P	Z	18:53:38.0	27.0	304.0	1.4	116	5.4		
	e L	Z	19:03:51.7			18.3	7076		5.3	
CLL	e P	Z	18:53:37.0	27.1	301.5	1.4	46	5.0		
TANN	e P	Z	18:53:38.4	27.3	302.9	1.8	98	5.2		
BRG	e P	Z	18:53:44.5	27.8	302.3	1.4	26	4.9		
FUR	e P	Z	18:53:44.2	27.9	306.4	1.8	137	5.5		
WET	e P	Z	18:53:46.7	28.2	304.9	1.6	55	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/01	20:36:17.2	11.026S	166.203E	149D	5.0			NEIC

Santa Cruz Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	20:55:22.2	136.2	36.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/01	21:11:3.5	57.720N	32.840W	33.0N	4.9	4.5		SZGRF
2003/02/01	21:10:54.6	57.378N	33.295W	10G	5.0	5.1		NEIC

North Atlantic Ocean

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	21:16:40.6	27.0	303.7	1.4	38	4.9		
	e L	Z	21:26:05.7			21.8	1474		4.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/01	21:15:54.4	52.430N	165.890W	33.0N	5.0			SZGRF
2003/02/01	21:15:57.4	53.856N	164.688W	23	4.7			NEIC

South of Aleutian Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:27:49.0	76.4	357.5	1.0	12	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/02	00:32:41.5	21.309S	179.311W	565?	4.6			NEIC

Fiji Islands Region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z 00:51:24.9	148.5	22.4	1.2	61			
	i PKPab	Z 00:51:30.9			0.8	20			
GRA1	e PKPbc	Z 00:51:29.6	150.4	20.2					
	e PKPab	Z 00:51:39.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/02	05:39:1.5	46.560N	151.070E	33.0N	5.8			SZGRF
2003/02/02	05:38:54.9	45.607N	151.628E	33N	5.4	4.8		NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 05:50:37.1	75.2	26.9	1.4	109	5.7		
RUE	e P	Z 05:50:38.7	75.5	29.0	1.3	131	5.8		
CLL	e P	Z 05:50:45.4	76.7	28.4	1.1	121	5.9		
BRG	e P	Z 05:50:46.2	76.8	28.9	1.4	69	5.6		
CLZ	e P	Z 05:50:47.9	77.0	26.7	1.4	167	6.0		
IBBN	e P	Z 05:50:49.1	77.3	25.0	1.0	81	5.8		
TANN	e P	Z 05:50:51.4	77.7	27.9	1.3	50	5.5		
MOX	e P	Z 05:50:51.5	77.7	27.4	1.4	83	5.7		
BUG	e P	Z 05:50:54.1	78.2	24.6	1.3	112	5.8		
WET	e P	Z 05:50:57.2	78.7	28.1	1.3	134	5.9		
GEC2	e P	Z 05:50:56.8	78.7	28.6	1.4	67	5.6		
GRA1	e P	Z 05:50:57.5	78.7	27.0	1.2	154	6.0		
TNS	e P	Z 05:50:58.7	79.0	25.3	1.2	77	5.7		
FUR	e P	Z 05:51:04.5	80.0	26.9	1.2	132	5.9		
STU	e P	Z 05:51:04.6	80.1	25.7	1.3	90	5.6		
BFO	e P	Z 05:51:08.0	80.7	25.1	1.2	72	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/02	06:02:41.8	26.463S	177.406W	121D	5.1			NEIC

Kermadec Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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GRA1	e PKP	Z	06:22:20.4	155.8	19.2							
	e		06:22:49.6									
	e		06:23:22.5									
CLL	e PKPbc	Z	06:22:27.4	154.0	21.6	1.0		12				
	e		06:22:32.0									
	e pPKPbc	Z	06:23:03.1									

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/02	06:17:38.8	4.142N	95.493E	33N	5.0			NEIC

Northern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 06:30:07.5	83.1	91.7	1.0	13	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/02	09:37:23.0	4.103N	95.488E	100?	4.7			NEIC

Off west coast of northern Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:49:40.7	83.2	91.7	1.2	14			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/02	12:25:46.1	34.310N	26.140E	10.0G			3.1	SZGRF
2003/02/02	12:25:49.0	34.324N	26.538E	79	4.2			NEIC

Crete, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
MOA	e Pn	Z 12:29:35.0	16.3	141.4					
WTTA	e Pn	Z 12:29:44.0	17.1	133.8					
GEC2	e Pn	Z 12:29:47.1	17.4	142.0					
WET	e Pn	Z 12:29:53.1	17.9	140.7					
DAVA	e Pn	Z 12:29:55.5	18.0	130.0					3.1
TANN	e Pn	Z 12:30:07.0	19.1	142.1					
GUNZ	e Pn	Z 12:30:07.5	19.1	141.7					
WERD	e Pn	Z 12:30:08.2	19.2	141.8					
BFO	e Pn	Z 12:30:11.6	19.5	129.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/02	17:00:28.4	57.332N	33.411W	10G	4.8	4.4		NEIC

North Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:06:14.4	27.1	303.6	1.3	20	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/02	17:32:41.5	57.429N	33.494W	10G	5.0	4.7		NEIC

North Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:38:27.3	27.1	303.8	1.5	26	4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/03	11:46:17.2	2.697S	101.199E	33N	5.4	5.3		NEIC

Southwest of Sumatera, Indonesia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z 11:59:20.7	93.1	93.3					
	e pP	Z 11:59:29.9							
GRA1	e P	Z 11:59:25.2	92.0	91.8	1.4	32	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/03	19:32:49.5	47.940N	16.840E	10.0G			3.2	SZGRF
2003/02/03	19:32:45.6	47.891N	17.003E	5G				NEIC

Austria

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
ARSA	e Pg	Z 19:33:08.8	1.2	56.8					2.8
	e Sg	N 19:33:26.2							
MOA	e Pg	Z 19:33:21.0	1.8	87.7					3.2
	e Sg	N 19:33:44.5							
GEC2	e Pn	Z 19:33:26.9	2.4	112.3					3.3
	e Sg	N 19:34:01.5							
WET	e Pg	Z 19:33:43.1	3.0	113.1					3.7
	e Sg	N 19:34:19.7							
BRG	e Sg	N 19:34:41.3	3.6	145.1					
TANN	e Pn	Z 19:33:47.1	3.9	128.6					
	e Sg	N 19:34:50.2							
WERD	e Pn	Z 19:33:48.5	4.0	128.0					
	e Sg	N 19:34:52.3							
GRA1	e Sg	N 19:34:59.6	4.2	113.1					
GRFO	e Sg	N 19:35:00.5	4.2	113.1					
CLL	e Sg	N 19:35:02.3	4.3	141.3					
MOX	e Sg	N 19:35:08.1	4.5	126.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/04	11:51:20.8	43.470N	15.880E	10.0G			4.1	SZGRF
2003/02/04	11:51:14.4	43.200N	16.031E	10G	4.5			NEIC

Adriatic Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 11:52:43.3	5.9	163.2					4.1
WET	e Pn	Z 11:52:49.1	6.3	158.7					4.2
	e Sn	E 11:53:56.7							
GRA1	e Pn	Z 11:53:02.4	7.3	151.2					
BFO	e Pn	Z 11:53:04.8	7.4	130.9					
GUNZ	e Pn	Z 11:53:07.3	7.6	159.2					
TANN	e Pn	Z 11:53:06.8	7.6	160.0					
WERD	e Pn	Z 11:53:08.5	7.7	159.3					
BRG	e Pn	Z 11:53:09.5	7.8	168.7					
MOX	e Pn	Z 11:53:11.8	8.0	156.3					
	e Sn	N 11:54:36.6							
TNS	e Pn	Z 11:53:22.2	8.7	140.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/04	12:41:39.5	33.390N	138.850E	33.0N	5.1			SZGRF
2003/02/04	12:42:16.0	33.951N	137.119E	331*	4.8			NEIC

Southeast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 12:54:11.2	83.6	42.5	1.2	16	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/04	20:49:39.8	45.970N	7.800E	10.0G			3.3	SZGRF
2003/02/04	20:49:40.8	46.100N	7.800E	5	4.2			NEIC

Northern Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
ZUR	e Pg	Z 20:50:08.3	1.4	203.2					
	e Sg	N 20:50:28.0							
SLE	e Pn	Z 20:50:12.2	1.7	196.1					
	e Sn	N 20:50:34.6							
BFO	e Pn	Z 20:50:18.8	2.3	189.4					3.1
TNS	e Pn	Z 20:50:45.0	4.1	186.2					
	e Sn	N 20:51:32.6							
GRA1	e Pn	Z 20:50:45.5	4.3	213.9					3.5
WET	e Pn	Z 20:50:51.7	4.6	230.3					

	e Sn	N	20:51:43.0			
GEC2	e Sn	N	20:51:50.0	4.8	237.7	
MOX	e Pn	Z	20:50:58.0	5.2	210.6	
GUNZ	e Pn	Z	20:50:58.0	5.2	217.0	
WERD	e Pn	Z	20:50:58.9	5.3	216.3	
	e Sn	E	20:51:58.8			
TANN	e Pn	Z	20:50:59.4	5.3	217.5	
	e Sn	E	20:52:01.6			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/05	19:01:29.1	14.430N	87.070W	80.7	5.2	5.0		SZGRF
2003/02/05	19:01:12.0	13.867N	90.865W	57D	5.4			NEIC

Honduras

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
TNS	e P	Z	19:13:42.8	85.2	286.0	1.1	17	5.1		
BSEG	e P	Z	19:13:44.3	85.2	287.1	1.0	27	5.4		
BFO	e P	Z	19:13:44.8	85.6	286.0	1.1	11	5.0		
CLZ	e P	Z	19:13:47.0	85.9	287.3	1.2	24	5.3		
MOX	e P	Z	19:13:52.0	87.0	288.3	1.6	36	5.3		
GRA1	e P	Z	19:13:52.8	87.1	288.1	1.4	39	5.4		
	e pP	Z	19:14:14.4							
	e L	Z	19:48:39.7			20.4	619		5.0	
TANN	e P	Z	19:13:55.9	87.6	289.0	1.4	35	5.4		
CLL	i P	+ Z	19:13:55.3	87.6	289.4	1.0	14	5.2		
	e pP	Z	19:14:17.2							
	e sP	Z	19:14:24.8							
	e PP	Z	19:17:23.0							
	e SKSac	R	19:24:21.3							
	e S	T	19:24:28.5							
	e PS	Z	19:25:41.5							
	e SS	R	19:30:19.9							
	e LR	Z	19:42:44.2							
	e L	Z	19:51:20.9			22.0	728		5.0	
WET	e P	Z	19:13:58.4	88.3	289.4	1.2	21	5.1		
BRG	e P	Z	19:13:58.9	88.3	290.1	1.6	20	5.0		
GEC2	e P	Z	19:14:01.5	88.9	290.0	1.3	8	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/05	21:00:44.3	35.780N	70.660E	33.0N	4.9			SZGRF
2003/02/05	21:00:58.1	37.185N	68.420E	33N	4.7			NEIC

Hindu Kush, Afghanistan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	21:08:53.3	42.3	84.7	1.1	16	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/06	18:48:44.9	44.480N	148.330E	33.0N	5.6	5.3		SZGRF
2003/02/06	18:48:37.9	43.375N	148.022E	33N	5.1	5.0		NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 19:00:26.2	76.2	30.2	1.2	74	5.7		
RUE	e P	Z 19:00:27.5	76.4	32.4	1.3	132	5.9		
CLL	i P	Z 19:00:33.9	77.6	31.7	1.2	121	5.9		
	e pP	Z 19:00:49.0							
	e PP	Z 19:03:30.9							
	e S	Z 19:10:21.6							
	e SS	R 19:15:34.6							
	e LR	Z 19:25:52.9							
	e L	Z 19:39:26.9			18.0	1685		5.4	
BRG	e P	Z 19:00:34.2	77.7	32.3	1.1	34	5.4		
CLZ	e P	Z 19:00:36.6	78.0	30.0	1.2	139	6.0		
IBBN	e P	Z 19:00:38.2	78.4	28.3	1.2	120	5.9		
TANN	e P	Z 19:00:39.8	78.5	31.3	1.6	49	5.4		
MOX	e P	Z 19:00:40.1	78.6	30.7					
BUG	e P	Z 19:00:43.1	79.3	27.9	1.2	84	5.6		
GEC2	e P	Z 19:00:44.5	79.5	31.9	1.3	32	5.2		
WET	e P	Z 19:00:45.0	79.5	31.4	1.3	76	5.6		
GRA1	e P	Z 19:00:45.5	79.6	30.4	1.2	110	5.8		
	e	19:01:00.2							
	e L	Z 19:41:10.7			18.1	1309		5.3	
GRFO	e P	Z 19:00:45.5	79.6	30.4	1.2	92	5.7		
TNS	e P	Z 19:00:47.4	80.0	28.6	1.3	62	5.5		
FUR	e P	Z 19:00:52.4	80.9	30.3	1.4	120	5.6		
BFO	e P	Z 19:00:56.5	81.7	28.4	1.2	41	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/07								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 00:17:48.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/07	02:17:22.3	43.980N	12.030E	10.0G			3.6	SZGRF

Central Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e Pn	Z 02:18:27.7	4.2	172.6					

GEC2	e Pn	Z	02:18:36.1	5.0	193.9							3.4
	e Sn	E	02:19:34.8									
BFO	e Pn	Z	02:18:37.7	5.0	148.1							3.7
	e Sn	E	02:19:34.3									
WET	e Pn	Z	02:18:39.0	5.2	186.8							3.6
	e Sn	E	02:19:37.3									
GRA1	e Sn	N	02:19:49.9	5.7	174.2							
MOX	e Sn	E	02:20:11.8	6.7	177.4							
TNS	e Sn	E	02:20:14.3	6.7	157.3							
BRG	e Sn	E	02:20:21.2	7.0	191.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/07	04:33:25.0	28.345S	177.479W	76D	5.0			NEIC

Kermadec Islands Region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 04:53:45.6	157.6	20.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/07								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 14:49:26.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/07	18:47:42.6	20.929S	175.860W	114D	5.0			NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 19:07:14.3	148.9	16.2	1.8	23			
	i PKPbc	- Z 19:07:18.1			0.7	54			
	e PKPab	Z 19:07:22.1							
	e pPKPbc	Z 19:07:50.3							
TNS	e PKP	Z 19:07:22.4	150.5	8.2					
GRA1	e PKP	Z 19:07:23.0	150.7	13.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/08	08:50: 2.1	39.030S	45.790E	33.0N	5.5	5.1		SZGRF
2003/02/08	08:49:57.3	39.789S	45.104E	10G	5.5	5.3		NEIC

Southwest Indian Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:03:16.2	94.3	154.6	1.5	32	5.5		
	e PP	Z 09:07:01.2							
	e L	Z 09:47:14.6			20.3	760		5.1	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/08	17:36:23.9	51.140N	141.650E	33.0N	5.5			SZGRF
2003/02/08	17:36:05.8	48.603N	142.275E	33N	5.4	4.6		NEIC

Sakhalin Island, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 17:47:16.5	69.8	31.6	1.6	54	5.5		
RUE	e P	Z 17:47:17.0	69.9	33.5					
CLL	i P	Z 17:47:24.3	71.1	32.8	1.0	50	5.6		
	e PcP	Z 17:47:43.3							
	e L	Z 18:22:02.1			18.0	429		4.8	
BRG	e P	Z 17:47:24.7	71.1	33.2					
CLZ	e P	Z 17:47:27.4	71.5	31.3	1.4	72	5.7		
IBBN	e P	Z 17:47:29.4	71.9	29.7	1.4	71	5.6		
TANN	e P	Z 17:47:30.3	72.0	32.3					
MOX	e P	Z 17:47:30.8	72.1	31.8	1.2	29	5.3		
BUG	e P	Z 17:47:34.8	72.8	29.3	1.5	76	5.6		
GEC2	e P	Z 17:47:35.6	72.9	32.7					
WET	e P	Z 17:47:36.2	73.0	32.3	1.3	50	5.5		
GRA1	e P	Z 17:47:36.9	73.1	31.4	1.2	86	5.7		
TNS	e P	Z 17:47:39.1	73.5	29.8	1.4	40	5.4		
FUR	e P	Z 17:47:44.2	74.4	31.2					
BFO	e P	Z 17:47:48.7	75.2	29.5	1.3	41	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/09	14:00: 2.0	20.770S	174.660W	33.0N				SZGRF
2003/02/09	14:00:04.0	19.037S	174.756W	129D	5.2			NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 14:19:26.6	144.9	8.4					
RUE	e PKPbc	Z 14:19:29.9	145.9	14.5					
IBBN	e PKPbc	Z 14:19:30.0	146.7	4.3					
CLZ	e PKPbc	Z 14:19:30.8	146.9	8.9					
CLL	e PKPdf	Z 14:19:30.8	147.2	13.6	1.4	24			
	i PKPbc	+ Z 14:19:33.7			1.4	270			
	e	14:19:40.6							
	e pPKPbc	Z 14:20:09.8							
BRG	e PKPbc	Z 14:19:31.6	147.4	15.4					
BUG	e PKPbc	Z 14:19:34.6	147.6	3.6					

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MOX	e	PKPdf	Z	14:19:32.2	148.0	11.4
TNS	e	PKPbc	Z	14:19:41.7	148.7	5.8
GRA1	e	PKPbc	Z	14:19:39.3	149.0	11.0
WET	e	PKPdf	Z	14:19:34.6	149.3	14.2
	e	PKPbc	Z	14:19:39.7		
	e	PKPab	Z	14:19:44.3		
WLF	e	PKPbc	Z	14:19:40.0	149.4	1.7
	e	PKPab	Z	14:19:44.8		
GEC2	e	PKPbc	Z	14:19:39.7	149.4	15.9
FUR	e	PKPdf	Z	14:19:36.7	150.5	11.6
	e	PKPbc	Z	14:19:42.1		
	e	PKPab	Z	14:19:49.3		
BFO	e	PKPbc	Z	14:19:42.4	150.6	5.9
	e	PKPab	Z	14:19:49.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/09	16:55:55.8	46.340N	10.250E	10.0G			3.0	SZGRF

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e Pn	Z	16:56:30.7	2.0						3.0
	e Sg	N	16:56:57.7							
BFO	e Pn	Z	16:56:34.6	2.4						
	e Sn	N	16:57:05.1							
	e Sg	E	16:57:11.1							
WET	e Pn	Z	16:56:46.8	3.3						
	e Sn	E	16:57:25.8							
GEC2	e Pn	Z	16:56:48.6	3.4						
	e Sn	E	16:57:30.4							
GRA1	e Pg	Z	16:56:57.6	3.4						3.1
	e Sn	E	16:57:28.8							
	e Sg	E	16:57:44.8							
MOX	e Sn	N	16:57:52.0	4.4						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/09	18:57:41.2	23.090N	122.280E	33.0N	5.2			SZGRF

Taiwan region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	19:10:14.2	85.1	59.5	1.6	24	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/09	21:00:26.6	50.930N	173.460W	33.0N	4.9			SZGRF

2003/02/09 21:00:30.7 52.296N 170.777W 33N 4.8 4.3 NEIC
 Andreanof Islands, Aleutian Islands, United States

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:12:29.3	78.0	1.2	1.2	17	4.9		

Date Origin Time Lat Long Depth mb Ms ML Source
 2003/02/10 04:49:30.7 6.011S 149.815E 33N 5.3 6.3 NEIC
 New Britain, Papua New Guinea, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 05:08:24.4	122.4	53.7	0.9	20			
	e pPKPdf	Z 05:08:33.9							
	e PP	Z 05:10:07.7							
	e PPP	Z 05:12:46.6							
	e PKKPbc	Z 05:18:20.7			0.9	9			
	e pPKKPbc	Z 05:18:31.2							
	e PS	R 05:19:56.1							
	e PPS	Z 05:21:25.4							
	e SKKSdf	Z 05:25:57.8							
	e SS	T 05:26:47.8							
	e SSS	E 05:31:38.3							
	e LR	Z 05:49:00.4							
	e L	Z 06:02:38.0			22.0	11931		6.5	
GRA1	e PKPdf	Z 05:08:27.4	124.2	52.7					
	e PP	Z 05:10:17.6							
	e PS	E 05:20:19.1							
	e SS	E 05:27:44.4							
	e L	Z 06:03:13.0			21.3	7957		6.3	

Date Origin Time Lat Long Depth mb Ms ML Source
 2003/02/10 08:42:56.7 17.440S 179.020W 500G 3.8 NEIC
 Fiji Islands Region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z 09:01:37.2	144.9	20.2	0.8	13			

Date Origin Time Lat Long Depth mb Ms ML Source
 2003/02/10 12:48:13.0 24.561S 176.330W 33N 5.2 5.2 NEIC
 South of the Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	+ Z 13:08:07.3	152.3	18.6	0.7	18			

	e			13:08:12.5								
	e	PKPab	Z	13:08:16.3			1.2		33			
GRA1	e	PKP	Z	13:08:25.4	154.2	15.9						

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/10	20:16:03.8	20.530S	178.220W	600G	4.3			NEIC

Fiji Islands Region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i	PKPbc	- Z 20:34:44.2	148.0	20.2	0.8	17			
	e	PKPab	Z 20:34:48.5							
GRA1	e	PKP	Z 20:34:48.4	149.9	17.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/10	23:33:39.6	24.360S	179.400W	500G	4.7			NEIC

South of the Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	PKP	Z 23:52:32.1	149.5	17.7					
RUE	e	PKP	Z 23:52:33.5	150.2	24.7					
CLL	i	PKPbc	- Z 23:52:36.6	151.4	24.2	0.9	28			
	e		23:52:39.8							
	e	PKPab	Z 23:52:46.1							
CLZ	e	PKP	Z 23:52:37.0	151.5	18.9					
GRA1	e	PKP	Z 23:52:41.5	153.3	22.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/11	00:49:52.8	16.185S	175.056W	327D	4.9			NEIC

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e	PKPbc	Z 01:08:44.1	142.0	8.4					
IBBN	e	PKPbc	Z 01:08:49.3	143.8	4.6					
CLZ	e	PKPbc	Z 01:08:50.3	144.1	8.9					
CLL	e	PKPbc	Z 01:08:50.5	144.3	13.3					
BRG	e	PKPbc	Z 01:08:51.7	144.6	15.0					
BUG	e	PKPbc	Z 01:08:51.9	144.7	3.9					
MOX	e	PKPbc	Z 01:08:53.6	145.1	11.3					
TANN	e	PKPbc	Z 01:08:54.2	145.2	12.7					
TNS	e	PKPbc	Z 01:08:56.5	145.8	6.0					
GRA1	e	PKPbc	Z 01:08:57.3	146.1	10.9					
WLF	e	PKPbc	Z 01:08:58.4	146.5	2.1					
GEC2	e	PKPbc	Z 01:08:58.1	146.6	15.4					

STU	e	PKPbc	Z	01:09:00.0	147.2	7.6
FUR	e	PKPbc	Z	01:09:01.0	147.6	11.4
BFO	e	PKPbc	Z	01:09:01.2	147.7	6.1

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/11	10:36:33.3	33.590N	93.240E	33.0N	5.4			SZGRF
2003/02/11	10:36:21.0	32.507N	93.763E	33N	5.1	4.4		NEIC

Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:46:38.5	61.3	72.5	1.4	51	5.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/12	11:44:18.0	19.620S	173.480W	183.1				SZGRF
2003/02/12	11:44:34.2	19.309S	175.642W	165D	4.9			NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 12:03:53.2	145.1	9.9					
	e pPKPbc	Z 12:04:38.9							
IBBN	e PKPbc	Z 12:03:58.9	146.9	5.9					
	e PKPab	Z 12:04:01.0							
CLZ	e PKPbc	Z 12:03:59.6	147.1	10.5					
	e PKPab	Z 12:04:02.7							
CLL	e PKPbc	Z 12:03:59.8	147.3	15.2					
	e pPKPbc	Z 12:04:46.5							
BRG	e PKPdf	Z 12:03:58.0	147.5	17.0					
	e PKPbc	Z 12:04:00.7							
BUG	e PKPbc	Z 12:04:00.9	147.8	5.2					
MOX	e PKPbc	Z 12:04:02.2	148.1	13.1					
TANN	e PKPdf	Z 12:03:59.2	148.2	14.6					
	e PKPbc	Z 12:04:02.8							
TNS	e PKPbc	Z 12:04:04.2	148.9	7.5					
GRA1	e PKPbc	Z 12:04:05.1	149.1	12.7					
	e PKPab	Z 12:04:10.5							
	e pPKPbc	Z 12:04:54.6							
WET	e PKPdf	Z 12:04:03.7	149.4	15.9					
	e PKPbc	Z 12:04:06.8							
GEC2	e PKPbc	Z 12:04:05.8	149.5	17.6					
WLF	e PKPbc	Z 12:04:06.5	149.6	3.3					
	e PKPab	Z 12:04:12.1							
STU	e PKPbc	Z 12:04:07.6	150.3	9.2					
FUR	e PKPbc	Z 12:04:08.3	150.6	13.4					
BFO	e PKPdf	Z 12:04:03.8	150.8	7.7					
	e PKPbc	Z 12:04:08.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/12	22:34: 3.1	1.400S	142.540E	33.0				SZGRF
2003/02/12	22:33:30.8	3.594S	144.255E	10G	6.0			NEIC

Ninigo Islands, Papua New Guinea, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e PKPdf	Z	22:52:16.8	116.4	57.9					
	e PP	Z	22:53:28.9							
BRG	e PKPdf	Z	22:52:18.3	117.1	58.8					
	e PP	Z	22:53:34.2							
BSEG	e PKPdf	Z	22:52:18.7	117.3	54.0					
	e PP	Z	22:53:36.2							
CLL	i PKPdf	Z	22:52:18.7	117.4	57.7	1.0	45			
	e PP	Z	22:53:36.5							
	e PPP	Z	22:56:06.1							
	e Sdiff	T	23:01:31.4							
	i PKKPbc	Z	23:02:41.0							
	e PS	R	23:03:16.2							
	e SS	T	23:09:44.0							
	e SSS	E	23:14:18.7							
	e LQ	T	23:24:48.8							
	e LR	Z	23:29:50.2							
	e L	Z	23:43:17.2			22.0	5318		6.1	
TANN	e PKPdf	Z	22:52:20.4	118.2	57.6					
	e PP	Z	22:53:42.4							
GEC2	e PKPdf	Z	22:52:20.5	118.3	59.5					
	e PP	Z	22:53:44.2							
CLZ	e PKPdf	Z	22:52:21.1	118.5	54.9					
	e PP	Z	22:53:45.2							
MOX	e PKPdf	Z	22:52:20.8	118.5	56.7					
	e PP	Z	22:53:44.7							
WET	e PKPdf	Z	22:52:21.3	118.6	58.6					
	e PP	Z	22:53:45.6							
GRA1	e PKPdf	Z	22:52:22.5	119.2	56.7					
	e		22:52:26.4							
	e PP	Z	22:53:50.5							
	e PKKPbc	Z	23:02:35.1							
IBBN	e PKPdf	Z	22:52:22.9	119.5	52.1					
	e PP	Z	22:53:51.2							
FUR	e PKPdf	Z	22:52:23.9	120.0	57.5					
	e PP	Z	22:53:55.8							
BUG	e PKPdf	Z	22:52:24.1	120.3	52.0					
	e PP	Z	22:53:57.3							
TNS	e PKPdf	Z	22:52:24.6	120.4	53.8					
	e PP	Z	22:53:58.4							
STU	e PKPdf	Z	22:52:25.4	120.8	55.2					

	e PP	Z	22:54:01.2					
BFO	e PKPdf	Z	22:52:26.4	121.6	54.6			
	e PP	Z	22:54:05.7					
WLF	e PKPdf	Z	22:52:28.2	121.9	51.7			
	e PP	Z	22:54:09.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/13	01:13:26.0	46.160N	151.670E	33.0N	4.9			SZGRF
2003/02/13	01:13:52.1	48.583N	142.504E	46*	4.7			NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:25:22.6	73.2	31.3	1.0	13	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/13	02:21:59.9	76.660N	4.900E	33.0N	5.3			SZGRF
2003/02/13	02:21:07.8	81.564N	3.510W	10G	5.1	4.7		NEIC

Greenland Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 02:27:01.7	27.9	355.7	1.5	129	5.2		
	e PcP	Z 02:30:15.0							
IBBN	e P	Z 02:27:15.1	29.5	356.7	2.2	138	5.1		
RUE	e P	Z 02:27:16.0	29.6	354.9	1.2	74	5.3		
CLZ	e P	Z 02:27:20.5	30.0	356.0	1.3	51	5.1		
BUG	e P	Z 02:27:22.5	30.3	356.9	1.3	62	5.2		
CLL	e P	Z 02:27:25.6	30.7	355.3	1.4	94	5.2		
	e PcP	Z 02:30:21.9							
BRG	e P	Z 02:27:30.0	31.2	355.1	1.2	68	5.2		
	e PcP	Z 02:30:23.5							
MOX	i P	Z 02:27:31.3	31.3	355.8	1.1	88	5.3		
TANN	e P	Z 02:27:33.9	31.5	355.6	1.1	114	5.5		
	e PcP	Z 02:30:24.6							
TNS	e P	Z 02:27:33.8	31.6	356.7	0.9	24	4.9		
WLF	e P	Z 02:27:40.1	32.0	357.3	2.3	247	5.5		
GRA1	e P	Z 02:27:40.0	32.2	356.0	1.1	56	5.2		
WET	e P	Z 02:27:45.7	32.8	355.6	1.5	70	5.3		
STU	e P	Z 02:27:47.0	33.0	356.6	1.1	95	5.5		
GEC2	e P	Z 02:27:48.8	33.2	355.4	1.1	72	5.4		
	e PcP	Z 02:30:29.1							
BFO	e P	Z 02:27:50.6	33.5	356.9	1.7	100	5.4		
	e PcP	Z 02:30:29.3							
FUR	e P	Z 02:27:53.3	33.7	356.1	1.4	98	5.4		
	e PcP	Z 02:30:30.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/13	04:45:20.6	1.790N	31.220W	33.0G	5.1			SZGRF
2003/02/13	04:45:21.3	2.654N	31.264W	10G	5.1	5.1		NEIC

Central Mid-Atlantic Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	04:55:23.8	59.2	231.8	1.4	25	5.1		
	e		04:55:35.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/13	05:59:20.0	5.510S	12.790W	33.0N	5.2	4.7		SZGRF
2003/02/13	05:59:09.8	6.850S	11.846W	10G	5.3	5.2		NEIC

Ascension Island region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	06:09:16.8	60.0	206.7	1.2	32	5.2		
	e L	Z	06:34:52.4			20.7	605		4.7	
CLL	e P	Z	06:09:30.9							
	e PP	Z	06:11:50.9	60.8	209.8					
	e S	Z	06:17:52.4							
	e SS	R	06:21:50.1							
	e LR	Z	06:28:36.9							
	e L	Z	06:34:44.1			22.0	712		4.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/13	15:38: 0.0	22.110S	178.360W	595.9				SZGRF
2003/02/13	15:38:51.8	22.122S	179.768W	592D	5.2			NEIC

South of Fiji Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPdf	Z	15:57:27.9	147.3	17.5					
	e PKPbc	Z	15:57:30.5							
	e PKPab	Z	15:57:34.6							
	e pPKPbc	Z	15:59:47.9							
RUE	e PKPbc	Z	15:57:32.1	147.9	24.1					
CLL	e PKPdf	Z	15:57:30.3	149.2	23.6	1.3	14			
	i PKPbc	Z	15:57:35.4			0.7	119			
	e PKPab	Z	15:57:42.3			0.6	27			
	e pPKPdf	Z	15:59:49.4							
	e pPKPbc	Z	15:59:53.8							
CLZ	e PKPdf	Z	15:57:30.6	149.3	18.6					
	e PKPbc	Z	15:57:35.7							
IBBN	e PKPbc	Z	15:57:35.4	149.3	13.7					

	e pPKPbc	Z	15:59:51.1			
BRG	e PKPpdf	Z	15:57:30.9	149.3	25.5	
	e PKPbc	Z	15:57:35.8			
	e PKPab	Z	15:57:43.2			
MOX	e PKPpdf	Z	15:57:31.9	150.1	21.5	
	e PKPbc	Z	15:57:37.4			
TANN	e PKPbc	Z	15:57:37.6	150.1	23.2	
BUG	e PKPpdf	Z	15:57:32.1	150.2	13.2	
	e PKPbc	Z	15:57:37.2			
GRA1	e PKPpdf	Z	15:57:33.5	151.1	21.4	
	e PKPbc	Z	15:57:39.9			
	e pPKPbc	Z	15:59:58.5			
TNS	e PKPbc	Z	15:57:39.8	151.2	15.9	
	e PKPab	Z	15:57:50.4			
WET	e PKPpdf	Z	15:57:33.7	151.2	24.9	
	e PKPab	Z	15:57:51.4			
GEC2	e PKPpdf	Z	15:57:33.8	151.2	26.6	
	e PKPbc	Z	15:57:39.9			
WLF	e PKPpdf	Z	15:57:35.8	152.1	11.8	
	e PKPbc	Z	15:57:42.2			
	e pPKPbc	Z	15:59:56.7			
STU	e PKPpdf	Z	15:57:35.7	152.4	18.2	
	e PKPbc	Z	15:57:43.2			
BFO	e PKPbc	Z	15:57:44.2	153.0	16.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/13	17:32:11.7	44.480N	85.590E	33.0N	5.1			SZGRF
2003/02/13	17:32:00.6	43.960N	85.819E	10G	4.8			NEIC

Northern Xinjiang, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:40:53.9	49.2	66.4	0.9	18	5.1		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/13	17:34:38.0	45.370N	84.760E	33.0N	5.3			SZGRF
2003/02/13	17:34:19.0	43.911N	85.918E	10G	5.1	5.2		NEIC

Northern Xinjiang, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 17:42:52.1	46.8	70.2	1.1	45	5.3		
BRG	e P	Z 17:42:56.0	47.3	68.9	1.1	25	5.2		
CLL	i P	Z 17:42:58.5	47.7	68.7	1.1	53	5.6		
	e PP	Z 17:44:53.1							
	e S	T 17:49:53.7							
	e SS	T 17:53:19.1							

	e LQ	T	17:57:21.2								
	e L	Z	18:04:10.1			18.0	4111		5.4		
GEC2	e P	Z	17:43:03.3	48.2	67.0	1.1	14		5.0		
BSEG	e P	Z	17:43:04.1	48.2	69.3	1.7	100		5.7		
TANN	e P	Z	17:43:03.4	48.3	67.7	1.0	30		5.4		
WET	e P	Z	17:43:05.6	48.5	66.8	1.0	17		5.1		
MOX	e P	Z	17:43:07.3	48.7	67.4	1.0	30		5.4		
CLZ	e P	Z	17:43:09.5	49.0	67.6	1.2	25		5.2		
GRA1	e P	Z	17:43:12.7	49.3	66.4	1.0	59		5.7		
FUR	e P	Z	17:43:17.1	49.9	65.2	1.0	62		5.6		
IBBN	e P	Z	17:43:19.2	50.3	66.5	0.8	42		5.5		
TNS	e P	Z	17:43:22.7	50.7	65.3	0.9	18		5.1		
BUG	e P	Z	17:43:24.1	50.9	65.5	1.0	33		5.2		
STU	e P	Z	17:43:23.8	50.9	64.6	1.0	39		5.3		
BFO	e P	Z	17:43:28.9	51.6	63.9	1.0	28		5.1		
WLF	e P	Z	17:43:34.5	52.3	63.6	1.0	18		5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/14	01:23:15.0	6.540N	65.020W	33.0N	4.7			SZGRF
2003/02/14	01:23:39.5	10.296N	62.369W	33N	4.9	4.5		NEIC

Venezuela

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:35:00.1	71.6	264.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/14	03:21:16.4	16.372S	173.380W	33N	5.1	5.5		NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLZ	e PKP	Z 03:40:49.6	144.4	6.2					
	e	03:41:03.4							
CLL	e PKP	Z 03:40:50.7	144.7	10.6					
	e	03:41:03.4							
BUG	e PKP	Z 03:40:51.0	144.9	1.1					
	e	03:41:04.4							
BRG	e PKP	Z 03:40:51.8	145.0	12.3					
	e	03:41:04.9							
MOX	e PKP	Z 03:40:53.2	145.5	8.5					
	e	03:41:06.6							
TNS	e PKP	Z 03:40:55.5	146.1	3.1					
	e	03:41:08.9							
GRA1	e PKP	Z 03:40:57.5	146.5	8.0					
	e	03:41:10.3							
WLF	e PKP	Z 03:40:57.6	146.7	359.2					

	e		03:41:11.1					
WET	e PKP	Z	03:40:58.1	146.8	11.0			
	e		03:41:11.2					
GEC2	e PKP	Z	03:40:58.4	147.0	12.5			
	e		03:41:11.2					
STU	e PKP	Z	03:40:59.9	147.5	4.6			
	e		03:41:13.9					
FUR	e PKP	Z	03:41:01.5	148.0	8.4			
	e		03:41:15.2					
BFO	e PKP	Z	03:41:01.5	148.0	3.1			
	e		03:41:15.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/14	04:49:13.5	46.120N	0.910W	10.0G				SZGRF
2003/02/14	04:49:17.2	46.400N	0.810W	10G				NEIC

France

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e Pn	Z	04:50:40.8	5.7	237.6					
	e Sg	N	04:52:21.9							
BFO	e Pn	Z	04:50:51.3	6.5	256.1					
	e Sg	N	04:52:45.0							
TNS	e Pn	Z	04:51:00.9	7.2	241.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/14	06:57:18.2	16.200S	176.393W	400G	4.4			NEIC

Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKP	Z	07:16:08.4	144.1	15.5					
BRG	e PKP	Z	07:16:09.0	144.3	17.2					
MOX	e PKP	Z	07:16:11.2	145.0	13.5					
TNS	e PKP	Z	07:16:14.3	145.8	8.3					
GRA1	e PKP	Z	07:16:14.8	145.9	13.1					
WLF	e PKP	Z	07:16:16.7	146.5	4.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/14	10:29: 6.9	28.470N	56.450E	41.5	5.3	5.0		SZGRF
2003/02/14	10:28:57.9	28.020N	56.869E	33N	5.2	5.4		NEIC

Southern Iran

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e P	Z	10:36:24.1	39.0	106.2	2.1	178	5.4		

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BRG	e P	Z	10:36:27.6	39.4	108.8	0.9	25	4.9
WET	e P	Z	10:36:28.6	39.6	105.8	1.6	77	5.2
RUE	e P	Z	10:36:33.0	40.1	110.5	1.0	89	5.3
CLL	e P	Z	10:36:33.3	40.1	108.4	1.5	144	5.4
	e pP	Z	10:36:44.7					
	e sP	Z	10:36:51.8					
	e PP	Z	10:38:05.2					
	e S	T	10:42:37.6					
	e SS	T	10:45:47.8					
	e LQ	T	10:48:24.2					
	e LR	Z	10:50:48.0					
	e L	Z	10:56:32.3			18.0	3596	5.3
FUR	e P	Z	10:36:35.1	40.4	103.1	1.1	64	5.2
GRA1	e P	Z	10:36:39.2	40.8	104.8	1.0	92	5.4
	e pP	Z	10:36:49.9					
	e L	Z	10:56:04.8			21.2	2387	5.0
MOX	e P	Z	10:36:39.0	40.8	106.2	1.1	21	4.7
RGN	e P	Z	10:36:41.8	41.1	112.2	1.2	431	5.9
STU	e P	Z	10:36:46.8	41.8	101.9	1.3	48	5.0
CLZ	e P	Z	10:36:48.5	41.9	106.3	1.6	243	5.7
BFO	e P	Z	10:36:50.7	42.3	100.6	2.7	138	5.2
BSEG	e P	Z	10:36:53.5	42.5	108.5	1.3	114	5.4
TNS	e P	Z	10:36:54.7	42.6	102.8	1.4	129	5.5
IBBN	e P	Z	10:37:02.0	43.5	104.3	1.2	147	5.6
BUG	e P	Z	10:37:02.7	43.6	102.9	1.3	112	5.5
WLF	e P	Z	10:37:04.8	44.0	100.1	1.3	63	5.2

Date Origin Time Lat Long Depth mb Ms ML Source
 2003/02/14 17:08:37.9 3.532S 144.430E 10G 5.1 4.2 NEIC
 Near north coast of New Guinea, Papua New Guinea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	17:27:29.7	119.3	56.5					

Date Origin Time Lat Long Depth mb Ms ML Source
 2003/02/14 21:42:18.2 19.742S 178.446W 600G 4.6 NEIC
 Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z	22:00:51.0	145.2	14.5					
RUE	e PKPbc	Z	22:00:53.2	145.9	20.8					
IBBN	e PKPbc	Z	22:00:56.2	147.1	10.8					
	e PKPab	Z	22:01:00.1							
CLZ	e PKPdf	Z	22:00:53.3	147.2	15.4					
	e PKPbc	Z	22:00:56.8							

	e PKPab	Z	22:01:00.3		
CLL	e PKPpdf	Z	22:00:53.1	147.2	20.2
	e PKPbc	Z	22:00:56.5		
	e PKPab	Z	22:01:00.4		
BRG	e PKPpdf	Z	22:00:53.6	147.4	22.0
	e PKPbc	Z	22:00:57.2		
	e PKPab	Z	22:01:01.4		
BUG	e PKPbc	Z	22:00:58.5	148.0	10.2
	e PKPab	Z	22:01:03.4		
MOX	e PKPpdf	Z	22:00:54.7	148.1	18.1
	e PKPbc	Z	22:00:59.1		
	e PKPab	Z	22:01:04.1		
TNS	e PKPbc	Z	22:01:01.4	149.0	12.7
GRA1	e PKPpdf	Z	22:00:56.3	149.1	17.9
	e PKPbc	Z	22:01:01.8		
WET	e PKPbc	Z	22:01:01.9	149.2	21.2
	e PKPab	Z	22:01:09.3		
GEC2	e PKPbc	Z	22:01:02.0	149.3	22.8
	e PKPab	Z	22:01:09.7		
WLF	e PKPbc	Z	22:01:03.8	149.9	8.6
	e PKPab	Z	22:01:12.0		
STU	e PKPbc	Z	22:01:04.4	150.3	14.6
	e PKPab	Z	22:01:13.6		
FUR	e PKPbc	Z	22:01:04.8	150.5	18.8
	e PKPab	Z	22:01:15.0		
BFO	e PKPbc	Z	22:01:05.5	150.9	13.2
	e PKPab	Z	22:01:15.9		

Date Origin Time Lat Long Depth mb Ms ML Source
 2003/02/14 22:43:17.5 20.150S 178.250W 600G 4.1 NEIC
 Fiji Islands Region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKP	Z	23:01:50.6	145.6	14.3					
CLZ	e PKP	Z	23:01:56.2	147.6	15.2					
CLL	e PKPpdf	Z	23:01:52.7	147.6	20.0					
	i PKPbc	- Z	23:01:56.3			0.9	21			
	i PKPab	Z	23:02:00.1			0.8	10			
BRG	e PKP	Z	23:01:56.7	147.8	21.9					
MOX	e PKP	Z	23:01:58.5	148.5	17.9					
TNS	e PKP	Z	23:02:01.0	149.5	12.4					
GRA1	e PKP	Z	23:02:00.5	149.5	17.7					
WET	e PKP	Z	23:02:01.6	149.7	21.0					
GEC2	e PKP	Z	23:02:01.7	149.7	22.7					
WLF	e PKP	Z	23:02:03.6	150.3	8.4					
FUR	e PKP	Z	23:02:04.7	151.0	18.7					
BFO	e PKP	Z	23:02:05.6	151.3	13.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/15								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e PKP	Z 00:27:52.8							
BSEG	e PKP	Z 00:27:45.5							
CLL	e PKP	Z 00:27:51.9							
CLZ	e PKP	Z 00:27:52.4							
FUR	e PKP	Z 00:28:01.9							
GEC2	e PKP	Z 00:27:58.6							
MOX	e PKP	Z 00:27:54.5							
RUE	e PKP	Z 00:27:48.5							
TNS	e PKP	Z 00:27:57.5							
WLF	e PKP	Z 00:28:00.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/15	05:48:39.4	18.220N	120.350E	33.0N	5.1	5.9		SZGRF
2003/02/15	05:48:02.1	12.119N	123.877E	33N	5.4	5.6		NEIC

Luzon, Philippine Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z 06:01:14.6	93.2	66.2	1.5	24	5.4		
	e PP	Z 06:05:11.2							
	e SKSac	R 06:11:53.2							
	e S	T 06:12:24.3							
	e PS	T 06:13:41.0							
	e SS	T 06:18:45.6							
	e LQ	T 06:29:51.8							
	e LR	Z 06:34:26.6							
	e L	Z 06:44:28.9			22.0	4548		5.9	
GRA1	e P	Z 06:01:26.0	94.8	64.9	1.0	11	5.1		
	e L	Z 06:47:25.2			19.6	4270		5.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/15	06:47:53.3	18.437S	176.754W	400G	4.7			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKPbc	Z 07:06:43.6	144.1	11.5					
RUE	e PKPbc	Z 07:06:46.3	145.0	17.6					
IBBN	e PKPbc	Z 07:06:50.7	145.9	7.7					
CLZ	e PKPbc	Z 07:06:50.2	146.1	12.2					

CLL	e	PKPbc	Z	07:06:50.3	146.2	16.8
BRG	e	PKPbc	Z	07:06:50.8	146.5	18.6
MOX	e	PKPbc	Z	07:06:52.5	147.1	14.7
TNS	e	PKPbc	Z	07:06:54.9	147.9	9.3
GRA1	e	PKPbc	Z	07:06:55.7	148.1	14.4
WET	e	PKPbc	Z	07:06:56.1	148.3	17.6
GEC2	e	PKPbc	Z	07:06:56.3	148.4	19.2
WLF	e	PKPbc	Z	07:06:57.4	148.7	5.3
STU	e	PKPbc	Z	07:06:58.5	149.3	11.1
FUR	e	PKPbc	Z	07:06:59.2	149.6	15.2
BFO	e	PKPbc	Z	07:06:59.6	149.8	9.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/15	08:58:2.1	52.560N	178.120W	33.0N	5.0			SZGRF
2003/02/15	08:58:21.0	52.900N	176.215W	227	5.0			NEIC

Andreanof Islands, Aleutian Islands, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z	09:09:30.6	73.0	4.1	0.8	15	5.1		
IBBN	e P	Z	09:09:40.5	74.7	2.5	0.9	26	5.3		
CLZ	e P	Z	09:09:42.8	75.1	4.1	0.8	18	5.3		
CLL	e P	Z	09:09:44.0	75.5	5.7	0.7	11	5.1		
BRG	e P	Z	09:09:46.1	75.9	6.3	0.9	10	4.9		
MOX	e P	Z	09:09:48.5	76.2	4.9	0.9	11	5.0		
TNS	e P	Z	09:09:51.7	76.8	2.9	0.9	12	5.0		
GRA1	e P	Z	09:09:54.5	77.2	4.6	0.7	16	5.3		
WLF	e P	Z	09:09:55.7	77.4	1.5	0.8	14	5.1		
WET	e P	Z	09:09:56.8	77.7	5.6	1.3	6	4.6		
GEC2	e P	Z	09:09:57.6	77.9	6.1	0.9	6	4.7		
STU	e P	Z	09:09:59.5	78.2	3.3	0.7	14	5.1		
BFO	e P	Z	09:10:02.1	78.7	2.8	1.4	7	4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/15	11:02:21.0	15.200N	122.890E	33.0N	6.0	6.5		SZGRF
2003/02/15	11:02:02.6	12.184N	123.968E	33N	5.8	6.2		NEIC

Philippine Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	11:15:13.1	92.2	66.6	1.0	57	5.8		
BRG	e P	Z	11:15:15.7	92.7	66.8	2.7	273	6.0		
CLL	i P	- Z	11:15:18.2	93.1	66.1	2.5	244	6.2		
	e PP	Z	11:19:02.6							
	e SKSac	R	11:25:45.2							
	e S	T	11:26:22.0							
	e PS	Z	11:27:30.9							

	e SS	T	11:32:37.8								
	e SSS	E	11:35:55.6								
	e SSSS	N	11:39:33.9								
	e LQ	T	11:43:59.4								
	e LR	Z	11:48:36.5								
	e L	Z	11:58:30.8			22.0	22642		6.6		
BSEG	e P	Z	11:15:18.9	93.5	63.8	9.1	7054	7.0			
GEC2	e P	Z	11:15:20.1	93.7	66.8	1.5	69	5.8			
WET	e P	Z	11:15:22.1	94.0	66.1	2.5	228	6.1			
MOX	e P	Z	11:15:22.3	94.2	65.0	2.6	206	6.0			
CLZ	e P	Z	11:15:23.4	94.3	63.9	2.9	466	6.3			
GRA1	e P	Z	11:15:25.7	94.8	64.8	2.5	263	6.1			
	e PP	Z	11:19:19.1								
	e S	N	11:26:42.0								
	e SS	N	11:33:14.4								
	e L	Z	12:01:17.5			20.7	16279		6.5		
FUR	e P	Z	11:15:28.3	95.4	64.9	1.5	147	6.2			
IBBN	e P	Z	11:15:28.7	95.6	61.8	2.8	467	6.4			
TNS	e P	Z	11:15:31.5	96.2	62.5	2.8	227	6.1			
BUG	e P	Z	11:15:31.6	96.2	61.5	1.1	39	5.7			
STU	e P	Z	11:15:32.4	96.4	63.3	2.5	163	5.9			
BFO	e P	Z	11:15:36.1	97.1	62.6	1.6	35	5.4			
WLF	e P	Z	11:15:39.0	97.7	60.7	1.4	68	5.9			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/16	03:03:44.4	36.210N	139.770E	33.0N	5.1			SZGRF
2003/02/16	03:03:47.8	37.400N	140.974E	63D	5.0			NEIC

Eastern Honshu, Japan

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z	03:15:49.0	79.1	40.1	1.2	20	4.9		
BRG	e P	Z	03:15:55.0	80.3	40.1	1.2	11	4.8		
CLL	i P	+ Z	03:15:55.3	80.3	39.4	0.9	11	4.9		
	e pP	Z	03:16:12.8							
CLZ	e P	Z	03:15:58.8	80.9	37.7	0.9	11	5.0		
IBBN	e P	Z	03:16:01.6	81.5	35.8	0.8	12	5.1		
WET	e P	Z	03:16:04.7	82.0	39.1	1.2	11	5.0		
GRA1	e P	Z	03:16:05.7	82.3	38.1	1.0	22	5.3		
FUR	e P	Z	03:16:12.1	83.5	38.0	0.7	23	5.5		
STU	e P	Z	03:16:13.8	83.8	36.6	0.9	15	5.2		
BFO	e P	Z	03:16:17.2	84.5	35.9	1.0	20	5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/17	01:52: 8.9	53.940N	163.430E	33.0N	4.7			SZGRF
2003/02/17	01:52:14.4	54.687N	161.840E	60*	4.7			NEIC

Off east coast of Kamchatka Peninsula, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 02:03:40.3	72.8	17.3	1.0	9	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/17	04:42:4.5	21.890N	108.000W	33.0N		5.2		SZGRF
2003/02/17	04:42:00.9	19.212N	104.603W	33N	4.7	4.8		NEIC

Revilla Gigedo Islands, Mexico, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:55:03.3	90.9	301.8					
	e L	Z 05:35:36.3			21.4	1039		5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/18	08:04:41.8	12.334S	166.932E	229D	4.8			NEIC

Santa Cruz Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 08:23:41.9	137.6	36.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/18	13:09:36.1	35.510N	3.890W	10.0G		3.8		SZGRF
2003/02/18	13:09:35.9	35.868N	3.397W	10G	4.7			NEIC

Strait of Gibraltar

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	e P	Z 13:13:22.1	15.4	210.3					
FUR	e P	Z 13:13:31.5	16.4	226.7					
TNS	e P	Z 13:13:37.2	16.7	215.3					
BUG	e P	Z 13:13:44.3	17.3	210.2					
GRA1	e P	Z 13:13:45.3	17.4	223.1					
	e L	Z 13:19:40.7			21.5	618		3.8	
WET	e P	Z 13:13:48.0	17.8	227.9					
GEC2	e P	Z 13:13:49.1	18.0	230.3					
IBBN	e P	Z 13:13:52.7	18.2	210.1					
MOX	e P	Z 13:13:53.0	18.3	221.9					
CLZ	e P	Z 13:14:03.3	18.7	216.9					
CLL	e P	Z 13:14:06.1	19.4	223.6					
BRG	e P	Z 13:14:06.2	19.5	226.4					
BSEG	e P	Z 13:14:17.4	20.4	213.4					
RUE	e P	Z 13:14:19.0	20.6	222.9					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/18	16:01:05.7	34.649S	111.377W	10G	5.1	5.0		NEIC
Southern East Pacific Rise								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 16:20:33.2	136.1	267.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/18	21:13:32.1	36.298N	26.602E	33.0N	4.2			NEIC
Dodecanese Islands, Greece								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:17:27.5	17.4	134.4	2.1	75			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/18	23:54:40.7	23.686S	179.941W	520?	4.8			NEIC
South of the Fiji Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e PKP	Z 00:13:29.8	148.8	18.3					
CLL	i PKPbc	Z 00:13:34.3	150.6	24.7	0.8	22			
CLZ	e PKP	Z 00:13:34.8	150.8	19.6					
BRG	e PKP	Z 00:13:34.2	150.8	26.7					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/19	00:25: 8.1	46.292N	144.588E	33.0N	5.2			SZGRF
2003/02/19	00:24:45.5	43.392N	147.251E	34*	4.9			NEIC
Sea of Okhotsk								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 00:36:32.7	75.9	30.8	1.0	24	5.3		
RUE	e P	Z 00:36:33.7	76.1	32.9	1.0	28	5.3		
CLL	e P	Z 00:36:39.9	77.3	32.2	0.8	19	5.2		
BRG	e P	Z 00:36:40.5	77.4	32.8	1.3	15	4.8		
CLZ	e P	Z 00:36:42.6	77.7	30.6	1.2	34	5.2		
WET	e P	Z 00:36:50.9	79.2	31.9	1.7	29	5.1		
GRA1	e P	Z 00:36:51.9	79.3	30.9	1.3	49	5.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2003/02/19 03:32:47.9 55.273N 164.028W 10.1 5.8 6.5 SZGRF
 2003/02/19 03:32:36.5 53.758N 164.612W 19G 5.8 6.6 NEIC
 Unimak Island, Alaska, United States, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	03:44:01.2	71.7	358.7	1.0	175	6.1		
BSEG	e P	Z	03:44:04.3	72.2	356.9	1.1	99	5.9		
IBBN	e P	Z	03:44:13.3	73.7	355.3	1.1	154	6.0		
RUE	e P	Z	03:44:13.1	73.8	359.0	1.1	151	6.0		
CLZ	e P	Z	03:44:16.8	74.3	356.9	1.1	139	6.0		
BUG	e P	Z	03:44:17.7	74.6	355.0	1.0	109	5.9		
CLL	i P	+ Z	03:44:19.5	74.9	358.5	1.1	89	5.8		
	e (pP)	Z	03:44:22.2							
	e		03:44:29.0							
	e		03:44:44.5							
	e PP	Z	03:47:09.7							
	e S	E	03:54:01.2							
	e PPS	N	03:54:43.9							
	e SS	N	03:58:56.5							
	e SSS	Z	04:02:57.3							
	e LQ	E	04:04:41.3							
	e LR	Z	04:08:48.7							
	e L	Z	04:24:27.5			18.0	19211		6.4	
BRG	e P	Z	03:44:22.3	75.4	359.1	1.1	69	5.6		
MOX	e P	Z	03:44:23.6	75.5	357.7	1.0	104	5.8		
TNS	e P	Z	03:44:25.4	75.9	355.8	1.0	68	5.6		
WLF	e P	Z	03:44:28.2	76.3	354.4	1.1	109	5.8		
GRA1	e P	Z	03:44:29.5	76.5	357.5	1.1	126	5.9		
	e pP	Z	03:44:32.1							
	e		03:44:38.9							
	e		03:44:55.0							
	e PP	Z	03:47:32.0							
	e S	E	03:54:20.4							
	e SS	N	03:59:37.4							
	e L	Z	04:29:15.9			18.2	20244		6.5	
WET	e P	Z	03:44:32.7	77.1	358.5	1.4	87	5.7		
STU	e P	Z	03:44:33.7	77.3	356.3	1.0	80	5.8		
GEC2	e P	Z	03:44:34.1	77.4	359.0	1.0	43	5.5		
BFO	e P	Z	03:44:35.9	77.7	355.7	1.1	61	5.6		
FUR	e P	Z	03:44:37.8	78.0	357.5	1.3	154	6.0		

Date Origin Time Lat Long Depth mb Ms ML Source
 2003/02/19 05:01:45.2 45.091N 143.638E 218.6 5.8 Ms ML SZGRF
 2003/02/19 05:01:39.9 44.206N 141.770E 211D 5.4 Ms ML NEIC
 Hokkaido, Japan, region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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RGN	e P	Z	05:12:43.7	72.0	36.2	1.5	289	6.2
	e pP	Z	05:13:35.4					
BSEG	e P	Z	05:12:52.6	73.5	34.1	1.1	92	5.7
	e pP	Z	05:13:44.7					
RUE	e P	Z	05:12:52.6	73.5	36.1	1.2	168	5.9
	e pP	Z	05:13:44.2					
CLL	i P	Z	05:12:59.3	74.7	35.4	1.0	135	5.9
	e PcP	Z	05:13:10.3					
	e pP	Z	05:13:51.0					
	e S	E	05:22:16.8					
BRG	e P	Z	05:12:59.6	74.7	35.9	1.5	51	5.3
	e pP	Z	05:13:51.4					
CLZ	e P	Z	05:13:02.9	75.2	33.8	0.9	113	5.9
IBBN	e P	Z	05:13:05.1	75.7	32.1	1.1	115	5.9
	e pP	Z	05:13:56.9					
MOX	e P	Z	05:13:05.8	75.8	34.4	1.3	63	5.6
	e pP	Z	05:13:57.4					
GEC2	e P	Z	05:13:08.8	76.5	35.5	1.6	49	5.4
	e pP	Z	05:14:01.5					
WET	e P	Z	05:13:09.6	76.5	35.0	1.0	52	5.6
	e pP	Z	05:14:02.4					
BUG	e P	Z	05:13:09.0	76.6	31.7	1.4	104	5.8
GRA1	e P	Z	05:13:11.7	76.7	34.0	3.3	1861	6.6
	e pP	Z	05:14:03.4					
TNS	e P	Z	05:13:13.0	77.2	32.3	3.8	1012	6.3
	e pP	Z	05:14:06.1					
FUR	e P	Z	05:13:18.6	77.9	33.9			
	e pP	Z	05:14:10.1					
STU	e P	Z	05:13:18.2	78.2	32.6	1.0	71	5.8
	e pP	Z	05:14:11.7					
WLF	e P	Z	05:13:21.2	78.5	30.8	0.9	12	5.0
BFO	e P	Z	05:13:23.3	78.9	32.0	1.3	66	5.5
	e pP	Z	05:14:16.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/19	11:30:19.5	46.326N	10.266E	10.0G			3.2	SZGRF
2003/02/19	11:30:17.8	46.329N	10.325E	10G				NEIC

Northern Italy

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
FUR	e Pg	Z	11:30:55.5	1.9	199.7					3.4
	e Sg	N	11:31:22.4							
BFO	e Pn	Z	11:30:58.9	2.4	145.2					2.9
	e Sg	E	11:31:35.6							
WET	e Pn	Z	11:31:11.2	3.3	212.3					3.3
	e Sn	N	11:31:50.0							
GEC2	e Pn	Z	11:31:12.9	3.4	223.4					

	e Sn	N	11:31:53.9						
	e Sg	E	11:32:07.7						
GRA1	e Sn	E	11:31:53.7	3.4	190.5				
MOX	e Sn	N	11:32:15.4	4.4	191.7				

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/20	00:55:32.2	44.885N	14.900E	10.0G			3.2	SZGRF
2003/02/20	00:55:33.2	45.041N	14.877E	10G				NEIC

Adriatic Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
ARSA	e Pn	Z 00:56:11.3	2.3	191.7					2.8
	e Sg	E 00:56:46.7							
KBA	e Pn	Z 00:56:12.5	2.3	151.9					
MOA	e Pn	Z 00:56:20.7	2.8	171.3					3.2
	e Sn	E 00:56:56.5							
WTTA	e Pn	Z 00:56:24.6	3.2	133.5					
	e Sg	N 00:57:16.3							
GEC2	e Pn	Z 00:56:33.8	3.9	167.7					3.4
	e Sn	N 00:57:21.5							
FUR	e Sg	E 00:57:41.2	4.0	140.3					
WET	e Pn	Z 00:56:39.5	4.3	160.9					
	e Sn	E 00:57:31.0							
GRA1	e Sg	N 00:58:26.2	5.3	150.6					
BFO	e Pn	Z 00:56:55.6	5.6	123.8					
MOX	e Pn	Z 00:57:01.7	6.0	157.4					
	e Sn	N 00:58:10.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/20	04:08:47.1	38.678N	92.428E	33.0N	5.2			SZGRF
2003/02/20	04:09:56.7	44.529N	81.206E	10G	4.8			NEIC

Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:18:25.4	46.2	68.2	1.5	42	5.2		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/20	09:24:49.9	28.891N	130.845E	33N	4.5			NEIC

Ryukyu Islands, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:37:38.2	84.9	49.8					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/20								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 12:45:20.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/20	20:07:17.7	16.956S	68.503W	33.0N	5.3	5.5		SZGRF
2003/02/20	20:07:05.2	18.409S	71.084W	33N	5.3	5.2		NEIC

Peru-Bolivia border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:20:43.7	99.1	252.2					
	e PP	Z 20:24:42.4							
	e L	Z 21:01:25.0			21.7	1679		5.5	
CLL	e Pdiff	Z 20:20:50.7	100.5	253.9	0.6	2			
	e PP	Z 20:24:56.5							
	e SKSac	R 20:31:45.0							
	e PS	R 20:34:03.8							
	e SS	T 20:39:19.4							
	e LR	Z 20:56:45.1							
	e L	Z 21:02:34.5			22.0	1477		5.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/21	12:06:03.9	51.033N	178.665W	33N	4.6			NEIC

Andreanof Islands, Alaska

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e P	Z 12:17:57.8	77.6	7.5	0.6	2	4.5		
GRA1	e P	Z 12:18:07.5	79.3	6.3	1.0	6	4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/21	12:07:56.5	55.619N	158.925E	317D	4.7			NEIC

Off east coast of Kamchatka Peninsula, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	- Z 12:18:34.4	69.7	19.8	0.8	17	5.2		
	e pP	Z 12:19:44.4							
GRA1	e P	Z 12:18:46.8	71.7	18.6					
	e	12:19:27.2							
	e	12:19:57.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/21	12:06:33.6	53.345N	162.757E	33.0N	4.6			SZGRF
2003/02/21	12:07:56.5	55.619N	158.925E	317D	4.7			NEIC

Off east coast of Kamchatka Peninsula, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 12:18:07.5	71.3	18.6	1.0	6	4.6		
	e	12:18:46.8							
	e	12:19:27.2							
	e	12:19:57.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/21	22:13:25.3	25.845S	178.417W	254D	5.2			NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 22:32:49.0	155.0	20.9					
	e PKPbc	Z 22:32:58.4							
	e PKPab	Z 22:33:15.4							
	e PP	Z 22:36:49.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/22	01:45:45.3	16.013S	172.872W	100G	4.8			NEIC

Samoa Islands Region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 02:05:17.5	146.2	7.1					
	e PKPbc	Z 02:05:25.4							
	e PKPab	Z 02:05:38.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/22	12:17:45.8	18.302S	178.132W	550G	4.5			NEIC

Fiji Islands Region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	Z 12:36:25.4	145.9	19.1	0.8	55			
GRA1	e PKP	Z 12:36:30.9	147.7	16.8					

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Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/23	02:24:21.7	21.227S	178.464W	500G	4.3			NEIC

Fiji Islands Region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 02:43:19.0	150.5	18.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/23	11:36:02.7	21.273S	171.682E	33N	5.0	5.1		NEIC

SE of the Loyality Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKP	Z 11:55:40.2	145.7	37.0	1.0	27			
	e	11:56:03.0							
	e	11:57:05.5							
	e SS	Z 12:18:10.6							
	e (SSS)	Z 12:23:59.5							
	e LR	Z 12:45:19.7							
	e L	Z 13:00:30.0			22.0	650		5.4	
GRA1	e PKP	Z 11:55:46.2	147.6	35.6					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/23	17:00:16.8	43.200N	142.640E	76.5	5.1			SZGRF
2003/02/23	17:00:07.6	42.041N	142.457E	63	4.7			NEIC

Hokkaido, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 17:11:49.8	75.6	34.6					
CLL	e P	Z 17:11:56.1	76.8	36.1	1.1	17	5.1		
CLZ	e P	Z 17:11:59.6	77.3	34.4					
IBBN	e P	Z 17:12:01.9	77.8	32.7					
WET	e P	Z 17:12:06.8	78.6	35.7	1.2	15	5.0		
GRA1	e P	Z 17:12:08.1	78.8	34.7	1.4	34	5.3		
	e pP	Z 17:12:28.4							
FUR	e P	Z 17:12:14.6	80.1	34.6					
STU	e P	Z 17:12:15.8	80.3	33.3	1.4	28	5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/24	00:19:32.4	36.121N	28.433E	10.0G				SZGRF
2003/02/24	00:19:35.4	35.658N	28.347E	116	4.3			NEIC

Dodecanese Islands, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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GEC2	e Pn	Z	00:23:27.5	17.0	135.4
WET	e Pn	Z	00:23:34.0	17.6	134.2
FUR	e Pn	Z	00:23:36.5	17.7	128.5
BRG	e Pn	Z	00:23:43.6	18.4	140.2
GRA1	e Pn	Z	00:23:48.1	18.8	131.9
CLL	e Pn	Z	00:23:50.3	19.1	139.0
MOX	e Pn	Z	00:23:54.7	19.2	134.8
BFO	e Pn	Z	00:23:57.2	19.4	123.3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/24	02:03:29.6	37.185N	78.797E	33.0G	5.8	6.2		SZGRF
2003/02/24	02:03:41.4	39.606N	77.241E	11G	5.8	6.3		NEIC

Southern Xinjiang, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RGN	e P	Z	02:11:54.7	44.3	82.3	1.3	234	6.2		
RUE	e P	Z	02:11:54.3	44.3	80.5	1.5	94	5.7		
CLL	i P	+ Z	02:11:59.7	45.2	78.8	1.7	148	5.6		
	e pP	Z	02:12:09.4							
	e sP	Z	02:12:14.4							
	e PP	Z	02:13:50.7							
	e S	T	02:18:36.6							
	e SS	T	02:21:59.3							
	e LR	Z	02:25:33.8							
	e L	Z	02:33:35.8			18.0	30890		6.3	
WET	e P	Z	02:12:04.7	45.6	76.6	1.5	125	5.8		
MOX	e P	Z	02:12:07.6	46.0	77.3	1.6	105	5.6		
	e P	N	02:12:07.9			2.0	71			
GRC1	e P	Z	02:12:11.8	46.5	75.7	1.0	74	5.7		
GRA1	e P	Z	02:12:12.6	46.5	76.1	1.6	253	6.0		
	e pP	Z	02:12:22.5							
	e sP	Z	02:12:27.3							
	e PP	Z	02:14:22.3							
	e S	E	02:19:16.9							
	e L	Z	02:33:55.7			20.6	23242		6.2	
FUR	e P	Z	02:12:15.0	46.8	74.8	1.7	355	6.1		
STU	e P	Z	02:12:23.6	48.0	74.1	1.5	155	5.7		
TNS	e P	Z	02:12:24.1	48.1	74.9	1.5	65	5.3		
WLF	e P	Z	02:12:36.5	49.6	73.0	1.5	134	5.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/24	03:19:13.9	36.434N	85.156E	33.0N	4.7			SZGRF
2003/02/24	03:19:57.3	39.578N	77.675E	10G	4.4			NEIC

Southern Xinjiang, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:28:30.3	46.8	75.9	1.1	9	4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/24	15:48: 4.4	35.676N	87.388E	13.7	4.9			SZGRF
2003/02/24	15:49:01.4	39.269N	77.679E	10G	4.5			NEIC

Xizang

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 15:57:37.1	46.9	76.3	0.9	10	4.9		
	e pP	Z 15:57:40.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/24	21:18: 3.1	36.924N	84.084E	33.0N				SZGRF
2003/02/24	21:18:40.9	39.560N	77.187E	10G	5.0	4.5		NEIC

Southern Xinjiang, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z 21:26:59.3	45.2	78.9	0.9	16	5.0		
	e PP	R 21:28:48.7							
	e S	T 21:33:40.4							
	e SS	T 21:36:59.2							
	e LQ	T 21:39:48.3							
	e L	Z 21:47:13.5			18.0	1698		5.0	
GRA1	e P	Z 21:27:12.4	46.5	76.2	0.9	19			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/25	03:52:45.3	39.400N	78.080E	52.4	5.2			SZGRF
2003/02/25	03:52:40.8	39.517N	77.438E	10G	5.0	5.3		NEIC

Southern Xinjiang, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 04:00:57.6	44.7	79.0	1.0	20	5.0		
CLL	i P	- Z 04:01:00.9	45.2	78.8	0.8	17	5.0		
	e pP	Z 04:01:12.7							
	e SS	T 04:11:00.6							
	e LR	Z 04:15:24.0							
	e L	Z 04:22:25.7			20.0	2327		5.1	
GEC2	e P	Z 04:01:02.4	45.3	76.8	1.1	40	5.4		
TANN	e P	Z 04:01:05.6	45.7	77.6	1.3	28	5.1		
WET	e P	Z 04:01:05.9	45.7	76.6	1.2	24	5.1		
MOX	e P	Z 04:01:09.3	46.2	77.3	1.2	20	5.1		
BSEG	e P	Z 04:01:10.7	46.3	79.5	1.1	35	5.4		

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GRA1	e P	Z	04:01:13.8	46.6	76.1	1.0	46	5.5
	e pP	Z	04:01:27.8					
	e sP	Z	04:01:35.1					
CLZ	e P	Z	04:01:13.3	46.7	77.6	1.4	27	5.2
FUR	e P	Z	04:01:16.4	47.0	74.8	1.0	53	5.6
IBBN	e P	Z	04:01:24.6	48.1	76.2	1.0	25	5.2
STU	e P	Z	04:01:24.8	48.2	74.1	1.1	32	5.3
TNS	e P	Z	04:01:25.4	48.2	74.9	1.4	27	5.1
BUG	e P	Z	04:01:28.6	48.6	75.2	1.3	32	5.2
BFO	e P	Z	04:01:29.7	48.8	73.2	1.1	18	4.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/25								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 04:38:13.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/25	10:24:12.4	36.645N	82.629E	14.7	4.8			SZGRF
2003/02/25	10:24:44.4	39.346N	77.572E	10G	4.8			NEIC
Southern Xinjiang, China								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:33:18.6	46.8	76.2	0.8	11	4.8		
	e pP	Z 10:33:22.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/25	19:32:39.6	19.471S	176.434W	33N	5.2			NEIC
Fiji Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 19:52:19.8	147.4	16.7					
	e PKPbc	Z 19:52:22.6							
	e PKPab	Z 19:52:25.7							
	e	19:52:34.3							
GRA1	e PKP	Z 19:52:29.7	149.2	14.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/26	03:32:56.8	42.197N	2.282E	10.0G				SZGRF
2003/02/26	03:32:57.8	42.198N	2.280E	2				NEIC
Pyrenees								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z	03:34:43.3	7.5	217.0					
	e Sn	E	03:36:02.9							
	e Sg	N	03:36:53.5							
WLF	e Pn	Z	03:34:53.4	7.9	201.2					
FUR	e Pn	Z	03:35:02.7	8.7	230.0					
TNS	e Sg	N	03:37:45.3	9.1	210.3					
GRA1	e Sg	N	03:38:09.2	9.7	223.0					
WET	e Pn	Z	03:35:21.6	10.1	230.7					
	e Sn	N	03:37:08.2							
GEC2	e Pn	Z	03:35:23.9	10.4	234.5					
	e Sn	N	03:37:17.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/26	04:42:43.5	36.624N	26.177E	10.0G				SZGRF
2003/02/26	04:42:41.8	36.444N	25.877E	33N	4.1			NEIC

Dodecanese Islands, Greece

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z	04:46:19.5	15.3	139.9					
WET	e Pn	Z	04:46:26.1	15.8	138.5					
BRG	e Pn	Z	04:46:38.5	16.8	144.8					
GRA1	e Pn	Z	04:46:39.5	17.0	135.8					
TANN	e Pn	Z	04:46:39.5	17.0	140.3					
TNS	e Pn	Z	04:46:59.5	18.6	131.0					
WLF	e Pn	Z	04:47:08.7	19.4	125.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/27	01:40:39.1	34.668N	45.211E	33.0N	4.4			SZGRF
2003/02/27	01:39:56.1	31.578N	49.265E	33N	4.7			NEIC

Iran-Iraq border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	01:46:36.0	33.6	108.2	0.8	6	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/27	15:35:19.1	56.281N	160.282W	198.2	4.9			SZGRF
2003/02/27	15:35:29.9	58.651N	156.874W	199D	5.5			NEIC

Alaska Peninsula, United States

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	15:46:31.8	71.2	353.5	1.5	18	4.9		

e pP Z 15:47:18.9

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2003/02/27								
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb MS ML
	GRA1	e PKP	Z 21:16:24.7					
		e	21:16:33.6					

Format description

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

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

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

EPICENTER LINES:

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

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

COMMENT LINE:

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

REGION LINE:

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

PHASE LINE:

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