

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/03	21:40:26.9		49.940N	7.185E				10G			6		2.1ML	STR	NEIC	
ML= 2.1(UCC), Less reliable solution																
1998/08/03	21:40:27.9	+- 0.43	49.780N	7.260E	5.6	3.3	50	0G		9	5	176	1.9ML	TNS	BGR	B?

Idar-Oberstein

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
TNS	e Pn	21:40:43.8	-3.2			98.1	59.4	ML 1.9
	e Pg	Z 21:40:44.9	0.3	T	12.8			
	e Sg	N 21:40:56.3	0.4	T				
GSH	e Pg	Z 21:40:49.4	0.5	T	2.2	123.5	329.8	ML 1.7
	e Sg	E 21:41:03.0	-0.3	T				
BFO	e Pn	Z 21:40:55.9	-0.9	T		179.1	153.8	ML 1.6
	e Pg	Z 21:40:58.8	0.5	T	2.4			
	e Sg	N 21:41:19.2	0.1	T				
GRFO	e Sg	N 21:41:49.9	0.6	T		284.7	90.5	
GRA1	e Sg	21:41:50.5	1.2			284.9	90.5	mb 5.2
WET	e Sg	N 21:42:25.5	-0.2	T		412.0	97.7	

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/04	09:22:58.3		49.792N	8.518E				10G			11		2.2ML	STR	NEIC	
ML= 2.1(UCC)																
1998/08/04	09:22:58.1	+- 0.18	49.761N	8.541E	2.2	1.9	21	7	+- 3.0	19	9	128	2.4ML		LEDBW	L
1998/08/04	09:22:57.9	+- 0.29	49.750N	8.550E	3.3	2.2	0	10G		13	8	82	2.2ML	GSH	BGR	L

Worms

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
TOD	i Pg +	09:23:02.8	0.4			24.3	131.2	
TNS	e Sg	09:23:06.1	0.7					
	e Pg	Z 09:23:07.2	0.1	T	7.3	53.0	352.1	ML 1.9
	e Sg	N 09:23:09.1	-1.1					
KTD	i SmS	09:23:13.2	-0.1	T				
	i Pg -	09:23:17.0	-1.7					
ABH	Sg	09:23:08.5	0.5			58.5	215.3	
	Pg	09:23:15.6	0.7					
SIND	e Pg	09:23:10.2	-0.3			73.4	281.9	
	e Sg	09:23:18.4	-0.7					
	e Pg +	09:23:13.7	0.7			88.3	120.0	ML 2.3
	e PmP	09:23:14.5	-0.6					
RUP	e Sg	09:23:24.9	1.6					
	e SmS	09:23:26.3	-0.6					
LBG	Pg	09:23:15.9	-0.3			107.3	267.7	
	e Sg	09:23:33.4	0.5			122.1	171.5	ML 2.0
	i SmS	09:23:34.8	-0.8					

BEU	Sx		09:23:46.7					144.1	153.8	ML	2.5				
	e	Sg	09:23:40.8	1.6											
BFO	e	Pg	Z	09:23:23.7	-1.2	T	3.3	158.7	185.9	ML	1.7				
	e	Sg	N	09:23:44.1	0.8	T									
WLF	e	Pg	Z	09:23:27.3	0.1	T	2.0	172.7	267.8						
	e	Sg	N	09:23:46.9	-0.4	T									
HDH	e	Sn		09:23:42.1	-2.8			176.9	136.5	ML	2.3				
	e	Sg		09:23:49.4	0.8										
GSH	e	Pg	Z	09:23:30.8	0.7	T	1.5	189.5	306.2	ML	2.2				
	e	Sg	N	09:23:52.1	-0.1	T									
GUT		Pn		09:23:27.2	0.1			191.2	167.3	ML	2.2				
	e	Sg		09:23:53.7	1.1										
GRFO	e	Sg	E	09:23:53.3	0.4	T		192.1	90.9	ML	2.1				
KIZ	e	Sn		09:23:53.0	2.2			204.7	193.3	ML	2.4				
	e	Sg		09:23:57.3	0.8										
FELD		Pg		09:23:35.2	1.3			212.1	191.1						
		Sg		09:23:59.0	0.4										
MOX	e	Pg	Z	09:23:39.3	0.7	T	1.5	239.8	64.3	ML	2.2				
	e	Sg	N	09:24:06.6	0.1	T									
CLZ	e	Sg	E	09:24:13.8	-0.0	T		265.5	28.1	ML	2.3				
GEC2	e	Sg	N	09:24:48.4	-0.0	T		386.8	103.1	ML	2.6				
BRG	e	Sg		09:24:59.0	6.0			402.7	69.9						

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/04	11:05:28.8	+ -	1.28	51.338N	14.240E	18.8	10.9	90	0G		9	5	114	3.5ML		PIDC	
1998/08/04	11:05:26.0			51.429N	14.317E				10G			6		3.2ML	VIE	NEIC	
Less reliable solution																	
1998/08/04	11:05:27.2	+ -	0.96	51.350N	14.610E	10.0	5.6	53	0G		11	6	271	2.6ML	MOX	BGR	B

N of Bautzen, Oberlausitz

Sta	Phase		Time	TRes	Def	S/N	Dist	EvAz	Mag
BRG	e	Pg	Z	11:05:39.2	0.0	T	14.3	70.6	221.6
CLL	e	Pg	Z	11:05:45.8	-0.3	T	10.2	111.8	268.2
	e	Sg	E	11:05:59.9	0.7	T			
MOX	e	Pg	Z	11:06:03.8	-1.4	T	6.7	223.7	250.6
	e	Sg	N	11:06:31.3	0.1	T			
WET	e	Pn	Z	11:06:08.4	0.6	T	2.6	274.4	207.3
	e	Sg	E	11:06:45.8	0.1	T			
GEC2	e	Pn	Z	11:06:09.7	0.5	T	1.8	286.0	193.4
	e	Sg	E	11:06:49.2	0.3	T			
CLZ	e	Pg	Z	11:06:17.4	-0.3	T	3.8	297.7	282.2
	e	Sg	N	11:06:53.4	1.1	T			

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/04	19:14:05.9			51.581N	7.569E				10G			13		2.7ML	UCC	NEIC	
1998/08/04	19:14:07.4			51.630N	7.780E				1G		21	9	119	2.7ML	GSH	BGR	I
1998/08/04	19:14:05.9			51.647N	7.744E				1G					2.7ML		RUB	I

Hamm/Westfalen, Ruhr Coal Mining District

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BUG	i Pg - Z	19:14:13.9	1.2	TA		40.1	235.2	ML 2.7
	e Sg N	19:14:19.8	2.4					
IBBN	e Pg Z	19:14:20.3	2.0		3.4	73.4	0.7	ML 2.5
	e Sg E	19:14:29.0	2.1					
GSH	e Pg Z	19:14:30.3	0.8		4.8	139.0	223.8	ML 2.7
	e Sg N	19:14:48.4	2.8					
TNS	e Pn Z	19:14:33.8	0.7		1.1	165.9	162.4	ML 2.5
	e Pg Z	19:14:35.0	1.0	4.3				
	e Sg E	19:14:53.7	0.4					
CLZ	e Pn Z	19:14:35.7	0.6		0.6	182.3	82.2	ML 2.6
	e Pg Z	19:14:37.6	0.8	5.3				
	e Sg E	19:14:59.1	1.1					
WLF	e Pg Z	19:14:49.4	1.5		2.0	247.3	207.6	
	e Sg E	19:15:17.1	0.5					
MOX	e Pn Z	19:14:50.6	2.2		0.9	292.1	110.9	
	e Pg Z	19:14:57.0	1.6					
	e Sg E	19:15:31.3	1.9					
CLL	e Pg Z	19:15:09.8	1.8		2.1	366.1	93.9	
	e Sg E	19:15:51.2	0.8					
BFO	e Pn Z	19:14:58.7	0.6		1.6	371.2	173.3	
	e Sn N	19:15:39.1	3.4					

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/05	06:03:02.6	+/- 0.36	51.640N	7.720E	7.8	4.4	137	1G		8	4	141	2.1ML		SZGRF	I
1998/08/05	06:03:01.7	+/- 0.30	51.630N	7.770E	4.4	3.3	132	1G		12	5	120	2.2ML	GSH	BGR	I
1998/08/05	06:02:59.9		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	06:03:07.9	1.2	TA		40.1	235.2	ML 2.1
	e Sg E	06:03:13.8	2.5					
IBBN	e Pg Z	06:03:14.8	2.5		1.2	73.4	0.7	ML 2.1
	e Sg E	06:03:22.8	2.0					
GSH	e Pg Z	06:03:24.6	1.1		3.6	139.0	223.8	ML 2.2
	e Sg E	06:03:41.9	2.3					
TNS	e Pn Z	06:03:28.9	1.8			165.9	162.4	ML 2.0
	e Pg Z	06:03:29.7	1.7	3.0				
	e Sg E	06:03:48.2	0.9					
CLZ	e Pn Z	06:03:31.0	2.0			182.3	82.2	ML 2.1
	e Pg Z	06:03:32.1	1.3	3.9				
	e Sg E	06:03:53.5	1.6					

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/05	11:14:59.1	+- 1.27	51.390N	14.366E	20.0	11.1	94	0G		8	5	117	3.5ML		PIDC	
1998/08/05	11:15:00.0	+- 1.06	51.340N	14.550E	11.1	6.7	48	0G		9	5	283	2.6ML	MOX	BGR	B

N of Bautzen, Oberlausitz

Sta	Phase		Time	TRes	Def	S/N	Dist	EvAz	Mag
BRG	e Pg	Z	11:15:11.5	0.1	T	21.2	67.0	219.5	
CLL	e Pg	Z	11:15:18.0	-0.2	T	6.6	107.6	268.7	ML 2.3
	e Sg	N	11:15:31.3	0.6	T				
MOX	e Pg	Z	11:15:36.2	-1.0	T	4.6	219.4	250.5	ML 2.6
	e Sg	E	11:16:02.9	0.1	T				
WET	e Pn	Z	11:15:40.4	0.2	T	2.6	271.6	206.6	ML 2.5
	e Sg	E	11:16:18.0	0.4	T				
GEC2	e Pn	Z	11:15:42.1	0.3	T	1.8	283.9	192.6	ML 2.6
	e Sg	E	11:16:20.5	-0.6	T				

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/05	19:50:19.1	+- 0.41	51.660N	7.720E	8.9	4.4	157	1G		9	6	129	2.3ML		SZGRF	I
1998/08/05	19:50:18.4	+- 0.26	51.600N	7.780E	4.4	3.3	146	1G		20	10	115	2.3ML	GSH	BGR	I
1998/08/05	19:50:16.9		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	19:50:24.9	1.2	TA		40.1	235.2	ML 2.2
	e Sg	E	19:50:30.4	2.0					
IBBN	e Pg	Z	19:50:31.4	2.0		3.1	73.4	0.7	ML 2.4
	e Sg	N	19:50:41.3	3.4					
GSH	e Pg	Z	19:50:41.3	0.8		8.8	139.0	223.8	ML 2.3
	e Sg	N	19:50:59.4	2.8					
TNS	e Pn	Z	19:50:44.6	0.5		1.9	165.9	162.4	ML 2.2
	e Pg	Z	19:50:46.0	1.0		8.8			
	e Sg	N	19:51:04.4	0.1					
CLZ	e Pn	Z	19:50:46.6	0.5		1.5	182.3	82.2	ML 2.3
	e Pg	Z	19:50:48.1	0.4		10.1			
	e Sg	E	19:51:10.1	1.1					
WLF	e Pg	Z	19:50:59.2	0.4		4.2	247.3	207.6	
	e Sg	N	19:51:26.2	-1.4					
MOX	e Pn	Z	19:51:01.5	2.1		2.2	292.1	110.9	ML 2.4
	e Pg	Z	19:51:08.2	1.8					
	e Sg	N	19:51:41.3	1.0					
GRA1	e Pn		19:51:05.5	1.7			327.6	130.2	
GRFO	e Pn	Z	19:51:05.8	2.0		1.9	327.6	130.2	
CLL	e Pg	Z	19:51:19.2	0.3		2.3	366.1	93.9	ML 2.6
BFO	e Pn	Z	19:51:10.1	0.9		2.5	371.2	173.3	

BRG e Sg 19:52:26.4 3.9 439.7 98.9

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/06	09:42:11.8	+ -	0.43	51.580N	7.240E	7.8	4.4	115	1G		10	5	170	2.1ML	TNS	BGR	I?

Essen, Ruhr Coal Mining District

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BUG	e Pg	Z 09:42:13.3	-1.2	T	11.0	15.6	172.5	ML 1.4
	e Sg	N 09:42:17.5	1.2	T				
IBBN	e Pg	N 09:42:26.8	0.0	T	0.1	88.3	23.4	ML 2.3
	e Sg	N 09:42:37.3	0.3	T				
GSH	e Pg	Z 09:42:29.9	-0.8	T	2.3	111.4	213.0	ML 1.9
	e Sg	E 09:42:44.2	0.6	T				
TNS	e Pg	Z 09:42:40.0	-1.1	T	1.9	173.1	150.2	ML 2.1
	e Sg	E 09:43:01.1	-0.1	T				
CLZ	e Pg	Z 09:42:50.1	1.4	T	1.6	217.7	81.1	ML 2.4
	e Sg	E 09:43:13.7	-0.3	T				

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/07	12:41:54.7	+ -	0.61	51.690N	7.680E	8.9	4.4	159	1G		10	6	217	2.3ML		SZGRF	I
1998/08/07	12:41:54.5	+ -	0.30	51.620N	7.780E	4.4	3.3	147	1G		13	6	118	2.4ML	GSH	BGR	I
1998/08/07	12:41:53.0			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 12:42:01.0	1.2	TA		40.1	235.2	ML 2.2
	e Sg	E 12:42:06.4	2.0					
IBBN	e Pg	Z 12:42:07.5	2.0		2.6	73.4	0.7	ML 2.3
	e Sg	E 12:42:16.4	2.4					
GSH	e Pg	Z 12:42:17.4	0.8		9.6	139.0	223.8	ML 2.4
	e Sg	E 12:42:35.0	2.3					
TNS	e Pn	Z 12:42:20.7	0.6		1.5	165.9	162.4	ML 2.2
	e Pg	Z 12:42:22.2	1.1					
	e Sg	E 12:42:40.5	0.1					
CLZ	e Pg	Z 12:42:24.2	0.3		7.8	182.3	82.2	ML 2.3
	e Sg	E 12:42:46.3	1.2					
MOX	e Pn	Z 12:42:38.5	2.9		1.5	292.1	110.9	ML 2.4
	e Sg	E 12:43:17.7	1.3					
GRA1	e Sg	N 12:43:31.3	4.8			327.6	130.2	
CLL	i Pg	12:42:57.0	2.0			366.1	93.9	
	e Sg	12:43:44.0	6.4					
BRG	e Sg	12:43:58.6	-0.0			439.7	98.9	

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/07	18:05:29.1	+- 0.61	49.832N	8.604E	15.8	8.6	133	2	+- 0.0	15		337	2.7ML		LDG	L
1998/08/07	18:05:31.7		49.690N	8.510E				2G					2.2ML		STR	
1998/08/07	18:05:31.2		49.754N	8.536E				6		18	9	126	2.2ML		LEDBW	L
Aftershock to event Aug 4, 09:22 with Ml= 2.4																
1998/08/07	18:05:31.6		49.760N	8.570E				10G		10	6	119	2.0ML		SZGRF	L
1998/08/07	18:05:30.9		49.760N	8.550E				5G		17	10	82	2.1ML	GRFO	BGR	L

Worms

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
TOD	i Pg -	18:05:35.7	0.5			25.1	133.1	
	i Sg	18:05:39.0	0.9					
TNS	e Pg Z	18:05:40.4	0.7	T	8.3	51.9	351.9	ML 1.9
	e Sg N	18:05:46.1	0.3	T				
KTD	i Pg +	18:05:41.2	0.2			59.4	214.7	
	i Sg	18:05:49.6	1.7					
ABH	e Pg +	18:05:43.2	-0.1			73.2	281.0	
SIND	e Pg +	18:05:46.7	0.8			88.8	120.6	ML 2.4
	i PmP	18:05:47.5	-1.0					
	e Sg	18:05:57.7	1.4					
	i SmS	18:05:59.3	-1.4					
RUP	i Pg -	18:05:49.2	0.1			107.3	267.1	
LBG	e Pg	18:05:51.9	0.2			123.2	171.6	ML 2.1
	e Sg	18:06:06.3	0.2					
	i SmS	18:06:07.4	-2.0					
BEU	i Px	18:05:56.9				145.1	154.0	ML 2.4
	Pg	18:05:56.3	0.8					
	i Sx	18:06:19.8						
	e Sg	18:06:13.6	1.3					
BFO	e Pg Z	18:05:58.3	0.4	T	6.2	159.8	185.9	ML 1.7
	e Sg N	18:06:16.9	0.4	T				
WLF	e Pn Z	18:05:58.2	-0.2	T	1.4	172.7	267.4	
	e Sg E	18:06:20.7	0.5	T				
HDH	e Sg	18:06:22.1	0.4			177.8	136.7	ML 2.2
GSH	e Pn Z	18:06:01.0	0.6	T	0.8	188.9	305.9	ML 2.0
	e Sg E	18:06:23.9	-1.0	T				
GRFO	e Pg Z	18:06:03.6	0.1	T	1.8	192.1	91.3	ML 2.1
	e Sg E	18:06:26.3	0.5	T				
GRA1	e Pg Z	18:06:03.2	-0.3			192.2	91.2	ML 2.2
	e Sg E	18:06:26.8	1.0					
GUT	Pn	18:05:57.0	-3.8			192.3	167.4	ML 2.0
	Sn	18:06:20.2	-1.9					
	e Sg	18:06:26.3	0.4					
KIZ	Pn	18:06:04.7	2.2			205.8	193.2	ML 2.2
	Sn	18:06:24.4	-0.6					
	e Sg	18:06:29.6	-0.1					
BUG	e Sg E	18:06:28.2	-2.0	T		207.6	334.7	ML 2.2

FELD	i	Pg	-	18:06:07.2	0.2			213.2	191.0								
	e	Sg		18:06:32.0	0.2												
MOX	e	Pg	Z	18:06:11.7	0.3	T	2.7	239.3	64.6	ML	1.9						
	e	Sg	N	18:06:40.1	0.9	T											
UBR	e	Pg		18:06:17.1	2.5			257.9	153.1	ML	2.1						
	e	Sg		18:06:46.5	1.9												
CLZ	e	Pg	Z	18:06:15.3	-0.4	T	2.0	264.5	28.3								
	e	Sn	E	18:06:39.5	2.1	T											
WET	e	Sg	N	18:07:02.2	-0.2	T		320.2	100.7	ML	2.3						
GEC2	e	Sg	N	18:07:21.4	-0.1	T		387.0	103.3	ML	2.3						

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/08	03:13:19.8	+-	0.41	51.640N	7.740E	6.7	4.4	150	1G		9	5	124	2.1ML		SZGRF	I
1998/08/08	03:13:19.0	+-	0.29	51.620N	7.780E	3.3	3.3	151	1G		14	6	118	2.1ML	GSH	BGR	I
1998/08/08	03:13:17.4			51.647N	7.744E				1G					2.0ML		RUB	I

Hamm/Westfalen, Ruhr Coal Mining District

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BUG	i Pg - Z	03:13:25.4	1.2	TA		40.1	235.2	ML 2.0
	e Sg E	03:13:31.4	2.6					
IBBN	e Pg Z	03:13:32.4	2.6		3.5	73.4	0.7	ML 2.2
	e Sg E	03:13:40.5	2.1					
GSH	e Pg Z	03:13:41.7	0.8		4.2	139.0	223.8	ML 2.1
	e Sg E	03:13:59.5	2.4					
TNS	e Pn Z	03:13:45.2	0.6		0.9	165.9	162.4	ML 1.9
	e Pg Z	03:13:46.6	1.1		4.4			
	e Sg N	03:14:05.0	0.2					
CLZ	e Pg Z	03:13:48.8	0.6		7.7	182.3	82.2	ML 2.1
	e Sg E	03:14:11.1	1.6					
MOX	e Pn Z	03:14:02.0	2.0		1.9	292.1	110.9	ML 2.3
	e Pg Z	03:14:08.4	1.4					
	e Sg N	03:14:41.6	0.7					

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/10	14:03:05.2	+-	0.42	51.650N	7.730E	8.9	4.4	149	1G		8	5	127	2.3ML		SZGRF	I
1998/08/10	14:03:04.1	+-	0.31	51.630N	7.780E	3.3	3.3	143	1G		13	7	119	2.2ML	TNS	BGR	I
1998/08/10	14:03:02.6			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	14:03:10.6	1.2	TA		40.1	235.2	ML 2.2
	e Sg E	14:03:16.3	2.3					

IBBN	e	Pg	Z	14:03:17.0	1.9			3.5	73.4	0.7	ML	2.3
	e	Sg	E	14:03:25.6	2.1							
GSH	e	Pg	Z	14:03:27.3	1.1			5.5	139.0	223.8	ML	2.3
	e	Sg	N	14:03:45.0	2.7							
TNS	e	Pg	Z	14:03:31.8	1.1			4.9	165.9	162.4	ML	2.2
	e	Sg	N	14:03:51.2	1.2							
CLZ	e	Pg	Z	14:03:34.8	1.3			5.5	182.3	82.2	ML	2.4
	e	Sg	E	14:03:55.7	1.0							
WLF	e	Pg	Z	14:03:45.0	0.5			1.9	247.3	207.6		
	e	Sg	E	14:04:11.6	-1.7							
MOX	e	Sg	N	14:04:27.1	1.0				292.1	110.9	ML	2.4
CLL	e	Sg		14:04:54.0	6.8				366.1	93.9		
BRG	e	Sg		14:05:10.0	1.8				439.7	98.9		

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/11	04:20:21.4	+-	0.86	48.727N	5.715E	15.5	8.0	156	2	+-	0.0	7	247	2.1ML		LDG	L

Toul, W of Nancy/F

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/11	18:06:17.7	+-	0.75	47.418N	7.980E	13.7	6.2	101	2	+-	0.0	9	263	2.3ML		LDG	L
1998/08/11	18:06:17.9			47.416N	7.916E				6		11	9		1.7ML		SED	

Saecingen, NE of Liestal/CH, Swiss-German border region

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BFO	e Pg	Z 18:06:35.8	-0.2		7.9	106.2	16.7	
	e Sg	N 18:06:48.0	-0.3					

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/11	21:33:36.2			51.630N	7.730E				1G		9	5	124	2.5ML		SZGRF	I
1998/08/11	21:33:35.2			51.640N	7.730E				1G		21	10	126	2.5ML	TNS	BGR	I
1998/08/11	21:33:33.7			51.647N	7.744E				1G					2.4ML		RUB	I

Hamm/Westfalen, Ruhr Coal Mining District

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BUG	i Pg	- Z 21:33:41.7	1.2	TA		40.1	235.2	ML 2.4
	e Sg	E 21:33:47.6	2.5					
IBBN	e Pg	Z 21:33:48.3	2.1		9.1	73.4	0.7	ML 2.5
GSH	e Pg	Z 21:33:58.4	1.1		11.4	139.0	223.8	ML 2.7
	e Sg	E 21:34:15.9	2.5					

TNS	e	Pn	Z	21:34:01.6	0.7		2.1	165.9	162.4	ML	2.5						
	e	Pg	Z	21:34:02.9	1.1		9.2										
	e	Sg	E	21:34:21.6	0.5												
CLZ	e	Pg	Z	21:34:04.9	0.4		14.5	182.3	82.2	ML	2.6						
	e	Sg	E	21:34:29.4	3.6												
WLF	e	Pg	Z	21:34:16.1	0.5		3.9	247.3	207.6								
	e	Sg	E	21:34:43.0	-1.4												
MOX	e	Pn	Z	21:34:18.3	2.1		2.9	292.1	110.9	ML	2.7						
	e	Pg	Z	21:34:24.7	1.5												
	e	Sg	N	21:34:58.6	1.4												
GRFO	e	Pn	Z	21:34:22.7	2.1		1.7	327.6	130.2	ML	2.8						
	e	Sg	N	21:35:12.0	4.7												
CLL	e	Pg	Z	21:34:36.1	0.3		3.2	366.1	93.9	ML	2.8						
	e	Sg	N	21:35:19.4	1.1												
BFO	e	Pn	Z	21:34:27.2	1.3		5.4	371.2	173.3	ML	2.6						
	e	Sn	E	21:35:06.5	3.0												
BRG	e	Pg		21:34:49.6	1.4			439.7	98.9	ML	2.9						
	e	Sg	N	21:35:41.0	1.7												
WET	e	Sg	E	21:35:46.3	1.7			458.0	125.4	ML	2.8						
GEC2	e	Sg	N	21:36:07.9	4.0			525.6	124.0	ML	2.9						

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/13	01:46:33.9		51.710N	7.640E				1G		7	4	224	2.3ML		SZGRF	I
1998/08/13	01:46:32.5		51.710N	7.760E				1G		11	6	222	2.2ML	TNS	BGR	I
1998/08/13	01:46:32.2		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	01:46:40.2	1.2	TA		40.1	235.2	ML 2.2
GSH	e	Pg Z	01:46:56.9	1.1		5.1	139.0	223.8	ML 2.3
	e	Sg E	01:47:14.5	2.6		12.7			
TNS	e	Pg Z	01:47:01.2	0.9		5.4	165.9	162.4	ML 2.2
	e	Sg E	01:47:19.6	-0.0		9.4			
CLZ	e	Pg Z	01:47:03.6	0.5		5.5	182.3	82.2	ML 2.3
	e	Sg N	01:47:24.0	-0.3		14.3			
MOX	e	Pg	01:47:23.6	1.9			292.1	110.9	
	e	Sg	01:47:57.0	1.3					
GRA1	e	Sg E	01:48:12.1	6.3			327.6	130.2	
GRFO	e	Pg Z	01:47:28.4	0.7		1.4	327.6	130.2	
	e	Sg E	01:48:09.0	3.2		2.4			
CLL	e	Pg Z	01:47:34.0	-0.3		1.5	366.1	93.9	
	e	Sg	01:48:21.0	4.2					
BFO	e	Pn Z	01:47:25.3	0.9			371.2	173.3	
	e	Sn E	01:48:05.1	3.1		2.4			
BRG	e	Sg	01:48:42.0	4.2			439.7	98.9	

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/14	00:12:13.2	+- 0.57	51.640N	7.800E	8.9	3.3	159	1G		8	4	202	2.1ML		SZGRF	I
1998/08/14	00:12:12.4	+- 0.55	51.680N	7.780E	7.8	3.3	160	1G		14	7	210	2.3ML	BUG	BGR	I
1998/08/14	00:12:11.6		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	00:12:19.6	1.2	TA		40.1	235.2	ML 2.2
	e Sg E	00:12:25.5	2.5		37.4			
GSH	e Pg Z	00:12:36.3	1.2		3.2	139.0	223.8	ML 2.2
	e Sg E	00:12:53.5	2.2		10.4			
TNS	e Pn Z	00:12:39.4	0.6		1.6	165.9	162.4	ML 2.0
	e Pg Z	00:12:40.3	0.6					
	e Sg N	00:13:00.2	1.2		7.5			
CLZ	e Pg Z	00:12:42.7	0.2		4.8	182.3	82.2	ML 2.1
	e Sg N	00:13:04.1	0.5		7.8			
MOX	e Pn Z	00:12:56.2	2.0		1.5	292.1	110.9	ML 2.3
	e Pg Z	00:13:01.7	0.6		2.5			
	e Sg E	00:13:35.6	0.5		3.0			
CLL	e Sg E	00:13:56.2	-0.0		2.6	366.1	93.9	ML 2.5
BFO	e Pn Z	00:13:04.6	0.8		1.3	371.2	173.3	
	e Sn E	00:13:43.9	2.5		1.9			

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/14	12:40:15.9		48.660N	8.910E				2					2.1ML		STR	

Calw/Black Forest

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/15	10:02:25.8	+- 0.47	49.250N	6.910E	6.7	3.3	47	1G		7	4	176	2.0ML	TNS	BGR	I

Saarbruecken-West

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
WLF	e Pg Z	10:02:38.3	0.3	T	6.4	71.6	310.4	
	e Sg E	10:02:46.2	-0.0	T	14.1			
BFO	e Pg Z	10:02:50.6	0.0	T	3.1	145.9	134.0	ML 1.6
	e Sg E	10:03:07.4	-0.0	T	11.5			
TNS	e Pn Z	10:02:51.7	0.1	T	1.3	154.6	45.0	ML 2.0
	e Sg N	10:03:10.2	0.2	T	7.3			
GSH	e Sg N	10:03:13.8	-0.5	T	1.7	169.7	347.2	ML 1.9

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/16	08:41:36.4	+- 0.92	49.407N	7.789E	41.0	15.3	114	2	+- 0.0	6		344	2.1ML		LDG	L
1998/08/16	08:41:36.4		49.420N	7.800E				0G		5	3	134	1.7ML	TNS	BGR	B?

Kaiserslautern

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
TNS	e Pg Z	08:41:53.8	0.4	T	2.1	100.6	27.2	ML 1.7
	e Sg E	08:42:05.0	-0.1	T				
WLF	e Sg N	08:42:11.2	-0.0	T		121.9	283.5	
BFO	e Pg Z	08:41:58.0	0.0	T	2.7	127.2	162.1	ML 1.4
	e Sg E	08:42:12.7	-0.0	T				

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/17	13:17:25.3	+- 0.47	51.560N	7.780E	8.9	4.4	159	1G		11	6	189	2.0ML	TNS	BGR	I
1998/08/17	13:17:23.3		51.647N	7.744E				1G					2.0ML		RUB	I

Hamm/Westfalen, Ruhr Coal Mining District

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BUG	i Pg - Z	13:17:31.3	1.2	TA		40.1	235.2	ML 2.0
	e Sg E	13:17:36.9	2.2		43.9			
GSH	e Pg Z	13:17:47.9	1.0		2.8	139.0	223.8	ML 2.2
	e Sg E	13:18:04.9	1.9		6.1			
TNS	e Pg Z	13:17:52.5	1.0		2.3	165.9	162.4	ML 2.0
	e Sg E	13:18:10.5	-0.2		8.2			
CLZ	e Pn Z	13:17:54.8	2.4		2.6	182.3	82.2	ML 2.1
	e Sg E	13:18:18.0	2.6		6.6			
WLF	e Pg Z	13:18:05.7	0.5		1.6	247.3	207.6	
	e Sg N	13:18:32.7	-1.3		2.6			
MOX	e Pn Z	13:18:05.6	-0.3		1.2	292.1	110.9	
CLL	e Sg	13:19:11.0	3.1			366.1	93.9	

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/18	05:09:08.6		51.684N	7.631E				10G			16		2.9ML	STR	NEIC	
	ML= 2.8(UCC), Less reliable solution															
1998/08/18	05:09:09.5		51.700N	7.760E				1G		18	10	214	2.9ML	GSH	BGR	I
1998/08/18	05:09:09.2		51.647N	7.744E				1G					2.7ML		RUB	I

Hamm/Westfalen, Ruhr Coal Mining District

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BUG	i Pg - Z	05:09:17.2	1.2	TA		40.1	235.2	ML 2.7
	e Sg N	05:09:22.9	2.3		81.6			

GSH	e	Pg	Z	05:09:33.4	0.6	12.9	139.0	223.8	ML	2.9
	e	Sg	E	05:09:50.9	2.0	32.3				
TNS	e	Pn	Z	05:09:36.8	0.4	3.1	165.9	162.4	ML	2.8
	e	Sg	N	05:09:56.5	-0.1	21.3				
CLZ	e	Pn	Z	05:09:38.7	0.3	2.1	182.3	82.2	ML	2.7
	e	Pg	Z	05:09:40.4	0.3	14.9				
	e	Sg	E	05:10:02.1	0.8	34.2				
WLF	e	Pg	Z	05:09:51.4	0.2	5.1	247.3	207.6		
	e	Sn	E	05:10:14.2	1.4	6.2				
MOX	e	Pn		05:09:47.8	-4.0		292.1	110.9	ML	3.0
	e	Pg	Z	05:09:58.5	-0.2	2.2				
	i	Sg		05:10:33.3	0.6					
HOF	i	Pn	+	05:09:57.6	1.8		325.1	115.5		
CLL	e	Pg	Z	05:10:11.6	0.3	2.4	366.1	93.9	ML	3.1
	e	Sg	N	05:10:54.2	0.5	3.5				
BFO	e	Pn	Z	05:10:02.3	0.9	4.9	371.2	173.3		
	e	Sn	E	05:10:42.4	3.4	4.3				
BRG	e	Sg	N	05:11:15.2	0.3	3.5	439.7	98.9	ML	3.0
GEC2	e	Sg	E	05:11:40.9	1.5	2.0	525.6	124.0	ML	3.1

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/18	07:56:18.2	+-	0.80	51.430N	6.940E	11.1	4.4	142	1G		11	7	230	2.0ML	GSH	BGR	I
1998/08/18	07:56:16.3			51.497N	6.848E				1G					1.8ML		RUB	I

Duisburg, Ruhr Coal Mining District

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BUG	i Pg + Z	07:56:22.3	0.9	TA		29.9	102.0	ML 1.8
	e Sg E	07:56:26.0	1.2		19.2			
GSH	e Pg Z	07:56:32.6	0.9		3.6	90.7	201.4	ML 2.0
	e Sg E	07:56:43.9	1.7		14.7			
TNS	e Pg Z	07:56:47.2	0.3		2.2	180.8	141.0	ML 2.3
	e Sg N	07:57:07.6	-0.4		10.5			
WLF	e Sg E	07:57:15.1	-1.1		4.8	209.6	193.8	
CLZ	e Pg Z	07:56:59.8	1.8		2.1	246.0	79.7	ML 2.2
	e Sg E	07:57:26.0	-0.6		2.5			
MOX	e Sg E	07:57:54.3	-0.9		2.2	346.3	104.0	ML 2.4
BFO	e Sn E	07:57:46.1	0.8		1.5	367.8	162.7	

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/18	15:22:59.4	+-	1.07	48.560N	6.090E	21.1	8.9	57	10G		8	4	264	1.7ML	BFO	BGR	B
1998/08/18	15:22:58.6	+-	1.10	48.610N	5.910E	9.0	6.0	61	10G		13	9	241	2.2ML		LEDBW	L

Toul, W of Nancy/F

Sta	Phase		Time	TRes	Def	S/N	Dist	EvAz	Mag
WLF	e Pg	Z	15:23:21.1	2.4		1.5	118.6	8.5	
	e Sg	N	15:23:34.2	1.6					
RUP	Pg		15:23:24.4	0.8	T		147.4	34.1	
	e Sg		15:23:41.5	0.7	T				
KIZ	Pg		15:23:25.1	-1.6	T		165.4	115.3	ML 2.2
	i Sg		15:23:44.0	-1.9	T				
BBS	Sg		15:23:52.2	3.7			174.2	136.4	
FELD	e Sg		15:23:47.0	-1.8	T		175.2	117.0	
KTD	Sg		15:23:49.5	0.2	T		177.2	62.7	
BFO	e Pn	Z	15:23:25.8	-0.7			181.1	99.0	ML 1.7
	e Pg	Z	15:23:27.3	-2.0		2.6			
	e Sg	E	15:23:45.8	-4.7					
ABH	Sn		15:23:47.8	0.5	T		184.7	39.4	
LBG	e Sg		15:23:57.1	-2.1			212.0	87.3	ML 2.2
GSH	e Sg	E	15:24:05.8	-1.1			238.9	7.9	ML 2.1
TNS	e Pg	Z	15:23:44.6	2.5		1.4	256.5	44.7	ML 2.4
	e Sg	N	15:24:12.8	0.8					

Date	Origin	Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/21	04:19:57.2	+-	0.31	47.167N	9.238E	5.1	3.1	83	2	+- 0.0	38		247	2.9ML		LDG	L
1998/08/21	04:19:56.1			47.154N	9.354E				10		21	14		2.7ML		SED	
1998/08/21	04:19:55.6			47.153N	9.294E				5G			35		3.2ML	VIE	NEIC	
														ML= 2.7(STR)			
1998/08/21	04:19:57.4			47.200N	9.390E				10G		18	8	261	2.9ML	GRFO	BGR	L
1998/08/21	04:19:56.9			47.170N	9.360E				10G		43	18	232	3.0ML		LEDBW	L

Vaduz/Liechtenstein, Swiss-Liechtenstein-Austrian border reg

Sta	Phase		Time	TRes	Def	S/N	Dist	EvAz	Mag
UBR	i Pg +		04:20:10.9	0.3	T		80.0	44.5	ML 3.0
	PmP		04:20:12.9	-0.0	T				
	Sg		04:20:21.8	1.9	T				
SPAK	i SmS		04:20:25.3	1.4	T				
	Pg		04:20:15.6	-0.4	T		112.2	337.7	
BHB	e Pn -		04:20:17.2	-0.5	T		122.7	347.6	
	e Pg -		04:20:18.0	0.2	T				
FELD	e Sn		04:20:32.2	-0.3	T				
	e Sg		04:20:33.7	1.6	T				
	e Pn -		04:20:17.9	-0.5	T		128.6	308.1	
JUN	i Pg		04:20:18.6	-0.1	T				
	e Pn +		04:20:19.2	0.4	T		131.2	349.6	
END	e Sn		04:20:33.7	-0.5	T				
	e Pn +		04:20:18.6	-0.8	T		136.2	297.0	
	e Pg -		04:20:19.5	-0.5	T				
	e Sn		04:20:35.6	0.3	T				
	e Sg		04:20:36.0	0.1	T				

KIZ	e	Pn	-	04:20:18.9	-0.8	T		139.1	309.5	ML	3.2				
	e	Pg	-	04:20:19.9	-0.6	T									
		Sg		04:20:36.5	-0.3	T									
BBS	e	Pn		04:20:19.9	-0.4	T		143.3	283.9						
	e	Pg	-	04:20:21.0	-0.3	T									
	e	Sg		04:20:38.1	0.1	T									
BFO	e	Pn	+	04:20:20.7	-0.4	T		150.2	329.5	ML	2.4				
	e	Pg	-	04:20:22.0	-0.4	T									
	e	Sg		04:20:39.9	-0.0	T									
BEU	e	Pn	-	04:20:21.2	-0.7	T		157.3	1.5	ML	3.0				
		Pg		04:20:23.0	-0.6	T									
		Sn		04:20:39.2	-0.5	T									
		Sg		04:20:42.5	0.6	T									
HDH		Pg		04:20:25.2	-0.5	T		169.5	21.6	ML	3.0				
		Sg		04:20:45.6	0.2	T									
LBG		Pg		04:20:25.5	-0.5	T		171.4	346.0	ML	2.7				
SCE	i	Pg	-	04:20:27.2	0.0			178.5	93.8						
FUR	e	Pg	Z	04:20:27.5	-0.1		1.4	181.0	51.7	ML	2.9				
	e	Sg	E	04:20:49.8	1.1										
SIND		Pn		04:20:31.2	-1.2	T		242.9	4.2	ML	2.8				
		Pg		04:20:37.7	-0.5	T									
		Sn		04:20:57.8	-0.1	T									
		Sg		04:21:05.5	-0.9	T									
GRFO	e	Sg	E	04:21:25.6	-0.5			312.1	25.4	ML	2.9				
WET	e	Pn	Z	04:20:44.2	-0.2		4.2	340.9	48.6	ML	3.0				
	e	Pg	Z	04:20:54.1	-0.6										
	e	Sn	N	04:21:20.0	1.4										
	e	Sg	N	04:21:33.6	-0.7										
TNS	e	Pn	Z	04:20:44.9	-0.0		1.3	345.9	349.2	ML	2.8				
	e	Sn	E	04:21:21.2	1.5										
	e	Sg	E	04:21:36.1	0.3										
WLF	e	Pn	Z	04:20:48.8	1.5		1.3	364.6	320.7						
	e	Sg	N	04:21:39.7	-1.4										
GEC2	e	Pn	Z	04:20:48.7	0.5		2.0	372.7	58.4	ML	2.7				
	e	Pg	Z	04:20:58.5	-1.6										
	e	Sg	N	04:21:41.1	-2.3										
MOX	e	Sg	E	04:21:55.6	-1.4			420.0	22.3	ML	3.0				
CLL	e	Sg		04:22:30.0	1.5			530.5	28.5						

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/21	23:30:32.7	+- 1.14	51.505N	7.673E	18.1	10.9	37	2	+- 0.0	7	6	309	2.4ML		LDG	L
1998/08/21	23:30:30.1		51.620N	7.810E				1G		12	6	198	2.1ML	TNS	BGR	I
1998/08/21	23:30:28.8		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	23:30:36.8	1.2	TA		40.1	235.2	ML 2.1
	e Sg N	23:30:42.8	2.6					
GSH	e Pg Z	23:30:53.1	0.7		5.6	139.0	223.8	ML 2.2
	e Sg E	23:31:11.1	2.6					
TNS	e Pg Z	23:30:58.3	1.4		4.6	165.9	162.4	ML 2.1
	e Sg N	23:31:15.8	-0.4					
CLZ	e Pg Z	23:31:00.4	0.8		7.1	182.3	82.2	ML 2.2
	e Sg E	23:31:21.3	0.4					
WLF	e Pg Z	23:31:10.9	0.2		2.2	247.3	207.6	
	e Sg E	23:31:37.1	-2.4					
MOX	e Pg Z	23:31:19.7	1.4		2.7	292.1	110.9	ML 2.3
	e Sg N	23:31:53.0	0.7					

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/22	00:09:53.4		51.567N	7.702E				2		7			2.5ML		LDG	L
1998/08/22	00:09:52.1		51.640N	7.800E				1G		10	5	202	2.0ML	TNS	BGR	I
1998/08/22	00:09:50.9		51.647N	7.744E				1G					1.7ML		RUB	I

Hamm/Westfalen, Ruhr Coal Mining District

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BUG	i Pg - Z	00:09:58.9	1.2	TA		40.1	235.2	ML 1.7
	e Sg E	00:10:04.7	2.4					
GSH	e Pg Z	00:10:15.6	1.2		5.4	139.0	223.8	ML 2.0
	e Sg N	00:10:33.4	2.8					
TNS	e Pn Z	00:10:18.8	0.7			165.9	162.4	ML 2.0
	e Pg Z	00:10:20.1	1.1					
	e Sg N	00:10:38.5	0.2					
	e Pg Z	00:10:22.0	0.2					
CLZ	e Pg Z	00:10:22.0	0.2		3.6	182.3	82.2	ML 2.1
	e Sg E	00:10:43.6	0.7					
MOX	e Sg N	00:11:15.1	0.7			292.1	110.9	

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/22	00:10:45.3	+ - 0.61	51.670N	7.760E	8.9	3.3	162	1G		10	5	209	2.1ML	TNS	BGR	I
1998/08/22	00:10:44.2		51.647N	7.744E				1G					1.9ML		RUB	I

Hamm/Westfalen, Ruhr Coal Mining District

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BUG	i Pg - Z	00:10:52.2	1.2	TA		40.1	235.2	ML 1.9
	e Sg E	00:10:58.1	2.5					
GSH	e Pg Z	00:11:08.8	1.0		3.1	139.0	223.8	ML 2.2
	e Sg E	00:11:26.2	2.3					

TNS	e	Pn	Z	00:11:13.0	1.6		165.9	162.4	ML	2.1
	e	Pg	Z	00:11:14.3	2.0	2.4				
	e	Sg	E	00:11:32.2	0.6					
CLZ	e	Pg	Z	00:11:15.6	0.5	2.2	182.3	82.2	ML	2.1
	e	Sg	N	00:11:36.8	0.5					
MOX	e	Sg	E	00:12:10.1	2.5		292.1	110.9	ML	2.2

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/22	00:40:31.2	+/- 0.60	48.356N	9.167E	11.9	9.5	172	2	+/- 0.0	15		317	2.4ML		LDG	L
1998/08/22	00:40:32.2		48.336N	9.072E				10G			11		2.2ML	STR	NEIC	
	ML= 2.0(FUR)															
1998/08/22	00:40:31.1		48.400N	9.220E				10G		11	7	164	2.1ML	WET	BGR	L
1998/08/22	00:40:31.4		48.375N	9.179E				10		37	17	79	1.9ML		LEDBW	L

Ebingen/Swabian Jura

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
MSG	e Pg -	00:40:34.1	0.2	T		10.9	284.3	
	e Sg	00:40:35.9	0.2	T				
JUN	e Pg -	00:40:34.1	0.1	T		11.4	244.1	
	e Sg	00:40:35.9	0.1	T				
BHB	e Pg +	00:40:35.3	0.2	T		19.2	222.3	
	e Sg	00:40:37.8	0.2	T				
BEU	i Pg +	00:40:36.7	0.1	T		29.0	36.8	ML 1.9
	i Sg	00:40:40.6	0.4	T				
SPAK	i Pg +	00:40:38.9	0.2	T		42.0	224.0	
	i Sg	00:40:44.4	0.7	T				
LBG	e Pg -	00:40:39.0	0.1	T		42.8	318.7	ML 2.1
	i Sg	00:40:44.5	0.5	T				
BFO	e Pg +	00:40:42.2	0.0	T		63.0	265.8	ML 1.7
	e PmP+	00:40:43.6	-1.4	T				
	e Sg	00:40:49.7	0.0	T				
	e SmS	00:40:52.3	-2.0	T				
HDH	e Pg +	00:40:44.8	-0.2	T		79.3	72.5	ML 1.9
	i Sg	00:40:54.7	0.5	T				
FELD	e Pn +	00:40:48.5	-1.3	T		103.3	238.0	
	i Pg	00:40:49.4	0.4	T				
	e Sg	00:41:01.2	0.1	T				
UBR	e Pg -	00:40:49.7	0.6	T		103.6	137.8	ML 1.8
	Sg	00:41:02.0	0.9	T				
KIZ	e Pn	00:40:48.5	-1.5	T		104.5	244.0	ML 2.0
	e Pg -	00:40:49.4	0.2	T				
	e Sg	00:41:01.0	-0.4	T				
SIND	Pn	00:40:49.6	-1.4			112.7	15.9	ML 2.0
	e Pg -	00:40:50.7	0.2	T				
	e Sg	00:41:03.3	-0.4	T				

TOD		Sg		00:41:11.6	0.2	T		139.5	348.8								
FUR	i	Pg	+	00:40:58.5	0.4			156.9	97.9			ML	2.3				
	e	Sg	N	00:41:15.6	-0.7												
BBS		Pg		00:40:58.3	-0.3	T		160.4	231.5								
GRFO	e	Pg	Z	00:41:06.5	-0.3		2.4	208.7	44.7								
	e	Sg	E	00:41:28.8	-2.3												
TNS	e	Sg	E	00:41:32.0	-0.1			212.2	345.8								
WET	e	Pg	Z	00:41:18.8	-0.8		2.4	284.3	71.1			ML	2.1				
	e	Sg	E	00:41:51.2	-1.5												
MOX	e	Sg	N	00:41:57.9	-1.5			307.6	34.0								
GEC2	e	Pg	Z	00:41:27.9	-0.6		1.7	336.5	79.4								
	e	Sg	N	00:42:06.8	-0.8												

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/25	00:16:16.8		48.683N	7.901E				10G			18		2.4ML	LDG	NEIC	
1998/08/25	00:16:15.3	+ - 0.75	48.790N	7.940E	21.6	10.2	149	2	+ - 0.0	13		336	2.4ML		LDG	L
1998/08/25	00:16:17.4		48.700N	8.010E				10G		6	4	220	1.1ML	BFO	BGR	L
1998/08/25	00:16:16.7		48.730N	7.920E				9		11	6	226	1.7ML		LEDBW	L

N of Strasbourg/F, Upper Rhine Graben

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BFO	e Pg Z	00:16:25.6	-0.4		1.7	53.7	145.7	ML 1.1
	e Sg E	00:16:31.2	-1.0					
LBG	i Pg +	00:16:27.8	0.0	T		64.6	96.2	ML 1.3
	e PmP-	00:16:28.7	-1.9	T				
	e Sg	00:16:35.2	-0.1	T				
LIBD	i PmP+	00:16:29.7	-1.5	T		68.5	200.1	
KIZ	i Pg +	00:16:31.4	0.1	T		86.0	180.1	ML 1.7
	e SmS	00:16:42.3	-3.0	T				
FELD	i Pn +	00:16:32.6	-1.7	T		95.1	176.2	
	e Sn	00:16:43.5	-3.1	T				
BEU	i Pn +	00:16:35.7	-0.6			111.0	97.9	ML 1.7
	i Pg -	00:16:36.0	0.5					
	e Sg	00:16:49.3	0.8					
TOD	e Sg	00:16:52.1	2.0			116.7	33.1	
ABH	e Pg +	00:16:40.0	1.1			130.9	348.2	
	e Sg	00:16:55.7	1.6					
SIND	e Pg	00:16:40.3	-0.3			140.8	60.1	ML 1.7
	e Sg	00:16:58.9	1.9					
HDH	i Pg +	00:16:45.7	0.3			168.7	94.7	ML 1.9
	e Sg	00:17:04.7	-0.3					
TNS	e Pg Z	00:16:46.5	0.9		1.3	170.3	12.7	
	e Sg Z	00:17:07.0	1.6					
UBR	Sg	00:17:13.2	-0.6			199.7	124.9	ML 1.9
FUR	e Sg N	00:17:29.0	-0.7			255.3	103.0	

GRFO e Sg N 00:17:30.9 -0.8 262.4 64.7

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/26	07:50:01.6		47.117N	9.303E	4.9	4.9	0	0	+ -15.8	7	6	118	2.1ML		SED	B?

Glarus, Walenstadt/CH, Walensee

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BFO	e Pg	Z 07:50:28.1	0.5		1.8	153.3	332.0	
	e Sg	E 07:50:45.9	0.5					

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/28	10:03:25.2		48.698N	10.145E				5G			7		2.4ML	STR	NEIC	
	ML= 2.3(VIE), Less reliable solution															
1998/08/28	10:03:22.8	+ - 0.48	48.690N	10.200E	7.8	4.4	164	0G		8	4	179	2.0ML	GRFO	BGR	B

Heidenheim/Swabian Jura

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
GRFO	e Pg	Z 10:03:44.9	-0.5	T	2.1	133.7	33.3	ML 2.0
	e Sg	N 10:04:02.1	1.2	T				
BFO	e Pg	Z 10:03:46.6	-0.5	T	5.9	143.5	254.5	ML 1.9
	e Sg	N 10:04:04.6	0.9	T				
WET	e Pg	Z 10:03:57.2	0.1	T	2.2	202.1	74.5	ML 2.0
	e Sg	N 10:04:20.5	0.0	T				
TNS	e Pg	Z 10:03:58.7	-0.0	T	2.1	212.3	324.0	ML 2.2
	e Sg	N 10:04:23.2	-0.2	T				

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/28	14:45:35.4	+ - 0.76	51.660N	7.400E	8.9	3.3	153	1G		11	7	228	2.9ML	TNS	BGR	I
1998/08/28	14:45:34.7		51.684N	7.298E				1G					2.4ML		RUB	I

Recklinghausen, Ruhr Coal Mining District

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BUG	e Pg	Z 14:45:40.1	0.8	TA		27.1	184.1	ML 2.4
	e Sg	E 14:45:42.6	0.1					
GSH	e Pg	Z 14:45:57.4	1.9		2.1	123.3	211.7	ML 2.7
	e Sg	N 14:46:11.3	1.4					
TNS	e Pg	Z 14:46:05.6	0.2		3.1	181.4	153.2	ML 2.9
	e Sg	E 14:46:25.0	-1.5					
CLZ	e Pg	Z 14:46:09.4	-1.3		3.5	212.3	84.1	ML 2.8
	e Sg	N 14:46:34.7	-0.6					

WLF	e	Sg	N	14:46:41.7	-1.1				238.6	200.2							
MOX	e	Sg	N	14:47:06.8	0.0				322.4	109.3		ML	3.0				
GRFO	e	Sg	E	14:47:14.0	-1.9				354.1	127.2		ML	3.5				
CLL	e	Sg	N	14:47:26.4	-1.8				397.0	93.8		ML	3.2				
BRG	e	Sg	N	14:47:50.0	0.8				470.7	98.4		ML	3.2				
WET	e	Sg	E	14:47:54.9	1.5				485.7	123.4		ML	3.3				
GEC2	e	Sg	N	14:48:11.7	-1.2				553.6	122.2		ML	3.3				

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/29	06:27:04.0		46.959N	11.412E	13.8	13.8	0	10	+ - 5.4	12	8	325	2.4ML		SED	
1998/08/29	06:27:05.4	+ - 1.41	47.090N	11.350E	12.2	7.8	51	10G		9	5	317	2.5ML		SZGRF	L
1998/08/29	06:27:07.9	+ - 0.68	47.150N	11.320E	11.1	5.6	162	10G		17	7	259	2.4ML	WET	BGR	L

Stubai Alps/A

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
SCE	i Pg +	06:27:10.2	-3.4			32.0	112.6	
	i Sg	06:27:14.3	-3.2					
FUR	e Pg Z	06:27:27.5	0.4	T	2.1	112.7	358.3	ML 2.6
	e Sg N	06:27:41.4	1.2	T				
BHG	i Pg +	06:27:30.8	0.2			133.3	61.0	
	i Sg	06:27:49.2	3.1					
GRC1	e Sg E	06:28:06.0	-0.7			205.8	4.1	ML 2.4
WET	e Pn Z	06:27:43.2	-1.1	T	3.2	250.0	27.0	ML 2.4
	e Sn N	06:28:11.3	0.9	T				
	e Sg E	06:28:18.2	-1.2	T				
GRB1	e Sg E	06:28:18.8	-0.7			250.4	5.5	ML 2.8
GEC2	e Pn Z	06:27:44.6	-0.7	T	1.2	258.7	42.4	ML 2.3
	e Sn N	06:28:14.1	1.9	T				
	e Sg N	06:28:20.2	-1.7	T				
BFO	e Pn Z	06:27:45.1	-0.4	T	1.2	259.2	301.5	
	e Pg Z	06:27:51.9	0.0	T	3.5			
	e Sn N	06:28:12.7	0.4	T				
	e Sg N	06:28:19.9	-2.1	T				
GRFO	e Sg E	06:28:27.3	-1.4	T		282.6	358.5	ML 2.4
GRA1	e Sg E	06:28:28.2	-0.6			282.7	358.6	ML 2.6
MOX	e Sn E	06:28:41.0	1.2	T		389.2	3.1	
	e Sg E	06:28:58.8	-0.4	T				
TNS	e Pn Z	06:28:02.3	-0.4	T	1.4	401.4	329.4	
	e Sn N	06:28:44.7	2.3	T				
CLL	e Sg	06:29:23.0	-1.5			478.1	14.2	

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/30	06:35:32.2	+ - 0.31	47.114N	7.514E	5.6	2.8	96	2	+ - 0.0	22		204	2.3ML		LDG	L
1998/08/30	06:35:31.8		47.110N	7.540E				10G		15	9	276	1.9ML		LEDBW	L
1998/08/30	06:35:32.2		47.128N	7.543E				10		19	13		1.8ML		SED	

S of Solothurn/CH, N of Bern

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
BBS	i Pg -	06:35:38.9	0.2			37.5	356.1	
	e Sg	06:35:44.2	0.9					
FELD	e Pg -	06:35:47.5	-0.1			90.1	22.4	
	i SmS	06:36:00.9	-0.7					
KIZ	e PmP	06:35:49.2	-1.4			96.3	16.9	ML 1.9
	e Sg	06:36:00.5	0.6					
BFO	e Pg Z	06:35:54.9	-2.1		3.4	146.0	23.5	
	e Sg N	06:36:12.2	-1.8					
LBG	e Sg	06:36:27.9	-0.0			194.6	28.2	ML 2.0
UBR	e Pg -	06:36:06.6	0.0			202.6	71.4	ML 1.9
	e Sg	06:36:31.1	1.0					
BEU	Pn	06:36:03.0	-1.2			213.8	40.1	ML 1.9
	Pg	06:36:08.3	-0.2					
	Sg	06:36:33.7	0.4					

Date	Origin Time	OT_err	Lat	Long	Smajor	Sminor	Az	Depth	D_err	Ndef	Nsta	Gap	Mag	Ref	Source	Ev_type
1998/08/30	21:10:24.0		49.176N	6.929E				5G			13		2.9ML	UCC	NEIC	I
Mining induced event in the Lorraine region, France																
1998/08/30	21:10:20.9		49.458N	6.456E	162.8	162.8	0	10	+-	349	8	6 316	2.8ML		SED	
1998/08/30	21:10:24.7	+- 0.51	49.140N	6.780E	7.8	3.3	39	1G			12	6 194	2.4ML	BFO	BGR	I
1998/08/30	21:10:24.9	+- 1.00	49.170N	6.870E	13.0	6.0	85	1G			29	16 200	2.6ML		LEDBW	I

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

Sta	Phase	Time	TRes	Def	S/N	Dist	EvAz	Mag
RUP	i Pg +	21:10:35.3	0.1	T		60.7	13.0	
WLF	e Pg Z	21:10:37.4	-0.3		19.0	75.6	316.9	
	e Sg N	21:10:46.4	-0.1		3.7			
KTD	e Pg -	21:10:40.0	-0.1	T		89.7	78.8	
	SmS	21:10:54.0	-1.6					
ABH	e Pg	21:10:40.8	0.2	T		93.0	31.5	
	e SmS	21:10:53.9	-2.4	T				
LIBD	e Pn	21:10:46.2	-0.9	T		125.5	154.3	
BFO	e Pg Z	21:10:48.8	-0.2		35.7	142.0	130.6	ML 2.4
	e Sg N	21:11:05.6	0.2		3.1			
TOD	e Pn	21:10:47.8	-2.1	T		148.1	70.2	
	e Sg	21:11:07.5	0.3	T				
LBG	e Pn +	21:10:50.3	0.0	T		151.5	111.1	ML 2.7
	e Sn	21:11:07.2	-1.0	T				
	e Sg	21:11:09.8	1.6	T				
KIZ	e Pn +	21:10:49.9	-0.9	T		155.4	149.9	ML 2.5
	e Sn	21:11:05.7	-3.4	T				
	i Sg	21:11:09.1	-0.2	T				
FELD	e Pn -	21:10:50.5	-1.7	T		166.3	149.4	
	e Sg	21:11:12.4	0.0	T				

GSH	e	Pg	Z	21:10:54.4	-0.7					
	e	Sg	E	21:11:16.0	0.4		3.9	177.8	348.7	ML 2.3
							3.1			
BBS	e	Pg	+	21:10:59.3	1.3	T		195.4	165.8	
BEU	e	Pg	+	21:10:58.5	0.1	T		197.2	108.3	ML 2.6
	e	Sg		21:11:21.6	0.4	T				
SIND	e	Pn		21:10:57.9	1.7			199.5	83.2	ML 2.5
	e	Pg		21:11:02.5	3.8					
		Sn		21:11:16.8	-1.6					
	e	Sg		21:11:22.3	0.4	T				
HDH		Sg		21:11:37.7	0.6			252.5	103.7	ML 2.5
UBR	e	Pn	-	21:11:07.5	0.2	T		290.6	123.5	ML 2.6
	e	Pg		21:11:15.5	1.3	T				
		Sn		21:11:38.9	1.2					
	e	Sg		21:11:50.0	2.0	T				
MOX	e	Sg	E	21:12:14.6	1.9		2.7	377.2	62.4	ML 2.6
WET	e	Pn	Z	21:11:26.0	0.9		2.8	436.8	88.1	ML 2.7
	e	Sn	E	21:12:10.9	2.3					
	e	Sg	N	21:12:31.1	1.4		2.7			
CLL	e	(Sg)		21:12:47.0	0.3			496.5	59.1	
GEC2	e	Pn	E	21:11:33.7	1.0		4.0	499.4	91.6	ML 2.9
	e	Sn	N	21:12:24.0	2.2					
BRG	e	Sg		21:13:01.0	2.0			539.3	66.8	

Unassociated arrivals

Sta	Phase	Date	Time	TRes	Def	S/N	Dist	EvAz	Mag
BRG	e Sg	1998/08/01	13:42:20.9						
BRG	e Sg	1998/08/09	03:39:22.4						
MOX	e (Sg)	1998/08/10	23:28:07.1						
CLL	e (Sg)	1998/08/11	23:17:24.0						
CLL	e Sg	1998/08/11	23:17:41.0						
BRG	e Sg	1998/08/11	23:18:00.0						
BRG	e Sg	1998/08/12	07:51:08.3						
BRG	e Sg	1998/08/12	08:11:48.3						
BRG	e Sg	1998/08/13	02:43:48.1						
BRG	i Pg	1998/08/27	03:36:34.9						
BRG	e Sg	1998/08/28	16:20:36.9						
TOD	e Sg	1998/08/30	00:11:07.5						
FELD	e Sg	1998/08/30	00:11:12.4						