

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/03	03:35:00.9	+ - 1.09	49.053N	7.630E	28.7	18.2	115	2	+ - 0.0	6		341	2.2ML		LDG	L
1998/11/03	03:35:04.0		48.760N	8.530E				10G		4	3	199			BGR	L

Wildbad/Black Forest

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BFO	e Pg Z	03:35:12.9	0.3	T	1.4	50.0	197.2	
	e Sg E	03:35:18.2	-0.4	T				
TNS	e Sg N	03:35:50.6	-0.0	T		162.7	357.9	
GSH	e Sg E	03:36:21.0	0.1	T		268.8	325.7	

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/07	15:22:00.3	+ - 0.44	50.200N	7.780E	7.7	4.0	57	9G		26		284	2.7ML		LDG	L
1998/11/07	15:22:00.9		50.096N	7.808E				10G			12		2.3ML	STR	NEIC	
ML= 2.1(UCC), Less reliable			solution													
1998/11/07	15:21:59.1		50.170N	7.800E				10G		8	4	220	2.2ML		SZGRF	L
1998/11/07	15:21:59.4		50.230N	7.840E				5G		12	5	107	2.0ML	TNS	BGR	L

Bad Ems, E of Koblenz

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
TNS	e Pg Z	15:22:06.9	0.1	T	54.1	43.2	90.9	ML 2.0
	e Sg N	15:22:11.9	0.1	T				
GSH	e Pg Z	15:22:19.9	0.5	T	2.7	117.9	299.1	ML 2.0
	e Sg N	15:22:33.7	0.6	T				
WLF	e Pn Z	15:22:21.5	-0.9	T		136.1	243.1	
	e Pg Z	15:22:22.3	-0.2	T	7.2			
	e Sg N	15:22:38.7	0.3	T				
BUG	e Pg Z	15:22:23.1	-0.1	T	1.7	140.4	343.6	ML 2.1
	e Sg E	15:22:39.1	-0.4	T				
BFO	e Pn Z	15:22:34.2	2.2	T		214.2	170.3	ML 2.3
	e Pg Z	15:22:37.0	1.3	T	2.6			
	e Sg E	15:22:58.1	-2.5	T				
GRFO	e Pg Z	15:22:42.7	1.0		2.2	249.1	102.6	
	e Sg E	15:23:09.4	-1.2					
CLZ	e Pn Z	15:22:36.4	-0.2			251.9	43.7	ML 2.7
	e Pg Z	15:22:40.2	-2.0		4.4			
	e Sg E	15:23:11.8	0.4					
MOX	e Pg Z	15:22:45.6	0.2		1.8	271.3	78.8	ML 2.3
	e Sg N	15:23:15.5	-1.5					
WET	e Sg N	15:23:46.0	-2.6			381.9	106.5	
BRG	e Sg N	15:24:04.1	-0.1			436.9	78.2	
GEC2	e Sg N	15:24:07.5	-0.5			450.0	107.8	

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/07	16:16:55.7	+/- 0.28	50.204N	7.921E	4.9	3.2	70	6G		63		281	3.4ML		LDG	L
1998/11/07	16:16:54.6		50.255N	7.770E				10G			39		3.4ML	STR	NEIC	
ML= 3.3(UCC), ML= 3.2(VIE), ML= 3.1(CLL,GRF)																
1998/11/07	16:16:55.4		50.210N	7.830E				10G		22	11	130	3.2ML		SZGRF	L
1998/11/07	16:16:55.9		50.250N	7.870E				5G		25	11	71	3.0ML	GSH	BGR	L
1998/11/07	16:16:56.3		50.200N	7.857E				4		25	14	78	2.8ML		BNS	L
1998/11/07	16:16:55.8		50.240N	7.800E				10G		42	27	122	3.0ML		LEDBW	L

Followed by an aftershock on Nov 10, 09:17 of the same magnitude

Bad Ems, E of Koblenz

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
KOE	e P + Z	16:17:01.4				21.1	347.1	
	i S N	16:17:04.2						
BGG	e P - Z	16:17:03.3				33.2	263.6	
	e S E	16:17:07.2						
ABH	i P +	16:17:03.9				43.7	204.4	
	i Pg +	16:17:03.8	0.4	T				
	S	16:17:08.6						
	e Sg	16:17:08.6	0.0	T				
	SmS	16:17:13.8	-1.0					
TNS	i Pg +	16:17:03.8	-0.0	T		46.1	92.2	ML 3.0
	e Sg	16:17:08.6	-0.6	T				
	e SmS	16:17:12.9	-2.4	T				
STB	e P + Z	16:17:10.5				78.6	300.5	
	e S N	16:17:21.3						
RUP	P	16:17:09.5				79.9	221.8	
	i Pg +	16:17:09.4	-0.0	T				
HOB	e P Z	16:17:12.4				89.0	338.5	
	e S E	16:17:24.3						
TOD	P	16:17:12.6				100.7	134.1	
	Pn	16:17:12.8	-1.2	T				
KTD	e Pn +	16:17:13.4	-1.0	T		104.3	168.6	
KLL	e P Z	16:17:16.4				114.7	293.8	
	e S E	16:17:30.9						
HEI	e Pn -	16:17:15.2	-0.5	T		114.8	144.2	
	e Sn	16:17:28.9	-0.8	T				
GSH	e Pg -	16:17:16.4	1.1			114.8	299.3	ML 3.0
	e Sg	16:17:30.6	1.9					
JUE	e P E	16:17:18.0				123.4	307.7	
WLF	e Pg Z	16:17:17.8	-0.8		67.7	134.1	242.1	
BUG	e Pg	16:17:19.6	0.2	T		138.6	344.6	ML 3.1
	e Sg	16:17:35.8	0.3	T				
SIND	Pn	16:17:21.1	-0.5	T		163.1	126.7	ML 3.4
	Pg	16:17:22.2	-1.3	T				
	Sg	16:17:41.4	-1.1	T				
LBG	Pn	16:17:24.9	0.1	T		189.4	157.3	ML 3.1

BFO	e	Pn		16:17:28.0	-0.0	T		215.8	169.5	ML	2.9
	e	Pg		16:17:32.3	-0.1	T					
	e	Sn		16:17:50.4	-0.7	T					
	e	Sg		16:17:55.9	-1.6	T					
BEU		Sg		16:17:56.8	-1.4	T		218.1	147.0	ML	3.0
LIBD		Pg		16:17:35.3	0.0	T		232.8	183.6		
		Sg		16:18:01.9	-0.5	T					
GRFO	e	Pn	Z	16:17:32.8	0.4		1.1	252.1	102.7	ML	3.0
	e	Pg	Z	16:17:38.8	0.2		17.4				
	e	Sg	E	16:18:06.7	-1.2						
GRA1	e	Pn	Z	16:17:33.9	1.5			252.2	102.7	ML	3.1
	e	Sg	E	16:18:08.6	0.7						
CLZ	e	Pn		16:17:32.2	-0.3	T		253.1	44.3	ML	3.5
	e	Pg		16:17:37.0	-1.7	T					
	e	Sn		16:18:00.8	1.9						
	e	Sg	N	16:18:07.1	-1.1						
HDH		Sn		16:17:57.8	-1.2	T		253.4	135.7	ML	2.9
		Sg		16:18:07.4	-0.8						
KIZ		Pn		16:17:32.3	-0.4	T		254.1	178.0	ML	3.1
		Pg		16:17:38.1	-0.8	T					
GUT	e	Pn	+	16:17:33.5	0.1	T		259.5	157.9	ML	3.0
FELD		Pn		16:17:34.2	0.4	T		263.2	176.7		
BAW	e	Sg		16:18:12.1	-1.3	T		271.5	181.9		
MOX	e	Pn	Z	16:17:36.2	1.1		3.6	273.9	79.1	ML	3.1
	e	Pg	Z	16:17:39.2	-3.1		22.6				
	e	Sn		16:18:05.5	2.2						
	e	Sg	N	16:18:12.7	-1.4						
END	e	Pn	+	16:17:31.3	-4.6	T		280.8	181.0		
HOF	e	Pn		16:17:38.0	1.0			289.8	86.8		
BBS		Pg		16:17:48.9	0.7	T		309.3	184.1		
UBR		Pn		16:17:43.3	1.3	T		330.7	148.5	ML	3.0
		Sg		16:18:31.1	0.7	T					
CLL	e	Pn	Z	16:17:51.7	3.1			384.5	70.0	ML	3.6
	e	Pg	Z	16:17:59.9	-1.1		6.8				
	e	Sg	N	16:18:44.3	-1.4						
WET	e	Pn	Z	16:17:50.4	1.7		18.8	385.0	106.5	ML	3.3
	e	Sg	E	16:18:42.6	-3.2						
BRG	e	Pn	Z	16:17:57.9	2.6			439.5	78.4	ML	3.4
	e	Sg	Z	16:18:59.3	-2.0						
GEC2	e	Pn	Z	16:17:58.6	1.7		15.6	453.0	107.8	ML	3.3
	e	Sn	N	16:18:41.0	-0.2						
	e	Sg	N	16:19:04.3	-1.0						

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/07	22:43:25.9	+/- 1.06	49.442N	8.251E	24.5	13.7	150	2	+/- 0.0	8		337	2.3ML		LDG	L
1998/11/07	22:43:25.4		49.350N	8.430E				10G		9	7	99	1.6ML TNS		BGR	L

Speyer/Upper Rhine Graben

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
TNS	e Pg	Z 22:43:41.6	-0.3	T	1.2	97.0	0.7	ML 1.6
	e Sg	E 22:43:54.2	0.9	T				
BFO	e Pg	Z 22:43:45.5	0.8	T	2.2	113.6	183.7	
	e Sg	N 22:43:58.0	0.0	T				
WLF	e Sg	E 22:44:12.7	-0.8	T		168.1	282.9	
GRFO	e Sg	E 22:44:24.0	0.0	T		204.9	78.3	
MOX	e Sg	E 22:44:41.4	-1.0	T		269.3	56.5	
CLZ	e Sg	E 22:44:54.7	0.9	T		309.1	25.6	
WET	e Sg	N 22:44:58.2	0.3	T		323.6	92.4	

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/08	06:10:27.5	+-	0.54	47.029N	9.561E	8.6	6.9	96	2	+-	0.0	15	279	2.3ML		LDG	L
1998/11/08	06:10:29.3			47.174N	9.540E				10G			9		2.5ML	STR	NEIC	
Less reliable solution																	
1998/11/08	06:10:28.1			47.080N	9.533E				10		14	9		1.9ML		SED	
1998/11/08	06:10:29.2			47.140N	9.570E				10G		9	6	268	2.1ML	BFO	BGR	L
1998/11/08	06:10:29.9			47.130N	9.640E				10G		18	9	274	2.2ML		LEDBW	L

Vaduz/Liechtenstein, Swiss-Liechtenstein-Austrian border reg

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
UBR	e Pg +	06:10:42.0	-0.0	T		70.7	29.7	ML 1.9
	e Sg	06:10:53.3	3.0	T				
	e SmS	06:10:57.5	2.8	T				
GUT	e P	06:10:47.8		T		111.7	339.6	ML 2.1
	e PmP-	06:10:49.0	-1.6	T				
	e S	06:11:01.7		T				
	e SmS	06:11:03.8	-1.1	T				
FELD	e Sg	06:11:11.1	-1.3	T		148.3	304.6	
KIZ	e Pn -	06:10:54.5	-0.6	T		158.6	306.0	ML 2.3
	e Pg	06:10:55.2	-1.6	T				
	e Sn	06:11:13.3	0.2	T				
	e Sg	06:11:13.8	-1.5	T				
BEU	e Sg	06:11:16.7	0.3	T		162.5	354.2	ML 2.5
BFO	e Pg	Z 06:10:56.5	-1.5		1.8	165.6	324.2	ML 2.1
	e Sg	N 06:11:15.5	-1.8					
HDH	e Pg	06:10:57.4	-0.8			167.1	14.5	ML 2.1
	e Sg	06:11:18.3	0.6	T				
FUR	e Pg	Z 06:10:58.2	-0.2		1.8	167.9	46.2	ML 2.5
	e Sg	N 06:11:17.9	-0.0					
LBG	e Sg	06:11:20.9	-1.0	T		181.8	340.0	ML 2.4
SIND	e Sn	06:11:32.1	0.4	T		246.7	359.4	ML 2.2
	e Sg	06:11:40.2	-0.2	T				
GRFO	e Sg	E 06:11:58.6	0.7			307.7	21.7	

WET	e	Sn	E	06:11:52.0	3.0				328.4	45.8								
	e	Sg	E	06:12:04.0	0.2													
TNS	e	Sg	E	06:12:09.5	-1.8				354.8	346.2								
GEC2	e	Pg	Z	06:11:31.5	1.0				1.2	357.3	56.3							
	e	Sn	E	06:11:59.9	4.9													
	e	Sg	E	06:12:11.3	-0.8													

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/09	03:48:57.6		50.141N	7.808E				10G			9		1.9ML	STR	NEIC	
1998/11/09	03:48:55.4	+ - 0.70	50.249N	7.872E	12.3	5.2	51	9G		13		287	2.4ML		LDG	L
1998/11/09	03:48:56.4		50.180N	7.860E				10G		6	3	217	1.6ML		SZGRF	L

Kaub/Rhine

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
TNS	e Pg Z	03:49:03.9	0.2	T		42.1	83.3	ML 1.6
	e Sg E	03:49:09.0	0.3	T				
GSH	e Pg Z	03:49:17.0	-0.1	T		121.9	301.1	
	e Sg N	03:49:30.4	-0.9	T				
CLZ	e Pg Z	03:49:38.1	-1.5	T		255.0	42.6	
	e Sg E	03:50:09.6	0.3	T				

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/10	08:08:03.4	+ - 0.54	50.208N	7.773E	9.9	4.8	56	6G		19		284	2.7ML		LDG	L
1998/11/10	08:08:02.6		50.264N	7.785E				10G			10		2.4ML	STR	NEIC	
	Less reliable solution															
1998/11/10	08:08:03.6		50.170N	7.890E				10G		7	4	219	2.3ML		SZGRF	L
1998/11/10	08:08:03.2		50.220N	7.880E				10G		13	7	104	2.1ML	GSH	BGR	L

Bad Ems, E of Koblenz

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
TNS	e Pg Z	08:08:11.1	0.9	T	28.5	40.4	89.4	ML 2.0
	e Sg N	08:08:15.4	0.3	T				
GSH	e Pg Z	08:08:23.9	0.2	T	1.3	120.9	299.0	ML 2.1
	e Sg N	08:08:37.5	-0.3	T				
WLF	e Pg Z	08:08:26.6	-0.1	T	4.7	138.2	244.1	
	e Sg E	08:08:43.0	0.2	T				
BFO	e Pg Z	08:08:40.0	0.7	T	2.3	212.7	171.0	
	e Sn N	08:08:57.5	-0.2	T				
	e Sg N	08:09:03.4	-0.6	T				
GRFO	e Sg N	08:09:13.7	0.1	T		246.1	102.6	
CLZ	e Pg Z	08:08:44.9	-0.8	T	2.4	250.7	43.1	ML 2.7
	e Sg N	08:09:15.0	0.2	T				

MOX e Sg E 08:09:20.2 0.2 T 268.7 78.4

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/10	09:17:40.8	+ - 0.26	50.168N	7.862E	4.4	3.1	65	6G		57		281	3.4ML		LDG	L
1998/11/10	09:17:38.2		50.309N	7.650E				10G			40		3.2ML	GRF	NEIC	
			ML= 3.3(STR), ML= 3.0(CLL)													
1998/11/10	09:17:41.0		50.200N	7.800E				10G		38	20	261	3.1ML		LEDBW	L
			Aftershock to event Nov 7, 16:16 with Ml= 3.0													
1998/11/10	09:17:40.9		50.210N	7.870E				10G		18	10	103	3.2ML		SZGRF	L
1998/11/10	09:17:40.9		50.210N	7.860E				10G		17	9	103	3.0ML	BFO	BGR	L
1998/11/10	09:17:41.4		50.210N	7.782E				11		15	8	140	2.9ML		BNS	L

Bad Ems, E of Koblenz

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
KOE	i P + Z	09:17:45.9		T		24.2	351.8	
	i S N	09:17:48.9		T				
BGG	e P - Z	09:17:47.8		T		31.8	269.4	
	e S N	09:17:51.9		T				
ABH	i Pg +	09:17:48.4	-0.0	T		40.2	204.7	
	e Sg	09:17:53.2	-0.1	T				
TNS	e Pg Z	09:17:48.4	-1.3		268.1	47.4	88.1	ML 3.1
	e Sg E	09:17:52.5	-2.8					
RUP	i Pg	09:17:54.0	-0.5	T		76.6	222.7	
	Sg	09:18:04.2	0.7	T				
STB	e P Z	09:17:54.9		T		79.2	303.0	
	e S N	09:18:03.4		T				
HOB	e P Z	09:17:57.0		T		91.6	340.0	
	e S E	09:18:08.0		T				
TOD	e Pg	09:17:57.3	-1.0	T		99.3	132.2	
KTD	e Pg +	09:17:58.0	-0.7			101.3	167.5	
HEI	e Pn -	09:18:00.0	-1.0			112.9	142.7	
	e Sn	09:18:13.6	-1.2					
KLL	e P Z	09:18:01.4		T		114.9	295.6	
	e S E	09:18:12.9		T				
GSH	e Pg Z	09:18:01.1	0.0		7.7	115.4	301.1	ML 3.0
	e Sg N	09:18:15.3	0.8					
WLF	e Pn Z	09:18:02.2	-1.1			131.4	243.2	ML 2.7
	e Pg Z	09:18:03.8	0.1		45.6			
	e Sg N	09:18:19.8	0.8					
SIND	e Pn -	09:18:05.9	-1.1			162.2	125.5	ML 3.4
	e Pg	09:18:06.8	-2.1					
	PmP	09:18:08.3	-1.8					
	e Sg	09:18:26.1	-1.8					
LBG	e Pg	09:18:12.9	-0.2			186.8	156.5	ML 3.1
	Sn	09:18:29.9	-0.5					
	e Sg	09:18:33.7	-1.2					

BFO	e	Pn	Z	09:18:13.5	0.3														
	e	Pg	Z	09:18:16.5	-1.0				2.2	212.8	169.0	ML	3.0						
	e	Sn		09:18:34.8	-1.1				9.8										
	e	Sg	N	09:18:40.2	-2.0														
BEU	e	Pg		09:18:13.2	-4.9					216.0	146.2	ML	3.1						
	e	PmP		09:18:17.5	-1.4														
	e	Sn		09:18:35.2	-1.4														
		Sg		09:18:42.1	-1.1														
LIBD		Pg		09:18:19.6	-0.7					229.4	183.3								
		Sg		09:18:46.8	-0.2														
KIZ		Pn		09:18:17.3	-0.5					250.8	177.7	ML	3.2						
		Sn		09:18:41.9	-2.0														
		Sg		09:18:51.8	-1.3														
HDH	e	Sn		09:18:42.9	-1.3					251.9	134.9	ML	2.9						
		SmS		09:18:52.1	-2.6														
GRFO	e	Sg	N	09:18:50.5	-3.1					252.7	101.9	ML	3.1						
GRA1	e	Pn	Z	09:18:16.3	-1.7					252.7	101.9	ML	3.2						
	e	Pg	Z	09:18:23.0	-1.2														
	e	Sg	E	09:18:51.7	-1.9														
CLZ	e	Pn	Z	09:18:17.0	-1.5				2.6	256.4	44.0	ML	3.5						
	e	Sg	N	09:18:53.8	-0.9														
GUT	e	Pn	-	09:18:17.0	-1.5					256.9	157.3	ML	2.9						
	e	Sn		09:18:43.9	-1.3														
	e	SmS		09:18:53.5	-2.6														
FELD		Sg		09:18:53.1	-2.6					260.0	176.3								
MOX	e	Pn	Z	09:18:21.1	0.2				2.0	275.8	78.4	ML	3.2						
	e	Pg		09:18:24.5	-3.7														
	e	Sn	N	09:18:51.5	2.3														
	i	Sg		09:18:58.7	-1.6														
HOF	i	Pn	-	09:18:22.5	-0.3					291.3	86.2								
GRC1	e	Sg	E	09:19:05.6	-1.9					301.3	115.2	ML	3.3						
BBS		Pg		09:18:33.4	0.1					305.9	183.8								
UBR	e	Pn		09:18:28.0	0.7					328.5	148.0	ML	3.1						
	e	Sn		09:18:59.8	-0.6														
WET	e	Pn		09:18:35.1	0.9					385.3	106.0								
CLL	e	Pg	Z	09:18:44.5	-2.5				6.5	386.9	69.6	ML	3.6						
	e	Sg	E	09:19:29.0	-3.0														
BRG	e	Pn		09:18:43.6	2.5					441.4	78.0	ML	3.0						
	i	Pg		09:18:58.2	2.0														
	i	Sg		09:19:47.3	-0.3														
GEC2	e	Pn	Z	09:18:43.4	0.9				2.5	453.2	107.3								
	e	Sn	N	09:19:28.5	1.7														
BHG	e	Pn		09:18:46.5	2.8					463.5	124.7								

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/10	20:48:04.1	+-	0.70	51.660N	7.770E	11.1	5.6	149	1G		6	3	218	2.2ML		SZGRF	I
1998/11/10	20:48:03.7			51.647N	7.744E				1G					2.2ML		RUB	I

Hamm/Westfalen, Ruhr Coal Mining District

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BUG	i Pg - Z	20:48:11.7	1.2	TA		40.1	235.2	ML 2.2
GSH	e Pn Z	20:48:28.3	0.7			139.0	223.8	ML 2.2
	e Sg E	20:48:45.3	1.8					
TNS	e Pn Z	20:48:31.8	0.9			165.9	162.4	
	e Sg E	20:48:51.4	0.3					
CLZ	e Pn Z	20:48:33.0	0.2			182.3	82.2	
	e Sg E	20:48:56.5	0.7					
MOX	e Pg	20:48:55.0	1.8			292.1	110.9	
	e Sg	20:49:29.9	2.7					

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/10	22:02:30.5	+ - 0.80	48.435N	8.113E	13.0	10.4	121	2	+ - 0.0	12		308	2.0ML		LDG	L

Oberkirch/Upper Rhine Graben, NE of Offenburg

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/11	05:38:13.1	+ - 0.81	48.205N	9.063E	12.7	6.9	69	2	+ - 0.0	10		290	2.2ML		LDG	L

Ebingen/Swabian Jura

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/11	13:26:44.1	+ - 1.21	48.329N	8.753E	18.1	17.9	86	2	+ - 0.0	7		311	2.3ML		LDG	L
1998/11/11	13:26:40.0		48.670N	8.940E				0G		4	3	175	1.5ML	BFO	BGR	B

Calw/Black Forest

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BFO	e Pg Z	13:26:49.9	-0.1	T	2.5	58.7	230.2	ML 1.5
	e Sg E	13:26:56.9	0.1	T				
TNS	e Sg N	13:27:30.3	-0.1	T		176.3	348.5	
GRFO	e Sg E	13:27:37.6	0.2	T		200.9	54.7	

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/15	17:52:17.4	+ - 0.65	50.886N	6.000E	10.6	8.3	16	2	+ - 0.0	12		302	2.6ML		LDG	L
1998/11/15	17:52:15.5		51.000N	5.950E				10G		7	4	300	1.5ML	GSH	BGR	L?

Maastricht, Heerlen/NL, Dutch-German border region

Sta	Phase		Time	TRes	Def	S/N	Dist	EvAz	Mag
GSH	e Pg	Z	17:52:23.9	1.1	T	7.3	41.9	134.1	ML 1.5
	e Sg	E	17:52:28.6	0.9	T				
WLF	e Pg	Z	17:52:41.1	0.3	T	4.0	149.2	174.4	
	e Sg	E	17:52:57.4	-0.8	T				
TNS	e Pg	Z	17:52:47.8	-1.0	T	1.3	196.3	115.2	ML 1.9
	e Sg	E	17:53:11.3	-0.3	T				
BFO	e Sg	N	17:53:53.4	0.0	T		342.7	149.1	

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/16	05:44:38.3	+ - 1.27	48.197N	9.070E	32.8	19.9	162	2	+ - 0.0	5		335	2.1ML		LDG	L

Sigmaringen/Donau

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/17	11:54:17.5	+ - 0.64	51.360N	7.900E	17.8	4.4	153	5G		5	3	194	2.1ML		SZGRF	I
1998/11/17	11:54:17.0	+ - 0.57	51.380N	7.890E	8.9	4.4	157	1G		7	4	195	2.2ML	CLZ	BGR	I

Iserlohn/Nordrehin-Westfalen

Sta	Phase		Time	TRes	Def	S/N	Dist	EvAz	Mag
GSH	e Pg	Z	11:54:38.4	-0.2	T	2.3	127.6	236.5	ML 2.0
	e Sg	N	11:54:54.1	0.6	T				
TNS	e Pg	Z	11:54:39.0	-0.8	T	4.0	134.5	162.9	ML 1.9
	e Sg	E	11:54:55.0	-0.4	T				
CLZ	e Pg	Z	11:54:46.3	-1.0	T	2.9	178.9	72.4	ML 2.2
	e Sg	E	11:55:09.0	0.9	T				
MOX	e Sg	N	11:55:36.2	1.1	T		273.1	106.0	

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/19	05:47:07.6	+ - 1.16	51.520N	7.740E	16.7	6.7	172	1G		7	4	240	2.0ML	TNS	BGR	I
1998/11/19	05:47:04.1		51.647N	7.744E				1G					2.1ML		RUB	I

Hamm/Westfalen, Ruhr Coal Mining District

Sta	Phase		Time	TRes	Def	S/N	Dist	EvAz	Mag
BUG	i Pg	- Z	05:47:12.1	1.2	TA		40.1	235.2	ML 2.1
GSH	e Pg	Z	05:47:28.5	0.9		4.6	139.0	223.8	ML 2.1
	e Sg	E	05:47:45.9	2.1					
TNS	e Pg	Z	05:47:33.3	1.1		3.9	165.9	162.4	ML 2.0
	e Sg	N	05:47:51.6	0.1					

WLF	e	Pg	Z	05:47:48.1	2.0	1.7	247.3	207.6		
	e	Sg	E	05:48:13.1	-1.6					
MOX	e	Sg	E	05:48:30.0	2.4		292.1	110.9	ML	2.3

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/11/19	19:31:07.3	+ - 0.49	49.180N	6.850E	8.9	4.4	40	1G		10	5	186	2.4ML		SZGRF	I
1998/11/19	19:31:06.6	+ - 0.49	49.140N	6.870E	8.9	4.4	33	1G		12	7	189	2.4ML	TNS	BGR	I
1998/11/19	19:31:06.6	+ - 0.70	49.140N	6.840E	9.0	3.0	86	1G		31	15	194	2.9ML		LEDBW	I

Merlebach/F, SW of Saarbruecken, French-German border region

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
RUP	i Pg +	19:31:17.8	0.2	T		64.4	14.2	
	e Sg	19:31:26.8	1.8	T				
WLF	e Pg Z	19:31:19.7	0.1		10.3	76.7	319.8	ML 2.0
	e Sg N	19:31:28.8	0.2					
KTD	e Pg -	19:31:22.2	-0.1	T		92.5	77.0	
ABH	i Pg -	19:31:23.1	0.0	T		97.0	31.5	
	e Sg	19:31:36.2	1.8	T				
BFO	e Pg Z	19:31:29.6	-0.9		23.1	141.6	128.9	ML 2.2
	e Sg E	19:31:46.0	-1.1					
TOD	e Pg	19:31:31.7	-0.5	T		151.3	69.2	
	e Sg	19:31:49.8	-0.0	T				
LBG	e Pn +	19:31:31.0	-1.2	T		152.3	109.6	ML 2.9
	e Pg +	19:31:33.1	0.7	T				
	e Sn	19:31:49.4	-0.7	T				
	e Sg	19:31:51.6	1.5	T				
	SmS	19:31:55.7	2.4					
FELD	e Pn	19:31:34.0	0.4	T		164.6	148.2	
	e Sg	19:31:54.3	0.7	T				
TNS	e Pg Z	19:31:34.4	-0.5		4.7	166.9	43.2	ML 2.4
	e Sg N	19:31:54.9	0.6					
GSH	e Pg Z	19:31:35.6	-1.6			180.6	349.6	ML 2.3
	e Sg E	19:31:55.9	-2.3					
BEU	e Pg	19:31:40.5	0.3	T		198.3	107.2	
	e Sg	19:32:04.0	0.7	T				
SIND	Pn	19:31:36.5	-1.7			202.1	82.4	ML 3.0
	e Pg +	19:31:40.1	-0.8	T				
	e Sn	19:31:59.5	-1.1	T				
	e Sg	19:32:04.3	-0.1	T				
GUT	Pn	19:31:38.1	-0.5			205.2	124.5	ML 2.5
	e Pg +	19:31:42.0	0.6	T				
	e Sn	19:32:01.3	-0.1					
	e Sg	19:32:07.7	2.4	T				
HDH	e Pg	19:31:49.7	0.0			253.9	102.8	ML 2.6
	e Sg	19:32:20.0	0.9					

UBR	e	P?	-	19:31:49.7		290.6	122.7	ML 3.2
		Sn		19:32:21.2	1.8			
	e	Sg		19:32:32.5	2.9			
GRFO	e	Sg	E	19:32:36.6	-2.1	322.7	77.4	
GRA1	e	Pg	Z	19:32:01.9	0.6	322.8	77.4	ML 2.9
	e	Sg	E	19:32:37.9	-1.0			
MOX	e	Sg	Z	19:32:54.6	-0.8	380.7	62.1	
GEC2	e	Pn	Z	19:32:15.5	0.7	501.5	91.2	
	e	Sn	N	19:33:06.7	2.7			
	e	Sg	N	19:33:29.4	-0.4			
BRG	e	Sg		19:33:41.5	-0.1	542.7	66.5	

Unassociated arrivals

Sta	Phase	Date	Time	TRes	Def	S/N	Dist	EvAz	Mag
BRG	e Sg	1998/11/01	17:45:38.6						
BRG	i Sg	1998/11/04	03:52:22.2						
CLL	e Sg	1998/11/05	23:57:19.0						
CLL	e (Sg)	1998/11/09	12:39:33.0						
BFO	e Pg	1998/11/10	22:02:33.2						
BFO	e Sg	1998/11/10	22:02:35.2						
BFO	e Pg	1998/11/11	05:38:22.7						
BFO	e Sg	1998/11/11	05:38:30.1						
BRG	i Sg	1998/11/12	21:06:01.1						
BFO	e Pg	1998/11/16	05:44:47.8						
BFO	e Sg	1998/11/16	05:44:55.5						
BRG	e Sg	1998/11/16	08:50:10.0						
MOX	e (Sg)	1998/11/16	17:40:41.5						
CLL	e Sg	1998/11/20	21:23:48.0						
BRG	e Sg	1998/11/21	06:10:56.7						
BRG	e Sg	1998/11/23	17:46:41.6						
BRG	e Sg	1998/11/24	19:27:56.6						
BRG	e Sg	1998/11/25	01:49:40.8						
BRG	e Sg	1998/11/26	11:59:42.1						
BRG	e Sg	1998/11/27	00:25:01.8						
BRG	i Sg	1998/11/28	01:33:18.9						
BRG	e Sg	1998/11/28	02:15:22.0						

BRG	e	Sg	1998/11/29 01:10:31.1
BRG	e	Sg	1998/11/30 09:28:00.4
BRG	e	Sg	1998/11/30 09:48:38.7
MOX	i	Sg	1998/11/30 16:54:01.5