

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

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

NOVEMBER 2001      UPDATED 10.January.2002

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

(Format description at the end of the bulletin)

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/01	12:21:35.0	17.420S	71.819W	33N	5.1	4.8		NEIC
Near coast of Peru								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 12:35:22.0	98.8	253.4					
	e (PP)	Z 12:38:47.7							
	e L	Z 13:16:56.9			21.2	127		4.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/01	14:54:40.2	16.935S	177.149E	33N	4.9			NEIC
Fiji Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 15:14:14.4	145.3	24.1					
	e L	Z 16:24:46.5			21.6	192		4.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/01	15:02:05.0	17.050S	177.180E	33N	4.7			NEIC
Fiji Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 15:21:40.1	145.4	24.1					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2001/11/01 18:38:48.1 16.402S 179.370W 500G 4.1 NEIC  
Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 18:57:32.0	145.6	18.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/01	19:31:01.5	15.980S	176.100E	33N	4.4			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 19:50:40.2	144.1	25.3					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/01	22:43:55.6	37.042S	179.479E	33N	5.1	5.3		NEIC

Off east coast of North Island, New Zealand

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 23:04:53.2	164.8	38.2					
	e PKPab	Z 23:05:02.0							
	e L	Z 00:21:20.9			20.1	327		5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/02								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:18:18.9							
	e L	Z 09:25:34.7			17.2	488			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/02	10:14:29.3	44.073N	149.306E	33N	4.9			NEIC

Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:26:37.7	79.4	29.2			4.6		
	e	10:26:49.6							
	e (pP)	Z 10:27:04.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
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2001/11/02 14:30:01.9 51.747N 179.151E 65D 4.9 4.7 NEIC  
Rat Islands, Aleutian Islands, United States

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e P Z 14:41:57.2 78.0 7.6

Date Origin Time Lat Long Depth mb Ms ML Source  
2001/11/02

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e Pg Z 21:28:37.0  
e Sg Z 21:29:15.3

Date Origin Time Lat Long Depth mb Ms ML Source  
2001/11/02 22:05:25.8 27.570N 55.920E 9.3 4.9 SZGRF  
2001/11/02 22:05:30.9 27.175N 54.620E 33N 5.2 NEIC  
Southern Iran

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e P Z 22:13:04.9 40.0 107.9 4.9  
e pP Z 22:13:07.3

Date Origin Time Lat Long Depth mb Ms ML Source  
2001/11/02 22:18: 0.6 N 5.3 4.8 SZGRF  
2001/11/02 22:17:39.2 6.105N 126.869E 33N 5.2 NEIC  
East of Philippine Islands

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 e P Z 22:31:30.1 101.4 66.1 5.3  
e L Z 23:05:25.2 18.3 272 4.8

Date Origin Time Lat Long Depth mb Ms ML Source  
2001/11/02 22:35:14.7 36.070N 70.540E 27.0 4.4 4.1 SZGRF  
2001/11/02 22:35:17.2 36.470N 69.721E 33N 5.1 NEIC  
Hindu Kush, Afghanistan, region

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
GRA1 i P - Z 22:43:22.4 43.5 84.7 4.4  
e pP Z 22:43:29.8  
e sP Z 22:43:32.7  
e L Z 23:14:21.3 18.1 216 4.1

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source			
2001/11/03											
		Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
		GRA1	e (PKPab)	Z 04:01:24.0							
			e (pPKPab)	Z 04:01:32.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source			
2001/11/03	09:48:09.8	19.969S	177.975W	393D	5.0			NEIC			
Fiji Islands region											
		Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
		CLL	e PKPdf	Z 10:07:06.2			1.1	10			
			i PKPbc	- Z 10:07:09.9			0.9	101			
			i PKPab	Z 10:07:13.1			1.1	65			
			e pPKPbc	Z 10:08:45.7							
		GRA1	e PKPdf	Z 10:07:12.6	149.4	17.2					
			i PKPbc	- Z 10:07:15.3							
			e PKPab	Z 10:07:21.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source			
2001/11/03											
		Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
		GRA1	e PKP	Z 11:43:29.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source			
2001/11/03	17:03:26.9			N	4.8			SZGRF			
2001/11/03	17:03:42.1	55.935N	161.034E	83D	4.9			NEIC			
Off east coast of Kamchatka Peninsula, Russia											
		Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
		GRA1	e P	Z 17:14:57.6	71.4	17.3			4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source			
2001/11/03											
		Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML

GRA1 e P Z 20:31:59.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/03	23:33:58.0	42.260N	143.960E	33.0G	5.9			SZGRF
2001/11/03	23:34:32.0	43.927N	139.520E	220D	4.9			NEIC

Hokkaido, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	- Z 23:45:47.7			1.0	143	5.9		
	e pP	Z 23:46:39.9							
	e PP	Z 23:48:36.7							
GRA1	e P	Z 23:46:00.0	76.1	35.6			5.9		
	e pP	Z 23:47:49.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/04								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKPab)	Z 01:47:18.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/04	08:45:31.9				5.0			SZGRF
2001/11/04	08:45:35.8	23.742N	121.203E	33N	4.9			NEIC

Southwestern Ryukyu Islands, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 08:58:05.9	84.0	59.9			5.0		
	e pP	Z 08:58:11.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/04								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 15:58:54.6							
	e L	Z 16:45:06.6			19.4	240	4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/04	16:38:20.5			N	4.4			SZGRF
2001/11/04	16:38:09.8	27.143N	54.600E	33N	4.9			NEIC

Southern Iran

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 16:45:43.8	40.0	108.0			4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/04	17:23:29.8	34.060N	25.428E	33N	5.0			NEIC

Crete, Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:27:47.3	18.8	140.9	1.5	416	5.4		
	e L	Z 17:34:40.9			21.5	176		3.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/04	21:44:58.4	39.458N	15.089E	315*				NEIC

Central Mediterranean Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 21:47:23.8	10.6	163.5					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/04								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 23:09:19.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/05	01:43:15.8	36.550N	33.470E	33.0N	4.3			SZGRF
2001/11/05	01:43:28.2	36.831N	31.216E	33N	4.2			NEIC

Turkey

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	+ Z 01:47:54.3	19.3	124.2			4.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/05	20:08:45.0	32.420N	131.150E	33.0N	4.4			SZGRF
2001/11/05	20:08:23.2	29.995N	130.938E	33N	4.7			NEIC

Kyushu, Japan

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Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:21:03.0	84.1	49.1			4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/05	23:07:11.7	17.297S	179.240W	564D	5.4			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 23:25:45.7							
	i PKPbc	Z 23:25:46.8			0.9	1013			
	e pPKPdf	Z 23:27:56.6							
	i SKP	Z 23:28:34.6							
	e sPKPdf	Z 23:28:50.3							
	e SKKSac	N 23:35:01.1							
	e SKSP	Z 23:38:20.0							
	e SPP	Z 23:40:55.9							
	e SS	T 23:47:33.4							
	e SSP	N 23:47:56.9							
GRA1	e PKPdf	- Z 23:25:49.5	146.5	18.3					
	e PKPbc	Z 23:25:52.7							
	e PKPab	Z 23:25:55.4							
	e pPKPdf	Z 23:27:57.8							
	e (pPKPab)	Z 23:28:36.0							
	e PP	Z 23:29:31.1							
	e	23:38:37.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/06	00:03:19.3	21.442S	178.995W	600G	4.4			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z 00:22:06.6	150.6	19.7					
	e PKPab	Z 00:22:15.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/06	14:09:24.9	27.205N	91.958E	33N	5.2	4.3		NEIC

Eastern Xizang-India border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 14:19:58.0	63.8	78.0			5.5		
	e (pP)	Z 14:20:00.9							
	e L	Z 14:50:27.2			20.1	167		4.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/06	16:09:23.5	31.780N	85.200E	33.0N		4.0		SZGRF
2001/11/06	16:09:19.3	34.033N	79.715E	33N	4.9	4.0		NEIC

Xizang

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 16:18:25.1	51.4	80.4					
	e (S)	Z 16:26:14.6							
	e (SS)	Z 16:30:09.6							
	e L	Z 16:41:29.9			21.4	148		4.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/06								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	Z 22:33:22.7			1.1	29			
	e PKPab	Z 22:33:27.7			1.2	18			
GRA1	e (P)	Z 22:33:27.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/07	03:38:51.3	42.810N	23.220W	20.6	4.2	3.9		SZGRF

Azores Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:44:10.0	24.5	267.0			4.2		
	e (pP)	Z 03:44:15.2							
	e L	Z 03:54:42.5			19.7	389		3.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/07	05:12:13.3	49.860N	18.020E	10.0			3.3	SZGRF
2001/11/07	05:12:05.5	49.819N	18.557E	5G				NEIC

Czech and Slovak Republics

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e Pn	Z 05:12:59.0	3.1	107.9					2.9
	e Pg	Z 05:13:02.2							
	e Sg	N 05:13:43.9							
GEC2	e Pn	Z 05:12:58.8	3.3	71.1					3.1
	e Pg	Z 05:13:07.1							
	e Sg	E 05:13:49.3							
WET	e Pn	Z 05:13:04.3	3.7	77.5					3.4



	e Pg	Z	05:13:14.7								
	e Sg	E	05:14:02.2								
CLL	e Pn	Z	05:13:05.5	3.8	110.7						3.4
	e Pg	Z	05:13:16.5								
	e Sg	E	05:14:03.5								
MOX	e Pg	Z	05:13:30.1	4.5	97.9						3.4
	e Sg	N	05:14:25.4								
GRA1	e Sg	N	05:14:33.0	4.7	85.7						3.7

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/07 09:40:43.5 41.393N 10.113E 10G 4.6 NEIC  
 Tyrrhenian Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	09:42:45.8	8.3	185.7					
	e L	Z	09:47:12.0			13.2	740		3.6	

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/07 09:40:00.4 21.126S 178.685W 500G 4.3 NEIC  
 Fiji Islands region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z	09:58:54.2	150.4	18.9					
	e PKPab	Z	09:59:03.3							

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/08 02:00: 7.5 72.400N 0.010W 26.3 4.9 3.9 SZGRF  
 2001/11/08 02:00:05.5 72.326N 2.234E 10G 4.9 4.5 NEIC  
 Jan Mayen Island region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z	02:05:13.3	23.0	353.0			4.9		
	e pP	Z	02:05:19.5							
	e (sP)	Z	02:05:23.2							
	e L	Z	02:13:52.8			20.5	474		3.9	

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/08

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z	10:17:06.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/08	17:43:11.4	22.230S	68.900E	21.0	5.4	4.6		SZGRF
2001/11/08	17:42:55.0	27.757S	65.739E	10G	5.2	4.7		NEIC

Mid-Indian Ridge

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRC4	e L	Z	18:33:46.2	90.7	134.1	19.4	168		4.5	
GRA1	i P	- Z	17:56:01.2	91.3	133.9			5.4		
	e pP	Z	17:56:07.0							
	e sP	Z	17:56:10.2							
	e L	Z	18:35:30.8			20.4	216		4.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/09	00:47:54.9	9.630N	82.990W	9.9	6.0	5.8		SZGRF
2001/11/09	00:47:58.0	9.643N	82.243W	33N	5.9	5.7		NEIC

Panama-Costa Rica border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
WLF	i P	+ Z	01:00:15.7	81.6	275.1					
	e L	Z	01:31:10.6			20.2	2896		5.6	
BUG	i P	+ Z	01:00:18.1	82.2	275.7					
	e L	Z	01:34:42.2			19.6	3627		5.8	
IBBN	i P	+ Z	01:00:19.3	82.4	275.9					
	e L	Z	01:33:01.0			20.1	7291		6.0	
TNS	i P	+ Z	01:00:22.7	83.0	276.7					
	e L	Z	01:32:04.4			20.7	3937		5.8	
BFO	i P	+ Z	01:00:23.2	83.2	276.9					
	e L	Z	01:31:21.4			20.7	4446		5.8	
STU	i P	+ Z	01:00:26.2	83.7	277.5					
	e L	Z	01:36:15.2			18.5	8627		6.2	
BSEG	i P	+ Z	01:00:26.1	83.7	277.8					
	e L	Z	01:37:59.2			18.8	3072		5.7	
CLZ	i P	+ Z	01:00:28.0	84.0	278.0					
	e L	Z	01:34:01.5			20.2	4307		5.8	
GRFO	e L	Z	01:33:31.3	84.9	278.9	20.2	4740		5.9	
GRA1	i P	+ Z	01:00:32.6	84.9	278.9			6.0		
	i pP	- Z	01:00:35.5							
	e SKS	Z	01:11:26.6							
	e (S)	Z	01:11:52.4							
	e SS	Z	01:16:41.0							
	e L	Z	01:33:31.4			20.1	5318		5.9	
MOX	i P	+ Z	01:00:32.7	85.0	279.1					
	e L	Z	01:33:15.8			20.3	3083		5.7	
FUR	i P	+ Z	01:00:33.5	85.2	279.1					

	e L	Z	01:36:58.5			18.6	4836		5.9
CLL	i P	+ Z	01:00:36.4			1.3	369	6.4	
	e PP	Z	01:03:56.6						
	e S	T	01:11:09.9						
	e PS	Z	01:12:02.3						
	e SS	R	01:16:48.9						
	e SSS	E	01:20:18.7						
	e LR	Z	01:27:55.1						
	e L	Z	01:40:43.1			18.0	3149		5.8
RUE	i P	+ Z	01:00:37.6	86.0	280.6				
	e L	Z	01:36:23.5			19.6	5944		6.0
WET	i P	+ Z	01:00:38.3	86.0	280.2				
	e L	Z	01:33:54.0			20.5	5272		5.9
BRG	i P	+ Z	01:00:39.9	86.4	280.9				
	e L	Z	01:36:40.8			20.9	2296		5.6
GEC2	i P	+ Z	01:00:41.0	86.6	280.8				
	e L	Z	01:37:56.0			18.3	4163		5.9

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/09 03:15:11.5 46.660N 158.950E 33.0N  
 East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:27:16.2	79.7	21.9					

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/09 04:20:17.5 43.164N 11.027E 10G  
 Central Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e Pn	Z 04:21:40.0	5.5	159.0					
	e Pn	E 04:21:40.6							
	e Sg	E 04:22:40.4							
GEC2	e Pn	Z 04:21:45.9	6.0	199.1					
WET	e Pn	Z 04:21:47.3	6.1	192.8					
GRA1	e Pn	Z 04:21:55.0	6.5	181.3					
MOX	e Pn	Z 04:22:07.8	7.5	183.3					
BRG	e Pn	Z 04:22:15.1	8.0	195.5					
CLL	e Pn	Z 04:22:17.8	8.3	190.1					
	e Sg	E 04:23:28.1							

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/09 05:36:11.6 53.210N 35.700W 20.6 4.9 4.8  
 SZGRF

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2001/11/09 05:36:10.0 53.144N 35.182W 10G 5.4 5.1 NEIC  
North Atlantic Ocean

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 05:42:09.6	28.6	295.0			4.9		
	e (pP)	Z 05:42:14.9							
	e L	Z 05:52:41.3			18.5	2052		4.8	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/09	08:35:41.8	45.050N	154.740E	49.8	4.9			SZGRF
2001/11/09	08:35:37.1	44.038N	149.411E	33N	4.9	4.5		NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 08:47:46.3	79.4	29.2			4.9		
	e pP	Z 08:47:57.5							
	e (sP)	Z 08:48:10.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/10	00:37:14.4	24.859N	122.792E	33N	4.8	4.8		NEIC

Taiwan region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 00:49:44.3	84.0	58.0			4.8		
	e L	Z 01:27:55.8			21.1	479		4.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/10								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 02:28:39.2					3.8		
BEAM		02:28:39.2			1.2	5			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/10	17:09:18.2	16.206N	98.033W	33N	5.2	5.1		NEIC

Guerrero, Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:22:16.6	89.5	295.0			5.6		
	e L	Z 18:00:33.0			22.0	589		5.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/11								
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb MS ML
	GRA1	e PKP	Z 00:30:16.0					
		e (pPKP)	Z 00:30:25.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/11								
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb MS ML
	GRA1	e P	Z 00:56:57.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/11	07:36:44.6	51.490N	163.470E	33.0N	4.7			SZGRF
Off east coast of Kamchatka Peninsula, Russia								
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb MS ML
	GRA1	e P	Z 07:48:29.4	76.1	17.4			4.7

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/11	14:09:41.0	45.120N	154.310E	42.2	5.2			SZGRF
2001/11/11	14:09:42.6	45.830N	152.970E	40D	5.2	5.0		NEIC
East of Kuril Islands, Russia								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 14:21:45.6	78.9	26.1			5.2		
	e	14:21:53.7							
	e pP	Z 14:21:57.6							
	e sP	Z 14:22:03.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/11	18:12:46.4	33.287N	137.374E	362D	5.0			NEIC
Southeast of Honshu, Japan								
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb MS ML
	GRA1	i P	- Z 18:24:41.5	84.3	42.7			
		e pP	Z 18:26:06.6					
		e (sP)	Z 18:26:45.7					

e PP Z 18:28:03.8

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/11	18:27:09.9	21.230S	174.693W	33N	4.8	4.6		NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKPdf)	Z 18:47:02.4	151.2	11.5					
	e (PKPab)	Z 18:47:11.0							
	e (pPKPab)	Z 18:47:20.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/12	01:37:28.2	52.430N	162.430E	33.0N	4.7			SZGRF
2001/11/12	01:37:42.3	52.134N	157.245E	147D	4.3			NEIC

Off east coast of Kamchatka Peninsula, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z 01:49:06.7	74.2	20.9			4.7		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/12								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKP)	Z 05:21:06.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/12								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA2	e (P)	Z 07:14:19.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/12	10:11:16.0	22.296N	45.119W	10G	4.9	5.3		NEIC

Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:20:25.5	51.6	259.3			5.2		
	e S	Z 10:27:52.8							
	e L	Z 10:38:00.7			19.2	1022		4.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source			
2001/11/12											
		Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
		GRA1	e (PKPdf)	Z 11:01:30.6							
			i PKPbc	- Z 11:01:36.1							
			e PKPab	Z 11:01:44.0							
			e (PP)	Z 11:04:51.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/12	11:30:19.7	41.760N	144.180E	33.0N	4.8			SZGRF
2001/11/12	11:30:22.2	41.345N	142.114E	67D	4.8			NEIC

Hokkaido, Japan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 11:42:24.4	79.3	35.3			4.8		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/12	17:54:19.1	49.572S	116.143W	10G	5.4	4.9		NEIC

Southern East Pacific Rise

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 18:14:01.0	146.6	249.5					
	e PKPbc	Z 18:14:08.4							
	e PKPab	Z 18:14:16.7							
	e L	Z 19:17:49.3			21.8	271		5.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source			
2001/11/12											
		Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
		GRA1	e (P)	Z 18:31:26.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/13	07:45: 3.9	39.340N	141.960E	22.8	5.1			SZGRF
2001/11/13	07:45:07.4	39.576N	141.896E	69*	4.7			NEIC

Eastern Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 07:57:17.0	80.7	36.3			5.1		
	e (pP)	Z 07:57:23.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/13	08:25:31.3	25.203N	128.072E	33N	4.6			NEIC

Southeast of Ryukyu Islands, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 08:38:12.1	86.5	54.0					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/13	09:47:36.0	22.264N	106.949W	33N	5.5	5.7		NEIC

Northern Mexico

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BUG	e P	Z 10:00:22.3	86.6	302.3					
	e L	Z 10:38:39.0			18.5	9601		6.2	
BSEG	e P	Z 10:00:24.5	86.8	304.5					
	e L	Z 10:39:27.2			19.8	7519		6.1	
WLF	e P	Z 10:00:28.0	86.9	301.5					
	e L	Z 10:41:43.0			21.0	5253		5.9	
TNS	e L	Z 10:36:46.1	87.9	303.2	20.3	5001		5.9	
CLZ	e P	Z 10:00:24.9	88.0	304.6					
	e L	Z 10:39:14.3			20.3	8331		6.1	
BFO	e P	Z 10:00:32.5	88.8	303.2					
	e L	Z 10:35:01.2			21.6	7707		6.1	
MOX	e P	Z 10:00:34.1	89.3	305.6					
	e L	Z 10:42:19.3			20.5	10908		6.2	
CLL	i P	- Z 10:00:44.8			1.5	22	5.2		
	e PP	Z 10:04:03.2							
	e S	T 10:11:25.2							
	e PS	E 10:12:34.7							
	e SS	N 10:17:20.7							
	e LQ	T 10:24:23.0							
	e LR	Z 10:29:05.1							
	e L	Z 10:40:08.3			20.0	7295		6.1	
GRFO	e P	Z 10:00:37.6	89.6	305.3					
	e L	Z 10:37:42.0			21.5	6051		6.0	
GRA1	e (P)	Z 10:00:42.2	89.6	305.3					
	e PP	Z 10:04:00.2							
	e L	Z 10:37:42.3			21.8	4025		5.8	
BRG	e P	Z 10:00:39.1	90.3	307.4					
	e L	Z 10:40:39.8			20.6	8227		6.1	
WET	e P	Z 10:00:41.7	90.8	306.6					



	e L	Z	10:41:38.2			19.8	5918	6.0
GEC2	e P	Z	10:00:43.4	91.4	307.2			
	e L	Z	10:40:35.9			19.4	5298	6.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/13	10:43:38.0	55.540N	170.080E	33.0N	5.1	5.6		SZGRF
2001/11/13	10:43:22.7	53.682N	170.484E	33N	5.5	5.8		NEIC

Bering Sea

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BSEG	e P	Z 10:54:42.4	71.1	12.3	0.9	30	5.4		
	e L	Z 11:30:19.1			18.8	3309		5.6	
CLZ	e P	Z 10:54:54.7	73.2	12.2	1.0	18	5.2		
	e L	Z 11:31:54.1			18.8	5084		5.8	
CLL	i P	Z 10:54:54.8			1.1	22	5.1		
	e PP	Z 10:57:40.3							
	e S	Z 11:04:33.9							
	e SS	Z 11:09:02.4							
	e LR	Z 11:18:49.8							
	e L	Z 11:31:04.5			22.0	2895		5.5	
BRG	e P	Z 10:54:56.6	73.6	14.2	1.0	20	5.2		
	e L	Z 11:42:59.1			20.9	2510		5.5	
MOX	e P	Z 10:55:00.2	74.2	12.8	1.1	16	5.0		
	e L	Z 11:41:15.2			18.5	4465		5.8	
TNS	e P	Z 10:55:05.0	75.0	10.9	0.8	8	4.9		
	e L	Z 11:30:20.5			21.2	2852		5.5	
GRA1	e P	Z 10:55:06.6	75.2	12.5	1.0	15	5.0		
	e L	Z 11:33:16.4			18.7	3001		5.6	
WET	e P	Z 10:55:08.0	75.5	13.5	1.0	23	5.1		
	e L	Z 11:32:54.8			19.0	3956		5.7	
GEC2	e P	Z 10:55:08.7	75.6	13.9	1.0	21	5.1		
	e L	Z 11:33:57.0			18.4	3485		5.7	
BFO	e P	Z 10:55:15.5	76.9	10.7	1.0	13	4.9		
	e L	Z 11:33:10.0			19.9	3192		5.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/13	14:55:58.0	44.200N	151.550E	33.0N	4.8			SZGRF
2001/11/13	14:56:14.1	45.530N	148.785E	113D	4.7			NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	+ Z 15:08:04.1	77.9	28.9			4.8		

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Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/13	16:02:38.6	17.440S	178.813W	543D	4.5			NEIC

Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 16:21:19.1	146.7	17.6					
	i PKPbc	- Z 16:21:21.9							
	e (PKPab)	Z 16:21:26.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/13	16:35:52.4	36.421N	70.787E	206*	4.6			NEIC

Hindu Kush, Afghanistan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 16:43:44.1	44.2	84.0			4.5		
	e pP	Z 16:44:28.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/14	02:50:58.0	53.790N	164.770W	33.0N	5.0			SZGRF
2001/11/14	02:50:56.9	54.004N	164.113W	41D	4.9			NEIC

Unimak Island, Alaska, United States, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	- Z 03:02:44.8	76.2	357.2			5.0		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/14	09:26:11.4	34.950N	90.770E	33.0G	5.9	7.8		SZGRF
2001/11/14	09:26:10.3	35.945N	90.535E	10G	6.1	8.0		NEIC

Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
RUE	e P	Z 09:35:42.0	54.7	75.0	2.7	760	6.2		
BRG	e P	Z 09:35:44.6	55.0	74.1	2.4	303	5.9		
	e L	Z 10:01:29.7			20.0	784687		7.8	
CLL	e P	Z 09:35:47.0			1.6	257	6.0		
	e	09:35:56.6							
	e	09:36:25.4							
	e PP	Z 09:37:49.8							
	e S	T 09:43:34.4							
	e SSS	E 09:49:38.6							
	e LQ	T 09:51:42.4							
	e LR	Z 09:54:40.6							
	e L	Z 10:01:41.9			20.0	824783		7.8	

GEC2	e P	Z	09:35:50.2	55.7	72.6	2.4	257	5.8	
	e L	Z	10:02:32.0			21.4	404706	7.5	
WET	e P	Z	09:35:53.2	56.1	72.3	2.7	376	5.9	
	e L	Z	10:04:07.7			21.2	819142	7.8	
BSEG	e P	Z	09:35:54.4	56.3	73.6	2.0	257	5.9	
	e L	Z	10:03:39.5			22.0	897187	7.8	
MOX	e P	Z	09:35:55.3	56.5	72.4	2.4	248	5.8	
	e L	Z	10:02:13.8			21.9	685675	7.7	
CLZ	e P	Z	09:35:58.0	56.8	72.3	1.8	176	5.8	
	e L	Z	10:02:35.5			19.2	1167201	8.0	
GRA1	e P	Z	09:35:59.7	57.0	71.6	2.3	404	6.0	
	e		09:36:04.4						
	e		09:36:15.3						
	e		09:36:23.7						
	e		09:36:29.4						
	e		09:36:41.9						
	e		09:37:35.8						
	e S	Z	09:44:00.4						
	e L	Z	10:02:33.3			20.0	699867	7.8	
	GRFO	e P	Z	09:35:59.6	57.0	71.6			
GRC4	e P	Z	09:35:59.3	57.0	71.4				
IBBN	e P	Z	09:36:07.4	58.2	70.9	2.9	676	6.2	
	e L	Z	10:03:30.7			18.8	1041559	8.0	
TNS	e P	Z	09:36:09.5	58.5	70.1	2.5	314	5.9	
	e L	Z	10:06:01.6			20.1	463796	7.6	
STU	e P	Z	09:36:10.2	58.5	69.8	2.4	304	5.9	
	e L	Z	10:03:29.9			18.9	672041	7.8	
BUG	e P	Z	09:36:11.8	58.8	70.1	2.3	292	5.9	
	e L	Z	10:03:46.2			20.6	858041	7.9	
BFO	e P	Z	09:36:14.5	59.2	69.0	2.1	203	5.8	
	e L	Z	10:06:20.0			20.8	533511	7.7	
WLF	e P	Z	09:36:20.8	60.1	68.4	2.3	222	5.6	
	e L	Z	10:06:20.3			20.1	397539	7.6	

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/14 09:45:16.5 35.753N 93.298E 10G 5.5  
 Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z 09:55:18.8	58.8	70.0			6.0		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/14 10:58:12.0 35.637N 93.893E 10G 5.5  
 Qinghai, China

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Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z	11:08:18.0	59.2	69.7					
	e		11:08:20.9							
	e pP	Z	11:08:37.7							
	e (pX)	Z	11:08:40.9							
	e (PP)	Z	11:10:27.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/14	11:40:23.9	35.590N	93.911E	10G	5.3			NEIC

Qinghai, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	11:50:28.2	59.3	69.8			4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/14	13:38:46.1	15.105S	174.191W	92D	5.2			NEIC

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKP	Z	13:58:08.7			1.0	46			
	e pPKP	Z	13:58:39.1							
GRA1	i PKPdf	- Z	13:58:15.2	145.1	9.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/14	16:52:44.4	20.268S	175.916W	166D	5.1			NEIC

Tonga Islands

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPdf	- Z	17:12:12.1			0.9	34			
	i PKPbc	Z	17:12:15.4			0.8	58			
	e		17:12:26.4							
	e pPKPbc	Z	17:12:56.2							
	e PP	Z	17:15:35.1							
GRA1	i PKPdf	- Z	17:12:17.3	150.0	13.5					
	e PKPbc	Z	17:12:23.8							
	e PKPab	Z	17:12:33.3							
	e pPKPbc	Z	17:13:01.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/14	17:13:04.2	8.830S	124.227E	85D	5.3			NEIC

Timor, Indonesia, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PP	Z 17:32:12.1	111.5	77.9					
	e pPP	Z 17:32:36.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/14	19:55:46.7	38.120N	23.550E	6	4.4			NEIC

Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 19:59:18.6	14.5	138.0					
	e L	Z 20:05:12.9			28.7	169		3.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/14	21:23:32.8	35.627N	93.978E	10G	5.1			NEIC

Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z 21:33:38.5	59.3	69.7			5.0		
	e L	Z 22:00:36.6			19.9	291		4.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/14	23:05:30.1	35.670N	95.000E	10.0G	5.1	4.4		SZGRF
2001/11/14	23:05:28.0	35.602N	94.461E	10G	5.1	5.0		NEIC

Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z 23:15:36.2	59.6	69.4			5.1		
	e L	Z 23:42:10.7			20.4	299		4.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/15	01:03: 4.7	2.890S	14.510W	33.0N	5.6	6.1		SZGRF
2001/11/15	01:03:05.8	1.715S	15.561W	10G	5.6	5.9		NEIC

North of Ascension Island

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BFO	e P	Z 01:12:32.0	54.2	209.9	1.4	124	5.7		
	e L	Z 01:34:41.7			20.5	18278		6.1	
WLF	e P	Z 01:12:36.0	54.7	207.0	1.7	86	5.5		
	e L	Z 01:35:02.7			19.5	10841		5.9	
STU	e P	Z 01:12:36.9	54.8	210.8	1.4	90	5.6		

	e L	Z	01:35:01.7			21.6	13523		6.0
FUR	e P	Z	01:12:38.2	55.1	213.4	1.2	154	5.9	
	e L	Z	01:35:17.9			21.6	13282		6.0
TNS	e P	Z	01:12:44.2	55.9	209.4	1.6	110	5.6	
	e L	Z	01:37:04.1			18.2	17791		6.2
GRA1	e P	Z	01:12:48.0	56.3	212.8	1.4	71	5.5	
	e (pP)	Z	01:12:54.2						
	e (sP)	Z	01:12:57.9						
	e		01:13:05.8						
	e		01:13:11.9						
	e S	Z	01:20:40.6						
	e L	Z	01:38:23.5			18.2	16675		6.2
WET	e P	Z	01:12:48.4	56.5	214.8	1.4	135	5.8	
	e L	Z	01:36:30.6			21.4	18030		6.1
GEC2	e P	Z	01:12:49.2	56.5	215.8	1.5	121	5.7	
	e L	Z	01:34:45.7			21.1	7420		5.8
BUG	e P	Z	01:12:49.7	56.6	207.7	1.4	60	5.4	
	e L	Z	01:37:09.1			19.1	13736		6.1
MOX	e P	Z	01:12:54.0	57.3	212.9	1.5	118	5.7	
	e L	Z	01:38:59.8			18.0	21110		6.3
IBBN	e P	Z	01:12:56.1	57.5	208.0	1.8	147	5.7	
	e L	Z	01:36:43.7			21.0	12756		6.0
CLZ	e P	Z	01:12:58.7	57.9	211.1				
	e L	Z	01:40:49.2			18.5	15587		6.2
BRG	e P	Z	01:13:01.3	58.3	215.4	1.5	78	5.5	
	e L	Z	01:36:49.1			18.5	10494		6.0
CLL	i P	Z	01:13:01.1			1.5	77	5.5	
	e PP	Z	01:15:13.4						
	e PPP	Z	01:16:25.0						
	e S	N	01:21:04.2						
	e SS	N	01:24:59.7						
	e SSS	N	01:27:11.7						
	e LR	Z	01:30:32.7						
	e L	Z	01:39:34.1			18.0	20996		6.3
RUE	e P	Z	01:13:10.4	59.5	214.6	1.6	172	5.8	
	e L	Z	01:40:26.4			18.1	14947		6.2
BSEG	e P	Z	01:13:11.2	59.7	210.4	1.1	65	5.6	
	e L	Z	01:38:48.0			18.2	11735		6.1

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/15 08:13:41.1 20.363S 176.817W 400G 4.6 NEIC  
 Fiji Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPbc	Z 08:32:48.3	150.0	15.2					
	e PKPab	Z 08:32:55.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/15	09:42:46.1			N				SZGRF
2001/11/15	09:42:20.8	43.104N	47.181E	33N	4.8			NEIC

Ukraine - Moldova - Southwestern Russia region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 09:47:56.2	25.4	91.2					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/15	09:52:54.7	46.760N	14.360E	10.0G			3.2	SZGRF

Northwestern Balkan Peninsula

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pg	Z 09:53:31.4	2.1	167.8					2.9
	e Sg	E 09:54:02.4							
WET	e Pg	N 09:53:41.0	2.6	156.8					
	e Sg	E 09:54:17.2							3.0
GRC1	e Pg	Z 09:53:46.9	2.9	138.5					3.3
	e Sg	Z 09:54:28.7							
GRA1	e Pg	Z 09:53:59.5	3.6	143.3					3.7
	e Sg	E 09:54:48.3							
BRG	e Pg	N 09:54:10.6	4.1	176.0					
	e Sg	E 09:55:05.8							
MOX	e Sg	E 09:55:12.2	4.3	154.0					
CLL	e Sg	E 09:55:20.4	4.6	168.4					

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/15	22:14:34.5	45.870N	154.150E	33.0N	4.9			SZGRF
2001/11/15	22:15:27.5	47.118N	146.297E	376	4.6			NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z 22:26:36.4	75.7	29.7			4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/16	01:09:24.4	30.920N	51.630E	26.6	4.3	3.5		SZGRF
2001/11/16	01:09:26.9	30.429N	50.333E	33N	4.7	3.6		NEIC

Northern and central Iran

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:16:19.0	35.0	108.6			4.3		





GRA1 e P Z 07:59:59.4

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/17	12:16:29.8	38.490N	40.560E	31.8	4.2			SZGRF
2001/11/17	12:14:47.0	30.492N	50.440E	33N	4.8			NEIC

Turkey

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 12:21:38.8	35.0	108.4			4.2		
	e pP	Z 12:21:46.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/17	16:30:54.3	3.610S	79.090W	110.2	5.1			SZGRF
2001/11/17	16:30:55.1	3.352S	77.791W	102D	5.1			NEIC

Near coast of Ecuador

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	- Z 16:43:55.0	91.9	267.1			5.1		
	e pP	Z 16:44:23.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/17	17:24:51.9	50.200N	173.110E	33.0N	4.5			SZGRF
2001/11/17	17:25:03.8	49.276N	156.051E	48?	4.5			NEIC

South of Aleutian Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:36:52.5	76.5	22.7			4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/17	19:02:12.1	24.450S	115.884W	10G	5.3	5.3		NEIC

Southern East Pacific Rise

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 19:21:29.8	132.1	281.8					
	e L	Z 20:15:41.6			21.7	464		5.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/17	22:10:27.2	60.635S	153.703E	10	5.5	5.6		NEIC

West of Macquarie Island

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPab	Z 22:30:53.9	171.7	129.7					
	e L	Z 23:58:13.0			19.0	974			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/18		37.830N	24.040E	33.0N				SZGRF

Southern Greece

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 01:06:02.1	15.0	137.4					
	e	01:06:14.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/18	01:28:50.5				4.5			SZGRF
2001/11/18	01:28:57.0	42.555N	74.293E	33N	4.4			NEIC

Lake Issyk-Kul, Kyrgyzstan, region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	+ Z 01:36:57.7	43.0	74.4			4.5		
	e (pP)	Z 01:37:01.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/18	03:49:37.7	44.770N	150.720E	33.0N	5.3			SZGRF
2001/11/18	03:49:37.5	44.486N	148.067E	33N	5.3			NEIC

East of Kuril Islands, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 04:01:39.6	78.6	29.9			5.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/18	21:46: 2.3	37.210N	92.010E	33.0N	4.9			SZGRF

Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 21:55:45.6	57.1	69.5			4.9		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/18	21:59:53.4	35.806N	93.612E	10	5.9	5.6		NEIC

Qinghai, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	22:09:44.8			1.4	265	6.1		
	e PP	Z	22:11:48.1							
	e S	N	22:17:45.7							
	e SS	E	22:21:42.2							
	e LR	Z	22:27:20.4							
	e L	Z	22:35:28.1			18.0	3274		5.5	
GRA1	i P	+ Z	22:09:57.3					6.2		
ALIGN			22:09:57.3			1.3	309			
GRA1	e		22:12:05.2							
	e PP	Z	22:12:31.1							
	e L	Z	22:36:27.2			19.6	2041		5.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/19								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	00:02:26.4					4.9		
BEAM			00:02:26.4			1.0	5			
GRA1	e (pP)	Z	00:02:32.6							
	e L	Z	00:44:43.2			21.4	329		4.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/19	02:22:29.8	36.790N	93.430E	33.0N	4.4			SZGRF
2001/11/19	02:22:16.6	35.842N	93.873E	10G	4.7			NEIC

Qinghai, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	02:32:21.0	59.1	69.6			4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/19								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z	04:21:51.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/19	17:45:23.2	35.720N	93.636E	10G	5.8	5.4		NEIC

Qinghai, China

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z	17:55:16.5			1.5	191	5.9		
	e PP	Z	17:57:19.8							
	e S	N	18:03:20.4							
	e SS	E	18:07:10.8							
	e LR	Z	18:13:06.7							
	e L	Z	18:20:59.2			18.0	1788		5.2	
GRA1	e P	+ Z	17:55:27.5	59.0	69.8			6.0		
	e PP	Z	17:57:34.6							
	e S	Z	18:03:40.8							
	e L	Z	18:21:58.0			20.4	1077		5.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/19	22:16:49.2	46.110N	152.140E	33.0N	4.6			SZGRF
2001/11/19	22:17:56.4	48.385N	146.372E	511	4.2			NEIC

Kuril Islands, Russia

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	22:28:46.9	74.6	29.1			4.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/20	19:37: 4.1			N	5.3			SZGRF

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z	19:49:51.2					5.3		
BEAM			19:49:51.2			2.2	36			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/20								

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	- Z	20:59:21.8					4.2		
ALIGN			20:59:21.8			1.0	22			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/20	21:08:18.1	6.895S	128.911E	33N	5.7	6.0		NEIC

Banda Sea

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKP	Z	21:26:50.1							

	e PP	Z	21:27:29.8								
	e Sdiff	T	21:35:18.0								
	e PS	T	21:36:45.0								
	e		21:37:24.7								
	e SS	T	21:43:08.1								
	e LQ	T	21:53:53.3								
	e L	Z	22:22:31.2			20.0		4044		6.0	
GRA1	e PKPdf	Z	21:26:54.9	113.0	72.7						
	e PP	Z	21:27:43.0								
	e L	Z	22:20:54.1			21.3		2878		5.8	

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/21 01:20:57.0 8.450N 49.160W 33.0N 4.8  
 North Atlantic Ocean

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z 01:31:31.8	64.6	252.1			4.8		

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/21

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e PKP	Z 02:32:44.6							
		e	02:32:50.6							

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/21 10:25:40.2 43.000N 143.850E 33.0N 5.1 4.2 SZGRF  
 2001/11/21 10:25:39.2 42.053N 142.466E 69D 4.8 NEIC  
 Hokkaido, Japan, region

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	i P	+ Z 10:37:38.4	78.8	34.7			5.1		
		e pP	Z 10:37:57.0							
		e L	Z 11:10:49.9			19.5	104		4.2	

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/21 20:25: 4.4 42.940N 144.530E 33.0N 5.3 4.6 SZGRF  
 2001/11/21 20:24:53.7 41.553N 144.129E 23D 5.0 4.6 NEIC  
 Hokkaido, Japan, region

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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GRA1	i P	+ Z	20:37:04.3	79.8	33.8				5.3	
	e L	Z	21:15:58.7			20.2	300			4.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/22	02:59:25.4	42.620N	72.710E	30.2	4.1	4.0		SZGRF

Kyrgyzstan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 03:07:13.9	42.0	75.3			4.1		
	e pP	Z 03:07:21.9							
	e	03:07:33.1							
	e L	Z 03:26:38.6			20.4	195			4.0

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/22	04:17:26.9	31.045S	176.663W	33	6.0	5.7		NEIC

Kermadec Islands region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPdf	+ Z 04:37:20.4			2.5	165			
	e pPKPdf	Z 04:37:31.2							
	e	04:37:43.4							
	e PKPab	Z 04:37:55.7							
	i pPKPab	Z 04:38:06.0							
	e PP	Z 04:41:40.7							
	e PPS	Z 04:54:57.5							
	e SS	Z 05:02:22.1							
	e SSSS	Z 05:11:22.5							
	e L	Z 05:50:01.0			22.0	1395			5.8
GRA1	e PKPdf	Z 04:37:23.5							
	e (pPKPdf)	Z 04:37:33.8							
	e PKPab	Z 04:38:05.1							
	e (pPKPab)	Z 04:38:14.9							
	e PP	Z 04:41:55.8							
	e	04:49:58.7							
	e	04:52:06.9							
	e PPS	Z 04:55:13.4							
	e SS	Z 05:02:33.6							
	e L	Z 05:51:10.4			20.3	863			5.6

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/22	08:35: 4.5			N	4.6			SZGRF

Southern Xinjiang, China

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Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 08:44:12.7					4.6		
BEAM		08:44:12.7			1.4	12			

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/22								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 09:38:03.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/22	10:34:56.1	13.764N	120.613E	82D	5.3			NEIC
East of Philippine Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 10:47:56.5	91.6	66.4			5.6		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/22								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 15:46:53.8							
	e	15:46:56.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/22	23:22:23.6	16.217S	177.946E	33N	5.7	6.2		NEIC
Fiji Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 23:41:54.4							
	e PP	Z 23:45:03.9							
	e SS	Z 00:03:46.1							
GRA1	i PKPdf	+ Z 23:41:59.2	144.8	22.5					
	e	23:42:02.8							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/22	23:24:50.7	16.191S	177.868E	33N	5.9	6.2		NEIC
Fiji Islands								

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Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	e PKPdf	Z 23:44:20.0							
	e SS	Z 00:06:13.4							
	e L	Z 01:00:21.3			20.0	4933		6.3	
GRA1	e PKPdf	Z 23:44:25.6	144.8	22.6					
	e	23:44:31.4							
	e	23:44:39.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/23	10:13:44.8	22.480S	170.400E					GRSN
Southeast of Loyalty Islands								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	+ Z 10:33:26.1	146.3	39.8	0.7	23			
GRA1	e PKPdf	Z 10:33:32.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/23	20:43:18.6	37.300N	70.730E	131.7	6.1	5.3		SZGRF
2001/11/23	20:43:04.2	36.475N	71.533E	112D	5.8			NEIC
Afghanistan-Tajikistan border region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
BRG	e P	Z 20:50:54.1	42.9	86.6					
	e L	Z 21:12:34.0			18.2	4594		5.4	
RUE	e P	Z 20:50:54.4	42.9	88.2					
	e L	Z 21:11:59.4			18.5	5413		5.5	
RGN	e P	Z 20:50:57.1	43.1	90.0					
GEC2	e P	Z 20:50:56.8	43.2	84.2					
	e L	Z 21:12:57.2			18.5	1928		5.0	
CLL	i P	+ Z 20:50:58.5			1.1	264	5.9		
	e sP	Z 20:51:30.0							
	e PP	Z 20:52:40.0							
	e sPP	Z 20:53:11.8							
	e S	Z 20:57:19.7							
	e SS	Z 21:00:40.6							
	e LR	Z 21:03:53.6							
	e L	Z 21:10:23.1			18.0	4355		5.4	
WET	e P	Z 20:51:00.8	43.7	84.0					
	e L	Z 21:11:36.4			19.3	1620		4.9	
MOX	e P	Z 20:51:06.3	44.3	84.6					
	e L	Z 21:13:28.6			19.9	4174		5.3	
GRA1	i P	+ Z 20:51:10.1	44.7	83.4			6.1		
	e	20:51:34.5							
	e pP	Z 20:51:39.0							
	e (sP)	Z 20:51:56.4							



	e PP	Z	20:52:54.6								
	e S	Z	20:57:43.0								
	e SS	Z	21:01:08.2								
	e L	Z	21:13:16.5			20.9	3486		5.2		
FUR	e P	Z	20:51:10.4	44.8	81.9						
	e L	Z	21:12:53.7			19.4	2642		5.2		
BSEG	e P	Z	20:51:11.0	44.9	87.0						
	e L	Z	21:13:06.3			18.6	4266		5.4		
CLZ	e P	Z	20:51:11.8	45.0	84.9						
	e L	Z	21:12:42.3			20.1	4745		5.4		
STU	e P	Z	20:51:20.1	46.1	81.1						
TNS	e P	Z	20:51:22.4	46.4	82.0						
	e L	Z	21:12:19.8			21.6	2715		5.2		
IBBN	e P	Z	20:51:23.7	46.6	83.5						
	e L	Z	21:13:50.7			21.6	7096		5.6		
BFO	e P	Z	20:51:24.6	46.8	80.2						
	e L	Z	21:14:12.1			19.3	2218		5.1		
BUG	e P	Z	20:51:26.8	47.0	82.3						
	e L	Z	21:13:42.3			22.0	3703		5.3		
WLF	e P	Z	20:51:34.8	47.9	80.0						
	e L	Z	21:13:18.1			19.9	2440		5.2		

Date 2001/11/24 Origin Time 02:43: 2.1 Lat Pakistan Long Depth N 4.5 mb Ms ML Source SZGRF

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z 02:51:57.0					4.5		
	ALIGN		02:51:57.0			0.9	5			

Date 2001/11/24 Origin Time 02:56:48.1 Lat 26.810N Long 127.580E Depth 33.0N mb 6.1 Ms 4.4 ML Source SZGRF  
 Date 2001/11/24 Origin Time 02:56:49.9 Lat 25.268N Long 125.233E Depth 76D mb 5.3 Ms ML Source NEIC  
 Ryukyu Islands, Japan

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	i P	+ Z 03:09:20.5	85.0	56.0			6.1		
		e L	Z 03:51:12.1			21.4	166		4.4	

Date 2001/11/24 Origin Time Lat Long Depth mb Ms ML Source

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
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Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 03:57:07.6							
	e (pPKP)	Z 03:57:12.9							
	e	03:57:18.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/25								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 04:21:12.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/25	08:47:43.7			N	4.3			SZGRF
2001/11/25	08:47:25.3	35.721N	93.691E	10G	4.7			NEIC

Qinghai, China

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 08:57:30.0	59.1	69.8			4.3		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/25	10:36:20.9	52.660N	162.300E	61.1	4.9			SZGRF
2001/11/25	10:36:14.4	52.215N	159.104E	33N	4.9	4.5		NEIC

Off east coast of Kamchatka Peninsula, Russia

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 10:47:54.3	74.5	19.8			4.9		
	e pP	Z 10:48:11.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/25	12:27:12.1	47.420N	24.900W	33.0N	4.0	4.0		SZGRF

Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 12:32:22.3	23.8	278.5			4.0		
	e L	Z 12:42:01.0			19.1	539		4.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/25	13:03:59.0	47.420N	24.180W	29.5	4.3	4.5		SZGRF

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2001/11/25 13:03:27.1 45.613N 27.779W 10G 4.8 4.6 NEIC  
Northern Mid-Atlantic Ridge

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:09:05.1	26.3	276.2			4.3		
	e pP	Z 13:09:12.2							
	e L	Z 13:18:43.3			18.4	1553		4.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/25	14:32: 8.9	24.890N	126.390E	35.4	5.6	5.4		SZGRF
2001/11/25	14:31:57.5	22.998N	125.336E	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 14:44:35.3			1.0	33	5.5		
	e pP	Z 14:44:45.9							
	e S	E 14:55:01.8							
	e SS	E 15:00:34.9							
	e	15:05:35.8							
	e LR	Z 15:14:27.4							
	e L	Z 15:28:02.1			18.0	2473		5.6	
GRA1	i P	- Z 14:44:45.5	86.9	57.3			5.6		
	e pP	Z 14:44:55.9							
	e (sP)	Z 14:44:59.8							
	e PP	Z 14:48:10.4							
	e L	Z 15:26:52.7			18.8	1395		5.4	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/25	19:34:17.3	37.677N	14.006E	10G	5.1			NEIC

Sicily, Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (Pn)	Z 19:37:11.1	12.2	169.5					
	e (P)	Z 19:37:26.4							
	e L	Z 19:42:21.9			19.6	498		3.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/25	21:30:53.6	28.323N	57.268E	33N	5.1	4.1		NEIC

Southern Iran

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 21:38:34.5	40.8	104.1			5.2		
	e pP	Z 21:38:45.9							

e				21:39:26.0							
e	PP	Z		21:40:12.1							
e	L	Z		21:57:28.0	21.1			241		4.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source			
2001/11/25											
	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML	
	GRA1	e PKP	Z 23:39:20.9								

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/26	00:56:58.8	43.760N	12.180E	10.0G		3.6	5.0	SZGRF
2001/11/26	00:56:57.0	43.886N	12.156E	10G	4.6			NEIC

Central Italy

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 00:58:15.9	5.1	192.7					4.7
	e Sn	E 00:59:15.1							
	e L	Z 01:01:05.2			12.5	3589		3.9	
GRC1	e Pn	Z 00:58:16.6	5.1	174.9					5.1
BFO	e Pn	Z 00:58:17.6	5.2	147.8					4.9
	e Sn	N 00:59:15.5							
	e L	Z 01:01:06.9			16.9	598		3.0	
WET	e Pn	Z 00:58:18.6	5.3	185.7					4.7
	e Sn	E 00:59:19.5							
	e L	Z 01:01:07.8			14.4	3092		3.8	
STU	e Pn	Z 00:58:19.0	5.3	156.2					5.1
	e Sn	E 00:59:20.8							
	e L	Z 01:00:57.4			16.5	905		3.3	
GRA1	e Pn	Z 00:58:26.1	5.8	173.4					5.4
	e L	Z 01:01:34.7			14.7	1112		3.5	
MOX	e Pn	Z 00:58:38.6	6.8	176.7					5.0
	e Sn	N 00:59:53.4							
	e L	Z 01:01:59.8			17.3	1108		3.5	
TNS	e Pn	Z 00:58:40.0	6.8	156.9					5.1
	e L	Z 01:02:03.3			21.5	513		3.1	
WLF	e Pn	Z 00:58:44.1	7.1	142.3					
BRG	e Pn	Z 00:58:43.1	7.1	190.5					5.0
	e L	Z 01:02:11.1			14.2	4126		4.2	
CLL	e Pn	Z 00:58:48.2	7.4	184.7					5.3
	e L	Z 01:02:22.4			15.7	1950		3.9	
CLZ	e Pn	Z 00:58:56.7	8.0	170.8					5.2
	e L	Z 01:02:58.8			14.0	1220		3.8	
BUG	e L	Z 01:02:47.5	8.2	154.6	15.7	786		3.5	
RUE	e L	Z 01:03:17.0	8.7	187.8	13.8	3484		4.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/26	04:21:45.2	34.811N	24.408E	33N	4.3			NEIC
Crete, Greece								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:25:51.9	17.7	142.1	1.1	34	4.4		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/26	05:03:20.9	34.833N	24.283E	33N	5.1	4.6		NEIC
Crete, Greece								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 05:07:24.3	17.7	142.3	1.3	322	5.3		
	e L	Z 05:15:40.3			17.2	1437		4.3	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/26								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 05:15:36.5							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/26	12:10:21.5	40.020N	141.450E	35.1	5.5	5.0		SZGRF
2001/11/26	12:10:10.8	39.286N	143.037E	31D	5.1	5.2		NEIC
Near east coast of eastern Honshu, Japan								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i P	+ Z 12:22:28.6	81.4	35.7			5.5		
	i pP	- Z 12:22:38.8							
	e L	Z 13:03:57.3			18.3	663		5.0	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/26	12:34:13.7	43.560N	12.110E	10.0G			4.0	SZGRF
2001/11/26	12:34:12.8	43.612N	12.084E	10	4.9			NEIC
Central Italy								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 12:35:33.3	5.4	192.7					3.7

	e Sn	N	12:36:35.7							
BFO	e Pn	Z	12:35:35.1	5.4	149.7					3.8
	e Sn	E	12:36:34.8							
WET	e Pn	Z	12:35:36.2	5.6	185.9					3.9
	e Sn	E	12:36:38.5							
GRA1	e Pn	Z	12:35:43.8	6.1	174.1					4.3
MOX	e Pn	Z	12:35:55.9	7.0	177.2					
	e Sn	E	12:37:13.7							
TNS	e Pn	Z	12:35:58.5	7.1	158.1					4.2
CLL	e Pn	Z	12:36:05.3	7.7	185.0					4.3

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/26	13:22:11.4	39.590N	143.240E	33.9	5.1			SZGRF
2001/11/26	13:22:05.8	39.166N	143.231E	33N	4.7			NEIC

Off east coast of Honshu, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 13:34:24.4	81.6	35.6			5.1		
	e pP	Z 13:34:34.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/26	17:36:17.6	42.120N	148.230E	34.5	4.5			SZGRF

Off southeast coast of Hokkaido, Japan

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 17:48:27.9	80.8	30.8			4.5		
	e (pP)	Z 17:48:37.9							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/27								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i PKPdf	- Z 00:19:11.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/27	00:53:49.7	33.316N	178.615W	33N	5.4	5.7		NEIC

South of Kermadec Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	i PKPab	- Z 01:14:34.2	96.5	8.3					
	e (pPKPab)	Z 01:14:39.0							

e L Z 02:33:39.4 18.4 1513 5.9

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/27 01:10:32.7 N 4.7 SZGRF  
 Off east coast of Honshu, Japan

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
 GRA1 e P Z 01:23:14.5 4.7  
 BEAM 01:23:14.5 1.1 6

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/27 01:32:17.1 15.818S 73.955W 42D 5.2 NEIC  
 Near coast of Peru

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
 GRA1 i P + Z 01:45:55.9 98.9 256.1 5.8  
 e pP Z 01:46:08.9  
 e sP Z 01:46:14.9

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/27 02:26:48.6 33.794S 178.649W 33N 5.2 NEIC  
 South of Kermadec Islands

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
 GRA1 e PKPab - Z 02:47:35.3 162.5 28.3  
 e pPKPab Z 02:47:41.4

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/27 04:14:06.8 17.879N 67.931W 63 4.8 NEIC  
 Mona Passage

Sta Phase Time Dist BAz T[s] A[nm] mb MS ML  
 GRA1 e P Z 04:25:11.8 69.5 273.8 4.8  
 e pP Z 04:25:21.1  
 e (sP) Z 04:25:26.8

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/27 04:23:37.8 44.508N 28.128W 10G 4.7 4.7 NEIC  
 Northern Mid-Atlantic Ridge



Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 04:29:21.8	27.0	274.2			4.2		
	e L	Z 04:38:21.1			20.5	636		4.2	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/27								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPab	Z 05:38:45.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/27	07:31:47.3	29.180N	82.840E	20.9	5.7	4.9		SZGRF
2001/11/27	07:31:52.6	29.634N	81.821E	33N	5.4	5.2		NEIC

Nepal

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	+ Z 07:41:18.6			1.3	34	5.2		
	e pP	Z 07:41:25.0							
	e PcP	Z 07:42:20.5							
	e PP	Z 07:43:25.6							
	e S	T 07:48:56.8							
	e SS	T 07:52:47.0							
	e LQ	T 07:59:10.0							
	e L	Z 08:08:27.9			18.0	1453		5.1	
GRA1	i P	+ Z 07:41:29.2	55.7	83.1			5.7		
	e pP	Z 07:41:34.9							
	e S	Z 07:49:19.1							
	e L	Z 08:08:01.1			18.7	1020		4.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/27	08:54: 4.9	31.410N	82.070E	30.7	5.5	5.1		SZGRF
2001/11/27	08:53:54.2	29.644N	81.618E	33N	5.3	5.3		NEIC

Xizang

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i P	Z 09:03:20.5			1.9	65	5.3		
	e pP	Z 09:03:28.4							
	e PcP	Z 09:04:23.9							
	e PP	Z 09:05:26.3							
	e S	T 09:10:58.0							
	e SS	T 09:14:44.3							
	e LQ	T 09:20:51.6							

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	e L	Z	09:30:30.0			18.0	1551	5.1
GRA1	e P	+ Z	09:03:31.1	55.5	83.2			5.5
	e pP	Z	09:03:39.5					
	e S	Z	09:11:20.0					
	e L	Z	09:30:04.0			18.2	1354	5.1

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/27	17:56:52.8	29.560N	83.130E	30.6	5.1			SZGRF
2001/11/27	17:56:55.6	29.601N	81.760E	33N	5.0			NEIC

Nepal

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	+ Z 18:06:32.8	55.7	83.1			5.1		
	e (pP)	Z 18:06:41.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/27								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 18:11:36.7							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/27	23:10:35.8	23.666S	179.874E	552D	5.0			NEIC

South of Fiji Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z 23:29:26.0			0.7	20			
	i PKPab	Z 23:29:34.8			0.9	13			
	e pPKPbc	Z 23:31:36.7							
	e pPKPab	Z 23:31:42.6							
GRA1	e (PKPdf)	Z 23:29:29.7	152.5	23.0					
	e PKPab	Z 23:29:44.4							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/28								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc	- Z 13:11:53.3			0.7	22			
	i PKPab	Z 13:12:03.6							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/28	14:32:46.4	16.330N	91.060W	97.7	6.3	6.0		SZGRF
2001/11/28	14:32:26.9	15.471N	93.104W	33N	6.1	5.7		NEIC

Mexico-Guatemala border region

Sta	Phase		Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML						
WLF	e P	Z	14:44:56.1	84.1	287.0	2.0	295	6.2								
	e L	Z	15:19:32.8			20.4	4345				5.8					
BUG	e P	Z	14:44:56.7	84.2	287.7	2.0	535	6.4								
	e L	Z	15:17:57.6			21.0	8054				6.1					
IBBN	e P	Z	14:44:57.1	84.3	288.0	2.2	1100	6.7								
	e L	Z	15:22:35.2			21.3	6467				6.0					
BSEG	e P	Z	14:45:02.1	85.2	289.8	2.0	1145	6.8								
	e L	Z	15:19:29.0			20.2	3653				5.7					
TNS	e P	Z	14:45:02.2	85.3	288.7	2.2	1088	6.7								
	e L	Z	15:21:08.8			21.0	7000				6.0					
BFO	e P	Z	14:45:04.1	85.9	288.7	2.2	408	6.3								
	e L	Z	15:18:40.8			20.2	5617				5.9					
CLZ	e P	Z	14:45:05.7	85.9	290.0	1.9	598	6.5								
	e L	Z	15:23:48.2			21.2	5503				5.9					
STU	e P	Z	14:45:06.8	86.3	289.3	1.7	340	6.3								
	e L	Z	15:20:25.9			21.0	7568				6.1					
MOX	e P	Z	14:45:11.1	87.1	291.0	1.8	304	6.1								
	e L	Z	15:19:55.1			21.8	5530				5.9					
GRA1	e P	Z	14:45:12.2	87.2	290.8	2.0	610	6.4								
	e pP	Z	14:45:38.3													
	e sP	Z	14:45:50.9													
	e		14:46:04.4													
	e		14:46:12.4													
	e PP	Z	14:48:35.7													
	e (SKS)	Z	14:54:58.7													
	e S	Z	14:55:43.7													
	e (PKKP)	Z	15:03:02.4													
	e (pPKKP)	Z	15:03:28.0													
	e PKPPKP	Z	15:11:06.6													
	e		15:11:30.4													
	e L	Z	15:21:18.7			22.0	7011				6.0					
	CLL	e P	Z			14:45:13.7	87.6				292.1	2.2	471	6.2		
		e pP	Z			14:45:41.6										
e PP		Z	14:48:33.9													
e pPP		Z	14:49:04.8													
e SKSac		R	14:55:34.8													
e S		T	14:55:51.7													
e SP		Z	14:56:49.9													
e PS		T	14:57:08.4													
e SS		T	15:01:36.5													
e PKKPbc		Z	15:03:00.9													
e pPKKPbc		Z	15:03:27.5													

	e LQ	T	15:10:16.0									
	e P'P'df	Z	15:11:04.2									
	e LR	Z	15:13:32.0									
	e L	Z	15:20:22.9			22.0	8880		6.1			
BRG	e P	Z	14:45:17.1	88.4	292.8	1.3	104		5.8			
	e L	Z	15:19:16.2			21.9	6018		6.0			
WET	e P	Z	14:45:17.6	88.4	292.0	1.6	234		6.1			
	e L	Z	15:21:53.8			21.6	11577		6.2			
GEC2	e P	Z	14:45:20.2	89.0	292.7	2.8	431		6.1			
	e L	Z	15:22:22.9			21.4	6577		6.0			

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/29 01:26:19.8 N 4.4 SZGRF  
 Mexico-Guatemala border region

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z 01:38:35.1					4.4		
	BEAM		01:38:35.1			0.9	3			

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/29

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	BRG	e PKPdf	Z 04:36:36.2							
	CLL	e PKPdf	Z 04:36:35.6							
	CLZ	e PKPdf	Z 04:36:36.0							
	GEC2	e PKPdf	Z 04:36:40.5							
	GRFO	e PKPdf	Z 04:36:35.4							
	MOX	e PKPdf	Z 04:36:37.8							

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/29 19:34:35.4 N 4.4 SZGRF  
 Northern and central Iran

	Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
	GRA1	e P	Z 19:41:54.8					4.4		
	BEAM		19:41:54.8			1.3	14			

Date Origin Time Lat Long Depth mb Ms ML Source  
 2001/11/29 19:37:34.6 15.057S 173.493W 33N 4.9 4.9 NEIC  
 Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 19:57:11.0	145.2	8.0					
	e PKPbc	Z 19:57:14.6							
	e PKPab	Z 19:57:18.0							
	e L	Z 21:02:53.2			18.1	185		4.9	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/30	02:11:10.5	36.470N	71.381E	100G	4.8			NEIC

Afghanistan-Tajikistan border region

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 02:19:15.9	44.6	83.5			4.8		
	e pP	Z 02:19:45.1							
	e L	Z 02:37:07.0			20.5	76		3.6	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/30								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GEC2	e Pn	Z 03:19:07.1							3.7
	e Sg	N 03:20:23.3							
WET	e Pn	Z 03:19:11.8							4.0
	e Sg	N 03:20:32.2							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/30	06:15:13.7	15.102S	173.684W	33N	4.6	4.8		NEIC

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (PKiKP)	Z 06:34:51.7	145.2	8.3					
	e	06:35:01.7							
	e L	Z 07:19:58.7			20.6	132		4.7	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/30	07:09:56.5			N				SZGRF

Tonga Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 07:18:49.0							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/30	07:46:56.4	40.494N	126.849W	10G	4.7	4.5		NEIC
Off coast of northern California, United States								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 07:59:28.5	82.6	329.2			5.3		
	e pP	Z 07:59:31.1							
	e L	Z 08:35:15.0			21.5	226		4.5	

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/30								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKP	Z 10:27:14.3							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/30								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPab	Z 14:33:44.9			1.4	34			
	e	14:33:57.1							

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/30	14:35:49.2	40.450N	143.500E	33.0N	4.5			SZGRF
Off east coast of Honshu, Japan								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 14:47:58.8	80.6	34.8			4.5		

Date	Origin Time	Lat	Long	Depth	mb	Ms	ML	Source
2001/11/30	17:24:06.1	20.037S	178.472W	600	4.6			NEIC
Fiji Islands region								

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
CLL	i PKPbc(1)	Z 17:42:45.0			0.6	22			
	e PKPab(1)	Z 17:42:48.6							
	i PKPbc(2)	Z 17:42:51.7			0.7	50			
	i PKPab(2)	Z 17:42:56.3			0.6	26			
GRA1	e PKPbc	Z 17:42:49.5							

e 17:42:56.2  
e (PKPab) Z 17:43:04.0

Date Origin Time Lat Long Depth mb Ms ML Source  
2001/11/30 18:02:06.6 32.640S 177.930W 33N 5.2 NEIC  
South of Kermadec Islands

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e PKPdf	Z 18:22:55.3	161.6	25.2					
	e PKPab	Z 18:23:06.8							
	e L	Z 19:38:38.7			19.7	727		5.5	

Date Origin Time Lat Long Depth mb Ms ML Source  
2001/11/30 18:32:33.9 Off east coast of Honshu, Japan  
N 5.1 SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 18:44:55.2					5.1		
BEAM		18:44:55.2			1.8	22			

Date Origin Time Lat Long Depth mb Ms ML Source  
2001/11/30 20:32:54.1 Eastern Sea of Japan  
40.530N 137.890E 43.2 4.9 SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e P	Z 20:44:50.1	78.3	38.5			4.9		
	e (pP)	Z 20:45:02.5							

Date Origin Time Lat Long Depth mb Ms ML Source  
2001/11/30 21:24: 7.0 Baltic States - Belarus - Northwestern Russia regi  
N 4.1 SZGRF

Sta	Phase	Time	Dist	BAz	T[s]	A[nm]	mb	MS	ML
GRA1	e (P)	Z 21:29:10.1					4.1		
BEAM		21:29:10.1			1.2	8			

## 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