

2017TC004867 Supporting Information, Dataset DS01:

Reiter, F.¹, Freudenthaler, C.², Hausmann, H.², Ortner, H.¹, Lenhardt, W.², and Brandner, R.¹:
Active seismotectonic deformation in front of the Dolomites Indenter, Eastern Alps

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Catalogue of Fault Plane Solutions of Western Austria and adjacent Regions

calculated

by

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Vienna, Austria

and the

AlpArray Working Group



Seismotectonic Domain 1: Southern Alps low seismicity domain (SALS)

ID	UTC	Lat	Long	z	Epicenter	MI	MecClass
1.01	2013-07-13 14:46:11	46,64	11,76	10,2	Villnöss	2,8	R

Missing event ID's belong to already published events. Results are listed, illustrated and cited in the main publication. No datasheets exist.

Event data **Seismotectonic Domain 1: Southern Alps low seismicity domain (SALS)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z a) z est. b)

Event remarks km"/>
 a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

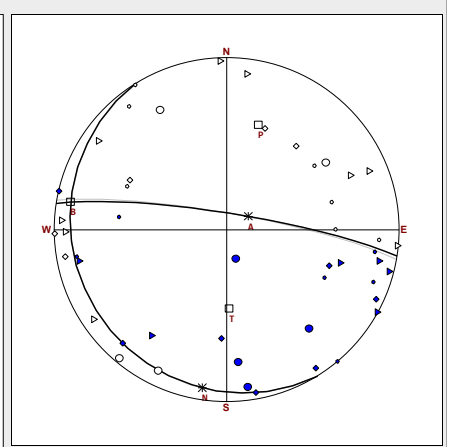
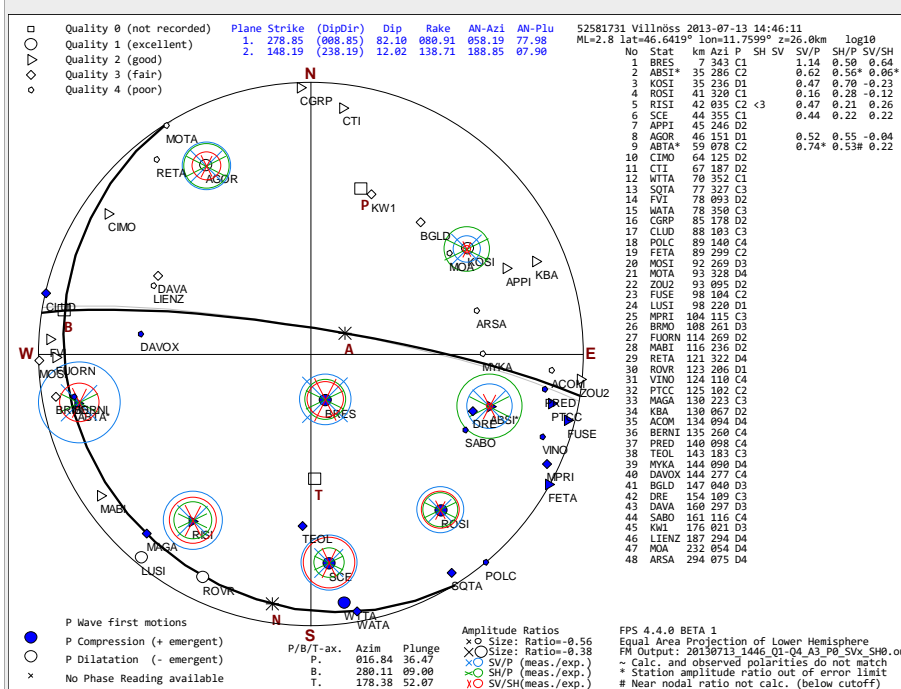
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	27		36°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	2
Contributors and References	
Reiter, 2017 (this Publ.) [1]	

Mechanism remarks
 Depth set to 26,0 km for focal mechanism calculation to compensate errors in velocity gradient
 from geological data plane 1 should be active (steep north dipping reverse fault)

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis				017	36°	<input checked="" type="checkbox"/>	48	0	0%
B-Axis				280	09°	<input checked="" type="checkbox"/>	0	0	0%
T-Axis				178	52°	<input checked="" type="checkbox"/>	1	0	0%
Plane1/A-Axis	279	82	081	058	78°	<input type="checkbox"/>	49	0	0%
Plane2/N-Axis	148	12	139	189	08°	<input type="checkbox"/>	8	0	0%
RMS for acceptable solutions ⁴¹						0,31			
RMS for all solutions ⁴¹						0,38			
Mechanism Class ^{45 46}						R			
Inferred active fault	Villnöss Valley reverse fault								
Fault zone	Reverse: South-vergent reverse faults in south-Alpine basement								
Seismotectonic region	Dolomites								
P Polarities							48	0	0%
SV Polarities							0	0	0%
SH Polarities							1	0	0%
All Polarities							49	0	0%
P/SV/SH Pol. Q1							8	0	0%
P/SV/SH Pol. Q2							15	0	0%
P/SV/SH Pol. Q3							13	0	0%
P/SV/SH Pol. Q4							13	0	0%
P/SV/SH Pol. Q0							0	0	0%
SV/P Ampl. Ratios							8	1	12%
SH/P Ampl. Ratios							8	1	12%
SV/SH Ampl. Ratios							8	1	12%
All Ampl. Ratios							24	3	12%

Seismotectonic Domain 2: Giudicarie fault system (GFS)

ID	UTC	Lat	Long	z	Epicenter	MI	MecClass
2.02	1998-07-29 06:35:24	46,77	11,40	9,0	Sarntal	2,7	R
2.04	2007-01-22 19:39:23	46,73	11,19	14,0	St.Martin in Passeier	3,0	N-SS
2.05	2008-09-11 09:08:04	46,83	11,21	6,8	Moos in Passeier	2,6	R
2.06	2010-04-03 13:10:27	46,82	11,17	10,8	Moos in Passeier	3,1	SS-R
2.07	2012-03-16 02:31:12	46,69	11,09	13,1	Algund	3,6	SS
2.08	2014-01-12 20:11:36	46,81	11,17	9,6	Moos in Passeier	3,4	SS-R
2.09	2015-09-01 22:40:01	46,71	11,13	11,4	Tirol	2,9	SS-R
2.10	2017-05-14 10:52:51	46,88	11,46	11,8	Sterzing	3,3	SS-R

Missing event ID's belong to already published events. Results are listed, illustrated and cited in the main publication. No datasheets exist.

Event data **Seismotectonic Domain 2: Giudicarie fault system (GFS)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

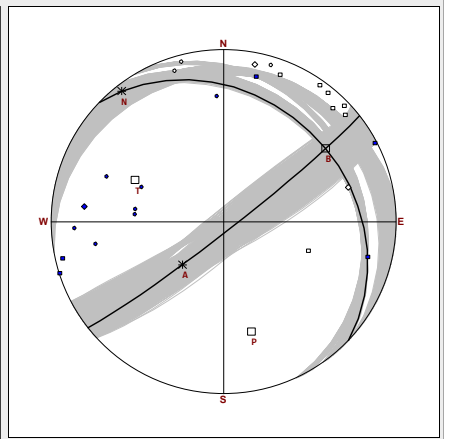
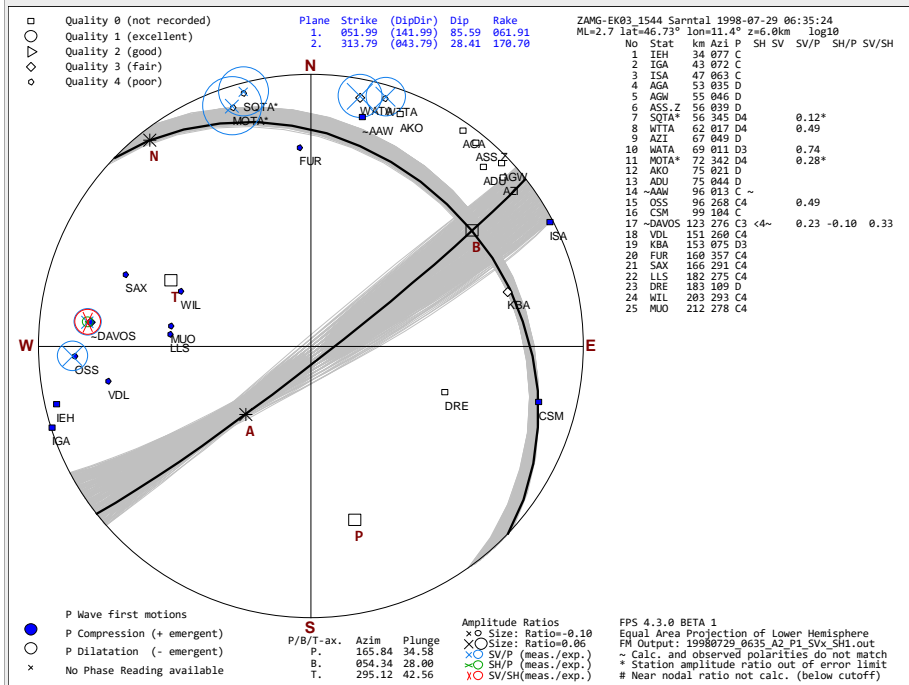
Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	143	149 °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	206
FPS quality (expl. at end)	765
	4

Contributors and References

Reiter, 2004-2017 (this Publ.), using polarities from Kraft, 1999 and waveform data from Diehl et al., 2009 [3, 51, 52]

Mechanism remarks no OASIS waveform data available
sv first onsets of Kraft, 1999 not used

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					166	35 °	
B-Axis					054	28 °	
T-Axis					295	43 °	
Plane1/A-Axis	052	86	062	224	62 °	<input type="checkbox"/>	
Plane2/N-Axis	314	28	171	322	04 °	<input type="checkbox"/>	

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	25	1	4 %
SV Polarities	0	0	%
SH Polarities	1	1	100 %
All Polarities	26	2	8 %
P/SV/SH Pol. Q1	0	0	%
P/SV/SH Pol. Q2	0	0	%
P/SV/SH Pol. Q3	3	0	0 %
P/SV/SH Pol. Q4	11	1	9 %
P/SV/SH Pol. Q0	12	1	8 %
SV/P Ampl. Ratios	6	2	33 %
SH/P Ampl. Ratios	1	0	0 %
SV/SH Ampl. Ratios	1	0	0 %
All Ampl. Ratios	8	2	25 %

Event data

Seismotectonic Domain 2: Giudicarie fault system (GFS)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z

Event remarks Err zErr z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Relative Weighting	No	B Trend	0	1 359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
Lower Limit of S rad. Factor	0,15			
Prim./sec. Azimuthal Gap ³²	36		49°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

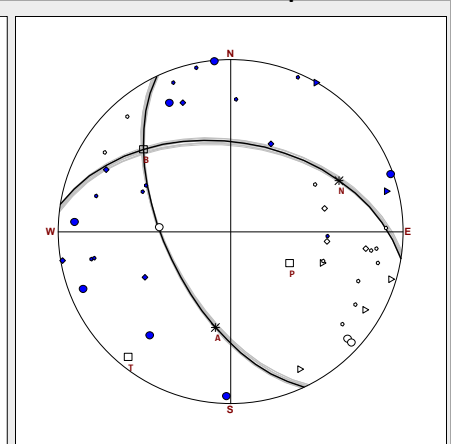
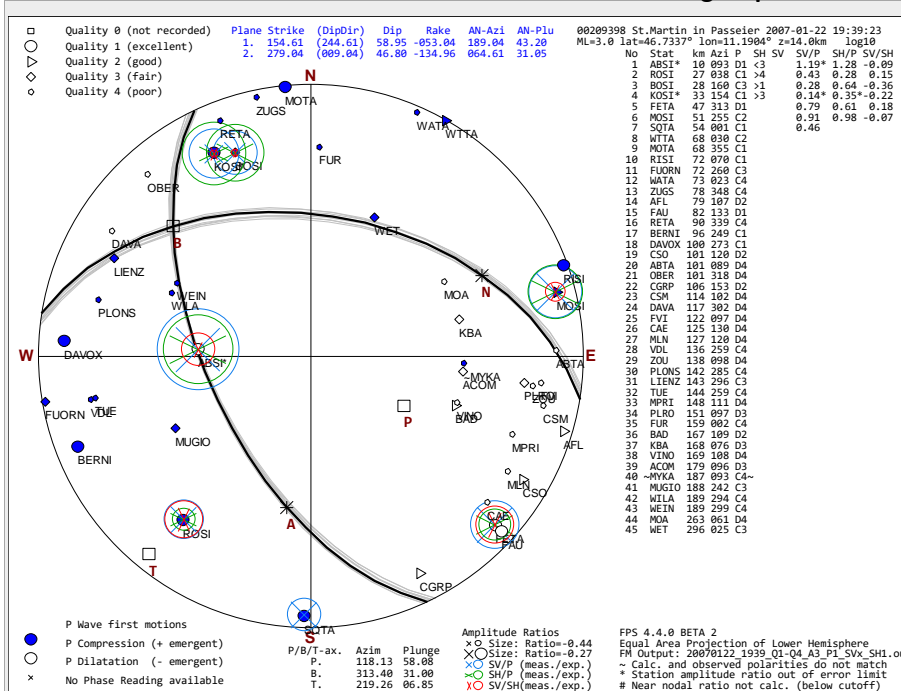
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	9
FPS quality (expl. at end)	2

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				118	58°	
B-Axis				313	31°	
T-Axis				219	07°	
Plane1/A-Axis	155	59	-053	189	43°	<input type="checkbox"/>
Plane2/N-Axis	279	47	-135	065	31°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	45	1	2%
SV Polarities	0	0	%
SH Polarities	4	0	0%
All Polarities	49	1	2%
P/SV/SH Pol. Q1	11	0	0%
P/SV/SH Pol. Q2	6	0	0%
P/SV/SH Pol. Q3	10	0	0%
P/SV/SH Pol. Q4	22	1	5%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	7	2	29%
SH/P Ampl. Ratios	6	1	17%
SV/SH Ampl. Ratios	6	0	0%
All Ampl. Ratios	19	3	16%

Event data

Seismotectonic Domain 2: Giudicarie fault system (GFS)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z

Event remarks Err zErr z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	61	68 °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

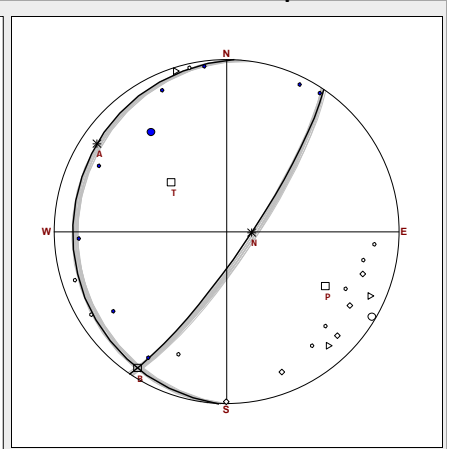
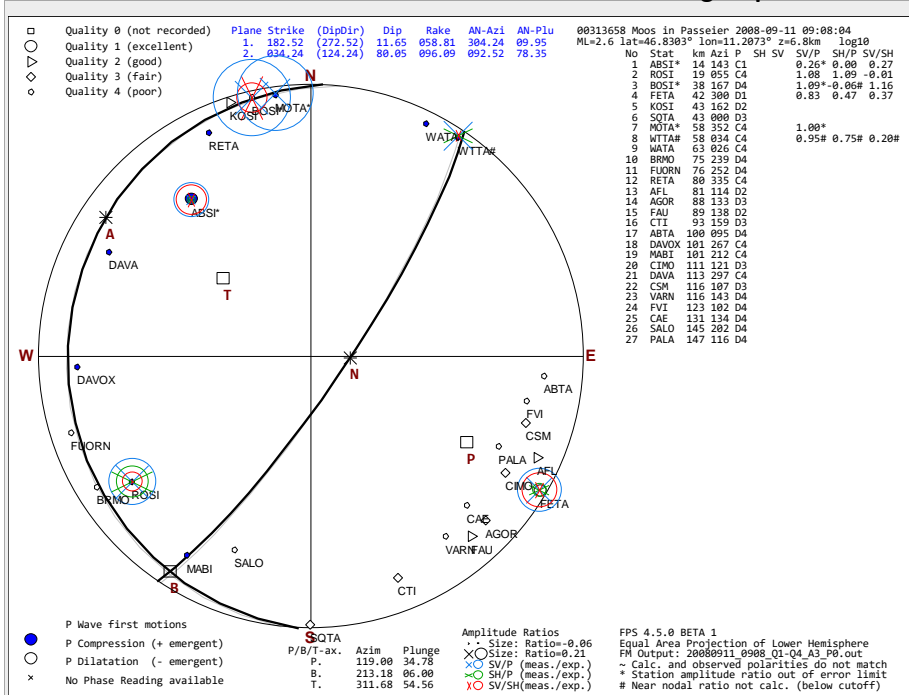
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	13
Contributors and References	2
Reiter, 2017 ((this Publ.) [1]	

Mechanism remarks

Strike-slip fault 4 km W of Passeier valley

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				119	35°	
B-Axis				213	06°	
T-Axis				312	55°	
Plane1/A-Axis	183	12	059	304	10°	<input type="checkbox"/>
Plane2/N-Axis	034	80	096	093	78°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Strike-slip fault 4 km W of Passeier valley
 Fault zone: Strike-Slip to oblique reverse: Passeier and Reschen Fault Systems
 Seismotectonic region: Stubai and Ötztal Alps, Texel Group

	Total	Misfit abs.	Misfit rel.
P Polarities	27	0	0%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	27	0	0%
P/SV/SH Pol. Q1	2	0	0%
P/SV/SH Pol. Q2	3	0	0%
P/SV/SH Pol. Q3	5	0	0%
P/SV/SH Pol. Q4	17	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	6	3	50%
SH/P Ampl. Ratios	5	0	0%
SV/SH Ampl. Ratios	5	0	0%
All Ampl. Ratios	16	3	19%

Event data

Seismotectonic Domain 2: Giudicarie fault system (GFS)

FPS ID	2.07	Ev ID	52433917	ID2		UTC	2012-03-16 02:31:12	MI	3,6	Io	5	
Epicenter	Algund			IT	Lat	46,691°	Long	11,087°	z	13,1 km a)	z est. b)	11,6 km
Event remarks	z 1D and zmacro < zNLL			NLL ERH ⁴⁷	1,81 km	NLL ERZ ⁴⁷	4,65 km	z macro	10 km			
				a) Loc. det./ refs. based on	grid search with Stations<150km, this publication [57]							
				b) z estim. based on	z averaged with macroseismic depth [64]							

FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min. B Trend	0	Incr. B Plunge	1	Max. A Plunge	359°
	Relative Weighting	No		0		1		90°
	Accepted log ₁₀ Ampl. Rat. Error	0,5		0		1		89°
	Lower Limit of P rad. Factor	0,05						
	Lower Limit of S rad. Factor	0,15						
	Prim./sec. Azimuthal Gap ³²	16		26°				

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

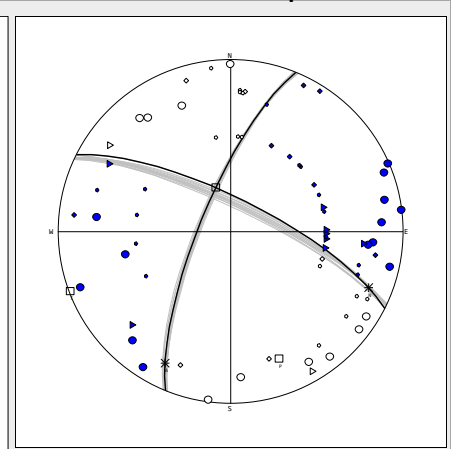
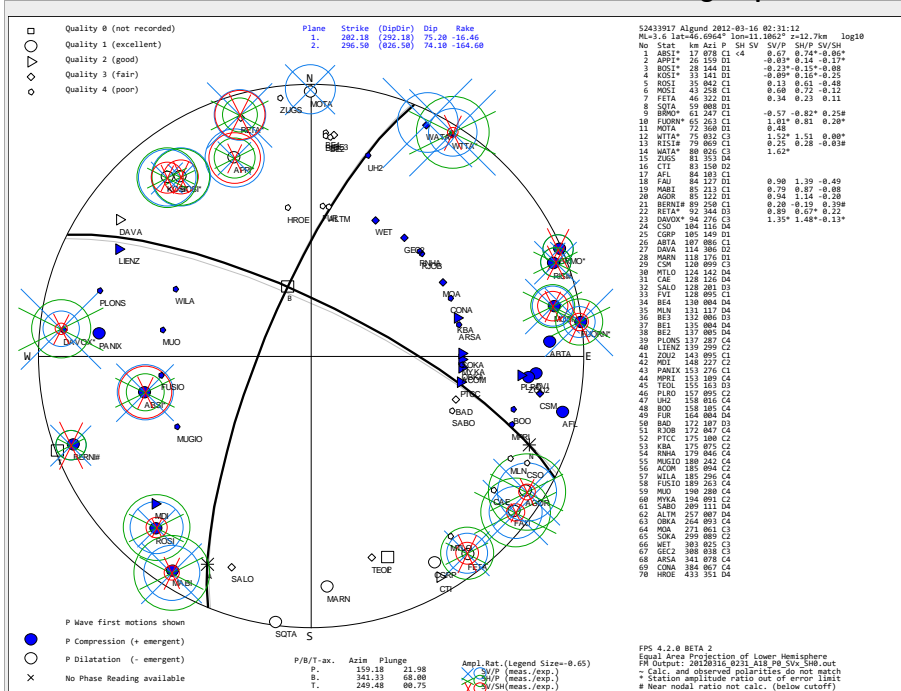
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	12
Contributors and References	1

Freudenthaler & Reiter, 2012-2016 (this Publ.) [1]

Mechanism remarks bad amplitude ratio fit ->Q2

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis					159	22°	70	0	0%	
B-Axis					341	68°	0	0	0%	
T-Axis					249	01°	1	0	0%	
Plane1/A-Axis	202	75	-016	207	16°		71	0	0%	
Plane2/N-Axis	297	74	-165	112	15°					
RMS for acceptable solutions ⁴¹						0,31	P Polarities			
RMS for all solutions ⁴¹						0,54	SV Polarities			
Mechanism Class ^{45 46}						SS	SH Polarities			
Inferred active fault	Strike-slip fault 4 km W of Passeier valley						All Polarities	71	0	0%
Fault zone	Strike-Slip to oblique reverse: Passeier and Reschen Fault Systems						P/SV/SH Pol. Q1	23	0	0%
Seismotectonic region	Stubai and Ötztal Alps, Texel Group						P/SV/SH Pol. Q2	10	0	0%
							P/SV/SH Pol. Q3	12	0	0%
							P/SV/SH Pol. Q4	26	0	0%
							P/SV/SH Pol. Q0	0	0	0%
							SV/P Ampl. Ratios	19	7	37%
							SH/P Ampl. Ratios	17	6	35%
							SV/SH Ampl. Ratios	17	5	29%
							All Ampl. Ratios	53	18	34%

Event data

Seismotectonic Domain 2: Giudicarie fault system (GFS)

FPS ID	2.08	Ev ID	52596635	ID2		UTC	2014-01-12 20:11:36	MI	3,4	I ₀	4,5	
Epicenter	Moos in Passeier			IT	Lat	46,812°	Long	11,169°	z	9,6 km	a) z est. b)	9,6 km
Event remarks	NLL ERH ⁴⁷			1,480 km	NLL ERZ ⁴⁷			3,66 km	z macro			10,6 km
a) Loc. grid search with Stations<150km, this publication [57] det./ refs. b) z estim. based on												

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	31		35°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

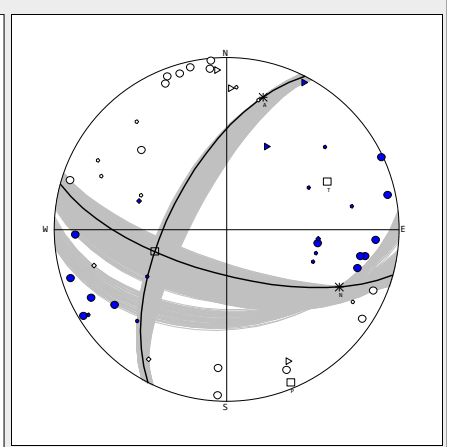
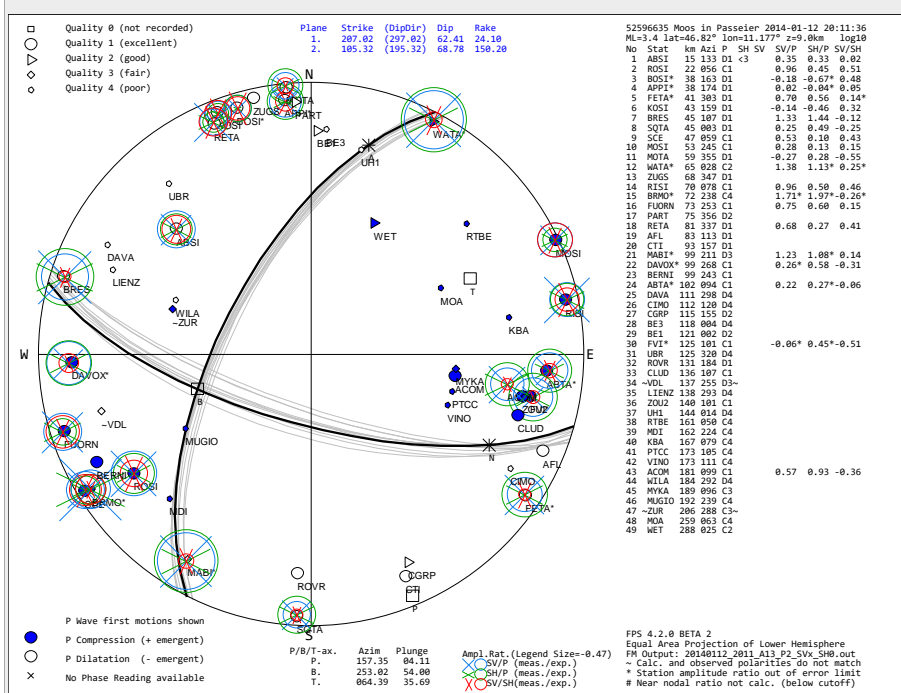
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	11 / 509
FPS quality (expl. at end)	1
Contributors and References	
Reiter, 2016 (this Publ.) [1]	

Mechanism remarks Comparable with earlier strong events (2005, ...)

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				157	04°	
B-Axis				253	54°	
T-Axis				064	36°	
Plane1/A-Axis	207	62	024	015	21°	<input type="checkbox"/>
Plane2/N-Axis	105	69	150	117	28°	<input type="checkbox"/>
RMS for acceptable solutions ⁴¹						0,28 log ₁₀
RMS for all solutions ⁴¹						0,45 log ₁₀
Mechanism Class ^{45 46}						SS-R
Inferred active fault	Strike-slip fault 4 km W of Passeier valley					
Fault zone	Strike-Slip to oblique reverse: Passeier and Reschen Fault Systems					
Seismotectonic region	Stubai and Ötztal Alps, Texel Group					

	Total	Misfit abs.	Misfit rel.
P Polarities	49	2	4%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	50	2	4%
P/SV/SH Pol. Q1	25	0	0%
P/SV/SH Pol. Q2	5	0	0%
P/SV/SH Pol. Q3	5	2	40%
P/SV/SH Pol. Q4	15	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	21	3	14%
SH/P Ampl. Ratios	21	7	33%
SV/SH Ampl. Ratios	21	3	14%
All Ampl. Ratios	63	13	21%

Event data

Seismotectonic Domain 2: Giudicarie fault system (GFS)

FPS ID	2.09	Ev ID	52679802	ID2		UTC	2015-09-01 22:40:01	MI	2,9	I ₀	4	
Epicenter	Tirol			IT	Lat	46,713°	Long	11,127°	z	11,4 km	a) z est. b)	10,2 km
Event remarks	z 1D and zmacro < zNLL			NLL ERH ⁴⁷	1,610 km	NLL ERZ ⁴⁷	3,78 km	z macro	9 km	a) Loc. grid search with Stations<150km, this publication [57]		
											det./ refs. b) z estim. based on z averaged with macroseismic depth [64]	

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	27		38°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

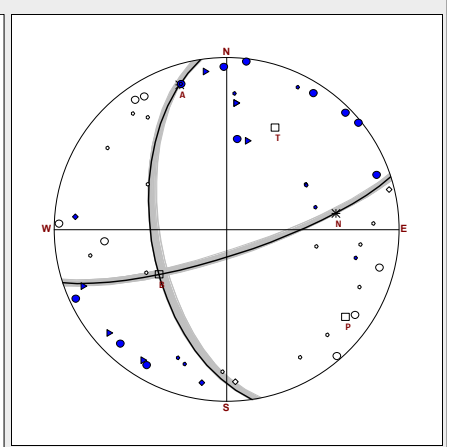
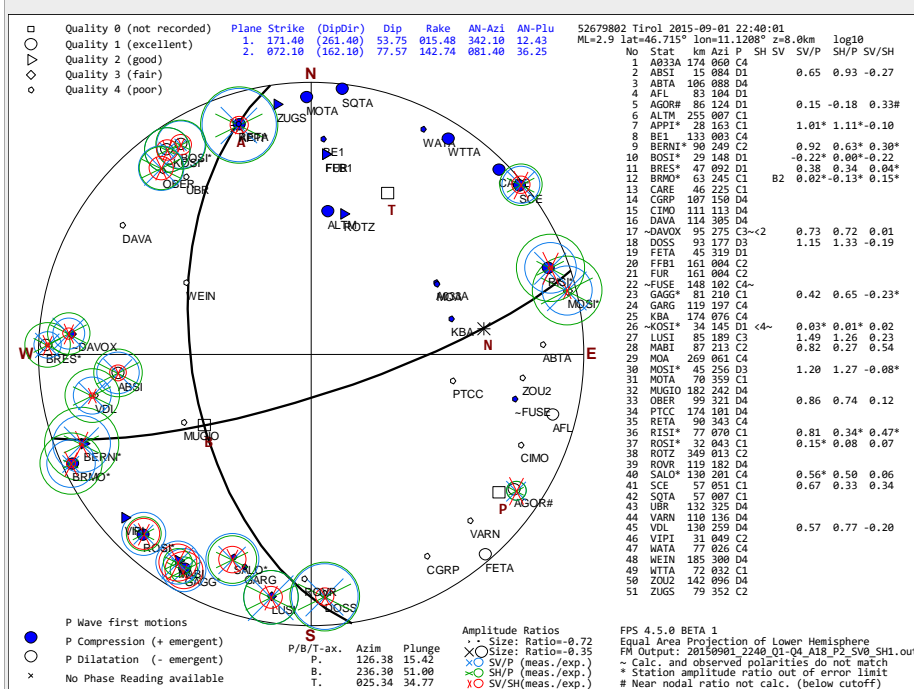
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	26
Contributors and References	1
Reiter & Hausmann, 2016 (this Publ.) [1]	

Mechanism remarks bad sht amplitude fit at brmo, kosi, berni

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis		126	15°				51	2	4%
B-Axis		236	51°				1	0	0%
T-Axis		025	35°				2	1	50%
Plane1/A-Axis	171	54	015	342	12°		54	3	6%
Plane2/N-Axis	072	78	143	081	36°		18	0	0%
RMS for acceptable solutions ⁴¹						0,26	9	0	0%
RMS for all solutions ⁴¹						0,55	4	1	25%
Mechanism Class ^{45 46}						SS-R	23	2	9%
Inferred active fault	Strike-slip fault 4 km W of Passeier valley						0	0	%
Fault zone	Strike-Slip to oblique reverse: Passeier and Reschen Fault Systems						20	6	30%
Seismotectonic region	Stubai and Ötztal Alps, Texel Group						20	6	30%
							20	6	30%
							60	18	30%

Event data

Seismotectonic Domain 2: Giudicarie fault system (GFS)

FPS ID **2.10** Ev ID **52766626** ID2 UTC **2017-05-14 10:52:51** MI **3,3** I₀

Epicenter **Sterzing** IT Lat **46,880°** Long **11,456°** z **11,8 km** a) z est. b) **11,8 km**

Event remarks **NLL ERH⁴⁷ 1,54 km NLL ERZ⁴⁷ 2,58 km z macro km**

a) Loc. grid search with Stations<150km, this publication [57]
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	14		22°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

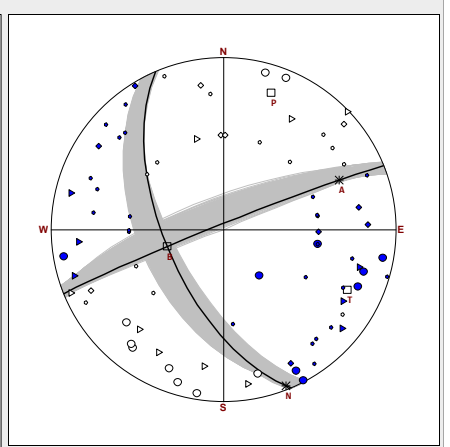
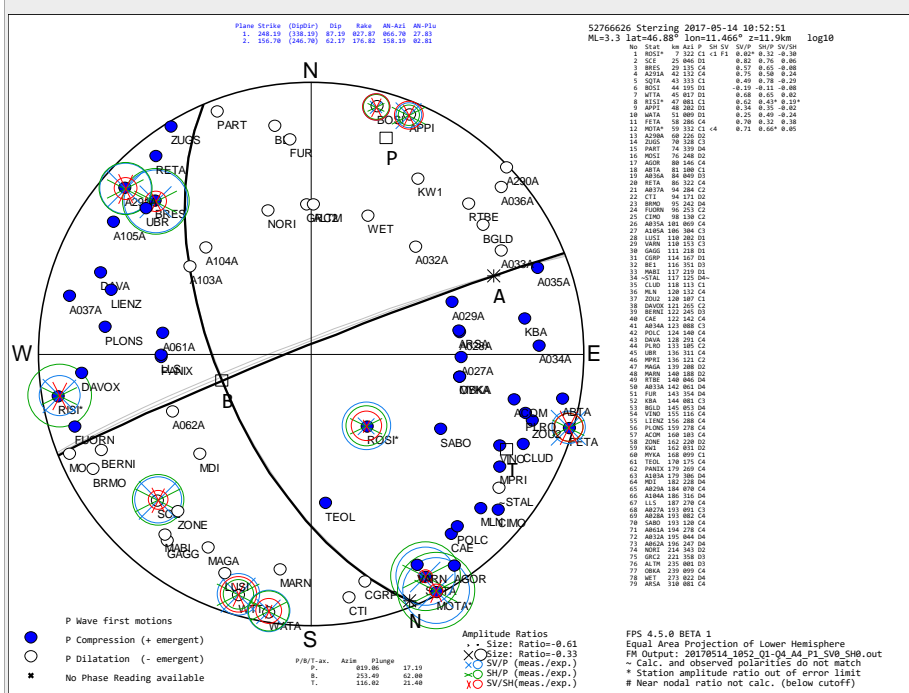
Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	1

Contributors and References
 Reiter & AlpArray Working Group, 2017 (this Publ.) [1, 55]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis	019	17°					79	1	1%
B-Axis	253	62°					1	0	0%
T-Axis	116	21°					2	0	0%
Plane1/A-Axis	248	87	028	067	28°	<input type="checkbox"/>	82	1	1%
Plane2/N-Axis	157	62	177	158	03°	<input type="checkbox"/>	19	0	0%

RMS for acceptable solutions ⁴¹	0,30	log ₁₀
RMS for all solutions ⁴¹	0,37	log ₁₀
Mechanism Class ^{45 46}	SS-R	

Inferred active fault	Eisacktal Fault
Fault zone	Strike-Slip: Pustertal-Gailtal fault system
Seismotectonic region	Pfunderer Mountains, Rieserferner Group, Pustertal, Upper Drau Valley, Gailtal

P Polarities	79	1	1%
SV Polarities	1	0	0%
SH Polarities	2	0	0%
All Polarities	82	1	1%
P/SV/SH Pol. Q1	19	0	0%
P/SV/SH Pol. Q2	14	0	0%
P/SV/SH Pol. Q3	11	0	0%
P/SV/SH Pol. Q4	38	1	3%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	12	1	8%
SH/P Ampl. Ratios	12	2	17%
SV/SH Ampl. Ratios	12	1	8%
All Ampl. Ratios	36	4	11%

Seismotectonic Domain 3: Eastern Periadriatic fault system (EPA)

ID	UTC	Lat	Long	z	Epicenter	MI	MecClass
3.01	1997-09-29 21:01:35	46,74	12,19	7,5	Welsberg-Taisten	3,6	SS
3.02	1999-12-25 23:36:02	46,72	12,52	7,8	Kartitsch	2,9	SS-R
3.03	2001-09-08 20:53:28	46,68	13,63	8,0	Paternion	2,3	SS
3.04	2006-01-18 00:16:45	46,97	13,26	4,7	Obervellach	2,9	SS-N
3.05	2010-01-21 16:20:47	46,83	12,99	8,9	Rangersdorf	2,6	SS
3.06	2013-04-10 21:55:19	46,92	12,68	9,4	Ainet	2,7	SS-N
3.07	2014-01-29 11:36:24	46,75	11,80	11,3	Lüsen	2,5	SS-R
3.08	2016-04-20 06:07:21	46,73	12,56	11,2	Obertilliach	2,6	SS-N
3.09	2017-05-04 21:58:26	46,81	11,96	9,7	Bruneck	3,1	SS

Missing event ID's belong to already published events. Results are listed, illustrated and cited in the main publication. No datasheets exist.

Event data **Seismotectonic Domain 3: Eastern Periadriatic fault system (EPA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err ° zErr z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

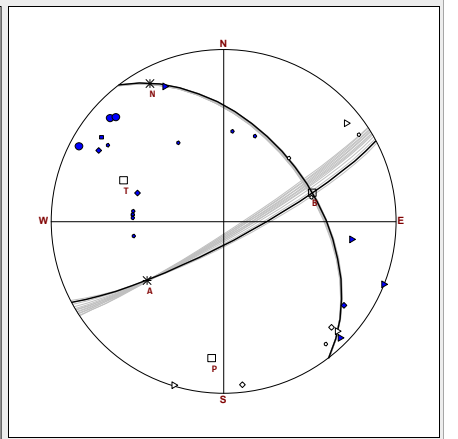
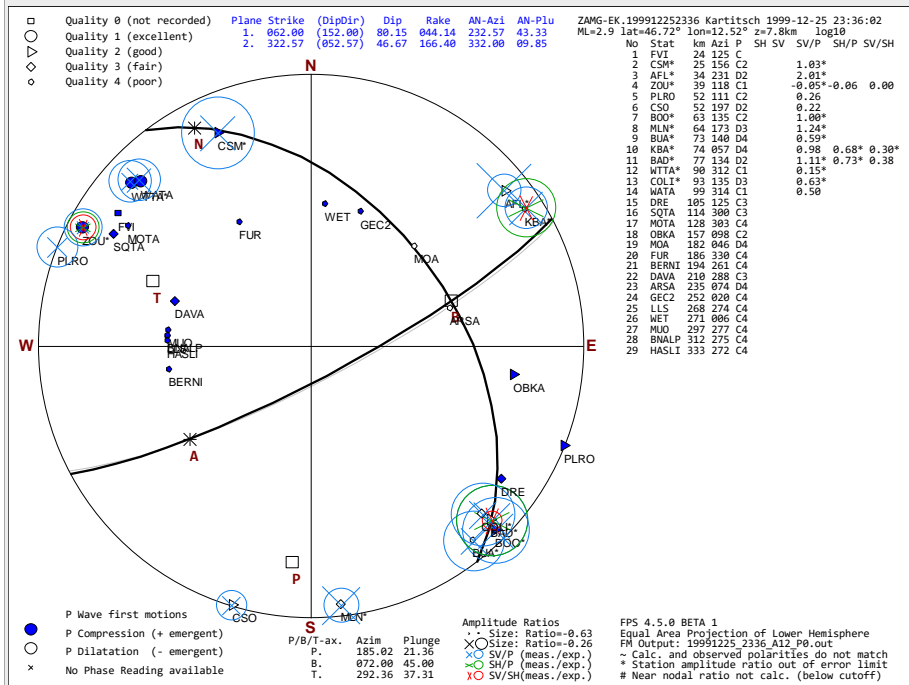
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	64		75 °		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	13
Contributors and References	3

Reiter, 2017 (this Publ.) [1]

Mechanism remarks no data from Diehl et al., 2009 available

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis				185	21	°	
B-Axis				072	45	°	
T-Axis				292	37	°	
Plane1/A-Axis	062	80	044	233	43	°	<input type="checkbox"/>
Plane2/N-Axis	323	47	166	332	10	°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	29	0	0%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	29	0	0%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	7	0	0%
P/SV/SH Pol. Q3	5	0	0%
P/SV/SH Pol. Q4	13	0	0%
P/SV/SH Pol. Q0	1	0	0%
SV/P Ampl. Ratios	13	9	69%
SH/P Ampl. Ratios	3	2	67%
SV/SH Ampl. Ratios	3	1	33%
All Ampl. Ratios	19	12	63%

Event data **Seismotectonic Domain 3: Eastern Periadriatic fault system (EPA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat ° Long ° z km a) z est. b) km

Event remarks Err ° zErr km z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

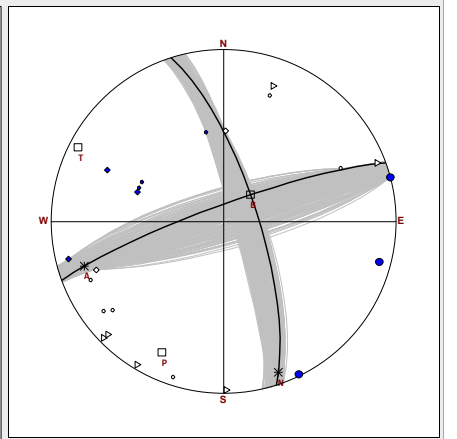
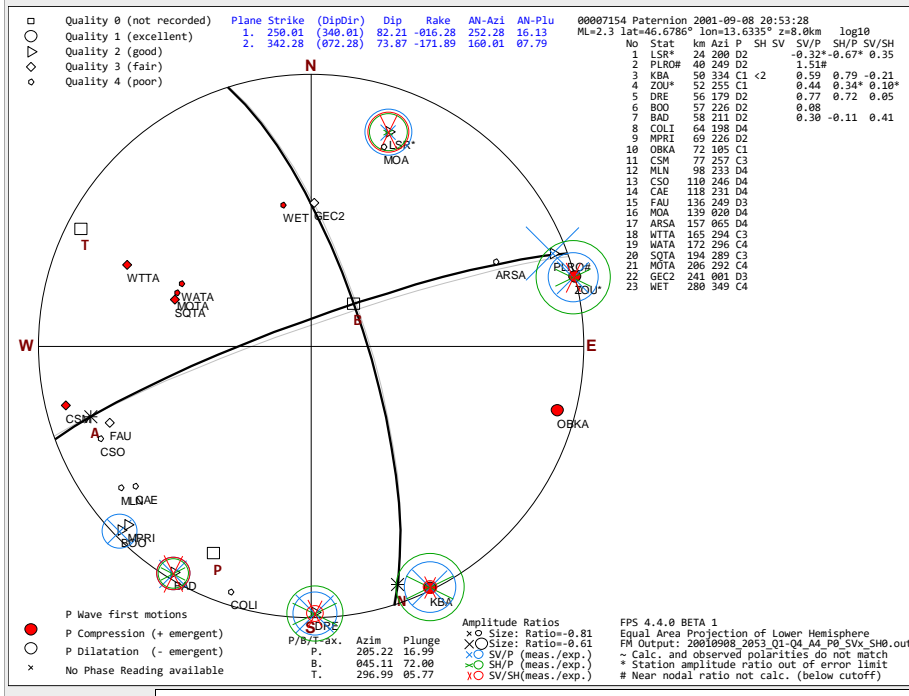
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	2	359
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	2	90
Lower Limit of P rad. Factor	0,05	A Plunge	0	2	88
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	53		79	°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	160
Contributors and References	3

Reiter, 2017 (this Publ.) [1]

Mechanism remarks no data in Diehl et al., 2009

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					205	17	°
B-Axis					045	72	°
T-Axis					297	06	°
Plane1/A-Axis	250	82	-016	252	16	°	<input type="checkbox"/>
Plane2/N-Axis	342	74	-172	160	08	°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Mölltal fault system
 Fault zone: Strike-Slip: Mölltal fault system
 Seismotectonic region: Hohe Tauern southeast, Schober and Ankogel Group

	Total	Misfit abs.	Misfit rel.
P Polarities	23	0	0%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	24	0	0%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	7	0	0%
P/SV/SH Pol. Q3	5	0	0%
P/SV/SH Pol. Q4	9	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	7	1	14%
SH/P Ampl. Ratios	5	2	40%
SV/SH Ampl. Ratios	5	1	20%
All Ampl. Ratios	17	4	24%

Event data **Seismotectonic Domain 3: Eastern Periadriatic fault system (EPA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

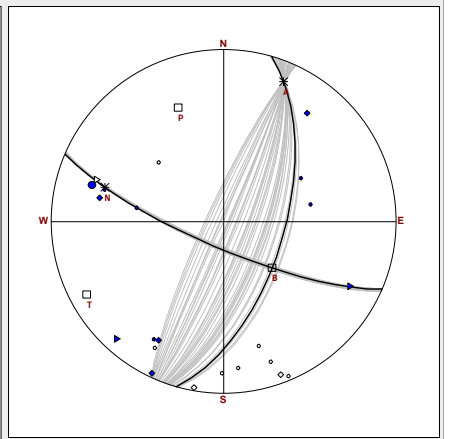
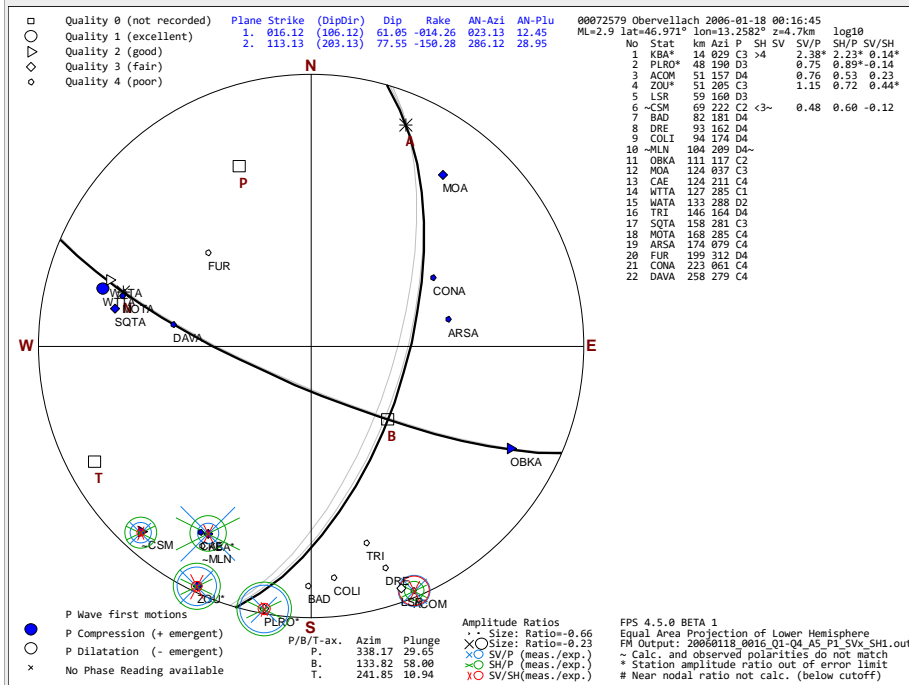
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	85				109°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	38
Contributors and References	4

Reiter, 2017 (this Publ.) [1]

Mechanism remarks: no NI data via OASIS available

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rate	Azim	Pl.	active
P-Axis				338	30°	
B-Axis				134	58°	
T-Axis				242	11°	
Plane1/A-Axis	016	61	-014	023	12°	<input type="checkbox"/>
Plane2/N-Axis	113	78	-150	286	29°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Mölltal fault system
 Fault zone: Strike-Slip: Mölltal fault system
 Seismotectonic region: Hohe Tauern southeast, Schober and Ankogel Group

	Total	Misfit abs.	Misfit rel.
P Polarities	22	1	5%
SV Polarities	0	0	%
SH Polarities	2	1	50%
All Polarities	24	2	8%
P/SV/SH Pol. Q1	1	0	0%
P/SV/SH Pol. Q2	3	0	0%
P/SV/SH Pol. Q3	7	1	14%
P/SV/SH Pol. Q4	13	1	8%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	5	1	20%
SH/P Ampl. Ratios	5	2	40%
SV/SH Ampl. Ratios	5	2	40%
All Ampl. Ratios	15	5	33%

Event data

Seismotectonic Domain 3: Eastern Periadriatic fault system (EPA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	36				40°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

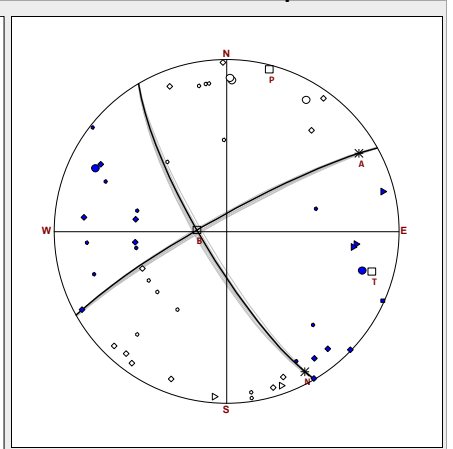
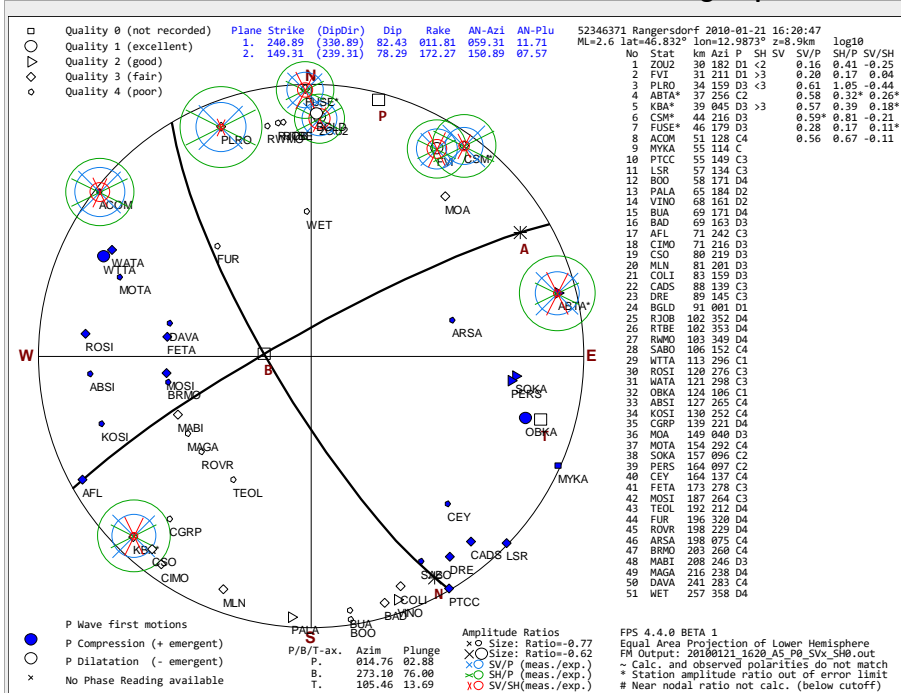
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	2

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				015	03°		51	0	0%	
B-Axis				273	76°		0	0	0%	
T-Axis				105	14°		4	0	0%	
Plane1/A-Axis	241	82	012	059	12°	<input type="checkbox"/>	55	0	0%	
Plane2/N-Axis	149	78	172	151	08°	<input type="checkbox"/>	5	0	0%	
RMS for acceptable solutions ⁴¹					0,31	log ₁₀	6	0	0%	
RMS for all solutions ⁴¹					0,45	log ₁₀	23	0	0%	
Mechanism Class ^{45 46}					SS		20	0	0%	
Inferred active fault	Iseltal fault system						P/SV/SH Pol. Q1	1	0	0%
Fault zone	Strike-Slip: Iseltal fault system						P/SV/SH Pol. Q2	8	1	12%
Seismotectonic region	Hohe Tauern southeast, Schober and Ankogel Group						SH/P Ampl. Ratios	8	1	12%
						SV/SH Ampl. Ratios	8	3	38%	
						All Ampl. Ratios	24	5	21%	

Event data

Seismotectonic Domain 3: Eastern Periadriatic fault system (EPA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERH⁴⁷ NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹	Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="359°"/>
	Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="90°"/>
	Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="89°"/>
	Lower Limit of S rad. Factor	<input type="text" value="0,15"/>			
	Prim./sec. Azimuthal Gap ³²	<input type="text" value="47"/>		<input type="text" value="59°"/>	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

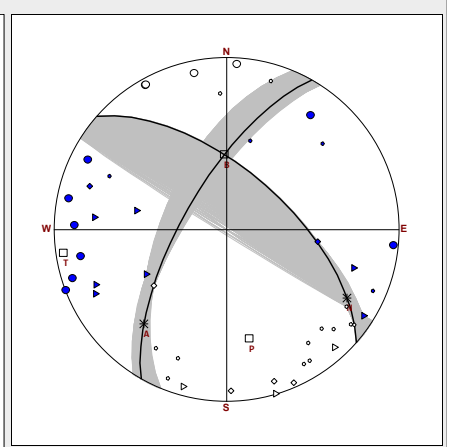
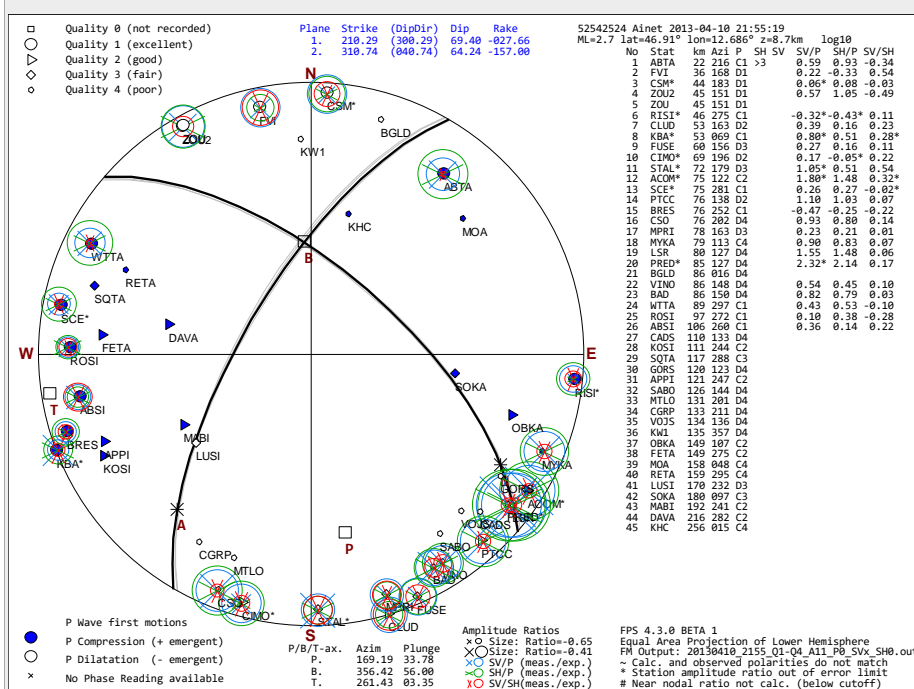
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="4"/>
FPS quality (expl. at end)	<input type="text" value="1"/>

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis			169		34°				45	0	0%
B-Axis			356		56°				0	0	0%
T-Axis			261		03°				1	0	0%
Plane1/A-Axis	210	69	-028	221	26°				46	0	0%
Plane2/N-Axis	311	64	-157	120	21°				12	0	0%
RMS for acceptable solutions ⁴¹							0,29	log ₁₀	10	0	0%
RMS for all solutions ⁴¹							0,38	log ₁₀	7	0	0%
Mechanism Class ^{45 46}							SS-N		17	0	0%
Inferred active fault	Iseltal fault system										
Fault zone	Strike-Slip: Iseltal fault system										
Seismotectonic region	Hohe Tauern southeast, Schober and Ankogel Group										
P Polarities									0	0	0%
SV Polarities									24	6	25%
SH Polarities									24	2	8%
All Polarities									24	3	12%
P/SV/SH Pol. Q1									72	11	15%
P/SV/SH Pol. Q2											
P/SV/SH Pol. Q3											
P/SV/SH Pol. Q4											
P/SV/SH Pol. Q0											
SV/P Ampl. Ratios											
SH/P Ampl. Ratios											
SV/SH Ampl. Ratios											
All Ampl. Ratios											

Event data

Seismotectonic Domain 3: Eastern Periadriatic fault system (EPA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z a) z est. b)

Event remarks Err zErr z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. Incr.	0	1	359
Relative Weighting	No	B Trend	0	1	90
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	89
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	48		84		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

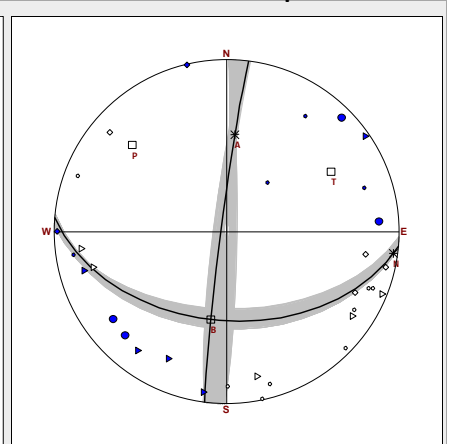
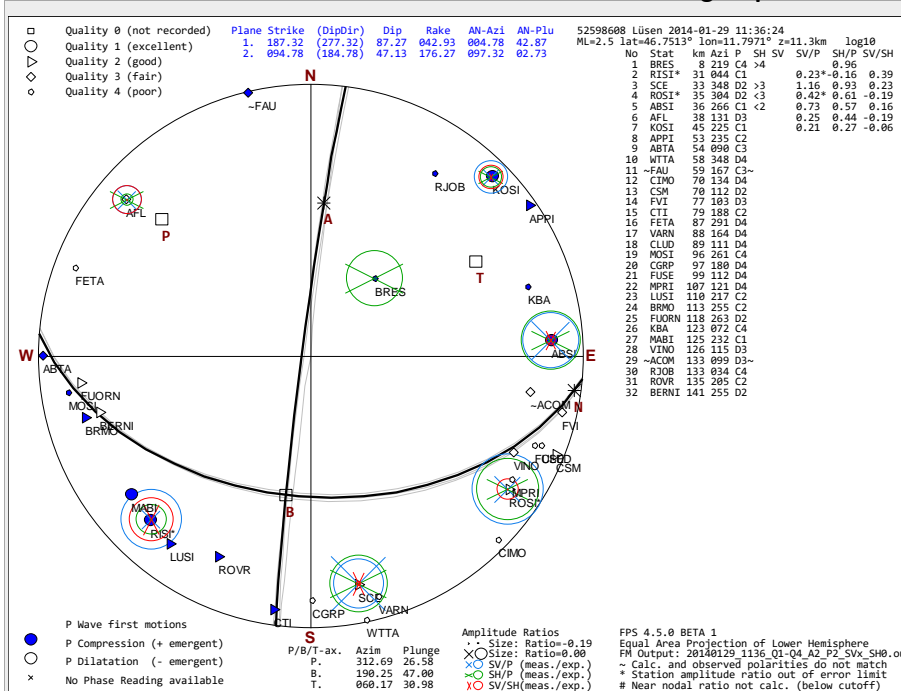
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	4
FPS quality (expl. at end)	193
Contributors and References	3

Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				313	27°	
B-Axis				190	47°	
T-Axis				060	31°	
Plane1/A-Axis	187	87	043	005	43°	<input type="checkbox"/>
Plane2/N-Axis	095	47	176	097	03°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault:
 Fault zone:
 Seismotectonic region:

	Total	Misfit abs.	Misfit rel.
P Polarities	32	2	6%
SV Polarities	0	0	%
SH Polarities	4	0	0%
All Polarities	36	2	6%
P/SV/SH Pol. Q1	4	0	0%
P/SV/SH Pol. Q2	11	0	0%
P/SV/SH Pol. Q3	8	2	25%
P/SV/SH Pol. Q4	13	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	6	2	33%
SH/P Ampl. Ratios	7	0	0%
SV/SH Ampl. Ratios	6	0	0%
All Ampl. Ratios	19	2	11%

Event data **Seismotectonic Domain 3: Eastern Periadriatic fault system (EPA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERH⁴⁷ NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

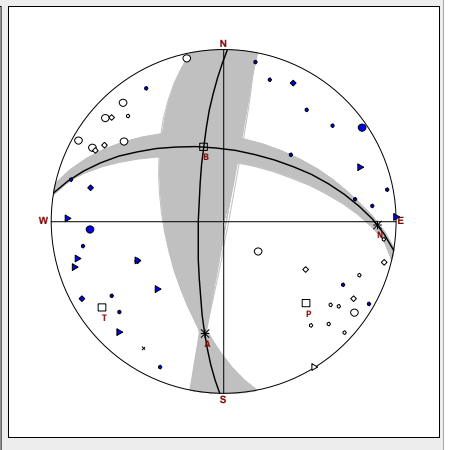
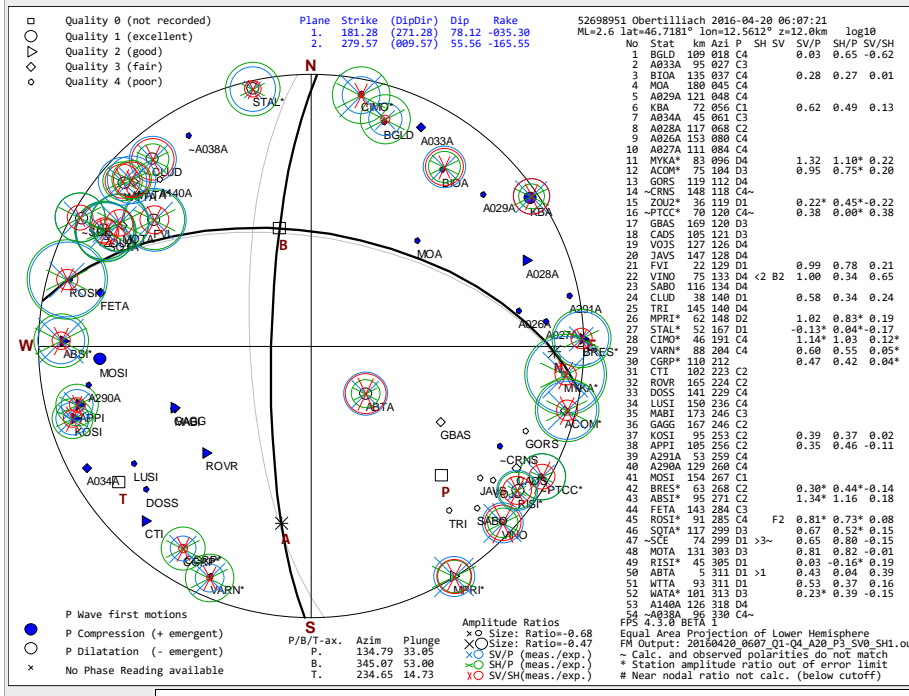
Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.	
Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="359°"/>
Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="90°"/>
Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="89°"/>
Lower Limit of S rad. Factor	<input type="text" value="0,15"/>				
Prim./sec. Azimuthal Gap ³²	<input type="text" value="55"/>				<input type="text" value="55°"/>

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="2"/>
FPS quality (expl. at end)	<input type="text" value="536"/>
Contributors and References	<input type="text" value="2"/>

Reiter & AlpArray Working Group, 2017 (this Publ.) [1, 55]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				135	33°		53	3	6%	
B-Axis				345	53°		2	0	0%	
T-Axis				235	15°		3	1	33%	
Plane1/A-Axis	181	78	-035	190	34°	<input type="checkbox"/>	58	4	7%	
Plane2/N-Axis	280	56	-166	091	12°	<input type="checkbox"/>	P/SV/SH Pol. Q1	11	0	0%
RMS for acceptable solutions ⁴¹					0,28	log ₁₀	P/SV/SH Pol. Q2	12	0	0%
RMS for all solutions ⁴¹					0,45	log ₁₀	P/SV/SH Pol. Q3	11	1	9%
Mechanism Class ^{45 46}					SS-N		P/SV/SH Pol. Q4	24	3	12%
Inferred active fault	Gailtal fault						P/SV/SH Pol. Q0	0	0	%
Fault zone	Strike-Slip: Pustertal-Gailtal fault system						SV/P Ampl. Ratios	27	7	26%
Seismotectonic region	Pfundnerer Mountains, Rieserferner Group, Pustertal, Upper Drau Valley, Gailtal						SH/P Ampl. Ratios	27	10	37%
							SV/SH Ampl. Ratios	27	3	11%
							All Ampl. Ratios	81	20	25%

Event data **Seismotectonic Domain 3: Eastern Periadriatic fault system (EPA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z a) z est. b)

Event remarks

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

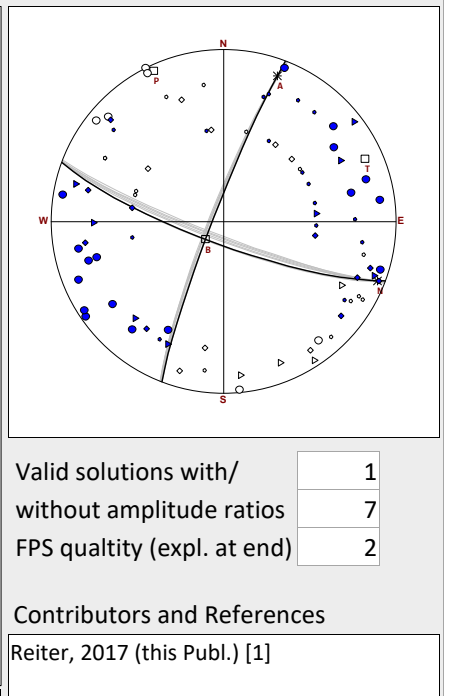
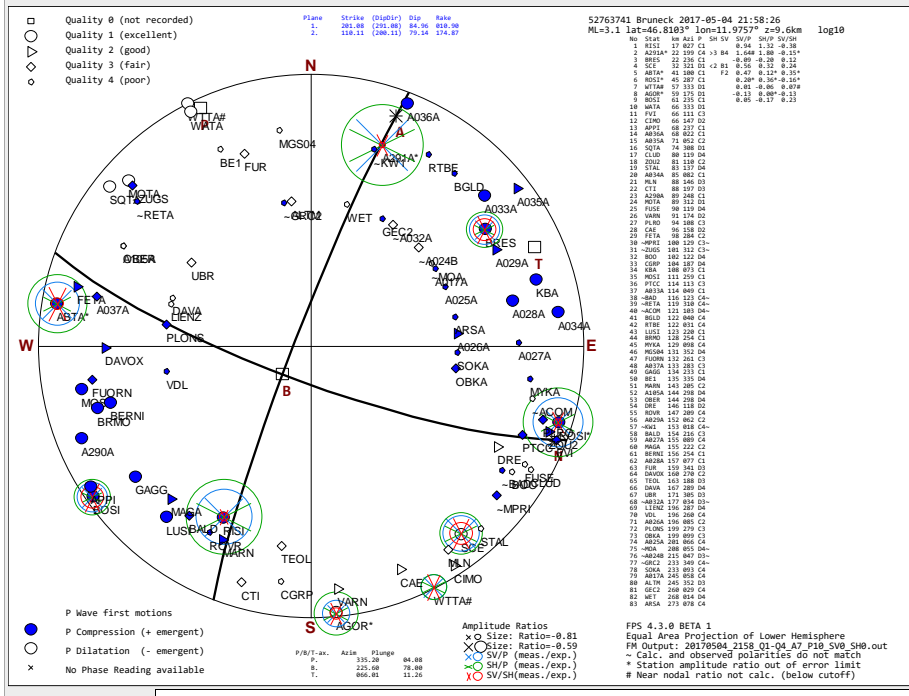
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	22				25 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Mechanism remarks

Valid solutions with/without amplitude ratios: 1
 FPS quality (expl. at end): 2
 Contributors and References
 Reiter, 2017 (this Publ.) [1]

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis		335	04°			
B-Axis		226	78°			
T-Axis		066	11°			
Plane1/A-Axis	201	85	011	020	11°	<input type="checkbox"/>
Plane2/N-Axis	110	79	175	111	05°	<input type="checkbox"/>
RMS for acceptable solutions ⁴¹					0,31	log ₁₀
RMS for all solutions ⁴¹					0,52	log ₁₀
Mechanism Class ^{45 46}					SS	
Inferred active fault	Pustertal Fault					
Fault zone	Strike-Slip: Pustertal-Gailtal fault system					
Seismotectonic region	Pfunderer Mountains, Rieserferner Group, Pustertal, Upper Drau Valley, Gailtal					

	Total	Misfit abs.	Misfit rel.
P Polarities	83	10	12%
SV Polarities	3	0	0%
SH Polarities	2	0	0%
All Polarities	88	10	11%
P/SV/SH Pol. Q1	24	0	0%
P/SV/SH Pol. Q2	14	0	0%
P/SV/SH Pol. Q3	19	4	21%
P/SV/SH Pol. Q4	31	6	19%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	9	1	11%
SH/P Ampl. Ratios	9	3	33%
SV/SH Ampl. Ratios	9	3	33%
All Ampl. Ratios	27	7	26%

Seismotectonic Domain 4: Central Alpine extension domain (CAE)

ID	UTC	Lat	Long	z	Epicenter	MI	MecClass
4.11	1997-04-12 23:00:00	46,57	10,42	5,6	Bormio/Sta. Maria	3,5	SS
4.12	1997-05-13 02:58:42	46,65	10,35	10,0	Ofenpass	2,9	N
4.15	2000-04-03 00:28:05	46,60	10,37	2,2	Piz Tea Fondada, Val Mora, Müstair GR	3,2	N
4.18	2001-12-18 01:14:12	46,89	11,37	8,0	Ratschings	2,7	N
4.23	2004-06-26 17:07:35	46,65	10,85	8,0	Latsch	2,7	N
4.24	2004-11-04 19:11:44	47,09	11,10	13,0	Sankt Sigmund im Sellrain	3,1	N-SS
4.26	2006-10-17 05:41:35	46,50	10,50	7,2	Stilfs	3,5	R
4.28	2008-10-10 22:43:47	46,74	10,74	11,1	Schnals	3,1	N
4.30	2009-06-18 23:03:01	46,67	10,56	10,1	Schluderns	2,8	N
4.32	2011-09-04 12:39:42	46,54	10,91	6,0	Ultental	3,1	N
4.34	2012-01-01 15:33:49	46,70	9,74	8,9	Filisur	3,3	N
4.36	2012-01-27 07:39:52	46,67	10,86	6,0	Schnals	2,9	SS
4.37	2013-01-13 13:30:50	47,02	10,54	6,1	Serfaus	2,5	N
4.38	2013-07-20 19:50:26	46,81	10,08	7,4	Zernez GR	2,8	N-SS
4.39	2014-07-07 06:46:35	46,41	10,56	11,0	Santa Caterina	3,0	N
4.40	2014-08-28 11:30:40	46,63	10,53	12,1	Prad am Stilfser Joch	3,1	N
4.41	2014-12-01 18:37:43	46,92	11,28	5,2	Ratschings	2,5	SS-N
4.42	2015-01-25 17:34:26	46,78	10,16	7,2	Guarda/Zernez GR	3,1	SS-N
4.43	2015-08-29 13:07:18	46,68	10,63	11,1	Mals	3,5	N
4.44	2016-03-13 00:58:49	46,68	10,65	10,1	Mals	3,1	N
4.45	2016-03-24 06:12:39	46,82	10,96	2,1	Obergurgl / Sölden	2,9	N
4.46	2016-04-02 16:47:40	46,89	10,57	10,4	Nauders	2,7	SS-N

Missing event ID's belong to already published events. Results are listed, illustrated and cited in the main publication. No datasheets exist.

Event data **Seismotectonic Domain 4: Central Alpine extension domain (CAE)**

FPS ID	4.11	Ev ID	VIG2015.005	ID2		UTC	1997-04-12 23:00:00	MI	3,5	I ₀		
Epicenter	Bormio/Sta. Maria			CH	Lat	46,569°	Long	10,422°	z	5,6 km	a) z est. b)	5,6 km
Event remarks				Err	2°	zErr	2,6 km	z macro		km		
a) Loc. grid search with Stations closer than 150km [53] det./ refs. b) z estim. based on												

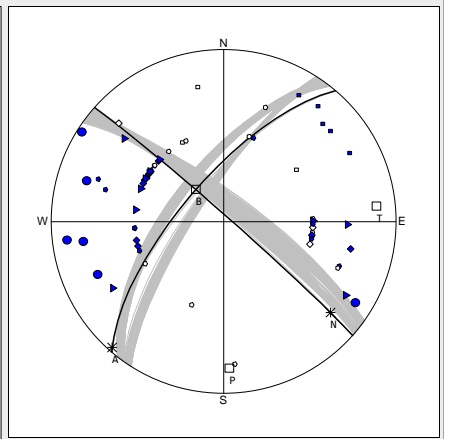
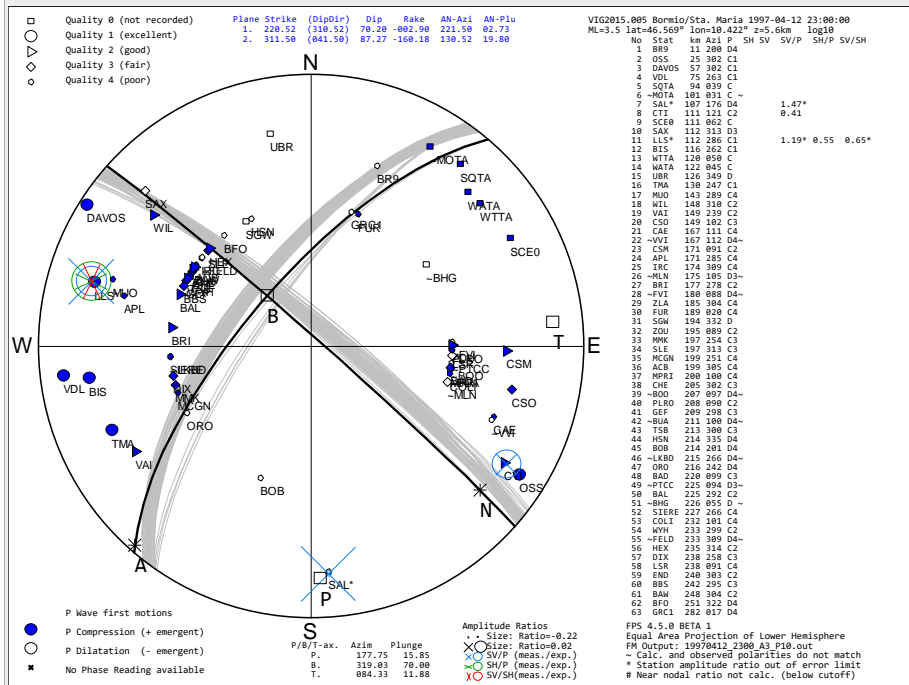
FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
	Relative Weighting	No	B Trend	0	1	359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
	Lower Limit of S rad. Factor	0,15				
	Prim./sec. Azimuthal Gap ³²	54	63°			

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	52
FPS quality (expl. at end)	83
Contributors and References	3

Reiter, 2005-2017 (this Publ.) [1]

Mechanism remarks
 no ZAMG waveform data available
 agency readings >300 km skipped
 solutions restricted: errors allowed for Q3,4,0 only

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Plane	Rake	Azim	Pl.	active		Total	Misfit abs.	Misfit rel.
P-Axis					178	16°		P Polarities	63	10	16%
B-Axis					319	70°		SV Polarities	0	0	%
T-Axis					084	12°		SH Polarities	0	0	%
Plane1/A-Axis	221	70	-003	222	03°			All Polarities	63	10	16%
Plane2/N-Axis	312	87	-160	131	20°			P/SV/SH Pol. Q1	6	0	0%
RMS for acceptable solutions ⁴¹						0,06	log ₁₀	P/SV/SH Pol. Q2	12	0	0%
RMS for all solutions ⁴¹						0,88	log ₁₀	P/SV/SH Pol. Q3	12	2	17%
Mechanism Class ^{45 46}						SS		P/SV/SH Pol. Q4	25	6	24%
Inferred active fault	NW Margin of Oetzal Complex										
Fault zone	Strike-Slip to oblique reverse: Passeier and Reschen Fault Systems										
Seismotectonic region	Stubai and Ötztal Alps, Texel Group										
								P/SV/SH Pol. Q0	8	2	25%
								SV/P Ampl. Ratios	3	2	67%
								SH/P Ampl. Ratios	1	0	0%
								SV/SH Ampl. Ratios	1	1	100%
								All Ampl. Ratios	5	3	60%

Event data **Seismotectonic Domain 4: Central Alpine extension domain (CAE)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter CH Lat ° Long ° z km a) z est. b) km

Event remarks Err ° zErr km z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

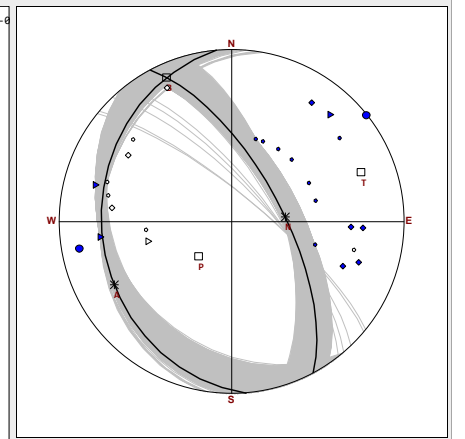
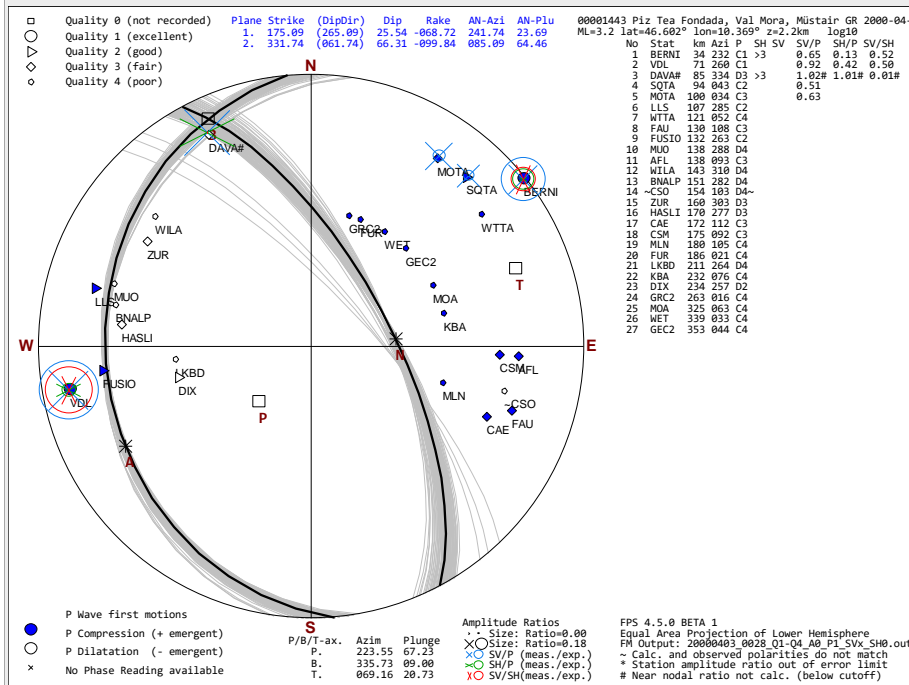
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.		
Relative Weighting	No	B Trend	0	1	359	°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90	°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89	°
Lower Limit of S rad. Factor	0,15					
Prim./sec. Azimuthal Gap ³²	145				149	°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	69
FPS quality (expl. at end)	831
	4

Contributors and References
 Reiter, 2017 (this Publ.) [1, 53]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rate	Azim	Pl.	active
P-Axis				224	67	°
B-Axis				336	09	°
T-Axis				069	21	°
Plane1/A-Axis	175	26	-069	242	24	°
Plane2/N-Axis	332	66	-100	085	64	°

RMS for acceptable solutions⁴¹ 0,25 log₁₀
 RMS for all solutions⁴¹ 0,25 log₁₀
 Mechanism Class^{45 46} N

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	27	1	4 %
SV Polarities	0	0	%
SH Polarities	2	0	0 %
All Polarities	29	1	3 %
P/SV/SH Pol. Q1	2	0	0 %
P/SV/SH Pol. Q2	4	0	0 %
P/SV/SH Pol. Q3	10	0	0 %
P/SV/SH Pol. Q4	13	1	8 %
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	5	0	0 %
SH/P Ampl. Ratios	3	0	0 %
SV/SH Ampl. Ratios	3	0	0 %
All Ampl. Ratios	11	0	0 %

Event data

Seismotectonic Domain 4: Central Alpine extension domain (CAE)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z

Event remarks Err ° zErr km z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	69				72 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

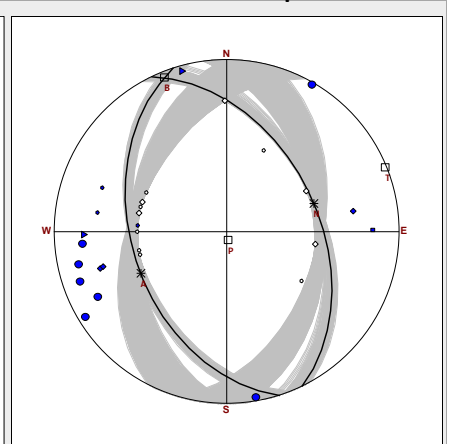
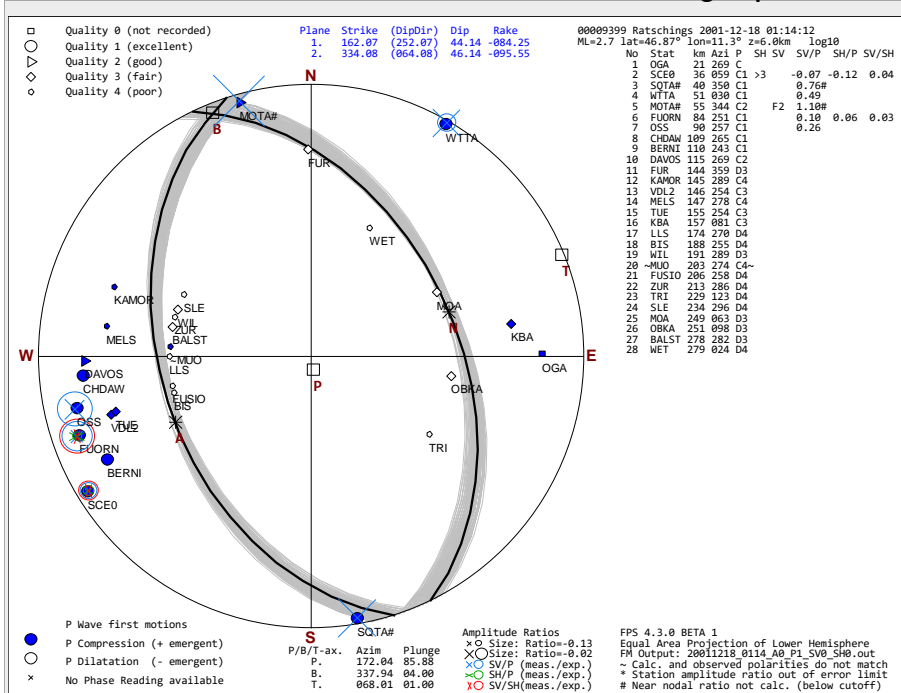
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	83
FPS quality (expl. at end)	3

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks
 no OASIS waveform data available
 errors restricted to Q2-Q4

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					172	86°	
B-Axis					338	04°	
T-Axis					068	01°	
Plane1/A-Axis	162	44		-084	244	44°	<input type="checkbox"/>
Plane2/N-Axis	334	46		-096	072	46°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Brenner normal fault
 Fault zone: Extension: Brenner normal fault, Stubai and Oetzal Alps, Texel Group
 Seismotectonic region: Stubai and Ötztal Alps, Texel Group

	Total	Misfit abs.	Misfit rel.
P Polarities	28	1	4%
SV Polarities	1	0	0%
SH Polarities	1	0	0%
All Polarities	30	1	3%
P/SV/SH Pol. Q1	7	0	0%
P/SV/SH Pol. Q2	3	0	0%
P/SV/SH Pol. Q3	9	0	0%
P/SV/SH Pol. Q4	10	1	10%
P/SV/SH Pol. Q0	1	0	0%
SV/P Ampl. Ratios	6	0	0%
SH/P Ampl. Ratios	2	0	0%
SV/SH Ampl. Ratios	2	0	0%
All Ampl. Ratios	10	0	0%

Event data **Seismotectonic Domain 4: Central Alpine extension domain (CAE)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

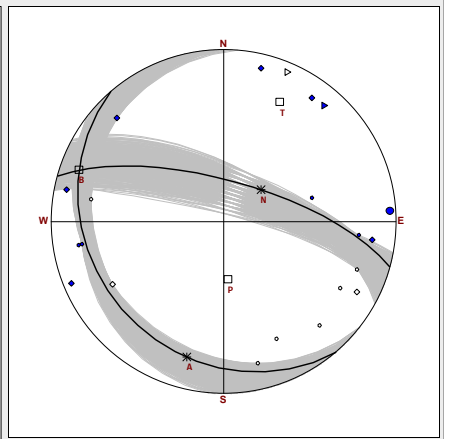
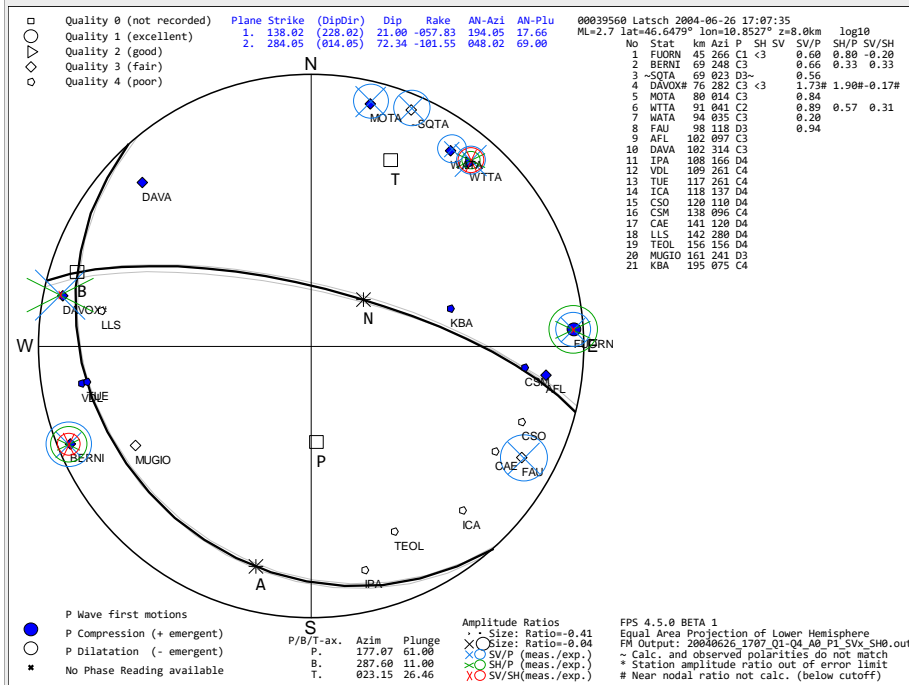
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	74				92°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	227
	4

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rate	Azim	Pl.	active
P-Axis				177	61°	
B-Axis				288	11°	
T-Axis				023	26°	
Plane1/A-Axis	138	21	-058	194	18°	<input type="checkbox"/>
Plane2/N-Axis	284	72	-102	048	69°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Basal Austroalpine thrust
 Fault zone: Extension: Brenner normal fault, Stubai and Oetzal Alps, Texel Group
 Seismotectonic region: Stubai and Ötztal Alps, Texel Group

	Total	Misfit abs.	Misfit rel.
P Polarities	21	1	5%
SV Polarities	0	0	%
SH Polarities	2	0	0%
All Polarities	23	1	4%
P/SV/SH Pol. Q1	1	0	0%
P/SV/SH Pol. Q2	1	0	0%
P/SV/SH Pol. Q3	11	1	9%
P/SV/SH Pol. Q4	10	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	8	0	0%
SH/P Ampl. Ratios	4	0	0%
SV/SH Ampl. Ratios	4	0	0%
All Ampl. Ratios	16	0	0%

Event data **Seismotectonic Domain 4: Central Alpine extension domain (CAE)**

FPS ID	4.24	Ev ID	00045729	ID2	Reit05.10	UTC	2004-11-04 19:11:44	MI	3,1	Io	4,5	
Epicenter	Sankt Sigmund im Sellrain			AT	Lat	47,093°	Long	11,100°	z	13,0 km	a) z est. b)	10,5 km
Event remarks				Err	0,170°	zErr	2 km	z macro	7,8 km			
				a) Loc.	ZAMG standard location [64]							
				det./ refs.								
				b) z estim.	z averaged with macroseismic depth [64]							
				based on								

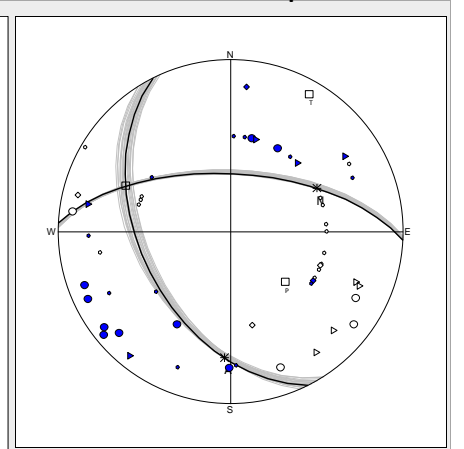
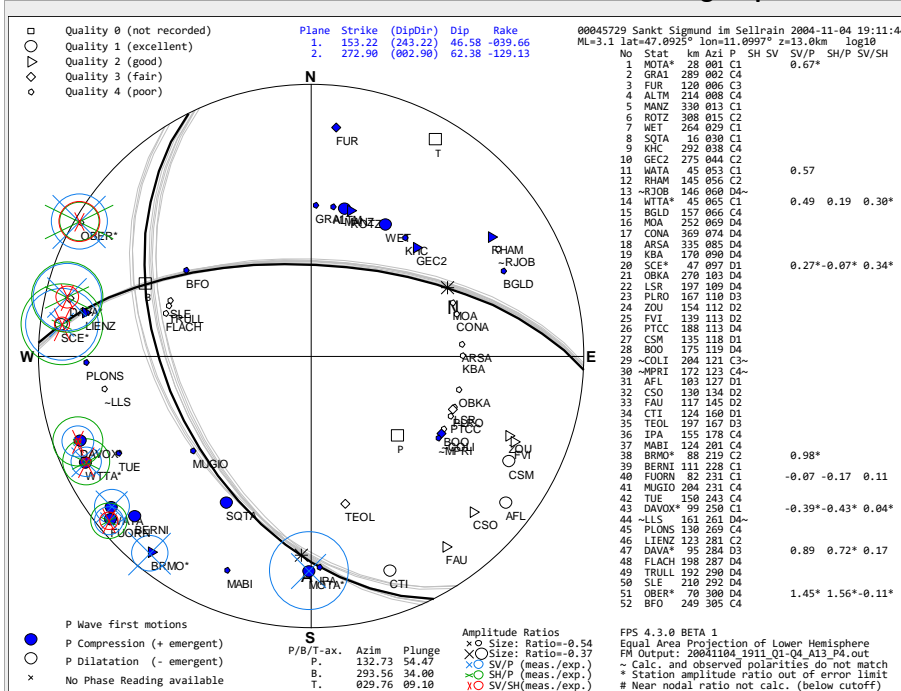
FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	57	62°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	9
FPS quality (expl. at end)	19
Contributors and References	3

Reiter, 2017 (this Publ.) [7, 51, 52]

Mechanism remarks
 all agency readings with d>200 km skipped;
 bad amplitude ratio fit; if some stations skipped a strike slip solution would be possible (bad amplitude fit, also) as published in Reiter et al., 2005

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis				133	54°		52	4	8%
B-Axis				294	34°		0	0	%
T-Axis				030	09°		0	0	%
Plane1/A-Axis	153	47	-040	183	28°	<input type="checkbox"/>	52	4	8%
Plane2/N-Axis	273	62	-129	063	43°	<input type="checkbox"/>	13	0	0%
RMS for acceptable solutions ⁴¹						0,34	9	0	0%
RMS for all solutions ⁴¹						0,75	5	1	20%
Mechanism Class ^{45 46}						N-SS	25	3	12%
Inferred active fault	Brenner normal fault						0	0	%
Fault zone	Extension: Brenner normal fault, Stubai and Oetzal Alps, Texel Group						9	5	56%
Seismotectonic region	Stubai and Ötztal Alps, Texel Group						6	4	67%
							6	4	67%
							21	13	62%

Event data **Seismotectonic Domain 4: Central Alpine extension domain (CAE)**

FPS ID	4.26	Ev ID	00179844	ID2	VIG2015.034	UTC	2006-10-17 05:41:35	MI	3,5	Io	
Epicenter	Stilfs	IT		Lat	46,495°	Long	10,497°	z	7,2 km	a) z est. b)	7,2 km
Event remarks	Err 1° zErr 2,8 km z macro km										
a) Loc. grid search with Stations closer than 150km [53]											
det./ refs. based on											
b) z estim.											

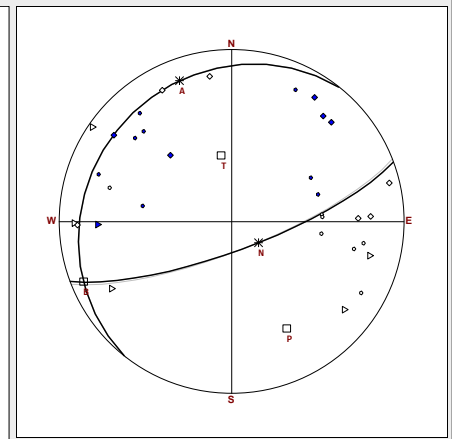
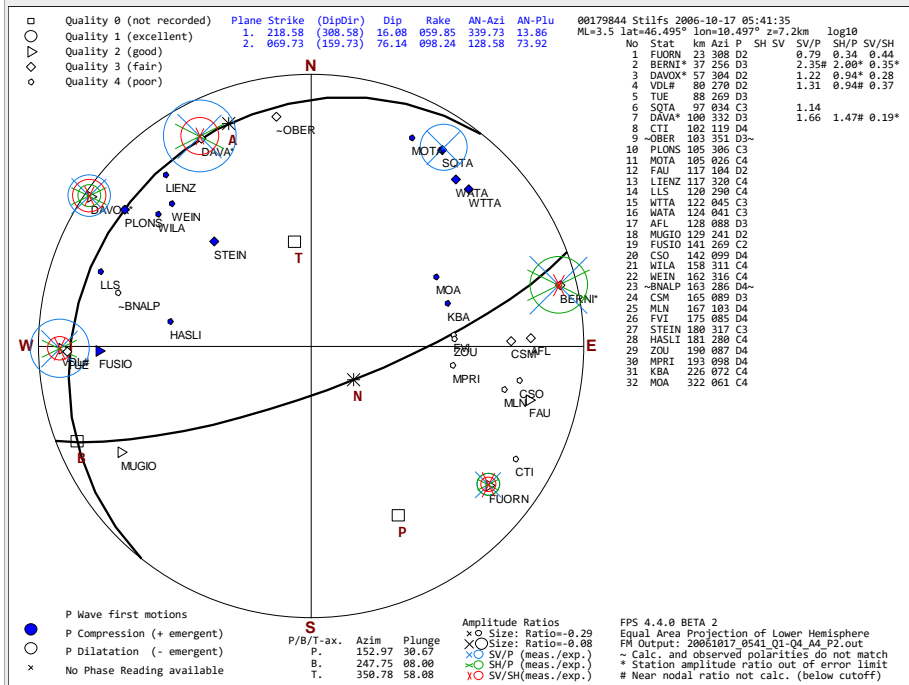
FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
	Relative Weighting	No	B Trend	0	1	359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
	Lower Limit of S rad. Factor	0,15				
	Prim./sec. Azimuthal Gap ³²	113				141°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	2
Contributors and References	3

Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				153	31°	
B-Axis				248	08°	
T-Axis				351	58°	
Plane1/A-Axis	219	16	060	340	14°	<input type="checkbox"/>
Plane2/N-Axis	070	76	098	129	74°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ 0,30 log₁₀
 RMS for all solutions⁴¹ 0,42 log₁₀
 Mechanism Class^{45 46} R

Inferred active fault: Ortler thrust
 Fault zone: Thrust: Alpine Floor thrust W of Vinschgau
 Seismotectonic region: Engadin-Graubünden-Ortler Alps Extension zone

	Total	Misfit abs.	Misfit rel.
P Polarities	32	2	6%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	32	2	6%
P/SV/SH Pol. Q1	0	0	%
P/SV/SH Pol. Q2	6	0	0%
P/SV/SH Pol. Q3	11	1	9%
P/SV/SH Pol. Q4	15	1	7%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	6	0	0%
SH/P Ampl. Ratios	5	2	40%
SV/SH Ampl. Ratios	5	2	40%
All Ampl. Ratios	16	4	25%

Event data

Seismotectonic Domain 4: Central Alpine extension domain (CAE)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z a) z est. b)

Event remarks

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	26				43°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

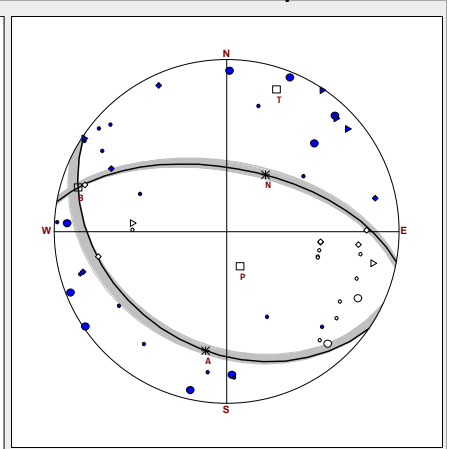
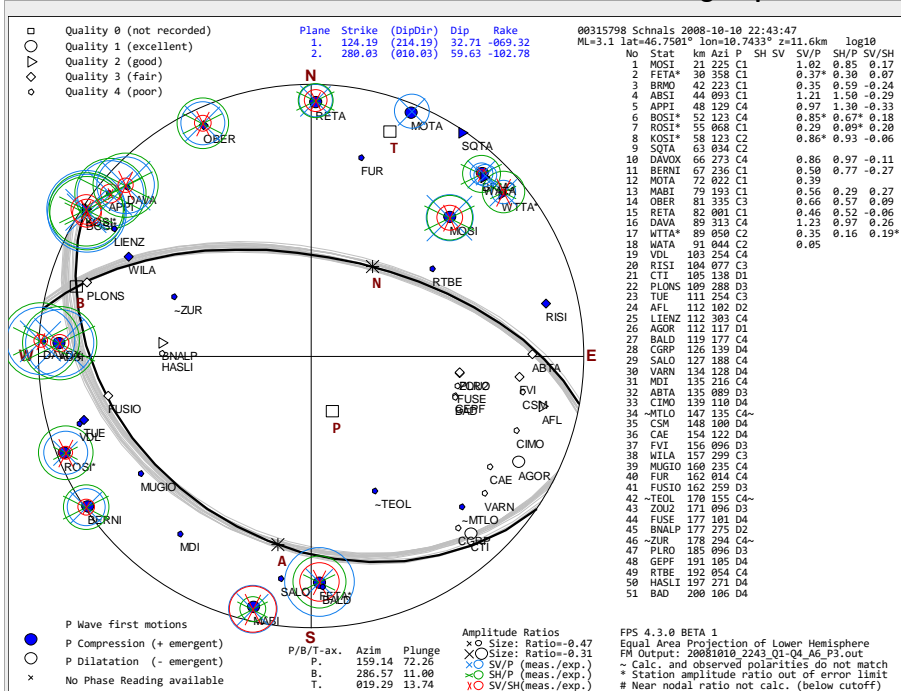
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	17
FPS quality (expl. at end)	46
Contributors and References	1

Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis					159	72°		51	3	6%
B-Axis					287	11°		0	0	%
T-Axis					019	14°		0	0	%
Plane1/A-Axis	124	33		-069	190	30°	<input type="checkbox"/>	51	3	6%
Plane2/N-Axis	280	60		-103	034	57°	<input type="checkbox"/>	11	0	0%
RMS for acceptable solutions ⁴¹						0,26	log ₁₀	6	0	0%
RMS for all solutions ⁴¹						0,34	log ₁₀	10	0	0%
Mechanism Class ^{45 46}						N		24	3	12%
Inferred active fault	Basal Austroalpine thrust									
Fault zone	Extension: Brenner normal fault, Stubai and Oetzal Alps, Texel Group									
Seismotectonic region	Stubai and Ötztal Alps, Texel Group									
P Polarities								0	0	%
SV Polarities								0	0	%
SH Polarities								0	0	%
All Polarities								51	3	6%
P/SV/SH Pol. Q1								11	0	0%
P/SV/SH Pol. Q2								6	0	0%
P/SV/SH Pol. Q3								10	0	0%
P/SV/SH Pol. Q4								24	3	12%
P/SV/SH Pol. Q0								0	0	%
SV/P Ampl. Ratios								17	3	18%
SH/P Ampl. Ratios								15	2	13%
SV/SH Ampl. Ratios								15	1	7%
All Ampl. Ratios								47	6	13%

Event data **Seismotectonic Domain 4: Central Alpine extension domain (CAE)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z a) z est. b)

Event remarks km"/> a) Loc. det./ refs. b) z estim. based on

FocMec⁴¹ Input parameters and presets

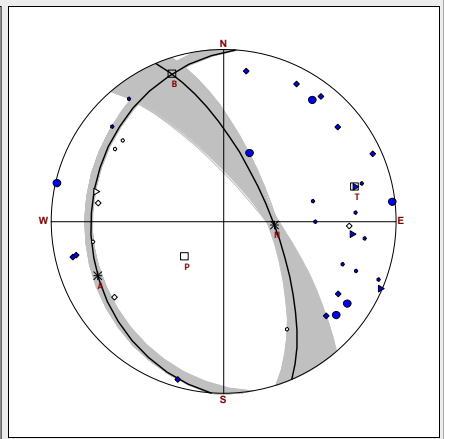
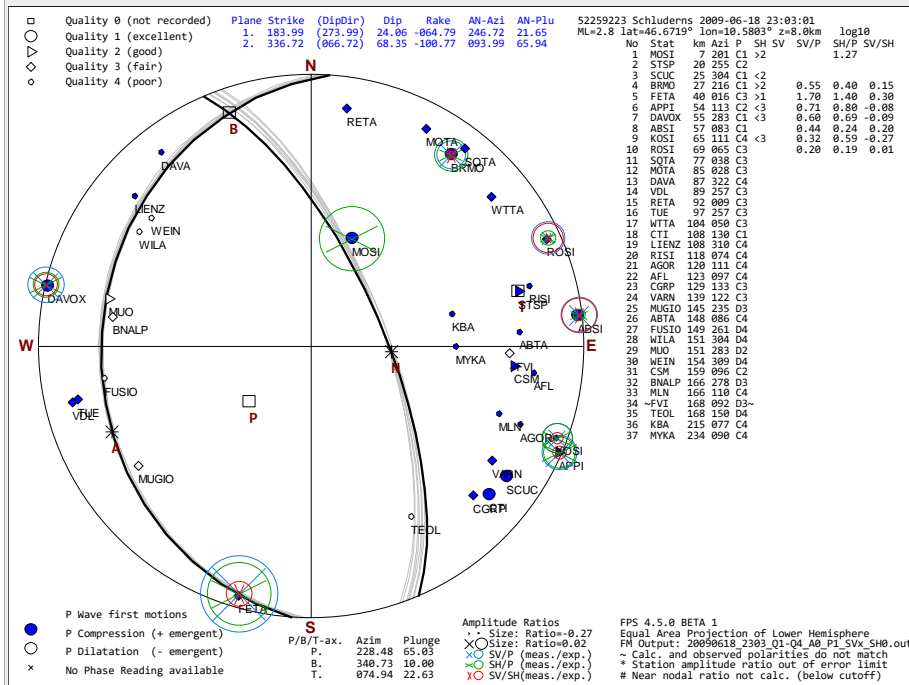
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	47		64°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	8
FPS quality (expl. at end)	3

Contributors and References

Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				228	65°	
B-Axis				341	10°	
T-Axis				075	23°	
Plane1/A-Axis	184	24	-065	247	22°	<input type="checkbox"/>
Plane2/N-Axis	337	68	-101	094	66°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ 0,25 log₁₀

RMS for all solutions⁴¹ 0,25 log₁₀

Mechanism Class^{45 46} N

Inferred active fault

Fault zone

Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	37	1	3%
SV Polarities	0	0	%
SH Polarities	7	0	0%
All Polarities	44	1	2%
P/SV/SH Pol. Q1	7	0	0%
P/SV/SH Pol. Q2	7	0	0%
P/SV/SH Pol. Q3	16	1	6%
P/SV/SH Pol. Q4	14	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	7	0	0%
SH/P Ampl. Ratios	8	0	0%
SV/SH Ampl. Ratios	7	0	0%
All Ampl. Ratios	22	0	0%

Event data **Seismotectonic Domain 4: Central Alpine extension domain (CAE)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Vp/Vs Ratio at Source Min. Incr. Max.

Input parameters and presets Relative Weighting B Trend

Accepted log₁₀ Ampl. Rat. Error B Plunge

Lower Limit of P rad. Factor A Plunge

Lower Limit of S rad. Factor

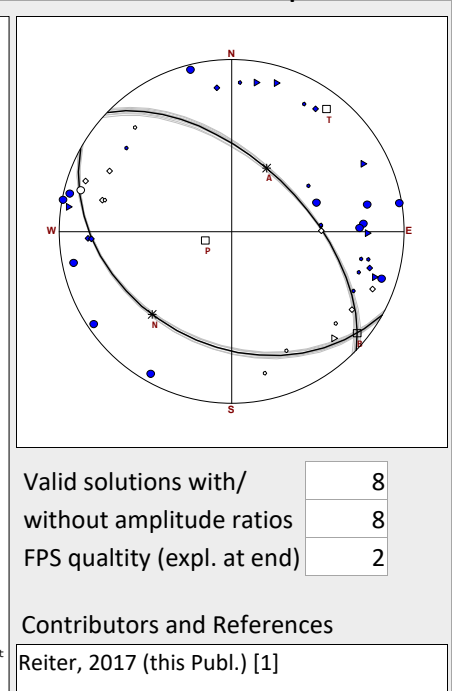
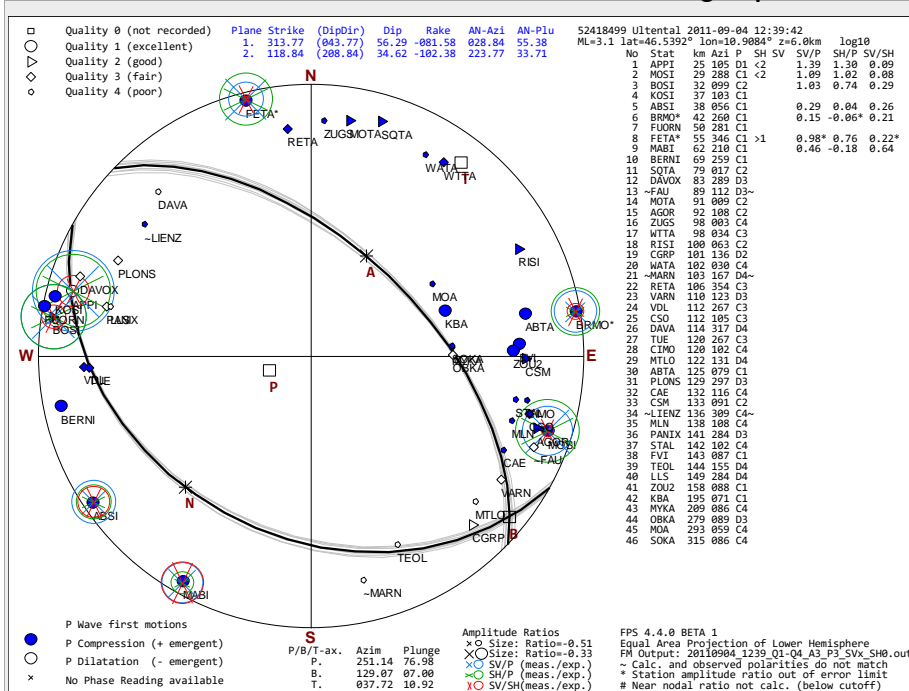
Prim./sec. Azimuthal Gap³²

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				251	77°	<input type="checkbox"/>	46	3	7%	
B-Axis				129	07°	<input type="checkbox"/>	0	0	%	
T-Axis				038	11°	<input type="checkbox"/>	3	0	0%	
Plane1/A-Axis	314	56	-082	029	55°	<input type="checkbox"/>	49	3	6%	
Plane2/N-Axis	119	35	-102	224	34°	<input type="checkbox"/>	14	0	0%	
RMS for acceptable solutions ⁴¹						0,25	P/SV/SH Pol. Q1	9	0	0%
RMS for all solutions ⁴¹						0,36	P/SV/SH Pol. Q2	11	1	9%
Mechanism Class ^{45 46}						N	P/SV/SH Pol. Q3	15	2	13%
Inferred active fault	Bormio normal fault						P/SV/SH Pol. Q0	0	0	%
Fault zone	Extension: Engadin-Ortler-Graubünden normal faulting zone						SV/P Ampl. Ratios	7	1	14%
Seismotectonic region	Engadin-Graubünden-Ortler Alps Extension zone						SH/P Ampl. Ratios	7	1	14%
							SV/SH Ampl. Ratios	7	1	14%
							All Ampl. Ratios	21	3	14%

Event data **Seismotectonic Domain 4: Central Alpine extension domain (CAE)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter CH Lat Long z a) z est. b)

Event remarks ° zErr km z macro km"/>
 a) Loc.
 det./ refs.
 b) z estim. based on

FocMec⁴¹ Input parameters and presets

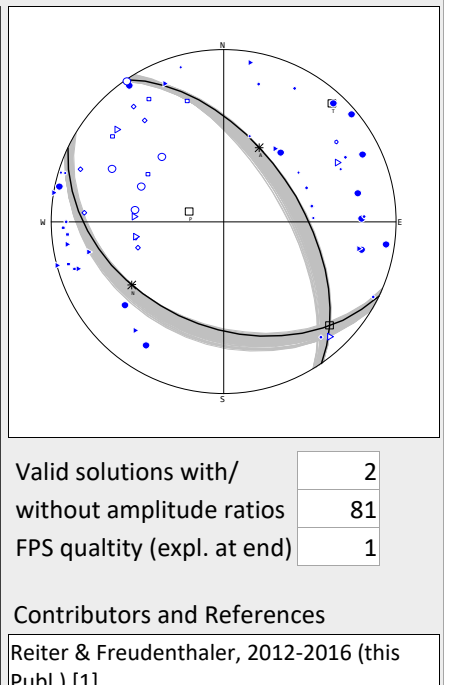
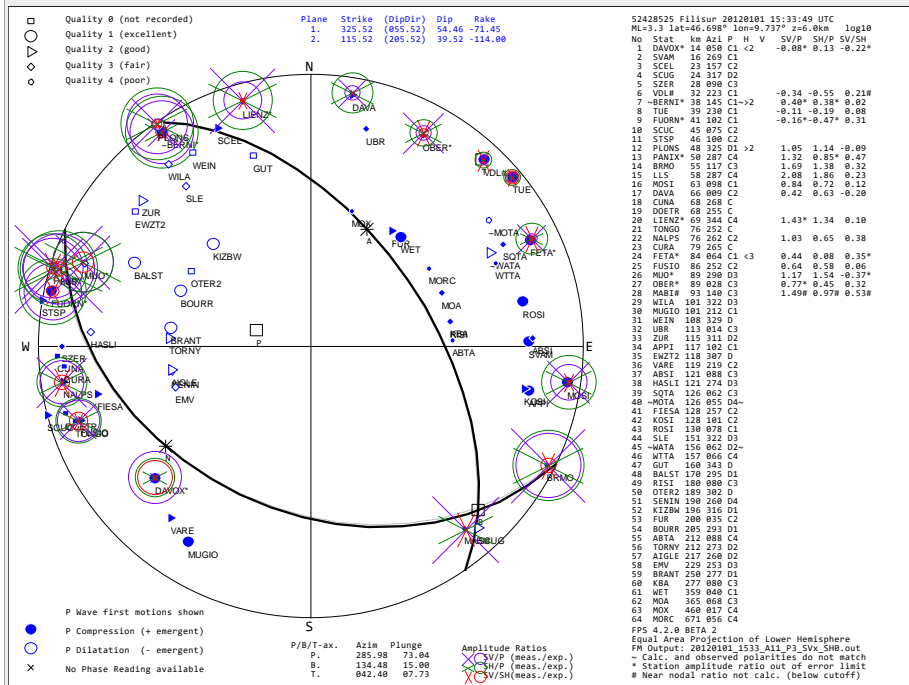
Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	72		79 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Mechanism remarks Solution consistent with 52428550 (Marshall et al., 2013)
 SW dipping nodal plane is active fault plane due to Marshall et al., 2013

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rate	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				286	73°		64	3	5%	
B-Axis				134	15°		0	0	%	
T-Axis				042	08°		4	0	0%	
Plane1/A-Axis	326	54	-071	026	50°	<input type="checkbox"/>	68	3	4%	
Plane2/N-Axis	116	40	-114	236	36°	<input checked="" type="checkbox"/>	P/SV/SH Pol. Q1	17	1	6%
RMS for acceptable solutions ⁴¹						0,29	P/SV/SH Pol. Q2	18	1	6%
RMS for all solutions ⁴¹						0,54	P/SV/SH Pol. Q3	16	0	0%
Mechanism Class ^{45 46}						N	P/SV/SH Pol. Q4	9	1	11%
Inferred active fault	Scalettapass normal fault						P/SV/SH Pol. Q0	8	0	0%
Fault zone	Extension: Engadin-Ortler-Graubünden normal faulting zone						SV/P Ampl. Ratios	18	5	28%
Seismotectonic region	Engadin-Graubünden-Ortler Alps Extension zone						SH/P Ampl. Ratios	18	3	17%
							SV/SH Ampl. Ratios	18	3	17%
							All Ampl. Ratios	54	11	20%

Event data **Seismotectonic Domain 4: Central Alpine extension domain (CAE)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z

Event remarks km"/>

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

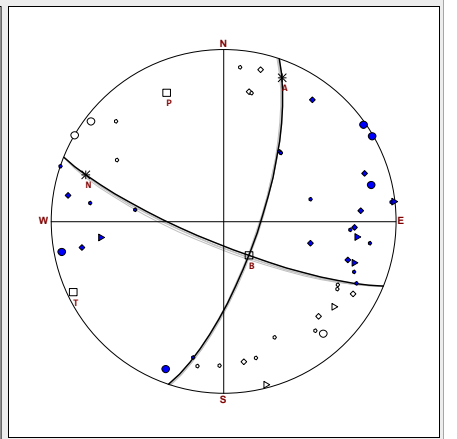
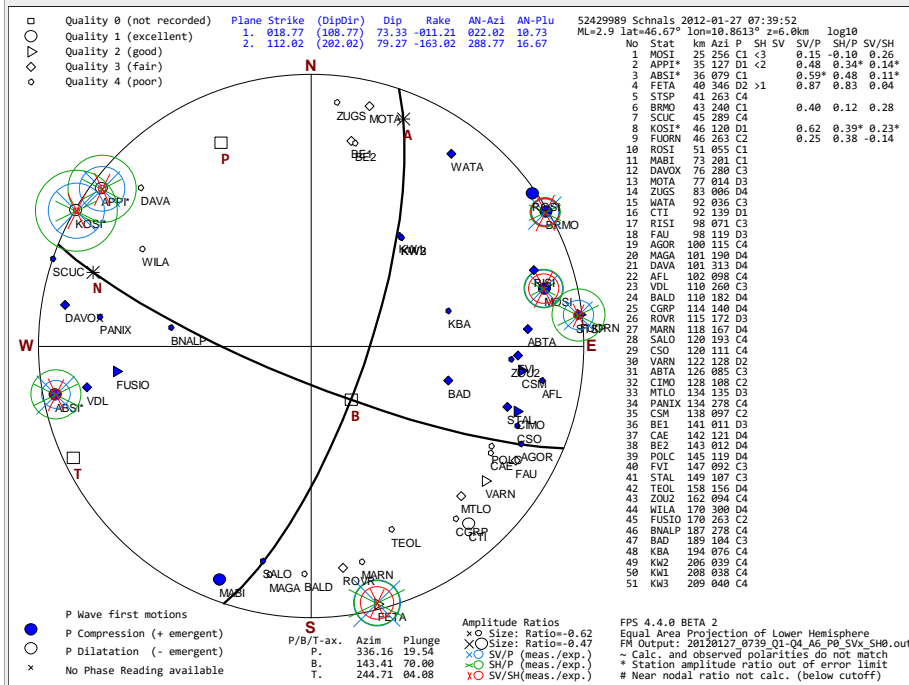
Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	58	67 °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	2

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				336	20°		P Polarities	51	0 0%	
B-Axis				143	70°		SV Polarities	0	0 0%	
T-Axis				245	04°		SH Polarities	3	0 0%	
Plane1/A-Axis	019	73	-011	022	11°	<input type="checkbox"/>	All Polarities	54	0 0%	
Plane2/N-Axis	112	79	-163	289	17°	<input type="checkbox"/>	P/SV/SH Pol. Q1	9	0 0%	
RMS for acceptable solutions ⁴¹					0,30	log ₁₀	P/SV/SH Pol. Q2	7	0 0%	
RMS for all solutions ⁴¹					0,46	log ₁₀	P/SV/SH Pol. Q3	14	0 0%	
Mechanism Class ^{45 46}					SS		P/SV/SH Pol. Q4	24	0 0%	
Inferred active fault	Strike-slip fault 20 km W of Passeier valley							P/SV/SH Pol. Q0	0	0 0%
Fault zone	Strike-Slip to oblique reverse: Passeier and Reschen Fault Systems							SV/P Ampl. Ratios	7	1 14%
Seismotectonic region	Stubai and Ötztal Alps, Texel Group							SH/P Ampl. Ratios	7	2 29%
							SV/SH Ampl. Ratios	7	3 43%	
							All Ampl. Ratios	21	6 29%	

Event data **Seismotectonic Domain 4: Central Alpine extension domain (CAE)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks a) Loc.
 det./ refs.
 b) z estim.
 based on

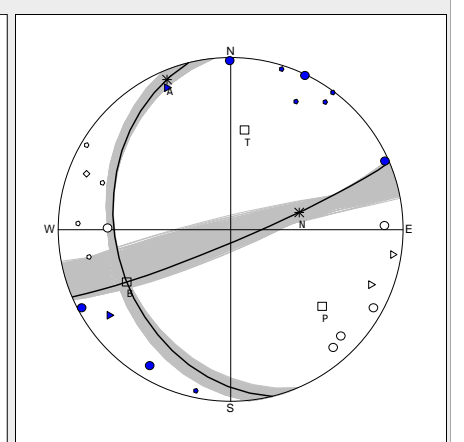
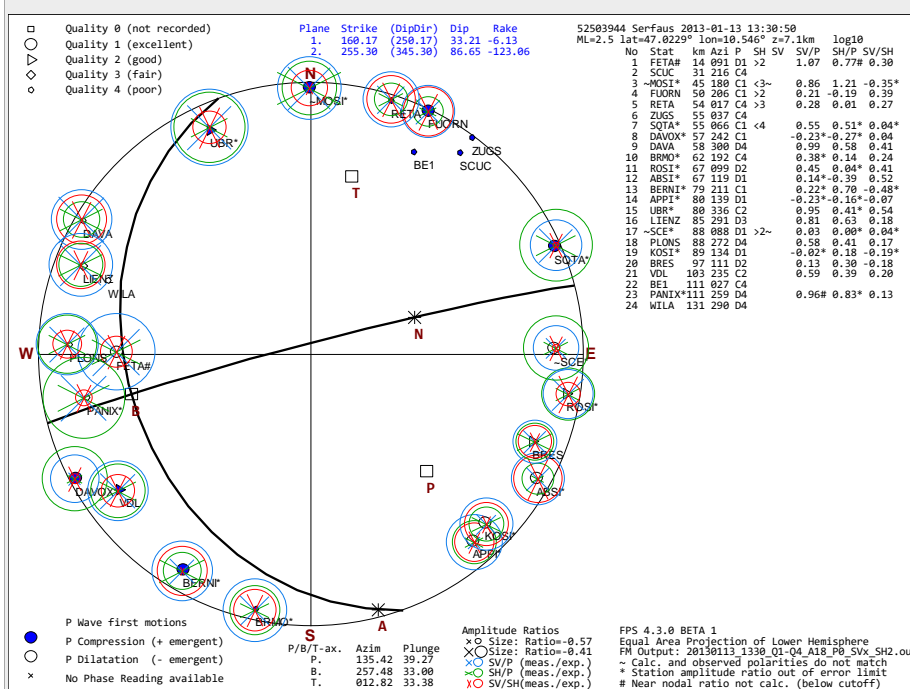
FocMec⁴¹	Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1 359°"/>
	Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1 90°"/>
	Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1 89°"/>
	Lower Limit of S rad. Factor	<input type="text" value="0,15"/>			
	Prim./sec. Azimuthal Gap ³²	<input type="text" value="53"/>	<input type="text" value="53°"/>		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="1"/> <input type="text" value="247"/>
FPS quality (expl. at end)	<input type="text" value="3"/>

Contributors and References

Reiter, 2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					135	39°	
B-Axis					257	33°	
T-Axis					013	33°	
Plane1/A-Axis	160	33		-006	165	03°	<input type="checkbox"/>
Plane2/N-Axis	255	87		-123	070	57°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀

RMS for all solutions⁴¹ log₁₀

Mechanism Class^{45 46}

Inferred active fault

Fault zone

Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	24	0	0%
SV Polarities	0	0	%
SH Polarities	6	2	33%
All Polarities	30	2	7%
P/SV/SH Pol. Q1	10	0	0%
P/SV/SH Pol. Q2	7	1	14%
P/SV/SH Pol. Q3	3	1	33%
P/SV/SH Pol. Q4	10	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	20	6	30%
SH/P Ampl. Ratios	20	7	35%
SV/SH Ampl. Ratios	20	5	25%
All Ampl. Ratios	60	18	30%

Event data **Seismotectonic Domain 4: Central Alpine extension domain (CAE)**

FPS ID	4.38	Ev ID	52582282	ID2		UTC	2013-07-20 19:50:26	MI	2,8	Io		
Epicenter	Zernez GR			CH	Lat	46,808°	Long	10,081°	z	7,4 km	a) z est. b)	7,4 km
Event remarks	SED ML 2,6 z 7,4; 46,808/10,081 not felt in Switzerland			NLL ERH ⁴⁷	1,850 km	NLL ERZ ⁴⁷	4,45 km	z macro	n.v. km			
a) Loc. grid search, SED Parameters [60] det./ refs. b) z estim. based on												

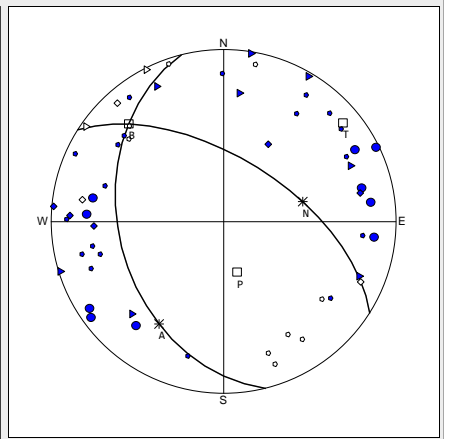
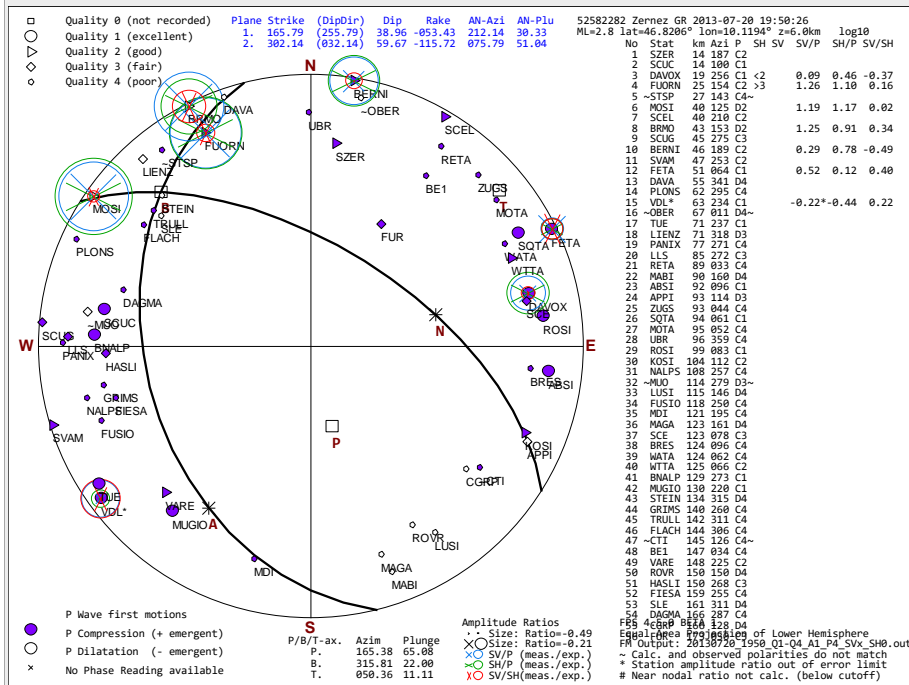
FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	34	59°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	1

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				165	65°		56	4	7%	
B-Axis				316	22°		0	0	%	
T-Axis				050	11°		2	0	0%	
Plane1/A-Axis	166	39	-053	212	30°		58	4	7%	
Plane2/N-Axis	302	60	-116	076	51°		10	0	0%	
RMS for acceptable solutions ⁴¹						0,27	P/SV/SH Pol. Q1	11	0	0%
RMS for all solutions ⁴¹						0,30	P/SV/SH Pol. Q2	9	1	11%
Mechanism Class ^{45 46}						N-SS	P/SV/SH Pol. Q3	28	3	11%
Inferred active fault	Zernez Fault						P/SV/SH Pol. Q0	0	0	%
Fault zone	Extension: Engadin-Ortler-Graubünden normal faulting zone						SV/P Ampl. Ratios	7	1	14%
Seismotectonic region	Engadin and Oberes Gericht						SH/P Ampl. Ratios	7	0	0%
							SV/SH Ampl. Ratios	7	0	0%
							All Ampl. Ratios	21	1	5%

Event data **Seismotectonic Domain 4: Central Alpine extension domain (CAE)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

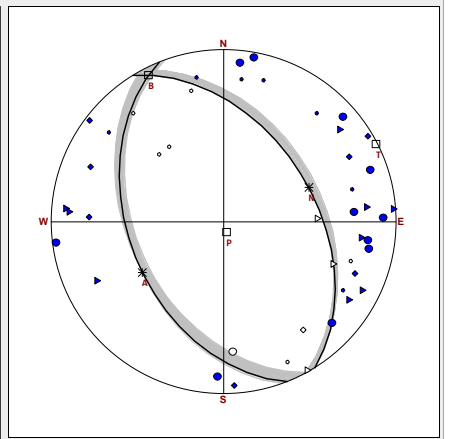
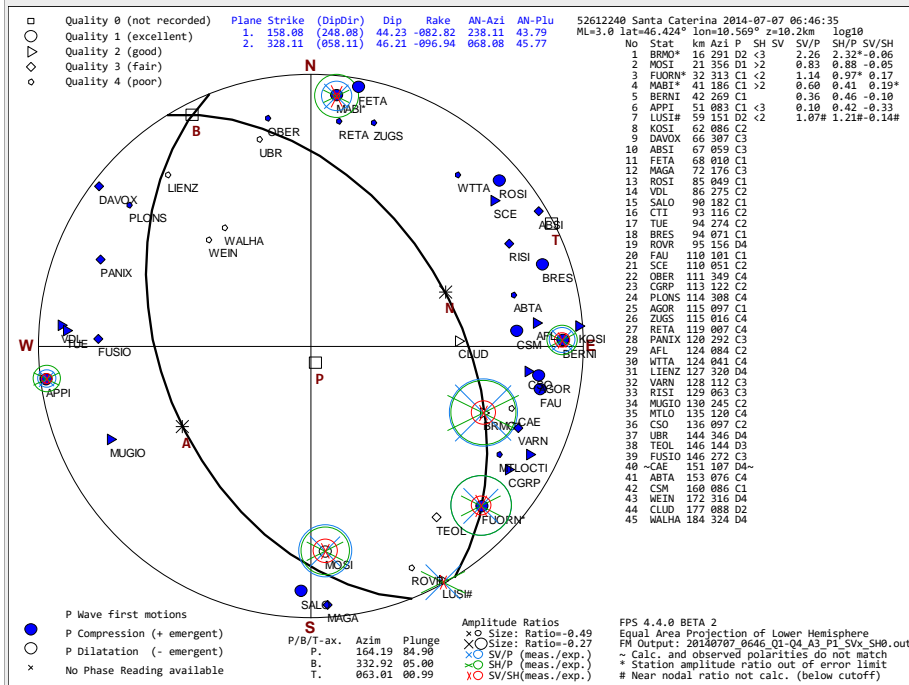
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	63				81 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	36
Contributors and References	2

Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				164	85 °	
B-Axis				333	05 °	
T-Axis				063	01 °	
Plane1/A-Axis	158	44	-083	238	44 °	<input type="checkbox"/>
Plane2/N-Axis	328	46	-097	068	46 °	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	45	1	2 %
SV Polarities	0	0	%
SH Polarities	6	0	0 %
All Polarities	51	1	2 %
P/SV/SH Pol. Q1	12	0	0 %
P/SV/SH Pol. Q2	16	0	0 %
P/SV/SH Pol. Q3	10	0	0 %
P/SV/SH Pol. Q4	13	1	8 %
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	7	0	0 %
SH/P Ampl. Ratios	7	2	29 %
SV/SH Ampl. Ratios	7	1	14 %
All Ampl. Ratios	21	3	14 %

Event data

Seismotectonic Domain 4: Central Alpine extension domain (CAE)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z a) z est. b)

Event remarks NLL ERH⁴⁷ NLL ERZ⁴⁷ z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	48				70°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

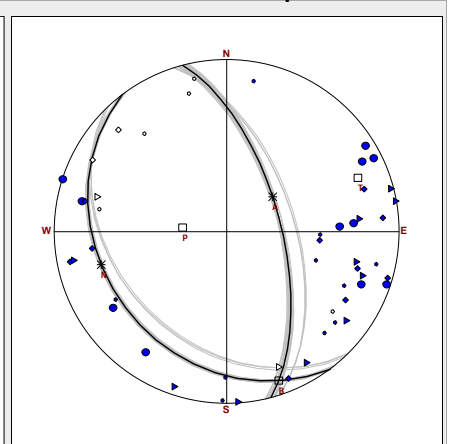
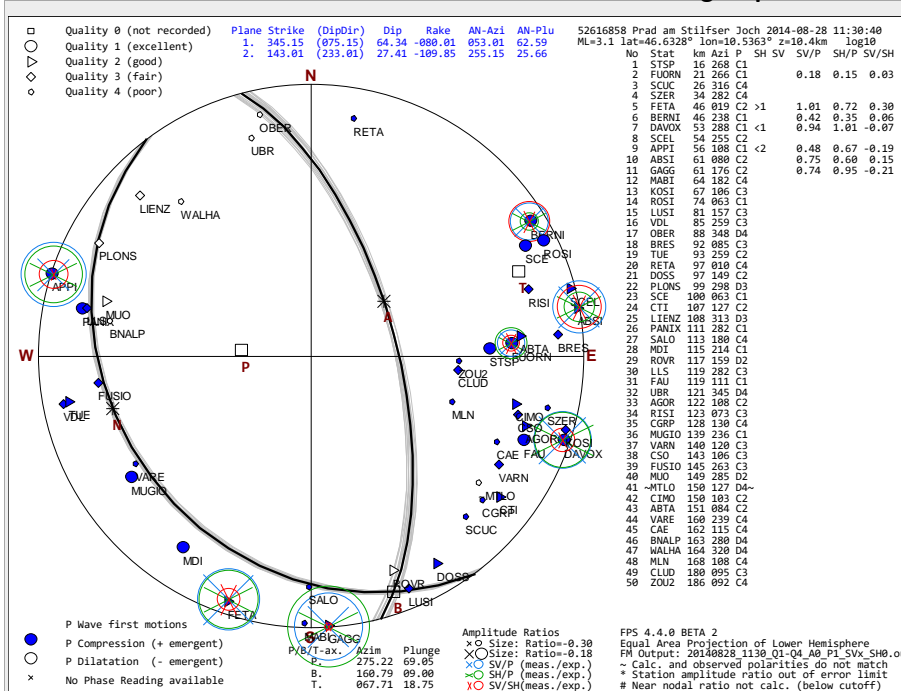
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	15
FPS quality (expl. at end)	18
Contributors and References	2

Reiter, 2017 (this Publ.) [1]

Mechanism remarks ZAMG full bandwidth waveform data missing

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis		275	69°			
B-Axis		161	09°			
T-Axis		068	19°			
Plane1/A-Axis	345	64	-080	053	63°	<input type="checkbox"/>
Plane2/N-Axis	143	27	-110	255	26°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	50	1	2%
SV Polarities	0	0	%
SH Polarities	3	0	0%
All Polarities	53	1	2%
P/SV/SH Pol. Q1	13	0	0%
P/SV/SH Pol. Q2	13	0	0%
P/SV/SH Pol. Q3	12	0	0%
P/SV/SH Pol. Q4	15	1	7%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	7	0	0%
SH/P Ampl. Ratios	7	0	0%
SV/SH Ampl. Ratios	7	0	0%
All Ampl. Ratios	21	0	0%

Event data

Seismotectonic Domain 4: Central Alpine extension domain (CAE)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter IT Lat Long z a) z est. b)

Event remarks Err zErr z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	48		85°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

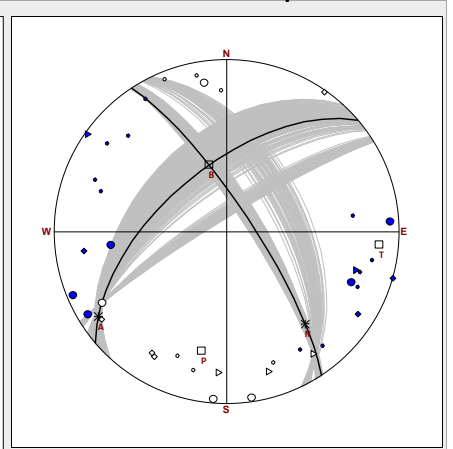
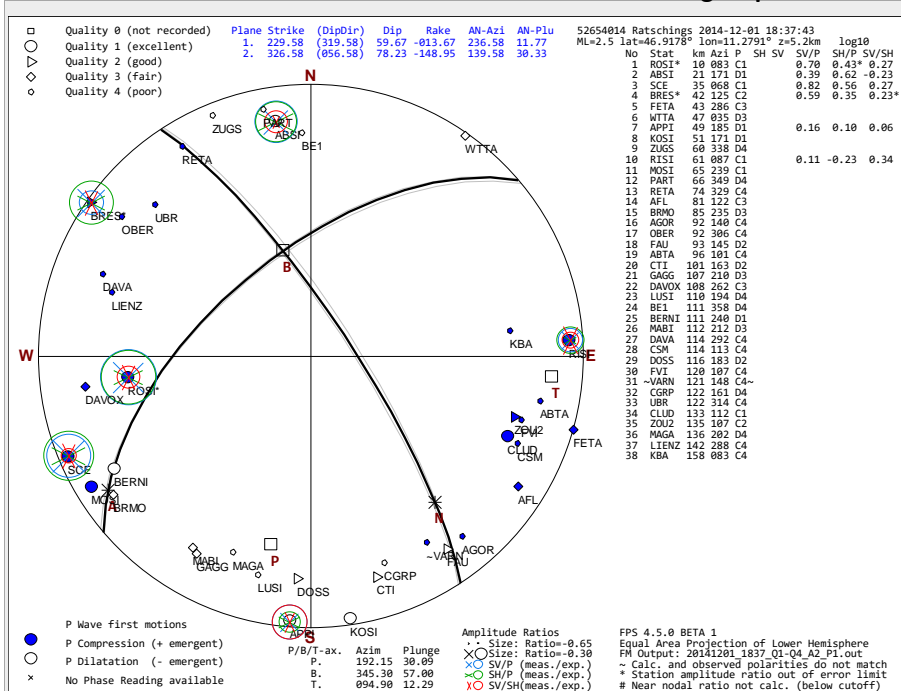
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	219
Contributors and References	2
Reiter, 2017 (this Publ.) [1]	

Mechanism remarks solutions restricted to Q3-Q4 and Q0.

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis		192	30°			
B-Axis		345	57°			
T-Axis		095	12°			
Plane1/A-Axis	230	60	-014	237	12°	<input type="checkbox"/>
Plane2/N-Axis	327	78	-149	140	30°	<input type="checkbox"/>
RMS for acceptable solutions ⁴¹					0,34	log ₁₀
RMS for all solutions ⁴¹					0,42	log ₁₀
Mechanism Class ^{45 46}					SS-N	
Inferred active fault	Passeier-Brenner Transfer Zone					
Fault zone	Strike-Slip to oblique reverse: Passeier-Brenner Transfer Zone					
Seismotectonic region	Stubai and Ötztal Alps, Texel Group					

	Total	Misfit abs.	Misfit rel.
P Polarities	38	1	3%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	38	1	3%
P/SV/SH Pol. Q1	9	0	0%
P/SV/SH Pol. Q2	5	0	0%
P/SV/SH Pol. Q3	7	0	0%
P/SV/SH Pol. Q4	17	1	6%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	6	0	0%
SH/P Ampl. Ratios	6	1	17%
SV/SH Ampl. Ratios	6	1	17%
All Ampl. Ratios	18	2	11%

Event data **Seismotectonic Domain 4: Central Alpine extension domain (CAE)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter CH Lat Long z a) z est. b)

Event remarks km"/> a) Loc. det./ refs. b) z estim. based on

FocMec⁴¹ Input parameters and presets

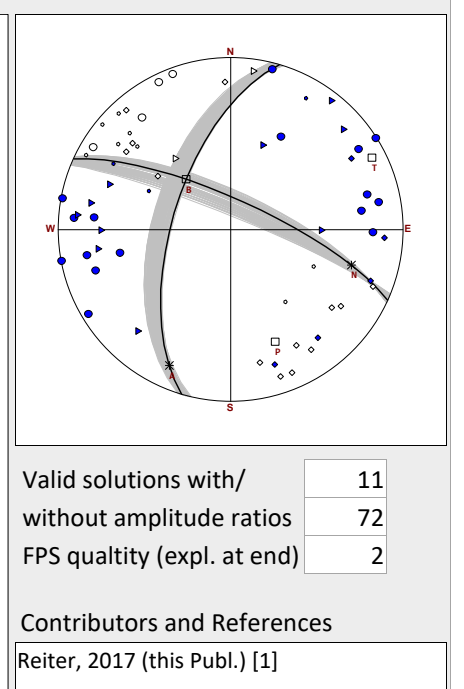
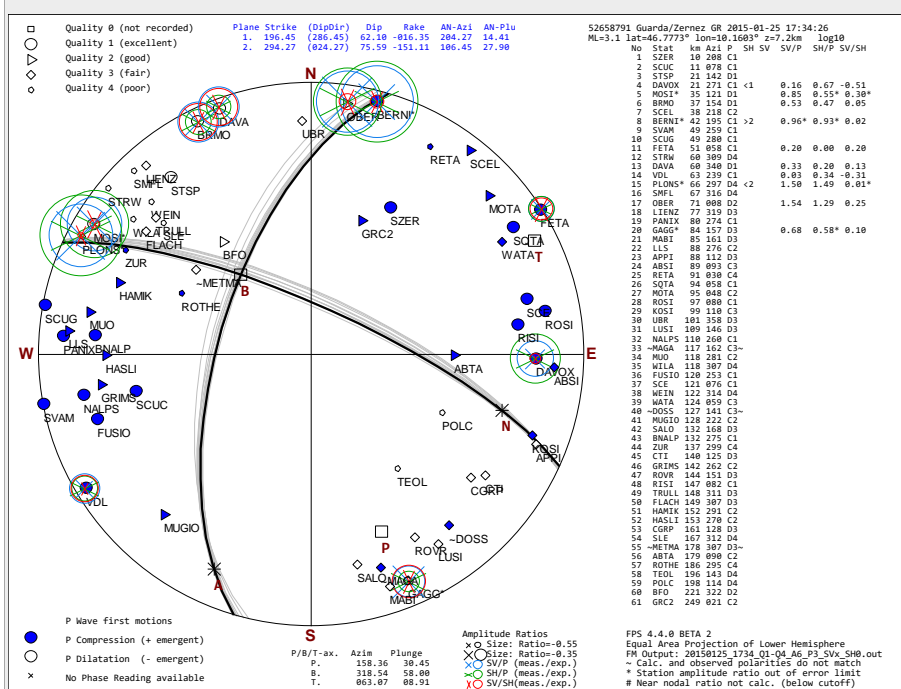
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	55		72°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis					158	30°	P Polarities	61	3	5%
B-Axis					319	58°	SV Polarities	0	0	%
T-Axis					063	09°	SH Polarities	3	0	0%
Plane1/A-Axis	196	62	-016	204	14°	<input type="checkbox"/>	All Polarities	64	3	5%
Plane2/N-Axis	294	76	-151	106	28°	<input type="checkbox"/>	P/SV/SH Pol. Q1	21	0	0%
RMS for acceptable solutions ⁴¹						0,29	P/SV/SH Pol. Q2	14	0	0%
RMS for all solutions ⁴¹						0,43	P/SV/SH Pol. Q3	18	3	17%
Mechanism Class ^{45 46}						SS-N	P/SV/SH Pol. Q4	11	0	0%
Inferred active fault	Zernez Fault						P/SV/SH Pol. Q0	0	0	%
Fault zone	Extension: Engadin-Ortler-Graubünden normal faulting zone						SV/P Ampl. Ratios	10	1	10%
Seismotectonic region	Engadin and Oberes Gericht						SH/P Ampl. Ratios	10	3	30%
							SV/SH Ampl. Ratios	10	2	20%
							All Ampl. Ratios	30	6	20%

Event data

Seismotectonic Domain 4: Central Alpine extension domain (CAE)

FPS ID	4.45	Ev ID	52695854	ID2		UTC	2016-03-24 06:12:39	MI	2,9	I ₀	3,5			
Epicenter			Obergurgl / Sölden			AT	Lat	46,819°	Long	10,956°	z	2,1 km	a) z est. b)	7,1 km
Event remarks			NLL ERH ⁴⁷			1,590 km	NLL ERZ ⁴⁷			4,1 km	z macro		12 km	
standard z and zmacro are > than z NLL therefore averaged with zmacro												a) Loc. grid search with Stations<150km, this publication [57]		
												det./ refs. b) z estim. z averaged with macroseismic depth [64]		
												based on		

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Input parameters and presets	Relative Weighting	No	B Trend	0	1	359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
	Lower Limit of S rad. Factor	0,15				
	Prim./sec. Azimuthal Gap ³²	39		50°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

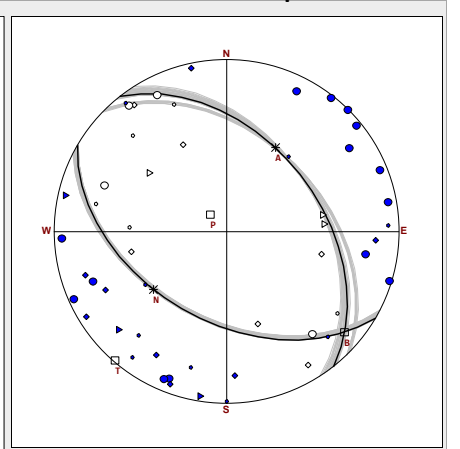
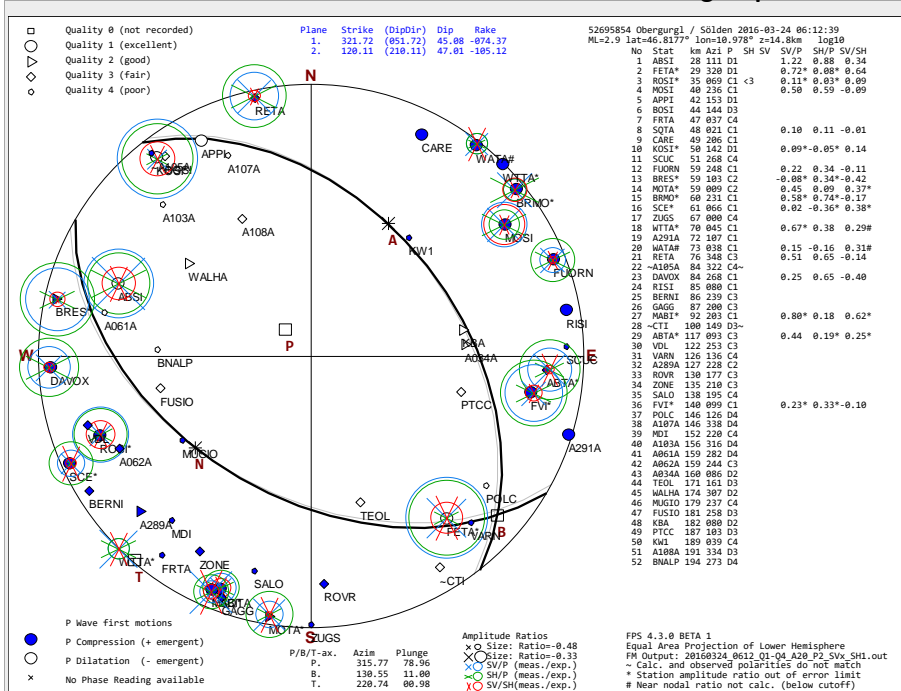
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	28
Contributors and References	1
Reiter, 2017 (this Publ.) [1]	

Mechanism remarks

Basal Austroalpine thrust

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Azim.	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis				316	79°		52	2	4%
B-Axis				131	11°		0	0	%
T-Axis				221	01°		1	0	0%
Plane1/A-Axis	322	45	-074	030	43°		53	2	4%
Plane2/N-Axis	120	47	-105	232	45°		18	0	0%
RMS for acceptable solutions ⁴¹						0,24	log ₁₀		
RMS for all solutions ⁴¹						0,55	log ₁₀		
Mechanism Class ^{45 46}						N			
Inferred active fault	Basal Austroalpine thrust								
Fault zone	Extension: Brenner normal fault, Stubai and Oetzal Alps, Texel Group								
Seismotectonic region	Stubai and Ötztal Alps, Texel Group								
P Polarities							52	2	4%
SV Polarities							0	0	%
SH Polarities							1	0	0%
All Polarities							53	2	4%
P/SV/SH Pol. Q1							18	0	0%
P/SV/SH Pol. Q2							6	0	0%
P/SV/SH Pol. Q3							15	1	7%
P/SV/SH Pol. Q4							14	1	7%
P/SV/SH Pol. Q0							0	0	%
SV/P Ampl. Ratios							18	8	44%
SH/P Ampl. Ratios							18	8	44%
SV/SH Ampl. Ratios							18	4	22%
All Ampl. Ratios							54	20	37%

Seismotectonic Domain 5: Central East Alpine low seismicity domain (EALS)

ID	UTC	Lat	Long	z	Epicenter	MI	MecClass
5.01	2014-03-27 11:22:03	47,10	12,29	12,9	Neukirchen am Großvenediger	3,3	R-SS

Missing event ID's belong to already published events. Results are listed, illustrated and cited in the main publication. No datasheets exist.

Event data **Seismotectonic Domain 5: Central East Alpine low seismicity domain (EALS)**

FPS ID	5.01	Ev ID	52603162	ID2		UTC	2014-03-27 11:22:03	MI	3,3	Io		
Epicenter	Neukirchen am Großvenediger			AT	Lat	47,103°	Long	12,285°	z	12,9 km	a) z est. b)	12,9 km
Event remarks	not felt			NLL ERH ⁴⁷		2 km	NLL ERZ ⁴⁷		4,46 km	z macro	n.v. km	
				a) Loc.		grid search with Stations<150km, this publication [57]						
				det./ refs.								
				b) z estim.								
				based on								

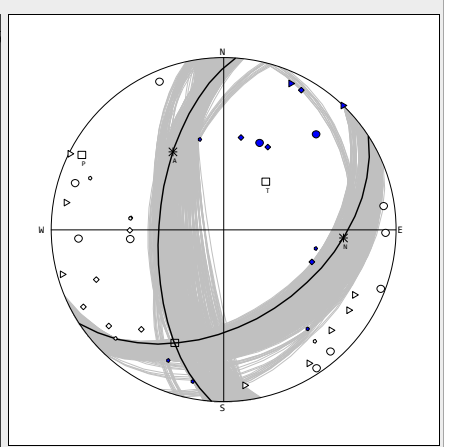
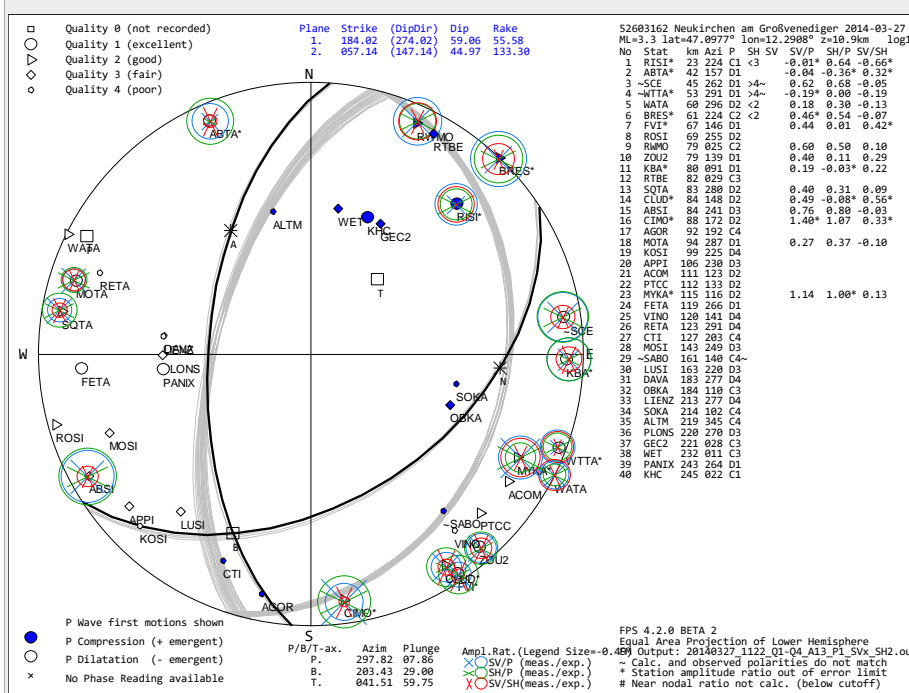
FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	40		45°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	24
FPS quality (expl. at end)	309
	2

Contributors and References
 Reiter & Hausmann, 2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

Strike Dip Rake Azim Pl. active					Total Misfit abs. Misfit rel.				
P-Axis				298	08°	P Polarities	40	1	2%
B-Axis				203	29°	SV Polarities	0	0	%
T-Axis				042	60°	SH Polarities	5	2	40%
Plane1/A-Axis	184	59	056	327	45°	All Polarities	45	3	7%
Plane2/N-Axis	057	45	133	094	31°	P/SV/SH Pol. Q1	11	0	0%
RMS for acceptable solutions ⁴¹					0,33	P/SV/SH Pol. Q2	12	0	0%
RMS for all solutions ⁴¹					0,51	P/SV/SH Pol. Q3	10	0	0%
Mechanism Class ^{45 46}					R-SS	P/SV/SH Pol. Q4	12	3	25%
Inferred active fault	Brixlegg thrust, Großvenediger section					P/SV/SH Pol. Q0	0	0	%
Fault zone	Thrust: basal thrust of Tauern Window					SV/P Ampl. Ratios	16	4	25%
Seismotectonic region	Hohe Tauern central					SH/P Ampl. Ratios	16	4	25%
						SV/SH Ampl. Ratios	16	5	31%
						All Ampl. Ratios	48	13	27%

Seismotectonic Domain 6: Central East Alpine extension domain (EAE)

ID	UTC	Lat	Long	z	Epicenter	MI	MecClass
6.02	2003-08-26 00:53:54	46,99	13,67	8,0	Krems in Kärnten	3,2	N
6.03	2006-05-13 12:01:06	46,98	13,25	6,9	Mallnitz	3,0	N-SS
6.04	2006-10-14 13:09:19	46,97	13,26	7,5	Obervellach	3,4	N
6.05	2007-02-23 06:14:38	47,01	13,28	7,4	Malta	3,2	N
6.06	2009-09-27 08:04:00	47,03	13,31	5,9	Malta	2,7	N-SS
6.07	2013-10-21 22:02:13	47,00	13,27	7,1	Mallnitz	3,1	SS-N

Missing event ID's belong to already published events. Results are listed, illustrated and cited in the main publication. No datasheets exist.

Event data **Seismotectonic Domain 6: Central East Alpine extension domain (EAE)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

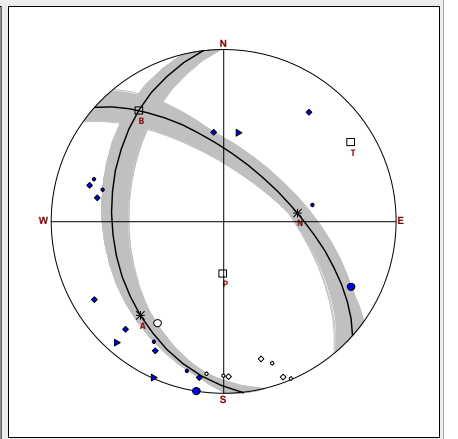
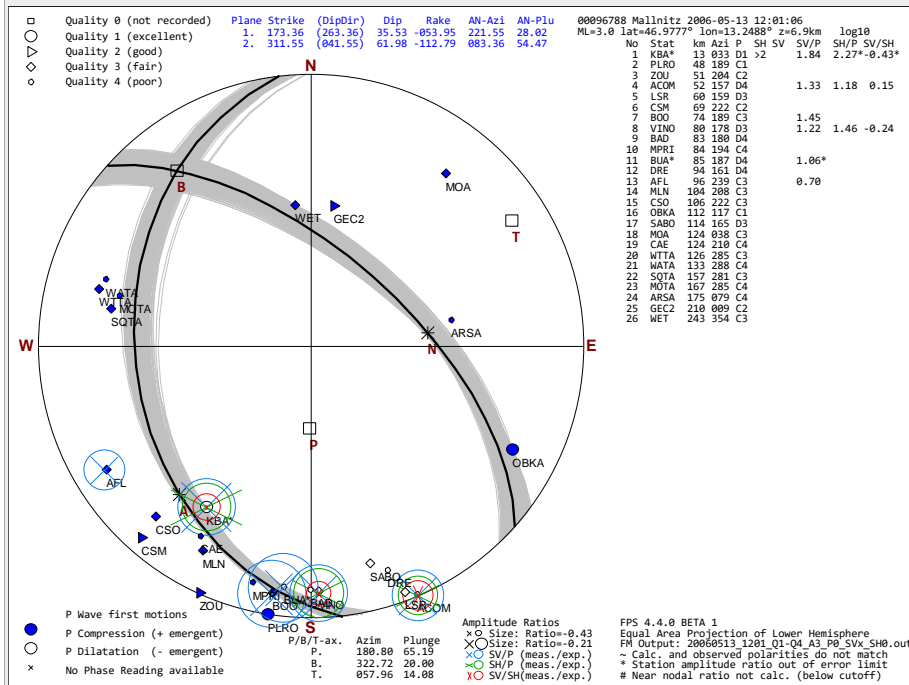
Vp/Vs Ratio at Source	1,732	Min. Incr.	0	1	359°
Relative Weighting	No	B Trend	0	1	90°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	89°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	66				81°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	185
FPS quality (expl. at end)	376
	3

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				181	65°	
B-Axis				323	20°	
T-Axis				058	14°	
Plane1/A-Axis	173	36	-054	222	28°	<input type="checkbox"/>
Plane2/N-Axis	312	62	-113	083	54°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault:
 Fault zone:
 Seismotectonic region:

	Total	Misfit abs.	Misfit rel.
P Polarities	26	0	0%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	27	0	0%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	4	0	0%
P/SV/SH Pol. Q3	11	0	0%
P/SV/SH Pol. Q4	9	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	6	1	17%
SH/P Ampl. Ratios	3	1	33%
SV/SH Ampl. Ratios	3	1	33%
All Ampl. Ratios	12	3	25%

Event data

Seismotectonic Domain 6: Central East Alpine extension domain (EAE)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc. ZAMG standard location [64]
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	36				47°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

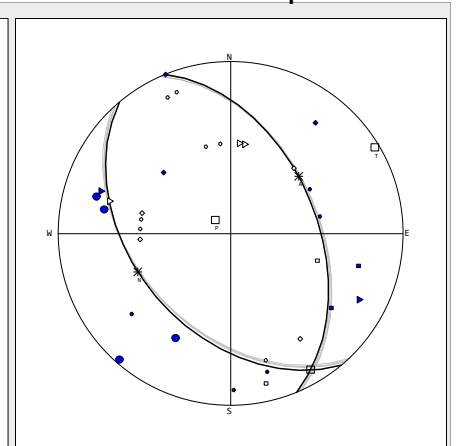
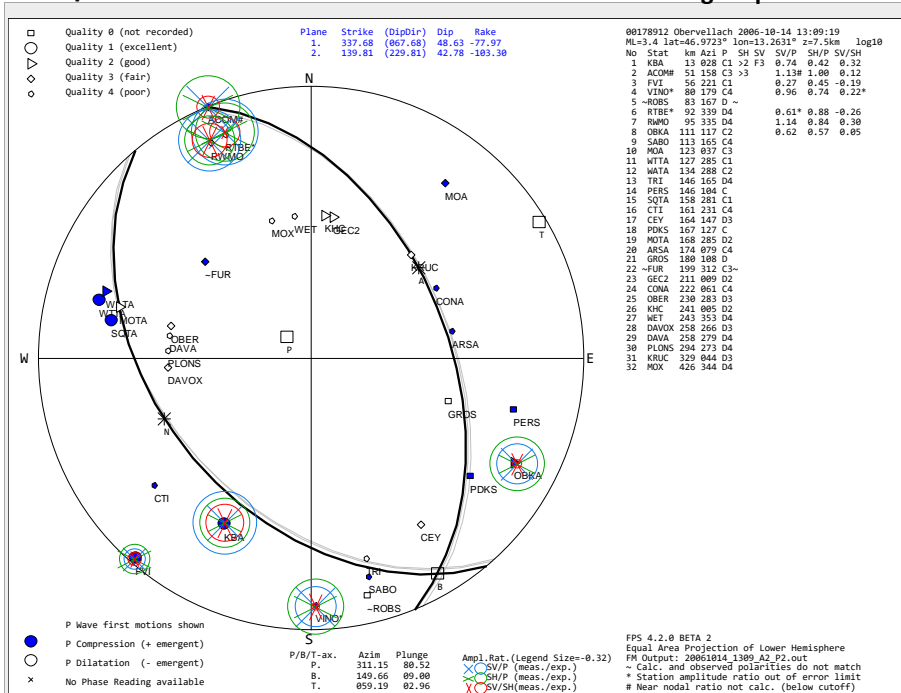
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	4
Contributors and References	3
Reiter, 2017 (this Publ.) [1]	

Mechanism remarks waveforms similar to 2013-10-21

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active	
P-Axis					311	81°		
B-Axis					150	09°		
T-Axis					059	03°		
Plane1/A-Axis	338	49	-078	050	47°		<input type="checkbox"/>	
Plane2/N-Axis	140	43	-103	248	41°		<input type="checkbox"/>	
RMS for acceptable solutions ⁴¹							0,29	log ₁₀
RMS for all solutions ⁴¹							0,34	log ₁₀
Mechanism Class ^{45 46}							N	
Inferred active fault	Katschberg fault: Ankogelgruppe section							
Fault zone	Extension: Central Eastern Alps E of the Tauern Window							
Seismotectonic region	Central Eastern Alps							

	Total	Misfit abs.	Misfit rel.
P Polarities	32	2	6%
SV Polarities	1	0	0%
SH Polarities	2	0	0%
All Polarities	35	2	6%
P/SV/SH Pol. Q1	4	0	0%
P/SV/SH Pol. Q2	6	0	0%
P/SV/SH Pol. Q3	9	1	11%
P/SV/SH Pol. Q4	12	0	0%
P/SV/SH Pol. Q0	4	1	25%
SV/P Ampl. Ratios	7	1	14%
SH/P Ampl. Ratios	7	0	0%
SV/SH Ampl. Ratios	7	1	14%
All Ampl. Ratios	21	2	10%

Event data **Seismotectonic Domain 6: Central East Alpine extension domain (EAE)**

FPS ID	6.05	Ev ID	00219343	ID2		UTC	2007-02-23 06:14:38	MI	3,2	Io	4
Epicenter	Malta	AT	Lat	47,012 °	Long	13,278 °	z	7,4 km	a) z est. b)	7,4 km	
Event remarks	epicenter too far from inhabited places		NLL ERH ⁴⁷	2,410 km	NLL ERZ ⁴⁷	4,05 km	z macro	n.v. km			
			a) Loc.	grid search with Stations<150km, this publication [57]							
			det./ refs.								
			b) z estim.								
			based on								

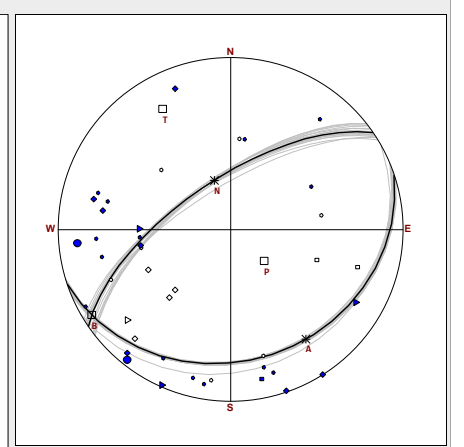
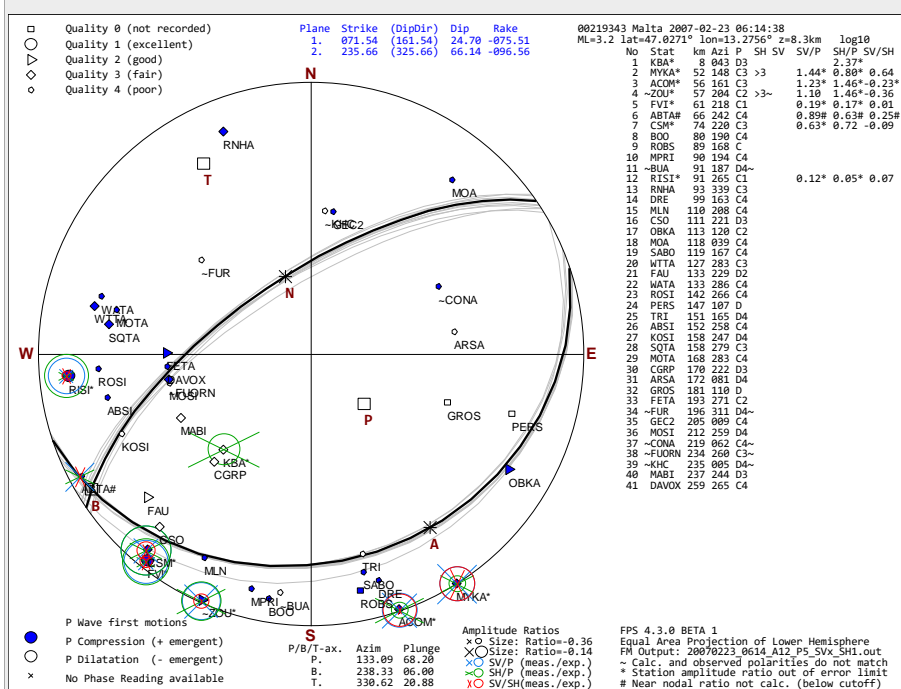
FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
	Relative Weighting	No	0	1	359 °
	Accepted log ₁₀ Ampl. Rat. Error	0,5	0	1	90 °
	Lower Limit of P rad. Factor	0,05	0	1	89 °
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	30	55 °		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	10
FPS quality (expl. at end)	4

Contributors and References
Reiter, 2016 (this Publ.) [1]

Mechanism remarks
agency readings >200km skipped
solutions restricted to errors for >=Q3

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					133	68 °	
B-Axis					238	06 °	
T-Axis					331	21 °	
Plane1/A-Axis	072	25	-076	146	24		<input type="checkbox"/>
Plane2/N-Axis	236	66	-097	342	65		<input type="checkbox"/>
RMS for acceptable solutions ⁴¹				0,29	log ₁₀		
RMS for all solutions ⁴¹				0,79	log ₁₀		
Mechanism Class ^{45 46}				N			
Inferred active fault	Katschberg fault: Ankogelgruppe section						
Fault zone	Extension: Central Eastern Alps E of the Tauern Window						
Seismotectonic region	Central Eastern Alps						

	Total	Misfit abs.	Misfit rel.
P Polarities	41	5	12 %
SV Polarities	0	0	%
SH Polarities	2	1	50 %
All Polarities	43	6	14 %
P/SV/SH Pol. Q1	2	0	0 %
P/SV/SH Pol. Q2	4	0	0 %
P/SV/SH Pol. Q3	13	2	15 %
P/SV/SH Pol. Q4	21	4	19 %
P/SV/SH Pol. Q0	3	0	0 %
SV/P Ampl. Ratios	7	5	71 %
SH/P Ampl. Ratios	8	6	75 %
SV/SH Ampl. Ratios	7	1	14 %
All Ampl. Ratios	22	12	55 %

Event data

Seismotectonic Domain 6: Central East Alpine extension domain (EAE)

FPS ID	6.06	Ev ID	52289583	ID2		UTC	2009-09-27 08:04:00	MI	2,7	Io	4	
Epicenter	Malta			AT	Lat	47,030 °	Long	13,308 °	z	5,9 km	a) z est. b)	6,6 km
Event remarks	standard z estimate and z micro > z NLL -> best estimate=average			NLL ERH ⁴⁷	2,170 km		NLL ERZ ⁴⁷	3,57 km		z macro	7,4 km	
				a) Loc. det./ refs. based on		grid search with Stations<150km, this publication [57]						
				b) z estim. based on		z averaged with macroseismic depth [64]						

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359 °
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90 °
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89 °
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	30		53 °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

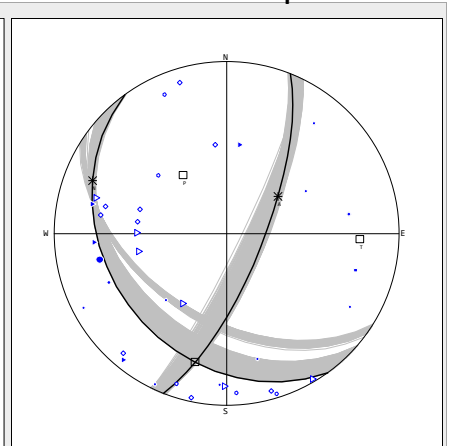
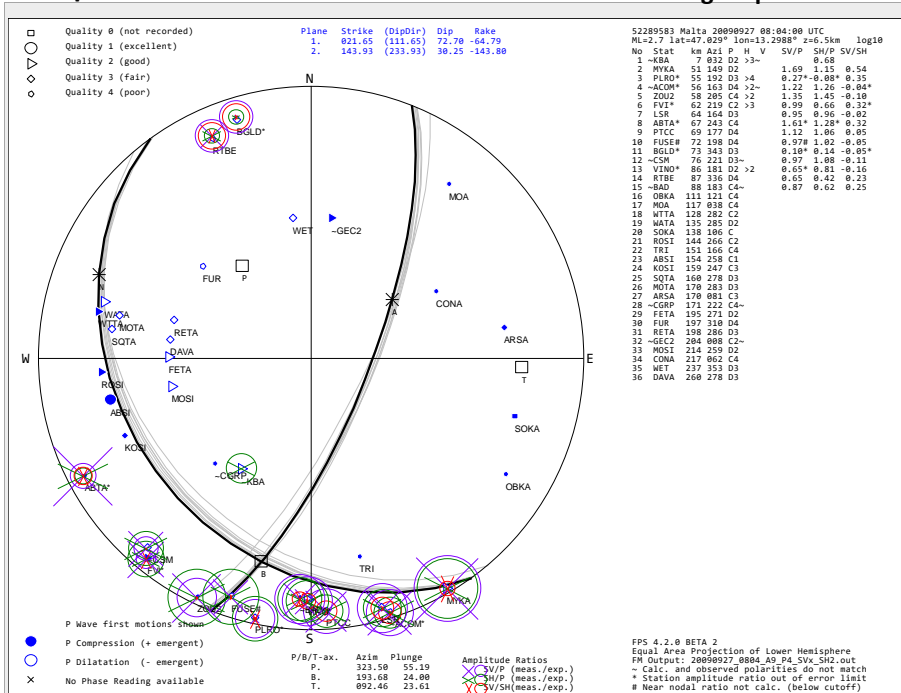
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	8
FPS quality (expl. at end)	222
	3

Contributors and References

Reiter, 2017 (this Publ.) [1]

Mechanism remarks oblique extension below Hochalm mountains

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis					324	55 °		P Polarities	36	4 11%
B-Axis					194	24 °		SV Polarities	0	0 %
T-Axis					092	24 °		SH Polarities	6	2 33%
Plane1/A-Axis	022	73	-065	054	60 °		All Polarities	42	6 14%	
Plane2/N-Axis	144	30	-144	292	17 °		P/SV/SH Pol. Q1	1	0 0%	
RMS for acceptable solutions ⁴¹							0,30	P/SV/SH Pol. Q2	13	2 15%
RMS for all solutions ⁴¹							0,47	P/SV/SH Pol. Q3	13	2 15%
Mechanism Class ^{45 46}							N-SS	P/SV/SH Pol. Q4	14	2 14%
Inferred active fault	Katschberg fault: Ankogelgruppe section							P/SV/SH Pol. Q0	1	0 0%
Fault zone	Extension: Central Eastern Alps E of the Tauern Window							SV/P Ampl. Ratios	14	4 29%
Seismotectonic region	Central Eastern Alps							SH/P Ampl. Ratios	15	2 13%
								SV/SH Ampl. Ratios	14	3 21%
								All Ampl. Ratios	43	9 21%

Event data **Seismotectonic Domain 6: Central East Alpine extension domain (EAE)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERH⁴⁷ NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

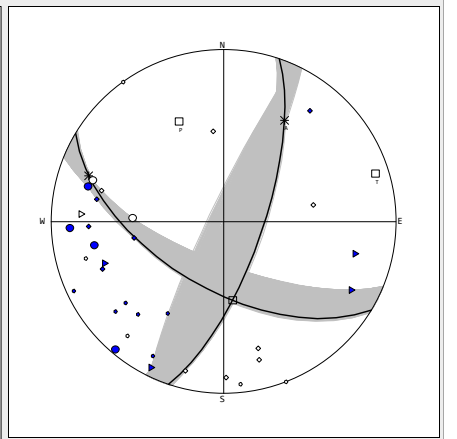
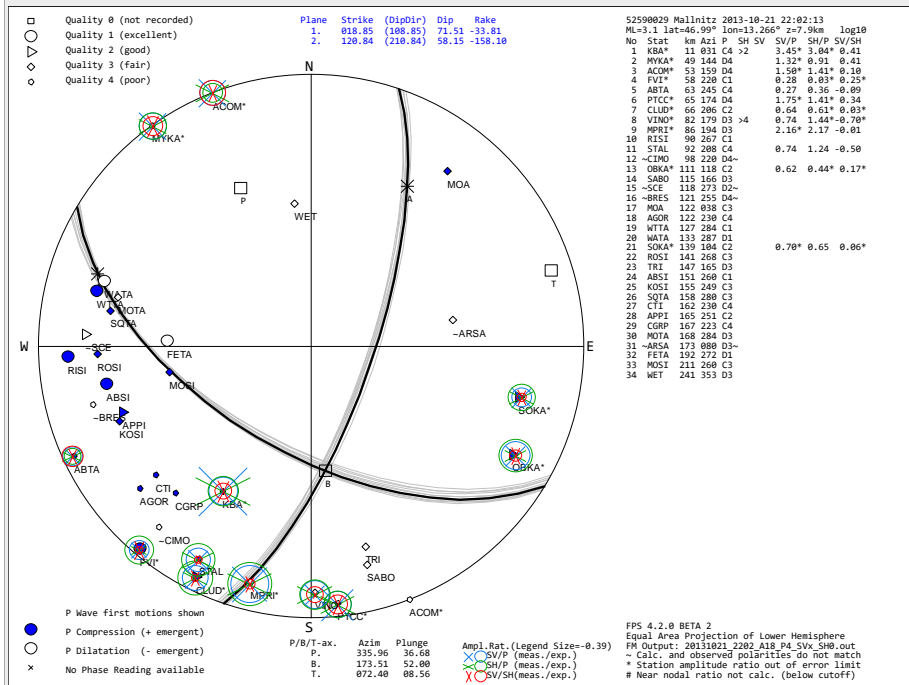
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	45				86 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	11 / 756
FPS quality (expl. at end)	2

Contributors and References
 Reiter, 2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rate	Azim	Pl.	active
P-Axis				336	37°	
B-Axis				174	52°	
T-Axis				072	09°	
Plane1/A-Axis	019	72	-034	031	32°	<input type="checkbox"/>
Plane2/N-Axis	121	58	-158	289	18°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	34	4	12%
SV Polarities	0	0	%
SH Polarities	2	0	0%
All Polarities	36	4	11%
P/SV/SH Pol. Q1	6	0	0%
P/SV/SH Pol. Q2	6	1	17%
P/SV/SH Pol. Q3	12	1	8%
P/SV/SH Pol. Q4	12	2	17%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	12	6	50%
SH/P Ampl. Ratios	12	7	58%
SV/SH Ampl. Ratios	12	5	42%
All Ampl. Ratios	36	18	50%

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

ID	UTC	Lat	Long	z	Epicenter	MI	MecClass
7.02	1996-05-17 09:30:59	47,17	9,49	1,0	Buchs/Vaduz	3,6	SS-N
7.03	1996-06-15 21:40:08	47,21	10,14	14,5	Lech	4,0	SS-N
7.04	1996-06-28 09:57:43	47,20	10,10	18,0	Lech	4,3	SS-N
7.05	1997-06-01 01:09:01	47,29	10,73	11,0	Tarrenz	3,1	SS-R
7.11	2000-09-09 02:02:07	47,21	10,12	3,0	Lech	3,0	N
7.12	2001-03-16 05:40:36	47,21	10,15	5,0	Lech	3,2	N
7.13	2001-10-30 17:30:22	47,26	10,17	10,0	Warth	3,2	SS-N
7.15	2004-01-10 02:51:58	47,13	10,67	8,0	Zams	2,6	N-SS
7.16	2005-05-03 15:35:10	47,18	10,79	8,0	Arzl im Pitztal	3,0	SS
7.18	2006-02-26 15:30:42	47,14	10,92	11,9	Umhausen	3,6	R-SS
7.19	2007-05-19 16:19:38	47,18	10,60	7,8	Zams	4,2	SS
7.20	2007-08-05 11:15:41	47,07	9,62	6,1	Nenzing	3,2	SS-R
7.21	2007-10-15 16:25:49	47,18	10,60	8,2	Zams	3,4	SS-N
7.23	2010-07-09 06:28:08	47,25	10,71	7,6	Imst	3,3	SS-R
7.24	2010-07-09 12:11:31	47,26	10,72	6,2	Imst	2,8	SS-N
7.25	2011-01-31 11:44:25	47,24	10,73	4,6	Imst	2,7	SS-N
7.26	2012-01-13 14:01:52	47,34	10,68	2,0	Tarrenz	2,6	SS
7.27	2012-08-28 10:32:35	47,20	10,81	8,1	Roppen	2,6	N-SS
7.28	2012-09-27 18:33:53	47,24	10,87	2,0	Haiming	2,1	R
7.29	2012-11-20 22:17:10	47,10	10,71	8,1	Wenns	2,1	SS-R
7.32	2015-02-25 07:57:51	47,29	11,03	7,1	Rietz	3,0	SS-N
7.33	2015-09-01 01:36:28	47,33	10,67	1,1	Namlos	2,5	R-SS
7.34	2016-01-31 22:43:58	47,11	10,10	9,1	Klösterle	3,6	SS
7.35	2016-02-17 20:17:04	47,10	10,09	6,8	Klösterle	3,0	SS

Missing event ID's belong to already published events. Results are listed, illustrated and cited in the main publication. No datasheets exist.

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter LI Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	51		63°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

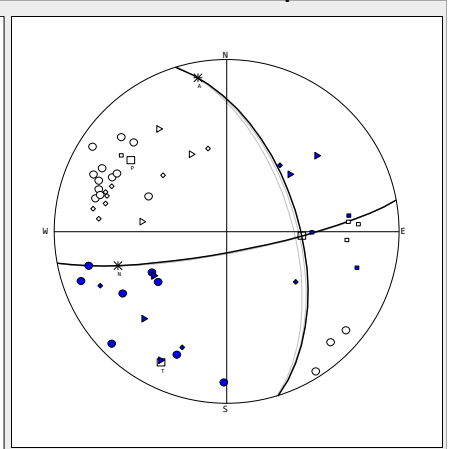
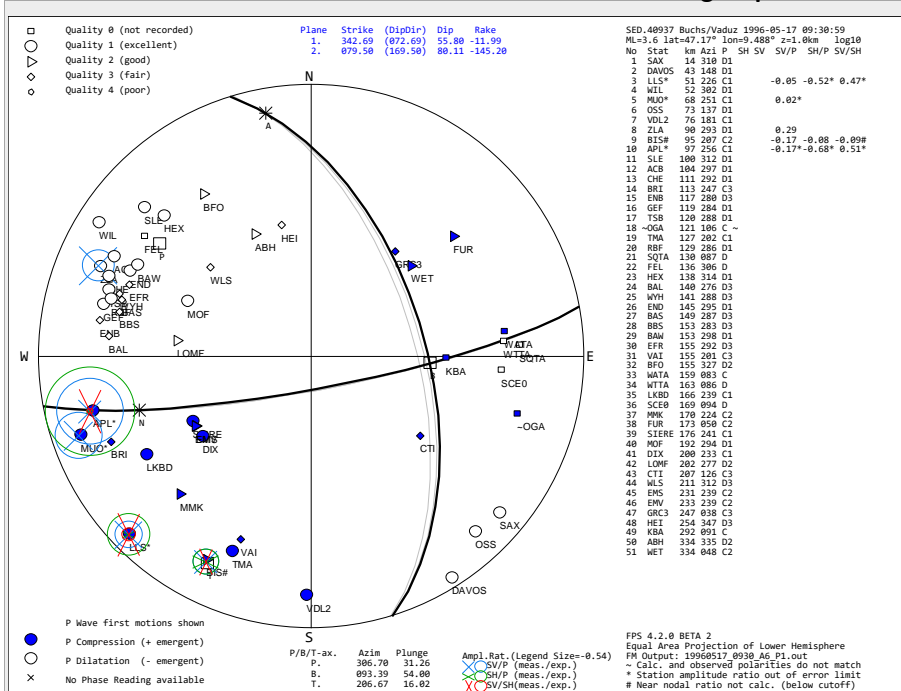
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	3

Contributors and References
 Reiter, 2005-2017 (this Publ.) [1]

Mechanism remarks not in Kastrup et al., 2004; no solution in Baer et al., 2007; agency readings >300km skipped; bad amplitude ratio fit, several station signals saturated or clipped

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				307	31°					
B-Axis				093	54°					
T-Axis				207	16°					
Plane1/A-Axis	343	56	-012	350	10°	<input type="checkbox"/>				
Plane2/N-Axis	080	80	-145	253	34°	<input type="checkbox"/>				
RMS for acceptable solutions ⁴¹						0,10	log ₁₀			
RMS for all solutions ⁴¹						1,14	log ₁₀			
Mechanism Class ^{45 46}						SS-N				
Inferred active fault	Buchs-Churfirsten strike-slip fault									
Fault zone	Strike-Slip: Swiss Rhine valley and Walensee area									
Seismotectonic region	Swiss Helvetic nappes East (Kastrup H3)									
							P Polarities	51	1	2%
							SV Polarities	0	0	%
							SH Polarities	0	0	%
							All Polarities	51	1	2%
							P/SV/SH Pol. Q1	23	0	0%
							P/SV/SH Pol. Q2	9	0	0%
							P/SV/SH Pol. Q3	12	0	0%
							P/SV/SH Pol. Q4	0	0	%
							P/SV/SH Pol. Q0	7	1	14%
							SV/P Ampl. Ratios	5	2	40%
							SH/P Ampl. Ratios	3	2	67%
							SV/SH Ampl. Ratios	3	2	67%
							All Ampl. Ratios	11	6	55%

Event data **Seismotectonic Domain 7: Central Alpine transition domain (CAT)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z

Event remarks Err zErr km z macro

ZAMG z set to zmacro. SED located at 10km depth., mean from 19 and 10 taken for depth

a) Loc. ZAMG standard location, z=calculated macroseismic depth [64]
 det./ refs.
 b) z estim. z averaged with standard depth of SED location [60]
 based on

FocMec⁴¹ Input parameters and presets

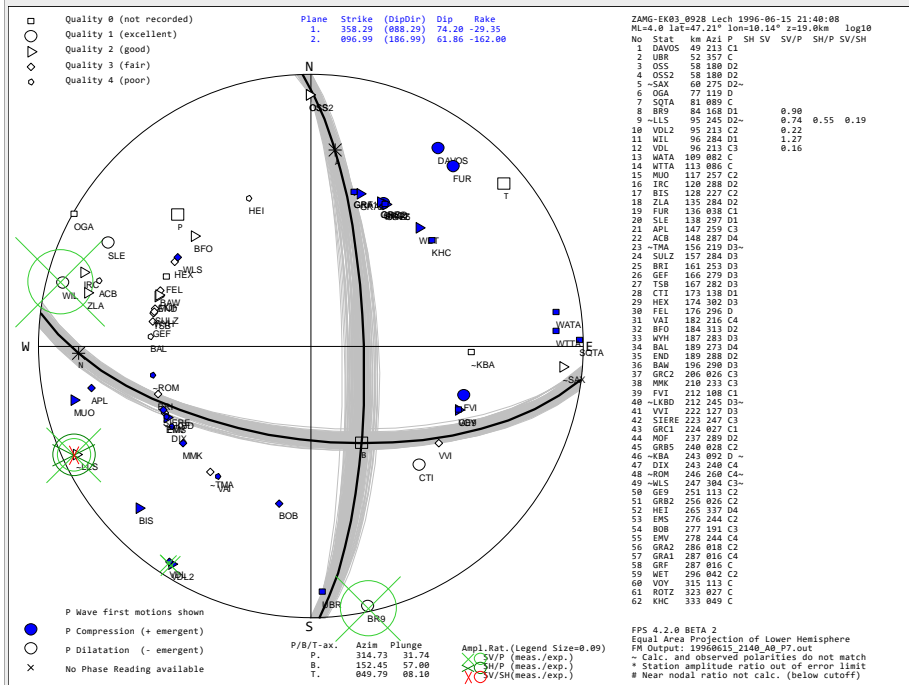
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	33				46 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	90 / 143
FPS quality (expl. at end)	3

Contributors and References
 Lenhardt & Reiter, 2003-2017 (this Publ.) [1]

Mechanism remarks all agency readings with d>350km skipped
 Data from Diehl et al., 2009 used
 no ZAMG waveforms available

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rate	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				315	32°		62	7	11%	
B-Axis				152	57°		0	0	%	
T-Axis				050	08°		0	0	%	
Plane1/A-Axis	358	74	-029	007	28°	<input type="checkbox"/>	62	7	11%	
Plane2/N-Axis	097	62	-162	268	16°	<input type="checkbox"/>	8	0	0%	
RMS for acceptable solutions ⁴¹						0,26	P/SV/SH Pol. Q1	18	2	11%
RMS for all solutions ⁴¹						0,26	P/SV/SH Pol. Q2	17	3	18%
Mechanism Class ^{45 46}						SS-N	P/SV/SH Pol. Q3	8	1	12%
Inferred active fault	Arlberg Fault						P/SV/SH Pol. Q4	11	2	18%
Fault zone	Strike-Slip to normal: Arlberg-Klosters transfer Fault						P/SV/SH Pol. Q0	5	0	0%
Seismotectonic region	Arlberg and Lechtal Alps						SV/P Ampl. Ratios	1	0	0%
							SH/P Ampl. Ratios	1	0	0%
							SV/SH Ampl. Ratios	7	0	0%
							All Ampl. Ratios			

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z

Event remarks Err ° zErr km z macro

ZAMG no depth calculated, z set to zmacro.
a foreshock occurred 1996-06-15 ML 4.0

a) Loc. ZAMG standard location, z=calculated macroseismic depth [64]
det./ refs.
b) z estim. z averaged with standard depth of SED location [60]
based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. Incr.	0	1	359	°
Relative Weighting	No	B Trend	0	1	90	°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	89	°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89	°
Lower Limit of S rad. Factor	0,15					
Prim./sec. Azimuthal Gap ³²	31				48	°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

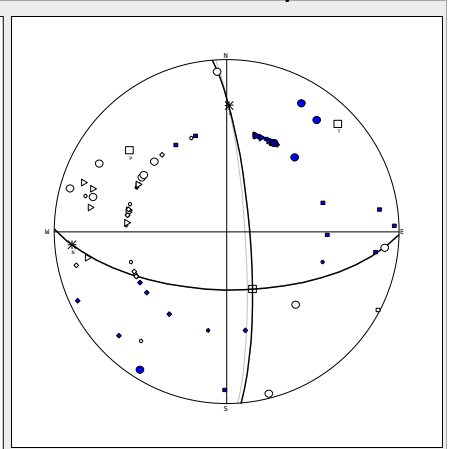
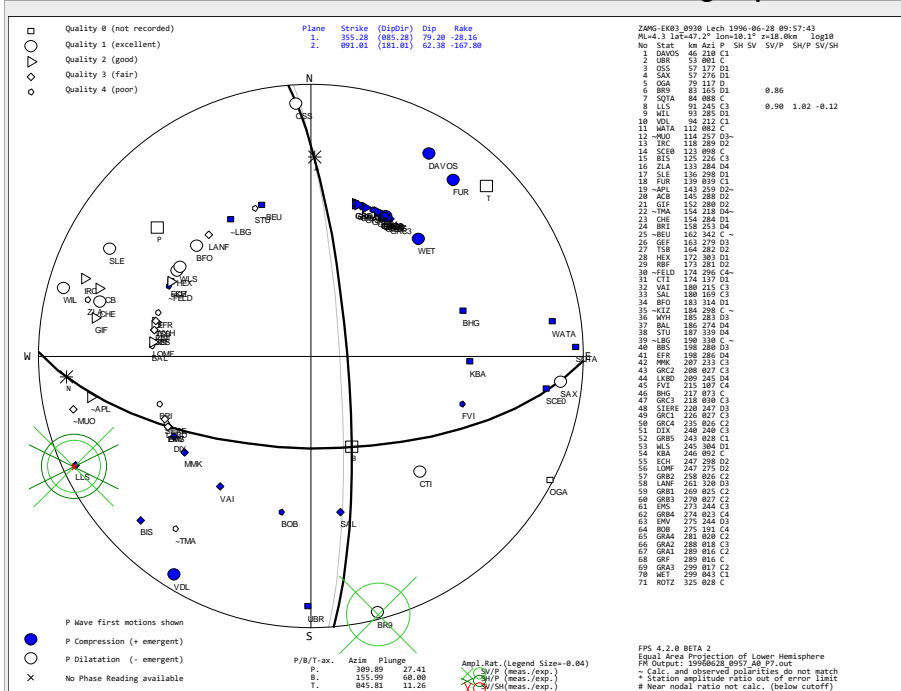
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	3

Contributors and References
Lenhardt, 2004 & Reiter, 2017 (this Publ.), using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks all agency readings with d>350km skipped
no ZAMG waveforms available
SED set depth to 10km. mean between 10 and 18 chosen

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis	310	27°					71	7	10%
B-Axis	156	60°					0	0	%
T-Axis	046	11°					0	0	%
Plane1/A-Axis	355	79	-028	001	28°		71	7	10%
Plane2/N-Axis	091	62	-168	265	11°		15	0	0%
RMS for acceptable solutions ⁴¹					0,27	log ₁₀	15	1	7%
RMS for all solutions ⁴¹					0,27	log ₁₀	18	1	6%
Mechanism Class ^{45 46}					SS-N		11	2	18%
Inferred active fault	Arlberg Fault						12	3	25%
Fault zone	Strike-Slip to normal: Arlberg-Klosters transfer Fault						2	0	0%
Seismotectonic region	Arlberg and Lechtal Alps						1	0	0%
							1	0	0%
							4	0	0%

P Polarities
SV Polarities
SH Polarities
All Polarities
P/SV/SH Pol. Q1
P/SV/SH Pol. Q2
P/SV/SH Pol. Q3
P/SV/SH Pol. Q4
P/SV/SH Pol. Q0
SV/P Ampl. Ratios
SH/P Ampl. Ratios
SV/SH Ampl. Ratios
All Ampl. Ratios

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z

Event remarks Err ° zErr km z macro

ZAMG catalogue depth is set to zmacro a) Loc. ZAMG standard location, z=calculated macroseismic depth [64]
 det./ refs. b) z estim. based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	122				129 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

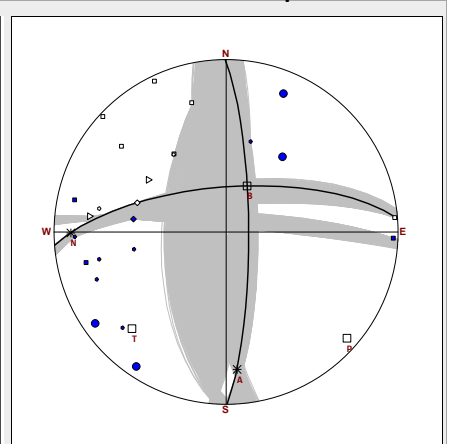
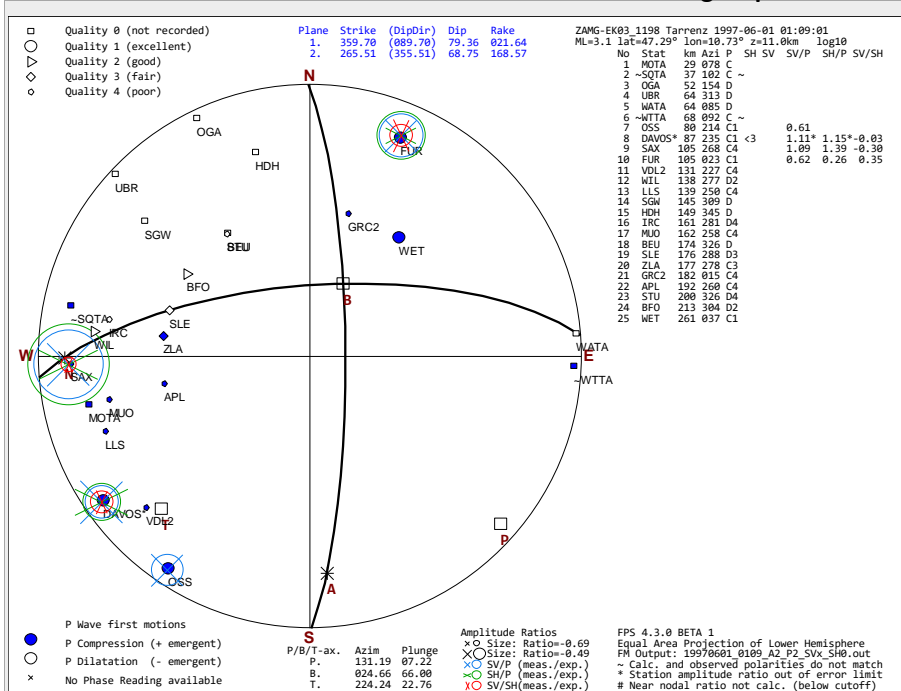
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	777
Contributors and References	4

Reiter & Lenhardt, 2003-2017 (this Publ.) [1]

Mechanism remarks no OASIS data available
 Agency readings >300km skipped

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					131	07°	
B-Axis					025	66°	
T-Axis					224	23°	
Plane1/A-Axis	360	79	022	176	21°		<input type="checkbox"/>
Plane2/N-Axis	266	69	169	270	11°		<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Telfs-Tarrenz fault: Tarrenz segment
 Fault zone: Strike-Slip: Telfs-Tarrenz fault zone
 Seismotectonic region: Upper Inn Valley

	Total	Misfit abs.	Misfit rel.
P Polarities	25	2	8%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	26	2	8%
P/SV/SH Pol. Q1	4	0	0%
P/SV/SH Pol. Q2	2	0	0%
P/SV/SH Pol. Q3	3	0	0%
P/SV/SH Pol. Q4	8	0	0%
P/SV/SH Pol. Q0	9	2	22%
SV/P Ampl. Ratios	4	1	25%
SH/P Ampl. Ratios	3	1	33%
SV/SH Ampl. Ratios	3	0	0%
All Ampl. Ratios	10	2	20%

Event data **Seismotectonic Domain 7: Central Alpine transition domain (CAT)**

FPS ID **7.11** Ev ID **ZAMG-EK03_1829** ID2 UTC **2000-09-09 02:02:07** MI **3,0** I₀ **4**

Epicenter **Lech** AT Lat **47,211°** Long **10,121°** z **3,0 km** a) z est. b) **6,5 km**

Event remarks Err ° zErr km z macro **9,9 km**

SED depth: 3km
z estimated to an average of z SED and z ZAMG
strong difference between SED inst. depth and ZAMG

a) Loc. standard location, parameters unknown [21]
det./ refs.
b) z estim. z averaged with macroseismic depth [64]
based on

FocMec⁴¹ Input parameters and presets

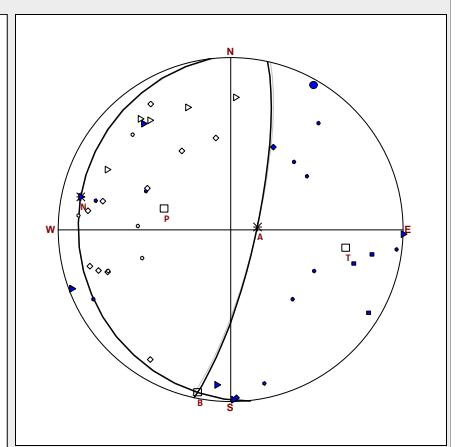
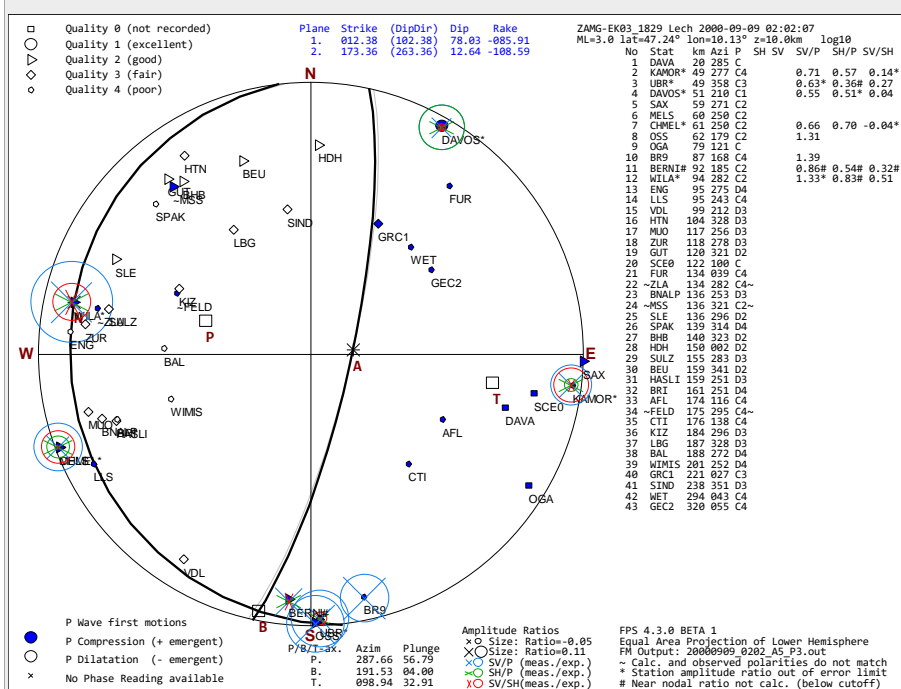
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Relative Weighting	No	B Trend	0	1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89 °
Lower Limit of S rad. Factor	0,15			
Prim./sec. Azimuthal Gap ³²	37		58 °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	2

Contributors and References

Reiter, 2005-2017 using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks no ZAMG data available
fps calculated for z=10km and zamg coordinate

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					288	57 °	
B-Axis					192	04 °	
T-Axis					099	33 °	
Plane1/A-Axis	012	78	-086	083	77 °		<input type="checkbox"/>
Plane2/N-Axis	173	13	-109	282	12 °		<input type="checkbox"/>

RMS for acceptable solutions⁴¹ 0,30 log₁₀

RMS for all solutions⁴¹ 0,46 log₁₀

Mechanism Class^{45 46} N

Inferred active fault: Arlberg Fault

Fault zone: Strike-Slip to normal: Arlberg-Klosters transfer Fault

Seismotectonic region: Arlberg and Lechtal Alps

	Total	Misfit abs.	Misfit rel.
P Polarities	43	3	7 %
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	43	3	7 %
P/SV/SH Pol. Q1	1	0	0 %
P/SV/SH Pol. Q2	12	1	8 %
P/SV/SH Pol. Q3	12	0	0 %
P/SV/SH Pol. Q4	15	2	13 %
P/SV/SH Pol. Q0	3	0	0 %
SV/P Ampl. Ratios	8	2	25 %
SH/P Ampl. Ratios	6	1	17 %
SV/SH Ampl. Ratios	6	2	33 %
All Ampl. Ratios	20	5	25 %

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z

Event remarks Err ° zErr km z macro

coordinate after Deichmann et al., 2002
old coordinate in EK03: 47,19/10,12/12km
zestimate = average(zSED=5km, zmacro)

a) Loc. standard location, parameters unknown [26]
det./ refs.
b) z estim. z averaged with macroseismic depth [64]
based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. B Trend	0	Incr. 1	Max. 359 °
Relative Weighting	No	B Plunge	0	1	90 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	A Plunge	0	1	89 °
Lower Limit of P rad. Factor	0,05				
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	45				45 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

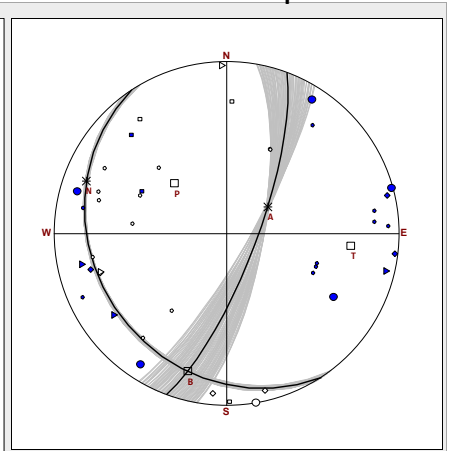
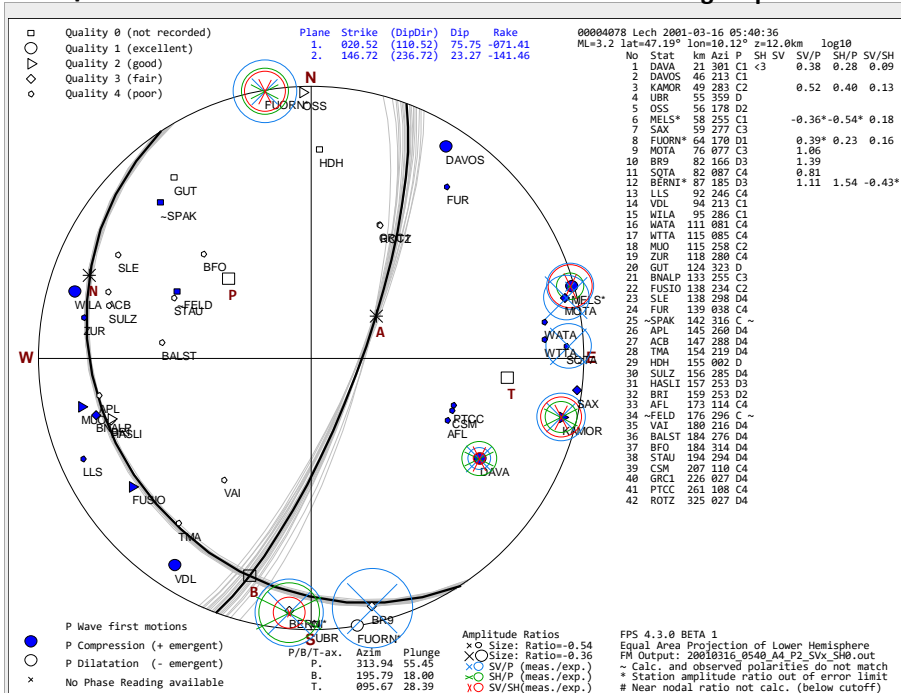
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	18
FPS quality (expl. at end)	75
	2

Contributors and References
Reiter, 2005-2017 (this Publ.), using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks
no LMU data
agency readings >200 km skipped

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				314	55 °	
B-Axis				196	18 °	
T-Axis				096	28 °	
Plane1/A-Axis	021	76	-071	057	67 °	<input type="checkbox"/>
Plane2/N-Axis	147	23	-141	291	14 °	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
RMS for all solutions⁴¹ log₁₀
Mechanism Class^{45 46}

Inferred active fault:
Fault zone:
Seismotectonic region:

	Total	Misfit abs.	Misfit rel.
P Polarities	42	2	5 %
SV Polarities	0	0	%
SH Polarities	1	0	0 %
All Polarities	43	2	5 %
P/SV/SH Pol. Q1	6	0	0 %
P/SV/SH Pol. Q2	5	0	0 %
P/SV/SH Pol. Q3	7	0	0 %
P/SV/SH Pol. Q4	20	0	0 %
P/SV/SH Pol. Q0	5	2	40 %
SV/P Ampl. Ratios	8	2	25 %
SH/P Ampl. Ratios	5	1	20 %
SV/SH Ampl. Ratios	5	1	20 %
All Ampl. Ratios	18	4	22 %

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z

Event remarks Err ° zErr km z macro

a) Loc.

b) z estim. based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	55				71 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

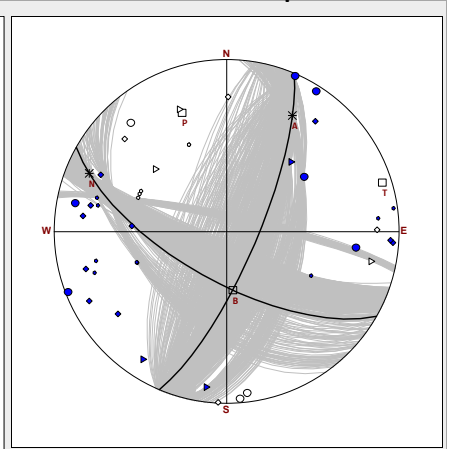
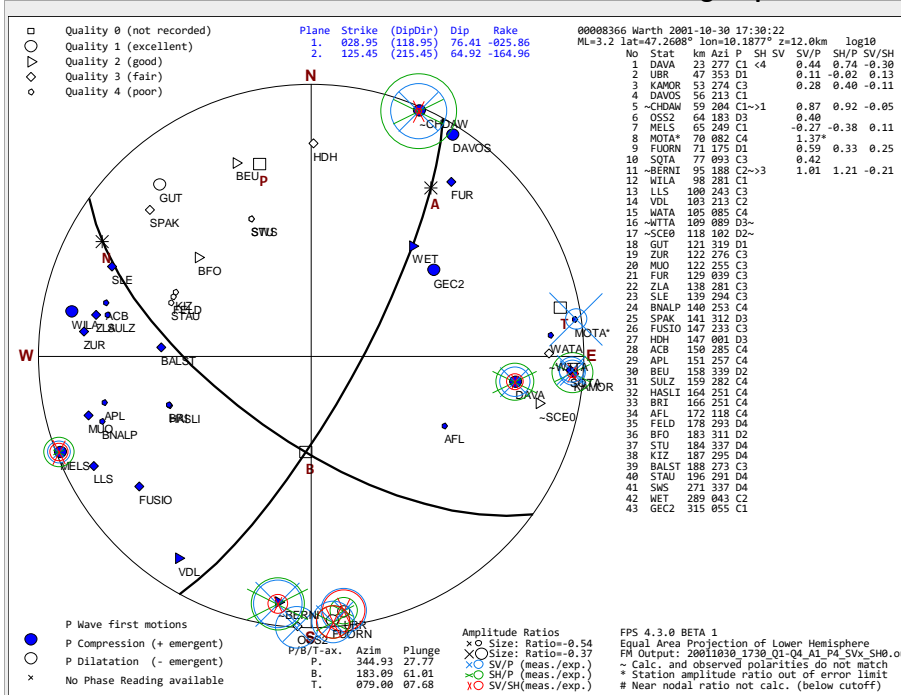
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	416
Contributors and References	3

Reiter, 2005-2017 (this Publ.), using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				345	28 °	
B-Axis				183	61 °	
T-Axis				079	08 °	
Plane1/A-Axis	029	76	-026	035	25 °	<input type="checkbox"/>
Plane2/N-Axis	125	65	-165	299	14 °	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀

RMS for all solutions⁴¹ log₁₀

Mechanism Class^{45 46}

Inferred active fault

Fault zone

Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	43	4	9 %
SV Polarities	0	0	%
SH Polarities	3	0	0 %
All Polarities	46	4	9 %
P/SV/SH Pol. Q1	10	1	10 %
P/SV/SH Pol. Q2	6	2	33 %
P/SV/SH Pol. Q3	15	1	7 %
P/SV/SH Pol. Q4	15	0	0 %
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	10	1	10 %
SH/P Ampl. Ratios	7	0	0 %
SV/SH Ampl. Ratios	7	0	0 %
All Ampl. Ratios	24	1	4 %

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z z est. b)

Event remarks zErr z macro

series of events:
 2004-01-16 19:26 ML 2,5
 2004-04-06 08:23 ML 2,6

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. Incr. Max.	
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	52		74 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

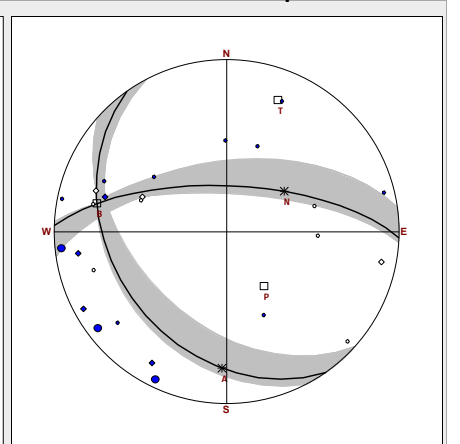
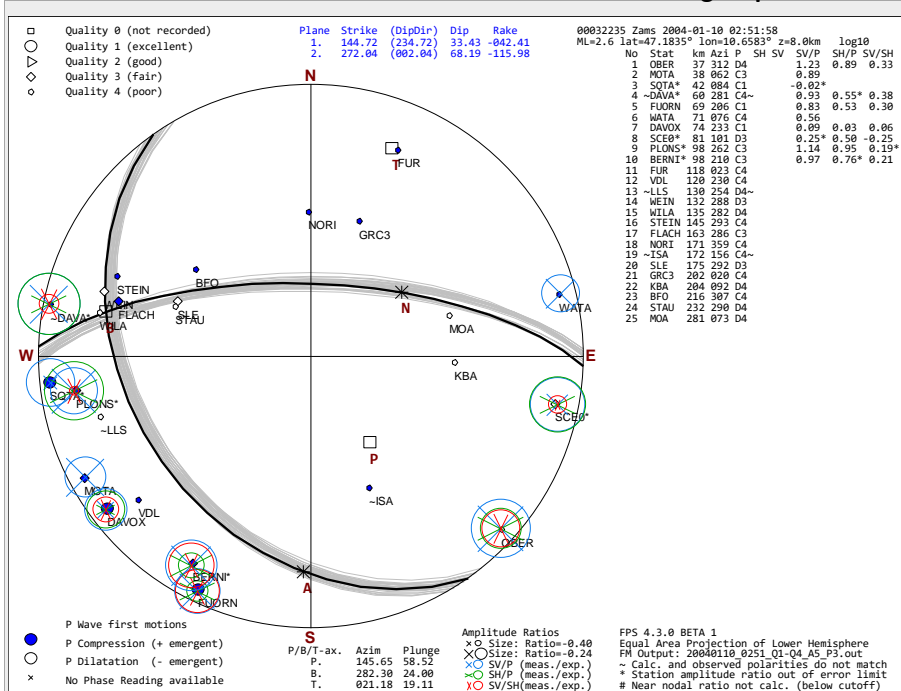
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	26
FPS quality (expl. at end)	4

Contributors and References
 Reiter, 2017 (this Publ.), using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks
 WOTA available, triggered too late
 no OASIS waveform data available
 solutions restricted to errors for Q=(0, 4)

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					146	59°	
B-Axis					282	24°	
T-Axis					021	19°	
Plane1/A-Axis	145	33		-042	182	22°	<input type="checkbox"/>
Plane2/N-Axis	272	68		-116	055	57°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault:
 Fault zone:
 Seismotectonic region:

	Total	Misfit abs.	Misfit rel.
P Polarities	25	3	12%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	25	3	12%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	0	0	%
P/SV/SH Pol. Q3	7	0	0%
P/SV/SH Pol. Q4	15	3	20%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	10	2	20%
SH/P Ampl. Ratios	7	2	29%
SV/SH Ampl. Ratios	7	1	14%
All Ampl. Ratios	24	5	21%

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90°
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89°
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	51		74°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

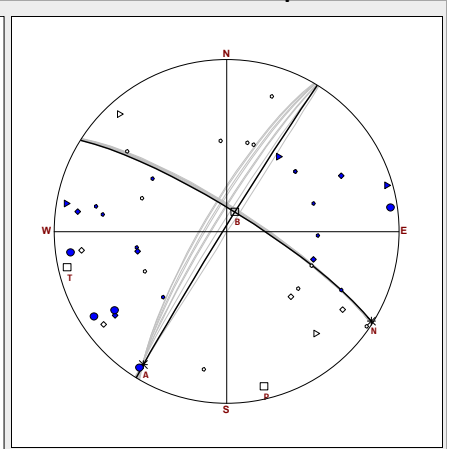
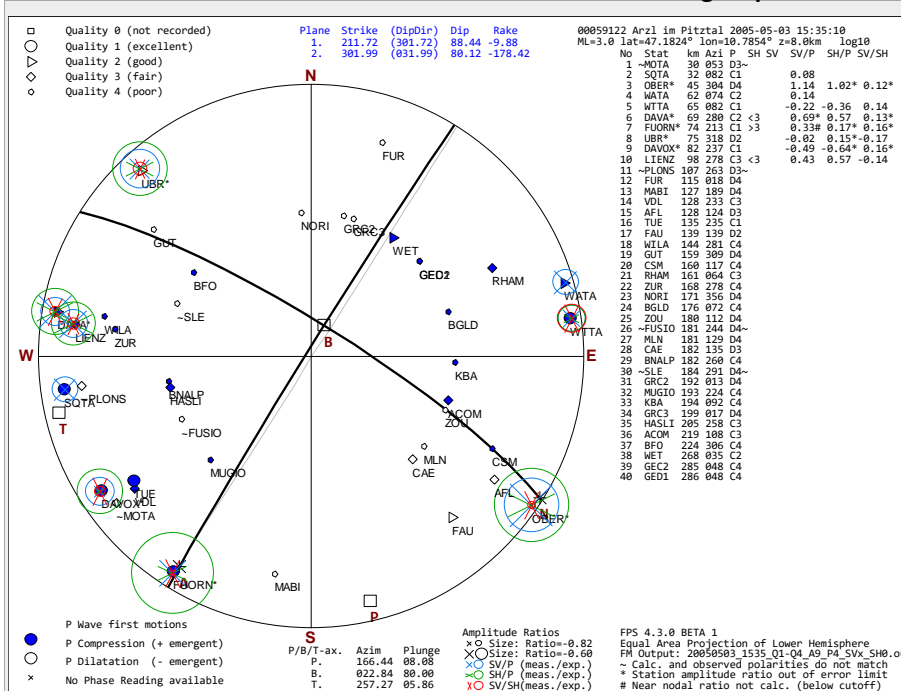
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	9
Contributors and References	3

Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis		166	08°			
B-Axis		023	80°			
T-Axis		257	06°			
Plane1/A-Axis	212	88	-010	212	10°	<input type="checkbox"/>
Plane2/N-Axis	302	80	-178	122	02°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	40	4	10%
SV Polarities	0	0	%
SH Polarities	3	0	0%
All Polarities	43	4	9%
P/SV/SH Pol. Q1	5	0	0%
P/SV/SH Pol. Q2	5	0	0%
P/SV/SH Pol. Q3	12	2	17%
P/SV/SH Pol. Q4	21	2	10%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	9	1	11%
SH/P Ampl. Ratios	7	4	57%
SV/SH Ampl. Ratios	7	4	57%
All Ampl. Ratios	23	9	39%

Event data **Seismotectonic Domain 7: Central Alpine transition domain (CAT)**

FPS ID	7.18	Ev ID	00074381	ID2		UTC	2006-02-26 15:30:42	MI	3,6	Io	4,5	
Epicenter	Umhausen			AT	Lat	47,145°	Long	10,916°	z	11,9 km	a) z est. b)	11,9 km
Event remarks				Err	0,330°	zErr	5,6 km	z macro	12,9 km			
				a) Loc.	ZAMG standard location [64]							
				det./ refs.								
				b) z estim.								
				based on								

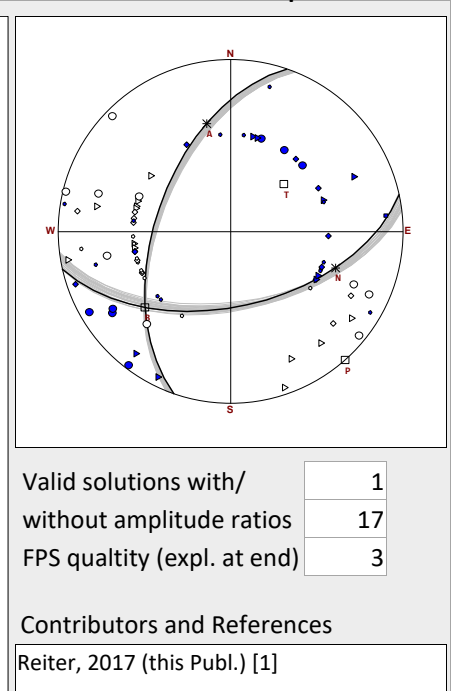
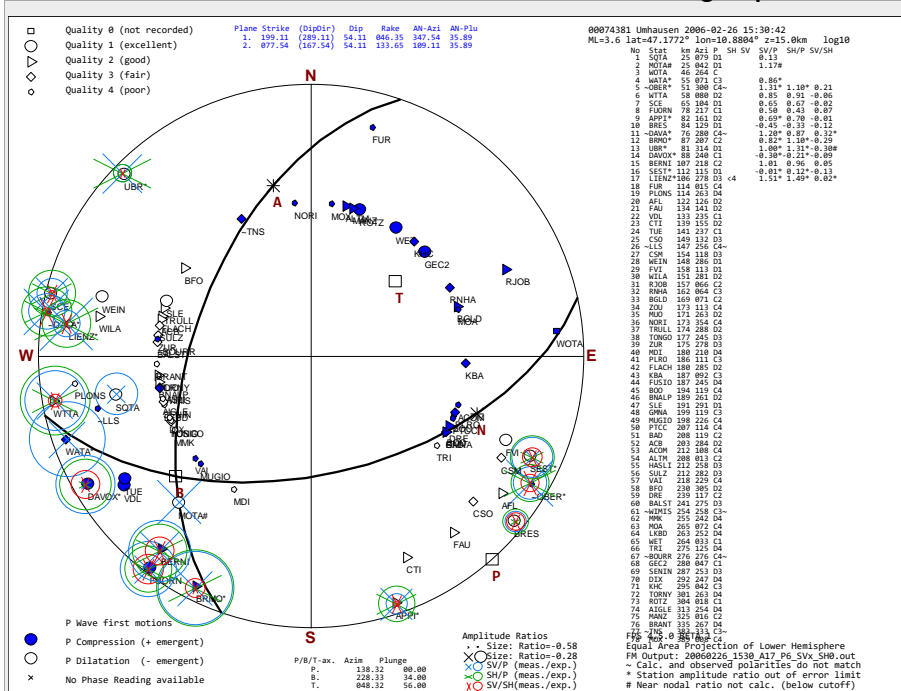
FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	45	45°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Mechanism remarks focal depth set from 11,9 to 15km for calculation because station MOTA with quality 1 did not fit before. Quality ratio could be improved from 4 to 3

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Strike Dip Rake Azim Pl. active</th> <th colspan="2"></th> </tr> <tr> <td>P-Axis</td> <td>138</td> <td>00°</td> </tr> <tr> <td>B-Axis</td> <td>228</td> <td>34°</td> </tr> <tr> <td>T-Axis</td> <td>048</td> <td>56°</td> </tr> <tr> <td>Plane1/A-Axis</td> <td>199 54 046 348</td> <td>36°</td> </tr> <tr> <td>Plane2/N-Axis</td> <td>078 54 134 109</td> <td>36°</td> </tr> </table>	Strike Dip Rake Azim Pl. active			P-Axis	138	00°	B-Axis	228	34°	T-Axis	048	56°	Plane1/A-Axis	199 54 046 348	36°	Plane2/N-Axis	078 54 134 109	36°	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>Total Misfit abs. Misfit rel.</th> <th colspan="2"></th> </tr> <tr> <td>P Polarities</td> <td>78</td> <td>6 8%</td> </tr> <tr> <td>SV Polarities</td> <td>0</td> <td>0 %</td> </tr> <tr> <td>SH Polarities</td> <td>1</td> <td>0 0%</td> </tr> <tr> <td>All Polarities</td> <td>79</td> <td>6 8%</td> </tr> <tr> <td>P/SV/SH Pol. Q1</td> <td>16</td> <td>0 0%</td> </tr> <tr> <td>P/SV/SH Pol. Q2</td> <td>20</td> <td>0 0%</td> </tr> <tr> <td>P/SV/SH Pol. Q3</td> <td>17</td> <td>2 12%</td> </tr> <tr> <td>P/SV/SH Pol. Q4</td> <td>25</td> <td>4 16%</td> </tr> <tr> <td>P/SV/SH Pol. Q0</td> <td>1</td> <td>0 0%</td> </tr> <tr> <td>SV/P Ampl. Ratios</td> <td>16</td> <td>9 56%</td> </tr> <tr> <td>SH/P Ampl. Ratios</td> <td>13</td> <td>6 46%</td> </tr> <tr> <td>SV/SH Ampl. Ratios</td> <td>13</td> <td>2 15%</td> </tr> <tr> <td>All Ampl. Ratios</td> <td>42</td> <td>17 40%</td> </tr> </table>	Total Misfit abs. Misfit rel.			P Polarities	78	6 8%	SV Polarities	0	0 %	SH Polarities	1	0 0%	All Polarities	79	6 8%	P/SV/SH Pol. Q1	16	0 0%	P/SV/SH Pol. Q2	20	0 0%	P/SV/SH Pol. Q3	17	2 12%	P/SV/SH Pol. Q4	25	4 16%	P/SV/SH Pol. Q0	1	0 0%	SV/P Ampl. Ratios	16	9 56%	SH/P Ampl. Ratios	13	6 46%	SV/SH Ampl. Ratios	13	2 15%	All Ampl. Ratios	42	17 40%
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RMS for acceptable solutions ⁴¹	0,31 log ₁₀																																																												
RMS for all solutions ⁴¹	0,63 log ₁₀																																																												
Mechanism Class ^{45 46}	R-SS																																																												
Inferred active fault	North Alpine Floor Thrust W of Tauern Window																																																												
Fault zone	Thrust: Alpine Floor Thrust W of Tauern Window																																																												
Seismotectonic region	Stubai and Ötztal Alps, Texel Group																																																												

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	54				77°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

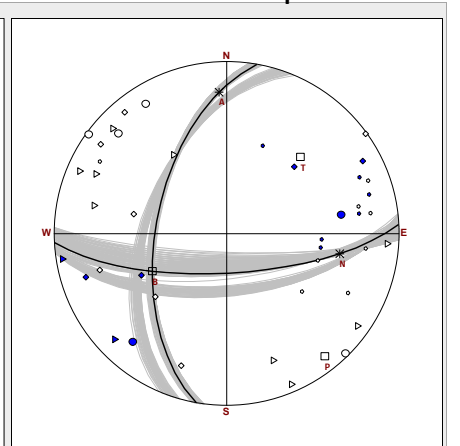
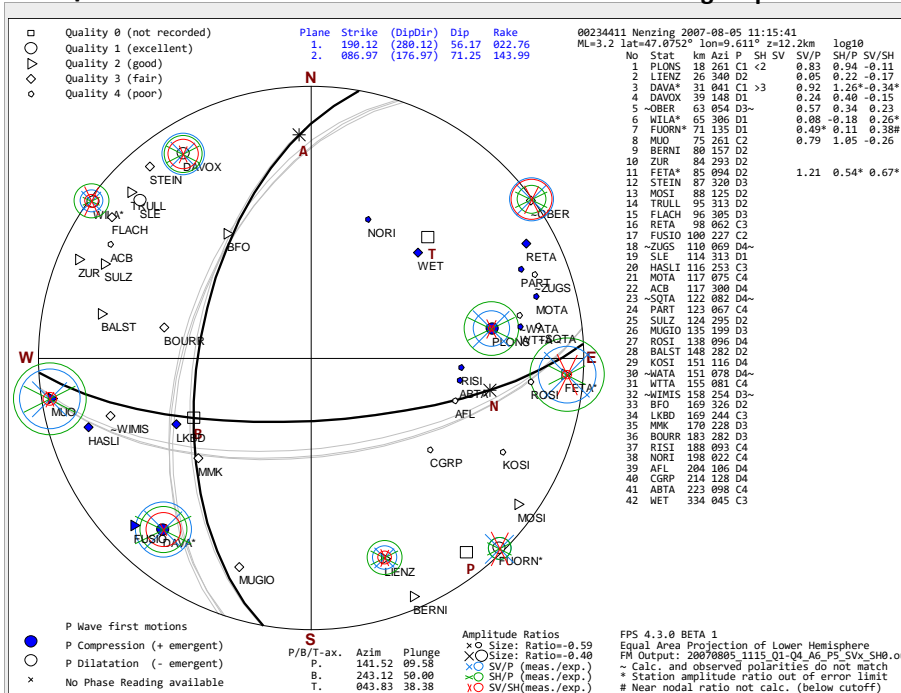
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	5
FPS quality (expl. at end)	100
	3

Contributors and References

Reiter, 2017 (this Publ.) [1]

Mechanism remarks no INGV data available
 solutions restricted to errors for Q>=3

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	
P-Axis				142	10°		
B-Axis				243	50°		
T-Axis				044	38°		
Plane1/A-Axis	190	56	023	357	19°	<input type="checkbox"/>	
Plane2/N-Axis	087	71	144	100	34°	<input type="checkbox"/>	
RMS for acceptable solutions ⁴¹						0,27	log ₁₀
RMS for all solutions ⁴¹						0,45	log ₁₀
Mechanism Class ^{45 46}						SS-R	
Inferred active fault	Sargans-Walensee strike-slip zone						
Fault zone	Strike-Slip: Swiss Rhine valley and Walensee area						
Seismotectonic region	Swiss Helvetic nappes East (Kastrup H3)						

	Total	Misfit abs.	Misfit rel.
P Polarities	42	5	12%
SV Polarities	0	0	%
SH Polarities	2	0	0%
All Polarities	44	5	11%
P/SV/SH Pol. Q1	6	0	0%
P/SV/SH Pol. Q2	12	0	0%
P/SV/SH Pol. Q3	12	2	17%
P/SV/SH Pol. Q4	14	3	21%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	9	1	11%
SH/P Ampl. Ratios	9	2	22%
SV/SH Ampl. Ratios	9	3	33%
All Ampl. Ratios	27	6	22%

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID	7.21	Ev ID	00265068	ID2		UTC	2007-10-15 16:25:49	MI	3,4	I ₀	4,5
Epicenter	Zams	AT	Lat	47,176°	Long	10,603°	z	8,2 km	a) z est. b)	9,4 km	
Event remarks	NLL ERH ⁴⁷		1,66 km	NLL ERZ ⁴⁷		3,99 km	z macro	10,6 km			
aftershock to 2007-05-19 16:19						a) Loc. grid search with Stations<150km, this publication [57]					
						det./ refs. b) z estim. z averaged with macroseismic depth [64] based on					

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	35		40°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

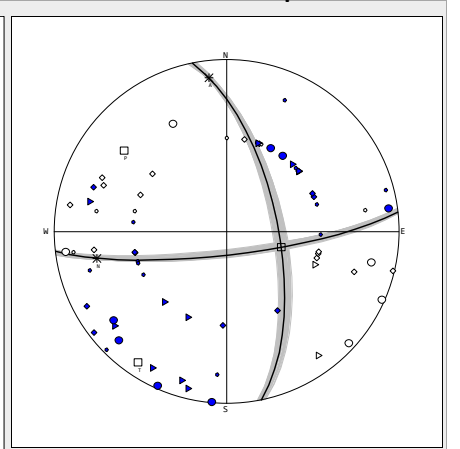
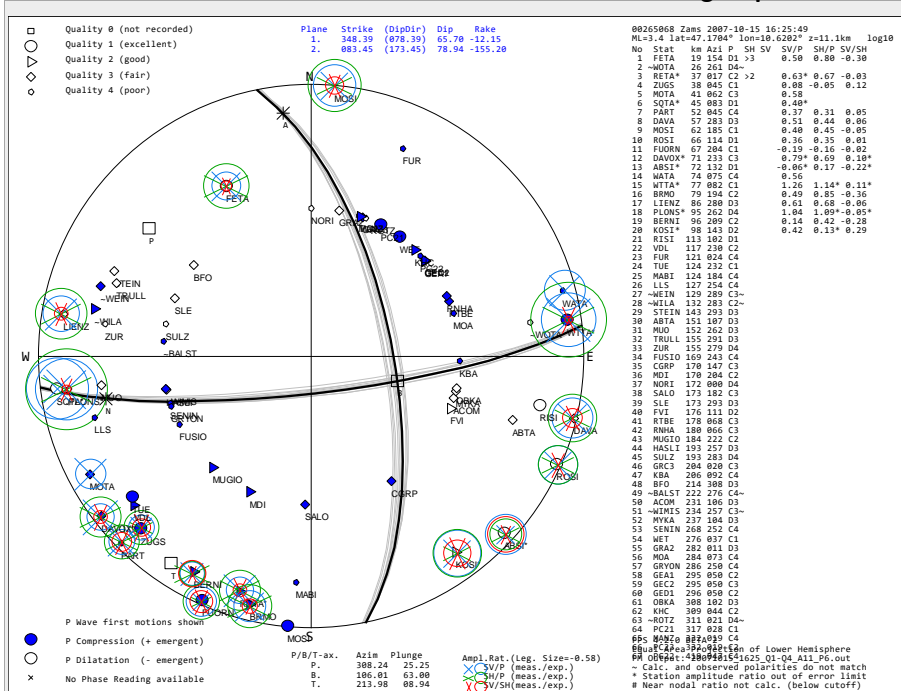
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	11
FPS quality (expl. at end)	31
	1

Contributors and References
Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rate	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis	308	25°					67	6	9%
B-Axis	106	63°					0	0	%
T-Axis	214	09°					2	0	0%
Plane1/A-Axis	348	66	-012	353	11°		69	6	9%
Plane2/N-Axis	083	79	-155	258	24°		12	0	0%
RMS for acceptable solutions ⁴¹					0,31	log ₁₀	14	1	7%
RMS for all solutions ⁴¹					0,43	log ₁₀	24	2	8%
Mechanism Class ^{45 46}					SS-N		19	3	16%
Inferred active fault	Landeck-Imst transfer fault: Zams segment						0	0	%
Fault zone	Strike-Slip: Landeck-Imst transfer fault zone						19	4	21%
Seismotectonic region	NW margin of Oetztal alps						16	3	19%
							16	4	25%
							51	11	22%

Event data **Seismotectonic Domain 7: Central Alpine transition domain (CAT)**

FPS ID	7.23	Ev ID	52355209	ID2		UTC	2010-07-09 06:28:08	MI	3,3	Io	4,5
Epicenter	lmst	AT	Lat	47,252°	Long	10,712°	z	7,6 km	a) z est. b)	8,8 km	
Event remarks	NLL ERH ⁴⁷		1,91 km	NLL ERZ ⁴⁷		4,36 km	z macro		10 km		
aftershock at 2010-07-09 12:11:31											
a) Loc. grid search with Stations<150km, this publication [57]						det./ refs.					
b) z estim. based on						z averaged with macroseismic depth [64]					

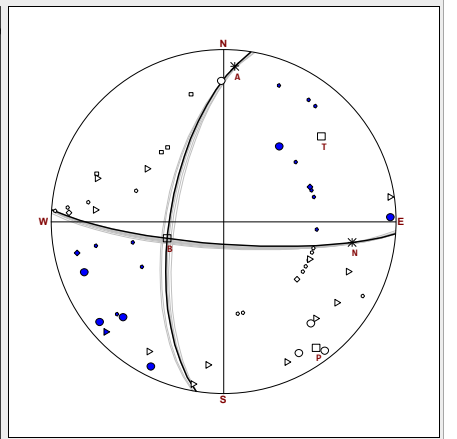
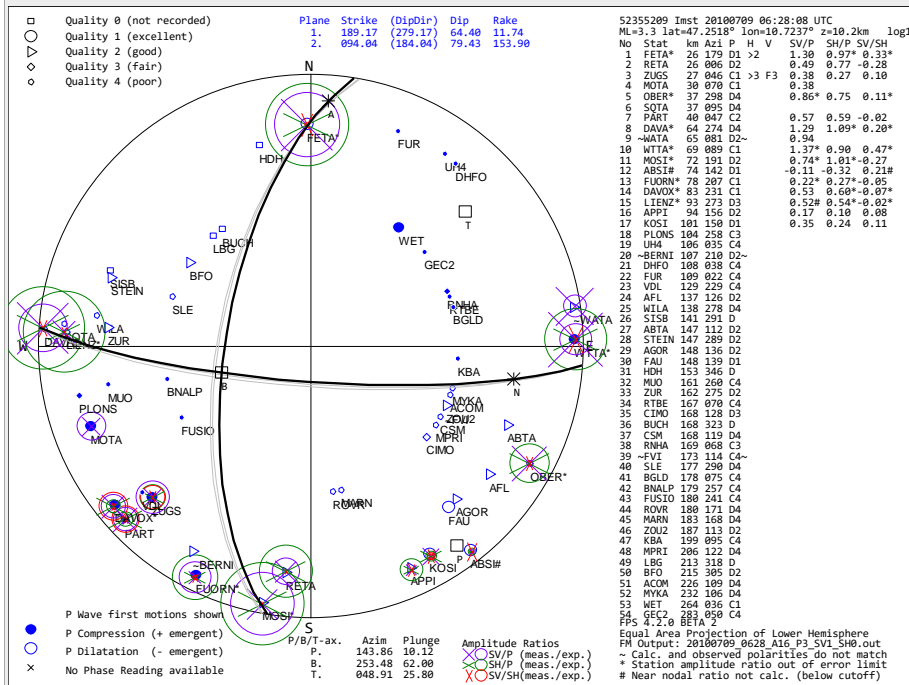
FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	23		36°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	8
Contributors and References	2

Reiter, 2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				144	10°		54	3	6%	
B-Axis				253	62°		1	0	0%	
T-Axis				049	26°		2	0	0%	
Plane1/A-Axis	189	64	012	004	11°		57	3	5%	
Plane2/N-Axis	094	79	154	099	26°		10	0	0%	
RMS for acceptable solutions ⁴¹						0,29	14	2	14%	
RMS for all solutions ⁴¹						0,57	6	0	0%	
Mechanism Class ^{45 46}						SS-R	23	1	4%	
Inferred active fault	Telfs-Tarrenz fault: Tarrenz segment									
Fault zone	Strike-Slip: Telfs-Tarrenz fault zone									
Seismotectonic region	Upper Inn Valley									
							4	0	0%	
							16	4	25%	
							14	6	43%	
							14	6	43%	
							44	16	36%	

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID	7.24	Ev ID	52355230	ID2		UTC	2010-07-09 12:11:31	MI	2,8	I ₀	4
Epicenter	lmst	AT	Lat	47,259°	Long	10,718°	z	6,2 km	a) z est. b)	7,1 km	
Event remarks	aftershock to 2010-07-09 06:28		NLL ERH ⁴⁷	2,430 km	NLL ERZ ⁴⁷	5,63 km	z macro	8 km			
			a) Loc.	grid search with Stations<150km, this publication [57]							
			det./ refs.								
			b) z estim.	z averaged with macroseismic depth [64]							
			based on								

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	53		68°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

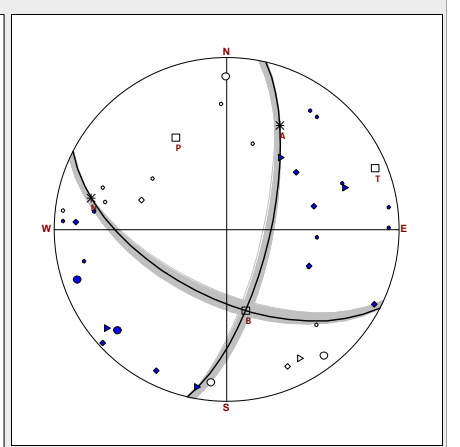
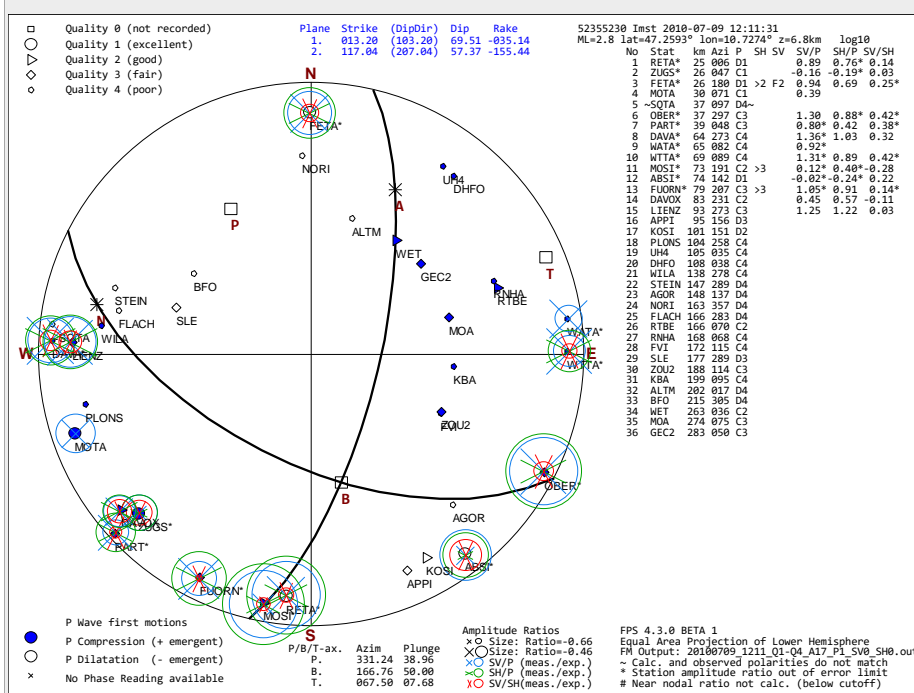
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	55
Contributors and References	3
Reiter, 2016 (this Publ.) [1]	

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					331	39°	
B-Axis					167	50°	
T-Axis					068	08°	
Plane1/A-Axis	013	70	-035	027	33		<input type="checkbox"/>
Plane2/N-Axis	117	57	-155	283	20		<input type="checkbox"/>
RMS for acceptable solutions ⁴¹						0,29	log ₁₀
RMS for all solutions ⁴¹						0,64	log ₁₀
Mechanism Class ^{45 46}						SS-N	
Inferred active fault	Imst-Namlos Extension Zone						
Fault zone	Extension: Northern Calcareous Alps						
Seismotectonic region	NCA between Innsbruck and Arlberg						

	Total	Misfit abs.	Misfit rel.
P Polarities	36	1	3%
SV Polarities	1	0	0%
SH Polarities	3	0	0%
All Polarities	40	1	2%
P/SV/SH Pol. Q1	5	0	0%
P/SV/SH Pol. Q2	7	0	0%
P/SV/SH Pol. Q3	11	0	0%
P/SV/SH Pol. Q4	17	1	6%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	14	7	50%
SH/P Ampl. Ratios	12	5	42%
SV/SH Ampl. Ratios	12	5	42%
All Ampl. Ratios	38	17	45%

Event data **Seismotectonic Domain 7: Central Alpine transition domain (CAT)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

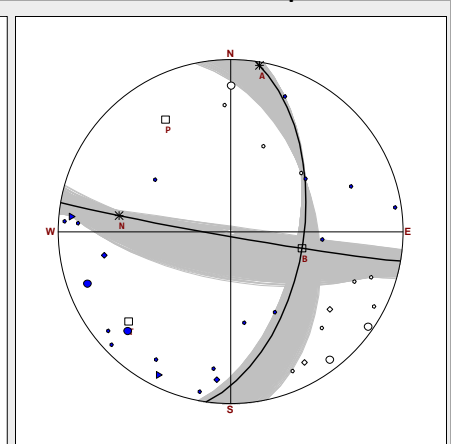
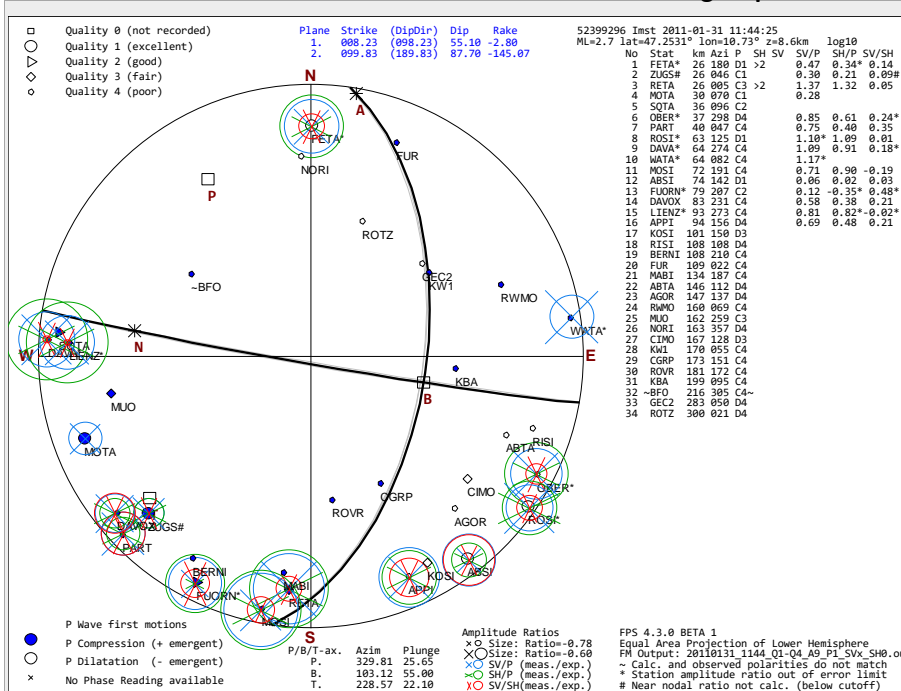
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	53		82°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	318
Contributors and References	3

Reiter, 2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					330	26°	
B-Axis					103	55°	
T-Axis					229	22°	
Plane1/A-Axis	008	55	-003	010	02		<input type="checkbox"/>
Plane2/N-Axis	100	88	-145	278	35		<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault:
 Fault zone:
 Seismotectonic region:

	Total	Misfit abs.	Misfit rel.
P Polarities	34	1	3%
SV Polarities	0	0	%
SH Polarities	2	0	0%
All Polarities	36	1	3%
P/SV/SH Pol. Q1	5	0	0%
P/SV/SH Pol. Q2	4	0	0%
P/SV/SH Pol. Q3	4	0	0%
P/SV/SH Pol. Q4	23	1	4%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	15	2	13%
SH/P Ampl. Ratios	13	3	23%
SV/SH Ampl. Ratios	13	4	31%
All Ampl. Ratios	41	9	22%

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID	7.26	Ev ID	52429244	ID2		UTC	2012-01-13 14:01:52	MI	2,6	Io	4	
Epicenter	Tarrenz			AT	Lat	47,343°	Long	10,683°	z	2,0 km	a) z est. b)	2,6 km
Event remarks	negative NLL z=-1,9km, set to +2 km			NLL ERH ⁴⁷	2,53 km	NLL ERZ ⁴⁷	5,08 km	z macro	7 km	a) Loc. grid search with Stations<150km, z negative or near 0 -> z det./ refs. set to 2km [57]		
b) z estim. z averaged with macroseismic depth [64] based on												

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	66		71°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

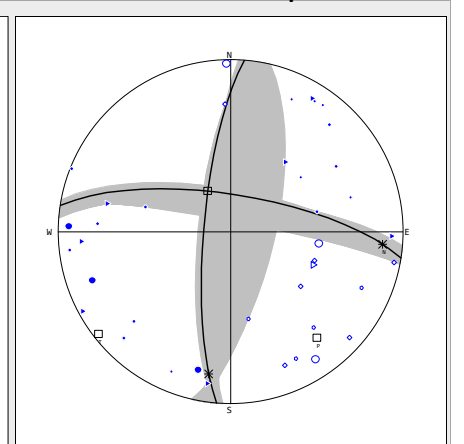
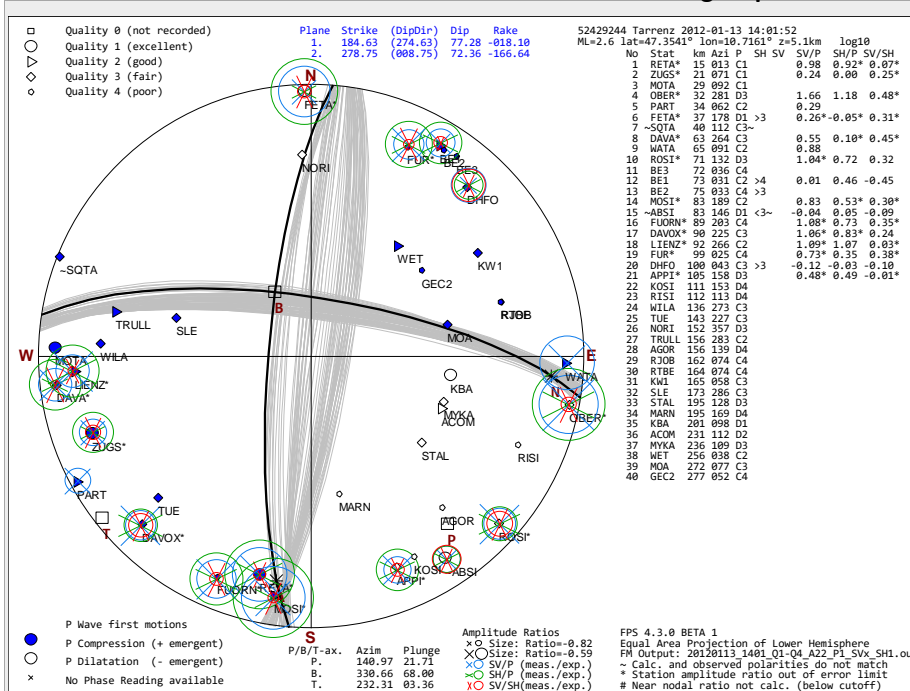
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	70
FPS quality (expl. at end)	807
	3

Contributors and References
Freudenthaler & Reiter, 2012-2016 (this Publ.) [1]

Mechanism remarks
Bad amplitude ratio fit
Sol. 02 selected = man sol. 85

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active	
P-Axis					141	22°		
B-Axis					331	68°		
T-Axis					232	03°		
Plane1/A-Axis	185	77	-018	189	18°			
Plane2/N-Axis	279	72	-167	095	13°			
RMS for acceptable solutions ⁴¹							0,30	log ₁₀
RMS for all solutions ⁴¹							0,64	log ₁₀
Mechanism Class ^{45 46}							SS	
Inferred active fault	Namlos transfer fault							
Fault zone	Strike-Slip: Namlos transfer fault							
Seismotectonic region	Arlberg and Lechtal Alps							

	Total	Misfit abs.	Misfit rel.
P Polarities	40	1	2%
SV Polarities	0	0	%
SH Polarities	5	1	20%
All Polarities	45	2	4%
P/SV/SH Pol. Q1	6	0	0%
P/SV/SH Pol. Q2	8	0	0%
P/SV/SH Pol. Q3	19	2	11%
P/SV/SH Pol. Q4	12	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	17	7	41%
SH/P Ampl. Ratios	15	5	33%
SV/SH Ampl. Ratios	15	10	67%
All Ampl. Ratios	47	22	47%

Event data **Seismotectonic Domain 7: Central Alpine transition domain (CAT)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

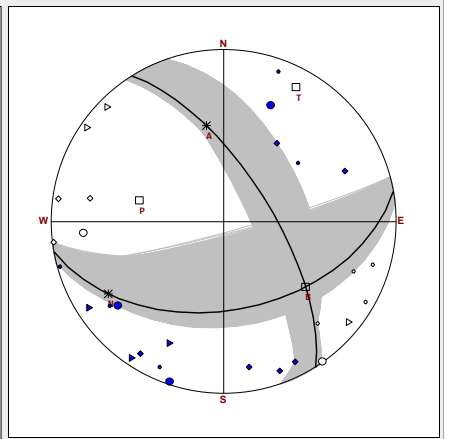
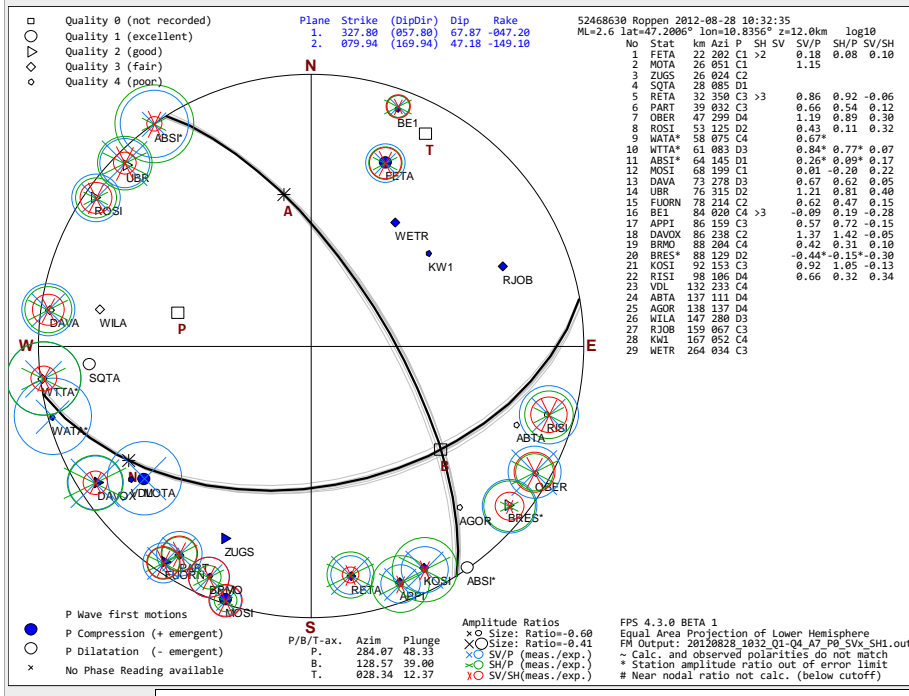
Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90°
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89°
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	55	65°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios

FPS quality (expl. at end)

Contributors and References
 Freudenthal & Reiter, 2012-2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					284	48°	
B-Axis					129	39°	
T-Axis					028	12°	
Plane1/A-Axis	328	68		-047	350	43°	<input type="checkbox"/>
Plane2/N-Axis	080	47		-149	238	22°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Landeck-Imst transfer fault: Roppen Segment
 Fault zone: Strike-Slip: Landeck-Imst transfer fault zone
 Seismotectonic region: NW margin of Oetztal alps

	Total	Misfit abs.	Misfit rel.
P Polarities	29	0	0%
SV Polarities	0	0	%
SH Polarities	3	0	0%
All Polarities	32	0	0%
P/SV/SH Pol. Q1	5	0	0%
P/SV/SH Pol. Q2	7	0	0%
P/SV/SH Pol. Q3	11	0	0%
P/SV/SH Pol. Q4	9	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	20	4	20%
SH/P Ampl. Ratios	18	3	17%
SV/SH Ampl. Ratios	18	0	0%
All Ampl. Ratios	56	7	12%

Event data **Seismotectonic Domain 7: Central Alpine transition domain (CAT)**

FPS ID	7.28	Ev ID	52475779	ID2		UTC	2012-09-27 18:33:53	MI	2,1	Io	5	
Epicenter	Haiming			AT	Lat	47,239 °	Long	10,870 °	z	2,0 km	a) z est. b)	4,4 km
Event remarks	NonLinLoc depth=-1,2km -> z set to +2km			NLL ERH ⁴⁷	1,840 km	NLL ERZ ⁴⁷	3,75 km	z macro	2 km			
				a) Loc. det./ refs. based on	grid search with Stations<150km, z negative or near 0 -> z set to 2km [57] b) z estim. z averaged with macroseismic depth [64]							

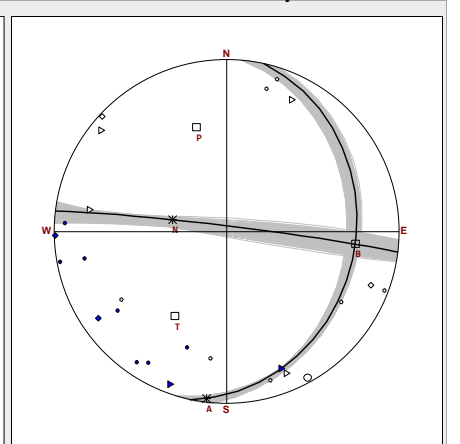
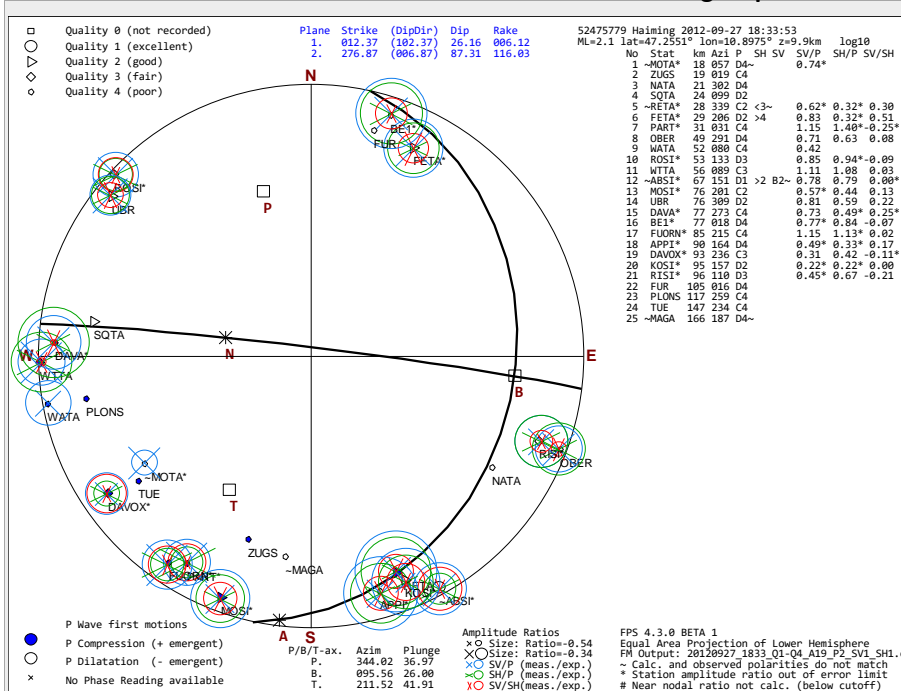
FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
	Relative Weighting	No	B Trend	0	1 359 °
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90 °
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89 °
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	84	84 °		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	127
Contributors and References	4

Freudenthaler & Reiter, 2012-2016 (this Publ.) [1]

Mechanism remarks makroseismic hypocentral depth 2 km due to amplification by soft sediments -> macroseismic depth must be used with care
NATA read by ZAMG, waveform not delivered

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					344	37 °	
B-Axis					096	26 °	
T-Axis					212	42 °	
Plane1/A-Axis	012	26	006	187	03		<input type="checkbox"/>
Plane2/N-Axis	277	87	116	282	64		<input type="checkbox"/>

RMS for acceptable solutions⁴¹ 0,32 log₁₀
RMS for all solutions⁴¹ 0,60 log₁₀
Mechanism Class^{45 46} R

Inferred active fault: Ötztal-Thrust
Fault zone: Thrust: Alpine nappe base below Oetztal Alps
Seismotectonic region: Upper Inn Valley

	Total	Misfit abs.	Misfit rel.
P Polarities	25	2	8 %
SV Polarities	1	1	100 %
SH Polarities	3	1	33 %
All Polarities	29	4	14 %
P/SV/SH Pol. Q1	1	0	0 %
P/SV/SH Pol. Q2	8	1	12 %
P/SV/SH Pol. Q3	5	1	20 %
P/SV/SH Pol. Q4	15	2	13 %
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	18	7	39 %
SH/P Ampl. Ratios	16	8	50 %
SV/SH Ampl. Ratios	16	4	25 %
All Ampl. Ratios	50	19	38 %

Event data **Seismotectonic Domain 7: Central Alpine transition domain (CAT)**

FPS ID	7.29	Ev ID	52490111	ID2		UTC	2012-11-20 22:17:10	MI	2,1	Io	3	
Epicenter	Wenns			AT	Lat	47,104°	Long	10,714°	z	8,1 km	a) z est. b)	8,1 km
Event remarks	solutions calculated with 3deg step angle			NLL ERH ⁴⁷	1,65 km	NLL ERZ ⁴⁷	3,51 km	z macro	8 km	a) Loc. grid search with Stations<150km, this publication [57]		
det./ refs. based on												

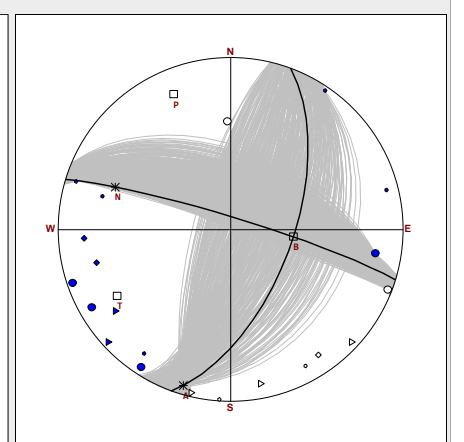
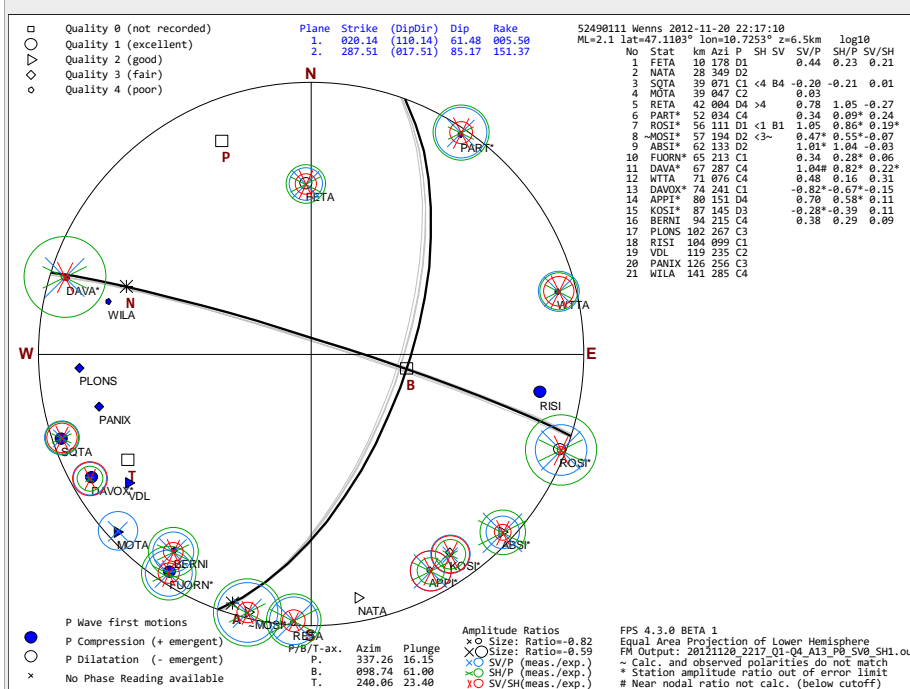
FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min. Incr.	0	1	359°
	Relative Weighting	No	B Trend	0	1	90°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	89°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1	
	Lower Limit of S rad. Factor	0,15				
	Prim./sec. Azimuthal Gap ³²	71	71°			

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	5
FPS quality (expl. at end)	294
	4

Contributors and References
 Reiter & Freudenthaler, 2012-2016 (this Publ.) [1]

Mechanism remarks NATA, WATA missing (NATA read by ZAMG, waveform not delivered)

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				337	16°	
B-Axis				099	61°	
T-Axis				240	23°	
Plane1/A-Axis	020	61	006	198	05°	<input type="checkbox"/>
Plane2/N-Axis	288	85	151	290	29°	<input type="checkbox"/>
RMS for acceptable solutions ⁴¹					0,32	log ₁₀
RMS for all solutions ⁴¹					0,55	log ₁₀
Mechanism Class ^{45 46}					SS-R	
Inferred active fault	NW Margin of Oetzal Complex					
Fault zone	Strike-Slip to oblique reverse: Passeier and Reschen Fault Systems					
Seismotectonic region	Stubai and Ötztal Alps, Texel Group					

	Total	Misfit abs.	Misfit rel.
P Polarities	21	0	0%
SV Polarities	2	0	0%
SH Polarities	4	1	25%
All Polarities	27	1	4%
P/SV/SH Pol. Q1	8	0	0%
P/SV/SH Pol. Q2	5	0	0%
P/SV/SH Pol. Q3	4	1	25%
P/SV/SH Pol. Q4	10	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	15	4	27%
SH/P Ampl. Ratios	14	7	50%
SV/SH Ampl. Ratios	14	2	14%
All Ampl. Ratios	43	13	30%

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERH⁴⁷ NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹	Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="359°"/>
	Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="90°"/>
	Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="89°"/>
	Lower Limit of S rad. Factor	<input type="text" value="0,15"/>			
	Prim./sec. Azimuthal Gap ³²	<input type="text" value="68"/>		<input type="text" value="69°"/>	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

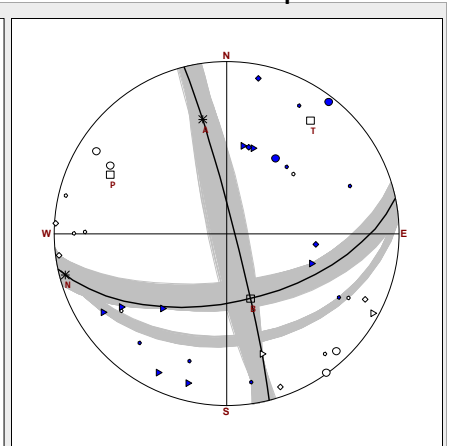
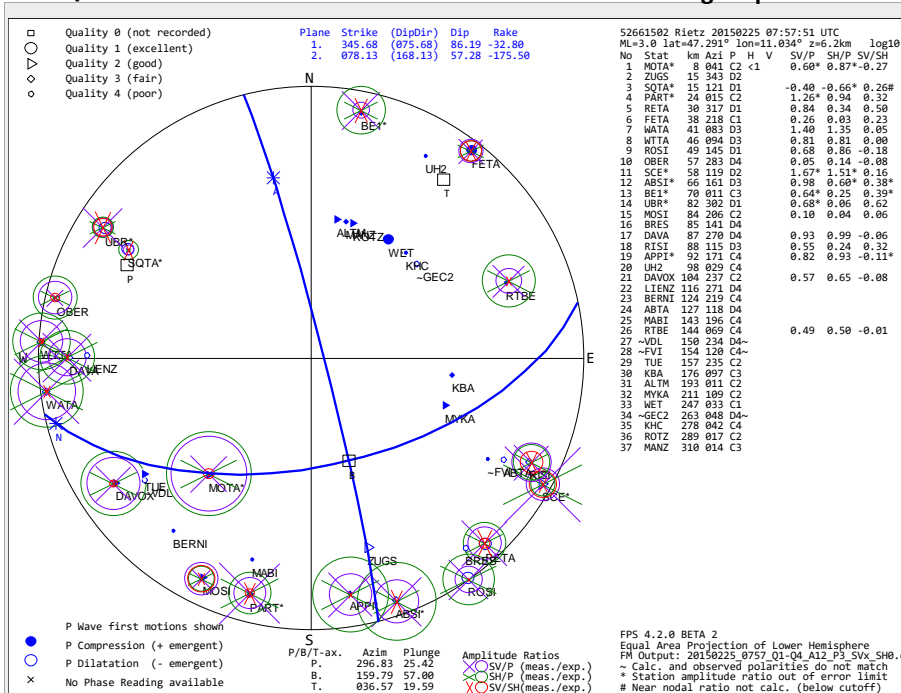
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="1"/>
FPS quality (expl. at end)	<input type="text" value="676"/>
Contributors and References	<input type="text" value="2"/>

Reiter & Freudenthaler, 2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active		Total	Misfit abs.	Misfit rel.	
P-Axis					297	25°		P Polarities	37	3	8%	
B-Axis					160	57°		SV Polarities	0	0	%	
T-Axis					037	20°		SH Polarities	1	0	0%	
Plane1/A-Axis	346	86	-033	348	33°			All Polarities	38	3	8%	
Plane2/N-Axis	078	57	-175	256	04°			P/SV/SH Pol. Q1	7	0	0%	
RMS for acceptable solutions ⁴¹						0,29	log ₁₀	P/SV/SH Pol. Q2	10	0	0%	
RMS for all solutions ⁴¹						0,50	log ₁₀	P/SV/SH Pol. Q3	7	0	0%	
Mechanism Class ^{45 46}						SS-N		P/SV/SH Pol. Q4	14	3	21%	
Inferred active fault	Telfs-Tarrenz fault: Rietz segment								P/SV/SH Pol. Q0	0	0	%
Fault zone	Strike-Slip: Telfs-Tarrenz fault zone								SV/P Ampl. Ratios	19	5	26%
Seismotectonic region	Upper Inn Valley								SH/P Ampl. Ratios	19	4	21%
								SV/SH Ampl. Ratios	19	3	16%	
								All Ampl. Ratios	57	12	21%	

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID	7.33	Ev ID	52679687	ID2		UTC	2015-09-01 01:36:28	MI	2,5	Io	4	
Epicenter	Namlos			AT	Lat	47,334°	Long	10,675°	z	1,1 km	a) z est. b)	2,6 km
Event remarks	not felt			NLL ERH ⁴⁷	1,990 km	NLL ERZ ⁴⁷	3,88 km	z macro	n.v. km			
				a) Loc.	grid search with Stations<150km, this publication [57]							
				det./ refs.								
				b) z estim.	z averaged with z from ZAMG standard location [64]							
				based on								

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	39		46°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

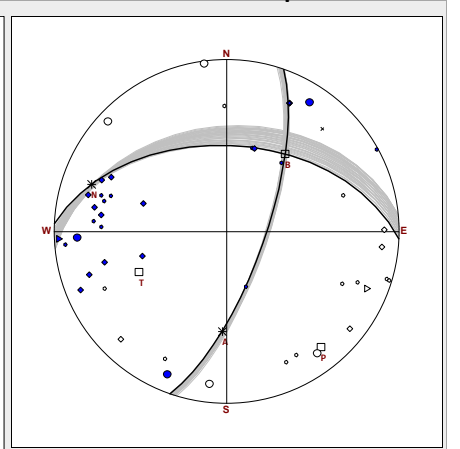
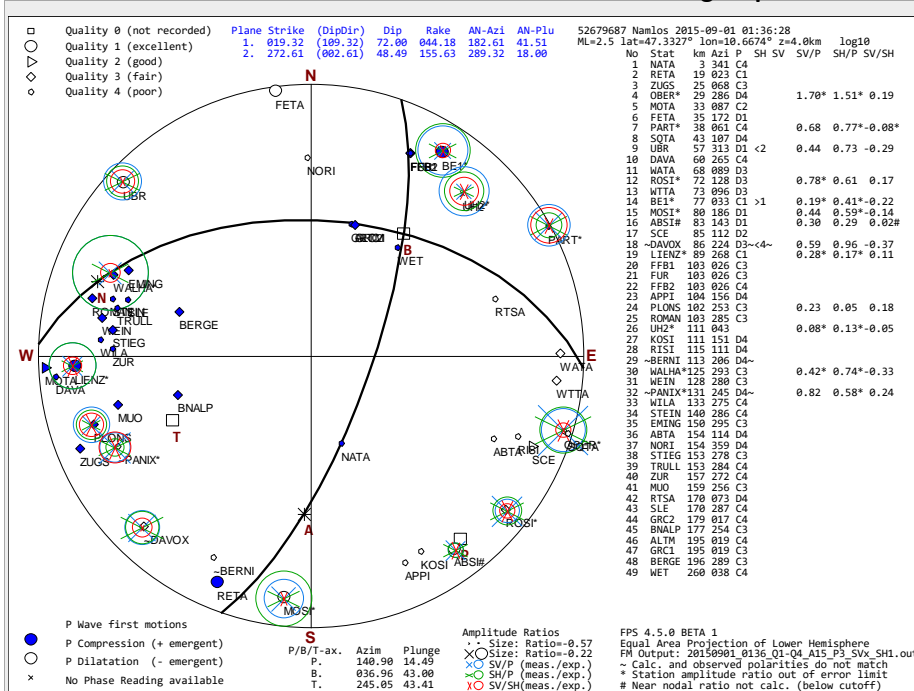
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	32
Contributors and References	3
Reiter, 2017 (this Publ.) [1]	

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				141	14°	
B-Axis				037	43°	
T-Axis				245	43°	
Plane1/A-Axis	019	72	044	183	42°	<input type="checkbox"/>
Plane2/N-Axis	273	48	156	289	18°	<input type="checkbox"/>
RMS for acceptable solutions ⁴¹						0,32 log ₁₀
RMS for all solutions ⁴¹						0,56 log ₁₀
Mechanism Class ^{45 46}						R-SS
Inferred active fault	Namlos transfer fault					
Fault zone	Strike-Slip: Namlos transfer fault					
Seismotectonic region	Arlberg and Lechtal Alps					

	Total	Misfit abs.	Misfit rel.
P Polarities	48	3	6%
SV Polarities	0	0	%
SH Polarities	3	1	33%
All Polarities	51	4	8%
P/SV/SH Pol. Q1	8	0	0%
P/SV/SH Pol. Q2	3	0	0%
P/SV/SH Pol. Q3	17	1	6%
P/SV/SH Pol. Q4	23	3	13%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	13	6	46%
SH/P Ampl. Ratios	13	8	62%
SV/SH Ampl. Ratios	13	1	8%
All Ampl. Ratios	39	15	38%

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID 7.34 Ev ID 52692283 ID2 UTC 2016-01-31 22:43:58 MI 3,6 I₀ 5

Epicenter Klösterle AT Lat 47,113° Long 10,100° z 9,1 km a) z est. b) 9,8 km

Event remarks NLL ERH⁴⁷ 1,870 km NLL ERZ⁴⁷ 4,26 km z macro 10,5 km

a) Loc. grid search with Stations<150km, this publication [57]
 det./ refs.
 b) z estim. z averaged with macroseismic depth [64]
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. Incr. Max.	
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	23		26 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

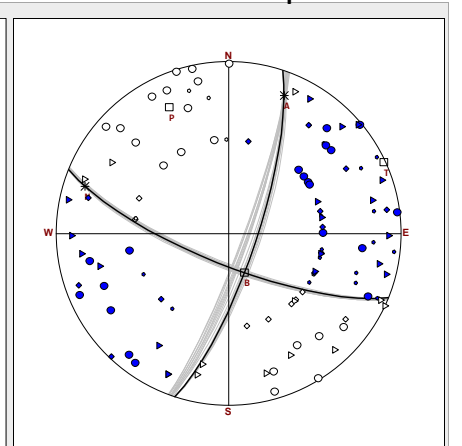
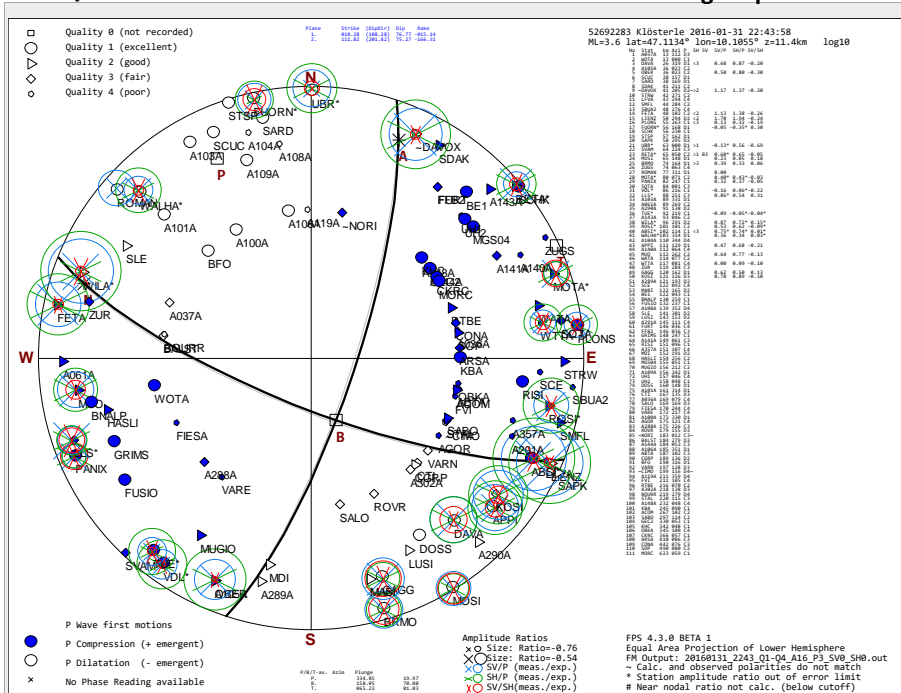
Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	16
	1

Contributors and References

Reiter, Hausmann, Freudenthaler & AlpArray Working Group, 2017 (this Publ.) [1, 55]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				335	20°	
B-Axis				158	70°	
T-Axis				065	01°	
Plane1/A-Axis	018	77	-015	022	15°	<input type="checkbox"/>
Plane2/N-Axis	112	75	-166	288	13°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ 0,28 log₁₀
 RMS for all solutions⁴¹ 0,43 log₁₀
 Mechanism Class^{45 46} SS

Inferred active fault: Arlberg Fault
 Fault zone: Strike-Slip to normal: Arlberg-Klosters transfer Fault
 Seismotectonic region: Arlberg and Lechtal Alps

	Total	Misfit abs.	Misfit rel.
P Polarities	111	3	3%
SV Polarities	1	0	0%
SH Polarities	9	0	0%
All Polarities	121	3	2%
P/SV/SH Pol. Q1	40	0	0%
P/SV/SH Pol. Q2	33	1	3%
P/SV/SH Pol. Q3	26	1	4%
P/SV/SH Pol. Q4	22	1	5%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	26	5	19%
SH/P Ampl. Ratios	25	6	24%
SV/SH Ampl. Ratios	25	5	20%
All Ampl. Ratios	76	16	21%

Event data

Seismotectonic Domain 7: Central Alpine transition domain (CAT)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	20		29 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

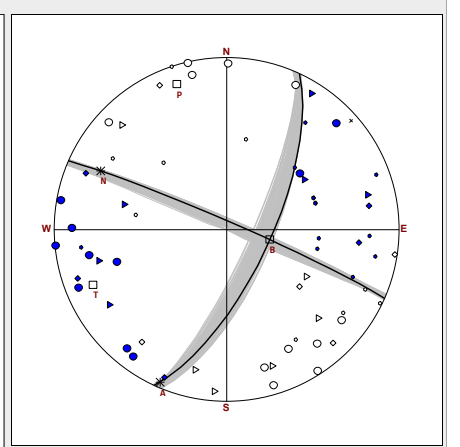
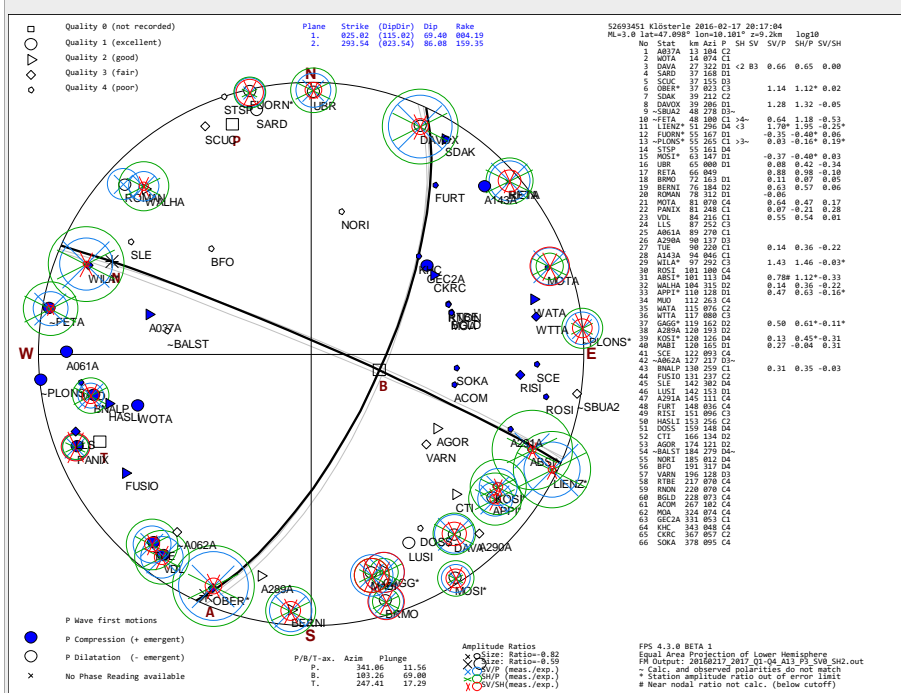
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	71
	1

Contributors and References
 Reiter, Freudenthaler & AlpArray Working Group, 2016 (this Publ.) [1, 55]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				341	12°		65	3	5%	
B-Axis				103	69°		1	0	0%	
T-Axis				247	17°		4	2	50%	
Plane1/A-Axis	025	69	004	204	04°		70	5	7%	
Plane2/N-Axis	294	86	159	295	21°		P/SV/SH Pol. Q1	21	0	0%
							P/SV/SH Pol. Q2	13	0	0%
							P/SV/SH Pol. Q3	13	3	23%
							P/SV/SH Pol. Q4	23	2	9%
							P/SV/SH Pol. Q0	0	0	%
							SV/P Ampl. Ratios	25	1	4%
							SH/P Ampl. Ratios	24	7	29%
							SV/SH Ampl. Ratios	24	5	21%
							All Ampl. Ratios	73	13	18%

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault:
 Fault zone:
 Seismotectonic region:

Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)

ID	UTC	Lat	Long	z	Epicenter	MI	MecClass
8.02	1996-07-17 00:50:07	47,12	11,54	7,0	Navis	3,4	SS-N
8.03	1996-07-17 00:54:12	47,11	11,54	6,0	Navis	3,9	SS-R
8.04	1997-09-14 15:46:45	47,08	11,45	6,0	Steinach am Brenner	2,5	SS-N
8.05	1998-08-29 06:27:04	47,08	11,31	12,0	Gschnitz	2,8	N
8.06	1998-09-30 05:53:40	47,29	11,20	15,0	Kematen in Tirol	3,0	SS-R
8.07	2000-07-02 13:36:38	47,11	11,27	5,0	Neustift im Stubaital	2,9	SS
8.08	2000-08-07 21:43:35	47,16	11,40	5,0	Mieders	2,5	N
8.10	2007-05-13 01:45:55	47,17	11,10	11,6	Sankt Sigmund im Sellrain	2,8	SS
8.11	2007-06-15 02:14:41	47,14	11,18	13,1	Sellrain	2,6	SS-N
8.12	2007-12-22 17:58:17	47,17	11,29	9,8	Axams	2,7	N-SS
8.13	2008-03-18 11:03:42	47,13	11,35	8,9	Fulpmes	3,5	SS
8.14	2008-09-17 22:10:38	47,05	11,33	11,4	Gschnitz	3,1	N-SS
8.15	2011-06-21 22:14:31	47,22	11,21	5,1	Grinzens	2,9	SS-N
8.16	2011-09-05 02:45:38	47,07	11,29	10,5	Neustift im Stubaital	2,6	SS-N
8.17	2012-11-09 16:29:41	47,21	11,36	8,8	Mutters	2,7	SS-N
8.18	2012-12-06 19:21:59	47,16	11,07	7,1	Sankt Sigmund im Sellrain	3,2	SS-N
8.19	2013-03-16 20:18:08	47,11	11,17	1,9	Neustift im Stubaital	3,1	SS-N
8.20	2016-01-15 20:43:06	47,18	11,34	7,1	Telfes im Stubai	3,0	SS-R
8.21	2016-10-05 06:27:02	47,17	11,34	6,7	Telfes im Stubai	2,6	SS-R
8.22	2017-05-12 07:44:12	47,25	11,33	13,4	Völs	3,5	SS-R

Missing event ID's belong to already published events. Results are listed, illustrated and cited in the main publication. No datasheets exist.

Event data **Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)**

FPS ID	8.02	Ev ID	ZAMG-EK03_0938	ID2		UTC	1996-07-17 00:50:07	MI	3,4	I ₀	3,5	
Epicenter	Navis			AT	Lat	47,120°	Long	11,540°	z	7,0 km	a) z est. b)	13,8 km
Event remarks	foreshock to 1996-07-17 00:54			Err	°	zErr	km	z macro	20,5 km			
				a) Loc.	ZAMG standard location [64]							
				b) z estim.	z averaged with macroseismic depth [64]							
				based on								

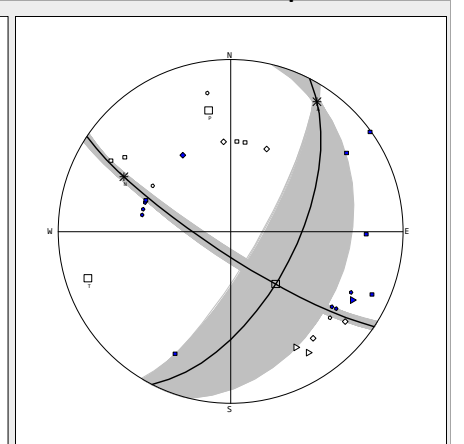
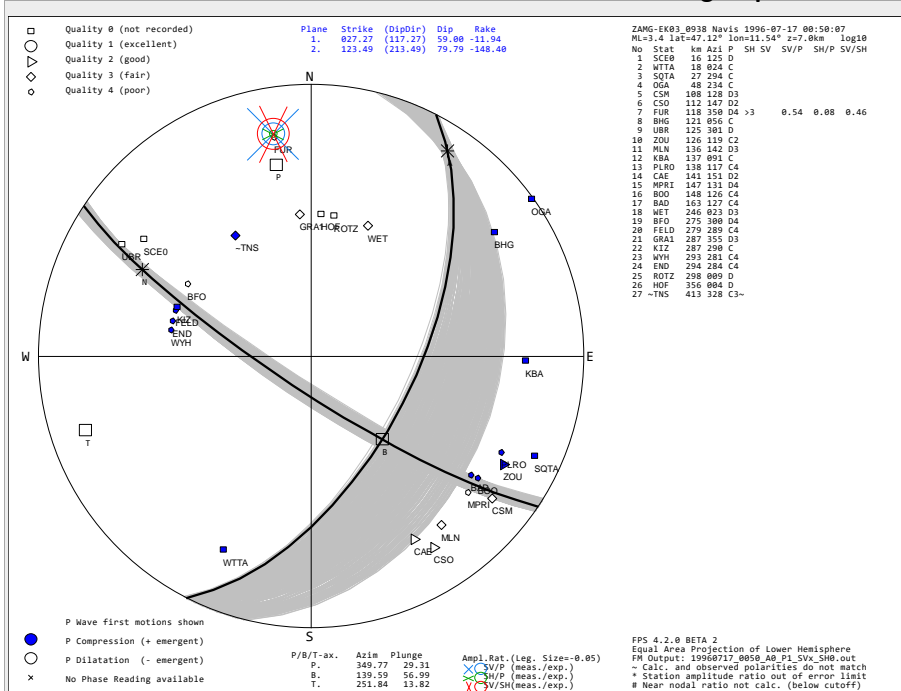
FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	76		130°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	292
FPS quality (expl. at end)	467
	4

Contributors and References
 Reiter, 2004-2016 (this Publ.) [1]

Mechanism remarks
 no ZAMG, LMU waveform data available
 CH waveforms partially missing

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rate	Azim	Pl.	active
P-Axis				350	29°	
B-Axis				140	57°	
T-Axis				252	14°	
Plane1/A-Axis	027	59	-012	033	10°	<input type="checkbox"/>
Plane2/N-Axis	123	80	-148	297	31°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ 0,35 log₁₀
 RMS for all solutions⁴¹ 0,35 log₁₀
 Mechanism Class^{45 46} SS-N

Inferred active fault: Kematen-Wipptal Transfer fault: Navis section
 Fault zone: Strike-Slip: Telfs-Wipptal Transfer zone
 Seismotectonic region: Stubai and Ötztal Alps, Texel Group

	Total	Misfit abs.	Misfit rel.
P Polarities	27	1	4%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	28	1	4%
P/SV/SH Pol. Q1	0	0	%
P/SV/SH Pol. Q2	3	0	0%
P/SV/SH Pol. Q3	6	1	17%
P/SV/SH Pol. Q4	9	0	0%
P/SV/SH Pol. Q0	10	0	0%
SV/P Ampl. Ratios	1	0	0%
SH/P Ampl. Ratios	1	0	0%
SV/SH Ampl. Ratios	1	0	0%
All Ampl. Ratios	3	0	0%

Event data

Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)

FPS ID **8.03** Ev ID **ZAMG-EK03_0939** ID2 **Reit05.05** UTC **1996-07-17 00:54:12** MI **3,9** I₀ **4,5**

Epicenter **Navis** AT Lat **47,110°** Long **11,540°** z **6,0 km** a) z est. b) **11,7 km**

Event remarks Err ° zErr km z macro **17,3 km**

a) Loc. **ZAMG standard location [64]**
 det./ refs.
 b) z estim. **z averaged with macroseismic depth [64]**
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	78		131 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

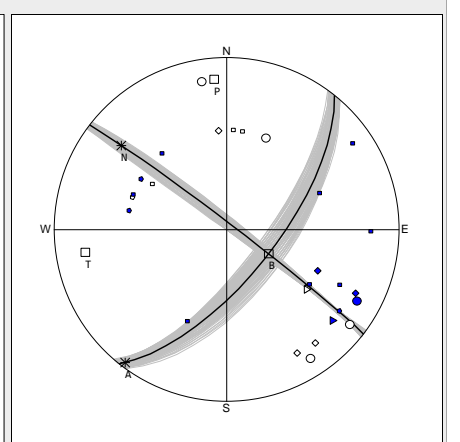
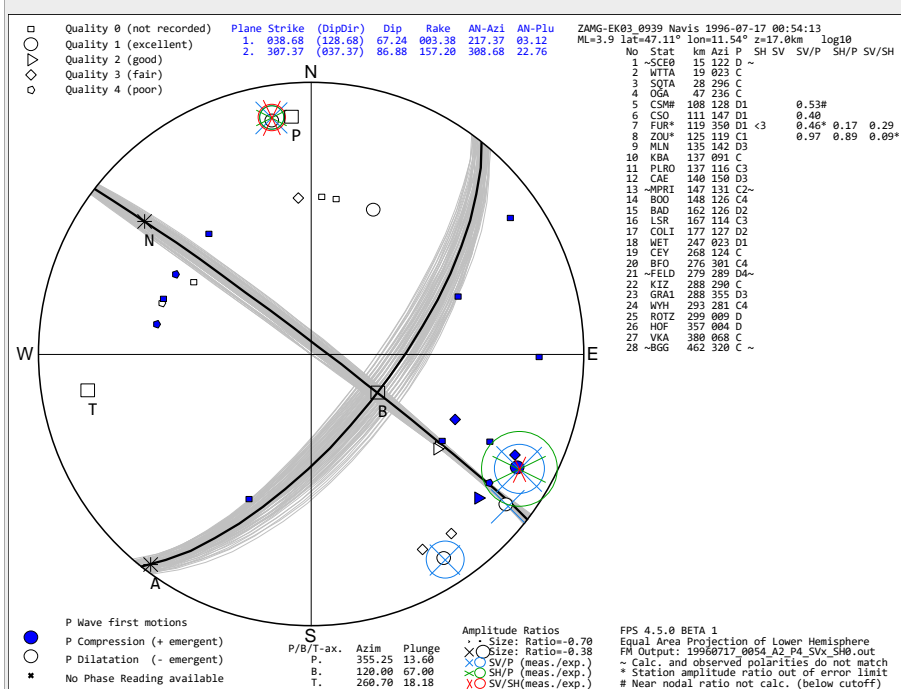
Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	73
FPS quality (expl. at end)	74
	3

Contributors and References

Lenhardt & Reiter, 2004-2017 (this Publ.), using waveform data from Diehl et al., 2009 [7, 51, 52]

Mechanism remarks no zamg waveform data available; solutions restricted to errors for Q2-4 only
 most waveforms from Diehl et al., 2009
 solution in line with Reiter et al., 2005

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				355	14°	
B-Axis				120	67°	
T-Axis				261	18°	
Plane1/A-Axis	039	67	003	217	03°	<input type="checkbox"/>
Plane2/N-Axis	307	87	157	309	23°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ 0,31 log₁₀
 RMS for all solutions⁴¹ 0,45 log₁₀
 Mechanism Class^{45 46} SS-R

Inferred active fault: **Kematen-Wipptal Transfer fault: Navis section**

Fault zone: **Strike-Slip: Telfs-Wipptal Transfer zone**

Seismotectonic region: **Stubai and Ötztal Alps, Texel Group**

	Total	Misfit abs.	Misfit rel.
P Polarities	28	4	14%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	29	4	14%
P/SV/SH Pol. Q1	5	0	0%
P/SV/SH Pol. Q2	3	1	33%
P/SV/SH Pol. Q3	6	0	0%
P/SV/SH Pol. Q4	4	1	25%
P/SV/SH Pol. Q0	11	2	18%
SV/P Ampl. Ratios	4	1	25%
SH/P Ampl. Ratios	2	0	0%
SV/SH Ampl. Ratios	2	1	50%
All Ampl. Ratios	8	2	25%

Event data **Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z

Event remarks Err ° zErr km z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

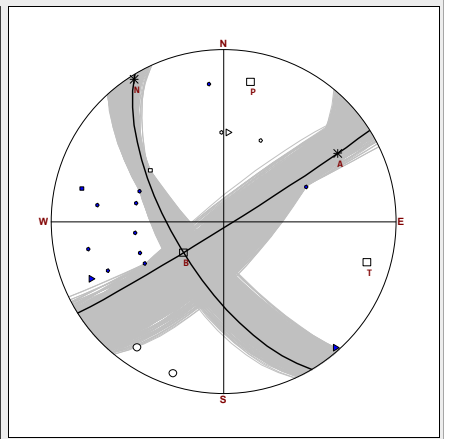
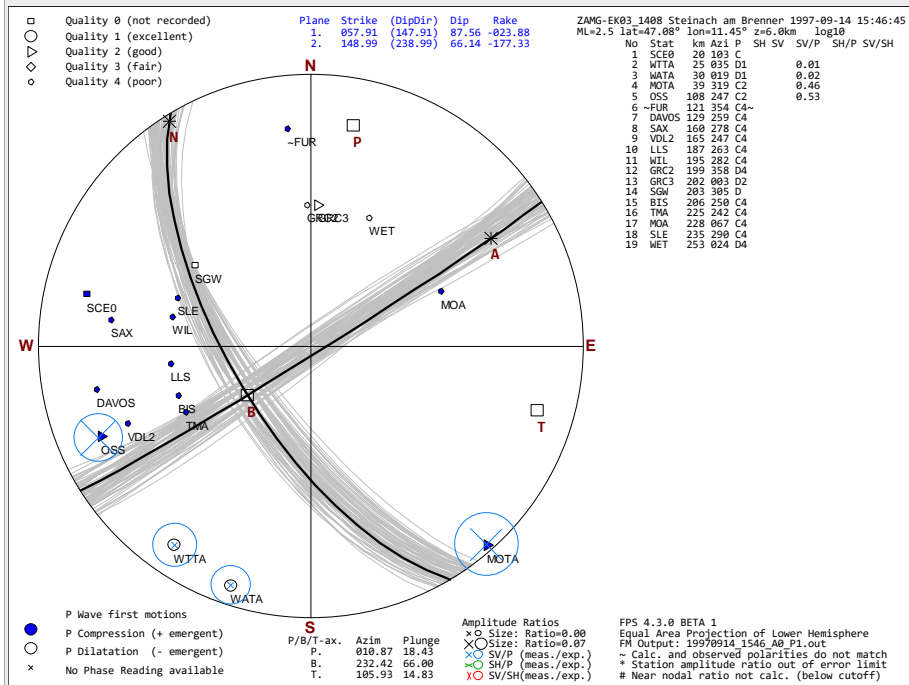
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	2	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	2	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	2	88 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	72				114 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	73
FPS quality (expl. at end)	4

Contributors and References

Reiter, 2004-2017 (this Publ.), using waveform data from Diehl et al., 2009 [7, 51, 52]

Mechanism remarks no OASIS waveform data available
 different from Reiter et al., 2005

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				011	18°	
B-Axis				232	66°	
T-Axis				106	15°	
Plane1/A-Axis	058	88	-024	059	24°	<input type="checkbox"/>
Plane2/N-Axis	149	66	-177	328	02°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	19	1	5 %
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	19	1	5 %
P/SV/SH Pol. Q1	2	0	0 %
P/SV/SH Pol. Q2	3	0	0 %
P/SV/SH Pol. Q3	0	0	%
P/SV/SH Pol. Q4	12	1	8 %
P/SV/SH Pol. Q0	2	0	0 %
SV/P Ampl. Ratios	4	0	0 %
SH/P Ampl. Ratios	0	0	%
SV/SH Ampl. Ratios	0	0	%
All Ampl. Ratios	4	0	0 %

Event data **Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

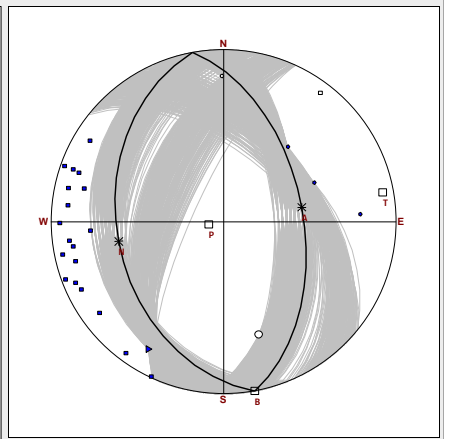
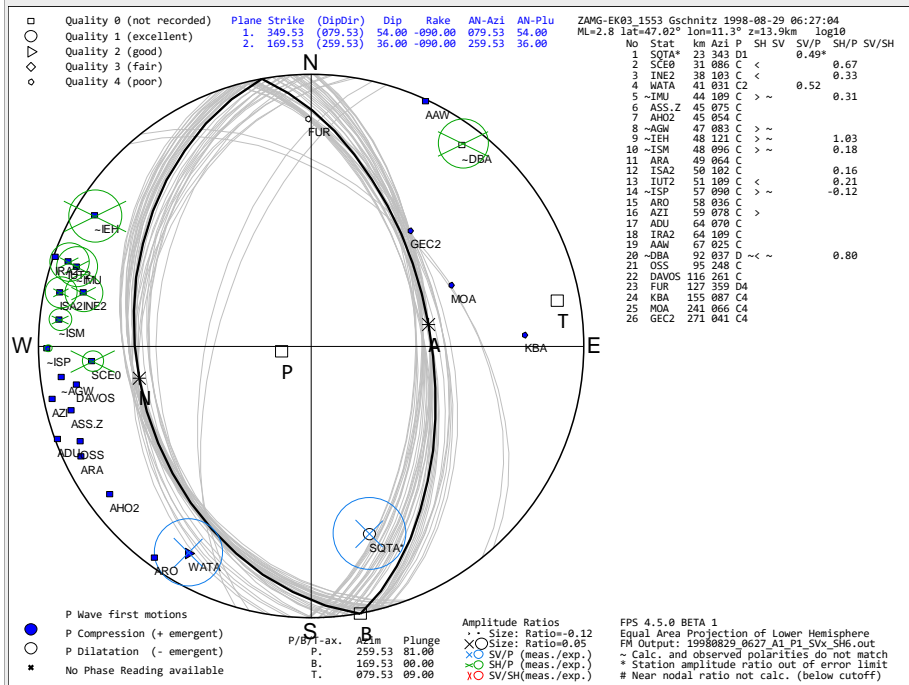
Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 2 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 2 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 2 88 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	76		96 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	36 / 495
FPS quality (expl. at end)	4

Contributors and References

Reiter, 2004-2017, using polarities from Kraft, 1999 and waveform data from Diehl et al., 2009 [3, 7, 51, 52]

Mechanism remarks no OASIS and SED waveform data available
 AGENCY readings >200km skipped
 Sv readings of Kraft, 1999 skipped; Sh readings used

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				260	81°	
B-Axis				170	00°	
T-Axis				080	09°	
Plane1/A-Axis	350	54	-090	080	54°	<input type="checkbox"/>
Plane2/N-Axis	170	36	-090	260	36°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	26	1	4%
SV Polarities	0	0	%
SH Polarities	10	6	60%
All Polarities	36	7	19%
P/SV/SH Pol. Q1	1	0	0%
P/SV/SH Pol. Q2	1	0	0%
P/SV/SH Pol. Q3	0	0	%
P/SV/SH Pol. Q4	4	0	0%
P/SV/SH Pol. Q0	30	7	23%
SV/P Ampl. Ratios	2	1	50%
SH/P Ampl. Ratios	9	0	0%
SV/SH Ampl. Ratios	0	0	%
All Ampl. Ratios	11	1	9%

Event data **Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)**

FPS ID	8.06	Ev ID	ZAMG-EK03_1560	ID2	Kraft99.28_Reit05.08	UTC	1998-09-30 05:53:40	MI	3,0	Io	4,5	
Epicenter	Kematen in Tirol				AT	Lat	47,286°	Long	11,196°	z	15,0 km a) z est. b)	9,5 km
Event remarks	xyz in Kraft, 1999:47,2855/11,19567/15,0km				Err	°	zErr	km	z macro	7,1 km		
						a) Loc.	standard location, parameters see [3]					
						det./ refs.						
						b) z estim.	z averaged with z from ZAMG standard location [64]					
						based on						

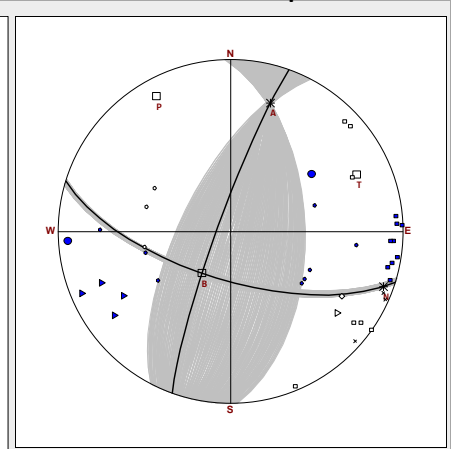
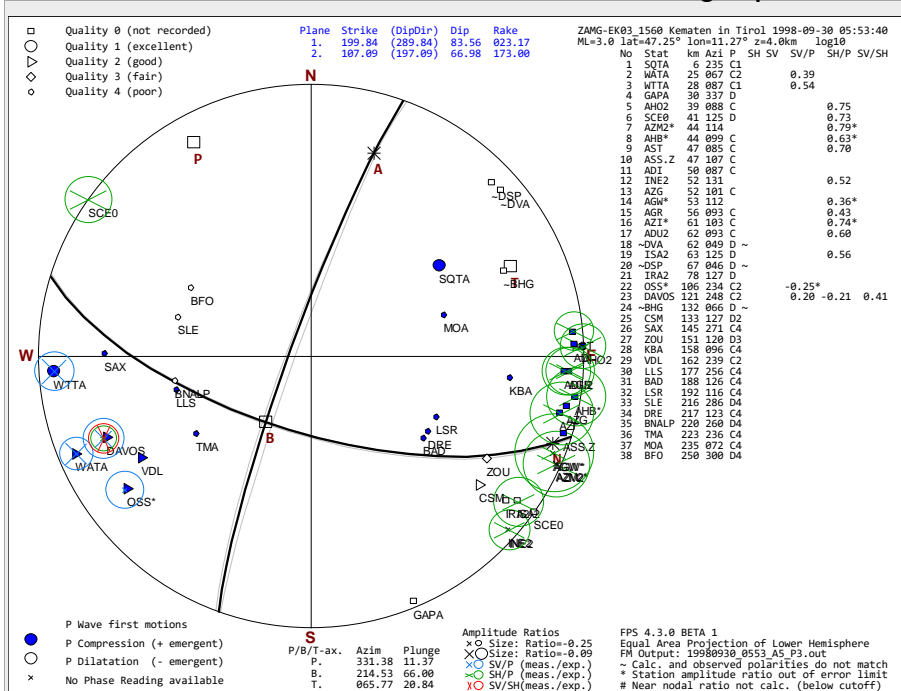
FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Input parameters and presets	Relative Weighting	No	B Trend	0	1	359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
	Lower Limit of S rad. Factor	0,15				
	Prim./sec. Azimuthal Gap ³²	101				107°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	296
	2

Contributors and References

Reiter, 2004-2017, changed from Kraft, 1999 [3, 7, 51]

Mechanism remarks
 transalp readings from Kraft, 1999
 all shear wave onset polarities of Kraft skipped
 changed from Kraft, 1999 and Reiter et al., 2005

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Plane	Rake	Azim	Pl.	active	
P-Axis					331	11°		
B-Axis					215	66°		
T-Axis					066	21°		
Plane1/A-Axis	200	84	023	017	23°		<input type="checkbox"/>	
Plane2/N-Axis	107	67	173	110	06°		<input type="checkbox"/>	
RMS for acceptable solutions ⁴¹							0,30	log ₁₀
RMS for all solutions ⁴¹							0,53	log ₁₀
Mechanism Class ^{45 46}							SS-R	
Inferred active fault	Telfs-Patsch transfer fault							
Fault zone	Strike-Slip: Telfs-Wipptal Transfer zone							
Seismotectonic region	Stubai and Ötztal Alps, Texel Group							

	Total	Misfit abs.	Misfit rel.
P Polarities	35	3	9%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	35	3	9%
P/SV/SH Pol. Q1	2	0	0%
P/SV/SH Pol. Q2	5	0	0%
P/SV/SH Pol. Q3	1	0	0%
P/SV/SH Pol. Q4	11	0	0%
P/SV/SH Pol. Q0	16	3	19%
SV/P Ampl. Ratios	4	1	25%
SH/P Ampl. Ratios	12	4	33%
SV/SH Ampl. Ratios	1	0	0%
All Ampl. Ratios	17	5	29%

Event data

Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z

Event remarks Err ° zErr km z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. B Trend	0	Incr. B Plunge	1	Max. B Plunge	359
Relative Weighting	No	Min. A Plunge	0	Incr. A Plunge	1	Max. A Plunge	90
Accepted log ₁₀ Ampl. Rat. Error	0,5						
Lower Limit of P rad. Factor	0,05						
Lower Limit of S rad. Factor	0,15						
Prim./sec. Azimuthal Gap ³²	70						70

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

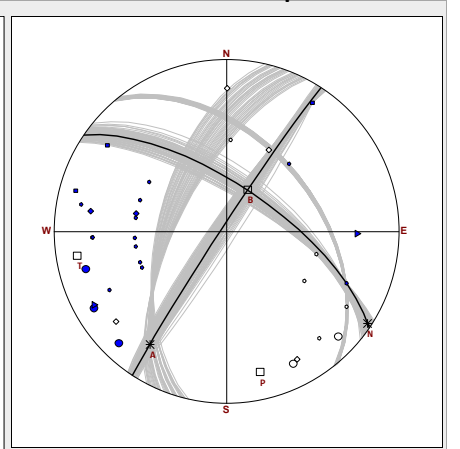
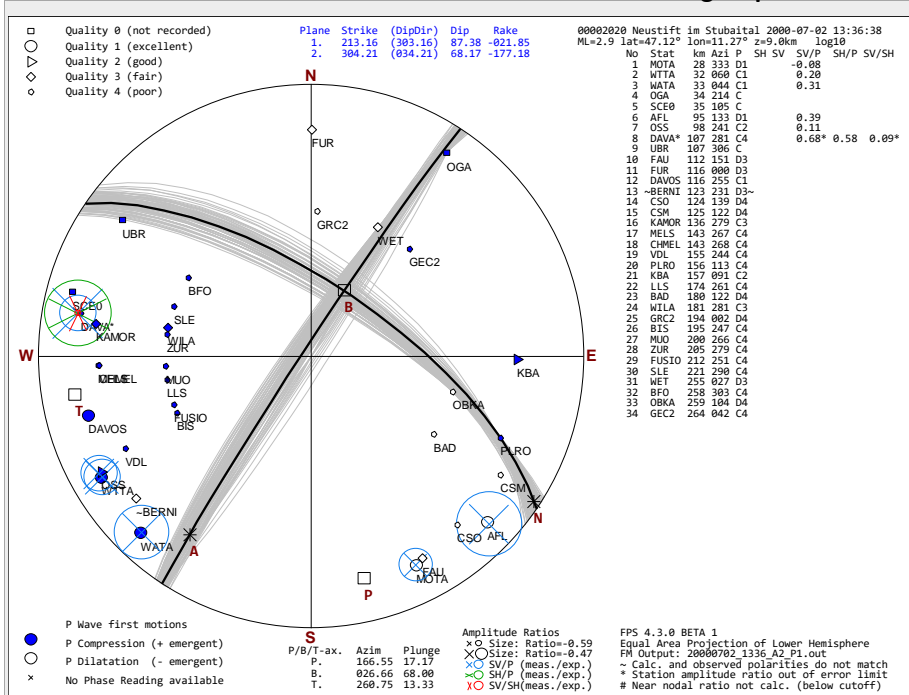
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	65
FPS quality (expl. at end)	102
	4

Contributors and References

Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Azim	Pl.	active
P-Axis				167	17	°
B-Axis				027	68	°
T-Axis				261	13	°
Plane1/A-Axis	213	87	-022	214	22	°
Plane2/N-Axis	304	68	-177	123	03	°

RMS for acceptable solutions⁴¹ log₁₀

RMS for all solutions⁴¹ log₁₀

Mechanism Class^{45 46}

Inferred active fault

Fault zone

Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	34	1	3%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	34	1	3%
P/SV/SH Pol. Q1	5	0	0%
P/SV/SH Pol. Q2	2	0	0%
P/SV/SH Pol. Q3	6	1	17%
P/SV/SH Pol. Q4	18	0	0%
P/SV/SH Pol. Q0	3	0	0%
SV/P Ampl. Ratios	6	1	17%
SH/P Ampl. Ratios	1	0	0%
SV/SH Ampl. Ratios	1	1	100%
All Ampl. Ratios	8	2	25%

Event data **Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)**

FPS ID	8.08	Ev ID	00002280	ID2	Reit05.09	UTC	2000-08-07 21:43:35	MI	2,5	Io	4	
Epicenter	Mieders	AT	Lat	47,157°	Long	11,401°	z	5,0 km	a) z est. b)	5,5 km		
Event remarks							Err	°	zErr	km	z macro	6 km
						a) Loc.	ZAMG standard location [64]					
						det./ refs.						
						b) z estim.	z averaged with macroseismic depth [64]					
						based on						

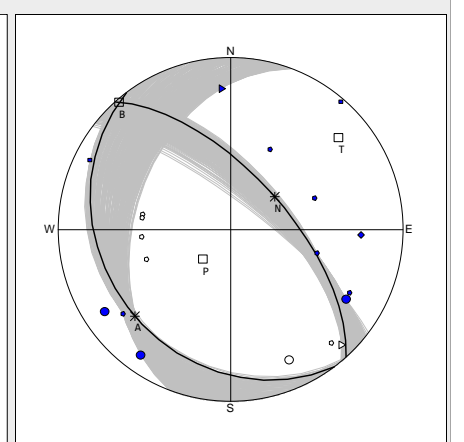
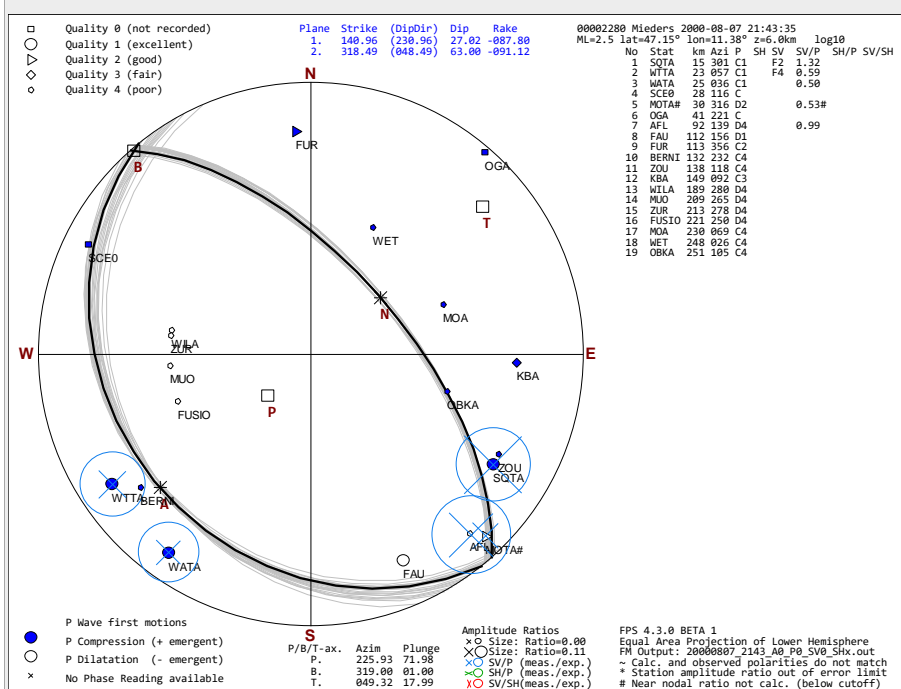
FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
	Relative Weighting	No	B Trend	0	1	359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
	Lower Limit of S rad. Factor	0,15				
	Prim./sec. Azimuthal Gap ³²	60				90°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	22
FPS quality (expl. at end)	4

Contributors and References

Reiter, 2004-2017, using waveform data from Diehl et al., 2009 [7, 51, 52]

Mechanism remarks
no LMU waveform data available in line with Reiter et al., 2005

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				226	72°	
B-Axis				319	01°	
T-Axis				049	04°	
Plane1/A-Axis	141	27	-088	228	27°	<input type="checkbox"/>
Plane2/N-Axis	318	63	-091	051	63°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ 0,35 log₁₀
RMS for all solutions⁴¹ 0,35 log₁₀
Mechanism Class^{45 46} N

Inferred active fault: Brenner normal fault
Fault zone: Extension: Brenner normal fault, Stubai and Oetzal Alps, Texel Group
Seismotectonic region: Stubai and Ötztal Alps, Texel Group

	Total	Misfit abs.	Misfit rel.
P Polarities	19	0	0%
SV Polarities	2	0	0%
SH Polarities	0	0	%
All Polarities	21	0	0%
P/SV/SH Pol. Q1	4	0	0%
P/SV/SH Pol. Q2	3	0	0%
P/SV/SH Pol. Q3	1	0	0%
P/SV/SH Pol. Q4	11	0	0%
P/SV/SH Pol. Q0	2	0	0%
SV/P Ampl. Ratios	5	0	0%
SH/P Ampl. Ratios	0	0	%
SV/SH Ampl. Ratios	0	0	%
All Ampl. Ratios	5	0	0%

Event data **Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)**

FPS ID	8.10	Ev ID	00230192	ID2		UTC	2007-05-13 01:45:55	MI	2,8	Io	4	
Epicenter	Sankt Sigmund im Sellrain			AT	Lat	47,174 °	Long	11,104 °	z	11,6 km	a) z est. b)	9,9 km
Event remarks	NLL ERH ⁴⁷			2,05 km	NLL ERZ ⁴⁷	4,36 km	z macro	8,1 km				
a) Loc. grid search with Stations<150km, this publication [57] det./ refs. b) z estim. z averaged with macroseismic depth [64] based on												

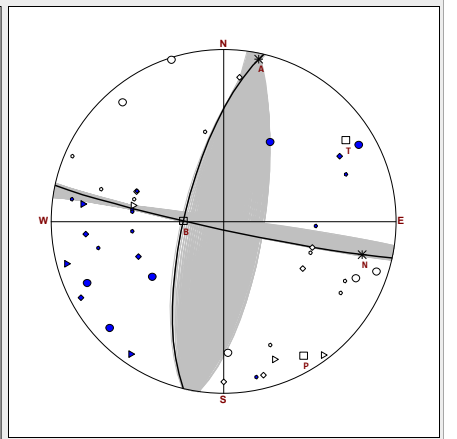
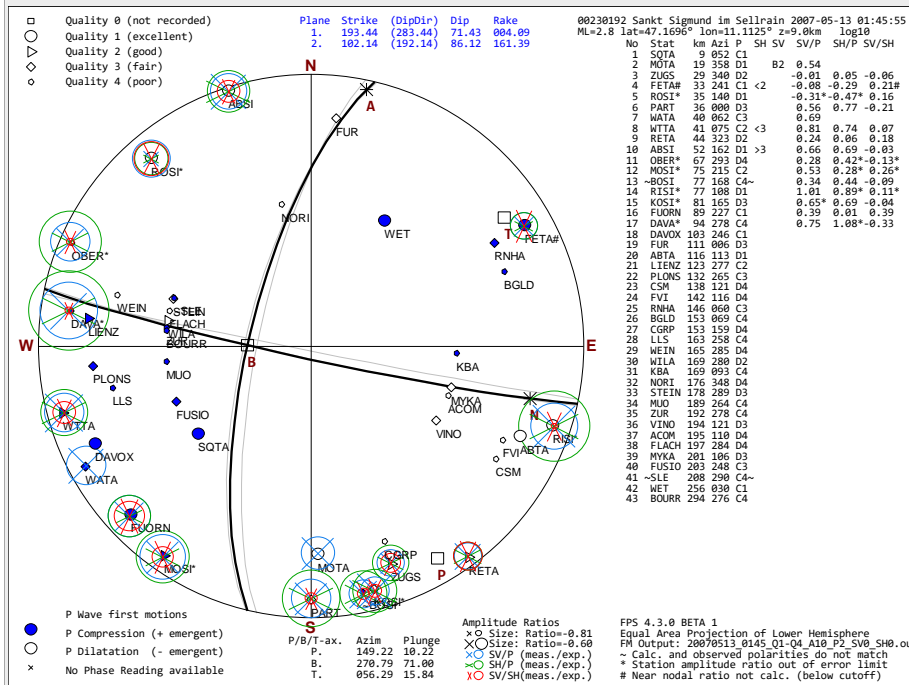
FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
	Relative Weighting	No	B Trend	0	1 359 °
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90 °
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89 °
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	35	54 °		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Mechanism remarks

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rake	Azim	Pl.	active	
P-Axis				149	10 °		
B-Axis				271	71 °		
T-Axis				056	16 °		
Plane1/A-Axis	193	71	004	012	04 °	<input type="checkbox"/>	
Plane2/N-Axis	102	86	161	103	19 °	<input type="checkbox"/>	
RMS for acceptable solutions ⁴¹						0,29	log ₁₀
RMS for all solutions ⁴¹						0,40	log ₁₀
Mechanism Class ^{45 46}						SS	
Inferred active fault	Gschnitz-Kühtai fault						
Fault zone	Strike-Slip: Telfs-Wipptal Transfer zone						
Seismotectonic region	Stubai and Ötztal Alps, Texel Group						

	Total	Misfit abs.	Misfit rel.
P Polarities	43	2	5 %
SV Polarities	1	0	0 %
SH Polarities	3	0	0 %
All Polarities	47	2	4 %
P/SV/SH Pol. Q1	10	0	0 %
P/SV/SH Pol. Q2	8	0	0 %
P/SV/SH Pol. Q3	12	0	0 %
P/SV/SH Pol. Q4	17	2	12 %
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	16	2	12 %
SH/P Ampl. Ratios	14	5	36 %
SV/SH Ampl. Ratios	14	3	21 %
All Ampl. Ratios	44	10	23 %

Event data

Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)

FPS ID **8.11** Ev ID **00231758** ID2 UTC **2007-06-15 02:14:41** MI **2,6** I₀

Epicenter **Sellrain** AT Lat **47,141°** Long **11,175°** z **13,1 km** a) z est. b) **11,2 km**

Event remarks **NLL ERH⁴⁷ 2,390 km NLL ERZ⁴⁷ 4,51 km z macro km**

a) Loc. grid search with Stations<150km, this publication [57]
 det./ refs.
 b) z estim. z averaged with z from ZAMG standard location [64]
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Relative Weighting	No	B Trend	0	1 359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
Lower Limit of S rad. Factor	0,15			
Prim./sec. Azimuthal Gap ³²	35		56°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

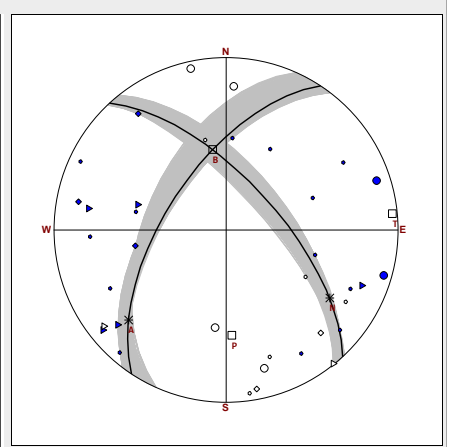
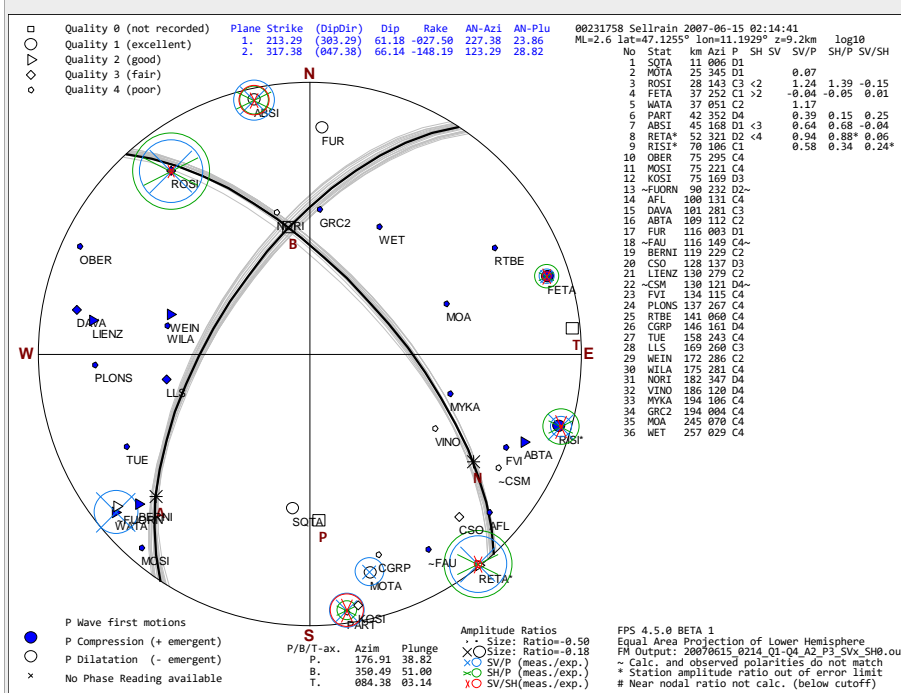
Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	18
FPS quality (expl. at end)	250
	2

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				177	39°	
B-Axis				350	51°	
T-Axis				084	03°	
Plane1/A-Axis	213	61	-028	227	24°	<input type="checkbox"/>
Plane2/N-Axis	317	66	-148	123	29°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ 0,28 log₁₀
 RMS for all solutions⁴¹ 0,34 log₁₀
 Mechanism Class^{45 46} SS-N

Inferred active fault Telfs-Patsch transfer fault
 Fault zone Strike-Slip: Telfs-Wipptal Transfer zone
 Seismotectonic region Stubai and Ötztal Alps, Texel Group

	Total	Misfit abs.	Misfit rel.
P Polarities	36	3	8%
SV Polarities	0	0	%
SH Polarities	4	0	0%
All Polarities	40	3	8%
P/SV/SH Pol. Q1	6	0	0%
P/SV/SH Pol. Q2	9	1	11%
P/SV/SH Pol. Q3	6	0	0%
P/SV/SH Pol. Q4	19	2	11%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	8	0	0%
SH/P Ampl. Ratios	6	1	17%
SV/SH Ampl. Ratios	6	1	17%
All Ampl. Ratios	20	2	10%

Event data

Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)

FPS ID	8.12	Ev ID	00279778	ID2		UTC	2007-12-22 17:58:17	MI	2,7	I ₀	3,5	
Epicenter	Axams			AT	Lat	47,174 °	Long	11,288 °	z	9,8 km	a) z est. b)	10,1 km
Event remarks	NLL ERH ⁴⁷					2,01 km	NLL ERZ ⁴⁷			4,22 km	z macro	10,3 km
z=average(zmacro, znll)												
a) Loc. grid search with Stations<150km, this publication [57]												
det./ refs.												
b) z estim. z averaged with macroseismic depth [64]												
based on												

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359 °
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90 °
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89 °
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	56		59 °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

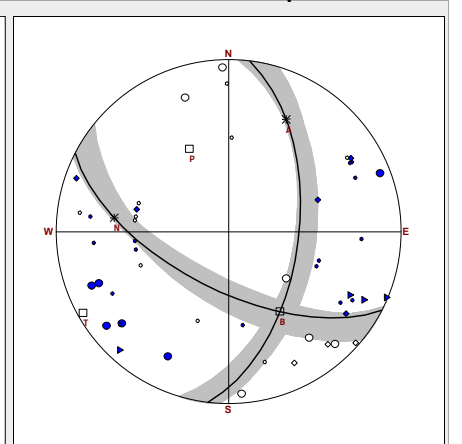
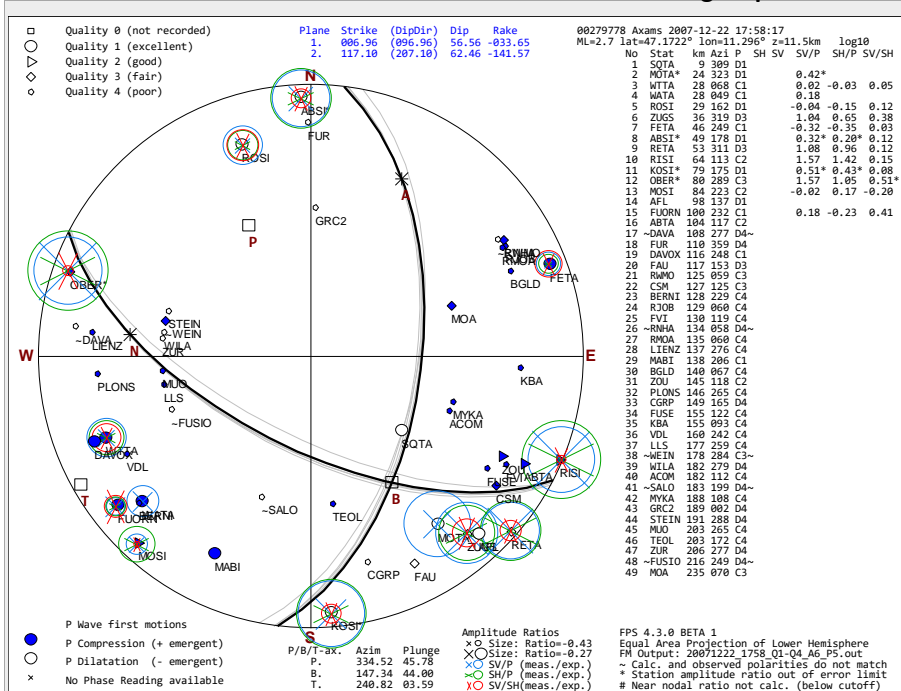
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	5
FPS quality (expl. at end)	808
Contributors and References	2
Reiter, 2017 (this Publ.) [1]	

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				335	46 °	
B-Axis				147	44 °	
T-Axis				241	04 °	
Plane1/A-Axis	007	57	-034	027	28 °	<input type="checkbox"/>
Plane2/N-Axis	117	62	-142	277	33 °	<input type="checkbox"/>
RMS for acceptable solutions ⁴¹						0,28 log ₁₀
RMS for all solutions ⁴¹						0,40 log ₁₀
Mechanism Class ^{45 46}						N-SS
Inferred active fault	Brenner normal fault					
Fault zone	Extension: Brenner normal fault, Stubai and Oetzal Alps, Texel Group					
Seismotectonic region	Stubai and Ötztal Alps, Texel Group					

	Total	Misfit abs.	Misfit rel.
P Polarities	49	5	10 %
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	49	5	10 %
P/SV/SH Pol. Q1	12	0	0 %
P/SV/SH Pol. Q2	4	0	0 %
P/SV/SH Pol. Q3	8	1	12 %
P/SV/SH Pol. Q4	25	4	16 %
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	13	3	23 %
SH/P Ampl. Ratios	11	2	18 %
SV/SH Ampl. Ratios	11	1	9 %
All Ampl. Ratios	35	6	17 %

Event data

Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)

FPS ID	8.13	Ev ID	00296576	ID2		UTC	2008-03-18 11:03:42	MI	3,5	I_0	4	
Epicenter	Fulpmes			AT	Lat	47,133°	Long	11,346°	z	8,9 km	a) z est. b)	10,4 km
Event remarks	NLL ERH ⁴⁷			1,63 km	NLL ERZ ⁴⁷			3,74 km	z macro			16,2 km
a) Loc. grid search with Stations<150km, this publication [57] det./ refs. b) z estim. z averaged with z from ZAMG standard location [64] based on												

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Input parameters and presets	Relative Weighting	No	B Trend	0	1	359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
	Lower Limit of S rad. Factor	0,15				
	Prim./sec. Azimuthal Gap ³²	18		32°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

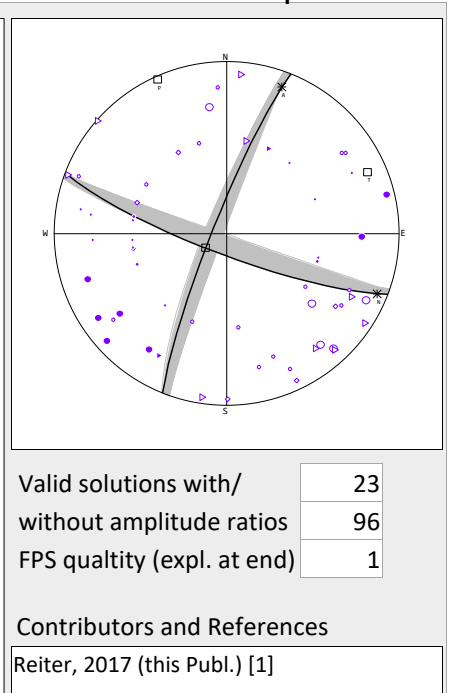
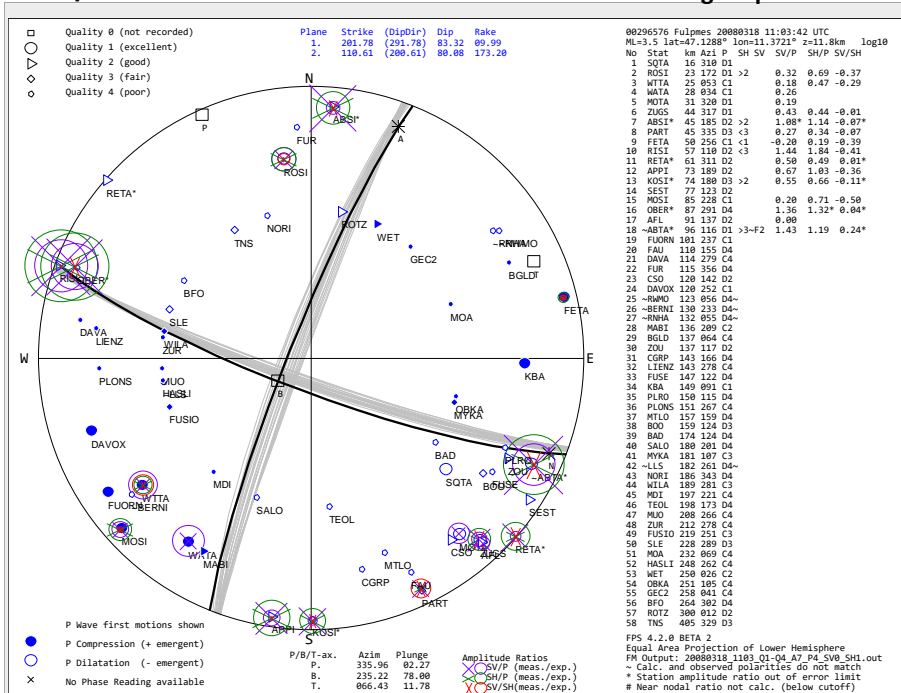
Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Mechanism remarks

Steinach-Neustift transfer fault

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis				336	02°				
B-Axis				235	78°				
T-Axis				066	12°				
Plane1/A-Axis	202	83	010	021	10°				
Plane2/N-Axis	111	80	173	112	07°				
RMS for acceptable solutions ⁴¹						0,28	log ₁₀		
RMS for all solutions ⁴¹						0,40	log ₁₀		
Mechanism Class ^{45 46}						SS			
Inferred active fault	Steinach-Neustift transfer fault								
Fault zone	Strike-Slip: Telfs-Wipptal Transfer zone								
Seismotectonic region	Stubai and Ötztal Alps, Texel Group								
P Polarities							58	4	7%
SV Polarities							1	0	0%
SH Polarities							7	1	14%
All Polarities							66	5	8%
P/SV/SH Pol. Q1							13	0	0%
P/SV/SH Pol. Q2							15	0	0%
P/SV/SH Pol. Q3							11	1	9%
P/SV/SH Pol. Q4							27	4	15%
P/SV/SH Pol. Q0							0	0	%
SV/P Ampl. Ratios							16	1	6%
SH/P Ampl. Ratios							13	1	8%
SV/SH Ampl. Ratios							13	5	38%
All Ampl. Ratios							42	7	17%

Event data

Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)

FPS ID	8.14	Ev ID	00314015	ID2		UTC	2008-09-17 22:10:38	MI	3,1	Io	4	
Epicenter	Gschnitz			AT	Lat	47,050°	Long	11,333°	z	11,4 km	a) z est. b)	11,2 km
Event remarks	z=average(zmacro, znll)			NLL ERH ⁴⁷	1,870 km	NLL ERZ ⁴⁷	4,15 km	z macro	10,9 km	a) Loc. grid search with Stations<150km, this publication [57]		
										det./ refs. b) z estim. based on z averaged with macroseismic depth [64]		

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	27			31°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

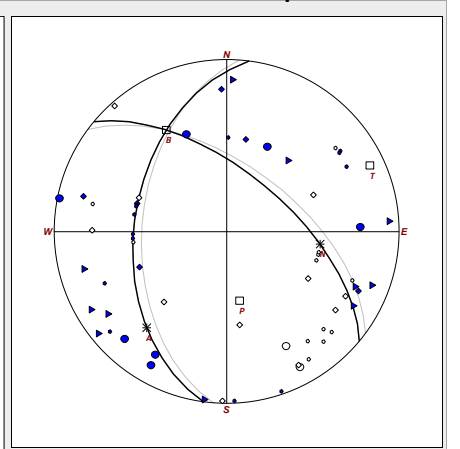
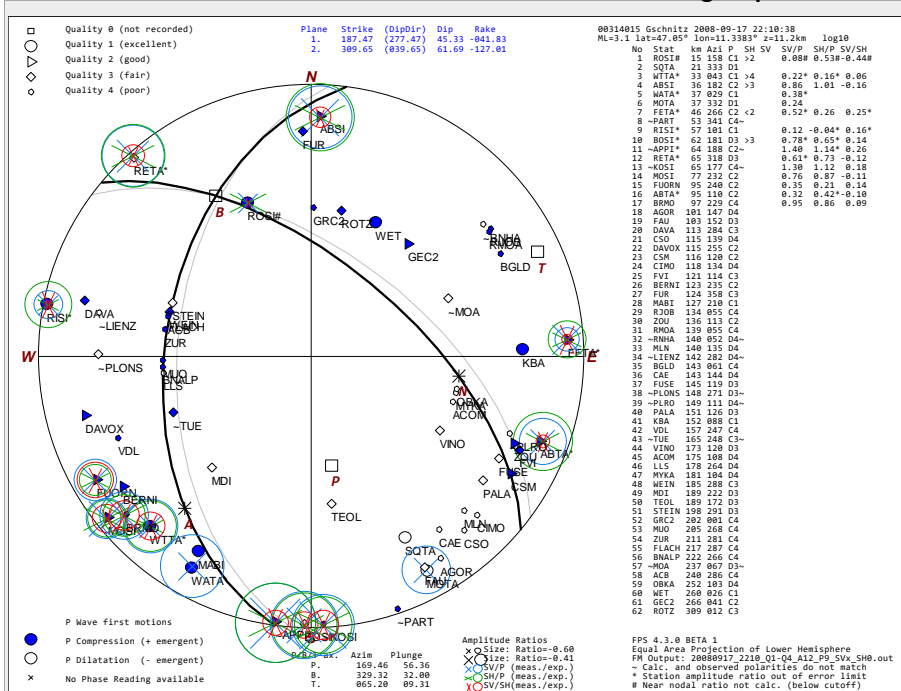
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	2

Contributors and References

Freudenthaler & Reiter, 2012-2017 (this Publ.) [1]

Mechanism remarks s wave onset polarity can be clearly seen in some traces

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rate	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				169	56°		62	9	15%	
B-Axis				329	32°		0	0	%	
T-Axis				065	09°		5	0	0%	
Plane1/A-Axis	187	45	-042	220	28°		67	9	13%	
Plane2/N-Axis	310	62	-127	097	45°		9	0	0%	
RMS for acceptable solutions ⁴¹						0,26	P/SV/SH Pol. Q1	13	1	8%
RMS for all solutions ⁴¹						0,43	P/SV/SH Pol. Q2	19	3	16%
Mechanism Class ^{45 46}						N-SS	P/SV/SH Pol. Q3	26	5	19%
Inferred active fault	Brenner normal fault						P/SV/SH Pol. Q0	0	0	%
Fault zone	Extension: Brenner normal fault, Stubai and Oetzal Alps, Texel Group						SV/P Ampl. Ratios	15	5	33%
Seismotectonic region	Stubai and Ötztal Alps, Texel Group						SH/P Ampl. Ratios	13	5	38%
							SV/SH Ampl. Ratios	13	2	15%
							All Ampl. Ratios	41	12	29%

Event data **Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

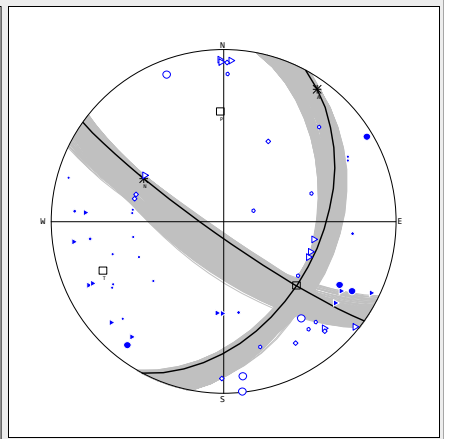
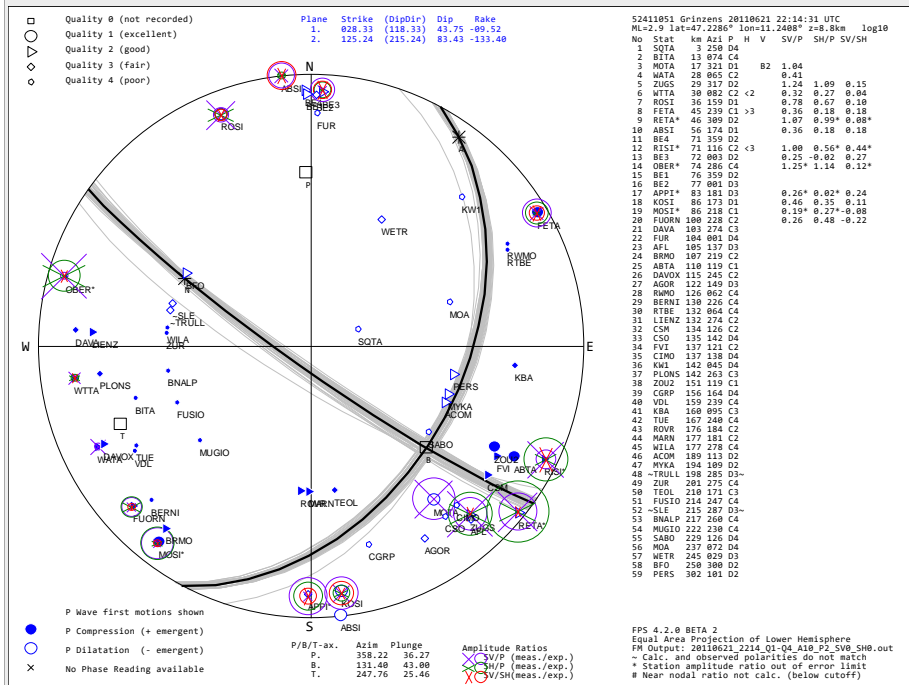
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	38		52 °		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	40
FPS quality (expl. at end)	1

Contributors and References

Reiter & Freudenthaler, 2012-2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rate	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis					358	36 °	59	2	3 %
B-Axis					131	43 °	1	0	0 %
T-Axis					248	25 °	3	0	0 %
Plane1/A-Axis	028	44	-010	035	07	<input type="checkbox"/>	63	2	3 %
Plane2/N-Axis	125	83	-133	298	46	<input type="checkbox"/>	8	0	0 %
RMS for acceptable solutions ⁴¹						0,29	log ₁₀		
RMS for all solutions ⁴¹						0,46	log ₁₀		
Mechanism Class ^{45 46}						SS-N			
Inferred active fault	Kematen-Wipptal Transfer fault: Halsl section								
Fault zone	Strike-Slip: Telfs-Wipptal Transfer zone								
Seismotectonic region	Upper Inn Valley								
P Polarities							59	2	3 %
SV Polarities							1	0	0 %
SH Polarities							3	0	0 %
All Polarities							63	2	3 %
P/SV/SH Pol. Q1							8	0	0 %
P/SV/SH Pol. Q2							22	0	0 %
P/SV/SH Pol. Q3							13	2	15 %
P/SV/SH Pol. Q4							20	0	0 %
P/SV/SH Pol. Q0							0	0	0 %
SV/P Ampl. Ratios							15	3	20 %
SH/P Ampl. Ratios							13	4	31 %
SV/SH Ampl. Ratios							13	3	23 %
All Ampl. Ratios							41	10	24 %

Event data

Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	37		37 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

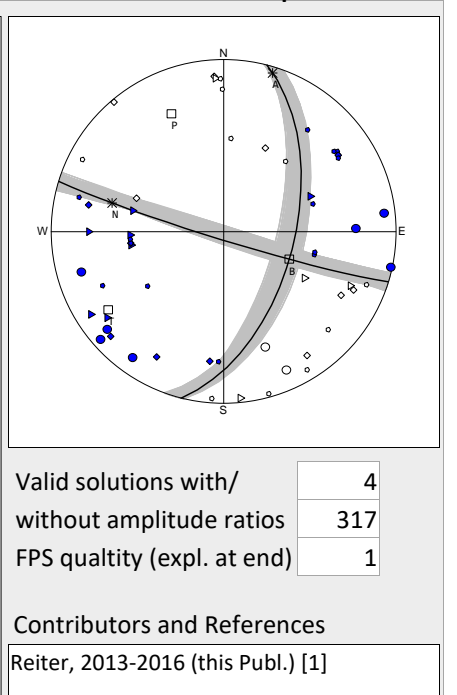
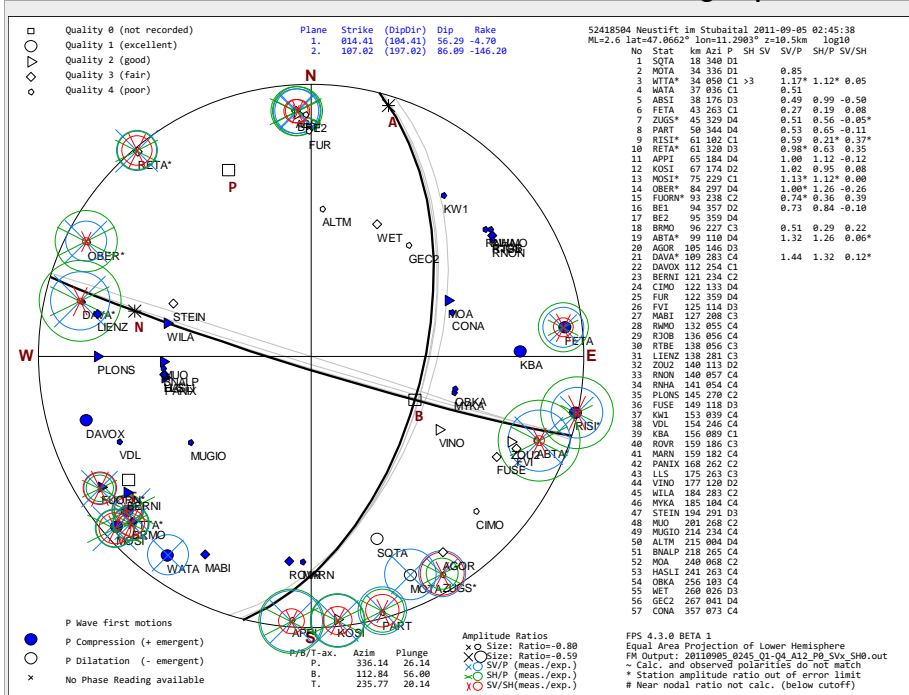
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rate	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis				336	26°		57	0	0%
B-Axis				113	56°		0	0	0%
T-Axis				236	20°		1	0	0%
Plane1/A-Axis	014	56	-005	017	04°		58	0	0%
Plane2/N-Axis	107	86	-146	284	34°		9	0	0%
RMS for acceptable solutions ⁴¹					0,27	log ₁₀	11	0	0%
RMS for all solutions ⁴¹					0,50	log ₁₀	14	0	0%
Mechanism Class ^{45 46}					SS-N		24	0	0%
Inferred active fault	Gschnitz-Kühtai fault						0	0	0%
Fault zone	Strike-Slip: Telfs-Wipptal Transfer zone						18	5	28%
Seismotectonic region	Stubai and Ötztal Alps, Texel Group						16	3	19%
							16	4	25%
							50	12	24%

Event data

Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)

FPS ID	8.17	Ev ID	52488218	ID2		UTC	2012-11-09 16:29:41	MI	2,7	I ₀	4,5	
Epicenter	Mutters			AT	Lat	47,211°	Long	11,363°	z	8,8 km	a) z est. b)	8,8 km
Event remarks	NLL ERH ⁴⁷			1,980 km	NLL ERZ ⁴⁷		3,16 km	z macro		7 km		
a) Loc. grid search with Stations<150km, this publication [57] det./ refs. b) z estim. based on												

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	38		48°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

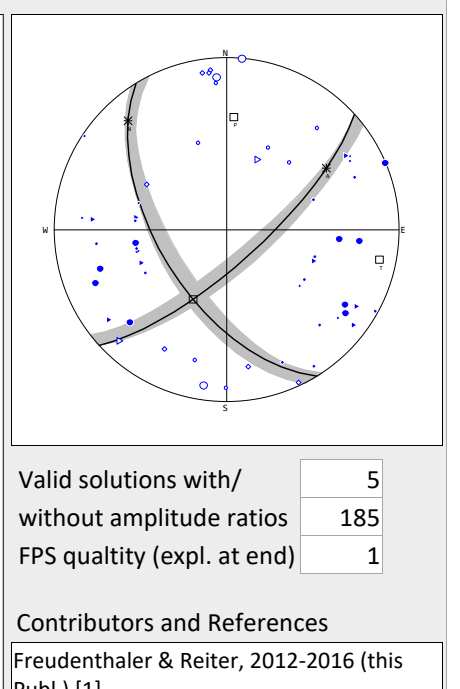
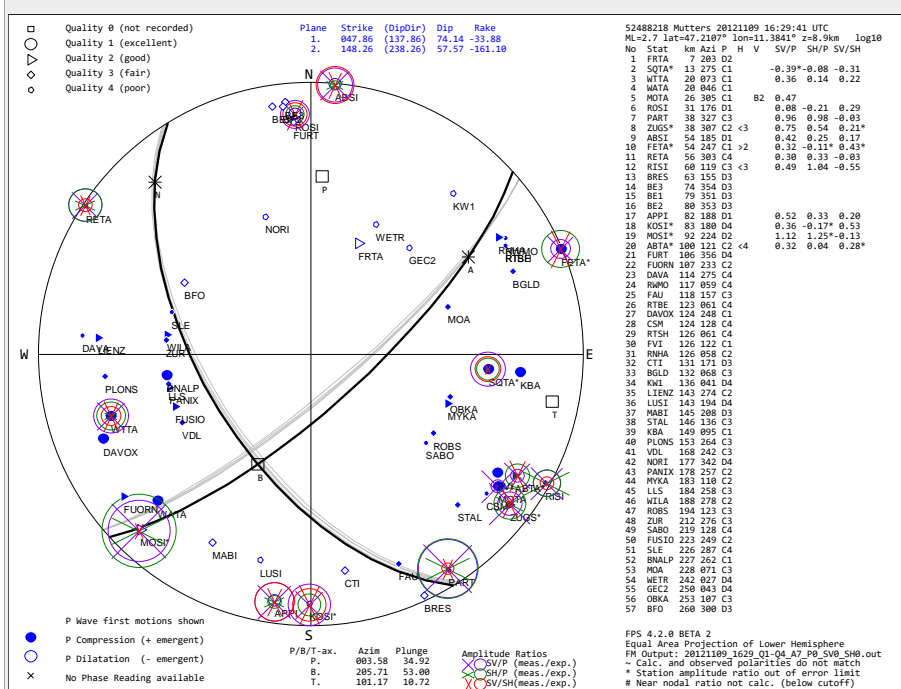
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Mechanism remarks WATA, MOTA waveforms missing to calculate amplitude ratios

Contributors and References
Freudenthaler & Reiter, 2012-2016 (this Publ.) [1]

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				004	35°		57	0	0%	
B-Axis				206	53°		1	0	0%	
T-Axis				101	11°		4	0	0%	
Plane1/A-Axis	048	74	-034	058	32°		62	0	0%	
Plane2/N-Axis	148	58	-161	318	16°		12	0	0%	
RMS for acceptable solutions ⁴¹						0,33	P/SV/SH Pol. Q1	13	0	0%
RMS for all solutions ⁴¹						0,46	P/SV/SH Pol. Q2	21	0	0%
Mechanism Class ^{45 46}						SS-N	P/SV/SH Pol. Q3	16	0	0%
Inferred active fault	Telfs-Patsch transfer fault						P/SV/SH Pol. Q4	0	0	%
Fault zone	Strike-Slip: Telfs-Wipptal Transfer zone						P/SV/SH Pol. Q0	14	1	7%
Seismotectonic region	Stubai and Ötztal Alps, Texel Group						SV/P Ampl. Ratios	13	3	23%
							SH/P Ampl. Ratios	13	3	23%
							SV/SH Ampl. Ratios	40	7	18%
							All Ampl. Ratios			

Event data

Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)

FPS ID **8.18** Ev ID **52493301** ID2 UTC **2012-12-06 19:21:59** MI **3,2** I_o **5**

Epicenter **Sankt Sigmund im Sellrain** AT Lat **47,160°** Long **11,074°** z **7,1 km** a) z est. b) **7,1 km**

Event remarks **NLL ERH⁴⁷ 1,75 km NLL ERZ⁴⁷ 3,96 km z macro 6 km**

a) Loc. grid search with Stations<150km, this publication [57]
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	22	31°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

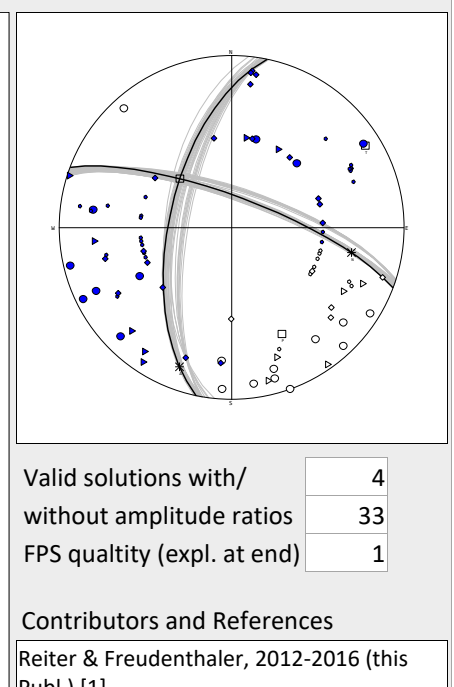
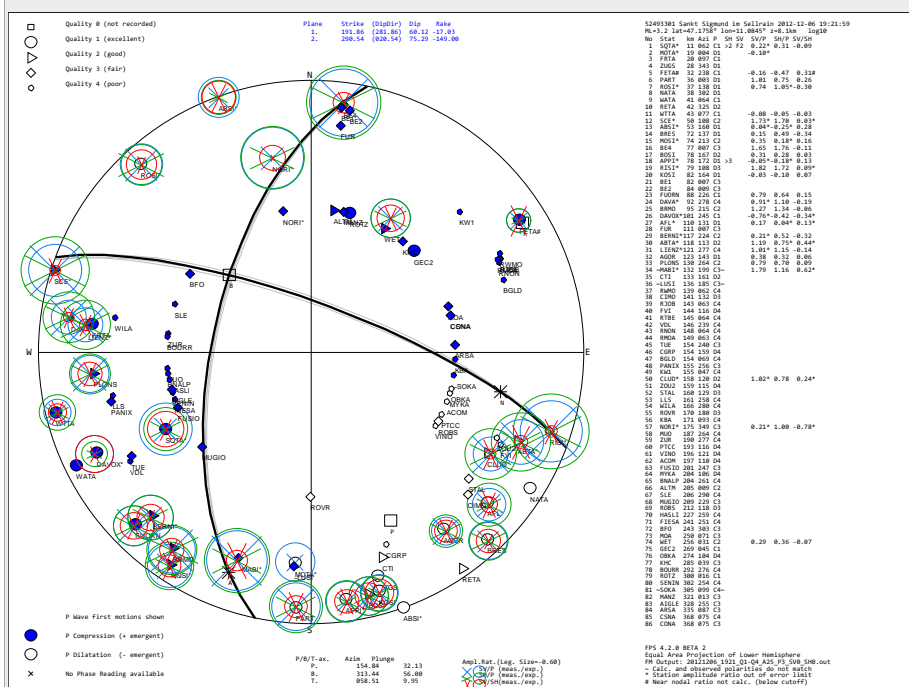
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Mechanism remarks

Gschnitz-Kühtai fault

Contributors and References

Reiter & Freudenthaler, 2012-2016 (this Publ.) [1]

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis				155	32°		86	3	3%
B-Axis				313	56°		1	0	0%
T-Axis				059	10°		2	0	0%
Plane1/A-Axis	192	60	-017	201	15°	<input type="checkbox"/>	89	3	3%
Plane2/N-Axis	291	75	-149	102	30°	<input type="checkbox"/>	20	0	0%
RMS for acceptable solutions ⁴¹					0,30	log ₁₀	14	0	0%
RMS for all solutions ⁴¹					0,48	log ₁₀	24	2	8%
Mechanism Class ^{45 46}					SS-N		31	1	3%
Inferred active fault	Gschnitz-Kühtai fault						0	0	0%
Fault zone	Strike-Slip: Telfs-Wipptal Transfer zone						29	11	38%
Seismotectonic region	Stubai and Ötztal Alps, Texel Group						28	6	21%
							28	8	29%
							85	25	29%

Event data **Seismotectonic Domain 8: Brenner-Intal transfer zone (BIT)**

FPS ID	8.19	Ev ID	52534159	ID2		UTC	2013-03-16 20:18:08	MI	3,1	Io	5	
Epicenter	Neustift im Stubaital			AT	Lat	47,112°	Long	11,170°	z	1,9 km	a) z est. b)	5,6 km
Event remarks	NLL ERH ⁴⁷			1,450 km	NLL ERZ ⁴⁷			2,37 km	z macro			6 km
a) Loc. grid search with Stations<150km, this publication [57] det./ refs. b) z estim. z averaged with z from ZAMG standard location [64] based on												

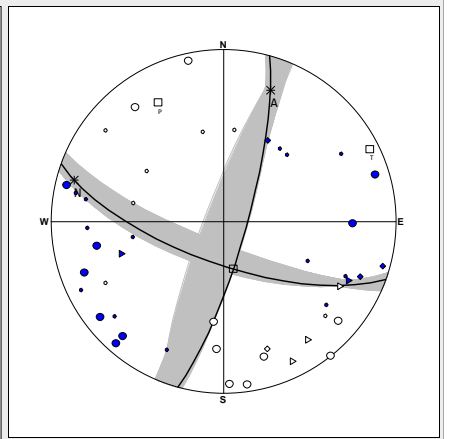
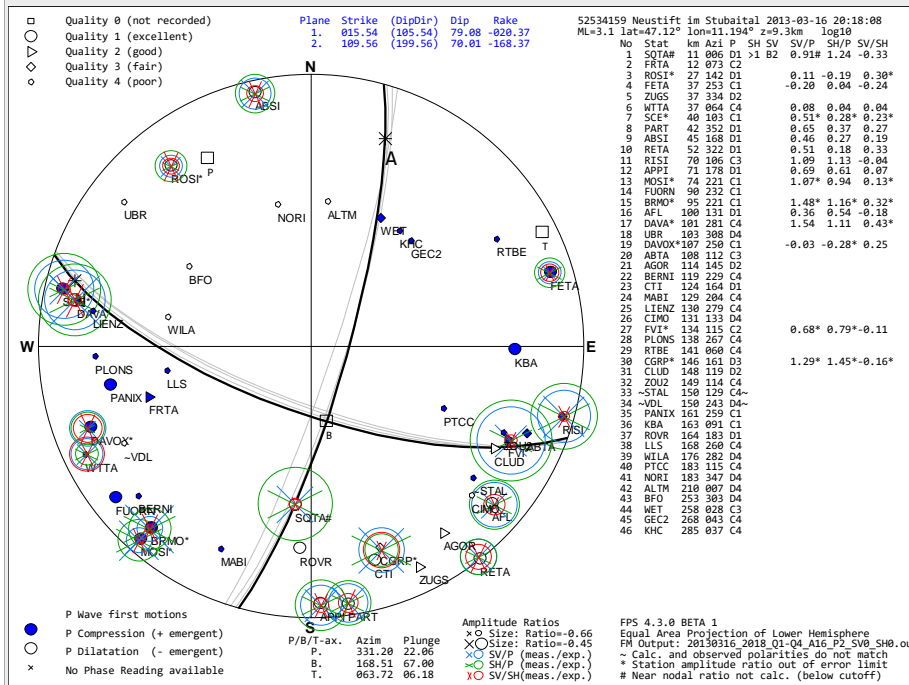
FocMec⁴¹ Input parameters and presets	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	25	41°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	4
FPS quality (expl. at end)	529
Contributors and References	1
Reiter, 2016 (this Publ.) [1]	

Mechanism remarks MOTA WATA KOSI LUSI missing

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				331	22°		46	2	4%	
B-Axis				169	67°		1	0	0%	
T-Axis				064	06°		1	0	0%	
Plane1/A-Axis	016	79	-020	020	20°		48	2	4%	
Plane2/N-Axis	110	70	-168	286	11°		18	0	0%	
RMS for acceptable solutions ⁴¹						0,29	log ₁₀			
RMS for all solutions ⁴¹						0,56	log ₁₀			
Mechanism Class ^{45 46}						SS-N				
Inferred active fault	Gschnitz-Kühtai fault									
Fault zone	Strike-Slip: Telfs-Wipptal Transfer zone									
Seismotectonic region	Stubai and Ötztal Alps, Texel Group									
							51	16	31%	

Event data

Seismotectonic Domain 8: Brenner-Inntal transfer zone (BIT)

FPS ID	8.20	Ev ID	52691060	ID2		UTC	2016-01-15 20:43:06	MI	3,0	Io	4,5	
Epicenter	Telfes im Stubai			AT	Lat	47,176°	Long	11,338°	z	7,1 km	a) z est. b)	7,1 km
Event remarks	NLL ERH ⁴⁷			1,600 km	NLL ERZ ⁴⁷			2,41 km	z macro			7 km
a) Loc. grid search with Stations<150km, this publication [57] det./ refs. b) z estim. based on												

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	47		50°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

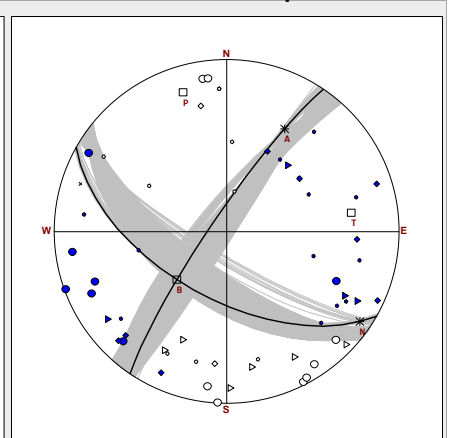
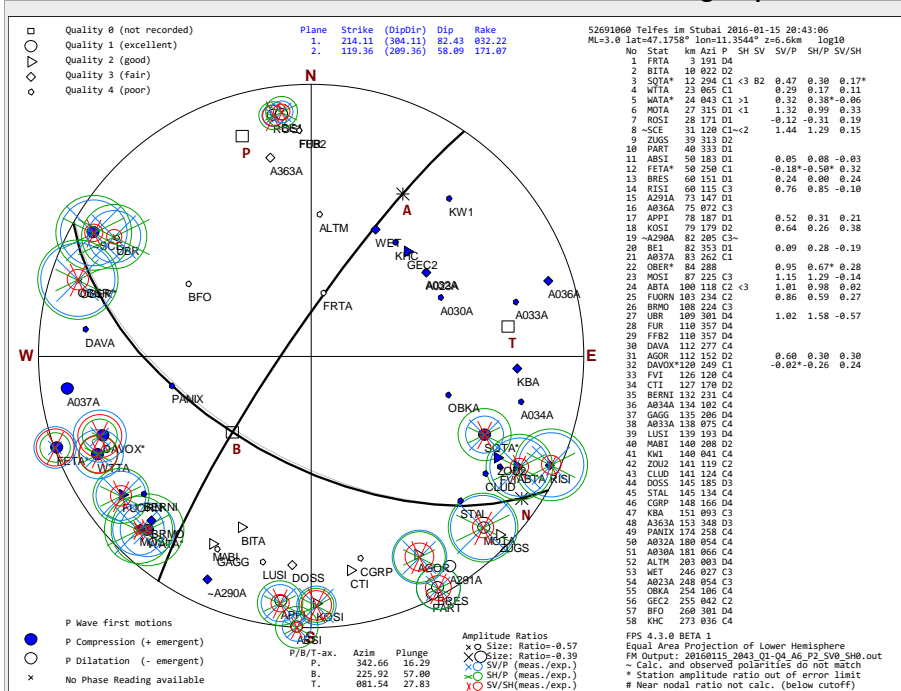
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	610
	1

Contributors and References
Reiter & Lenhardt, 2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis					343	16°		57	2	4%	
B-Axis					226	57°		1	0	0%	
T-Axis					082	28°		5	0	0%	
Plane1/A-Axis	214	82	032	029	32°		All Polarities	63	2	3%	
Plane2/N-Axis	119	58	171	124	08°		P/SV/SH Pol. Q1	17	1	6%	
RMS for acceptable solutions ⁴¹							0,31	P/SV/SH Pol. Q2	12	0	0%
RMS for all solutions ⁴¹							0,38	P/SV/SH Pol. Q3	12	1	8%
Mechanism Class ^{45 46}							SS-R	P/SV/SH Pol. Q4	22	0	0%
Inferred active fault	Kematen-Wipptal Transfer fault: Halsl section										
Fault zone	Strike-Slip: Telfs-Wipptal Transfer zone										
Seismotectonic region	Upper Inn Valley										
								P/SV/SH Pol. Q0	0	0	%
								SV/P Ampl. Ratios	20	2	10%
								SH/P Ampl. Ratios	20	3	15%
								SV/SH Ampl. Ratios	20	1	5%
								All Ampl. Ratios	60	6	10%

Event data

Seismotectonic Domain 8: Brenner-Intl transfer zone (BIT)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks a) Loc. det./ refs. b) z estim. based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	39				48°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

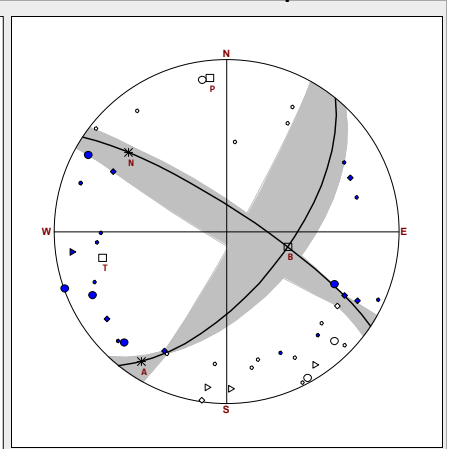
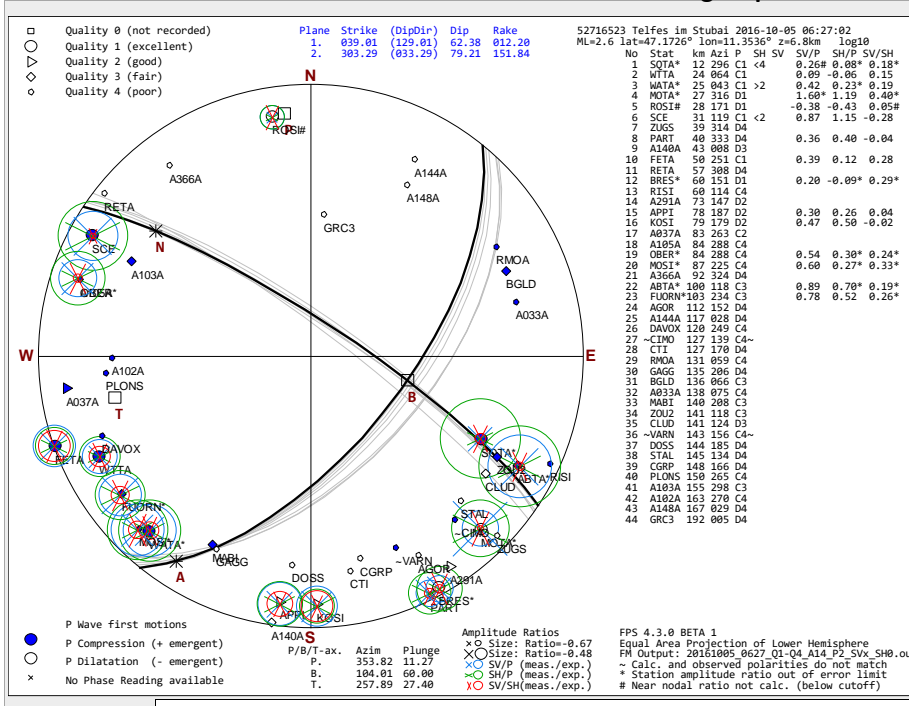
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	8
FPS quality (expl. at end)	373
	2

Contributors and References

Reiter & Alparay Working Group, 2017 (this Publ.) [1, 55]

Mechanism remarks Pers comm. N. Horn: FRTA, BITA not triggered, -> check with CF for FRTA (only 2,2 km from epicentre)

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Pl.	Azim	active
P-Axis			354	11°	
B-Axis			104	60°	
T-Axis			258	27°	
Plane1/A-Axis	039	62	012	213	11°
Plane2/N-Axis	303	79	152	309	28°

RMS for acceptable solutions⁴¹ log₁₀

RMS for all solutions⁴¹ log₁₀

Mechanism Class^{45 46}

Inferred active fault

Fault zone

Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	44	2	5%
SV Polarities	0	0	%
SH Polarities	3	0	0%
All Polarities	47	2	4%
P/SV/SH Pol. Q1	8	0	0%
P/SV/SH Pol. Q2	6	0	0%
P/SV/SH Pol. Q3	8	0	0%
P/SV/SH Pol. Q4	25	2	8%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	15	1	7%
SH/P Ampl. Ratios	15	6	40%
SV/SH Ampl. Ratios	15	7	47%
All Ampl. Ratios	45	14	31%

Event data

Seismotectonic Domain 8: Brenner-Intal transfer zone (BIT)

FPS ID **8.22** Ev ID **52766270** ID2 UTC **2017-05-12 07:44:12** MI **3,5** I₀ **4**

Epicenter **Völs** AT Lat **47,248°** Long **11,327°** z **13,4 km** a) z est. b) **13,4 km**

Event remarks **NLL ERH⁴⁷ 1,730 km NLL ERZ⁴⁷ 2,20 km z macro 16,2 km**

a) Loc. grid search with Stations<150km, this publication [57]
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	52				57 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

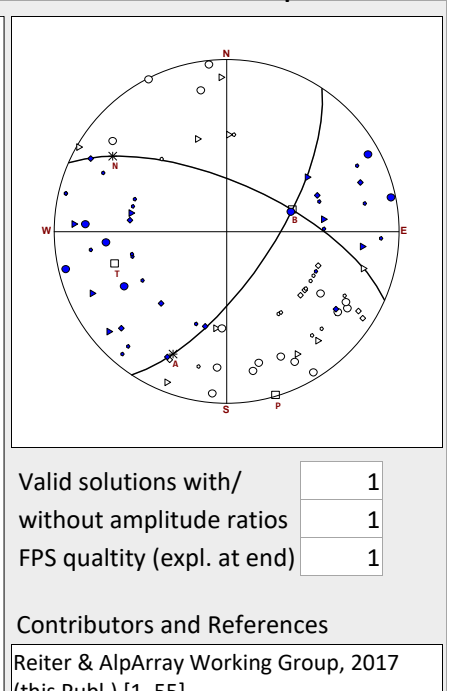
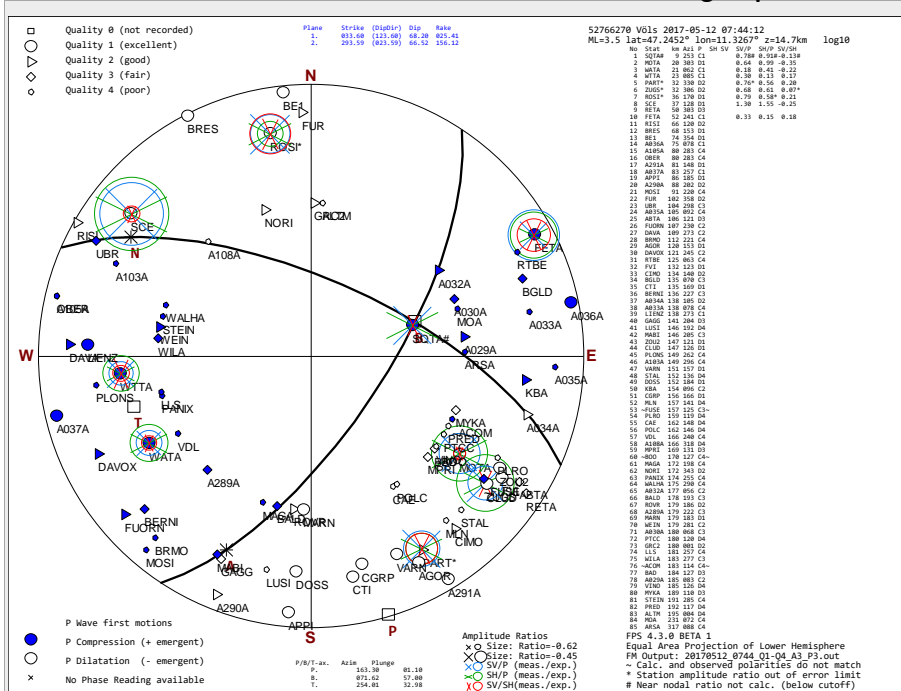
Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Mechanism remarks

Telfs-Patsch transfer fault

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis					163	01°	85	3	4%	
B-Axis					072	57°	0	0	%	
T-Axis					254	33°	0	0	%	
Plane1/A-Axis	034	68	025	204	23°		85	3	4%	
Plane2/N-Axis	294	67	156	304	22°		P Polarities			
RMS for acceptable solutions ⁴¹					0,29	log ₁₀	SV Polarities			
RMS for all solutions ⁴¹					0,35	log ₁₀	SH Polarities			
Mechanism Class ^{45 46}					SS-R		All Polarities			
Inferred active fault	Telfs-Patsch transfer fault						P/SV/SH Pol. Q1	23	0	0%
Fault zone	Strike-Slip: Telfs-Wipptal Transfer zone						P/SV/SH Pol. Q2	17	0	0%
Seismotectonic region	Stubai and Ötztal Alps, Texel Group						P/SV/SH Pol. Q3	15	1	7%
							P/SV/SH Pol. Q4	30	2	7%
							P/SV/SH Pol. Q0	0	0	%
							SV/P Ampl. Ratios	9	1	11%
							SH/P Ampl. Ratios	9	1	11%
							SV/SH Ampl. Ratios	9	1	11%
							All Ampl. Ratios	27	3	11%

Seismotectonic Domain 9: North Alpine thrust domain (NA)

ID	UTC	Lat	Long	z	Epicenter	MI	MecClass
9.03	1996-07-15 22:22:00	47,63	12,40	10,0	Schwendt	3,1	R
9.04	1996-10-03 09:29:25	47,43	11,87	5,0	Kramsach	2,9	R
9.05	1996-11-21 23:08:12	47,24	10,48	5,0	Zams	2,7	R
9.06	1997-08-11 15:04:07	47,31	11,32	4,0	Zirl	2,7	SS-R
9.07	1997-10-19 10:30:58	47,38	11,80	7,0	Buch in Tirol	3,0	R
9.08	1998-02-19 05:04:57	47,32	13,35	10,0	Pfarrwerfen	3,3	R
9.09	1998-03-09 02:17:29	47,31	11,27	9,0	Zirl	2,5	N-SS
9.10	1998-03-09 02:49:32	47,30	11,31	8,0	Zirl	2,3	R-SS
9.11	1998-03-20 03:11:42	47,16	9,65	4,0	Nenzing	3,3	R
9.12	1998-09-20 02:52:52	47,31	11,32	10,0	Innsbruck	3,1	R
9.13	1999-05-16 10:24:08	47,53	10,43	16,0	Hindelang, Bayern	2,8	R
9.14	1999-08-28 11:49:18	47,35	10,86	15,0	Biberwier	3,4	R
9.16	2000-05-12 13:16:11	47,62	12,93	10,0	Berchtesgaden, Ramsau	3,3	R-SS
9.17	2000-09-04 03:48:55	47,46	12,02	6,0	Kundl	2,6	N
9.18	2001-06-08 20:45:30	47,30	10,68	5,0	Imst	2,7	N
9.19	2001-08-07 21:55:40	47,29	10,39	7,0	Bach	2,7	R
9.20	2002-02-28 21:04:37	47,49	11,22	6,2	Garmisch-Partenkirchen	3,3	N
9.21	2003-05-08 03:36:08	47,42	11,87	8,0	Reith im Alpbachtal	2,6	R
9.22	2003-05-08 03:38:04	47,39	11,76	8,0	Jenbach	2,1	R
9.23	2003-05-12 07:51:03	47,40	11,81	5,9	Wiesing	2,8	R
9.25	2003-11-09 12:06:00	47,23	9,61	2,0	Feldkirch	2,9	SS-N
9.26	2004-05-22 11:35:01	47,27	11,77	11,1	Fügenberg	2,1	SS-N
9.27	2004-05-22 12:18:43	47,28	11,81	11,9	Fügenberg	3,4	N-SS
9.30	2004-07-22 12:12:27	47,63	12,04	7,3	Ursprungpaß S' Bayrischzell	3,3	N
9.31	2005-07-04 23:02:35	47,23	10,50	9,0	Zams	2,8	R
9.32	2006-01-31 22:41:31	47,55	12,06	8,0	Langkampfen	2,9	R
9.33	2006-05-23 12:57:39	47,34	11,46	8,5	Absam	3,2	N
9.34	2006-09-18 20:49:07	47,29	11,40	7,8	Innsbruck	2,7	R
9.35	2006-11-08 22:25:14	47,32	11,00	11,5	Wildermieming	2,8	R
9.36	2006-11-15 23:16:07	47,37	11,49	5,5	Scharnitz	2,8	SS-N
9.37	2007-09-26 15:38:21	47,34	11,46	9,4	Absam	2,7	R
9.38	2008-02-16 09:52:36	47,27	11,73	12,4	Weerberg	2,7	SS-N
9.39	2008-03-09 17:28:40	47,44	11,49	6,8	Vomp	2,6	R
9.40	2008-09-10 13:57:26	47,35	11,02	10,0	Wildermieming	3,0	R
9.41	2008-09-15 17:27:01	47,41	11,28	12,0	N' Scharnitz	2,6	R
9.42	2008-12-16 11:22:20	47,26	9,99	6,7	Sonntag	2,7	R
9.43	2009-04-01 05:23:54	47,36	12,30	13,1	Kirchberg in Tirol	2,7	R-SS
9.44	2010-09-23 12:29:53	47,29	10,37	5,9	Elbigenalp	2,8	R
9.45	2010-10-12 16:53:05	47,35	11,67	11,8	Vomp	3,1	R
9.46	2010-10-19 00:38:28	47,33	11,65	13,6	Vomp	4,0	R
9.47	2010-10-23 12:40:27	47,35	10,87	8,1	Biberwier	3,2	R
9.49	2010-12-01 00:19:39	47,35	11,67	14,1	Vomp	2,9	R
9.50	2011-03-12 08:01:20	47,35	12,44	6,2	Jochberg	3,5	R
9.51	2011-11-20 03:24:21	47,42	12,87	2,0	Saalfelden am Steinernen Meer	2,9	R
9.52	2011-11-20 03:27:55	47,42	12,84	2,0	Saalfelden am Steinernen Meer	2,7	R
9.53	2012-01-19 21:06:12	47,30	11,44	1,6	Rum	2,2	R-SS
9.54	2012-03-06 22:23:53	47,43	12,04	8,0	Wildschönau	3,0	R
9.55	2012-06-26 14:22:49	47,38	11,90	11,9	Reith im Alpbachtal	2,8	R
9.56	2012-07-03 09:44:57	47,26	11,60	11,9	Wattenberg	2,8	R
9.57	2013-01-04 04:25:45	47,28	10,89	9,4	Obsteig	2,3	R
9.58	2013-01-27 10:17:46	47,33	11,77	9,9	Schwaz	2,7	N
9.59	2013-01-31 04:36:26	47,26	11,70	8,5	Weerberg	2,8	R

9.60	2013-04-18 13:29:29	47,52	12,02	8,0	Angerberg	2,7	R
9.62	2013-05-08 13:31:05	47,27	11,75	9,8	Schwaz	2,8	R
9.63	2013-05-22 03:21:46	47,55	12,67	2,0	Sankt Martin bei Lofer	3,2	R-SS
9.64	2013-08-09 10:44:07	47,27	11,46	7,2	Thaur	3,7	R
9.65	2013-08-16 23:00:21	47,52	12,68	2,0	Sankt Martin bei Lofer	2,6	R-SS
9.66	2013-10-29 22:59:27	47,28	10,77	1,7	Tarrenz	2,8	R-SS
9.67	2015-12-29 20:54:15	47,60	12,88	8,1	Lofer	3,0	R
9.68	2016-02-26 18:50:13	47,30	10,93	7,4	Obsteig	2,4	R
9.69	2016-07-22 11:28:21	47,33	11,17	11,9	Seefeld in Tirol	3,0	R
9.70	2016-07-22 11:58:01	47,33	11,17	12,6	Seefeld in Tirol	3,2	R
9.71	2016-07-22 12:06:19	47,33	11,17	10,9	Seefeld in Tirol	2,8	R
9.72	2016-07-25 12:05:29	47,33	11,17	12,1	Seefeld in Tirol	3,5	R
9.73	2016-07-30 20:40:03	47,26	11,75	9,3	Fügenberg	2,8	R
9.74	2016-09-16 06:29:14	47,33	11,67	11,1	Vomp	2,8	R
9.75	2016-10-07 09:42:18	47,53	11,01	7,5	Garmisch	2,5	R
9.76	2017-01-12 17:21:44	47,32	11,44	2,0	Thaur	2,7	R
9.77	2017-07-15 23:33:22	47,34	11,47	7,4	Absam	2,5	N

Missing event ID's belong to already published events. Results are listed, illustrated and cited in the main publication. No datasheets exist.

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat ° Long ° z km a) z est. b) km

Event remarks Err ° zErr km z macro km

a) Loc. ZAMG standard location, z=calculated macroseismic depth
 det./ refs. [64]
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

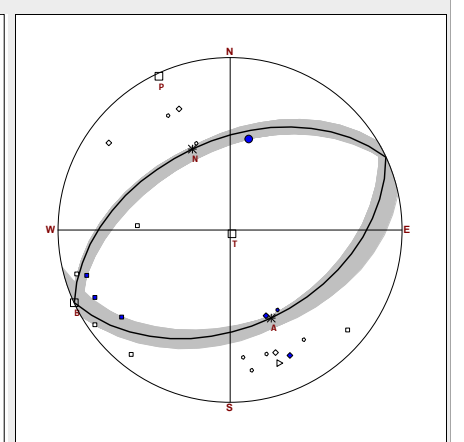
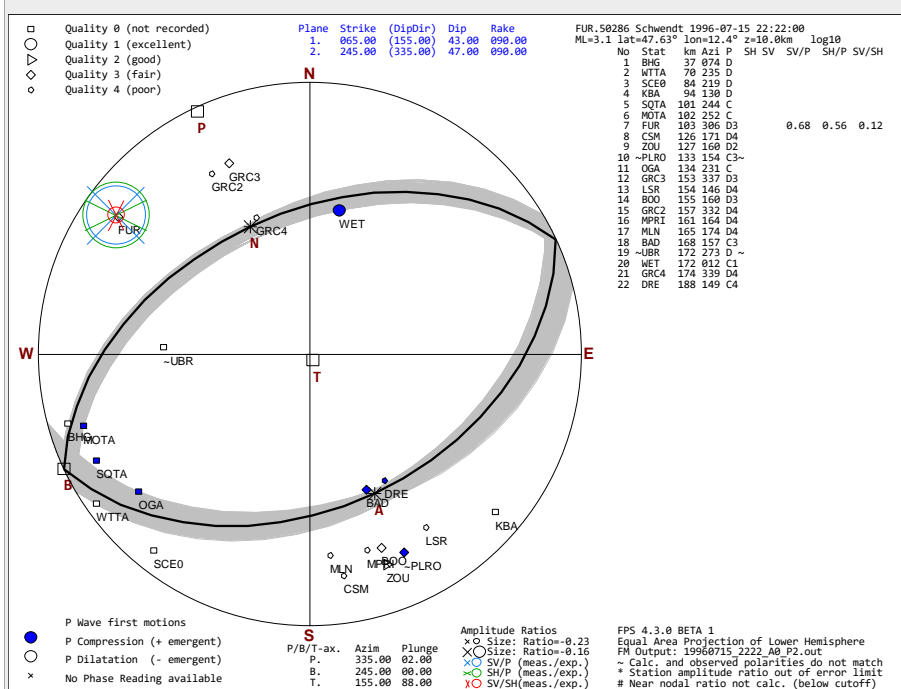
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	119		152	°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	256
FPS quality (expl. at end)	308
	4

Contributors and References
 Reiter, 2004-2017 (this Publ.) [1]

Mechanism remarks
 no ZAMG waveform data available
 AGENCY readings with d>= 300 km skipped

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				335	02	°
B-Axis				065	00	°
T-Axis				155	88	°
Plane1/A-Axis	065	43	090	155	43	°
Plane2/N-Axis	245	47	090	335	47	°

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Reverse fault in European upper crust between Kufstein and Salzburg
 Fault zone: Thrust/Reverse fault: Compression in European basement
 Seismotectonic region: NCA between Kufstein and Salzburg

	Total	Misfit abs.	Misfit rel.
P Polarities	22	2	9%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	22	2	9%
P/SV/SH Pol. Q1	1	0	0%
P/SV/SH Pol. Q2	1	0	0%
P/SV/SH Pol. Q3	5	1	20%
P/SV/SH Pol. Q4	7	0	0%
P/SV/SH Pol. Q0	8	1	12%
SV/P Ampl. Ratios	1	0	0%
SH/P Ampl. Ratios	1	0	0%
SV/SH Ampl. Ratios	1	0	0%
All Ampl. Ratios	3	0	0%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z

Event remarks Err ° zErr km z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	42		63 °		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

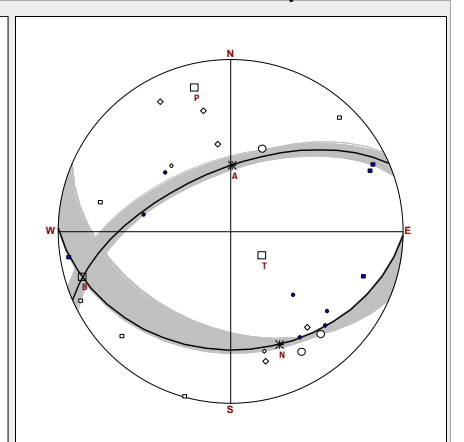
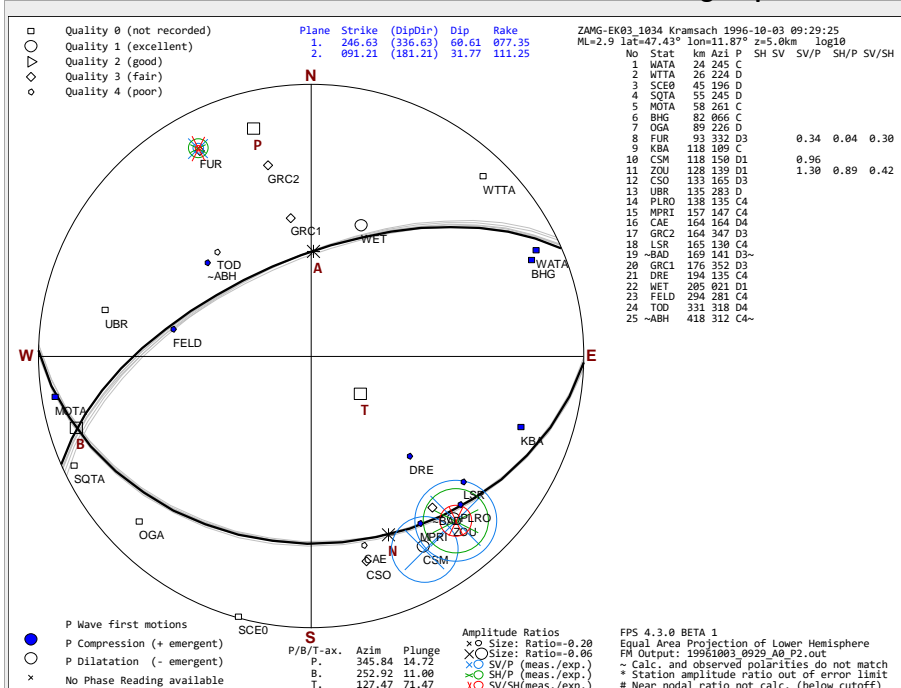
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	6
FPS quality (expl. at end)	195
	4

Contributors and References
 Reiter, 2005-2017 (this Publ.) [1, 52]

Mechanism remarks Some waveforms from Diehl et al., 2009
 no ZAMG waveform data available
 agency readings >200km skipped

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					346	15°	
B-Axis					253	11°	
T-Axis					127	71°	
Plane1/A-Axis	247	61	077	001	58°		<input type="checkbox"/>
Plane2/N-Axis	091	32	111	157	29°		<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: North Alpine floor thrust: Lower Inn valley section
 Fault zone: Thrust: Alpine Floor Thrust below the NCA
 Seismotectonic region: Lower Inn Valley

	Total	Misfit abs.	Misfit rel.
P Polarities	25	2	8%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	25	2	8%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	0	0	%
P/SV/SH Pol. Q3	5	1	20%
P/SV/SH Pol. Q4	8	1	12%
P/SV/SH Pol. Q0	9	0	0%
SV/P Ampl. Ratios	3	0	0%
SH/P Ampl. Ratios	2	0	0%
SV/SH Ampl. Ratios	2	0	0%
All Ampl. Ratios	7	0	0%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro

Macroseismic Epicenter: Elbigenalp

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	2	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	2	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	2	88 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	111				115 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

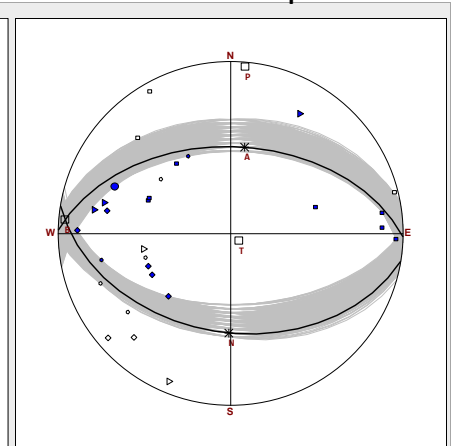
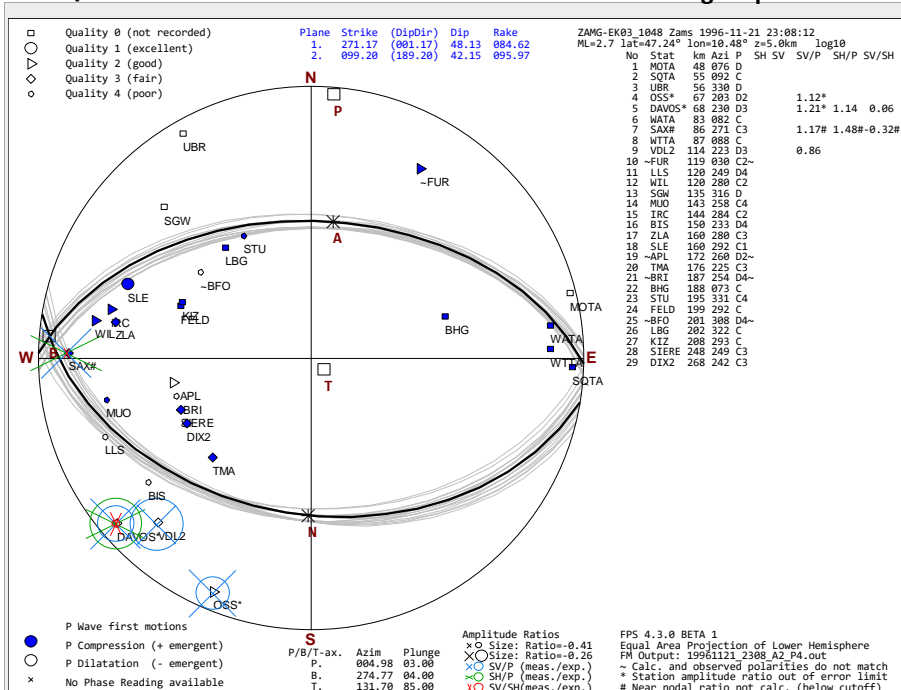
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	18
FPS quality (expl. at end)	3

Contributors and References

Reiter, 2005-2017 (this Publ.), using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks no OASIS/ZAMG waveform data available
 Agency readings >250km skipped

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					005	03°	
B-Axis					275	04°	
T-Axis					132	85°	
Plane1/A-Axis	271	48	085	009	48°		<input type="checkbox"/>
Plane2/N-Axis	099	42	096	181	42°		<input type="checkbox"/>
RMS for acceptable solutions ⁴¹						0,36	log ₁₀
RMS for all solutions ⁴¹						0,61	log ₁₀
Mechanism Class ^{45 46}						R	
Inferred active fault	North Alpine floor thrust in the Lechtal Alps						
Fault zone	Thrust: Alpine Floor Thrust below the NCA						
Seismotectonic region	Arlberg and Lechtal Alps						

	Total	Misfit abs.	Misfit rel.
P Polarities	29	4	14%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	29	4	14%
P/SV/SH Pol. Q1	1	0	0%
P/SV/SH Pol. Q2	5	2	40%
P/SV/SH Pol. Q3	7	0	0%
P/SV/SH Pol. Q4	6	2	33%
P/SV/SH Pol. Q0	10	0	0%
SV/P Ampl. Ratios	4	2	50%
SH/P Ampl. Ratios	2	0	0%
SV/SH Ampl. Ratios	2	0	0%
All Ampl. Ratios	8	2	25%

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

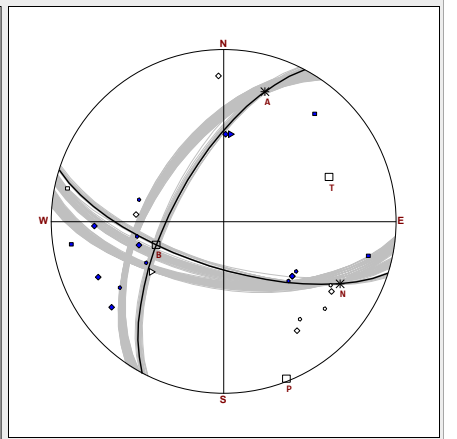
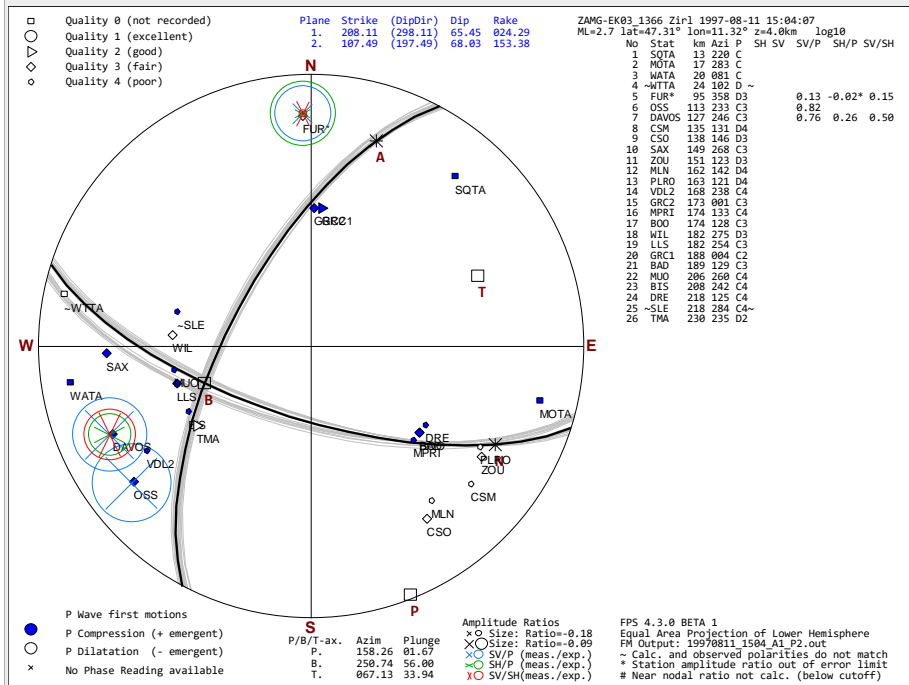
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	86				99 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	17
FPS quality (expl. at end)	75
	3

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks no ZAMG waveform data available
 Agency readings >200km skipped

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Strike	Dip	Rake	Azim	Pl.	active
P-Axis						158	02°	
B-Axis						251	56°	
T-Axis						067	34°	
Plane1/A-Axis	208	65	024	017	22°			<input type="checkbox"/>
Plane2/N-Axis	107	68	153	118	25°			<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	26	2	8%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	26	2	8%
P/SV/SH Pol. Q1	0	0	%
P/SV/SH Pol. Q2	2	0	0%
P/SV/SH Pol. Q3	11	0	0%
P/SV/SH Pol. Q4	9	1	11%
P/SV/SH Pol. Q0	4	1	25%
SV/P Ampl. Ratios	3	0	0%
SH/P Ampl. Ratios	2	1	50%
SV/SH Ampl. Ratios	2	0	0%
All Ampl. Ratios	7	1	14%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z

Event remarks Err ° zErr km z macro

Kraft: x 47,38217, y11,80083, z7

a) Loc. standard location, parameters see [3]
 det./ refs.
 b) z estim. z set to average of zZamg micro and zZamg macro [64]
 based on

FocMec⁴¹	Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="359"/> °
	Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="90"/> °
	Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="89"/> °
	Lower Limit of S rad. Factor	<input type="text" value="0,15"/>			
	Prim./sec. Azimuthal Gap ³²	<input type="text" value="43"/>		<input type="text" value="66"/> °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

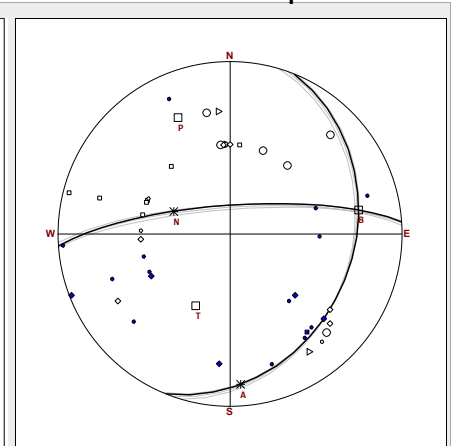
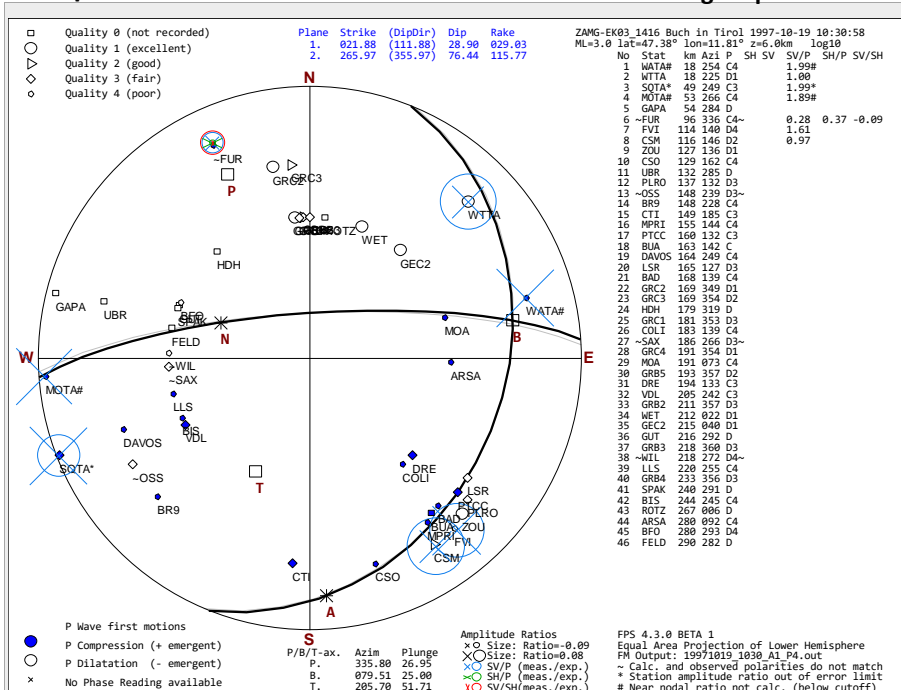
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="2"/>
FPS quality (expl. at end)	<input type="text" value="4"/>
	<input type="text" value="3"/>

Contributors and References

Reiter, 2004-2017 (this Publ.), changed from Kraft, 1999; using waveform data from Diehl et al., 2009 [3, 51, 52]

Mechanism remarks TRANSALP pick polarities from Kraft, 1999; sv and sh readings of Kraft, 1999 skipped; Agency readings >200km skipped; solution strongly different from Kraft, 1999

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis				336	27°		46	4	9%
B-Axis				080	25°		0	0	%
T-Axis				206	52°		0	0	%
Plane1/A-Axis	022	29	029	176	14°	<input type="checkbox"/>	46	4	9%
Plane2/N-Axis	266	76	116	292	61°	<input type="checkbox"/>			
RMS for acceptable solutions ⁴¹					0,36	log ₁₀			
RMS for all solutions ⁴¹					0,53	log ₁₀			
Mechanism Class ^{45 46}					R				
Inferred active fault	Brixlegg thrust, Schwaz section								
Fault zone	Thrust: basal thrust of Tauern Window								
Seismotectonic region	Tux & Kitzbuehel Alps (south of Inn valley)								
P Polarities							46	4	9%
SV Polarities							0	0	%
SH Polarities							0	0	%
All Polarities							46	4	9%
P/SV/SH Pol. Q1							6	0	0%
P/SV/SH Pol. Q2							3	0	0%
P/SV/SH Pol. Q3							13	2	15%
P/SV/SH Pol. Q4							16	2	12%
P/SV/SH Pol. Q0							8	0	0%
SV/P Ampl. Ratios							7	1	14%
SH/P Ampl. Ratios							1	0	0%
SV/SH Ampl. Ratios							1	0	0%
All Ampl. Ratios							9	1	11%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	72				109 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

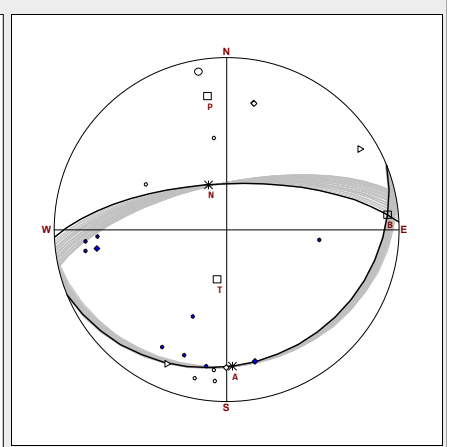
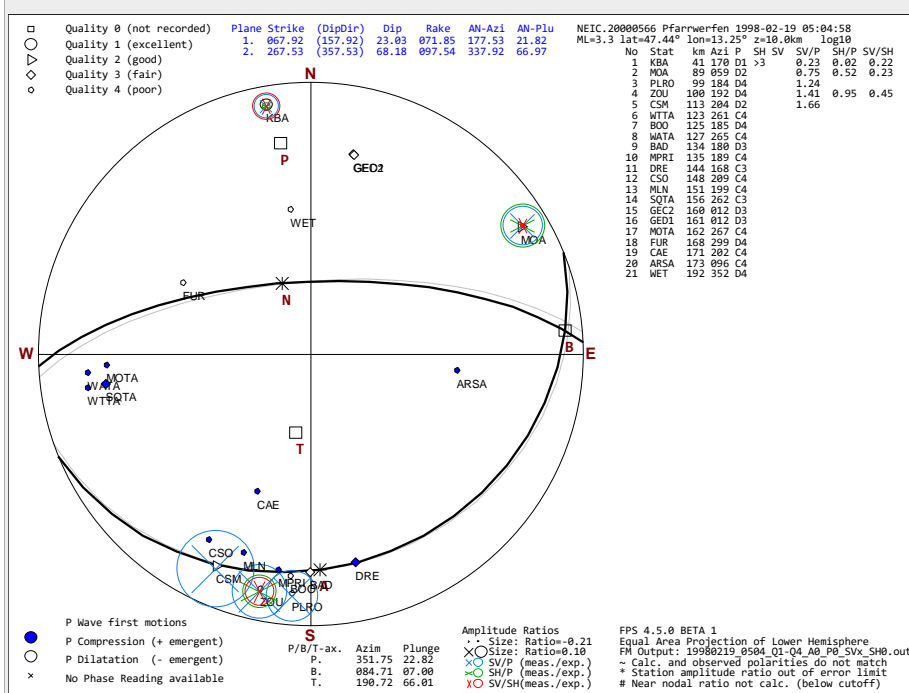
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	27
Contributors and References	3

Reiter, 2017 (this Publ.) [1]

Mechanism remarks
 no waveform data from Diehl et al., 2009 available
 no SED, INGV, ODC, GFZ data available

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Pl.	Azim	Pl.	active
P-Axis			352		23°	
B-Axis			085		07°	
T-Axis			191		66°	
Plane1/A-Axis	068	23	072	178	22°	<input type="checkbox"/>
Plane2/N-Axis	268	68	098	338	67°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: North Alpine floor thrust: Tennengebirge section
 Fault zone: Thrust: Alpine Floor Thrust below the NCA
 Seismotectonic region: Central and eastern NCA

	Total	Misfit abs.	Misfit rel.
P Polarities	21	0	0%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	22	0	0%
P/SV/SH Pol. Q1	1	0	0%
P/SV/SH Pol. Q2	2	0	0%
P/SV/SH Pol. Q3	6	0	0%
P/SV/SH Pol. Q4	13	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	5	0	0%
SH/P Ampl. Ratios	3	0	0%
SV/SH Ampl. Ratios	3	0	0%
All Ampl. Ratios	11	0	0%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat ° Long ° z km a) z est. b) km

Event remarks Err ° zErr km z macro km

a) Loc. det./ refs. b) z estim. based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.		
Relative Weighting	No	B Trend	0	1	359	°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90	°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89	°
Lower Limit of S rad. Factor	0,15					
Prim./sec. Azimuthal Gap ³²	80				80	°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

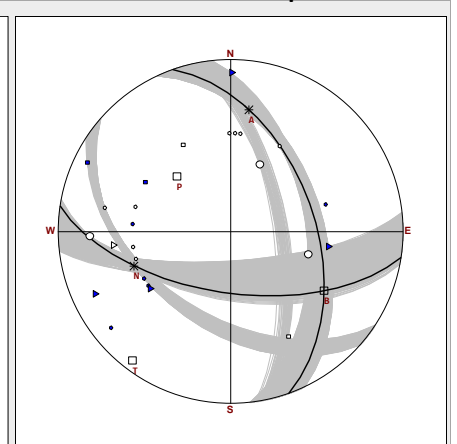
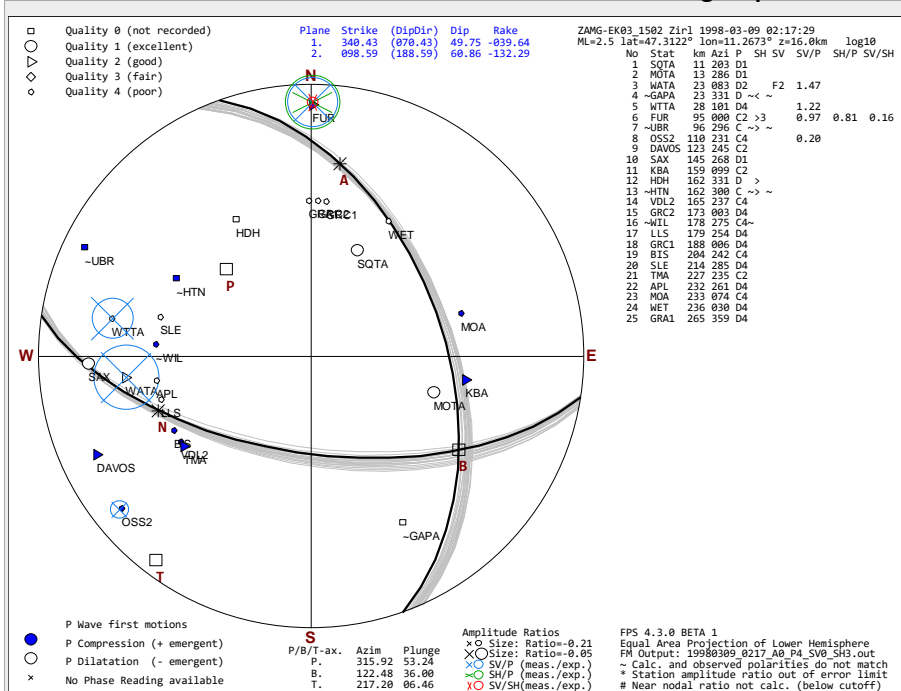
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	18
FPS quality (expl. at end)	722
	4

Contributors and References

Reiter, 2017 (this Publ.), using polarities from Kraft, 1999 and waveform data from Diehl et al., 2009 [3, 51, 52]

Mechanism remarks no OASIS, SED waveform data available Sv first onsets from Kraft, 1999 not used

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					316	53	°
B-Axis					122	36	°
T-Axis					217	06	°
Plane1/A-Axis	340	50	-040	009	29		°
Plane2/N-Axis	099	61	-132	250	40		°

RMS for acceptable solutions⁴¹ log₁₀

RMS for all solutions⁴¹ log₁₀

Mechanism Class^{45 46}

Inferred active fault

Fault zone

Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	25	4	16%
SV Polarities	1	0	0%
SH Polarities	5	3	60%
All Polarities	31	7	23%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	6	0	0%
P/SV/SH Pol. Q3	1	0	0%
P/SV/SH Pol. Q4	13	1	8%
P/SV/SH Pol. Q0	8	6	75%
SV/P Ampl. Ratios	4	0	0%
SH/P Ampl. Ratios	1	0	0%
SV/SH Ampl. Ratios	1	0	0%
All Ampl. Ratios	6	0	0%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr km z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹	Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	<input type="text" value="No"/>	0	2	359°
	Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	0	2	90°
	Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	0	2	88°
	Lower Limit of S rad. Factor	<input type="text" value="0,15"/>			
	Prim./sec. Azimuthal Gap ³²	<input type="text" value="87"/>			99°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

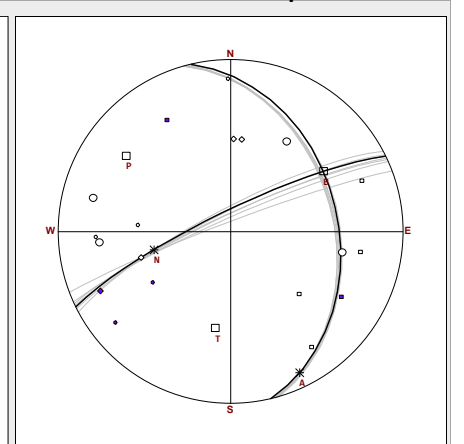
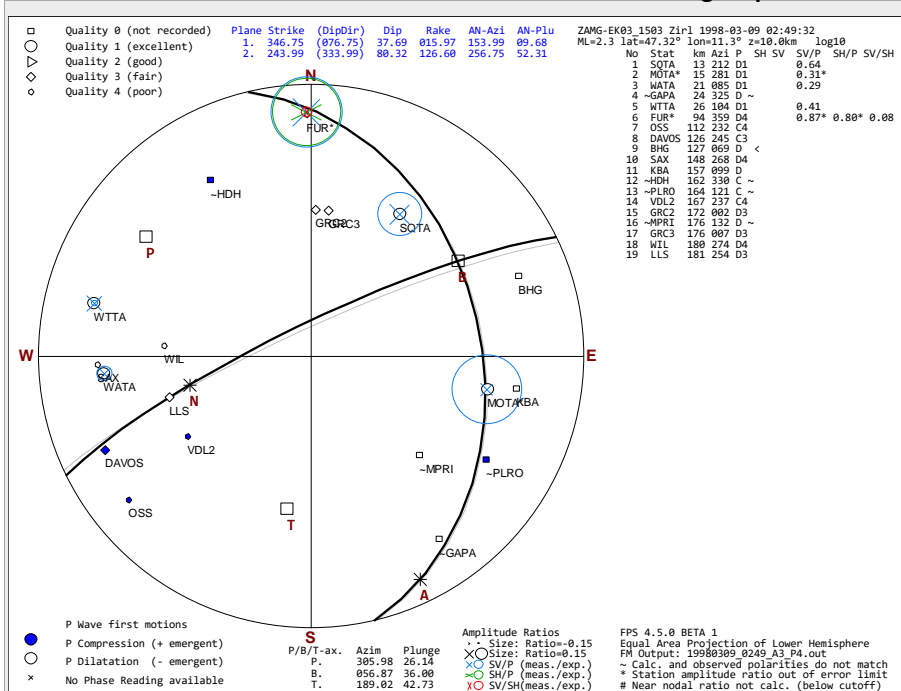
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="2"/>
FPS quality (expl. at end)	<input type="text" value="7"/>
	<input type="text" value="4"/>

Contributors and References

Reiter, 2017 (this Publ.), using polarities from Kraft, 1999 and waveform data from Diehl et al., 2009 [3, 51, 52]

Mechanism remarks waveform data from Diehl et al., 2009
 no OASIS waveform data available
 all readings >200km skipped

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				306	26°	
B-Axis				057	36°	
T-Axis				189	43°	
Plane1/A-Axis	347	38	016	154	10°	<input type="checkbox"/>
Plane2/N-Axis	244	80	127	257	52°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	19	4	21%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	20	4	20%
P/SV/SH Pol. Q1	4	0	0%
P/SV/SH Pol. Q2	0	0	%
P/SV/SH Pol. Q3	4	0	0%
P/SV/SH Pol. Q4	5	0	0%
P/SV/SH Pol. Q0	7	4	57%
SV/P Ampl. Ratios	5	2	40%
SH/P Ampl. Ratios	1	1	100%
SV/SH Ampl. Ratios	1	0	0%
All Ampl. Ratios	7	3	43%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	56				67°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

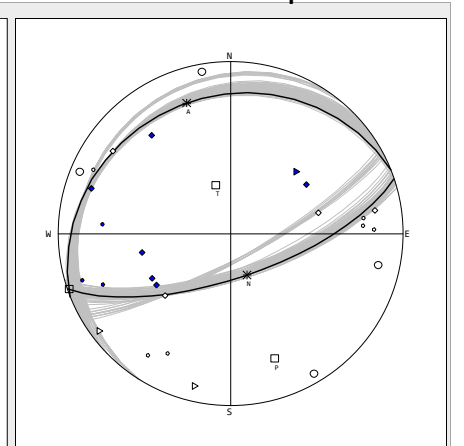
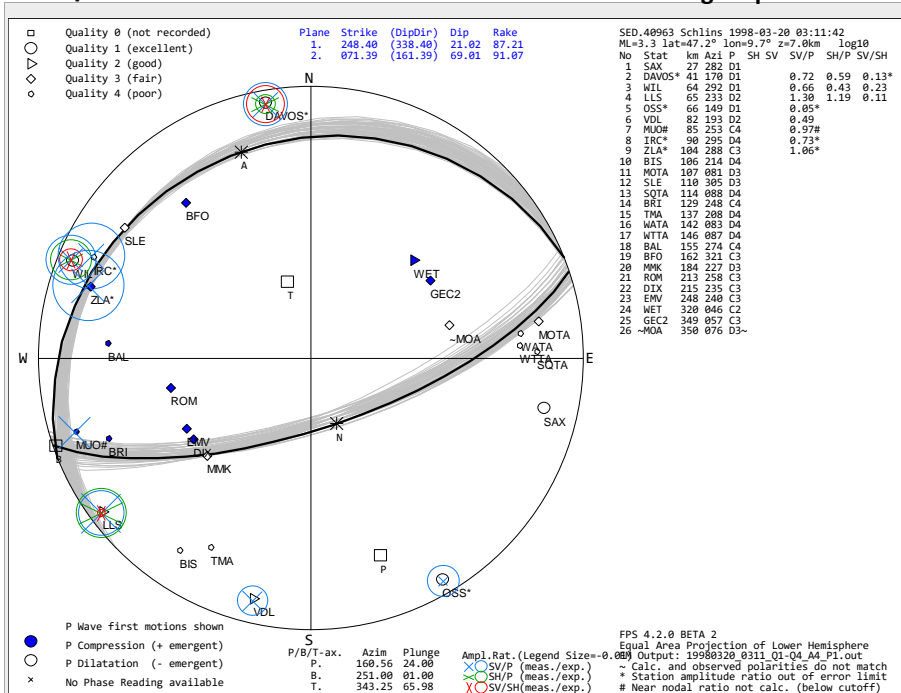
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	47
FPS quality (expl. at end)	59
	3

Contributors and References

Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					161	24°	
B-Axis					251	01°	
T-Axis					343	66°	
Plane1/A-Axis	248	21	087	341	21°		<input type="checkbox"/>
Plane2/N-Axis	071	69	091	158	69°		<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	26	1	4%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	26	1	4%
P/SV/SH Pol. Q1	4	0	0%
P/SV/SH Pol. Q2	3	0	0%
P/SV/SH Pol. Q3	10	1	10%
P/SV/SH Pol. Q4	9	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	8	3	38%
SH/P Ampl. Ratios	3	0	0%
SV/SH Ampl. Ratios	3	1	33%
All Ampl. Ratios	14	4	29%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat ° Long ° z km a) z est. b) km

Event remarks Err ° zErr km z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.		
Relative Weighting	No	B Trend	0	1	359	°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90	°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89	°
Lower Limit of S rad. Factor	0,15					
Prim./sec. Azimuthal Gap ³²	85				96	°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

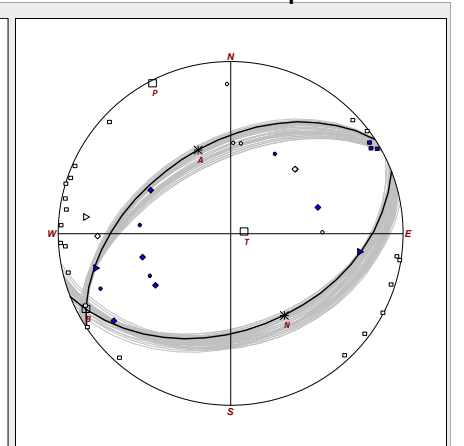
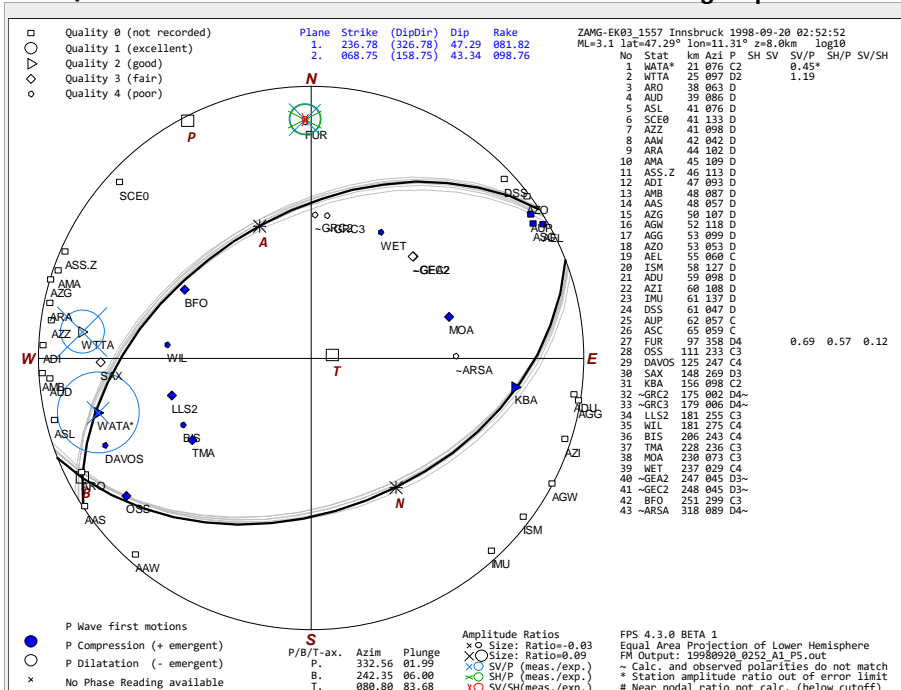
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	7
FPS quality (expl. at end)	42
	2

Contributors and References

Reiter & Lenhardt, 2004-2017 (this Publ.), using polarities from Kraft, 1999 [3, 51]

Mechanism remarks no OASIS data available
 Transalp Station Picks from Kraft, 1998 (all shear wave polarities skipped). Solution different from Kraft, 1998

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis				333	02	°			
B-Axis				242	06	°			
T-Axis				081	84	°			
Plane1/A-Axis	237	47	082	339	47	°			
Plane2/N-Axis	069	43	099	147	43	°			
RMS for acceptable solutions ⁴¹					0,29	log ₁₀			
RMS for all solutions ⁴¹					0,50	log ₁₀			
Mechanism Class ^{45 46}					R				
Inferred active fault	Innsbruck thrust								
Fault zone	Thrust: Intra-nappe stack thrust in Austroalpine								
Seismotectonic region	Lower Inn Valley and adjacent mountains								
P Polarities							43	5	12%
SV Polarities							0	0	%
SH Polarities							0	0	%
All Polarities							43	5	12%
P/SV/SH Pol. Q1							0	0	%
P/SV/SH Pol. Q2							3	0	0%
P/SV/SH Pol. Q3							8	2	25%
P/SV/SH Pol. Q4							8	3	38%
P/SV/SH Pol. Q0							24	0	0%
SV/P Ampl. Ratios							3	1	33%
SH/P Ampl. Ratios							1	0	0%
SV/SH Ampl. Ratios							1	0	0%
All Ampl. Ratios							5	1	20%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter DE Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro

a) Loc. ZAMG standard location, z=calculated macroseismic depth [64]
 b) z estim. based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	85				85 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

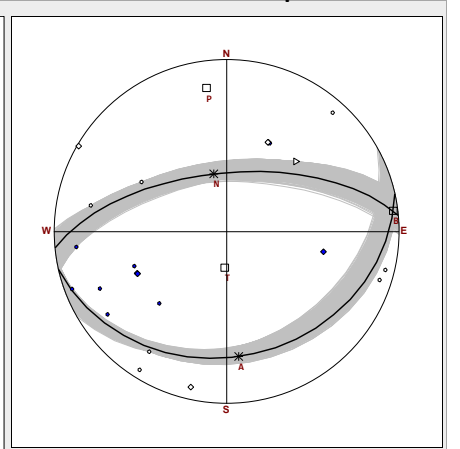
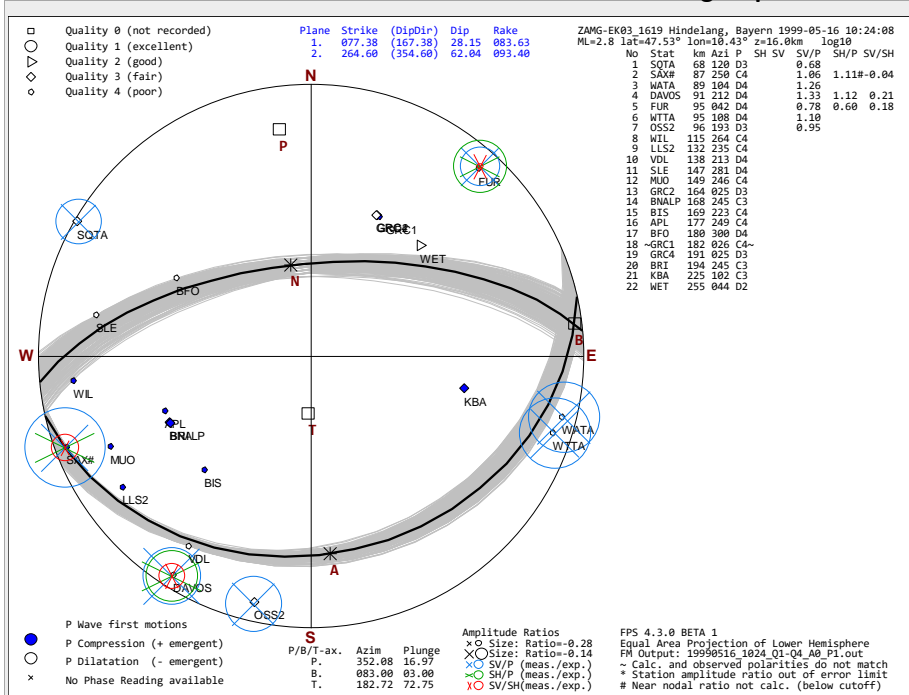
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	163
FPS quality (expl. at end)	399
	3

Contributors and References
 Reiter, 2017 (this Publ.), using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					352	17°	
B-Axis					083	03°	
T-Axis					183	73°	
Plane1/A-Axis	077	28	084	175	28°		<input type="checkbox"/>
Plane2/N-Axis	265	62	093	347	62°		<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Reverse fault in European upper crust below front of NCA
 Fault zone: Thrust/Reverse fault: Compression in European basement
 Seismotectonic region: NCA between Innsbruck and Arlberg

	Total	Misfit abs.	Misfit rel.
P Polarities	22	1	5 %
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	22	1	5 %
P/SV/SH Pol. Q1	0	0	%
P/SV/SH Pol. Q2	1	0	0 %
P/SV/SH Pol. Q3	7	0	0 %
P/SV/SH Pol. Q4	14	1	7 %
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	7	0	0 %
SH/P Ampl. Ratios	3	0	0 %
SV/SH Ampl. Ratios	3	0	0 %
All Ampl. Ratios	13	0	0 %

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro

a) Loc. ZAMG standard location, z=calculated macroseismic depth
 det./ refs. [64]
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	44	78 °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

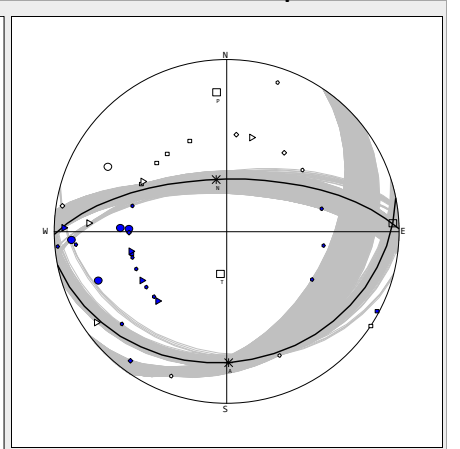
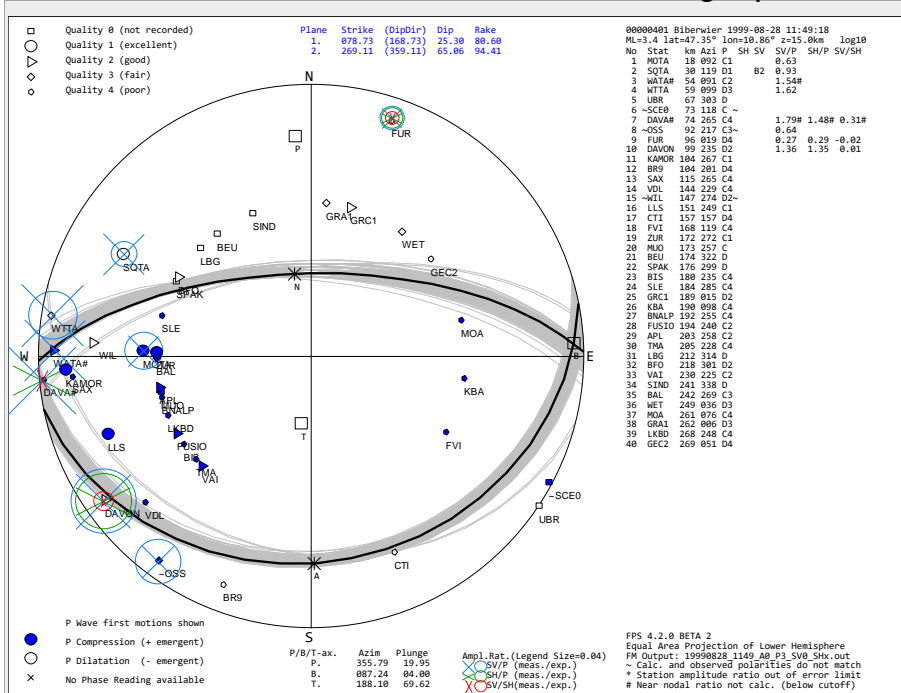
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	94
FPS quality (expl. at end)	1

Contributors and References
 Lenhardt & Reiter (2003-2017), this Publ. [1]

Mechanism remarks
 all agency pol. readings skipped for d>300km
 no OASIS data available (re-checked)

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				356	20°	
B-Axis				087	04°	
T-Axis				188	70°	
Plane1/A-Axis	079	25	081	179	25°	<input type="checkbox"/>
Plane2/N-Axis	269	65	094	349	65°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Reverse fault in European upper crust below Seefeld-Biberwier
 Fault zone: Thrust/Reverse fault: Compression in European basement
 Seismotectonic region: NCA between Innsbruck and Arlberg

	Total	Misfit abs.	Misfit rel.
P Polarities	40	3	8%
SV Polarities	1	0	0%
SH Polarities	0	0	%
All Polarities	41	3	7%
P/SV/SH Pol. Q1	5	0	0%
P/SV/SH Pol. Q2	9	1	11%
P/SV/SH Pol. Q3	5	1	20%
P/SV/SH Pol. Q4	15	0	0%
P/SV/SH Pol. Q0	7	1	14%
SV/P Ampl. Ratios	8	0	0%
SH/P Ampl. Ratios	3	0	0%
SV/SH Ampl. Ratios	3	0	0%
All Ampl. Ratios	14	0	0%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter DE Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	58				92°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

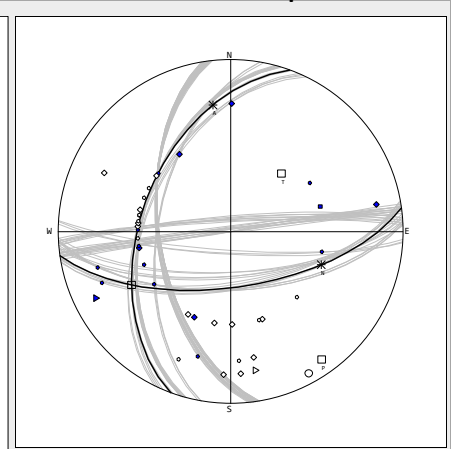
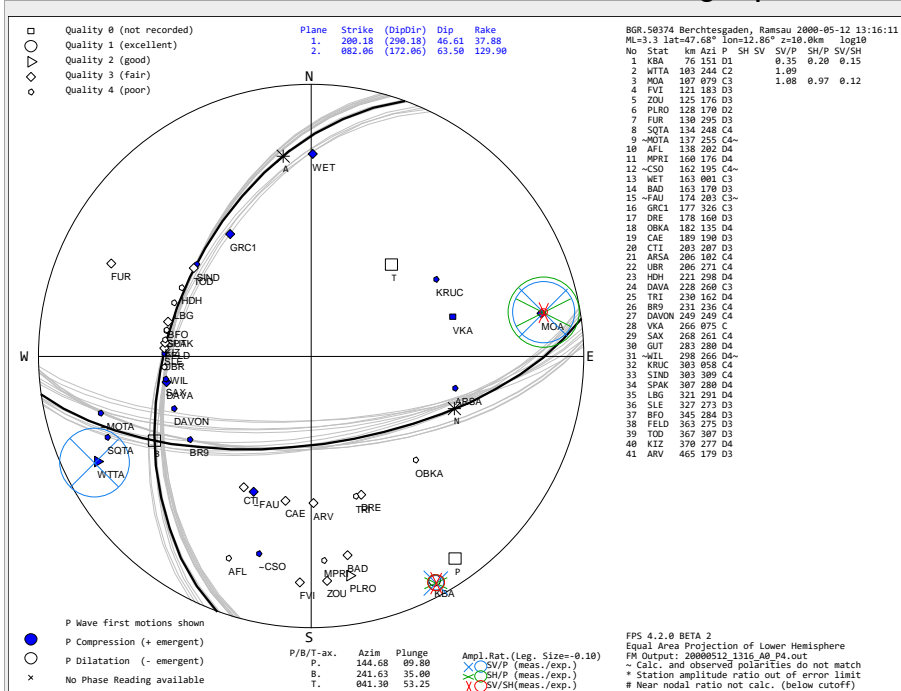
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	15
FPS quality (expl. at end)	3

Contributors and References
 Reiter, 2005-2017 (this Publ.) [1]

Mechanism remarks

Reverse fault in European upper crust, Lower Inn Valley

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rate	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis				145	10°		41	4	10%
B-Axis				242	35°		0	0	%
T-Axis				041	53°		0	0	%
Plane1/A-Axis	200	47	038	352	27°		41	4	10%
Plane2/N-Axis	082	64	130	110	43°		1	0	0%
RMS for acceptable solutions ⁴¹					0,23	log ₁₀			
RMS for all solutions ⁴¹					0,23	log ₁₀			
Mechanism Class ^{45 46}					R-SS				
Inferred active fault	Reverse fault in European upper crust, Lower Inn Valley								
Fault zone	Thrust/Reverse fault: Compression in European basement								
Seismotectonic region	Lower Inn Valley and adjacent mountains								
							All Polarities	4	10%
							P/SV/SH Pol. Q1	1	0%
							P/SV/SH Pol. Q2	2	0%
							P/SV/SH Pol. Q3	17	6%
							P/SV/SH Pol. Q4	20	15%
							P/SV/SH Pol. Q0	1	0%
							SV/P Ampl. Ratios	3	0%
							SH/P Ampl. Ratios	2	0%
							SV/SH Ampl. Ratios	2	0%
							All Ampl. Ratios	7	0%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	44				61 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

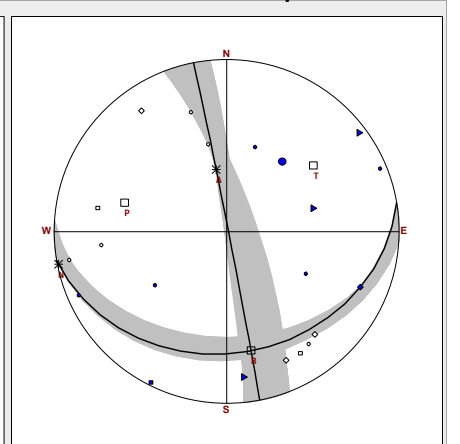
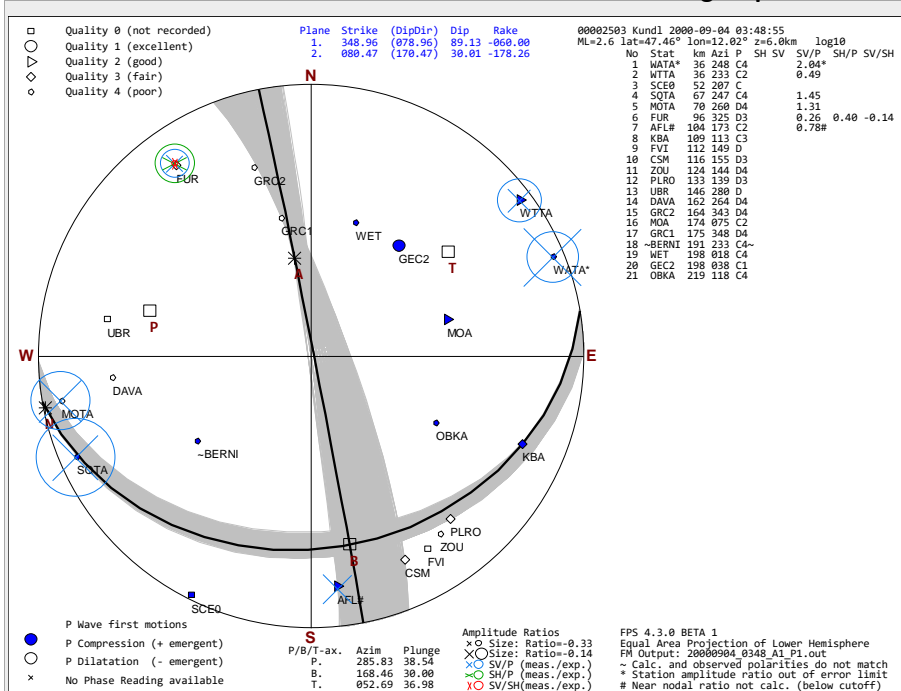
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	366
FPS quality (expl. at end)	760
	4

Contributors and References
 Reiter, 2017 (this Publ.), using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				286	39°	
B-Axis				168	30°	
T-Axis				053	37°	
Plane1/A-Axis	349	89	-060	350	60°	<input type="checkbox"/>
Plane2/N-Axis	080	30	-178	259	01°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault:
 Fault zone:
 Seismotectonic region:

	Total	Misfit abs.	Misfit rel.
P Polarities	21	1	5 %
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	21	1	5 %
P/SV/SH Pol. Q1	1	0	0 %
P/SV/SH Pol. Q2	3	0	0 %
P/SV/SH Pol. Q3	4	0	0 %
P/SV/SH Pol. Q4	10	1	10 %
P/SV/SH Pol. Q0	3	0	0 %
SV/P Ampl. Ratios	6	1	17 %
SH/P Ampl. Ratios	1	0	0 %
SV/SH Ampl. Ratios	1	0	0 %
All Ampl. Ratios	8	1	12 %

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro

a) Loc. ZAMG standard location, z=calculated macroseismic depth [64]
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

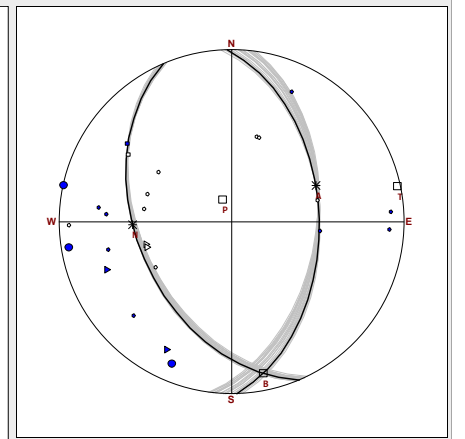
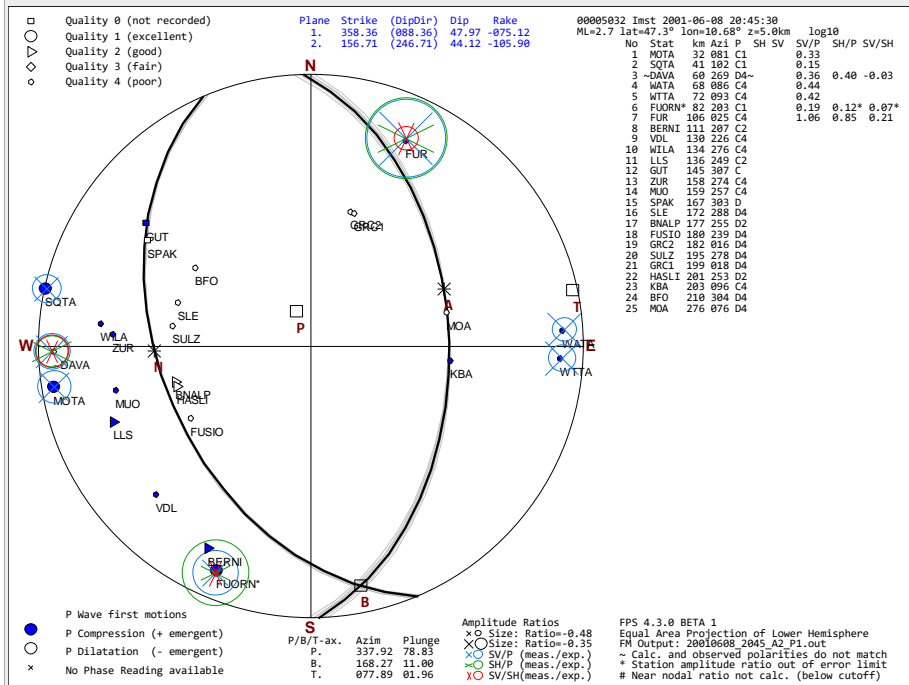
Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.	
Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="359°"/>
Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="90°"/>
Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="89°"/>
Lower Limit of S rad. Factor	<input type="text" value="0,15"/>				
Prim./sec. Azimuthal Gap ³²	<input type="text" value="107"/>				<input type="text" value="110°"/>

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	<input type="text" value="6"/>
FPS quality (expl. at end)	<input type="text" value="18"/>
	<input type="text" value="4"/>

Contributors and References

Reiter, 2017 (this Publ.), using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					338	79°	
B-Axis					168	11°	
T-Axis					078	02°	
Plane1/A-Axis	358	48		-075	067	46°	<input type="checkbox"/>
Plane2/N-Axis	157	44		-106	268	42°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀

RMS for all solutions⁴¹ log₁₀

Mechanism Class^{45 46}

Inferred active fault

Fault zone

Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	25	1	4%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	25	1	4%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	4	0	0%
P/SV/SH Pol. Q3	0	0	%
P/SV/SH Pol. Q4	16	1	6%
P/SV/SH Pol. Q0	2	0	0%
SV/P Ampl. Ratios	7	0	0%
SH/P Ampl. Ratios	3	1	33%
SV/SH Ampl. Ratios	3	1	33%
All Ampl. Ratios	13	2	15%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z z est. b)

Event remarks Err ° zErr km z macro

a) Loc. ZAMG standard location, z=calculated macroseismic depth
 det./ refs. [64]
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	55	84 °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

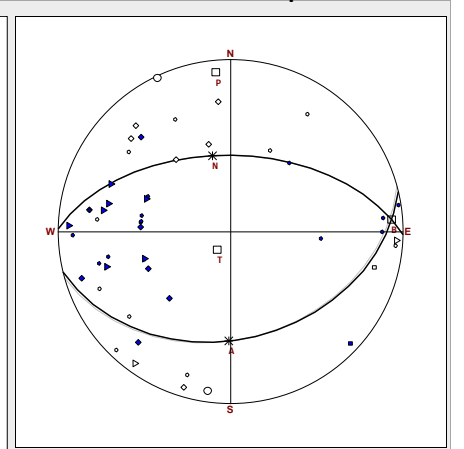
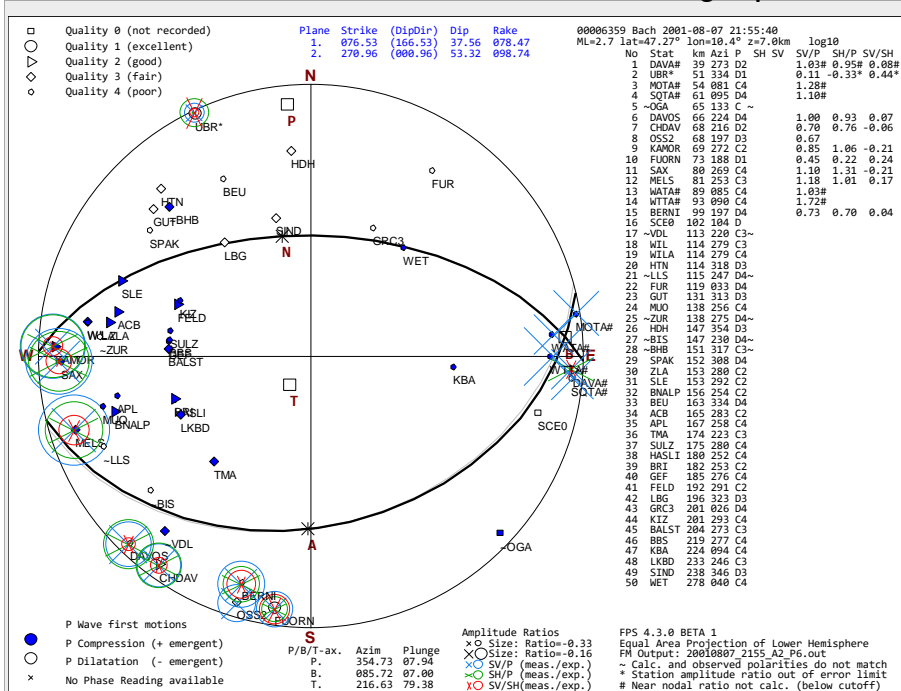
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	2

Contributors and References
 Reiter, 2005-2017 (this Publ.), using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks
 no OASIS waveform data available
 good amplitude ratio fit

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rate	Azim	Pl.	active
P-Axis				355	08°	
B-Axis				086	07°	
T-Axis				217	79°	
Plane1/A-Axis	077	38	078	181	37°	<input type="checkbox"/>
Plane2/N-Axis	271	53	099	347	52°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: North Alpine floor thrust in the Lechtal Alps
 Fault zone: Thrust: Alpine Floor Thrust below the NCA
 Seismotectonic region: Arlberg and Lechtal Alps

	Total	Misfit abs.	Misfit rel.
P Polarities	50	6	12%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	50	6	12%
P/SV/SH Pol. Q1	2	0	0%
P/SV/SH Pol. Q2	9	0	0%
P/SV/SH Pol. Q3	13	2	15%
P/SV/SH Pol. Q4	24	3	12%
P/SV/SH Pol. Q0	2	1	50%
SV/P Ampl. Ratios	14	0	0%
SH/P Ampl. Ratios	9	1	11%
SV/SH Ampl. Ratios	9	1	11%
All Ampl. Ratios	32	2	6%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter DE Lat Long z

Event remarks Err ° zErr km z macro

BW coord: 47,483;11,217 (no z given)-> z ZAMG used
old coordinate in EK03: 47,58/11,12/8km

a) Loc. det./ refs. based on
b) z estim. z averaged with macroseismic depth [64]

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. B Trend	0	Incr. B Plunge	1	Max. B Plunge	359
Relative Weighting	No	A Plunge	0		1		90
Accepted log ₁₀ Ampl. Rat. Error	0,5						
Lower Limit of P rad. Factor	0,05						
Lower Limit of S rad. Factor	0,15						
Prim./sec. Azimuthal Gap ³²	28		54				

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

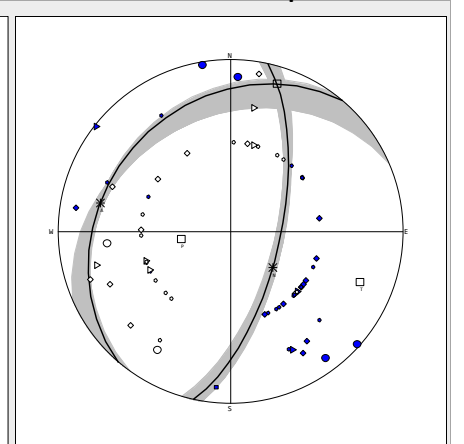
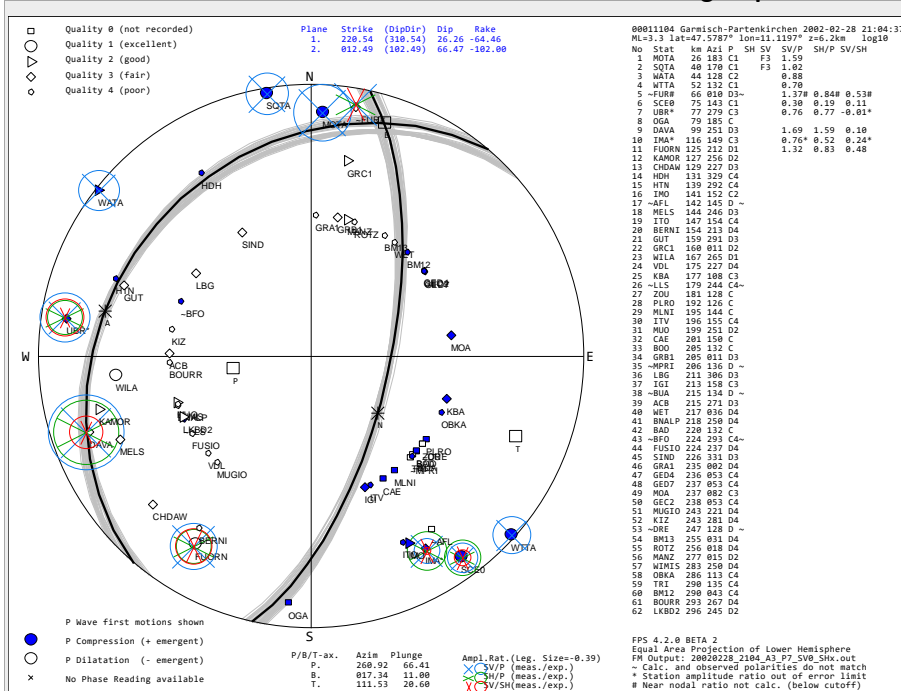
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	35
FPS quality (expl. at end)	202
	2

Contributors and References
Reiter, 2005-2017 (this Publ.) [1]

Mechanism remarks
Agency readings d>300km not used
no INGV data available
some data from Diehl et al., 2009

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rate	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis				261	66°		66	5	8%
B-Axis				017	11°		2	0	0%
T-Axis				112	21°		0	0	0%
Plane1/A-Axis	221	26	-064	282	24°		68	5	7%
Plane2/N-Axis	012	66	-102	131	64°		6	0	0%
RMS for acceptable solutions ⁴¹					0,26	log ₁₀			
RMS for all solutions ⁴¹					0,36	log ₁₀			
Mechanism Class ^{45 46}					N				
Inferred active fault	Garmisch fault								
Fault zone	Extension: Northern Calcareous Alps								
Seismotectonic region	NCA between Innsbruck and Arlberg								
P Polarities							66	5	8%
SV Polarities							2	0	0%
SH Polarities							0	0	0%
All Polarities							68	5	7%
P/SV/SH Pol. Q1							6	0	0%
P/SV/SH Pol. Q2							8	0	0%
P/SV/SH Pol. Q3							23	2	9%
P/SV/SH Pol. Q4							30	3	10%
P/SV/SH Pol. Q0							1	0	0%
SV/P Ampl. Ratios							10	1	10%
SH/P Ampl. Ratios							6	0	0%
SV/SH Ampl. Ratios							6	2	33%
All Ampl. Ratios							22	3	14%

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

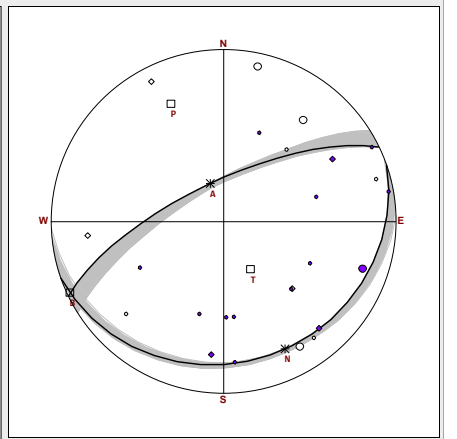
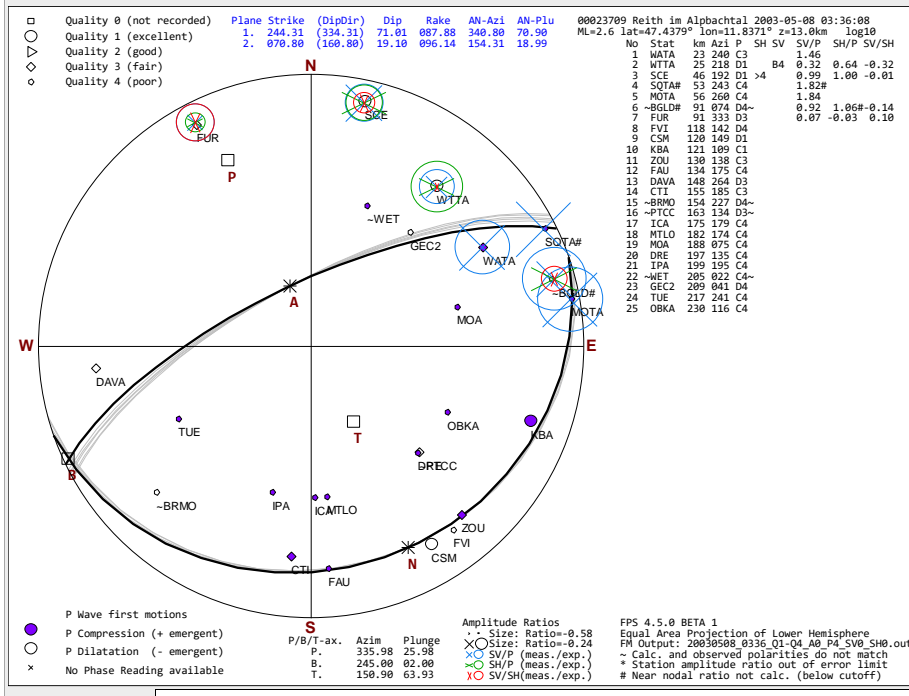
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	68				91 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	64
FPS quality (expl. at end)	4

Contributors and References
 Reiter & Lenhardt, 2017 (this Publ.), using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				336	26°	
B-Axis				245	02°	
T-Axis				151	64°	
Plane1/A-Axis	244	71	088	341	71°	<input type="checkbox"/>
Plane2/N-Axis	071	19	096	154	19°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	25	4	16%
SV Polarities	1	0	0%
SH Polarities	1	0	0%
All Polarities	27	4	15%
P/SV/SH Pol. Q1	4	0	0%
P/SV/SH Pol. Q2	0	0	0%
P/SV/SH Pol. Q3	6	1	17%
P/SV/SH Pol. Q4	17	3	18%
P/SV/SH Pol. Q0	0	0	0%
SV/P Ampl. Ratios	7	0	0%
SH/P Ampl. Ratios	4	0	0%
SV/SH Ampl. Ratios	4	0	0%
All Ampl. Ratios	15	0	0%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro

a) Loc. ZAMG standard location [64]
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	71				92 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

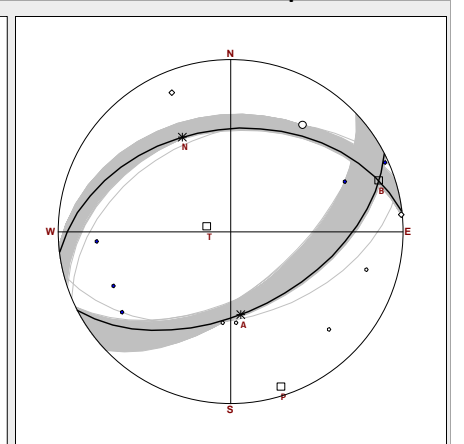
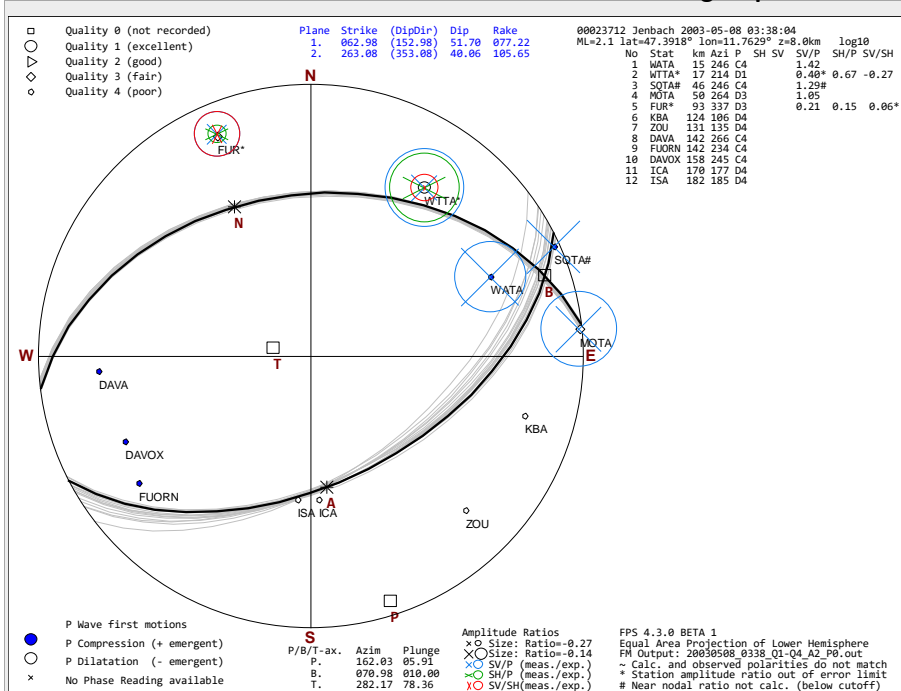
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	16
FPS quality (expl. at end)	4

Contributors and References
 Reiter & Lenhardt, 2003-2017 (this Publ.) [1]

Mechanism remarks: no LMU data available

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				162	06°	
B-Axis				071	10°	
T-Axis				282	78°	
Plane1/A-Axis	063	52	077	173	50°	<input type="checkbox"/>
Plane2/N-Axis	263	40	106	333	38°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: North Alpine floor thrust: Lower Inn valley section
 Fault zone: Thrust: Alpine Floor Thrust below the NCA
 Seismotectonic region: Lower Inn Valley

	Total	Misfit abs.	Misfit rel.
P Polarities	12	0	0%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	12	0	0%
P/SV/SH Pol. Q1	1	0	0%
P/SV/SH Pol. Q2	0	0	%
P/SV/SH Pol. Q3	2	0	0%
P/SV/SH Pol. Q4	9	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	5	1	20%
SH/P Ampl. Ratios	2	0	0%
SV/SH Ampl. Ratios	2	1	50%
All Ampl. Ratios	9	2	22%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	<input type="text"/>	Incr.	<input type="text"/>	Max.	<input type="text"/>
Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="359"/>	°	
Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="90"/>	°	
Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="89"/>	°	
Lower Limit of S rad. Factor	<input type="text" value="0,15"/>						
Prim./sec. Azimuthal Gap ³²	<input type="text" value="83"/>	<input type="text" value="90°"/>					

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

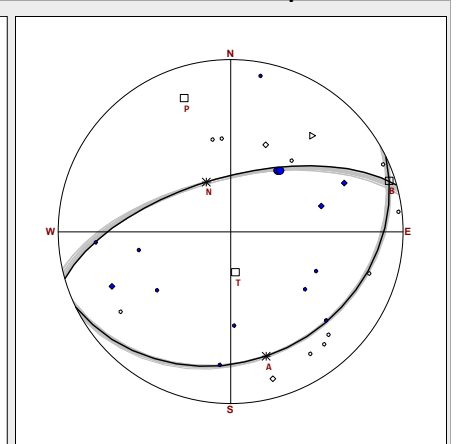
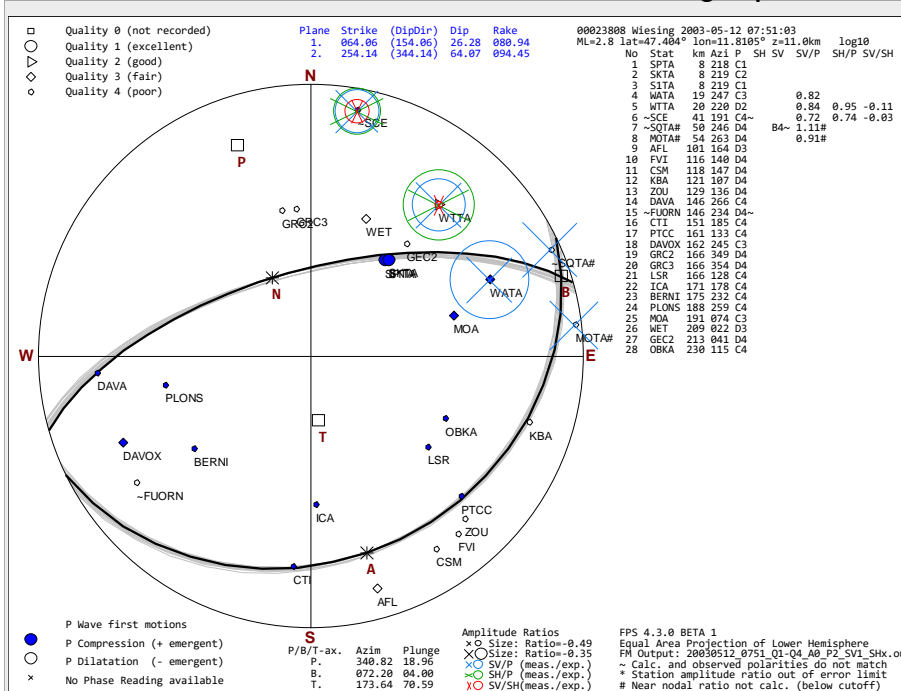
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="12"/>
FPS quality (expl. at end)	<input type="text" value="3"/>

Contributors and References

Reiter & Lenhardt, 2003-2017 (this Publ.), using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					341	19°	
B-Axis					072	04°	
T-Axis					174	71°	
Plane1/A-Axis	064	26	081	164	26°	<input type="checkbox"/>	
Plane2/N-Axis	254	64	094	334	64°	<input type="checkbox"/>	

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Reverse fault in European upper crust, Lower Inn Valley
 Fault zone: Thrust/Reverse fault: Compression in European basement
 Seismotectonic region: Lower Inn Valley and adjacent mountains

	Total	Misfit abs.	Misfit rel.
P Polarities	28	2	7%
SV Polarities	1	1	100%
SH Polarities	0	0	%
All Polarities	29	3	10%
P/SV/SH Pol. Q1	2	0	0%
P/SV/SH Pol. Q2	2	0	0%
P/SV/SH Pol. Q3	5	0	0%
P/SV/SH Pol. Q4	20	3	15%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	5	0	0%
SH/P Ampl. Ratios	2	0	0%
SV/SH Ampl. Ratios	2	0	0%
All Ampl. Ratios	9	0	0%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

SED ecos09: 47.233° N 9.614° E 2km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. Incr. Max.	
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	47		65 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

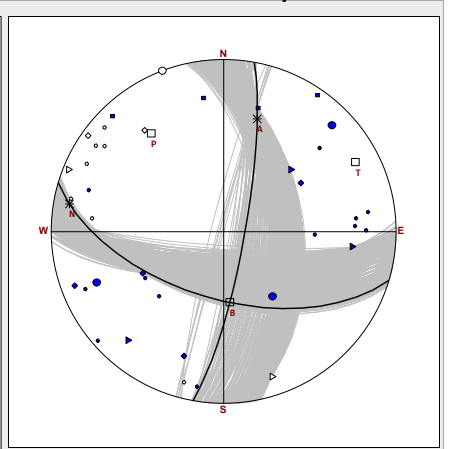
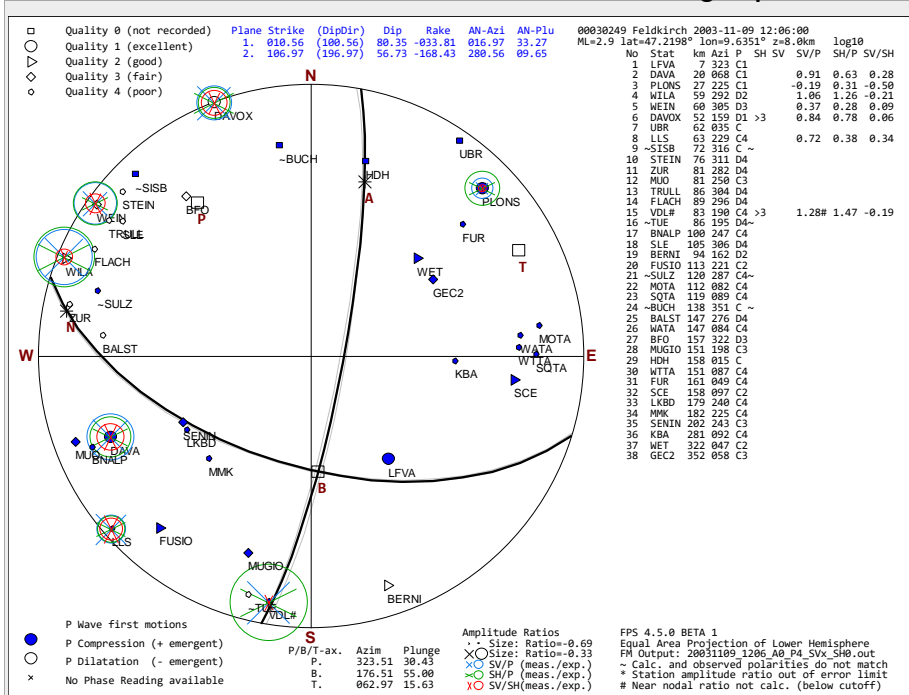
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	350
Contributors and References	4

Reiter, 2005-2017 (this Publ.) [1, 52]

Mechanism remarks
 no BW data available (except SCE from Diehl et al., 2009)
 no OASIS waveform data available
 agency readings >160km skipped

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				324	30°	
B-Axis				177	55°	
T-Axis				063	16°	
Plane1/A-Axis	011	80	-034	017	33°	<input type="checkbox"/>
Plane2/N-Axis	107	57	-168	281	10°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	38	4	11%
SV Polarities	0	0	%
SH Polarities	2	0	0%
All Polarities	40	4	10%
P/SV/SH Pol. Q1	4	0	0%
P/SV/SH Pol. Q2	5	0	0%
P/SV/SH Pol. Q3	8	0	0%
P/SV/SH Pol. Q4	19	2	11%
P/SV/SH Pol. Q0	4	2	50%
SV/P Ampl. Ratios	7	0	0%
SH/P Ampl. Ratios	7	0	0%
SV/SH Ampl. Ratios	7	0	0%
All Ampl. Ratios	21	0	0%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERH⁴⁷ NLL ERZ⁴⁷ z macro

a) Loc. det./ refs. b) z estim. based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	66				76 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

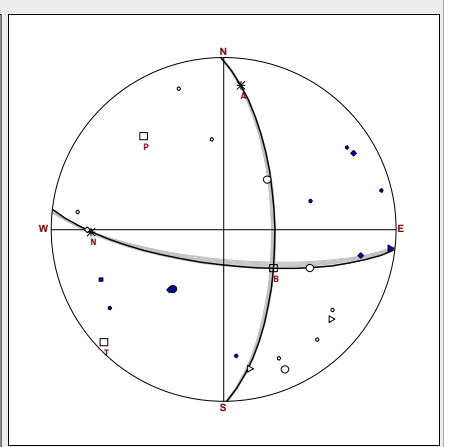
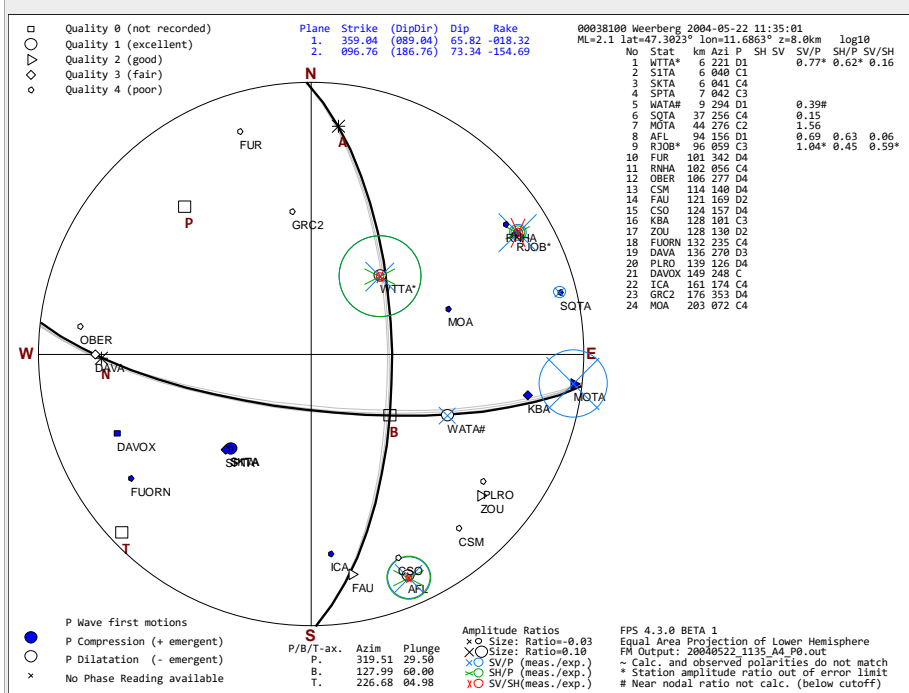
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	4
FPS quality (expl. at end)	8
	4

Contributors and References

Reiter & Lenhardt, 2004-2017 (this Publ.), using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks no SED data available; some LMU data delivered by ZAMG agency readings >150km skipped

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					320	30 °	
B-Axis					128	60 °	
T-Axis					227	05 °	
Plane1/A-Axis	359	66	-018	007	17 °		<input type="checkbox"/>
Plane2/N-Axis	097	73	-155	269	24 °		<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	24	0	0 %
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	24	0	0 %
P/SV/SH Pol. Q1	4	0	0 %
P/SV/SH Pol. Q2	3	0	0 %
P/SV/SH Pol. Q3	4	0	0 %
P/SV/SH Pol. Q4	12	0	0 %
P/SV/SH Pol. Q0	1	0	0 %
SV/P Ampl. Ratios	6	2	33 %
SH/P Ampl. Ratios	3	1	33 %
SV/SH Ampl. Ratios	3	1	33 %
All Ampl. Ratios	12	4	33 %

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	84				86°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

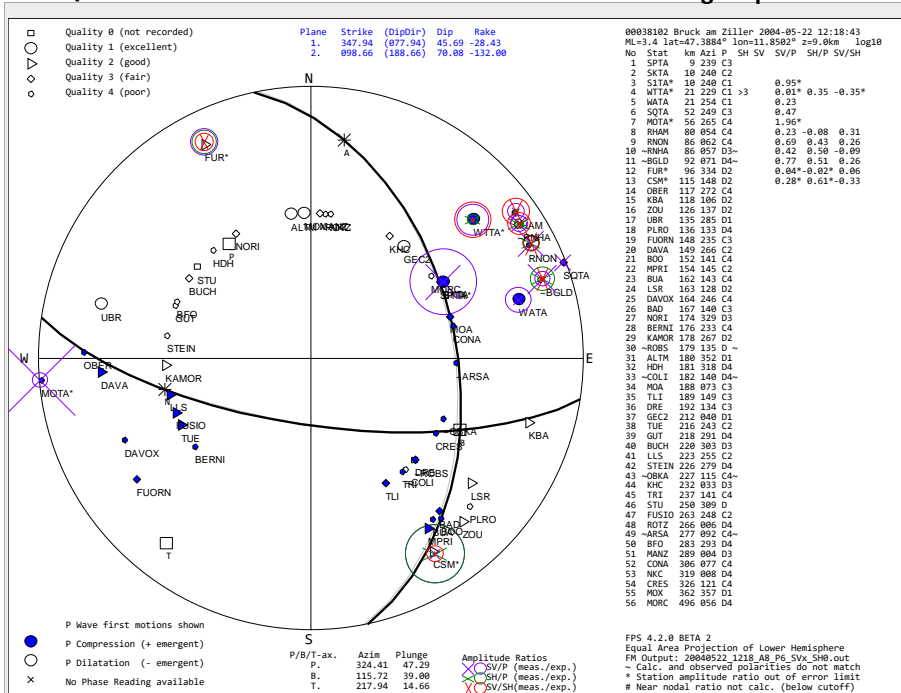
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios

FPS quality (expl. at end)

Contributors and References

Lenhardt & Reiter, 2004-2017 (this Publ.) [1]

Mechanism remarks
 big azimuthal gap due to missing INGV stations
 PART,SCE and INGV stations should be added if available

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

Axis	Strike	Dip	Rake	Azim	Pl.	active
P-Axis	324	47				
B-Axis	116	39				
T-Axis	218	15				
Plane1/A-Axis	348	46	-028	009	20°	<input type="checkbox"/>
Plane2/N-Axis	099	70	-132	258	44°	<input type="checkbox"/>

	Total	Misfit abs.	Misfit rel.
P Polarities	56	6	11%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	57	6	11%
P/SV/SH Pol. Q1	7	0	0%
P/SV/SH Pol. Q2	12	0	0%
P/SV/SH Pol. Q3	13	1	8%
P/SV/SH Pol. Q4	23	4	17%
P/SV/SH Pol. Q0	2	1	50%
SV/P Ampl. Ratios	11	5	45%
SH/P Ampl. Ratios	7	2	29%
SV/SH Ampl. Ratios	7	1	14%
All Ampl. Ratios	25	8	32%

RMS for acceptable solutions ⁴¹	0,29	log ₁₀
RMS for all solutions ⁴¹	0,59	log ₁₀
Mechanism Class ^{45 46}	N-SS	

Inferred active fault	Normal faults near Ziller Valley
Fault zone	Extension: Normal faults in Austroalpine north of TW
Seismotectonic region	Zillertal Alps, Ziller Valley, Kitzbühel Alps

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter DE Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	49		57°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

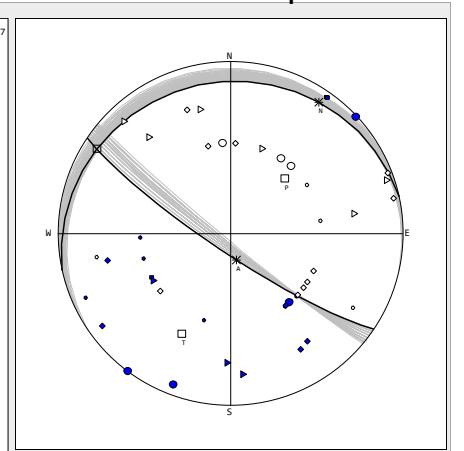
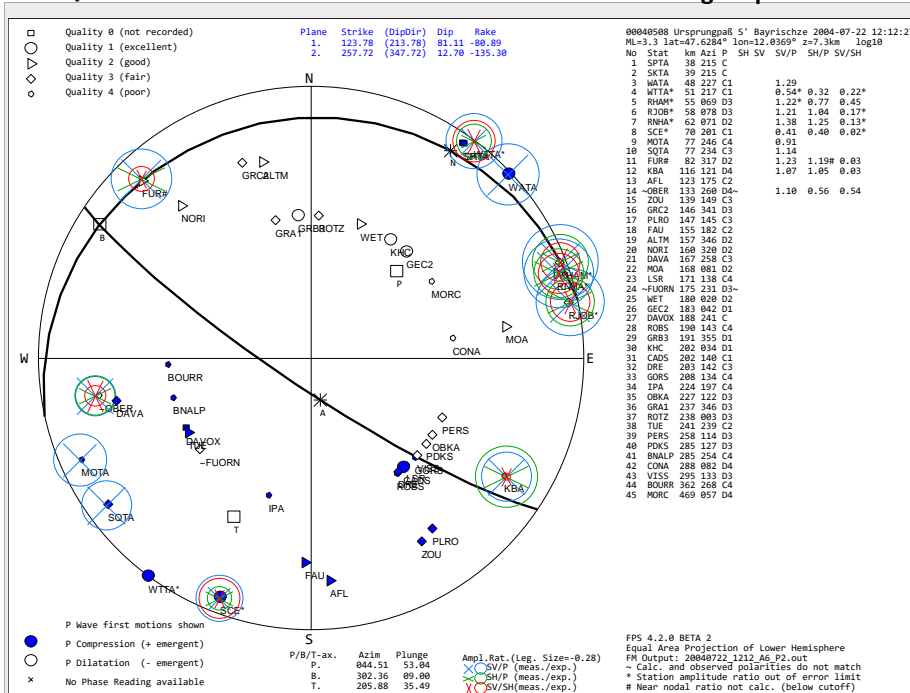
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	38
	2

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks
 no INGV data available
 no BW data available

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rate	Azim	Pl.	active
P-Axis				045	53°	
B-Axis				302	09°	
T-Axis				206	35°	
Plane1/A-Axis	124	81	-081	168	77°	<input type="checkbox"/>
Plane2/N-Axis	258	13	-135	034	09°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	45	2	4%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	45	2	4%
P/SV/SH Pol. Q1	7	0	0%
P/SV/SH Pol. Q2	9	0	0%
P/SV/SH Pol. Q3	15	1	7%
P/SV/SH Pol. Q4	11	1	9%
P/SV/SH Pol. Q0	3	0	0%
SV/P Ampl. Ratios	11	2	18%
SH/P Ampl. Ratios	8	0	0%
SV/SH Ampl. Ratios	8	4	50%
All Ampl. Ratios	27	6	22%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	39		54°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

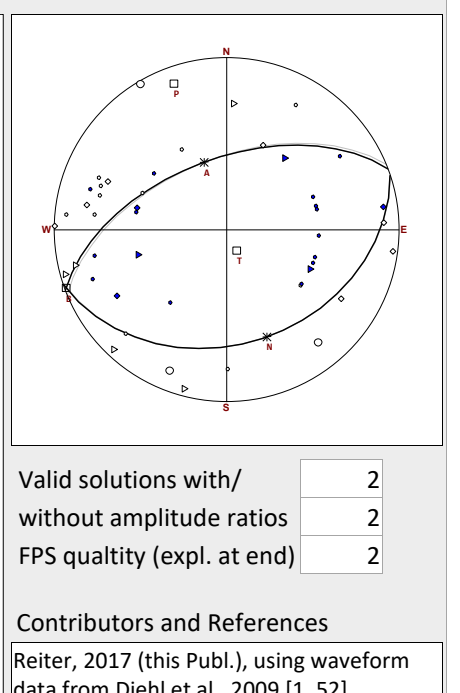
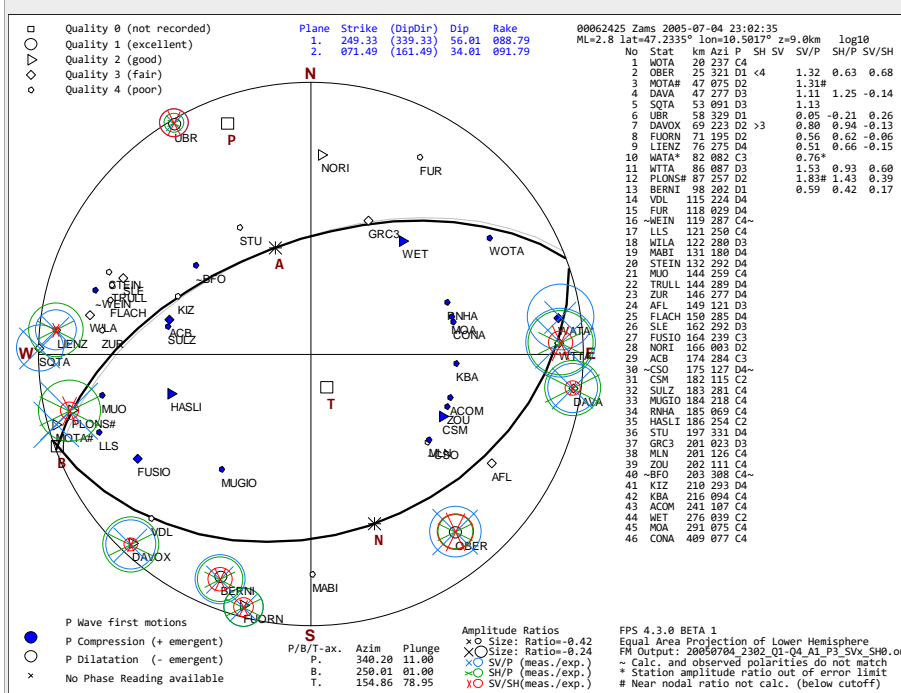
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				340	11°	
B-Axis				250	01°	
T-Axis				155	79°	
Plane1/A-Axis	249	56	089	341	56°	<input type="checkbox"/>
Plane2/N-Axis	071	34	092	159	34°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	46	3	7%
SV Polarities	0	0	%
SH Polarities	2	0	0%
All Polarities	48	3	6%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	8	0	0%
P/SV/SH Pol. Q3	11	0	0%
P/SV/SH Pol. Q4	26	3	12%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	12	1	8%
SH/P Ampl. Ratios	9	0	0%
SV/SH Ampl. Ratios	9	0	0%
All Ampl. Ratios	30	1	3%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. B Trend	0	Incr. 1	Max. 359°
Relative Weighting	No	B Plunge	0	1	90°
Accepted log ₁₀ Ampl. Rat. Error	0,5	A Plunge	0	1	89°
Lower Limit of P rad. Factor	0,05				
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	77				

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

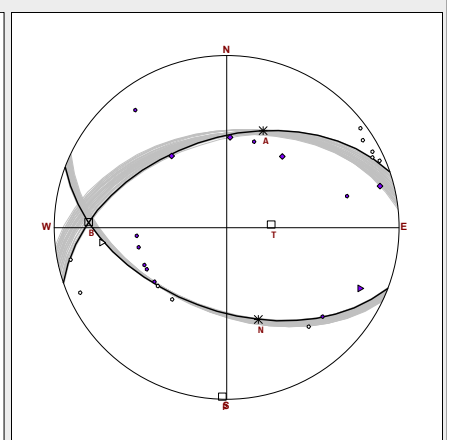
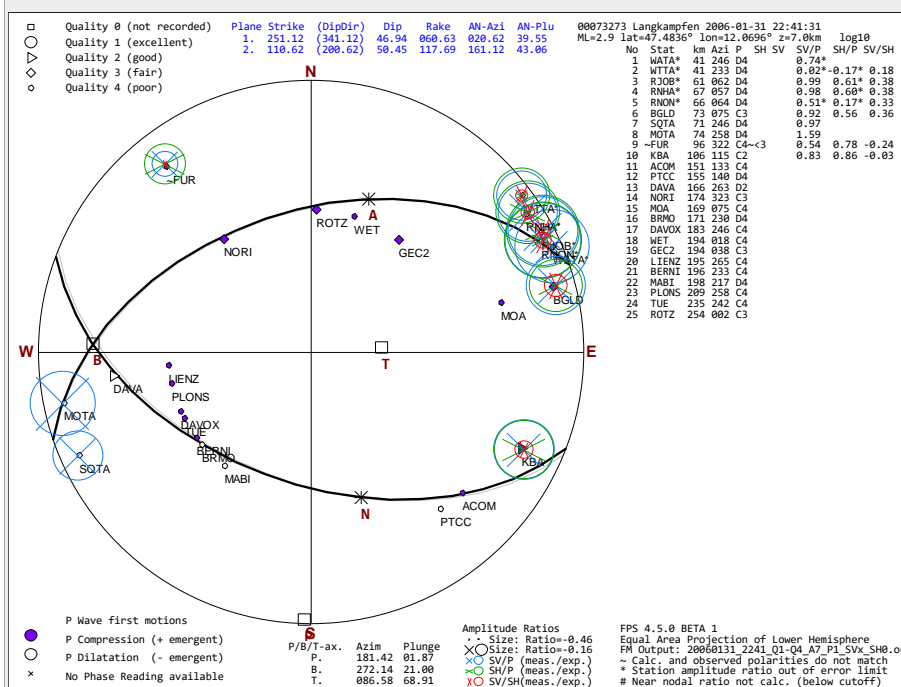
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	33
	4

Contributors and References

Reiter, 2017 (this Publ.), using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				181	02°	
B-Axis				272	21°	
T-Axis				087	69°	
Plane1/A-Axis	251	47	061	021	40°	<input type="checkbox"/>
Plane2/N-Axis	111	50	118	161	43°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀

RMS for all solutions⁴¹ log₁₀

Mechanism Class^{45 46}

Inferred active fault: North Alpine floor thrust: Lower Inn valley section

Fault zone: Thrust: Alpine Floor Thrust below the NCA

Seismotectonic region: Lower Inn Valley

	Total	Misfit abs.	Misfit rel.
P Polarities	25	1	4%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	26	1	4%
P/SV/SH Pol. Q1	0	0	%
P/SV/SH Pol. Q2	2	0	0%
P/SV/SH Pol. Q3	5	0	0%
P/SV/SH Pol. Q4	19	1	5%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	10	3	30%
SH/P Ampl. Ratios	7	4	57%
SV/SH Ampl. Ratios	7	0	0%
All Ampl. Ratios	24	7	29%

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

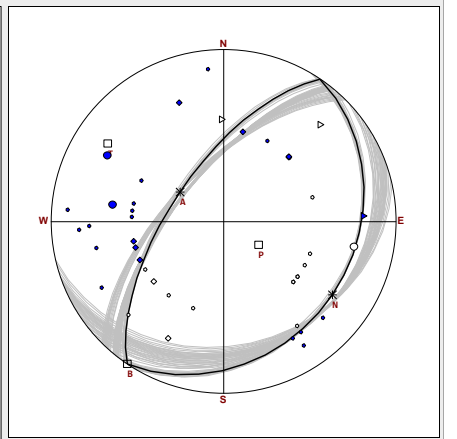
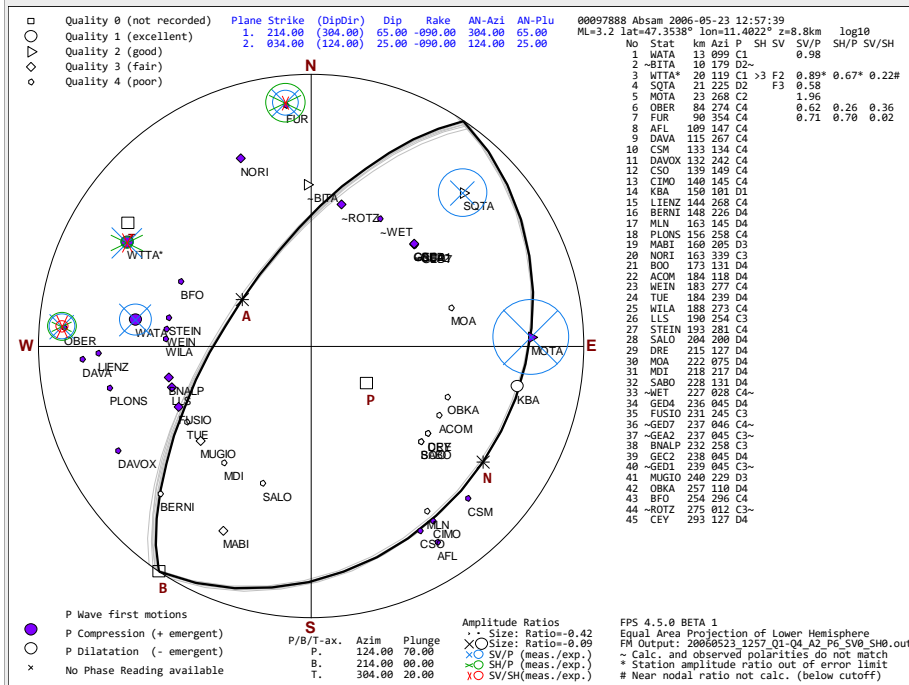
Vp/Vs Ratio at Source	1,732	Min. Incr. Max.	
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	50	56 °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	6
FPS quality (expl. at end)	48
Contributors and References	4

Reiter, 2006-2017 (this Publ.) [1]

Mechanism remarks no data provided in Diehl et al., 1999
 normal fault!
 some BW stations missing

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.		
P-Axis		124	70°				45	6	13%		
B-Axis		034	00°				2	0	0%		
T-Axis		304	20°				1	0	0%		
Plane1/A-Axis	214	65	-090	304	65°	<input type="checkbox"/>	48	6	12%		
Plane2/N-Axis	034	25	-090	124	25°	<input type="checkbox"/>	P/SV/SH Pol. Q1	3	0	0%	
RMS for acceptable solutions ⁴¹					0,34	log ₁₀	P/SV/SH Pol. Q2	4	1	25%	
RMS for all solutions ⁴¹					0,49	log ₁₀	P/SV/SH Pol. Q3	11	3	27%	
Mechanism Class ^{45 46}					N		P/SV/SH Pol. Q4	30	2	7%	
Inferred active fault	Nordkette fault							P/SV/SH Pol. Q0	0	0	%
Fault zone	Extension: Northern Calcareous Alps							SV/P Ampl. Ratios	6	1	17%
Seismotectonic region	Lower Inn Valley and adjacent mountains							SH/P Ampl. Ratios	3	1	33%
							SV/SH Ampl. Ratios	3	0	0%	
							All Ampl. Ratios	12	2	17%	

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	95				98°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

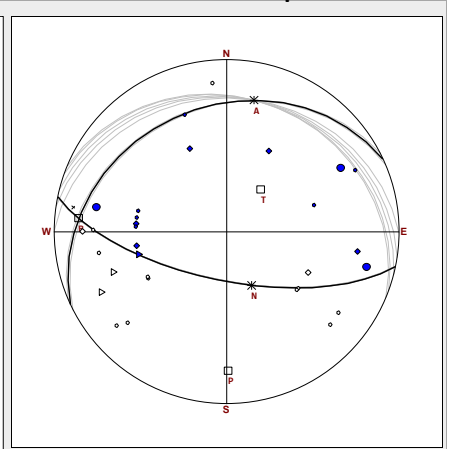
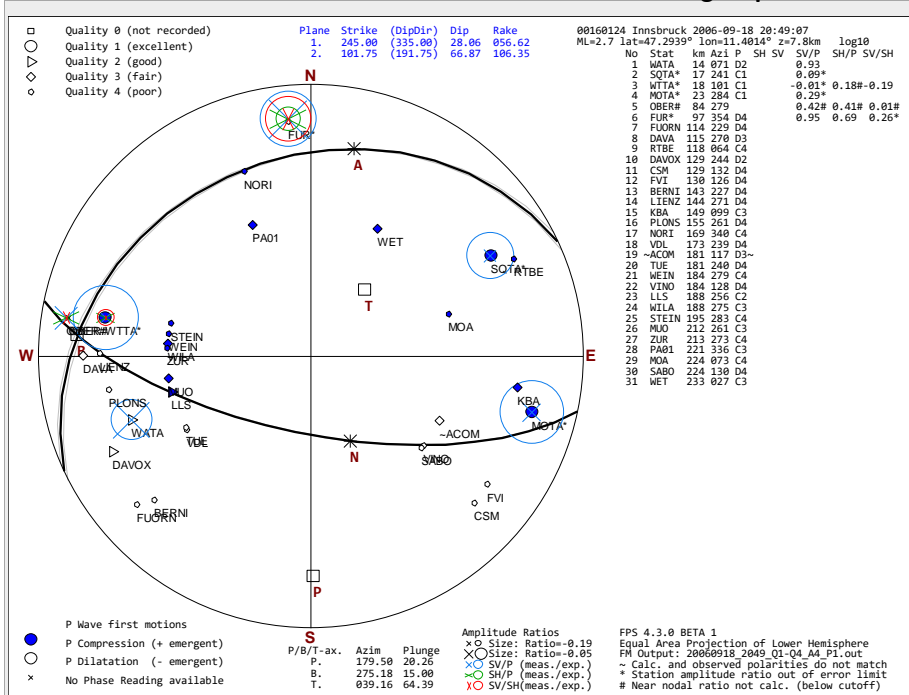
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	7
Contributors and References	4

Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active	
P-Axis				180	20°			
B-Axis				275	15°			
T-Axis				039	64°			
Plane1/A-Axis	245	28	057	012	23°	<input type="checkbox"/>		
Plane2/N-Axis	102	67	106	155	62°	<input type="checkbox"/>		
RMS for acceptable solutions ⁴¹							0,29	log ₁₀
RMS for all solutions ⁴¹							0,67	log ₁₀
Mechanism Class ^{45 46}							R	
Inferred active fault	North Alpine floor thrust: Vomp-Schwaz section							
Fault zone	Thrust: Alpine Floor Thrust below the NCA							
Seismotectonic region	Lower Inn Valley and adjacent mountains							

	Total	Misfit abs.	Misfit rel.
P Polarities	30	1	3%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	30	1	3%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	3	0	0%
P/SV/SH Pol. Q3	7	1	14%
P/SV/SH Pol. Q4	17	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	6	3	50%
SH/P Ampl. Ratios	3	0	0%
SV/SH Ampl. Ratios	3	1	33%
All Ampl. Ratios	12	4	33%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.	
Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="359°"/>
Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="90°"/>
Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="89°"/>
Lower Limit of S rad. Factor	<input type="text" value="0,15"/>				
Prim./sec. Azimuthal Gap ³²	<input type="text" value="53"/>		<input type="text" value="68°"/>		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

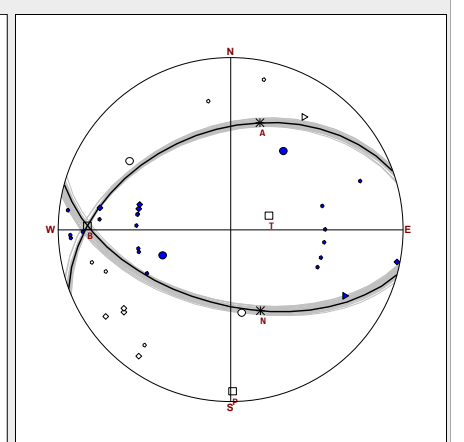
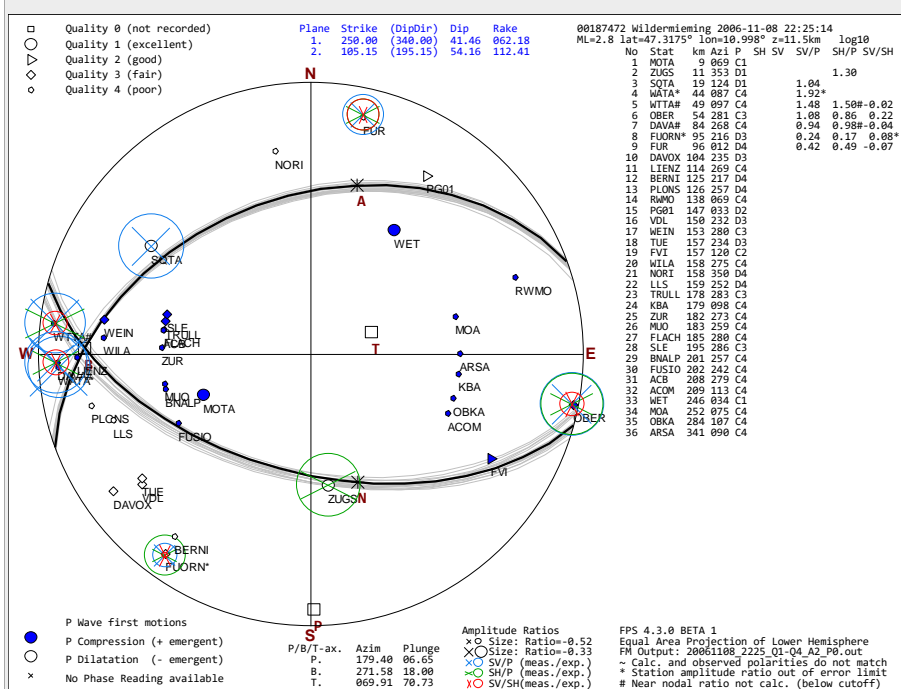
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="14"/>
FPS quality (expl. at end)	<input type="text" value="3"/>

Contributors and References

Reiter, 2017 (this Publ.) [1]

Mechanism remarks Agency readings >200km skipped

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active	
P-Axis					179	07°		
B-Axis					272	18°		
T-Axis					070	71°		
Plane1/A-Axis	250	41	062	015	36°		<input type="checkbox"/>	
Plane2/N-Axis	105	54	112	160	49°		<input type="checkbox"/>	
RMS for acceptable solutions ⁴¹							0,27	log ₁₀
RMS for all solutions ⁴¹							0,34	log ₁₀
Mechanism Class ^{45 46}								R
Inferred active fault	North Alpine floor thrust in the Mieminger Kette and Wetterstein							
Fault zone	Thrust: Alpine Floor Thrust below the NCA							
Seismotectonic region	NCA between Innsbruck and Arlberg							

	Total	Misfit abs.	Misfit rel.
P Polarities	36	0	0%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	36	0	0%
P/SV/SH Pol. Q1	4	0	0%
P/SV/SH Pol. Q2	2	0	0%
P/SV/SH Pol. Q3	8	0	0%
P/SV/SH Pol. Q4	22	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	7	1	14%
SH/P Ampl. Ratios	6	0	0%
SV/SH Ampl. Ratios	5	1	20%
All Ampl. Ratios	18	2	11%

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

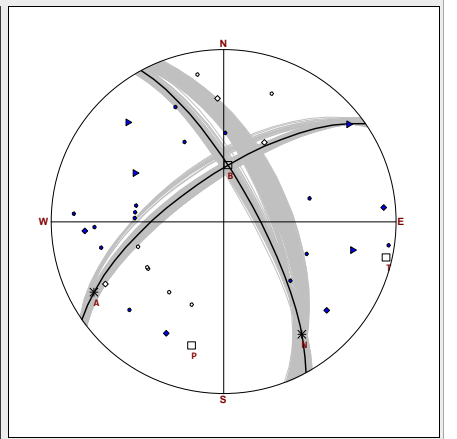
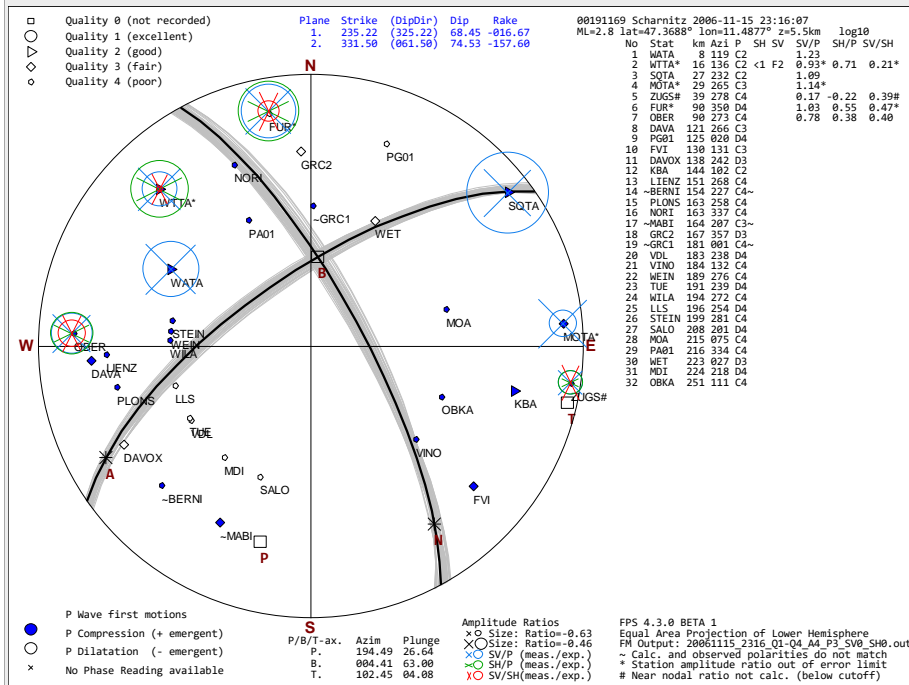
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	70				76°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	40
FPS quality (expl. at end)	4

Contributors and References
 Reiter, 2016 (this Publ.) [1]

Mechanism remarks Agency Readings >195km skipped solutions restricted to errors for Q>2

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					195	27°	
B-Axis					004	63°	
T-Axis					102	04°	
Plane1/A-Axis	235	68		-017	242	15°	<input type="checkbox"/>
Plane2/N-Axis	332	75		-158	145	22°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Lower Inntal splay faults within NCA
 Fault zone: Strike-Slip: Lower Inntal fault system
 Seismotectonic region: Lower Inn Valley and adjacent mountains

	Total	Misfit abs.	Misfit rel.
P Polarities	32	3	9%
SV Polarities	1	0	0%
SH Polarities	1	0	0%
All Polarities	34	3	9%
P/SV/SH Pol. Q1	1	0	0%
P/SV/SH Pol. Q2	5	0	0%
P/SV/SH Pol. Q3	7	1	14%
P/SV/SH Pol. Q4	21	2	10%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	7	2	29%
SH/P Ampl. Ratios	4	0	0%
SV/SH Ampl. Ratios	4	2	50%
All Ampl. Ratios	15	4	27%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro km

a) Loc. ZAMG standard location [64]
 det./ refs.
 b) z estim. z averaged with z from 3D grid search method, this based on publication [57]

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	1	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	37				51°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

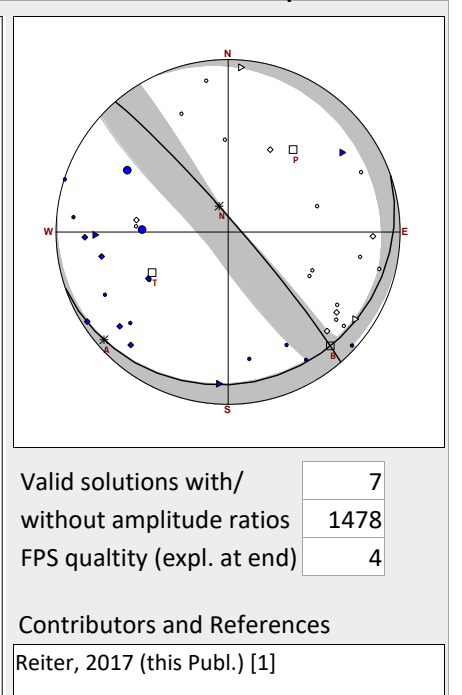
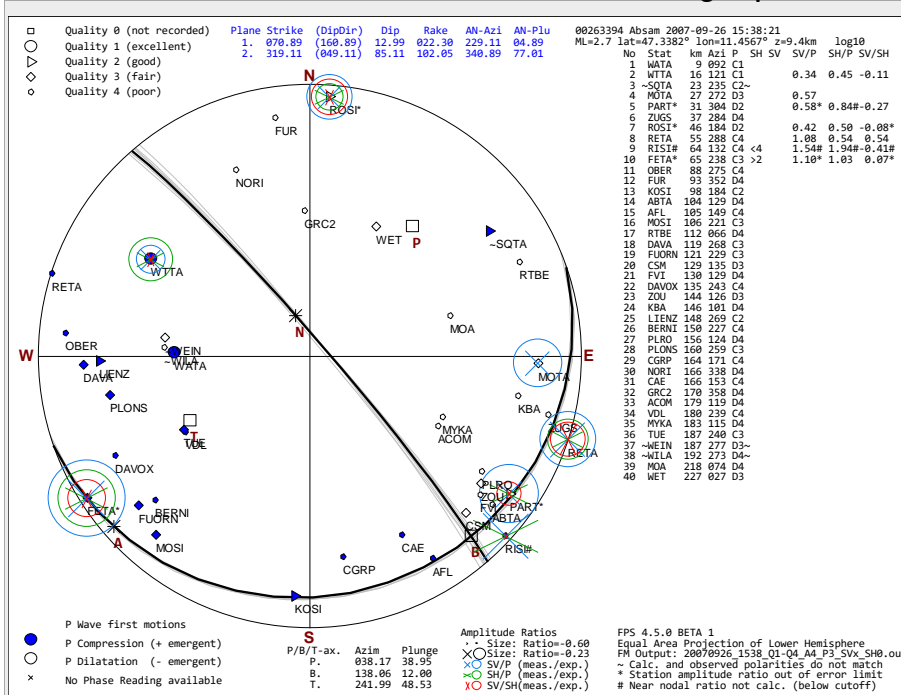
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				038	39°	
B-Axis				138	12°	
T-Axis				242	49°	
Plane1/A-Axis	071	13	022	229	05°	<input type="checkbox"/>
Plane2/N-Axis	319	85	102	341	77°	<input type="checkbox"/>
RMS for acceptable solutions ⁴¹					0,34	log ₁₀
RMS for all solutions ⁴¹					0,48	log ₁₀
Mechanism Class ^{45 46}					R	
Inferred active fault	Nordkette fault					
Fault zone	Extension: Northern Calcareous Alps					
Seismotectonic region	Lower Inn Valley and adjacent mountains					

	Total	Misfit abs.	Misfit rel.
P Polarities	40	3	8%
SV Polarities	0	0	%
SH Polarities	2	0	0%
All Polarities	42	3	7%
P/SV/SH Pol. Q1	2	0	0%
P/SV/SH Pol. Q2	6	1	17%
P/SV/SH Pol. Q3	11	1	9%
P/SV/SH Pol. Q4	23	1	4%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	7	2	29%
SH/P Ampl. Ratios	6	0	0%
SV/SH Ampl. Ratios	6	2	33%
All Ampl. Ratios	19	4	21%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	49		53°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

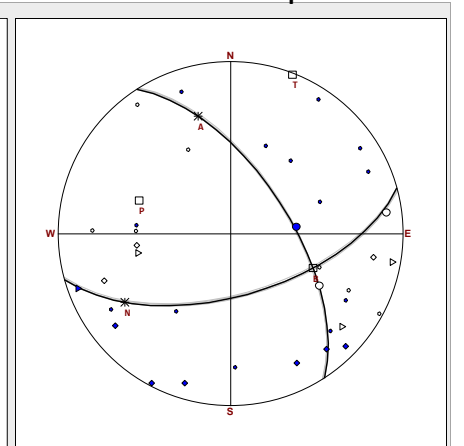
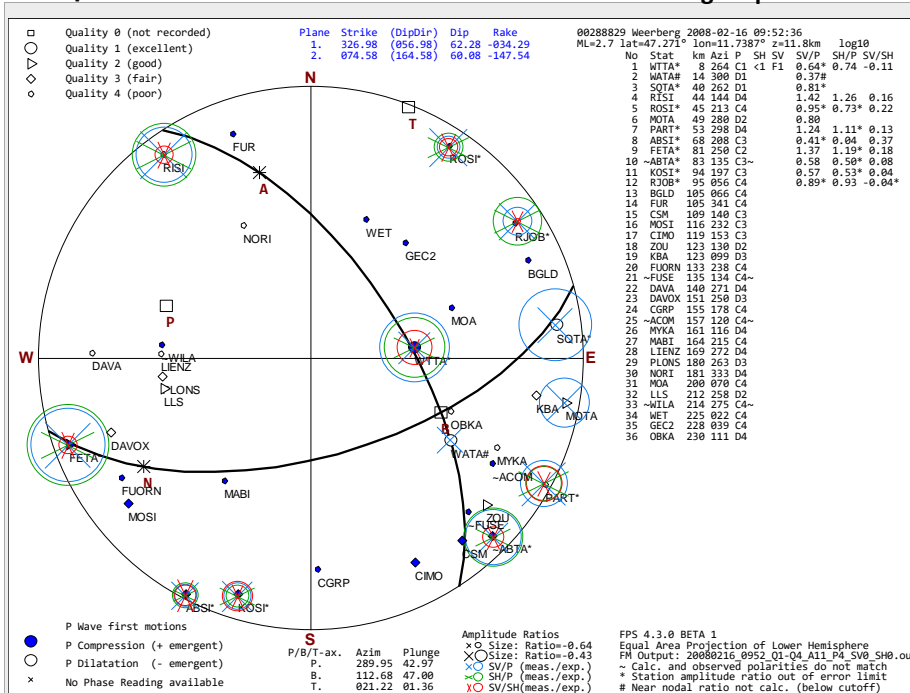
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	4

Contributors and References

Reiter, 2017 (this Publ.) [1]

Mechanism remarks solutions restricted to errors for Q>2

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					290	43°	
B-Axis					113	47°	
T-Axis					021	01°	
Plane1/A-Axis	327	62	-034	345	30°		
Plane2/N-Axis	075	60	-148	237	28°		

RMS for acceptable solutions⁴¹ log₁₀

RMS for all solutions⁴¹ log₁₀

Mechanism Class^{45 46}

Inferred active fault

Fault zone

Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	36	4	11%
SV Polarities	1	0	0%
SH Polarities	1	0	0%
All Polarities	38	4	11%
P/SV/SH Pol. Q1	5	0	0%
P/SV/SH Pol. Q2	4	0	0%
P/SV/SH Pol. Q3	9	1	11%
P/SV/SH Pol. Q4	20	3	15%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	12	5	42%
SH/P Ampl. Ratios	9	5	56%
SV/SH Ampl. Ratios	9	1	11%
All Ampl. Ratios	30	11	37%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro km

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	52		52°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

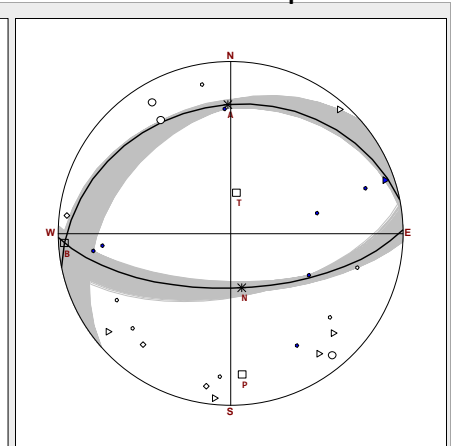
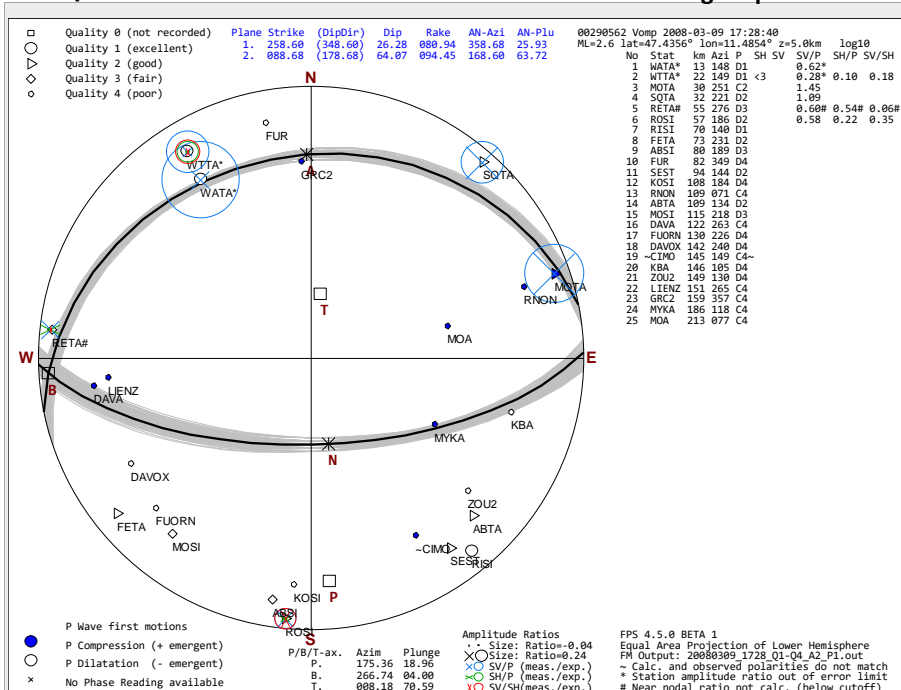
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	67
FPS quality (expl. at end)	445
	3

Contributors and References

Reiter, 2017 (this Publ.) [1]

Mechanism remarks
 depth set to 5 km for calculation due to strong amplitude misfit at wata wtta for 6,8 km
 NLL also tends to shallower z

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	
P-Axis				175	19°		
B-Axis				267	04°		
T-Axis				008	71°		
Plane1/A-Axis	259	26	081	359	26°	<input type="checkbox"/>	
Plane2/N-Axis	089	64	094	169	64°	<input type="checkbox"/>	
RMS for acceptable solutions ⁴¹						0,23	log ₁₀
RMS for all solutions ⁴¹						0,55	log ₁₀
Mechanism Class ^{45 46}							R
Inferred active fault	Innsbruck thrust						
Fault zone	Thrust: Intra-nappe stack thrust in Austroalpine						
Seismotectonic region	Lower Inn Valley and adjacent mountains						

	Total	Misfit abs.	Misfit rel.
P Polarities	25	1	4%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	26	1	4%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	6	0	0%
P/SV/SH Pol. Q3	4	0	0%
P/SV/SH Pol. Q4	13	1	8%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	6	2	33%
SH/P Ampl. Ratios	3	0	0%
SV/SH Ampl. Ratios	3	0	0%
All Ampl. Ratios	12	2	17%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	44				63°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

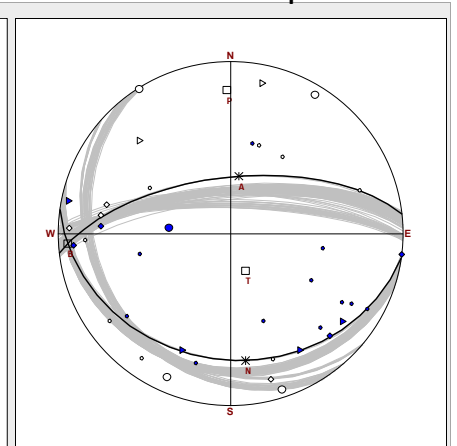
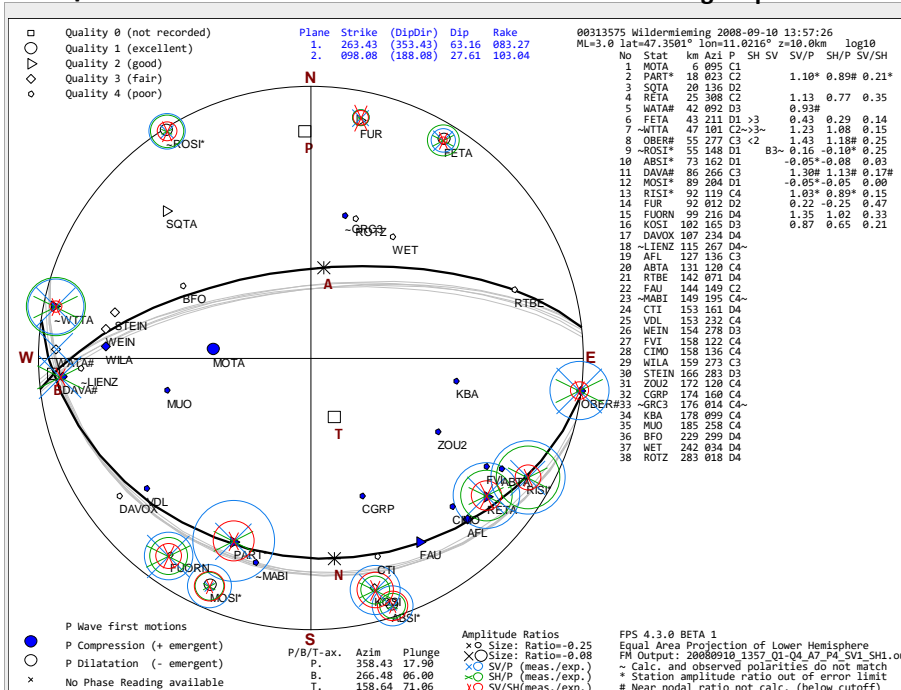
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	6
FPS quality (expl. at end)	95
Contributors and References	2
Reiter, 2017 (this Publ.) [1]	

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				358	18°	
B-Axis				266	06°	
T-Axis				159	71°	
Plane1/A-Axis	263	63	083	008	62°	<input type="checkbox"/>
Plane2/N-Axis	098	28	103	173	27°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	38	4	11%
SV Polarities	1	1	100%
SH Polarities	3	1	33%
All Polarities	42	6	14%
P/SV/SH Pol. Q1	5	0	0%
P/SV/SH Pol. Q2	7	1	14%
P/SV/SH Pol. Q3	11	2	18%
P/SV/SH Pol. Q4	19	3	16%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	14	4	29%
SH/P Ampl. Ratios	13	2	15%
SV/SH Ampl. Ratios	13	1	8%
All Ampl. Ratios	40	7	18%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter DE Lat Long z

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	49		55°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

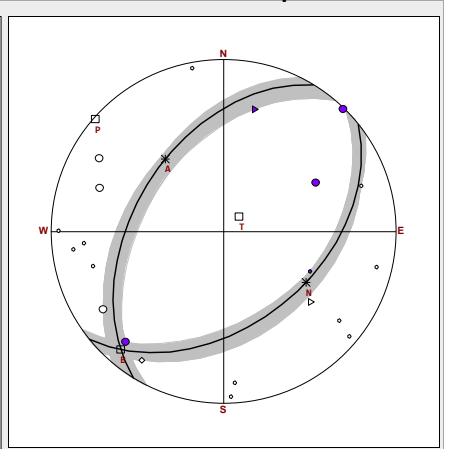
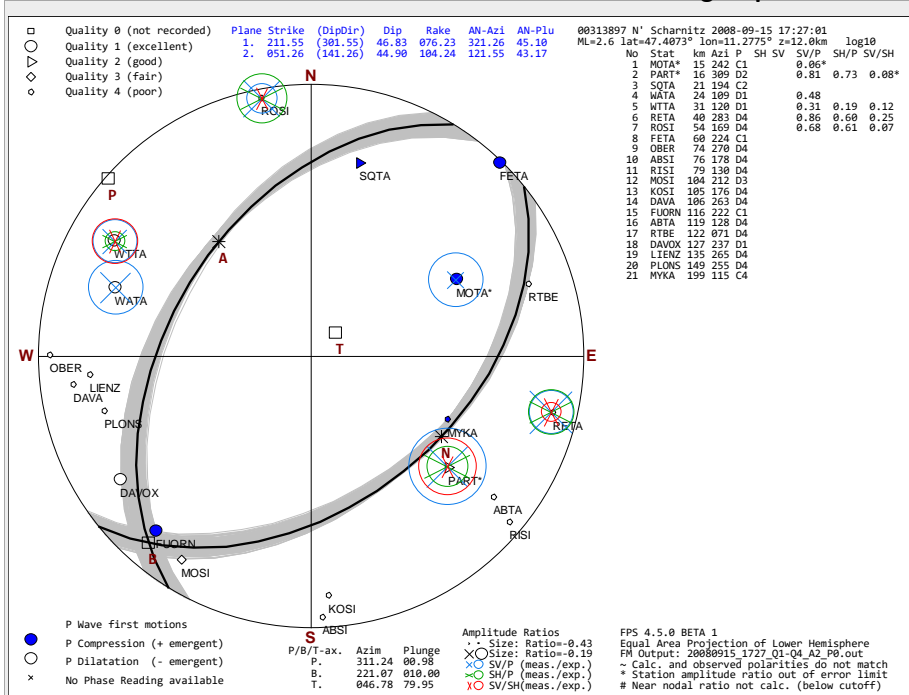
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	116
FPS quality (expl. at end)	4

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				311	01°	
B-Axis				221	10°	
T-Axis				047	80°	
Plane1/A-Axis	212	47	076	321	45°	<input type="checkbox"/>
Plane2/N-Axis	051	45	104	122	43°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	21	0	0%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	21	0	0%
P/SV/SH Pol. Q1	6	0	0%
P/SV/SH Pol. Q2	2	0	0%
P/SV/SH Pol. Q3	1	0	0%
P/SV/SH Pol. Q4	12	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	6	1	17%
SH/P Ampl. Ratios	4	0	0%
SV/SH Ampl. Ratios	4	1	25%
All Ampl. Ratios	14	2	14%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.	
Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="359°"/>
Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="90°"/>
Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="89°"/>
Lower Limit of S rad. Factor	<input type="text" value="0,15"/>				
Prim./sec. Azimuthal Gap ³²	<input type="text" value="89"/>				<input type="text" value="112°"/>

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

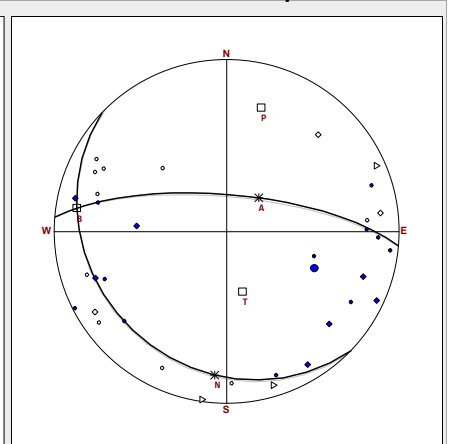
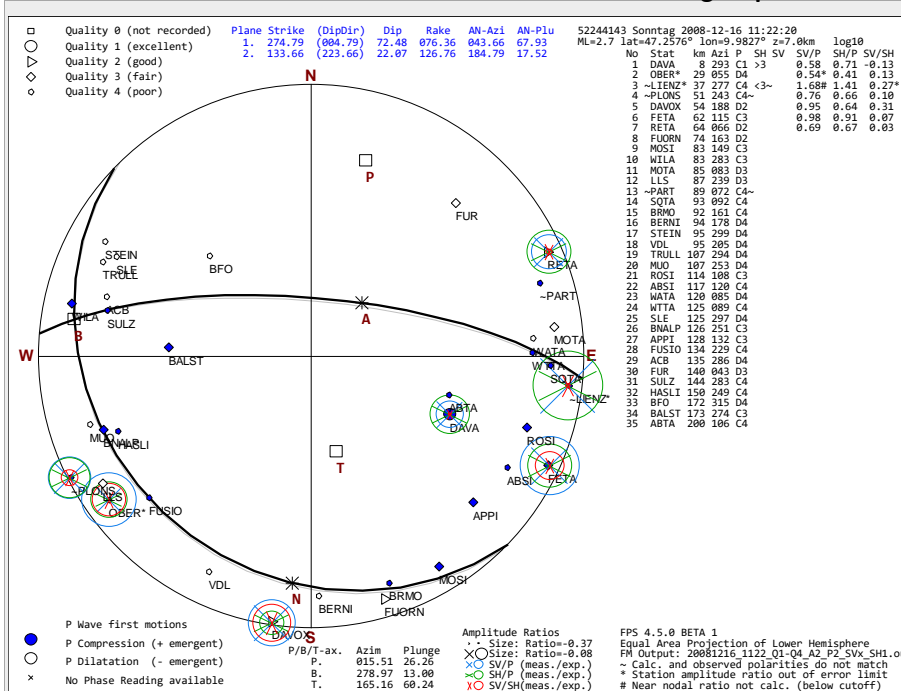
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	<input type="text" value="2"/>
FPS quality (expl. at end)	<input type="text" value="3"/>

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks

North Alpine floor thrust between Arlberg and Rhein Valley

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				016	26°	
B-Axis				279	13°	
T-Axis				165	60°	
Plane1/A-Axis	275	72	076	044	68°	<input type="checkbox"/>
Plane2/N-Axis	134	22	127	185	18°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: North Alpine floor thrust between Arlberg and Rhein Valley
 Fault zone: Thrust: Alpine Floor Thrust below the NCA
 Seismotectonic region: Bregenzerald

	Total	Misfit abs.	Misfit rel.
P Polarities	35	2	6%
SV Polarities	0	0	%
SH Polarities	2	1	50%
All Polarities	37	3	8%
P/SV/SH Pol. Q1	1	0	0%
P/SV/SH Pol. Q2	3	0	0%
P/SV/SH Pol. Q3	12	1	8%
P/SV/SH Pol. Q4	21	2	10%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	7	1	14%
SH/P Ampl. Ratios	7	0	0%
SV/SH Ampl. Ratios	7	1	14%
All Ampl. Ratios	21	2	10%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	51				59°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

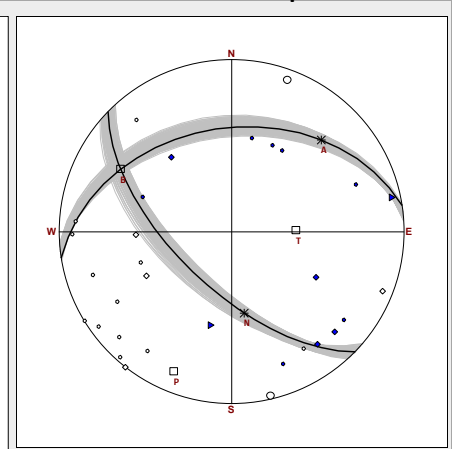
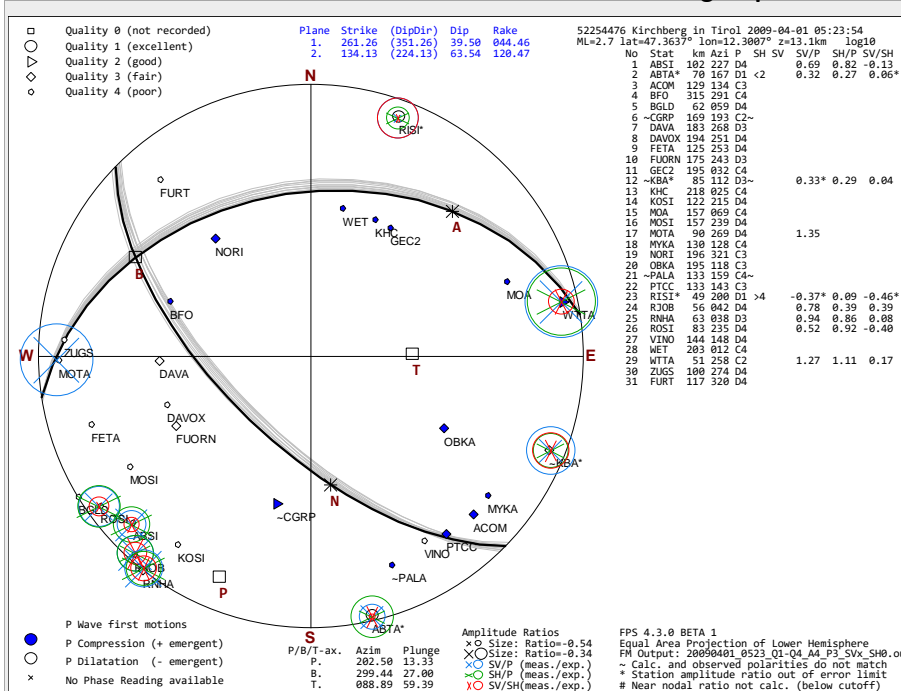
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	11 / 98
FPS quality (expl. at end)	4

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				203	13°	
B-Axis				299	27°	
T-Axis				089	59°	
Plane1/A-Axis	261	40	044	044	26°	<input type="checkbox"/>
Plane2/N-Axis	134	64	120	171	51°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	31	3	10%
SV Polarities	0	0	%
SH Polarities	2	0	0%
All Polarities	33	3	9%
P/SV/SH Pol. Q1	2	0	0%
P/SV/SH Pol. Q2	3	1	33%
P/SV/SH Pol. Q3	8	1	12%
P/SV/SH Pol. Q4	20	1	5%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	9	2	22%
SH/P Ampl. Ratios	8	0	0%
SV/SH Ampl. Ratios	8	2	25%
All Ampl. Ratios	25	4	16%

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

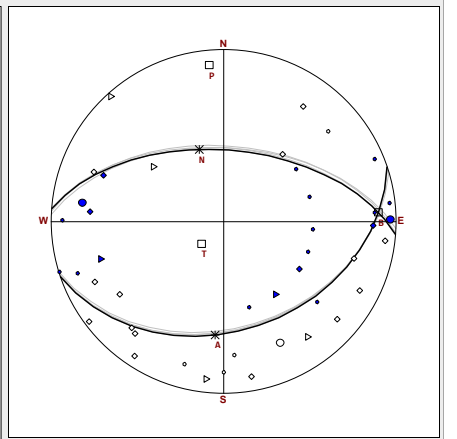
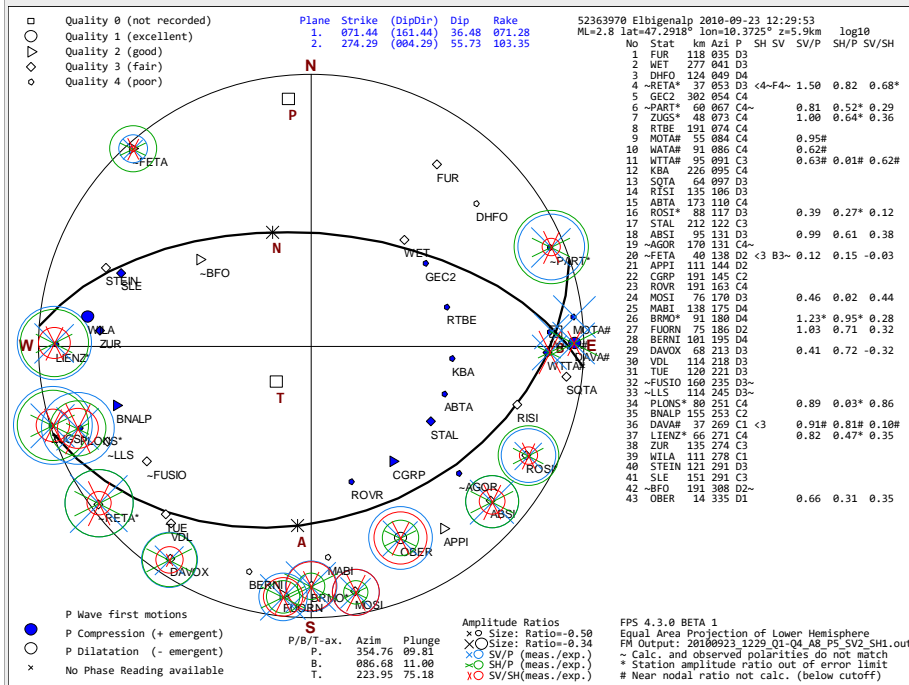
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	77		83°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	3

Contributors and References
 Reiter, 2016 (this Publ.) [1]

Mechanism remarks Basal thrust of Alpine nappes is at -7 km (Zerlauth et al., 2014)

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				355	10°	
B-Axis				087	11°	
T-Axis				224	75°	
Plane1/A-Axis	071	36	071	184	34°	<input type="checkbox"/>
Plane2/N-Axis	274	56	103	341	54°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: North Alpine floor thrust in the Lechtal Alps
 Fault zone: Thrust: Alpine Floor Thrust below the NCA
 Seismotectonic region: Arlberg and Lechtal Alps

	Total	Misfit abs.	Misfit rel.
P Polarities	43	5	12%
SV Polarities	2	2	100%
SH Polarities	3	1	33%
All Polarities	48	8	17%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	6	1	17%
P/SV/SH Pol. Q3	21	3	14%
P/SV/SH Pol. Q4	18	4	22%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	17	1	6%
SH/P Ampl. Ratios	15	6	40%
SV/SH Ampl. Ratios	15	1	7%
All Ampl. Ratios	47	8	17%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Relative Weighting	No	B Trend	0	1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89 °
Lower Limit of S rad. Factor	0,15			
Prim./sec. Azimuthal Gap ³²	69		73 °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

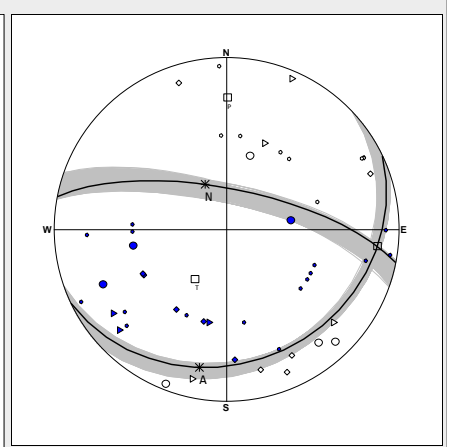
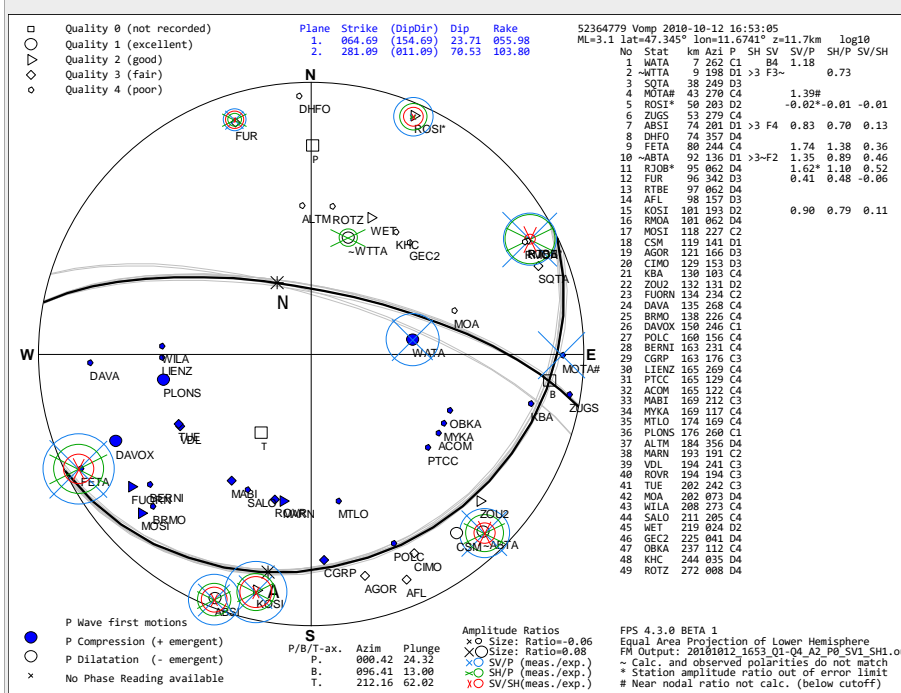
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	8
FPS quality (expl. at end)	277
	3

Contributors and References
 Reiter, 2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.		
P-Axis	000	24°					49	0	0%		
B-Axis	096	13°					4	1	25%		
T-Axis	212	62°					3	1	33%		
Plane1/A-Axis	065	24	056	191	19°	<input type="checkbox"/>	All Polarities	56	2	4%	
Plane2/N-Axis	281	71	104	335	66°	<input type="checkbox"/>	P/SV/SH Pol. Q1	7	0	0%	
RMS for acceptable solutions ⁴¹					0,30	log ₁₀	P/SV/SH Pol. Q2	8	0	0%	
RMS for all solutions ⁴¹					0,35	log ₁₀	P/SV/SH Pol. Q3	14	2	14%	
Mechanism Class ^{45 46}					R		P/SV/SH Pol. Q4	27	0	0%	
Inferred active fault	North Alpine floor thrust: Vomp-Schwaz section							P/SV/SH Pol. Q0	0	0	%
Fault zone	Thrust: Alpine Floor Thrust below the NCA							SV/P Ampl. Ratios	9	2	22%
Seismotectonic region	Lower Inn Valley and adjacent mountains							SH/P Ampl. Ratios	8	0	0%
							SV/SH Ampl. Ratios	7	0	0%	
							All Ampl. Ratios	24	2	8%	

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID	9.46	Ev ID	52364973	ID2		UTC	2010-10-19 00:38:28	MI	4,0	Io	5	
Epicenter	Vomp			AT	Lat	47,333 °	Long	11,653 °	z	13,6 km	a) z est. b)	13,6 km
Event remarks	NLL ERH ⁴⁷			2,170 km	NLL ERZ ⁴⁷	1,93 km	z macro	14 km				
a) Loc. grid search with Stations<150km, this publication [57] det./ refs. b) z estim. based on												

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359 °
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90 °
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89 °
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	29		39 °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

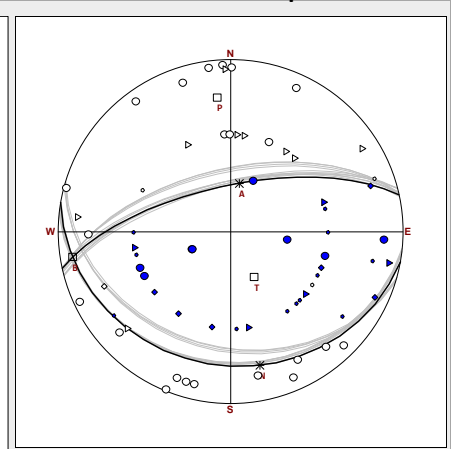
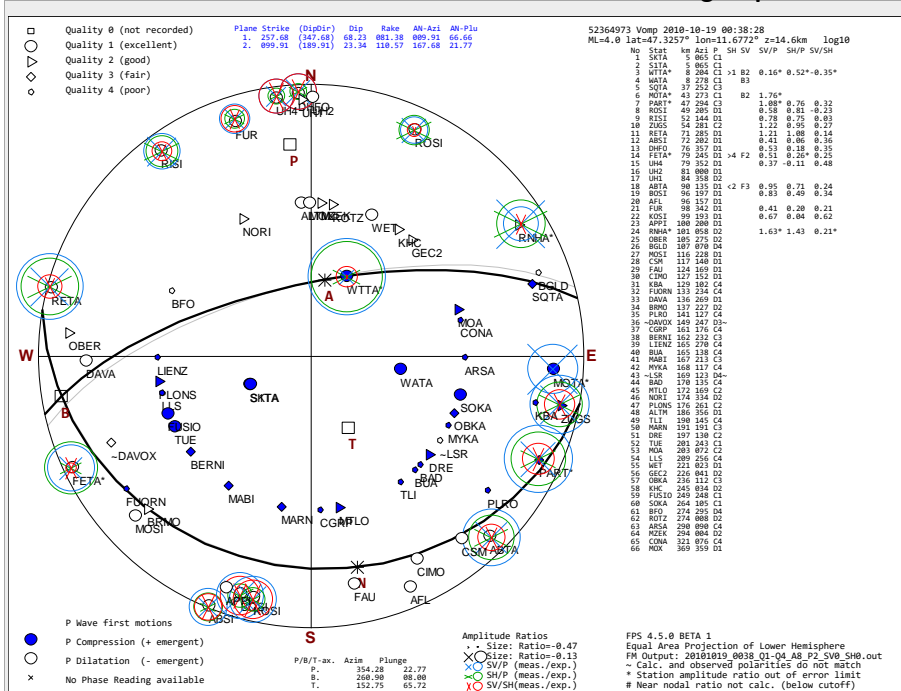
Velocity model
 Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	11
Contributors and References	1
Reiter, 2016 (this Publ.) [1]	

Mechanism remarks

North Alpine thrust: Vomp-Schwaz section

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				354	23 °	
B-Axis				261	08 °	
T-Axis				153	66 °	
Plane1/A-Axis	258	68	081	010	67 °	<input type="checkbox"/>
Plane2/N-Axis	100	23	111	168	22 °	<input type="checkbox"/>
RMS for acceptable solutions ⁴¹						0,25
RMS for all solutions ⁴¹						0,48
Mechanism Class ^{45 46}						R
Inferred active fault	North Alpine thrust: Vomp-Schwaz section					
Fault zone	Thrust: Alpine Floor Thrust below the NCA					
Seismotectonic region	Lower Inn Valley and adjacent mountains					

	Total	Misfit abs.	Misfit rel.
P Polarities	66	2	3 %
SV Polarities	5	0	0 %
SH Polarities	3	0	0 %
All Polarities	74	2	3 %
P/SV/SH Pol. Q1	31	0	0 %
P/SV/SH Pol. Q2	18	0	0 %
P/SV/SH Pol. Q3	9	1	11 %
P/SV/SH Pol. Q4	16	1	6 %
P/SV/SH Pol. Q0	0	0	0 %
SV/P Ampl. Ratios	16	4	25 %
SH/P Ampl. Ratios	15	2	13 %
SV/SH Ampl. Ratios	15	2	13 %
All Ampl. Ratios	46	8	17 %

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID	9.47	Ev ID	52365151	ID2		UTC	2010-10-23 12:40:27	MI	3,2	Io	4,5	
Epicenter	Biberwier			AT	Lat	47,346°	Long	10,865°	z	8,1 km	a) z est. b)	10,1 km
Event remarks	z=average(znll, zmacro)			NLL ERH ⁴⁷	2,31 km	NLL ERZ ⁴⁷	4,77 km	z macro	12 km			
				a) Loc.	grid search with Stations<150km, this publication [57]							
				det./ refs.								
				b) z estim.	z averaged with macroseismic depth [64]							
				based on								

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	33		35°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

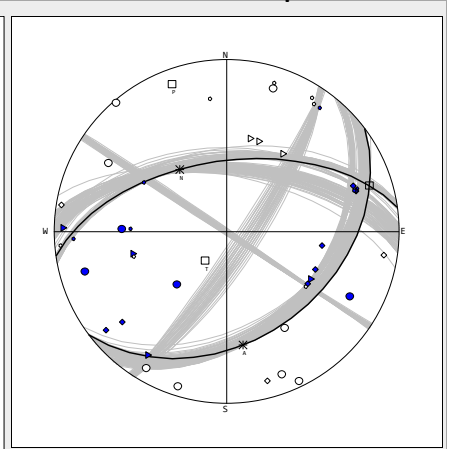
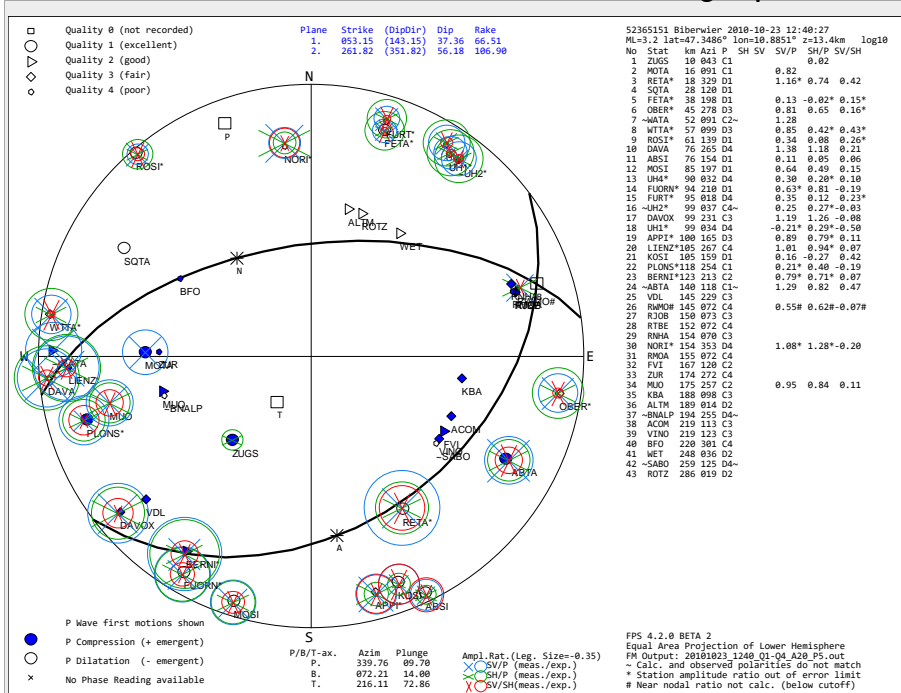
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	139
Contributors and References	
Reiter, 2016 (this Publ.)	[1]

Mechanism remarks error for one Q1 station (ABTA) could come from velocity model

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				340	10°	
B-Axis				072	14°	
T-Axis				216	73°	
Plane1/A-Axis	053	37	067	172	34°	<input type="checkbox"/>
Plane2/N-Axis	262	56	107	323	53°	<input type="checkbox"/>
RMS for acceptable solutions ⁴¹						0,29 log ₁₀
RMS for all solutions ⁴¹						0,47 log ₁₀
Mechanism Class ^{45 46}						R
Inferred active fault	Reverse fault in European upper crust below Seefeld-Biberwier					
Fault zone	Thrust/Reverse fault: Compression in European basement					
Seismotectonic region	NCA between Innsbruck and Arlberg					

	Total	Misfit abs.	Misfit rel.
P Polarities	43	5	12%
SV Polarities	0	0	%
SH Polarities	0	0	%
All Polarities	43	5	12%
P/SV/SH Pol. Q1	12	1	8%
P/SV/SH Pol. Q2	7	1	14%
P/SV/SH Pol. Q3	10	0	0%
P/SV/SH Pol. Q4	14	3	21%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	25	6	24%
SH/P Ampl. Ratios	24	9	38%
SV/SH Ampl. Ratios	23	5	22%
All Ampl. Ratios	72	20	28%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z z est. b)

Event remarks zErr z macro

NLL coordinates used because of low errors and well fit with first aftershock

a) Loc. grid search with Stations<150km, this publication [57]
 det./ refs.
 b) z estim. z averaged with macroseismic depth [64]
 based on

FocMec⁴¹	Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1 359°"/>
	Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1 90°"/>
	Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1 89°"/>
	Lower Limit of S rad. Factor	<input type="text" value="0,15"/>			
	Prim./sec. Azimuthal Gap ³²	<input type="text" value="40"/>		<input type="text" value="40°"/>	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

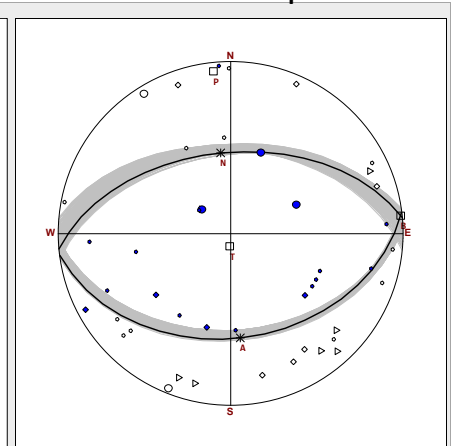
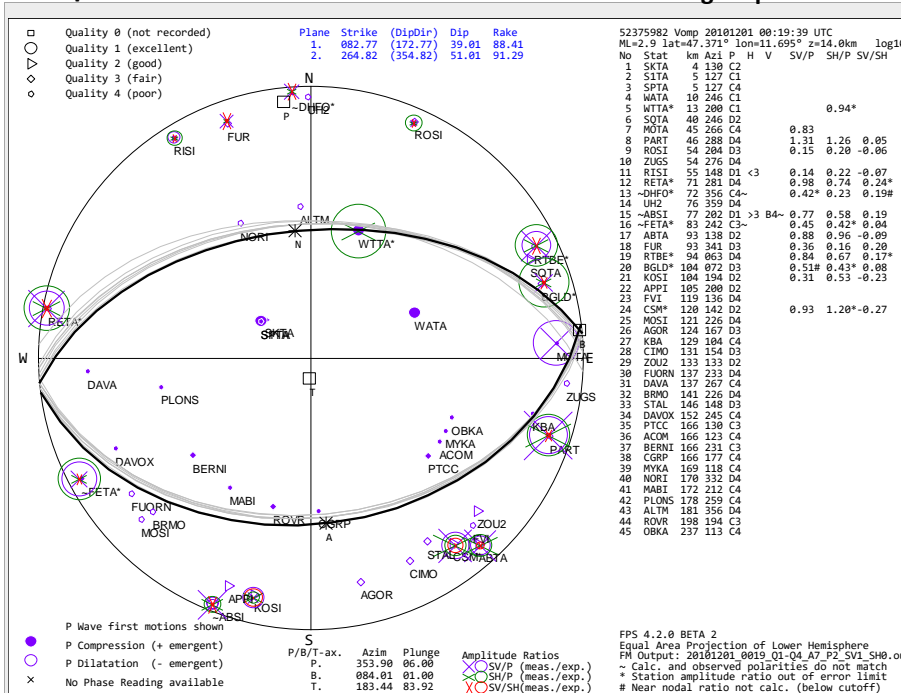
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="8"/>
FPS quality (expl. at end)	<input type="text" value="127"/>
	<input type="text" value="2"/>

Contributors and References
 Reiter, 2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis				354	06°		45	2	4%
B-Axis				084	01°		1	1	100%
T-Axis				183	84°		2	0	0%
Plane1/A-Axis	083	39	088	175	39°	<input type="checkbox"/>	48	3	6%
Plane2/N-Axis	265	51	091	353	51°	<input type="checkbox"/>	5	0	0%
RMS for acceptable solutions ⁴¹						0,32	7	0	0%
RMS for all solutions ⁴¹						0,40	12	1	8%
Mechanism Class ^{45 46}						R	24	2	8%
Inferred active fault	North Alpine floor thrust: Vomp-Schwaz section						0	0	%
Fault zone	Thrust: Alpine Floor Thrust below the NCA						14	1	7%
Seismotectonic region	Lower Inn Valley and adjacent mountains						14	4	29%
							13	2	15%
							41	7	17%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	43	58 °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

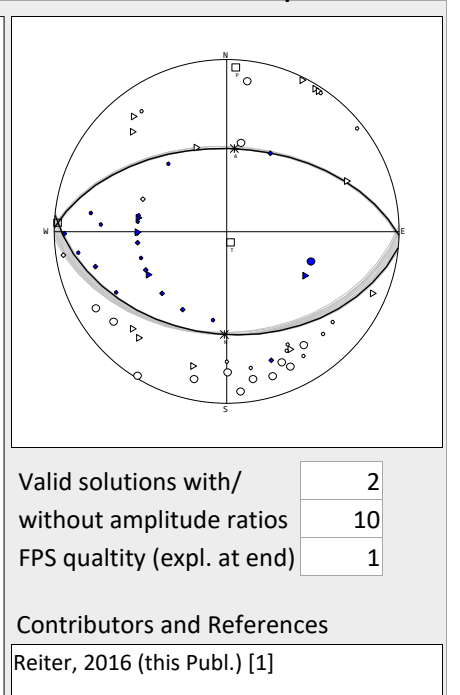
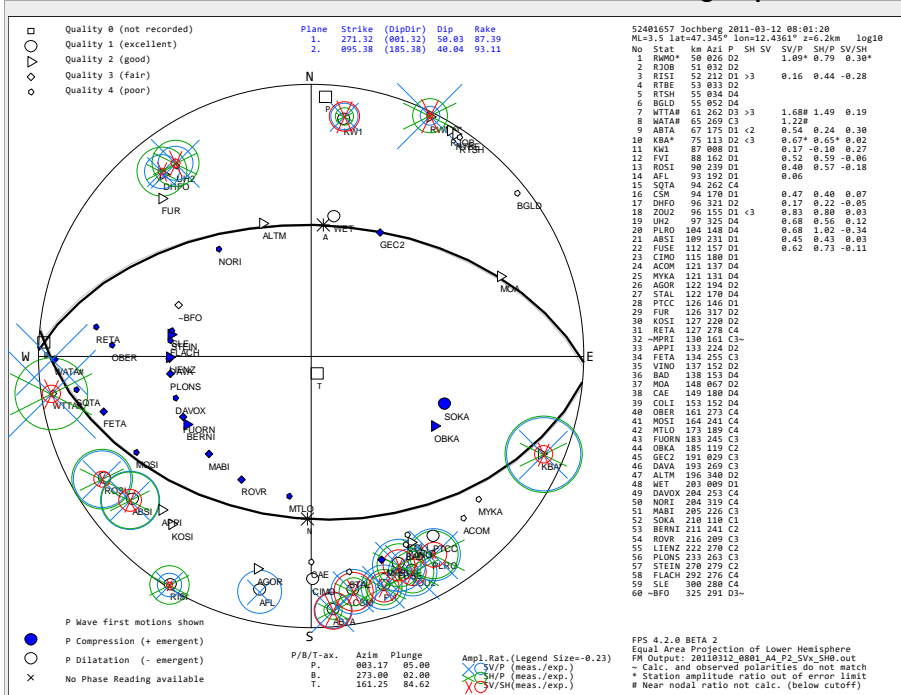
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rate	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis	003	05°					60	2	3%
B-Axis	273	02°					0	0	%
T-Axis	161	85°					5	0	0%
Plane1/A-Axis	271	50	087	005	50°	<input type="checkbox"/>	65	2	3%
Plane2/N-Axis	095	40	093	181	40°	<input type="checkbox"/>	14	0	0%
RMS for acceptable solutions ⁴¹					0,28	log ₁₀	17	0	0%
RMS for all solutions ⁴¹					0,36	log ₁₀	15	2	13%
Mechanism Class ^{45 46}					R		19	0	0%
Inferred active fault	Brixlegg thrust, Jochberg section						P/SV/SH Pol. Q1	0	0%
Fault zone	Thrust: basal thrust of Tauern Window						P/SV/SH Pol. Q2	0	0%
Seismotectonic region	Tux & Kitzbuehel Alps (south of Inn valley)						P/SV/SH Pol. Q3	0	0%
						P/SV/SH Pol. Q4	0	0%	
						P/SV/SH Pol. Q0	17	2	12%
						SV/P Ampl. Ratios	15	1	7%
						SH/P Ampl. Ratios	15	1	7%
						SV/SH Ampl. Ratios	47	4	9%
						All Ampl. Ratios			

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat ° Long ° z km a) z est. b) km

Event remarks NLL ERH⁴⁷ km NLL ERZ⁴⁷ km z macro km

a) Loc. grid search with Stations<150km, z negative or near 0 -> z
 det./ refs. set to 2km [57]
 b) z estim. z averaged with macroseismic depth [64]
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	71				140 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

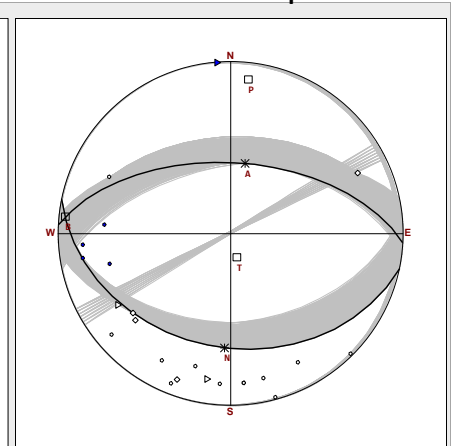
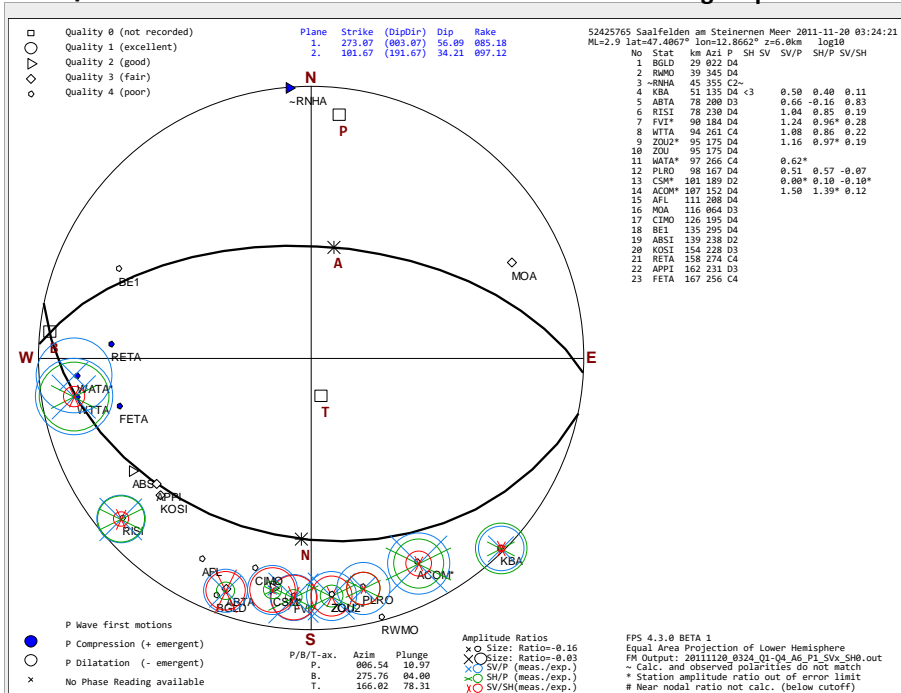
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	494
	3

Contributors and References
 Reiter, 2016 (this Publ.) [1]

Mechanism remarks a foreshock occurred ca. 4.3 seconds before the main shock and interferes with the main shock waveforms

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				007	11 °	
B-Axis				276	04 °	
T-Axis				166	78 °	
Plane1/A-Axis	273	56	085	012	56 °	<input type="checkbox"/>
Plane2/N-Axis	102	34	097	183	34 °	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: North Alpine floor thrust: Saalfelden-Lofer section
 Fault zone: Thrust: Alpine Floor Thrust below the NCA
 Seismotectonic region: NCA between Kufstein and Salzburg

	Total	Misfit abs.	Misfit rel.
P Polarities	23	1	4 %
SV Polarities	0	0	%
SH Polarities	1	0	0 %
All Polarities	24	1	4 %
P/SV/SH Pol. Q1	0	0	%
P/SV/SH Pol. Q2	3	1	33 %
P/SV/SH Pol. Q3	5	0	0 %
P/SV/SH Pol. Q4	16	0	0 %
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	10	2	20 %
SH/P Ampl. Ratios	9	3	33 %
SV/SH Ampl. Ratios	9	1	11 %
All Ampl. Ratios	28	6	21 %

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID	9.52	Ev ID	52425769	ID2		UTC	2011-11-20 03:27:55	MI	2,7	Io	3,5	
Epicenter	Saalfelden am Steinernen Meer			AT	Lat	47,417°	Long	12,843°	z	2,0 km	a) z est. b)	3,5 km
Event remarks	negative NLL z = -1,9km set to +2km z=average(zmicro, zmacro) IO estim., 9 km from mainshock at 03:24			NLL ERH ⁴⁷	2,480 km		NLL ERZ ⁴⁷	5,7 km		z macro	9 km	
	a) Loc. grid search with Stations<150km, z negative or near 0 -> z set to 2km [57]			det./ refs.		b) z estim. z averaged with macroseismic depth [64]						
	based on											

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	50		61°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

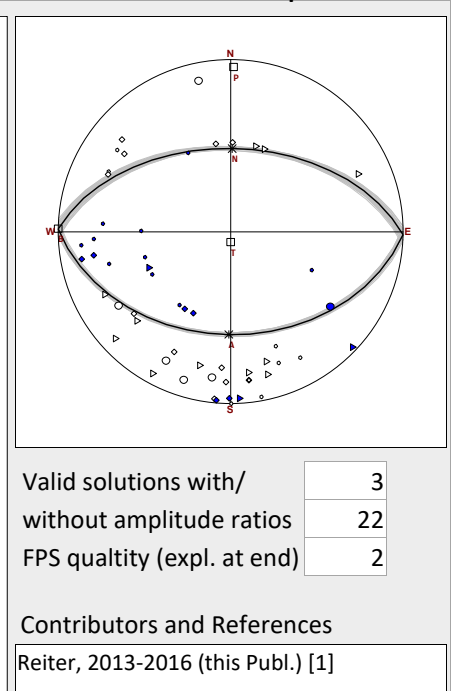
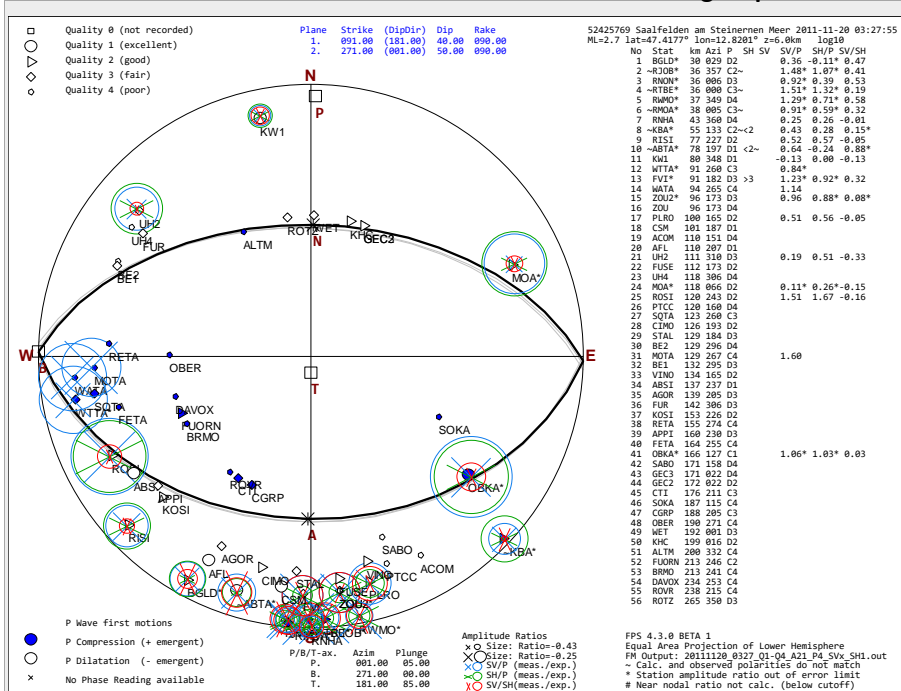
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	22
Contributors and References	2
Reiter, 2013-2016 (this Publ.) [1]	

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rate	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis	001	05°					56	4	7%
B-Axis	091	00°					0	0	%
T-Axis	181	85°					3	1	33%
Plane1/A-Axis	091	40	090	181	40°		59	5	8%
Plane2/N-Axis	271	50	090	001	50°		6	0	0%
RMS for acceptable solutions ⁴¹					0,28	log ₁₀	16	3	19%
RMS for all solutions ⁴¹					0,58	log ₁₀	18	2	11%
Mechanism Class ^{45 46}					R		19	0	0%
Inferred active fault	North Alpine floor thrust: Saalfelden-Lofer section						0	0	%
Fault zone	Thrust: Alpine Floor Thrust below the NCA						21	9	43%
Seismotectonic region	NCA between Kufstein and Salzburg						18	9	50%
							18	3	17%
							57	21	37%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	47				72°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

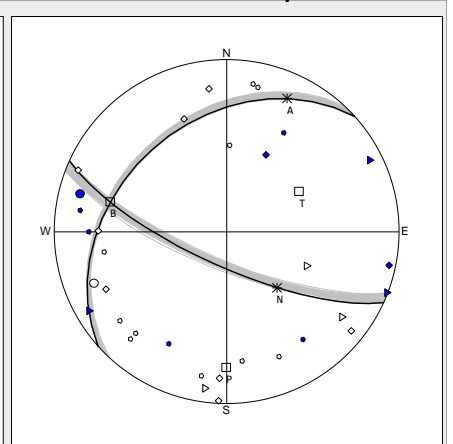
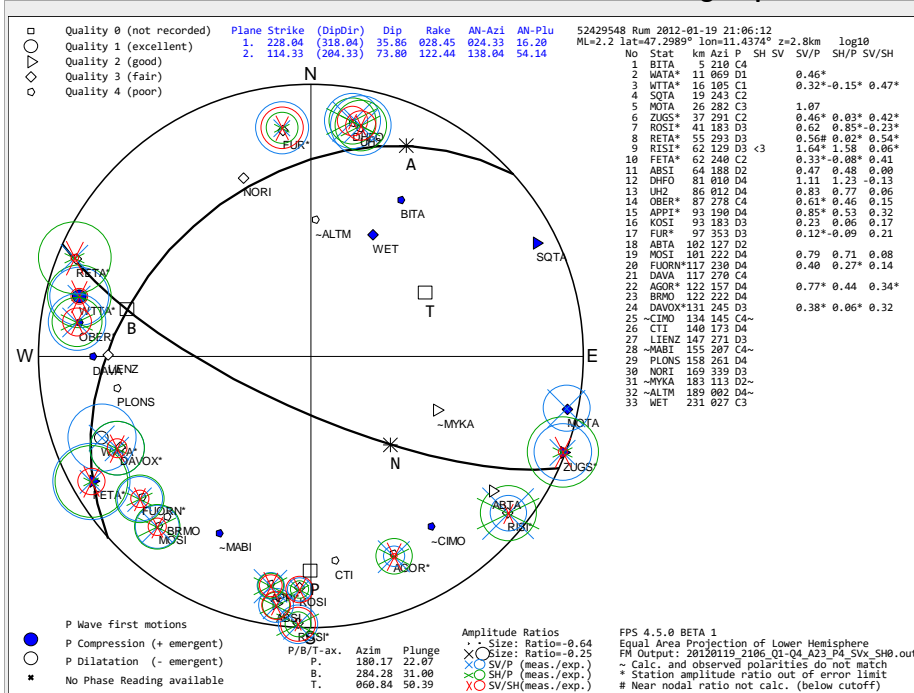
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	3

Contributors and References
 Freudenthaler & Reiter, 2012-2017 [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis		180		22°		
B-Axis		284		31°		
T-Axis		061		50°		
Plane1/A-Axis	228	36	028	024	16°	<input type="checkbox"/>
Plane2/N-Axis	114	74	122	138	54°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Innsbruck thrust
 Fault zone: Thrust: Intra-nappe stack thrust in Austroalpine
 Seismotectonic region: Lower Inn Valley and adjacent mountains

	Total	Misfit abs.	Misfit rel.
P Polarities	33	4	12%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	34	4	12%
P/SV/SH Pol. Q1	2	0	0%
P/SV/SH Pol. Q2	6	1	17%
P/SV/SH Pol. Q3	11	0	0%
P/SV/SH Pol. Q4	15	3	20%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	19	10	53%
SH/P Ampl. Ratios	17	7	41%
SV/SH Ampl. Ratios	17	6	35%
All Ampl. Ratios	53	23	43%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	32				41°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

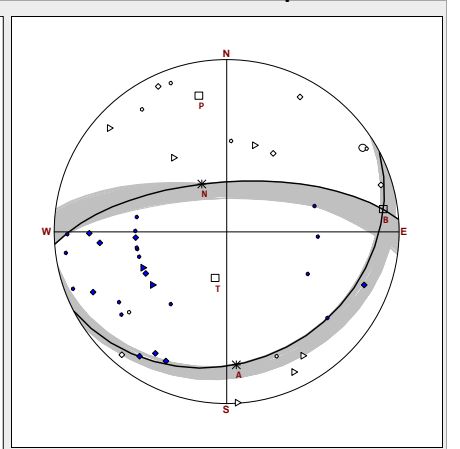
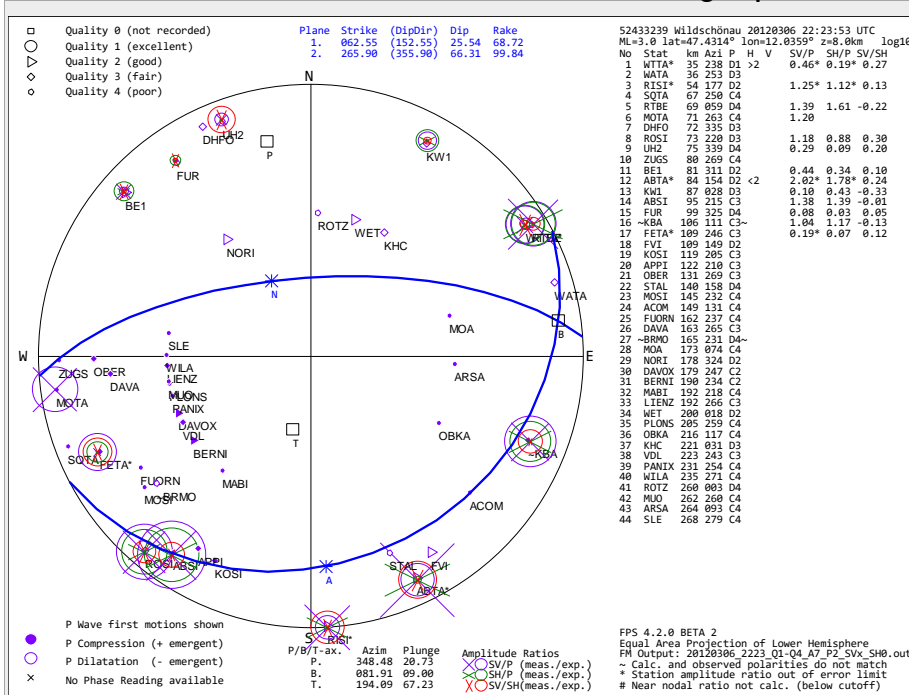
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	220
	3

Contributors and References
 Reiter, 2013-2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.		
P-Axis				348	21°		44	2	5%		
B-Axis				082	09°		0	0	%		
T-Axis				194	67°		2	0	0%		
Plane1/A-Axis	063	26	069	176	24°	<input type="checkbox"/>	46	2	4%		
Plane2/N-Axis	266	66	100	333	64°	<input type="checkbox"/>	1	0	0%		
RMS for acceptable solutions ⁴¹					0,32	log ₁₀	P/SV/SH Pol. Q1	10	0	0%	
RMS for all solutions ⁴¹					0,52	log ₁₀	P/SV/SH Pol. Q2	14	1	7%	
Mechanism Class ^{45 46}					R		P/SV/SH Pol. Q3	21	1	5%	
Inferred active fault	Brixlegg thrust, Schwaz section							P/SV/SH Pol. Q0	0	0	%
Fault zone	Thrust: basal thrust of Tauern Window							SV/P Ampl. Ratios	13	4	31%
Seismotectonic region	Tux & Kitzbuehel Alps (south of Inn valley)							SH/P Ampl. Ratios	12	3	25%
							SV/SH Ampl. Ratios	12	0	0%	
							All Ampl. Ratios	37	7	19%	

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

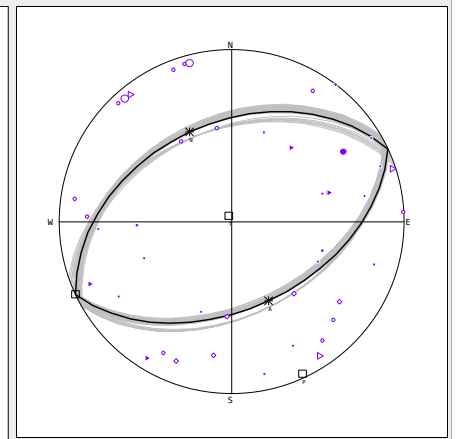
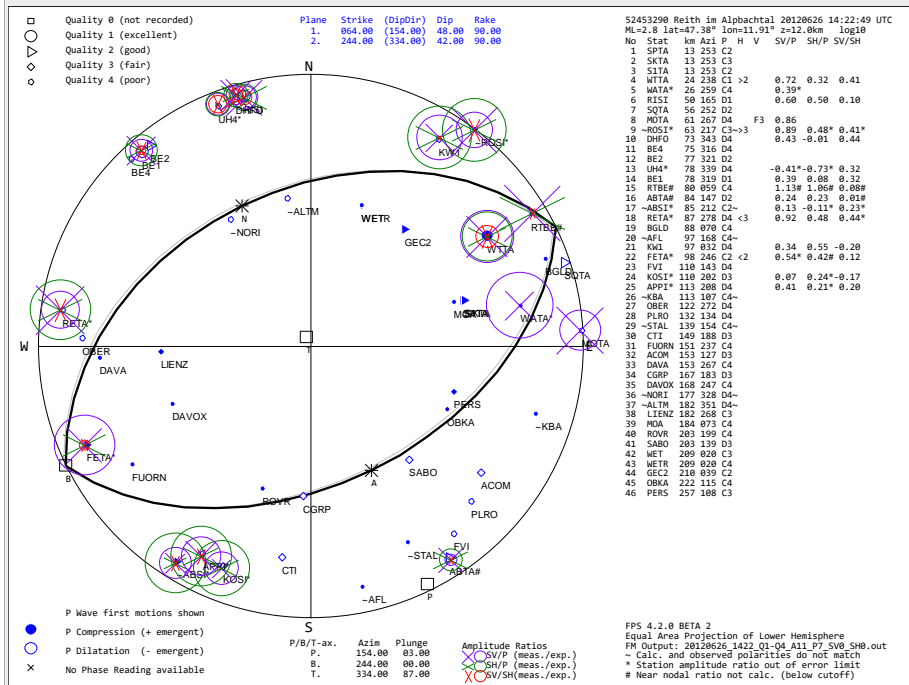
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Relative Weighting	No	B Trend	0	1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89 °
Lower Limit of S rad. Factor	0,15			
Prim./sec. Azimuthal Gap ³²	38		41 °	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	38
	4

Contributors and References
 Freudenthaler & Reiter, 2012-2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rate	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				154	03°		46	7	15%	
B-Axis				064	00°		1	0	0%	
T-Axis				334	87°		4	0	0%	
Plane1/A-Axis	064	48	090	154	48°	<input type="checkbox"/>	51	7	14%	
Plane2/N-Axis	244	42	090	334	42°	<input type="checkbox"/>	3	0	0%	
RMS for acceptable solutions ⁴¹						0,30	P/SV/SH Pol. Q1	10	1	10%
RMS for all solutions ⁴¹						0,47	P/SV/SH Pol. Q2	13	1	8%
Mechanism Class ^{45 46}						R	P/SV/SH Pol. Q3	25	5	20%
Inferred active fault	Reverse fault in European upper crust, Lower Inn Valley						P/SV/SH Pol. Q4	0	0	%
Fault zone	Thrust/Reverse fault: Compression in European basement						P/SV/SH Pol. Q0	16	3	19%
Seismotectonic region	Lower Inn Valley and adjacent mountains						SV/P Ampl. Ratios	14	5	36%
							SH/P Ampl. Ratios	14	3	21%
							All Ampl. Ratios	44	11	25%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Relative Weighting	No	B Trend	0	1 359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
Lower Limit of S rad. Factor	0,15			
Prim./sec. Azimuthal Gap ³²	33		36°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

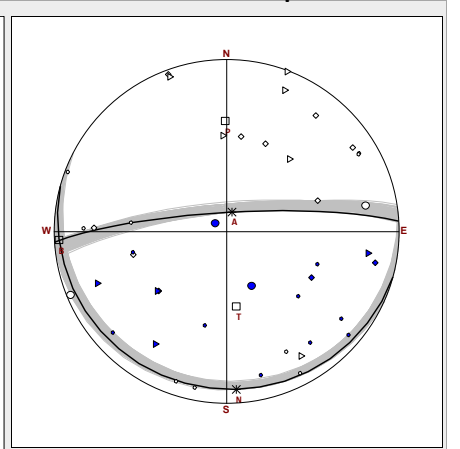
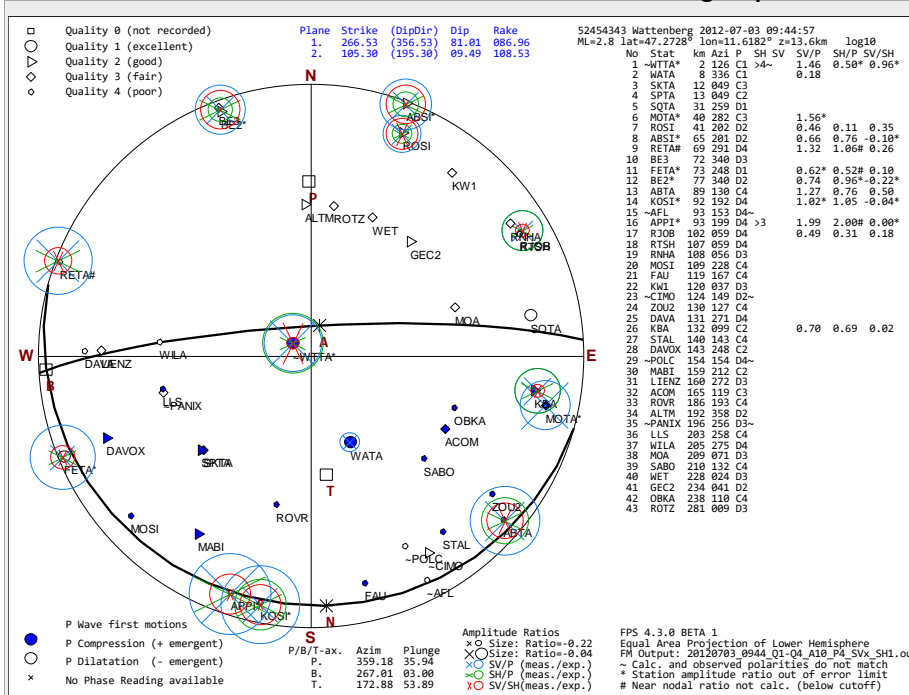
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	100
FPS quality (expl. at end)	2

Contributors and References
 Freudenthaler & Reiter, 2012-2016 (this Publ.) [1]

Mechanism remarks

Reverse fault in European upper crust, Lower Inn Valley

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				359	36°	
B-Axis				267	03°	
T-Axis				173	54°	
Plane1/A-Axis	267	81	087	015	81°	<input type="checkbox"/>
Plane2/N-Axis	105	09	109	177	09°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: Reverse fault in European upper crust, Lower Inn Valley
 Fault zone: Thrust/Reverse fault: Compression in European basement
 Seismotectonic region: Lower Inn Valley and adjacent mountains

	Total	Misfit abs.	Misfit rel.
P Polarities	43	4	9%
SV Polarities	0	0	%
SH Polarities	2	1	50%
All Polarities	45	5	11%
P/SV/SH Pol. Q1	4	0	0%
P/SV/SH Pol. Q2	10	1	10%
P/SV/SH Pol. Q3	12	1	8%
P/SV/SH Pol. Q4	19	3	16%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	13	3	23%
SH/P Ampl. Ratios	11	2	18%
SV/SH Ampl. Ratios	11	5	45%
All Ampl. Ratios	35	10	29%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERH⁴⁷ NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	60				71°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

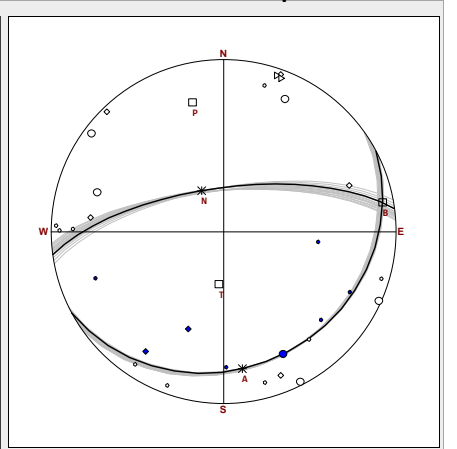
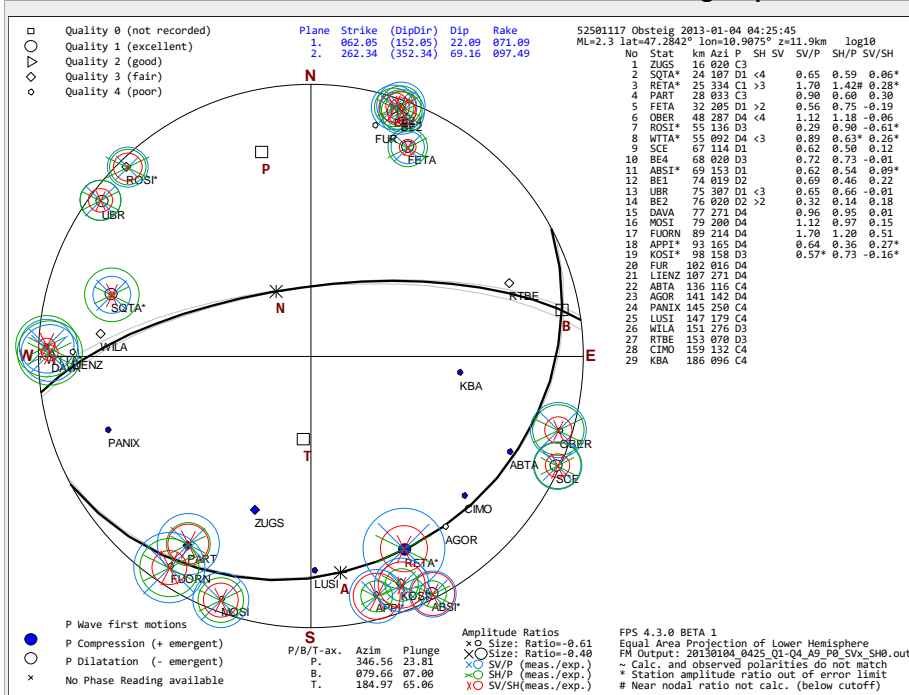
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	3
FPS quality (expl. at end)	14
	2

Contributors and References
 Reiter, 2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plunge	Azim	Pl.	active
P-Axis				347	24°	
B-Axis				080	07°	
T-Axis				185	65°	
Plane1/A-Axis	062	22	071	172	21°	<input type="checkbox"/>
Plane2/N-Axis	262	69	097	332	68°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	29	0	0%
SV Polarities	0	0	%
SH Polarities	7	0	0%
All Polarities	36	0	0%
P/SV/SH Pol. Q1	6	0	0%
P/SV/SH Pol. Q2	4	0	0%
P/SV/SH Pol. Q3	10	0	0%
P/SV/SH Pol. Q4	16	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	18	1	6%
SH/P Ampl. Ratios	18	1	6%
SV/SH Ampl. Ratios	18	7	39%
All Ampl. Ratios	54	9	17%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERH⁴⁷ NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹	Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="359°"/>
	Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="90°"/>
	Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="89°"/>
	Lower Limit of S rad. Factor	<input type="text" value="0,15"/>			
	Prim./sec. Azimuthal Gap ³²	<input type="text" value="34"/>		<input type="text" value="36°"/>	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

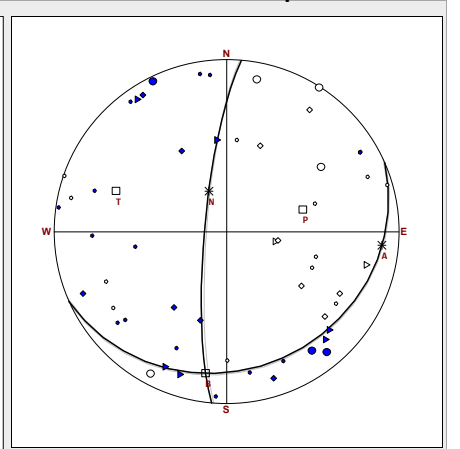
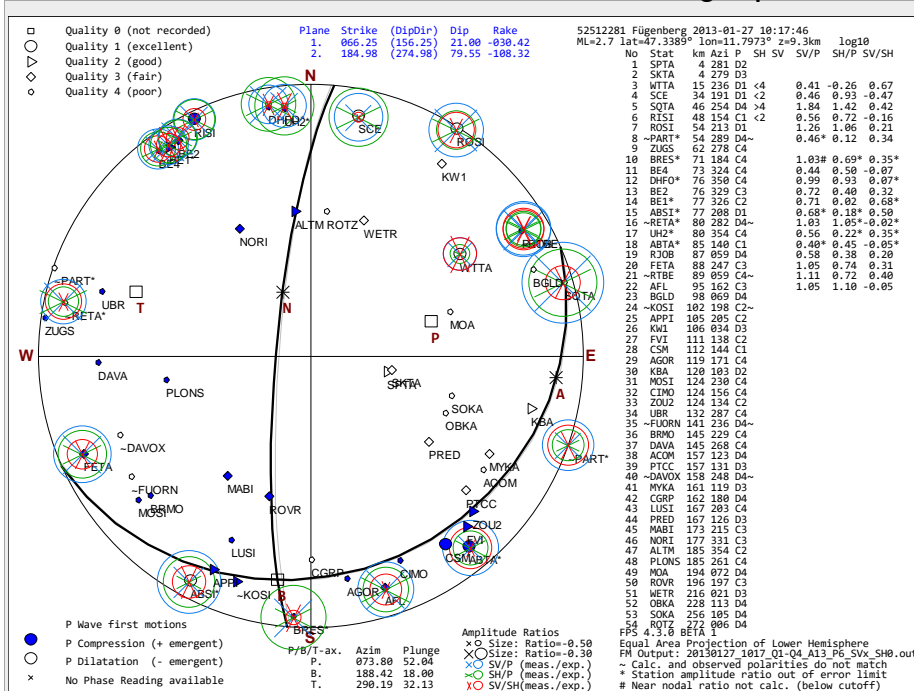
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="2"/>
FPS quality (expl. at end)	<input type="text" value="3"/>
Contributors and References	<input type="text" value="2"/>
Reiter, 2016 (this Publ.) [1]	

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.		
P-Axis	074	52°					<input checked="" type="checkbox"/>	54	6	11%		
B-Axis	188	18°					<input checked="" type="checkbox"/>	0	0	%		
T-Axis	290	32°					<input checked="" type="checkbox"/>	4	0	0%		
Plane1/A-Axis	066	21	-030	095	10°		<input type="checkbox"/>	58	6	10%		
Plane2/N-Axis	185	80	-108	336	69°		<input type="checkbox"/>	P/SV/SH Pol. Q1	7	0	0%	
RMS for acceptable solutions ⁴¹						0,24	log ₁₀	P/SV/SH Pol. Q2	10	1	10%	
RMS for all solutions ⁴¹						0,40	log ₁₀	P/SV/SH Pol. Q3	12	0	0%	
Mechanism Class ^{45 46}						N		P/SV/SH Pol. Q4	29	5	17%	
Inferred active fault	Lower Inn Valley Extensional events								P/SV/SH Pol. Q0	0	0	%
Fault zone	Extension: Northern Calcareous Alps								SV/P Ampl. Ratios	19	3	16%
Seismotectonic region	Lower Inn Valley and adjacent mountains								SH/P Ampl. Ratios	19	4	21%
								SV/SH Ampl. Ratios	19	6	32%	
								All Ampl. Ratios	57	13	23%	

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks a) Loc. det./ refs. b) z estim. based on

FocMec⁴¹	Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1 359°"/>
	Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1 90°"/>
	Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1 89°"/>
	Lower Limit of S rad. Factor	<input type="text" value="0,15"/>			
	Prim./sec. Azimuthal Gap ³²	<input type="text" value="35"/>		<input type="text" value="35°"/>	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

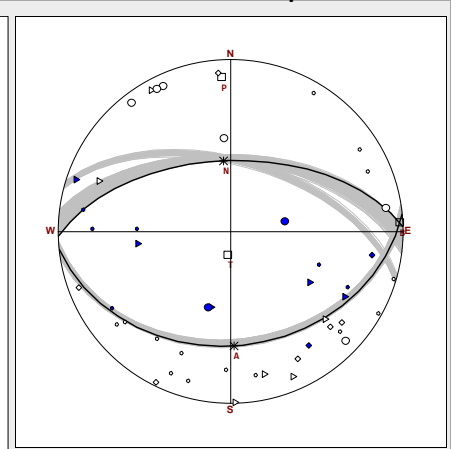
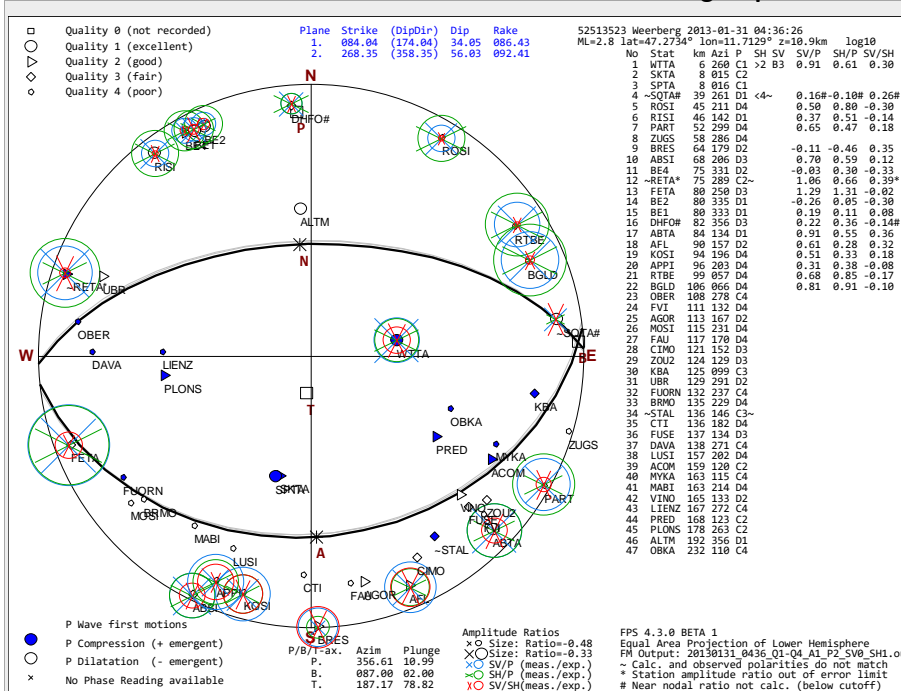
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="3"/>
FPS quality (expl. at end)	<input type="text" value="90"/>
Contributors and References	<input type="text" value="1"/>

Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				357	11°	
B-Axis				087	02°	
T-Axis				187	79°	
Plane1/A-Axis	084	34	086	178	34°	<input type="checkbox"/>
Plane2/N-Axis	268	56	092	354	56°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀

RMS for all solutions⁴¹ log₁₀

Mechanism Class^{45 46}

Inferred active fault

Fault zone

Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	45	3	7%
SV Polarities	1	0	0%
SH Polarities	2	1	50%
All Polarities	48	4	8%
P/SV/SH Pol. Q1	8	0	0%
P/SV/SH Pol. Q2	10	1	10%
P/SV/SH Pol. Q3	10	2	20%
P/SV/SH Pol. Q4	20	1	5%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	19	0	0%
SH/P Ampl. Ratios	19	0	0%
SV/SH Ampl. Ratios	19	1	5%
All Ampl. Ratios	57	1	2%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹	Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	<input type="text" value="No"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="359°"/>
	Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="90°"/>
	Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="89°"/>
	Lower Limit of S rad. Factor	<input type="text" value="0,15"/>			
	Prim./sec. Azimuthal Gap ³²	<input type="text" value="56"/>	<input type="text" value="101°"/>		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

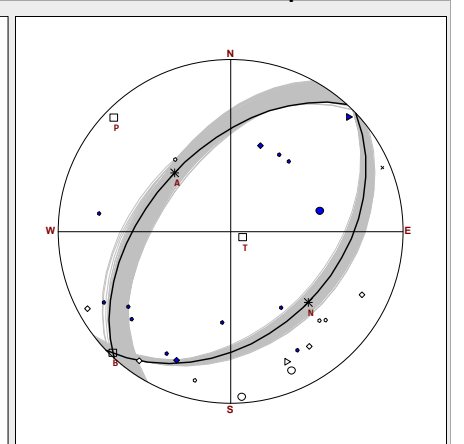
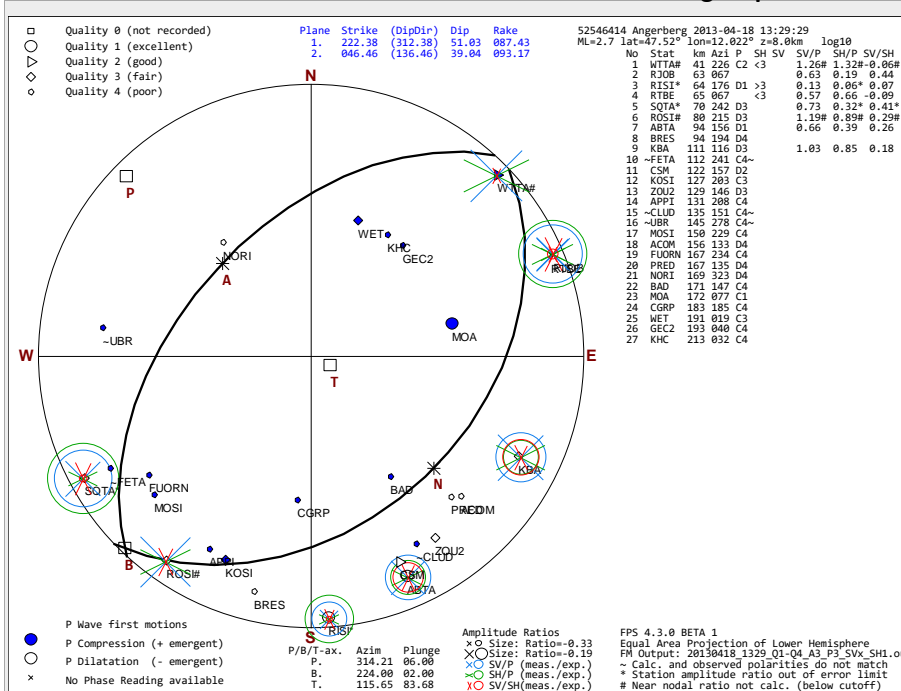
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="1"/>
FPS quality (expl. at end)	<input type="text" value="4"/>

Contributors and References

Reiter, 2016-2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					314	06°	
B-Axis					224	02°	
T-Axis					116	84°	
Plane1/A-Axis	222	51	087	316	51°		<input type="checkbox"/>
Plane2/N-Axis	046	39	093	132	39°		<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	25	3	12%
SV Polarities	0	0	%
SH Polarities	3	0	0%
All Polarities	28	3	11%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	2	0	0%
P/SV/SH Pol. Q3	9	0	0%
P/SV/SH Pol. Q4	14	3	21%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	7	0	0%
SH/P Ampl. Ratios	7	2	29%
SV/SH Ampl. Ratios	7	1	14%
All Ampl. Ratios	21	3	14%

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERH⁴⁷ NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

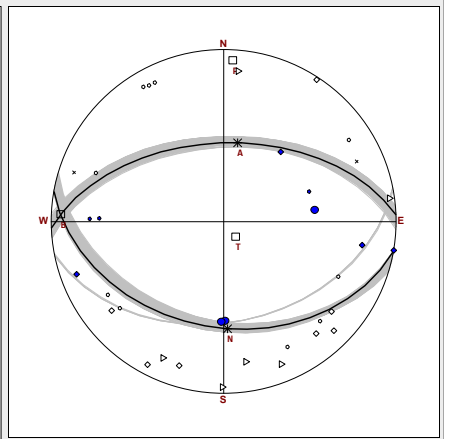
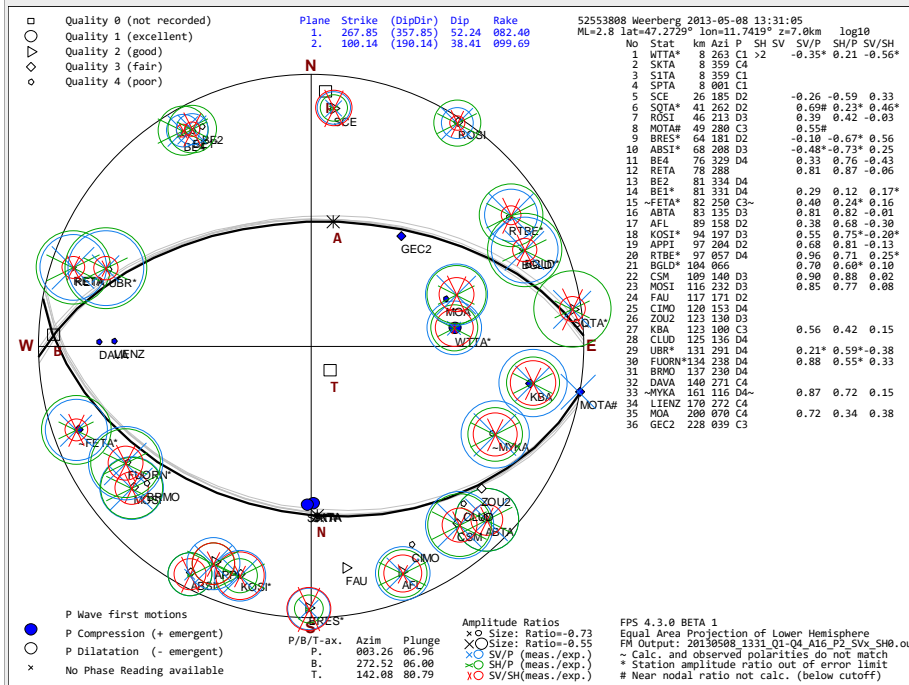
Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.	
Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="359°"/>
Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="90°"/>
Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="89°"/>
Lower Limit of S rad. Factor	<input type="text" value="0,15"/>				
Prim./sec. Azimuthal Gap ³²	<input type="text" value="38"/>				<input type="text" value="38°"/>

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	<input type="text" value="5"/>
FPS quality (expl. at end)	<input type="text" value="91"/>
FPS quality (expl. at end)	<input type="text" value="2"/>

Contributors and References

Reiter, 2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					003	07°	
B-Axis					273	06°	
T-Axis					142	81°	
Plane1/A-Axis	268	52	082	010	52°	<input type="checkbox"/>	
Plane2/N-Axis	100	38	100	178	38°	<input type="checkbox"/>	

RMS for acceptable solutions⁴¹ log₁₀

RMS for all solutions⁴¹ log₁₀

Mechanism Class^{45 46}

Inferred active fault

Fault zone

Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	34	2	6%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	35	2	6%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	7	0	0%
P/SV/SH Pol. Q3	11	1	9%
P/SV/SH Pol. Q4	14	1	7%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	24	3	12%
SH/P Ampl. Ratios	23	8	35%
SV/SH Ampl. Ratios	23	5	22%
All Ampl. Ratios	70	16	23%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID	9.63	Ev ID	52561610	ID2		UTC	2013-05-22 03:21:46	MI	3,2	Io	4,5	
Epicenter	Sankt Martin bei Lofer			AT	Lat	47,550°	Long	12,672°	z	2,0 km	a) z est. b)	3,6 km
Event remarks	zNLL=-1,9km -> set to 2km			NLL ERH ⁴⁷	1,840 km	NLL ERZ ⁴⁷	3,61 km	z macro	9 km	a) Loc. grid search with Stations<150km, z negative or near 0 -> z det./ refs. set to 2km [57]		
b) z estim. z averaged with macroseismic depth [64] based on												

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Input parameters and presets	Relative Weighting	No	B Trend	0	1	359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
	Lower Limit of S rad. Factor	0,15				
	Prim./sec. Azimuthal Gap ³²	46		57°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

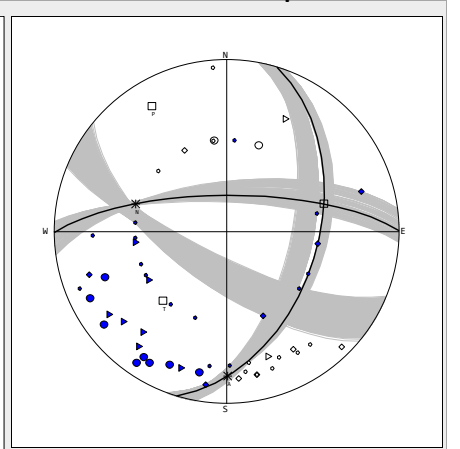
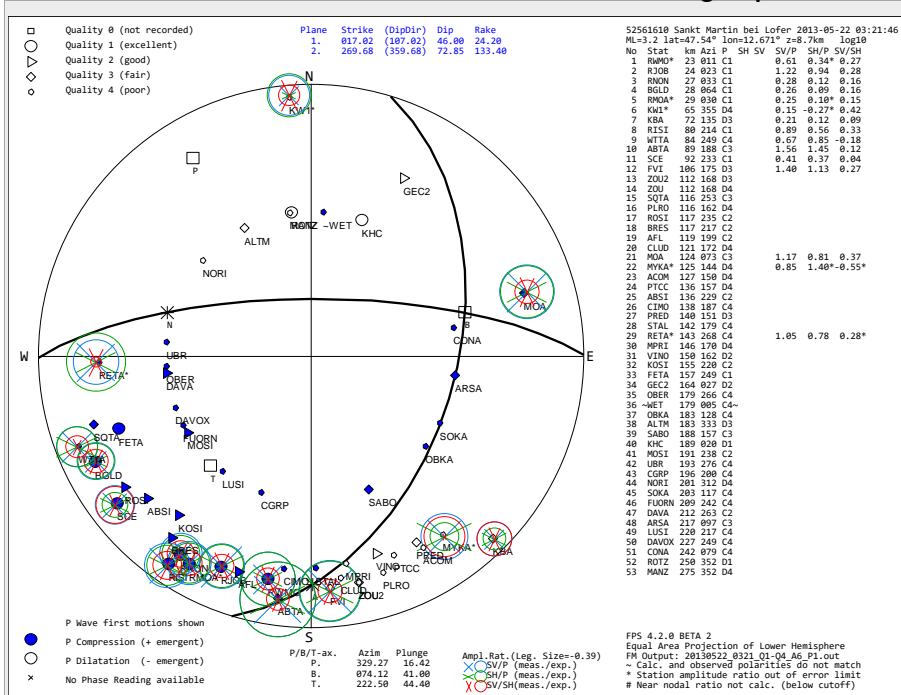
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	533
Contributors and References	4
Reiter, 2016 (this Publ.) [1]	

Mechanism remarks
oblique strike slip / normal fault
MOTA WATA missing

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis					329	16°		53	1	2%	
B-Axis					074	41°		0	0	0%	
T-Axis					222	44°		0	0	0%	
Plane1/A-Axis	017	46	024	180	17°		All Polarities	53	1	2%	
Plane2/N-Axis	270	73	133	287	44°		P/SV/SH Pol. Q1	10	0	0%	
RMS for acceptable solutions ⁴¹							0,29	P/SV/SH Pol. Q2	9	0	0%
RMS for all solutions ⁴¹							0,43	P/SV/SH Pol. Q3	10	0	0%
Mechanism Class ^{45 46}							R-SS	P/SV/SH Pol. Q4	24	1	4%
Inferred active fault	North Alpine floor thrust: Saalfelden-Lofer section										
Fault zone	Thrust: Alpine Floor Thrust below the NCA										
Seismotectonic region	NCA between Kufstein and Salzburg										
							P/SV/SH Pol. Q0	0	0	0%	
							SV/P Ampl. Ratios	15	0	0%	
							SH/P Ampl. Ratios	15	4	27%	
							SV/SH Ampl. Ratios	15	2	13%	
							All Ampl. Ratios	45	6	13%	

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID	9.64	Ev ID	52584029	ID2		UTC	2013-08-09 10:44:07	MI	3,7	I ₀	5,5	
Epicenter	Thaur			AT	Lat	47,272°	Long	11,460°	z	7,2 km	a) z est. b)	7,2 km
Event remarks	mainshock			NLL ERH ⁴⁷	1,81 km	NLL ERZ ⁴⁷	2,96 km	z macro	7 km			
				a) Loc.	grid search with Stations<150km, this publication [57]							
				det./ refs.								
				b) z estim.								
				based on								

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Input parameters and presets	Relative Weighting	No	B Trend	0	1	359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
	Lower Limit of S rad. Factor	0,15				
	Prim./sec. Azimuthal Gap ³²	29		29°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

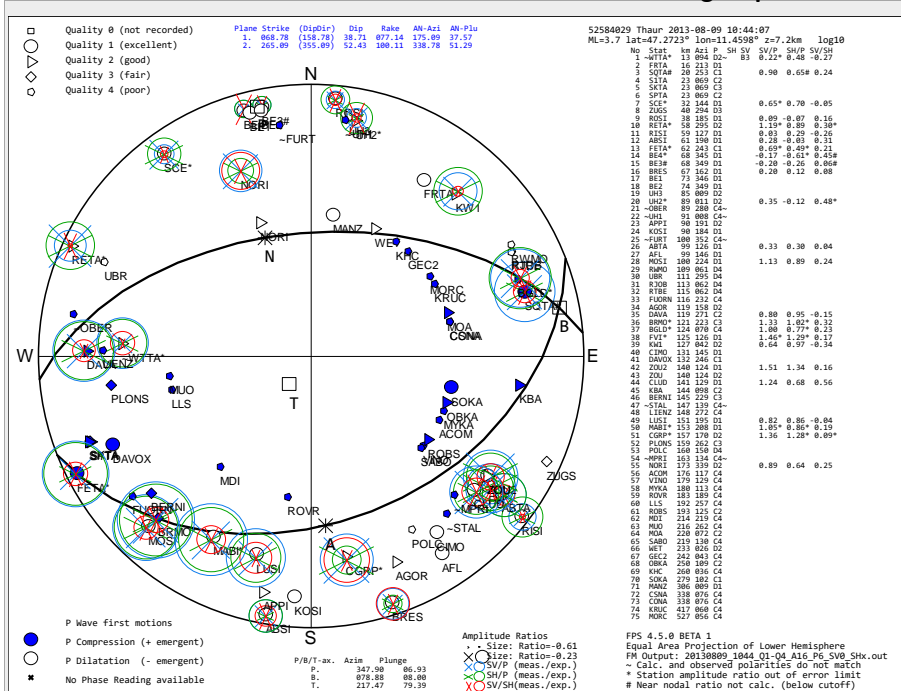
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	29
Contributors and References	1
Reiter, 2016 (this Publ.) [1]	

Mechanism remarks MOTA WATA missing

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				348	07°		75	6	8%	
B-Axis				079	08°		1	0	0%	
T-Axis				217	79°		0	0	0%	
Plane1/A-Axis	069	39	077	175	38°		76	6	8%	
Plane2/N-Axis	265	52	100	339	51°		25	0	0%	
RMS for acceptable solutions ⁴¹						0,29	log ₁₀			
RMS for all solutions ⁴¹						0,42	log ₁₀			
Mechanism Class ^{45 46}						R				
Inferred active fault	Innsbruck thrust									
Fault zone	Thrust: Intra-nappe stack thrust in Austroalpine									
Seismotectonic region	Lower Inn Valley and adjacent mountains									
P Polarities							75	6	8%	
SV Polarities							1	0	0%	
SH Polarities							0	0	0%	
All Polarities							76	6	8%	
P/SV/SH Pol. Q1							25	0	0%	
P/SV/SH Pol. Q2							18	1	6%	
P/SV/SH Pol. Q3							6	0	0%	
P/SV/SH Pol. Q4							27	5	19%	
P/SV/SH Pol. Q0							0	0	0%	
SV/P Ampl. Ratios							25	6	24%	
SH/P Ampl. Ratios							25	7	28%	
SV/SH Ampl. Ratios							25	3	12%	
All Ampl. Ratios							75	16	21%	

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERH⁴⁷ NLL ERZ⁴⁷ z macro

a) Loc. b) z estim.

FocMec⁴¹ Input parameters and presets

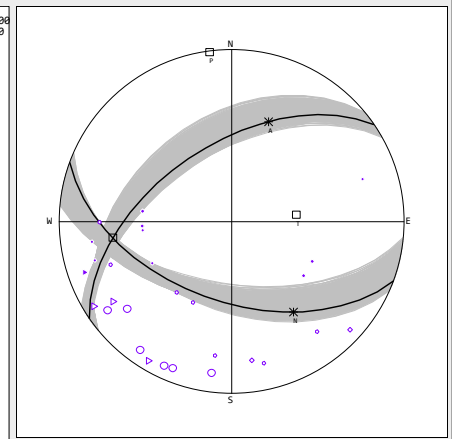
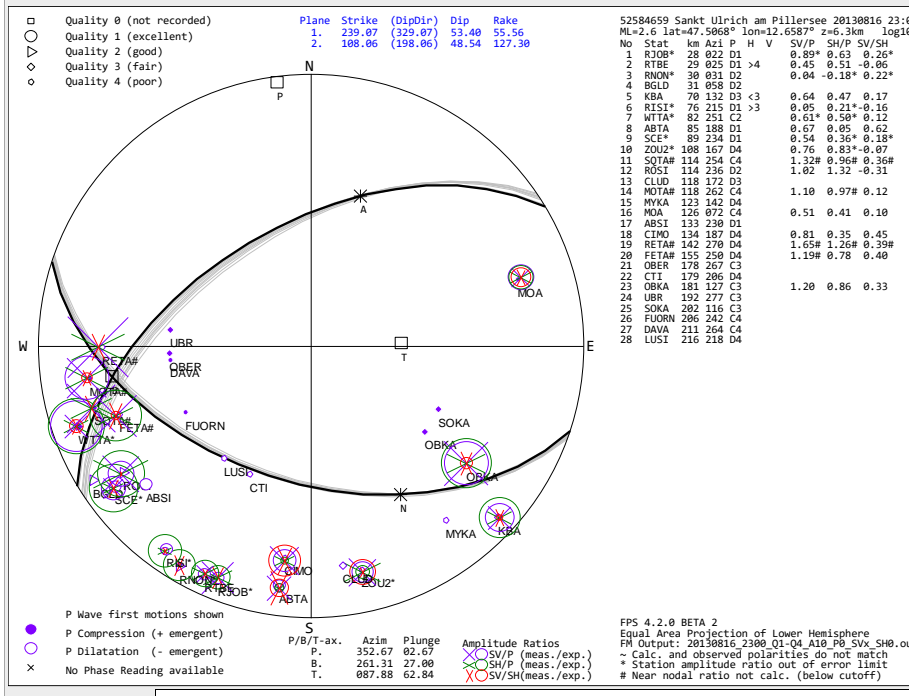
Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.	
Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="359°"/>
Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="90°"/>
Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="89°"/>
Lower Limit of S rad. Factor	<input type="text" value="0,15"/>				
Prim./sec. Azimuthal Gap ³²	<input type="text" value="155"/>				<input type="text" value="162°"/>

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	<input type="text" value="8"/>
FPS quality (expl. at end)	<input type="text" value="318"/>
	<input type="text" value="3"/>

Contributors and References

Mechanism remarks

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				<input type="text" value="353"/>	<input type="text" value="03°"/>	
B-Axis				<input type="text" value="261"/>	<input type="text" value="27°"/>	
T-Axis				<input type="text" value="088"/>	<input type="text" value="63°"/>	
Plane1/A-Axis	<input type="text" value="239"/>	<input type="text" value="53"/>	<input type="text" value="056"/>	<input type="text" value="018"/>	<input type="text" value="41°"/>	<input type="checkbox"/>
Plane2/N-Axis	<input type="text" value="108"/>	<input type="text" value="49"/>	<input type="text" value="127"/>	<input type="text" value="149"/>	<input type="text" value="37°"/>	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀

RMS for all solutions⁴¹ log₁₀

Mechanism Class^{45 46}

Inferred active fault

Fault zone

Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	<input type="text" value="27"/>	<input type="text" value="0"/>	<input type="text" value="0 %"/>
SV Polarities	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0 %"/>
SH Polarities	<input type="text" value="3"/>	<input type="text" value="0"/>	<input type="text" value="0 %"/>
All Polarities	<input type="text" value="30"/>	<input type="text" value="0"/>	<input type="text" value="0 %"/>
P/SV/SH Pol. Q1	<input type="text" value="6"/>	<input type="text" value="0"/>	<input type="text" value="0 %"/>
P/SV/SH Pol. Q2	<input type="text" value="4"/>	<input type="text" value="0"/>	<input type="text" value="0 %"/>
P/SV/SH Pol. Q3	<input type="text" value="8"/>	<input type="text" value="0"/>	<input type="text" value="0 %"/>
P/SV/SH Pol. Q4	<input type="text" value="12"/>	<input type="text" value="0"/>	<input type="text" value="0 %"/>
P/SV/SH Pol. Q0	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0 %"/>
SV/P Ampl. Ratios	<input type="text" value="17"/>	<input type="text" value="2"/>	<input type="text" value="12 %"/>
SH/P Ampl. Ratios	<input type="text" value="17"/>	<input type="text" value="5"/>	<input type="text" value="29 %"/>
SV/SH Ampl. Ratios	<input type="text" value="17"/>	<input type="text" value="3"/>	<input type="text" value="18 %"/>
All Ampl. Ratios	<input type="text" value="51"/>	<input type="text" value="10"/>	<input type="text" value="20 %"/>

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	58	58°			

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

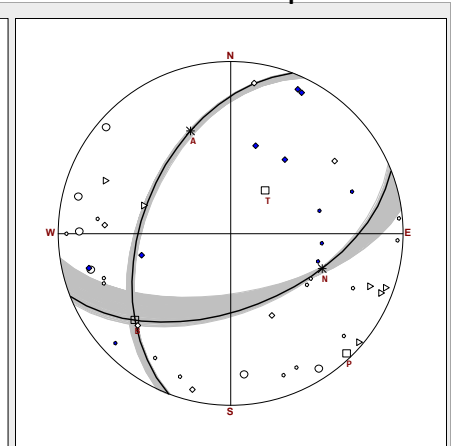
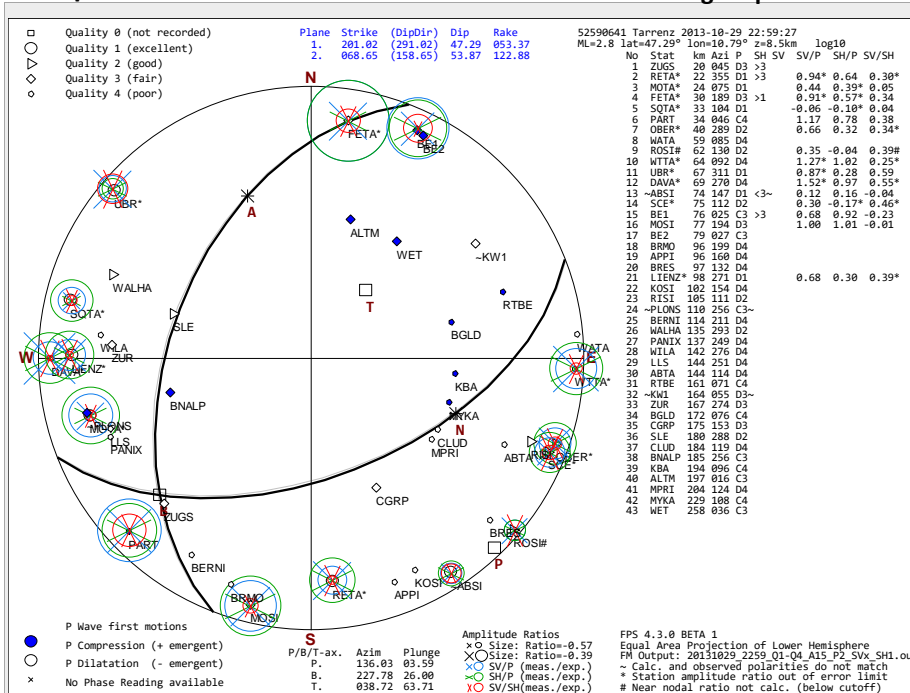
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	100
	2

Contributors and References
 Reiter, 2016 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				136	04°	
B-Axis				228	26°	
T-Axis				039	64°	
Plane1/A-Axis	201	47	053	339	36°	<input type="checkbox"/>
Plane2/N-Axis	069	54	123	111	43°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	43	2	5%
SV Polarities	0	0	%
SH Polarities	5	1	20%
All Polarities	48	3	6%
P/SV/SH Pol. Q1	7	0	0%
P/SV/SH Pol. Q2	6	0	0%
P/SV/SH Pol. Q3	16	3	19%
P/SV/SH Pol. Q4	19	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	15	5	33%
SH/P Ampl. Ratios	15	4	27%
SV/SH Ampl. Ratios	15	6	40%
All Ampl. Ratios	45	15	33%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter DE Lat Long z a) z est. b)

Event remarks NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	28				40°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

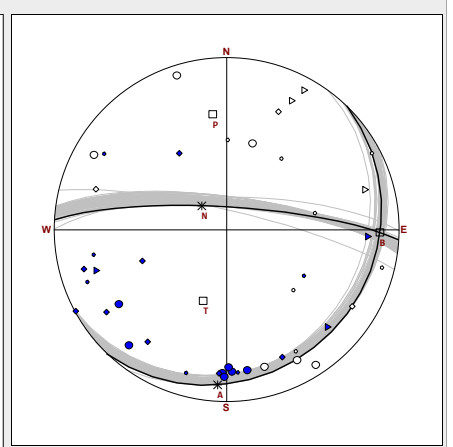
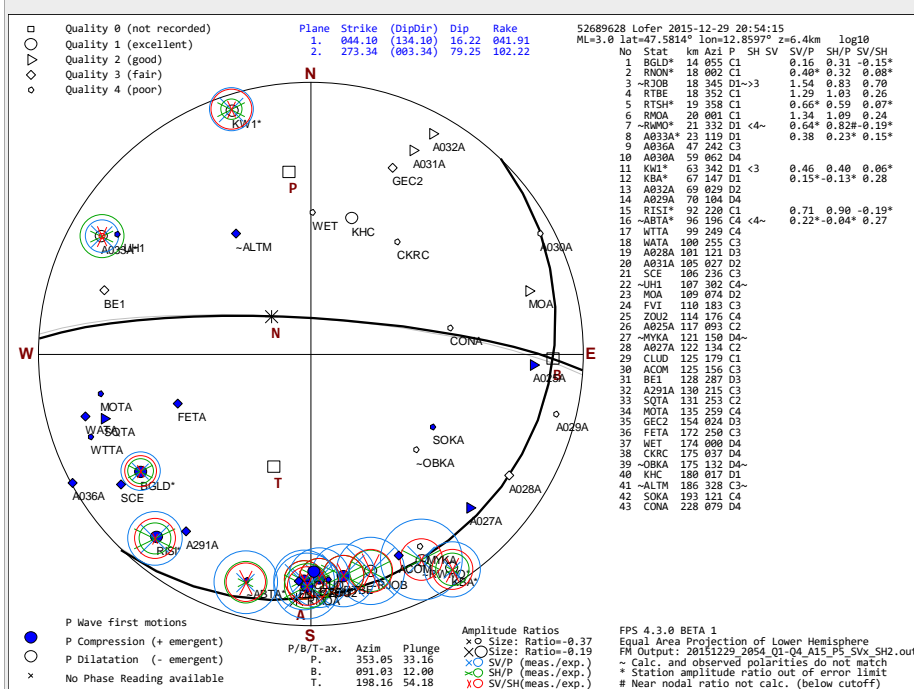
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	2
FPS quality (expl. at end)	57
Contributors and References	3
Reiter, 2016 (this Publ.) [1]	

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					353	33°	
B-Axis					091	12°	
T-Axis					198	54°	
Plane1/A-Axis	044	16	042	183	11°		<input type="checkbox"/>
Plane2/N-Axis	273	79	102	314	74°		<input type="checkbox"/>
RMS for acceptable solutions ⁴¹						0,31	log ₁₀
RMS for all solutions ⁴¹						0,58	log ₁₀
Mechanism Class ^{45 46}							R
Inferred active fault	North Alpine floor thrust: Saalfelden-Lofer section						
Fault zone	Thrust: Alpine Floor Thrust below the NCA						
Seismotectonic region	NCA between Kufstein and Salzburg						

	Total	Misfit abs.	Misfit rel.
P Polarities	43	5	12%
SV Polarities	0	0	%
SH Polarities	4	2	50%
All Polarities	47	7	15%
P/SV/SH Pol. Q1	13	1	8%
P/SV/SH Pol. Q2	6	0	0%
P/SV/SH Pol. Q3	13	1	8%
P/SV/SH Pol. Q4	15	5	33%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	12	5	42%
SH/P Ampl. Ratios	12	3	25%
SV/SH Ampl. Ratios	12	7	58%
All Ampl. Ratios	36	15	42%

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

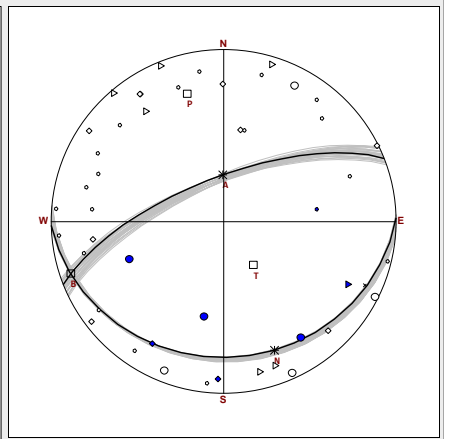
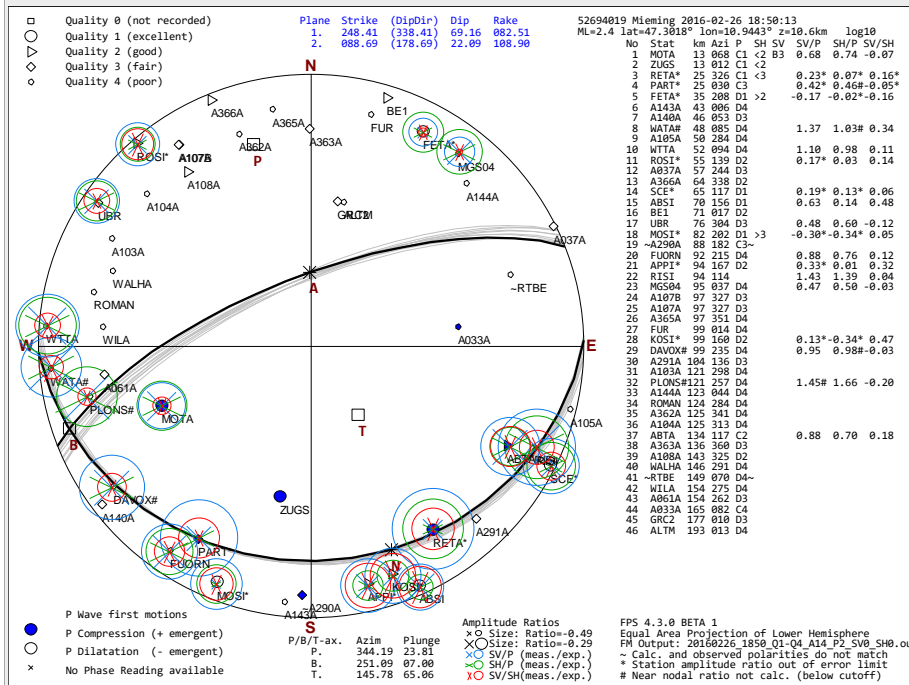
Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90°
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89°
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	21		34°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	10
FPS quality (expl. at end)	26
	3

Contributors and References
 Reiter & AlpArray Working Group, 2017 (this Publ.) [1, 55]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				344	24°	
B-Axis				251	07°	
T-Axis				146	65°	
Plane1/A-Axis	248	69	083	359	68°	<input type="checkbox"/>
Plane2/N-Axis	089	22	109	158	21°	<input type="checkbox"/>

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: North Alpine floor thrust: Vomp-Schwaz section
 Fault zone: Thrust: Alpine Floor Thrust below the NCA
 Seismotectonic region: Lower Inn Valley and adjacent mountains

	Total	Misfit abs.	Misfit rel.
P Polarities	45	2	4%
SV Polarities	1	0	0%
SH Polarities	5	0	0%
All Polarities	51	2	4%
P/SV/SH Pol. Q1	7	0	0%
P/SV/SH Pol. Q2	10	0	0%
P/SV/SH Pol. Q3	14	1	7%
P/SV/SH Pol. Q4	20	1	5%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	19	7	37%
SH/P Ampl. Ratios	19	5	26%
SV/SH Ampl. Ratios	19	2	11%
All Ampl. Ratios	57	14	25%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks zErr z macro

NLL coordinates used although nGT5=3 because of a group of 4 events

a) Loc. grid search with Stations<150km, this publication [57]
 b) z estim.
 based on

FocMec⁴¹	Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="359°"/>
	Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="90°"/>
	Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1"/> <input type="text" value="89°"/>
	Lower Limit of S rad. Factor	<input type="text" value="0,15"/>			
	Prim./sec. Azimuthal Gap ³²	<input type="text" value="50"/>		<input type="text" value="54°"/>	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

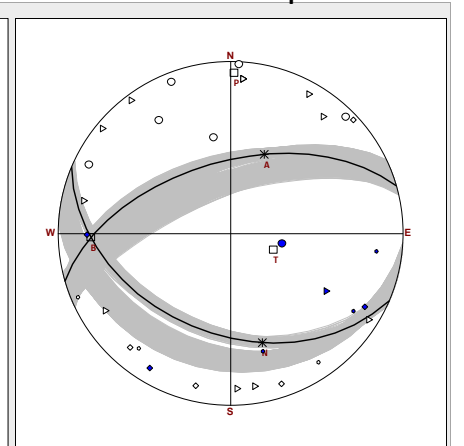
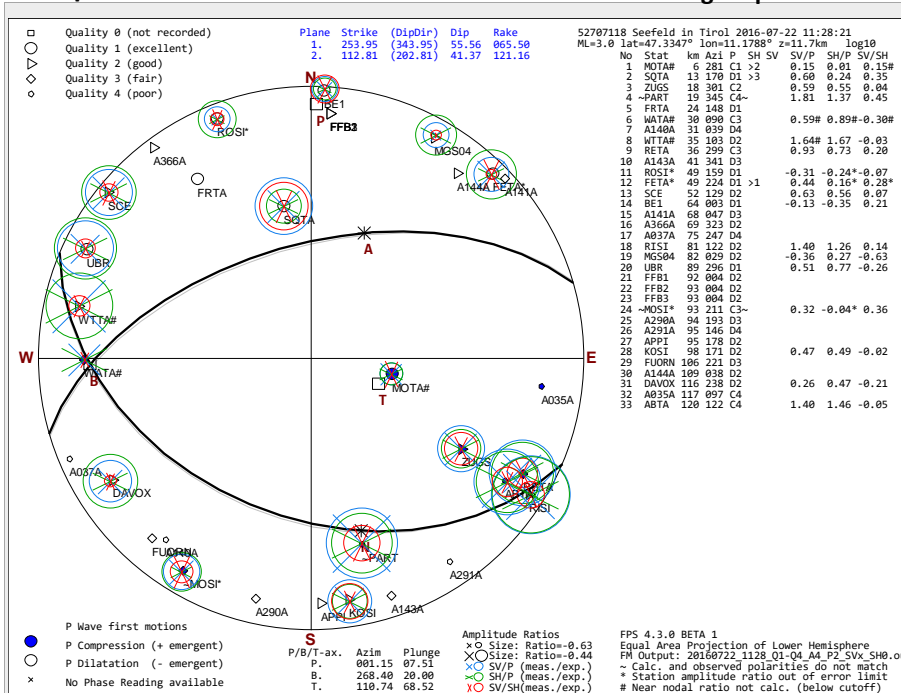
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="2"/> <input type="text" value="833"/>
FPS quality (expl. at end)	<input type="text" value="2"/>
Contributors and References	
Reiter & AlpArray Working Group, 2017 (this Publ.) [1, 55]	

Mechanism remarks solutions restricted to errors of Q>2

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				001	08°	
B-Axis				268	20°	
T-Axis				111	69°	
Plane1/A-Axis	254	56	066	023	49°	<input type="checkbox"/>
Plane2/N-Axis	113	41	121	164	34°	<input type="checkbox"/>
RMS for acceptable solutions ⁴¹						0,28 log ₁₀
RMS for all solutions ⁴¹						0,32 log ₁₀
Mechanism Class ^{45 46}						R
Inferred active fault	Reverse fault in European upper crust below Seefeld-Biberwier					
Fault zone	Thrust/Reverse fault: Compression in European basement					
Seismotectonic region	NCA between Innsbruck and Arlberg					

	Total	Misfit abs.	Misfit rel.
P Polarities	33	2	6%
SV Polarities	0	0	%
SH Polarities	3	0	0%
All Polarities	36	2	6%
P/SV/SH Pol. Q1	8	0	0%
P/SV/SH Pol. Q2	14	0	0%
P/SV/SH Pol. Q3	8	1	12%
P/SV/SH Pol. Q4	6	1	17%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	18	0	0%
SH/P Ampl. Ratios	18	3	17%
SV/SH Ampl. Ratios	18	1	6%
All Ampl. Ratios	54	4	7%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID	9.70	Ev ID	52707132	ID2		UTC	2016-07-22 11:58:01	MI	3,2	Io	4	
Epicenter	Seefeld in Tirol			AT	Lat	47,333°	Long	11,167°	z	12,6 km a)	z est. b)	12,6 km
Event remarks				Err	0,25°	zErr	2,2 km	z macro	12 km			
NLL coordinates used although nGT5=3 because of a group of 4 quakes						a) Loc. grid search with Stations<150km, this publication [57]						
						b) z estim. based on						

FocMec⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	20		29°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

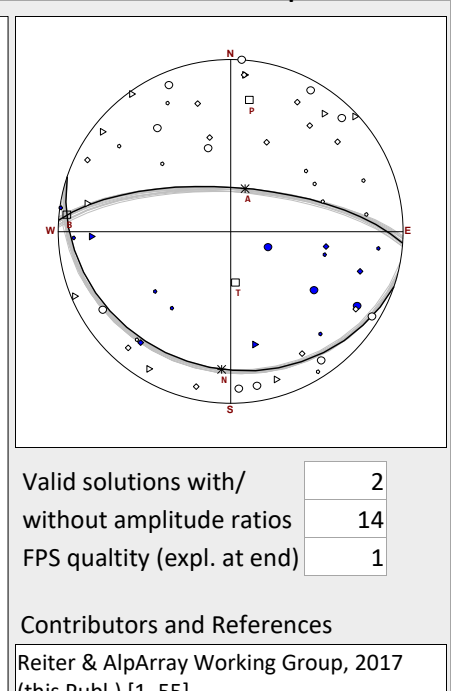
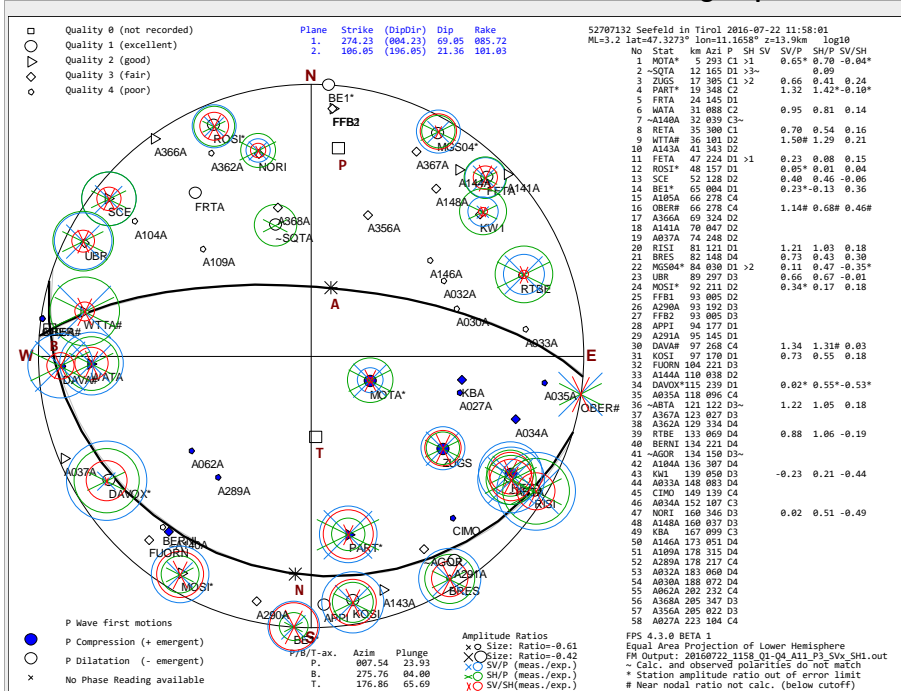
Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Mechanism remarks solutions restricted to errors of Q>2

Reiter & AlpArray Working Group, 2017 (this Publ.) [1, 55]

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	
P-Axis				008	24°		
B-Axis				276	05°		
T-Axis				175	66°		
Plane1/A-Axis	274	69	085	019	68°	<input type="checkbox"/>	
Plane2/N-Axis	109	22	104	184	21°	<input type="checkbox"/>	
RMS for acceptable solutions ⁴¹						0,30	log ₁₀
RMS for all solutions ⁴¹						0,45	log ₁₀
Mechanism Class ^{45 46}						R	
Inferred active fault	Reverse fault in European upper crust below Seefeld-Biberwier						
Fault zone	Thrust/Reverse fault: Compression in European basement						
Seismotectonic region	NCA between Innsbruck and Arlberg						

	Total	Misfit abs.	Misfit rel.
P Polarities	58	3	5%
SV Polarities	0	0	%
SH Polarities	5	1	20%
All Polarities	63	4	6%
P/SV/SH Pol. Q1	16	0	0%
P/SV/SH Pol. Q2	13	0	0%
P/SV/SH Pol. Q3	16	4	25%
P/SV/SH Pol. Q4	18	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	23	5	22%
SH/P Ampl. Ratios	24	2	8%
SV/SH Ampl. Ratios	23	4	17%
All Ampl. Ratios	70	11	16%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹	Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	<input type="text" value="No"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="359°"/>
	Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="90°"/>
	Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="89°"/>
	Lower Limit of S rad. Factor	<input type="text" value="0,15"/>			
	Prim./sec. Azimuthal Gap ³²	<input type="text" value="31"/>	<input type="text" value="37°"/>		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

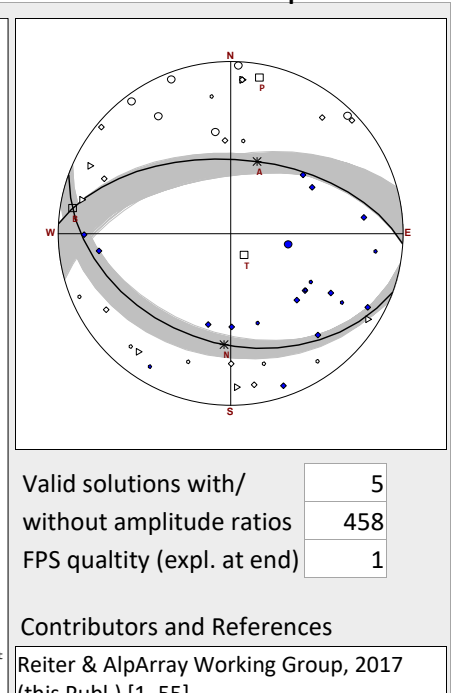
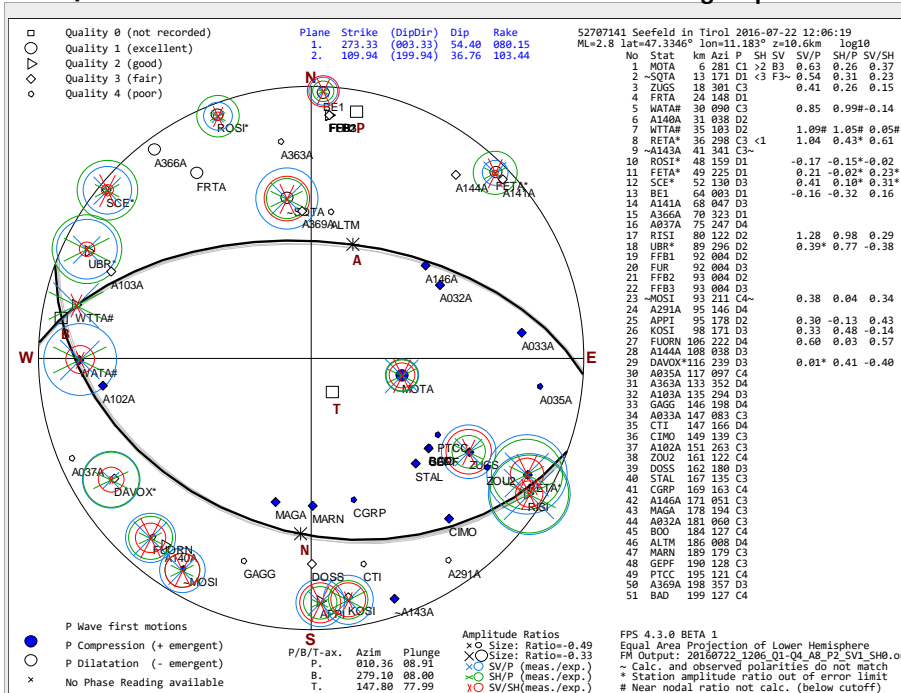
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Mechanism remarks

Reverse fault in European upper crust below Seefeld-Biberwier active fault

Thrust/Reverse fault: Compression in European basement

NCA between Innsbruck and Arlberg

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Pl.	Azim	active	Total	Misfit abs.	Misfit rel.
P-Axis					010	09°		51	2	4%
B-Axis					279	08°		2	1	50%
T-Axis					148	78°		3	0	0%
Plane1/A-Axis	273	54	080	020	53°		All Polarities	56	3	5%
Plane2/N-Axis	110	37	103	183	36°		P/SV/SH Pol. Q1	8	0	0%
RMS for acceptable solutions ⁴¹					0,33	log ₁₀	P/SV/SH Pol. Q2	8	0	0%
RMS for all solutions ⁴¹					0,42	log ₁₀	P/SV/SH Pol. Q3	26	2	8%
Mechanism Class ^{45 46}					R		P/SV/SH Pol. Q4	14	1	7%
Inferred active fault	Reverse fault in European upper crust below Seefeld-Biberwier active fault									
Fault zone	Thrust/Reverse fault: Compression in European basement									
Seismotectonic region	NCA between Innsbruck and Arlberg									
							P/SV/SH Pol. Q0	0	0	%
							SV/P Ampl. Ratios	17	2	12%
							SH/P Ampl. Ratios	17	4	24%
							SV/SH Ampl. Ratios	17	2	12%
							All Ampl. Ratios	51	8	16%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	14		24 °		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

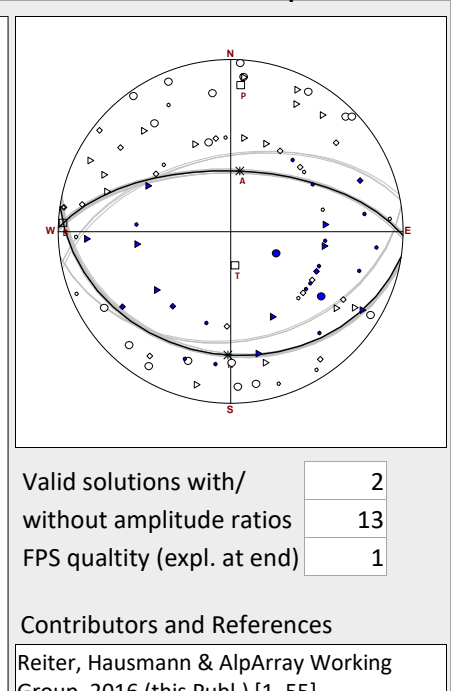
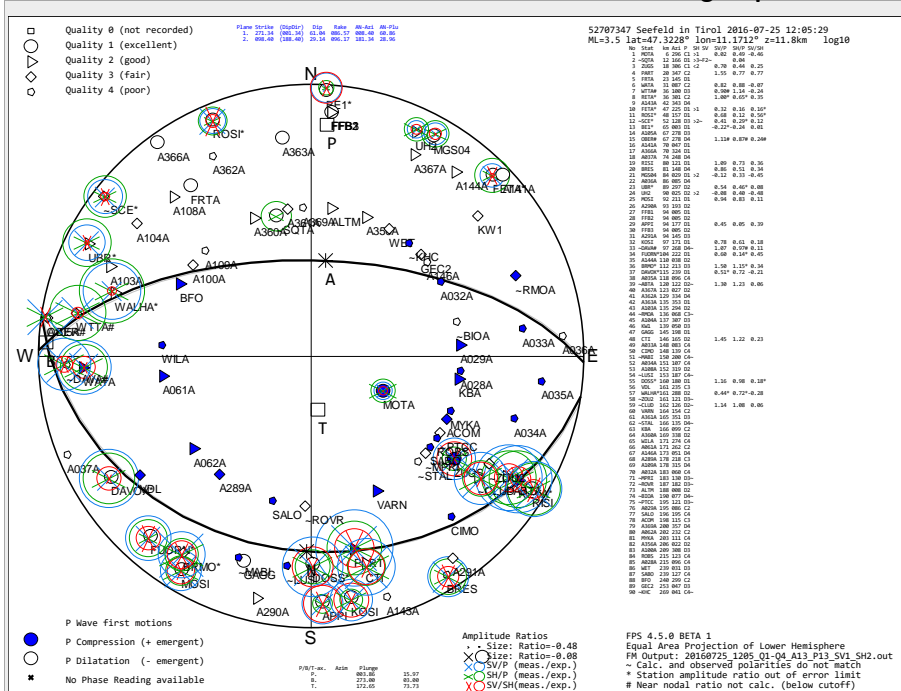
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	
P-Axis				004	16°		
B-Axis				273	03°		
T-Axis				173	74°		
Plane1/A-Axis	271	61	087	008	61°	<input type="checkbox"/>	
Plane2/N-Axis	098	29	096	181	29°	<input type="checkbox"/>	
RMS for acceptable solutions ⁴¹						0,30	log ₁₀
RMS for all solutions ⁴¹						0,39	log ₁₀
Mechanism Class ^{45 46}						R	
Inferred active fault	Reverse fault in European upper crust below Seefeld-Biberwier						
Fault zone	Thrust/Reverse fault: Compression in European basement						
Seismotectonic region	NCA between Innsbruck and Arlberg						

	Total	Misfit abs.	Misfit rel.
P Polarities	90	13	14%
SV Polarities	1	1	100%
SH Polarities	7	2	29%
All Polarities	98	16	16%
P/SV/SH Pol. Q1	22	0	0%
P/SV/SH Pol. Q2	30	4	13%
P/SV/SH Pol. Q3	20	6	30%
P/SV/SH Pol. Q4	26	6	23%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	28	4	14%
SH/P Ampl. Ratios	29	6	21%
SV/SH Ampl. Ratios	28	3	11%
All Ampl. Ratios	85	13	15%

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks NLL ERH⁴⁷ NLL ERZ⁴⁷ z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	20				33 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

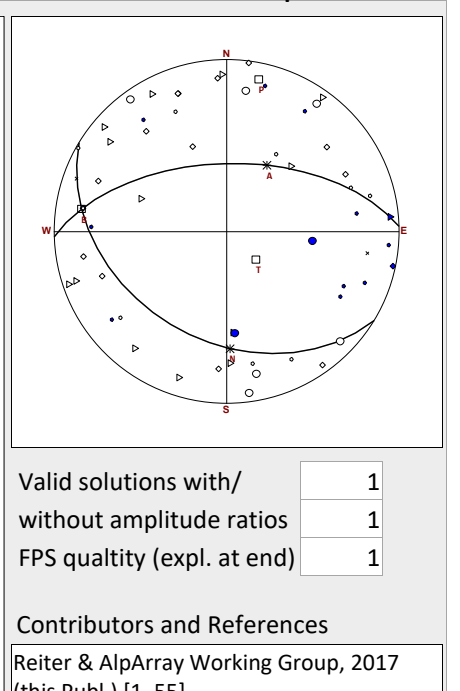
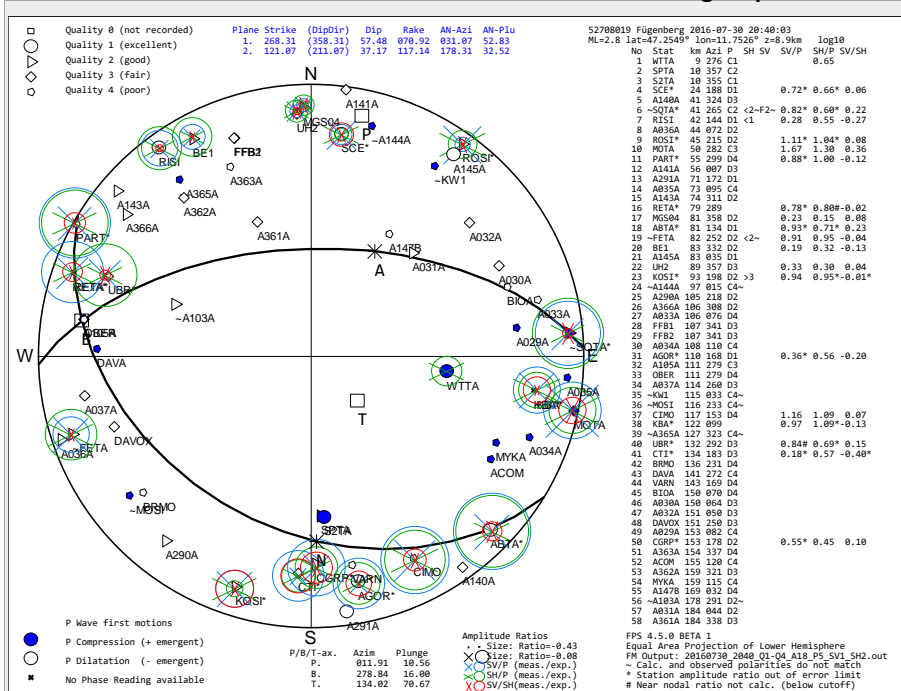
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Mechanism remarks

Contributors and References
 Reiter & AlpArray Working Group, 2017 (this Publ.) [1, 55]

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis				012	11°		56	5	9%
B-Axis				279	16°		1	1	100%
T-Axis				134	71°		4	2	50%
Plane1/A-Axis	268	57	071	031	53°	<input type="checkbox"/>	61	8	13%
Plane2/N-Axis	121	37	117	178	33°	<input type="checkbox"/>			
RMS for acceptable solutions ⁴¹					0,29	log ₁₀			
RMS for all solutions ⁴¹					0,49	log ₁₀			
Mechanism Class ^{45 46}						R			
Inferred active fault	Brixlegg thrust, Schwaz section								
Fault zone	Thrust: basal thrust of Tauern Window								
Seismotectonic region	Tux & Kitzbuehel Alps (south of Inn valley)								
P Polarities							56	5	9%
SV Polarities							1	1	100%
SH Polarities							4	2	50%
All Polarities							61	8	13%
P/SV/SH Pol. Q1							9	0	0%
P/SV/SH Pol. Q2							17	4	24%
P/SV/SH Pol. Q3							16	0	0%
P/SV/SH Pol. Q4							19	4	21%
P/SV/SH Pol. Q0							0	0	%
SV/P Ampl. Ratios							19	9	47%
SH/P Ampl. Ratios							20	7	35%
SV/SH Ampl. Ratios							19	2	11%
All Ampl. Ratios							58	18	31%

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

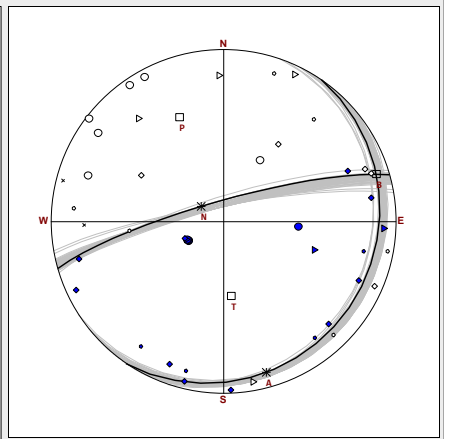
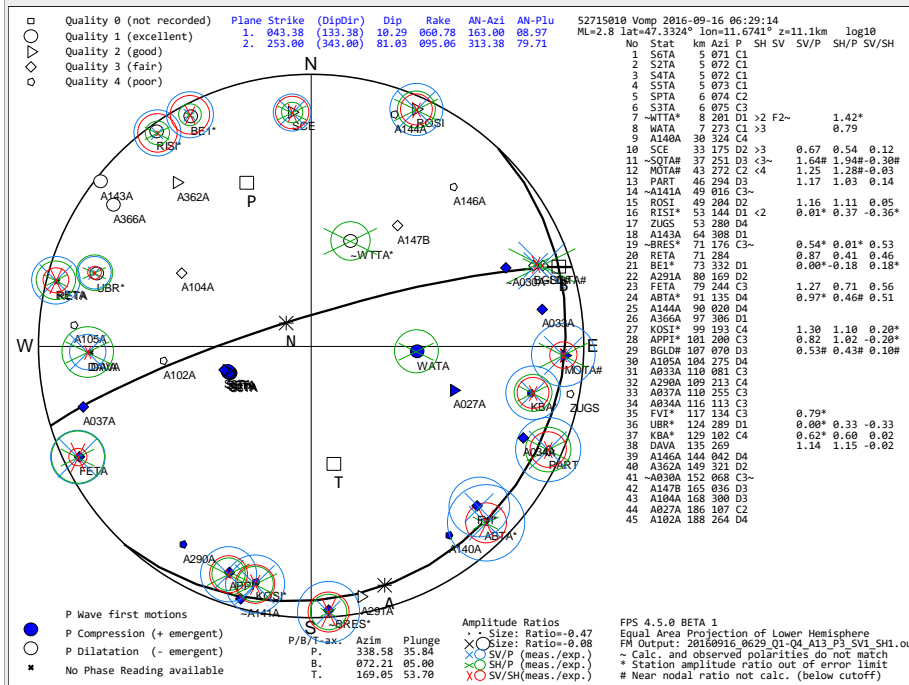
Vp/Vs Ratio at Source	1,732	Min. Incr. Max.	
Relative Weighting	No	B Trend	0 1 359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90°
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89°
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	32	45°	

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	30
Contributors and References	2

Reiter & AlpArray Working Group, 2017 (this Publ.) [1, 55]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis				339	36°		43	3	7%	
B-Axis				072	05°		1	1	100%	
T-Axis				169	54°		6	1	17%	
Plane1/A-Axis	043	10	061	163	09°	<input type="checkbox"/>	50	5	10%	
Plane2/N-Axis	253	81	095	313	80°	<input type="checkbox"/>	P/SV/SH Pol. Q1	11	0	0%
							P/SV/SH Pol. Q2	10	1	10%
							P/SV/SH Pol. Q3	18	4	22%
							P/SV/SH Pol. Q4	11	0	0%
							P/SV/SH Pol. Q0	0	0	%
							SV/P Ampl. Ratios	18	7	39%
							SH/P Ampl. Ratios	19	2	11%
							SV/SH Ampl. Ratios	17	4	24%
							All Ampl. Ratios	54	13	24%

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault: North Alpine floor thrust: Vomp-Schwarz section
 Fault zone: Thrust: Alpine Floor Thrust below the NCA
 Seismotectonic region: Lower Inn Valley and adjacent mountains

Event data

Seismotectonic Domain 9: North Alpine thrust domain (NA)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter DE Lat ° Long ° z

Event remarks Err ° zErr z macro

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	<input type="text" value="1,732"/>	Min. Incr.	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="359"/> °
Relative Weighting	<input type="text" value="No"/>	B Trend	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="90"/> °
Accepted log ₁₀ Ampl. Rat. Error	<input type="text" value="0,5"/>	B Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="89"/> °
Lower Limit of P rad. Factor	<input type="text" value="0,05"/>	A Plunge	<input type="text" value="0"/>	<input type="text" value="1"/>	<input type="text" value="60"/> °
Lower Limit of S rad. Factor	<input type="text" value="0,15"/>				
Prim./sec. Azimuthal Gap ³²	<input type="text" value="46"/>				

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

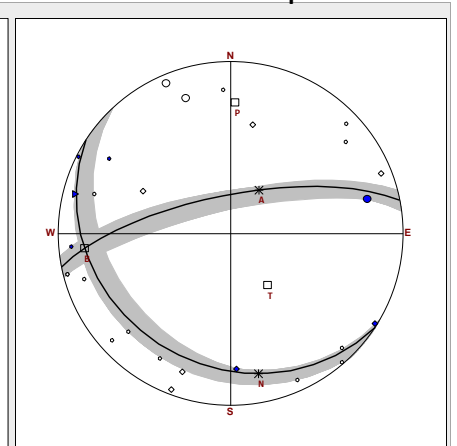
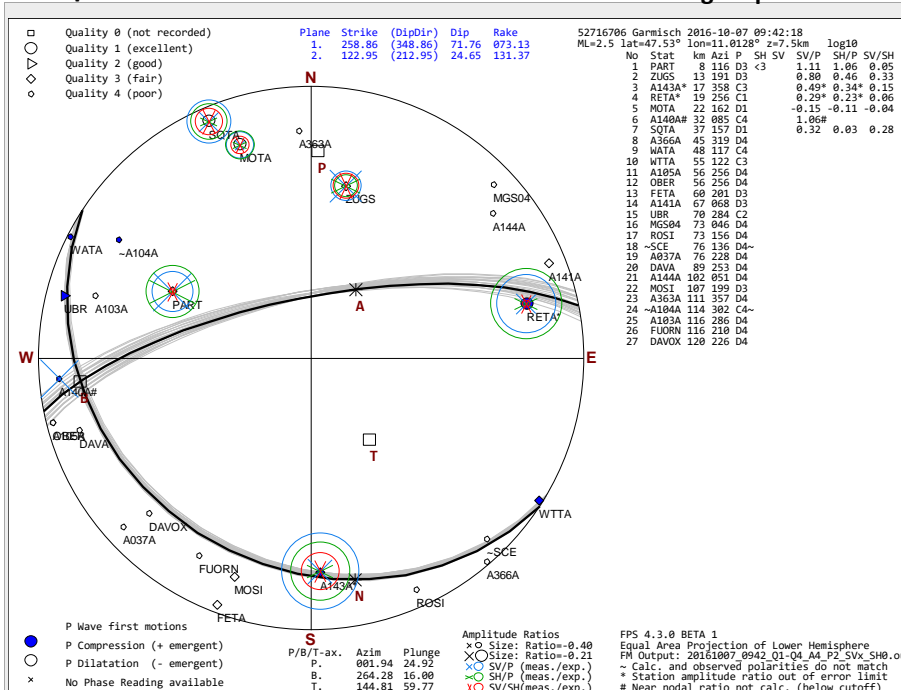
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	<input type="text" value="22"/>
FPS quality (expl. at end)	<input type="text" value="4"/>

Contributors and References
 Reiter & AlpArray Working Group, 2017 (this Publ.) [1, 55]

Mechanism remarks solutions restricted to errors in Q>3

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active
P-Axis				002	25	°
B-Axis				264	16	°
T-Axis				145	60	°
Plane1/A-Axis	259	72	073	033	65	°
Plane2/N-Axis	123	25	131	169	18	°

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	27	2	7%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	28	2	7%
P/SV/SH Pol. Q1	3	0	0%
P/SV/SH Pol. Q2	1	0	0%
P/SV/SH Pol. Q3	8	0	0%
P/SV/SH Pol. Q4	16	2	12%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	7	2	29%
SH/P Ampl. Ratios	6	2	33%
SV/SH Ampl. Ratios	6	0	0%
All Ampl. Ratios	19	4	21%

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID	9.76	Ev ID	52734113	ID2		UTC	2017-01-12 17:21:44	MI	2,7	I ₀	3,5	
Epicenter	Thaur	AT	Lat	47,324°	Long	11,441°	z	2,0 km	a) z est. b)	5,5 km		
Event remarks	zNLL=0,7km -> set to 2km		z=average(zNLL, zmacro)		NLL ERH ⁴⁷	1,970 km	NLL ERZ ⁴⁷	2,95 km	z macro	10,3 km		
		a) Loc. grid search with Stations<150km, z negative or near 0 -> z det./ refs. set to 2km [57]		b) z estim. z averaged with macroseismic depth [64]		based on						

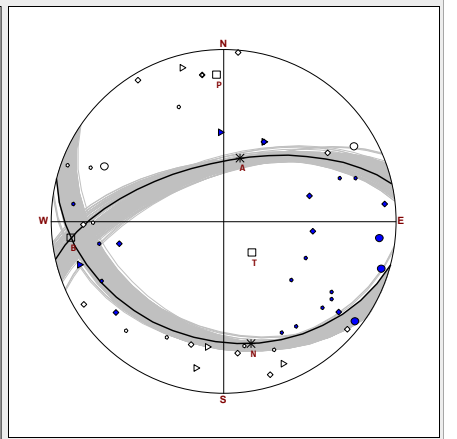
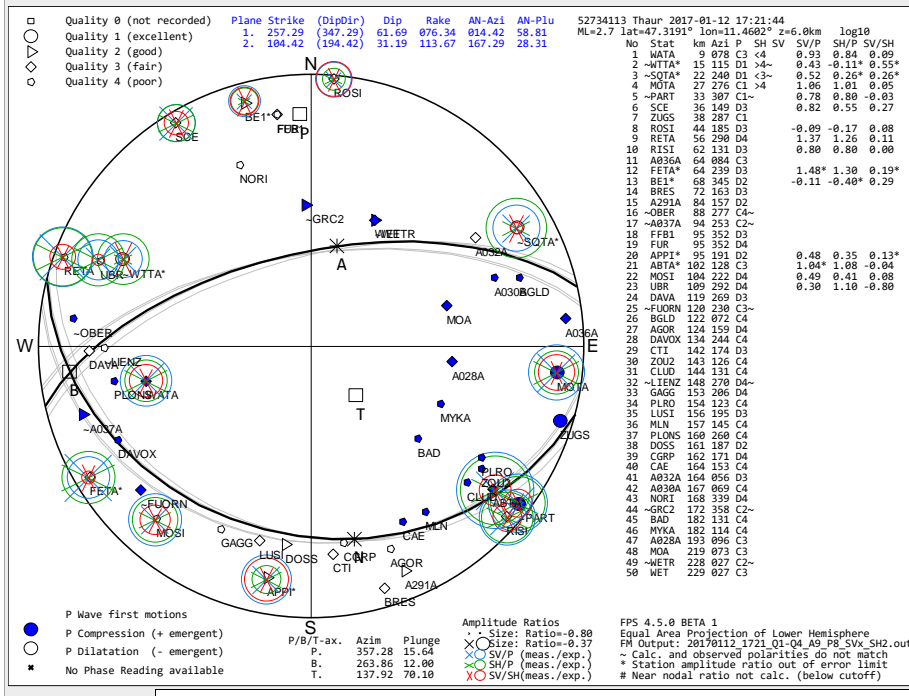
FocMec ⁴¹	Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.
Input parameters and presets	Relative Weighting	No	B Trend	0	1 359°
	Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1 90°
	Lower Limit of P rad. Factor	0,05	A Plunge	0	1 89°
	Lower Limit of S rad. Factor	0,15			
	Prim./sec. Azimuthal Gap ³²	34	34°		

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model
Central Eastern Alps Moho 45

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	5
FPS quality (expl. at end)	181
Contributors and References	3

Reiter & AlpArray Working Group, 2017 (this Publ.) [1, 55]

Mechanism remarks some AlpArray stations missing

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.
P-Axis					357	16°	P Polarities	50	8 16%
B-Axis					264	12°	SV Polarities	0	0 %
T-Axis					138	70°	SH Polarities	4	2 50%
Plane1/A-Axis	257	62	076	014	59°	<input type="checkbox"/>	All Polarities	54	10 19%
Plane2/N-Axis	104	31	114	167	28°	<input type="checkbox"/>	P/SV/SH Pol. Q1	5	1 20%
RMS for acceptable solutions ⁴¹						0,28	P/SV/SH Pol. Q2	7	4 57%
RMS for all solutions ⁴¹						0,44	P/SV/SH Pol. Q3	18	2 11%
Mechanism Class ^{45 46}						R	P/SV/SH Pol. Q4	24	3 12%
Inferred active fault	Innsbruck thrust						P/SV/SH Pol. Q0	0	0 %
Fault zone	Thrust: Intra-nappe stack thrust in Austroalpine						SV/P Ampl. Ratios	15	2 13%
Seismotectonic region	Lower Inn Valley and adjacent mountains						SH/P Ampl. Ratios	15	3 20%
							SV/SH Ampl. Ratios	15	4 27%
							All Ampl. Ratios	45	9 20%

Event data **Seismotectonic Domain 9: North Alpine thrust domain (NA)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks

a) Loc.
 det./ refs.
 b) z estim.
 based on

FocMec⁴¹ Input parameters and presets

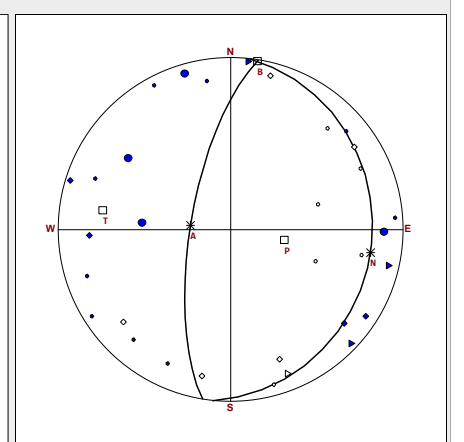
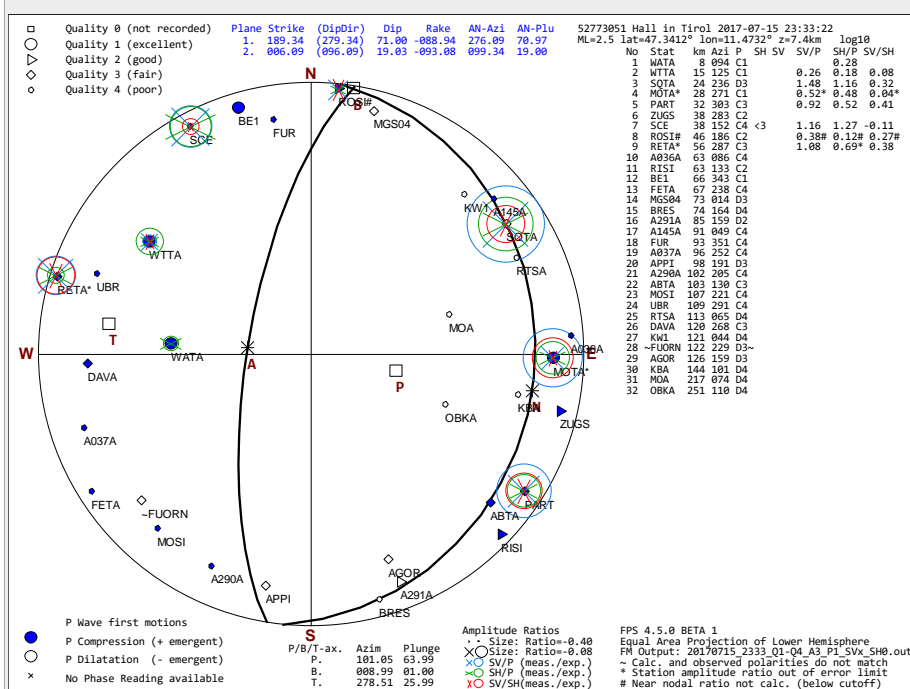
Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359°
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90°
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89°
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	29				41°

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios	1
FPS quality (expl. at end)	2

Contributors and References

Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results) **Number of Polarities and amplitude Ratios used/misfits**

	Strike	Dip	Plane	Rake	Azim	Pl.	active
P-Axis					101	64°	
B-Axis					009	01°	
T-Axis					279	26°	
Plane1/A-Axis	189	71	-089	276	71°	<input type="checkbox"/>	
Plane2/N-Axis	006	19	-093	099	19°	<input type="checkbox"/>	

RMS for acceptable solutions⁴¹ log₁₀
 RMS for all solutions⁴¹ log₁₀
 Mechanism Class^{45 46}

Inferred active fault
 Fault zone
 Seismotectonic region

	Total	Misfit abs.	Misfit rel.
P Polarities	32	1	3%
SV Polarities	0	0	%
SH Polarities	1	0	0%
All Polarities	33	1	3%
P/SV/SH Pol. Q1	4	0	0%
P/SV/SH Pol. Q2	4	0	0%
P/SV/SH Pol. Q3	10	1	10%
P/SV/SH Pol. Q4	15	0	0%
P/SV/SH Pol. Q0	0	0	%
SV/P Ampl. Ratios	7	1	14%
SH/P Ampl. Ratios	8	1	12%
SV/SH Ampl. Ratios	7	1	14%
All Ampl. Ratios	22	3	14%

Seismotectonic Domain 10: Zone of lower crustal seismicity (ZLC)

ID	UTC	Lat	Long	z	Epicenter	MI	MecClass
10.01	1996-04-27 06:59:46	47,30	10,00	35,0	Au	3,6	R
10.02	1999-10-28 04:54:22	47,39	9,90	8,0	Sibratsgfäll	3,1	N

Missing event ID's belong to already published events. Results are listed, illustrated and cited in the main publication. No datasheets exist.

Event data

Seismotectonic Domain 10: Zone of lower crustal seismicity (ZLC)

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z

Event remarks Err ° zErr km z macro

zamg depth=zmacro
 SED: 47,121/10,032/10km: XY unrealistic because of zamg macroseismic epicentre

a) Loc. ZAMG standard location, z=calculated macroseismic depth [64]
 det./ refs.
 b) z estim. z averaged with standard depth of SED location [60]
 based on

FocMec⁴¹ Input parameters and presets

Vp/Vs Ratio at Source	1,732	Min.	Incr.	Max.	
Relative Weighting	No	B Trend	0	1	359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0	1	90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0	1	89 °
Lower Limit of S rad. Factor	0,15				
Prim./sec. Azimuthal Gap ³²	52				74 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

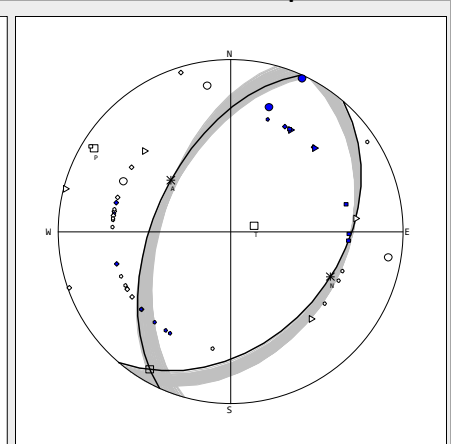
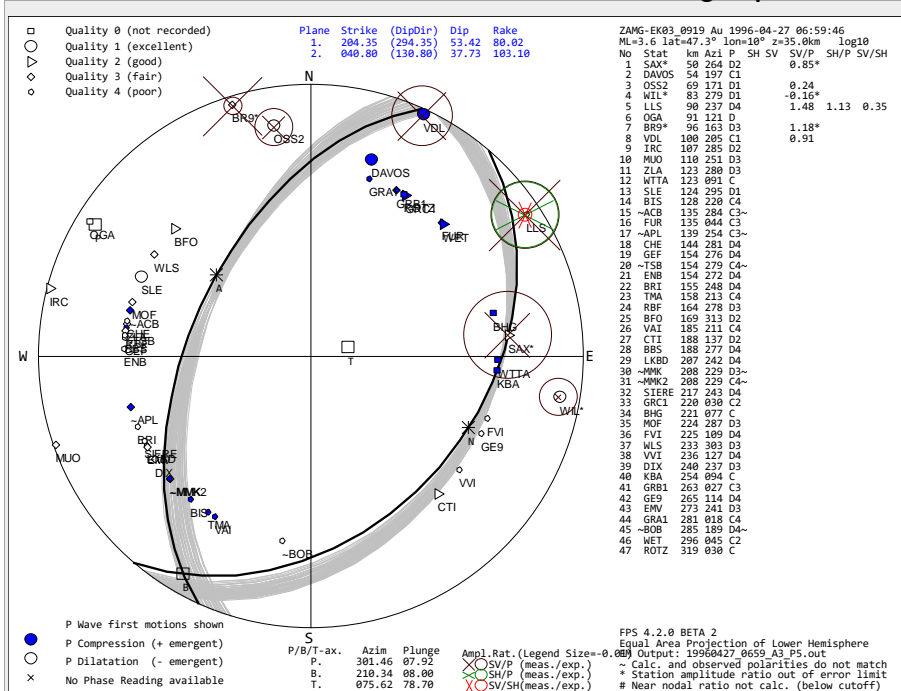
Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions

using amplitude ratios

without amplitude ratios



Valid solutions with/without amplitude ratios	51
FPS quality (expl. at end)	58
	4

Contributors and References
 Reiter, 2017 (this Publ.) [1]

Mechanism remarks

Best fit solution (manually selected from calculation results)

Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis					301	08°		47	5	11%	
B-Axis					210	08°		0	0	%	
T-Axis					076	79°		0	0	%	
Plane1/A-Axis	204	53	080	311	52°		All Polarities	47	5	11%	
Plane2/N-Axis	041	38	103	114	37°		P/SV/SH Pol. Q1	5	0	0%	
RMS for acceptable solutions ⁴¹						0,29	P/SV/SH Pol. Q2	6	0	0%	
RMS for all solutions ⁴¹						0,64	P/SV/SH Pol. Q3	13	3	23%	
Mechanism Class ^{45 46}						R	P/SV/SH Pol. Q4	18	3	17%	
Inferred active fault	Bregenz-Schwarzwald Transfer: Subalpine section							P/SV/SH Pol. Q0	5	0	0%
Fault zone	Strike-Slip: Bregenz-Schwarzwald transfer zone							SV/P Ampl. Ratios	6	3	50%
Seismotectonic region	Bregenzerwald							SH/P Ampl. Ratios	1	0	0%
							SV/SH Ampl. Ratios	1	0	0%	
							All Ampl. Ratios	8	3	38%	

Event data **Seismotectonic Domain 10: Zone of lower crustal seismicity (ZLC)**

FPS ID Ev ID ID2 UTC MI I₀

Epicenter AT Lat Long z a) z est. b)

Event remarks Err ° zErr km z macro

a) Loc. ZAMG standard location, z=calculated macroseismic depth [64]
 det./ refs. [64]
 b) z estim. z averaged with standard depth of SED location [60]
 based on

FocMec⁴¹ Input parameters and presets

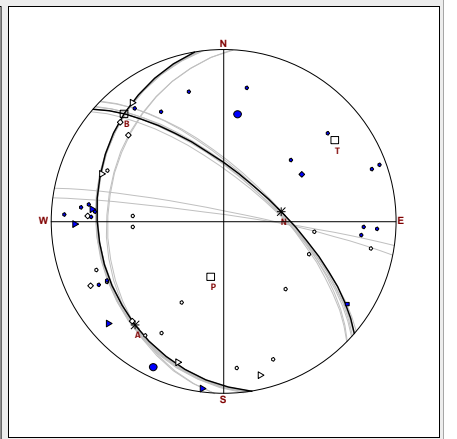
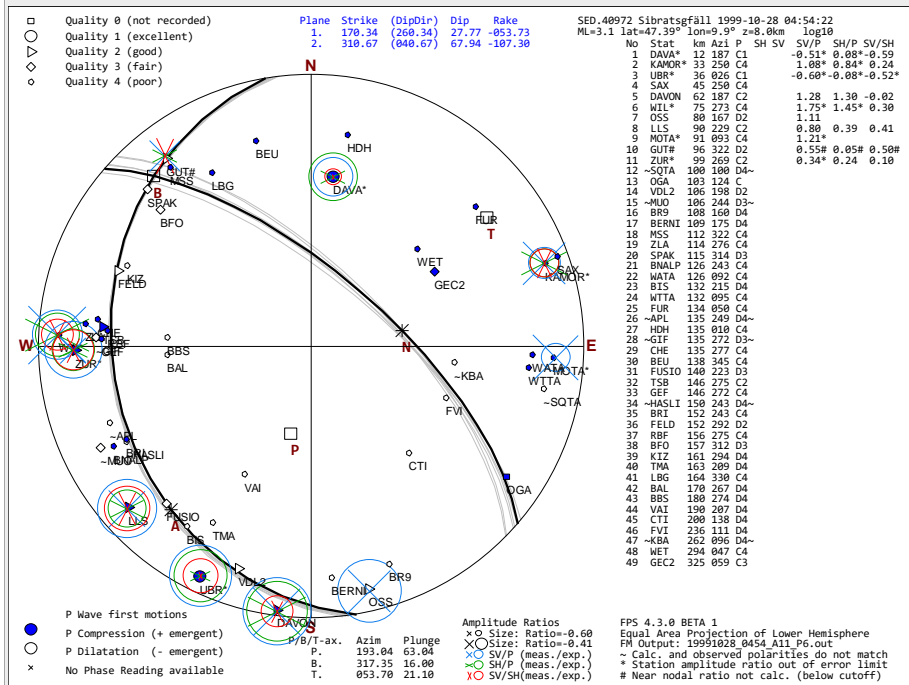
Vp/Vs Ratio at Source	1,732	Min. Incr.	Max.
Relative Weighting	No	B Trend	0 1 359 °
Accepted log ₁₀ Ampl. Rat. Error	0,5	B Plunge	0 1 90 °
Lower Limit of P rad. Factor	0,05	A Plunge	0 1 89 °
Lower Limit of S rad. Factor	0,15		
Prim./sec. Azimuthal Gap ³²	38		40 °

FPS⁴²/Obspy⁴³-TauP⁴⁴ input Param. to calculate takeoff and incidence

Velocity model

See table at end of this report for all parameters regarding velocity model

Fault plane solutions using amplitude ratios without amplitude ratios



Valid solutions with/without amplitude ratios

Valid solutions with/without amplitude ratios	7
FPS quality (expl. at end)	9
Contributors and References	4

Reiter, 2005-2017 (this Publ.); using waveform data from Diehl et al., 2009 [1, 52]

Mechanism remarks no OASIS waveform data available
 some data from Diehl et al., 1999

Best fit solution (manually selected from calculation results) Number of Polarities and amplitude Ratios used/misfits

	Strike	Dip	Plane	Rake	Azim	Pl.	active	Total	Misfit abs.	Misfit rel.	
P-Axis					193	63°		49	6	12%	
B-Axis					317	16°		0	0	%	
T-Axis					054	21°		0	0	%	
Plane1/A-Axis	170	28	-054	221	22°		49	6	12%		
Plane2/N-Axis	311	68	-107	080	62°		P/SV/SH Pol. Q1	2	0	0%	
RMS for acceptable solutions ⁴¹						0,21	P/SV/SH Pol. Q2	8	0	0%	
RMS for all solutions ⁴¹						0,69	P/SV/SH Pol. Q3	6	2	33%	
Mechanism Class ^{45 46}						N	P/SV/SH Pol. Q4	32	4	12%	
Inferred active fault	Bregenzerwald normal fault							P/SV/SH Pol. Q0	1	0	0%
Fault zone	Extension: Swiss/Vorarlberg Helvetic nappes (H3)							SV/P Ampl. Ratios	10	6	60%
Seismotectonic region	Bregenzerwald							SH/P Ampl. Ratios	8	4	50%
							SV/SH Ampl. Ratios	8	1	12%	
							All Ampl. Ratios	26	11	42%	

Quality criteria for fault plane solutions

Quality	Description	Criteria
0	no inform.	previously published solution without quality information
1	reliable	>=40 Stations, AziGap <75°, solution very stable
2	fair	>25 Stations, AziGap<=100°, solution stable
3	poor	>20 Stations, solution +/- stable or a high number of possible solutions
4	speculative	<20 Stations, solution not stable when skipping/reversing one station

Velocity Model for Obspy⁴³-TauP⁴⁴ calculation of takeoff angle and angle of incidence

Velocity Model	Explanation	MOHO at km	Vp ₀ km/s	Vs ₀ km/s	Vp Gradient km/s per km	Vs Gradient km/s per km	Vp/Vs Ratio	Vp Top MOHO km/s	Vs Top MOHO km/s	Vp Bottom MOHO km/s	Vs Bottom MOHO km/s	Density at Surface kg/m ³	Density at Top MOHO kg/m ³	Density at Bot. MOHO kg/m ³
Central Eastern Alps Moho 45	constant velocity gradient, MOHO at 45km	45	5,08	3,14	0,040	0,022	1,720	6,50	3,91	7,60	4,45	2.720	2.920	3.320

Mechanism/Fault Classification ^{45 46}

Fault Class	Explanation
N	normal fault
N-SS	oblique normal fault
R	reverse fault
R-SS	oblique reverse fault
SS	strike-slip fault
SS-N	strike-slip fault, oblique normal
SS-R	strike-slip fault, oblique reverse

Quality classes for polarity picks

FM_Quality	Explanation
1	clear, impulsive onset
2	good
3	fair
4	questionable

Database Version Information

Actualized	2017-07-31
Version	4.4.0
Report created	2018-06-08

Sources and References cited in Data Sheets (see bibliography at end of main publication for full citation)

- 1 New focal mechanism, calculated with FOCMEC⁴¹ and FPS 4.x⁴²
- 2 Viganò et al. (2008)
- 3 Kraft (1999)
- 4 Pondrelli et al. (2004)
- 5 Slejko & Rebez (1988); cited in ⁶
- 6 Slejko et al. (1989)
- 7 Reiter et al. (2005)
- 8 Roth et al. (1992)
- 9 modified by Kastrup et al. (2004)
- 10 Marschall et al. (2013)
- 11 Pondrelli et al. (2002)
- 12 Schweizerischer Erdbebendienst (2017)
- 13 Deichmann et al. (2004)
- 14 Baer et al. (2007)
- 15 Deichmann et al. (2010)
- 16 Deichmann et al. (2012)
- 17 Diehl et al. (2013)
- 18 Istituto Nazionale di Geofisica e Vulcanologia (2017)
- 19 Bernardi et al. (2005)
- 20 Braunmiller (2002)
- 21 Baer et al. (2001)
- 22 Deichmann et al. (2006)
- 23 Diehl et al. (2014)

- 24 Deichmann et al. (2011)
- 25 Saint Louis University Earthquake Center (2017)
- 26 Deichmann et al. (2002)
- 27 Baer et al. (2005)
- 28 Deichmann et al., 2009
- 41 Snoke (2003)
- 42 Reiter & Lenhardt (2006); Reiter (2017)
- 43 Beyreuther et al. (2010)
- 44 Crotwell & Owens (2016)
- 45 Johnston et al. (1994)
- 46 Álvarez-Gómez (2014)
- 47 Lomax et al. (2000)
- 51 Focal mechanism changed/recalculated^{41 42} with additional data
- 52 using waveform data from Diehl et al., 2009
- 53 using relocated coordinates from Viganò et al., 2015
- 54 using relocated coordinates from Viganò et al., 2015, z adjusted to their lower error limit based on macroseismic data
- 55 using waveform data from the AlpArray Network
- 56 using location from Baer et al. (1999)
- 57 New relocation, using velocity model of Behm et al. (2007); Behm (2009) and Waldhauser (2002)
- 60 SED earthquake catalogue (<http://www.seismo.ethz.ch/en/home/>)
- 61 BW earthquake catalogue (<https://www.erdbeben-in-bayern.de/>)
- 62 INGV fdsn catalogue (<http://webservices.rm.ingv.it/>)
- 63 NEIC earthquake catalogue (<https://earthquake.usgs.gov/earthquakes/search/>)
- 64 ZAMG earthquake bulletin (unpublished)