$\label{localizer_200V} $$\USER\Feinberglab\Tanja\20180510\localizer_200V $$$ Voxel size: 1.2×1.1×3.0 mm Rel. SNR: 1.00

SIEMENS: gre

TA: 0:16

PAT: 2

Properties		Phase resolution Phase partial Fourier	90 % 6/8
Prio Recon	Off	Interpolation	On
Before measurement			
After measurement		PAT mode	GRAPPA
Load to viewer	On	Accel, factor PE	2
Inline movie	Off	Ref. lines PE	24
Auto store images	On	Reference scan mode	
		Reference scan mode	Integrated
Load to stamp segments	On	Image Filter	Off
Load images to graphic	On	Distortion Corr.	Off
segments		Prescan Normalize	Off
Auto open inline display	Off		
Start measurement without	On	Normalize	Off
further preparation		B1 filter	Off
Wait for user to start	Off	Raw filter	Off
Start measurements	single	Elliptical filter	Off
Start measurements	Sirigie	Coomotimi	
Routine		Geometry	
Slice group 1		Multi-slice mode	Sequential
Slices	5	Series	Interleaved
Dist. factor	200 %	0-1	01
		Saturation mode	Standard
Position	Isocenter	Special sat.	None
Orientation	Sagittal		
Phase enc. dir.	A >> P	Table position	Н
Rotation	0.00 deg	Table position	0 mm
Slice group 2		Inline Composing	Off
Slices	5	Initine Composing	OII
Dist. factor	200 %	Tim CT mode	Off
Position	Isocenter	ı	
		System	
Orientation	Coronal	T1	On
Phase enc. dir.	R >> L	M2	On
Rotation	0.00 deg	B4	On
Slice group 3		M3	On
Slices	5	V32	Off
Dist. factor	200 %	V32	OII
Position	Isocenter	Positioning mode	FIX
Orientation	Transversal	MSMA	S - C - T
		Sagittal	R >> L
Phase enc. dir.	A >> P		
Rotation	0.00 deg	Coronal	A >> P
Phase oversampling	0 %	Transversal	F >> H
FoV read	280 mm	Save uncombined	Off
FoV phase	100.0 %	Coil Combine Mode	Adaptive Combine
Slice thickness	3.0 mm	AutoAlign	
TR	10.0 ms	Auto Coil Select	Off
TE	3.00 ms		
Averages	1	Shim mode	Tune up
		Adjust with body coil	Off
Concatenations	15 No. 2	Confirm freq. adjustment	Off
Filter	None	Assume Silicone	Off
Coil elements	B4;M2,3;T1	! Ref. amplitude 1H	200.000 V
Contrast		Adjustment Tolerance	Auto
	0	Adjust volume	Adio
TD	0 ms	Position	laggenter
MTC	Off		Isocenter
Magn. preparation	None	Orientation	Transversal
Flip angle	10 deg	Rotation	0.00 deg
Fat suppr.	None	R >> L	350 mm
Water suppr.	None	A >> P	263 mm
SWI	Off	F >> H	350 mm
		I	
Averaging mode	Short term	Physio	
Reconstruction	Magnitude	1st Signal/Mode	None
Measurements	1	Segments	1
Multiple series	Each measurement		·
Multiple Selles	Laon measurement	Tagging	None
Resolution		Dark blood	Off
Base resolution	256	Poon gentral	O#
1		Resp. control	Off

Inline

Subtract Liver registration Std-Dev-Sag Std-Dev-Cor Std-Dev-Tra Std-Dev-Time	Off Off Off Off Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
MapIt	None
Contrasts	1

Sequence

Introduction Dimension Phase stabilisation Asymmetric echo Bandwidth Flow comp.	On 2D Off Allowed 320 Hz/Px No
RF pulse type Gradient mode Excitation RF spoiling	Normal Whisper Slice-sel. On

	\\USER\Feinberglab\Tanja\	20180510\b1map_230V	
TA: 1:09	Voxel size: 3.9×3.9×5.0 mm	Rel. SNR: 1.00 USER	R: b1map_658
Properties		M3	On
Prio Recon	Off	V32	Off
Before measurement	Oll	Positioning mode	REF
After measurement		MSMA	S-C-T
Load to viewer	On	Sagittal	R >> L
Inline movie	Off	Coronal	A >> P
Auto store images	On	Transversal	F >> H
Load to stamp segments	Off	Save uncombined	Off
Load images to graphic	Off	Coil Combine Mode	Adaptive Combine
segments	0.11	AutoAlign	
Auto open inline display	Off	Auto Coil Select	Default
Start measurement without	On		
further preparation	OII	Shim mode	Tune up
Wait for user to start	Off	Adjust with body coil	Off
Start measurements	single	Confirm freq. adjustment	Off
Start measurements	Sirigie	Assume Silicone	Off
Routine		! Ref. amplitude 1H	230.000 V
Slice group 1	_	Adjustment Tolerance	Auto
Slices	8	Adjust volume	
Dist. factor	200 %	Position	Isocenter
Position	L0.0 A15.0 F2.1	Orientation	Transversal
Orientation	Transversal	Rotation	0.00 deg
Phase enc. dir.	A >> P	R >> L	350 mm
Rotation	0.00 deg	A >> P	263 mm
FoV read	250 mm	F >> H	350 mm
FoV phase	100.0 %		000 111111
Slice thickness	5 mm	Composing	
TR	1000 ms	Sequence	
TE 1	14 ms	•	2
TE 2	14 ms	Contrasts	_
Averages	14 1115	Bandwidth	260.416667 Hz/Px
Filter	None	T1 Compensation	Mean T1
Coil elements		Mean T1	1800.0 ms
Coll elements	B4;M2,3;T1	Angles	1
Contrast		Amplitude Weighting	Linear
Flip angle 1	90 deg	Scale Bar	Enabled
Flip angle 2	120 deg	Raw Data	Disabled
Flip angle 3	60 deg		
Flip angle 4	135 deg		
Flip angle 5	45 deg		
Measurements	1		
Resolution Base resolution	64		
Phase resolution	100 %		
Raw filter	Off		
Geometry			
Series	Ascending		
Navigator 1			
Position	R37.1 P12.8 H21.6		
Orientation	Transversal		
Rotation	0.00 deg		
Base size phase	40 mm		
Base size read	40 mm		
Thickness	40 mm		
Table position	ш		
Table position	H 0 mm		
Table position	0 mm		
Inline Composing	Off		
System			
T1	On		
M2	On On		

B4

On

\\USER\Feinberglab\Tanja\20180510\mp2rage_0.7mm_TR4500

TA: 7:36 PAT: 3	Voxel size: 0.8×0.8×0.8 mr	m Rel. SNR: 1.00 USER	: mp2rage_wip602B
Properties		Image Filter	Off
	0#	Distortion Corr.	Off
Prio Recon	Off	Prescan Normalize	Off
Before measurement		Normalize	Off
After measurement		B1 filter	Off
Load to viewer	On	Raw filter	Off
Inline movie	Off	Elliptical filter	Off
Auto store images	On	Elliptical filter	Oil
Load to stamp segments	Off	Geometry	
Load images to graphic	Off	Multi-slice mode	Single shot
segments		Series	Interleaved
Auto open inline display	Off		
Start measurement without	On	Table a side	
	Oli	Table position	H
further preparation		Table position	0 mm
Wait for user to start	On	Inline Composing	Off
Start measurements	single	Custom	
) outing		System	
Routine		_ T1	On
Slab group 1		M2	On
Slabs	1	B4	On
Dist. factor	50 %	M3	On
Position	L1.2 A28.3 F30.2	V32	Off
Orientation	Sagittal		-
Phase enc. dir.	H >> F	Positioning mode	FIX
Rotation	90.00 deg	MSMA	S - C - T
		Sagittal	R >> L
Phase oversampling	0 %	Coronal	A >> P
Slice oversampling	8.3 %	Transversal	F >> H
Slices per slab	192	Save uncombined	Off
FoV read	200 mm		-
FoV phase	90.6 %	Coil Combine Mode	Adaptive Combine
Slice thickness	0.80 mm	AutoAlign	
TR	4500 ms	Auto Coil Select	Default
TE	3.33 ms	Object of the second of the se	04
		Shim mode	Standard
Averages	1	Adjust with body coil	Off
Concatenations	1	Confirm freq. adjustment	Off
Filter	None	Assume Silicone	Off
Coil elements	B4;M2,3;T1	! Ref. amplitude 1H	230.000 V
N=====================================		Adjustment Tolerance	Auto
Contrast		- Adjust volume	, (0.0
Magn. preparation	Non-sel. IR	! Position	L1.9 A24.9 F9.3
TI 1	1000 ms		
TI 2	3200 ms	! Orientation	Sagittal
Flip angle 1	4 deg	! Rotation	0.00 deg
Flip angle 2	4 deg	! F >> H	108 mm
Fat suppr.	Water excit. fast	! A >> P	160 mm
Water suppr.	None	! R >> L	127 mm
		I	
2nd Inversion-Contrast	On	Physio	
Averaging mode	Long term	1st Signal/Mode	None
Reconstruction	Magnitude		O#
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Dark blood	Off
Measurements	I Factoria	Resp. control	Off
Multiple series	Each measurement	ixesp. contion	Oil
Resolution		Inline	
Base resolution	256	Subtract	Off
Phase resolution	100 %	Std-Dev-Sag	Off
Slice resolution	100 %	Std-Dev-Cor	Off
		Std-Dev-Tra	Off
Phase partial Fourier	Off	Std-Dev-Time	Off
Slice partial Fourier	6/8		_
Interpolation	Off	MIP-Sag	Off
DAT J	OD A DD A	MIP-Cor	Off
PAT mode	GRAPPA	MIP-Tra	Off
Accel. factor PE	3	MIP-Time	Off
Ref. lines PE	36	Save original images	On
Accel. factor 3D	1		
Reference scan mode	Integrated	Coguenes	
		Sequence	

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	200 Hz/Px
Flow comp.	Slice
Echo spacing	8.1 ms
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
FFT Scale Factor	200 %
Line/Partition Swap	Off
Homodyne Phase Filter	Off
Flat Image	On
T1 Map	On
Division Image	Off
ExtInvPulseOn	On
OffResFreqInv	0
Invflipangle	970

TA: 12:03

\\USER\Feinberglab\Tanja\20180510\BP_grase_clean_VASO_V10t				
PAT: Off	Voxel size: 0.8×0.8×1.5 mm	Rel. SNR: 1.00	USER: BP_grase_clean_VASO_V10t	

Properties		Position	R1.4 P6.6 H0.7
Prio Recon	Off	Orientation	C > S25.3 > T6.2
Before measurement	5	Special sat.	None
After measurement		Table position	H
Load to viewer	On	Table position	0 mm
Inline movie	Off	Inline Composing	Off
Auto store images	On	1	
Load to stamp segments	Off	System	
Load images to graphic	Off	T1	On
segments		M2	On
Auto open inline display	Off	B4	On
Start measurement without	On	M3	On
further preparation		V32	Off
Wait for user to start	Off	Positioning mode	FIX
Start measurements	single	MSMA	S - C - T
Routine		Sagittal	R >> L
Slab group 1		—— Coronal	A >> P
Slabs	1	Transversal	F >> H
Dist. factor	0 %	Save uncombined	Off
Position	R43.2 A10.6 H23.0	Coil Combine Mode	Adaptive Combine
Orientation	T > S31.6 > C-3.3	AutoAlign	
Phase enc. dir.	A >> P	Auto Coil Select	Default
Rotation	-20.00 deg	Chim made	Ctandard
Phase oversampling	0 %	Shim mode	Standard Off
Slice oversampling	0.0 %	Adjust with body coil Confirm freq. adjustment	Off
Slices per slab	8	Assume Silicone	Off
FoV read	99 mm	! Ref. amplitude 1H	220.000 V
FoV phase	25.8 %	Adjustment Tolerance	Auto
Slice thickness	1.5 mm	Adjust volume	Auto
TR	3000 ms	Position	R43.2 A10.6 H23.0
TE	45.9 ms	Orientation	T > S31.6 > C-3.3
Averages	1	Rotation	-20.00 deg
Concatenations	1	R >> L	99 mm
Filter	None	A >> P	26 mm
Coil elements	B4;M2,3;T1	F >> H	12 mm
1	, ,-,		12
Contrast	N LIB	Physio	
Magn. preparation	Non-sel. IR	1st Signal/Mode	None
TI Flin angle	1100 ms	Composing	
Flip angle	165 deg		
Fat suppr. Fat sat. mode	Fat sat.	Sequence	~"
	Strong	Introduction	Off
Averaging mode	Long term	Dimension	3D
Reconstruction	Magn./Phase	Reordering	Centric
Measurements	241	Contrasts Bandwidth	2 1052 Hz/Px
Pause after meas.	0.0 s		1052 H2/PX 1.1 ms
Multiple series	Off	Echo spacing	1.1 1115
Resolution		Turbo factor	5
Base resolution	132	EPI factor	34
Phase resolution	100 %	RF pulse type	Normal
Slice resolution	100 %	Gradient mode	Fast
Slice partial Fourier	5/8	BIR4: 2nd segm phase	338
Interpolation	Off	BIR4: duration	6400
		excite duration	2560
PAT mode	None	refoc duration	2560
Prescan Normalize	Off	excite BWTP	20.8
Raw filter	Off	refoc BWTP	5.2
		phase encoding	ON
Geometry		Maxwell compensation	Off
Series	Interleaved	ICE program	single
Sat. region 1		- 1 -3· -···	3 -
Thickness	26 mm		
1			

 $\verb|\USER\Feinberg| lab\Tanja \20180510 \BP_grase_clean_VASO_V10t_noClip| | Color \Color \Col$

Rel. SNR: 1.00

Voxel size: 0.8×0.8×1.5 mm

TA: 12:03

PAT: Off

USER: BP_grase_clean_VASO_V10_noClip

Duanautiaa		Position	R1.4 P6.6 H0.7
Properties	0"	— Orientation	C > S25.3 > T6.2
Prio Recon	Off	Special sat.	None
Before measurement			
After measurement	_	Table position	H
Load to viewer	On	Table position	0 mm
Inline movie	Off	Inline Composing	Off
Auto store images	On	System	
Load to stamp segments	Off	T1	On
Load images to graphic	Off	M2	On
segments		B4	On
Auto open inline display	Off		_
Start measurement without	On	M3	On O"
further preparation		V32	Off
Wait for user to start	Off	Positioning mode	FIX
Start measurements	single	MSMA	S - C - T
	3 -	Sagittal	R >> L
Routine		— Coronal	A >> P
Slab group 1		Transversal	F >> H
Slabs	1		
Dist. factor	0 %	Save uncombined	Off
Position	R43.2 A10.6 H23.0	Coil Combine Mode	Adaptive Combine
Orientation	T > S31.6 > C-3.3	AutoAlign	 D ();
Phase enc. dir.	A >> P	Auto Coil Select	Default
Rotation	-20.00 deg	Shim mode	Standard
Phase oversampling	0 %	Adjust with body coil	Off
Slice oversampling	0.0 %	Confirm freq. adjustment	Off
Slices per slab	8	Assume Silicone	Off
FoV read	99 mm		
FoV phase	25.8 %	! Ref. amplitude 1H	220.000 V
		Adjustment Tolerance	Auto
Slice thickness	1.5 mm	Adjust volume	
TR	3000 ms	Position	R43.2 A10.6 H23.0
TE	45.9 ms	Orientation	T > S31.6 > C-3.3
Averages	1	Rotation	-20.00 deg
Concatenations	1	R >> L	99 mm
Filter	None	A >> P	26 mm
Coil elements	B4;M2,3;T1	F >> H	12 mm
Contrast		Physio	
Magn. preparation	Non-sel. IR	1st Signal/Mode	None
TI	1100 ms	ı.	
Flip angle	165 deg	Composing	
Fat suppr.	Fat sat.	Sequence	
Fat sat. mode	Strong	Introduction	Off
		Dimension	3D
Averaging mode	Long term	Reordering	Centric
Reconstruction	Magnitude	Contrasts	2
Measurements	241	Bandwidth	1052 Hz/Px
Pause after meas.	0.0 s	Echo spacing	1.1 ms
Multiple series	Off	Line spacing	1.11115
Resolution		Turbo factor	5
Base resolution	132	EPI factor	34
Phase resolution	100 %	RF pulse type	Normal
Slice resolution	100 %	Gradient mode	Fast
Slice partial Fourier	5/8 Off	BIR4: 2nd segm phase	338
Interpolation	Off	BIR4: duration	5120
PAT mode	None	excite duration	2560
		refoc duration	2560
Prescan Normalize	Off	excite BWTP	10.4
Raw filter	Off	refoc BWTP	5.2
Geometry		phase encoding	ON
Series	Interleaved	— Maxwell compensation	Off
	michicaveu	ICE program	single
		-	-
Sat. region 1			

\\USER\Feinberglab\Tanja\20180510\VASO_116_phantom_M1paper				
TA: 12:05 PAT: 2 Voxel size: 0.7×0.7×1.5 mm Rel. SNR: 1.00 USER: VASO_116				
17. 12.00 FAT. 2 VOXELSIZE. 0.7 X0.7 X 1.3 HIIII REI. SINN. 1.00 USEN. VASU_110				
Properties		PAT mode	GRAPPA	
	0#	 Accel. factor PE 	2	
Prio Recon	Off	Ref. lines PE	36	
Before measurement		Accel. factor 3D	1	
After measurement	_	Ref. lines 3D	8	
Load to viewer	On	Reference scan mode	Separate	
Inline movie	Off			
Auto store images	On	Prescan Normalize	Off	
Load to stamp segments	Off	Raw filter	Off	
Load images to graphic	Off	Elliptical filter	Off	
segments		Hamming	Off	
Auto open inline display	Off	On a second track		
Start measurement without	On	Geometry		
further preparation		Multi-slice mode	Interleaved	
Wait for user to start	Off	Series	Ascending	
Start measurements	single	Special sat.	Parallel F	
Otart measurements	Single	·	25.0 mm	
Routine		Gap		
Slab group 1		- Thickness	100 mm	
Slabs	1	Table position	Н	
Dist. factor	50 %	Table position	0 mm	
Position	R37.8 A6.9 H16.3	Inline Composing	Off	
Orientation	T > S25.8 > C-11.1	I mille Composing	Oli	
Phase enc. dir.	R >> L	System		
		T1	On	
Rotation	70.00 deg	M2	On	
Phase oversampling	0 %	B4	On	
Slice oversampling	0.0 %	M3	On	
Slices per slab	8	V32	Off	
FoV read	32.8 mm	V32	OII	
FoV phase	300.0 %	Positioning mode	FIX	
Slice thickness	1.50 mm	MSMA	S - C - T	
TR	1500.00 ms	Sagittal	R >> L	
TE	24 ms			
Averages	1	Coronal	A >> P	
	1	Transversal	F >> H	
Concatenations	1	Save uncombined	Off	
Filter	None	Coil Combine Mode	Sum of Squares	
Coil elements	B4;M2,3;T1	AutoAlign		
Contrast		Auto Coil Select	Default	
Perfusion mode	Picore Q2TIPS			
		Shim mode	Standard	
TI2	900 ms	Adjust with body coil	Off	
TI1	50 ms	Confirm freq. adjustment	Off	
TI1s	50 ms	Assume Silicone	Off	
Flip angle	26 deg	! Ref. amplitude 1H	230.000 V	
Fat suppr.	Fat sat.	Adjustment Tolerance	Auto	
Fat sat. mode	Strong	Adjust volume		
Averaging made	l and tarm	Position	R37.8 A6.9 H16.3	
Averaging mode	Long term	Orientation	T > S25.8 > C-11.1	
Reconstruction	Magn./Phase	Rotation	160.00 deg	
Measurements	483	R >> L	99 mm	
Delay in TR	0 ms			
Multiple series	Off	A >> P	33 mm	
Dorfusion made	DICORE COT	F >> H	12 mm	
Perfusion mode	PICORE Q2T	Physio		
Inversion time 1	50 ms	1st Signal/Mode	None	
Saturation stop time	50 ms	Tat digital/Wode	INOTIC	
Inversion time 2	900.0 ms	BOLD		
Flow limit	100.0 cm/s	Motion correction	Off	
Pacalutian		Spatial filter	Off	
Resolution	44	_ ' '	-	
Base resolution	44	Sequence		
Phase resolution	100 %	Introduction	On	
Slice resolution	100 %	Dimension	3D	
Phase partial Fourier	6/8	Reordering	Linear	
Slice partial Fourier	Off	Contrasts	1	
Interpolation	Off	Bandwidth	1062 Hz/Px	
		Free echo spacing	Off	

Free echo spacing

Off

Echo spacing	1.07 ms
EPI factor RF pulse type Gradient mode Excitation RF spoiling	132 Normal Normal Slab-sel. On
Ampl BWDTH ph.skip 4 Robert (the one) use Ernst angle Maxwell Correction log physio files FFT scale dummy prepscan time z shim RF duration RF BWTP Renzo: Delta TI EFFECTIVE TR PatPartitions EPI phase correction PAT refscan mode FlashRef BaseRes FlashRef BW FlashRef TE FlashRef FA use CAIPI	120 150 3.1kHz 30 Off Off Off Off 1.00 3 s 0.00 mT/m*ms 2560 us 25.0 71 ms 12000 ms 8 local Flash 44 136 Hz/px 5000 us 5 deg Off

SIEME	NS MAGNETOM Investiga	itionai_Device_/ i syn(go wk 617
\\U:	SER\Feinberglab\Tanja\2018	0510\VASO_116_phant	om_V1
TA: 13:16 PA	AT: 3 Voxel size: 0.8×0.8×1.0) mm Rel. SNR: 1.00	USER: VASO_116
Dranautias		PAT mode	GRAPPA
Properties		Accel. factor PE	3
Prio Recon	Off	Ref. lines PE	96
Before measurement		Accel. factor 3D	1
After measurement	0	Ref. lines 3D	24
Load to viewer	On Off	Reference scan mode	Separate
Inline movie	Off	Decree Normaline	0#
Auto store images	On Off	Prescan Normalize	Off
Load to stamp segments	Off	Raw filter	Off
Load images to graphic	Off	Elliptical filter	Off
segments	0#	Hamming	Off
Auto open inline display	Off On	Geometry	
Start measurement without	OII	Multi-slice mode	Interleaved
further preparation Wait for user to start	Off	Series	Ascending
Start measurements			
Start measurements	single	Special sat.	Parallel A
Routine		Gap	25.0 mm
Slab group 1		Thickness	100 mm
Slabs	1	Table position	Н
Dist. factor	50 %	Table position	0 mm
Position	R37.8 A6.9 H16.3	Inline Composing	Off
Orientation	Coronal		
Phase enc. dir.	H >> F	System	
Rotation	-90.00 deg	T1	On
Phase oversampling	24 %	M2	On
Slice oversampling	9.1 %	B4	On
Slices per slab	22	M3	On O"
FoV read	130.0 mm	V32	Off
FoV phase	98.8 %	Positioning mode	FIX
Slice thickness	1.00 mm	MSMA	S - C - T
TR	2525.90 ms	Sagittal	R >> L
TE	24 ms	Coronal	A >> P
Averages	1	Transversal	F >> H
Concatenations	1	Save uncombined	Off
Filter	None	Coil Combine Mode	Sum of Squares
Coil elements	B4;M2,3;T1	AutoAlign	·
Contrast		Auto Coil Select	Default
Perfusion mode	Picore Q2TIPS	Shim mode	Standard
TI2	700 ms	Adjust with body coil	Off
TI1	50 ms	Confirm freq. adjustment	_
TI1s	50 ms	Assume Silicone	Off
Flip angle	4 deg	! Ref. amplitude 1H	230.000 V
Fat suppr.	Fat sat.	Adjustment Tolerance	Auto
Fat sat. mode	Strong	Adjust volume	, 1010
		Position	R37.8 A6.9 H16.3
Averaging mode	Long term	Orientation	Coronal
Reconstruction	Magn./Phase	Rotation	-90.00 deg
Measurements	315	R >> L	130 mm
Delay in TR	0 ms	F >> H	129 mm
Multiple series	Off	A >> P	22 mm
1		1	

After measurement		Accel. factor 3D	1
Load to viewer	On	Ref. lines 3D	24
Inline movie	Off	Reference scan mode	Separate
Auto store images	On	Prescan Normalize	Off
Load to stamp segments	Off	Raw filter	Off
Load images to graphic	Off	Elliptical filter	Off
segments		Hamming	Off
Auto open inline display	Off		
Start measurement without	On	Geometry	
further preparation		Multi-slice mode	Interleaved
Wait for user to start	Off	Series	Ascending
Start measurements	single	Special sat.	Parallel A
Routine		Gap	25.0 mm
Slab group 1		Thickness	100 mm
Slabs	1	Table position	H
Dist. factor	50 %	Table position	0 mm
Position	R37.8 A6.9 H16.3	Inline Composing	Off
Orientation	Coronal		
Phase enc. dir.	H >> F	System	
Rotation	-90.00 deg	T1	On
Phase oversampling	24 %	M2	On
Slice oversampling	9.1 %	B4	On
Slices per slab	22	M3	On
FoV read	130.0 mm	V32	Off
FoV phase	98.8 %	Positioning mode	FIX
Slice thickness	1.00 mm	MSMA	S-C-T
TR	2525.90 ms	Sagittal	R >> L
TE	24 ms	Coronal	A >> P
Averages	1	Transversal	F >> H
Concatenations	1		
Filter	None	Save uncombined	Off
Coil elements	B4;M2,3;T1	Coil Combine Mode	Sum of Squares
Con elements	D+,1V12,3,11	AutoAlign Auto Coil Select	 Default
Contrast		- Auto Coii Select	
Perfusion mode	Picore Q2TIPS	Shim mode	Standard
TI2	700 ms	Adjust with body coil	Off
TI1	50 ms	Confirm freq. adjustment	Off
TI1s	50 ms	Assume Silicone	Off
Flip angle	4 deg	! Ref. amplitude 1H	230.000 V
Fat suppr.	Fat sat.	Adjustment Tolerance	Auto
Fat sat. mode	Strong	Adjust volume	
Averaging mode	Long term	Position	R37.8 A6.9 H16.3
Reconstruction	Magn./Phase	Orientation	Coronal
Measurements	315	Rotation	-90.00 deg
Delay in TR	0 ms	R >> L	130 mm
Multiple series	Off	F >> H	129 mm
widitiple series	OII	A >> P	22 mm
Perfusion mode	PICORE Q2T	I	
Inversion time 1	50 ms	Physio	
Saturation stop time	50 ms	1st Signal/Mode	None
Inversion time 2	700.0 ms	BOLD	
Flow limit	100 cm/s	Motion correction	Off
Resolution		Spatial filter	Off
Base resolution	162	- ' ·	
		Sequence	
Phase resolution	100 %	Introduction	On
Slice resolution	100 %	Dimension	3D
Phase partial Fourier	6/8	Reordering	Linear
Slice partial Fourier	Off	Contrasts	1
Interpolation	Off	Bandwidth	1028 Hz/Px
		Free echo spacing	Off

Echo spacing	1.1 ms
EPI factor RF pulse type Gradient mode Excitation RF spoiling	160 Normal Fast Slab-sel. On
Ampl BWDTH ph.skip 4 Robert (the one) use Ernst angle Maxwell Correction log physio files FFT scale dummy prepscan time z shim RF duration RF BWTP Renzo: Delta TI EFFECTIVE TR PatPartitions EPI phase correction PAT refscan mode FlashRef BaseRes FlashRef BW FlashRef TE FlashRef FA use CAIPI	100 150 3.1kHz 30 Off Off Off Off 1.00 3 s 0.00 mT/m*ms 2000 us 25.0 73 ms 60621 ms 24 local Flash 162 1000 Hz/px 4800 us 5 deg Off

\\USER\Feinberglab\Tanja\20180510\BP_grase_clean_VASO_V10_noClip_tSNR_2560_20.8_2560_5.2
TA: 1:15 PAT: Off Voxel size: 0.8×0.8×1.5 mm Rel. SNR: 1.00 USER: BP_grase_clean_VASO_V10_noClip

Properties		Pause after meas. 19 Pause after meas. 20	0.0 s 0.0 s
Prio Recon	Off	Pause after meas. 21	0.0 s
Before measurement		Pause after meas. 22	0.0 s
After measurement		Pause after meas. 23	0.0 s
Load to viewer	On	Pause after meas. 24	0.0 s
Inline movie	Off	Multiple series	Off
Auto store images	On	Multiple Selles	Oli
Load to stamp segments	Off	Resolution	
Load images to graphic	Off	Base resolution	132
segments		Phase resolution	100 %
Auto open inline display	Off	Slice resolution	100 %
Start measurement without	On	Slice partial Fourier	5/8
further preparation		Interpolation	Off
Wait for user to start	Off		
Start measurements	single	PAT mode	None
	Single	Prescan Normalize	Off
Routine		Raw filter	Off
Slab group 1			
Slabs	1	Geometry	
Dist. factor	0 %	Series	Interleaved
Position	R43.2 A10.6 H23.0	Cot region 1	
Orientation	T > S31.6 > C-3.3	Sat. region 1	20
Phase enc. dir.	A >> P	Thickness	26 mm
Rotation	-20.00 deg	Position	R1.4 P6.6 H0.7
Phase oversampling	0 %	Orientation	C > S25.3 > T6.2
Slice oversampling	0.0 %	Special sat.	None
Slices per slab	8	Table position	Н
FoV read	99 mm	Table position	0 mm
FoV phase	25.8 %	Inline Composing	Off
Slice thickness	1.5 mm	miline Composing	Oli
TR	3000 ms	System	
TE			On
	45.9 ms	M2	On
Averages	1	B4	On
Concatenations	1	M3	On
Filter	None	V32	Off
Coil elements	B4;M2,3;T1	V32	OII
Contrast		Positioning mode	FIX
Magn. preparation	Non-sel. IR	─ MSMA	S - C - T
TI	1100 ms	Sagittal	R >> L
		Coronal	A >> P
Flip angle	165 deg	Transversal	F >> H
Fat suppr.	Fat sat.	Save uncombined	Off
Fat sat. mode	Strong	Coil Combine Mode	Adaptive Combine
Averaging mode	Long term		
Reconstruction	Magnitude	Auto Coil Soloct	
Measurements	25	Auto Coil Select	Default
Pause after meas. 1	0.0 s	Shim mode	Standard
Pause after meas. 2	0.0 s 0.0 s	Adjust with body coil	Off
Pause after meas. 2 Pause after meas. 3		Confirm freq. adjustment	Off
	0.0 s	Assume Silicone	Off
Pause after meas. 4	0.0 s	! Ref. amplitude 1H	220.000 V
Pause after meas. 5	0.0 s	•	
Pause after meas. 6	0.0 s	Adjustment Tolerance	Auto
Pause after meas. 7	0.0 s	Adjust volume	D40 0 440 0 1100 0
Pause after meas. 8	0.0 s	Position	R43.2 A10.6 H23.0
Pause after meas. 9	0.0 s	Orientation	T > S31.6 > C-3.3
Pause after meas. 10	0.0 s	Rotation	-20.00 deg
Pause after meas. 11	0.0 s	R >> L	99 mm
Pause after meas. 12	0.0 s	A >> P	26 mm
Pause after meas. 13	0.0 s	F >> H	12 mm
Pause after meas. 14	0.0 s	Disconic	
Pause after meas. 15	0.0 s 0.0 s	Physio	
		1st Signal/Mode	None
Pause after meas. 16	0.0 s	Composing	
Pause after meas. 17	0.0 s	Composing	
Pause after meas. 18	0.0 s		

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	2
Bandwidth	1052 Hz/Px
Echo spacing	1.1 ms
Turbo factor	5
EPI factor	34
RF pulse type	Normal
Gradient mode	Fast
BIR4: 2nd segm phase	338
BIR4: duration	5120
excite duration	2560
refoc duration	2560
excite BWTP	20.8
refoc BWTP	5.2
phase encoding	ON
Maxwell compensation	Off
ICE program	single
1 5	

\\USER\Feinberglab\Tanja\20180510\BP_grase_clean_VASO_V10_noClip_tSNR_2560_10.4_2560_5.2
TA: 1:15 PAT: Off Voxel size: 0.8×0.8×1.5 mm Rel. SNR: 1.00 USER: BP_grase_clean_VASO_V10_noClip

Properties		Pause after meas. 19	0.0 s
Prio Recon	Off	Pause after meas. 20	0.0 s
Before measurement		Pause after meas. 21	0.0 s
After measurement		Pause after meas. 22	0.0 s
Load to viewer	On	Pause after meas. 23	0.0 s
Inline movie	Off	Pause after meas. 24	0.0 s
Auto store images	On	Multiple series	Off
Load to stamp segments	Off	Resolution	
Load images to graphic	Off	Base resolution	132
segments	3. 1	Phase resolution	100 %
Auto open inline display	Off	Slice resolution	100 %
Start measurement without	On	Slice partial Fourier	5/8
further preparation	OII	Interpolation	Off
Wait for user to start	Off	······	
Start measurements	single	PAT mode	None
Start measurements	Sirigle	Dragger Newschie	
Routine		Prescan Normalize Raw filter	Off Off
Slab group 1			
Slabs	1	Geometry	
Dist. factor	0 %	Series	Interleaved
Position	R43.2 A10.6 H23.0	Sat. region 1	
Orientation	T > S31.6 > C-3.3	Thickness	26 mm
Phase enc. dir.	A >> P	Position	R1.4 P6.6 H0.7
Rotation	-20.00 deg	Orientation	C > S25.3 > T6.2
Phase oversampling	0 %	Special sat.	None
Slice oversampling	0.0 %		
Slices per slab	8	Table position	Н
FoV read	99 mm	Table position	0 mm
FoV phase	25.8 %	Inline Composing	Off
Slice thickness	1.5 mm	•	
TR	3000 ms	System	0.5
TE	45.9 ms	T1	On
Averages	1	M2	On
Concatenations	1	B4	On
Filter	None	M3	On
Coil elements	B4;M2,3;T1	V32	Off
Contrast		Positioning mode	FIX
Magn. preparation	Non-sel. IR	MSMA	S - C - T
TI TI	1100 ms	Sagittal	R >> L
Flip angle	165 deg	Coronal	A >> P
Fat suppr.	Fat sat.	Transversal	F >> H
Fat sat. mode	Strong	Save uncombined	Off
		Coil Combine Mode	Adaptive Combine
Averaging mode	Long term	AutoAlign	'
Reconstruction	Magnitude	Auto Coil Select	Default
Measurements	25	Obim	
Pause after meas. 1	0.0 s	Shim mode	Standard
Pause after meas. 2	0.0 s	Adjust with body coil	Off
Pause after meas. 3	0.0 s	Confirm freq. adjustment	Off
Pause after meas. 4	0.0 s	Assume Silicone	Off
Pause after meas. 5	0.0 s	! Ref. amplitude 1H	220.000 V
Pause after meas. 6	0.0 s	Adjustment Tolerance	Auto
Pause after meas. 7	0.0 s	Adjust volume	
Pause after meas. 8	0.0 s	Position	R43.2 A10.6 H23.0
Pause after meas. 9	0.0 s	Orientation	T > S31.6 > C-3.3
Pause after meas. 10	0.0 s	Rotation	-20.00 deg
Pause after meas. 11	0.0 s	R >> L	99 mm
Pause after meas. 12	0.0 s	A >> P	26 mm
Pause after meas. 13	0.0 s	F >> H	12 mm
Pause after meas. 14	0.0 s	Dharais	
Pause after meas. 15	0.0 s 0.0 s	Physio	
Pause after meas. 16	0.0 s 0.0 s	1st Signal/Mode	None
Pause after meas. 17	0.0 s 0.0 s	Composing	
Pause after meas. 18	0.0 s 0.0 s		
i aust ailti illtas. 10	0.0 5		

Sequence

•	
Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	2
Bandwidth	1052 Hz/Px
Echo spacing	1.1 ms
Turbo factor	5
EPI factor	34
RF pulse type	Normal
Gradient mode	Fast
BIR4: 2nd segm phase	338
BIR4: duration	5120
excite duration	2560
refoc duration	2560
excite BWTP	10.4
refoc BWTP	5.2
phase encoding	ON
Maxwell compensation	Off
ICE program	single

\\USE	:R\Feinberglab\Tanja\20180	510\BP_ep3d_bold_multiech	no_ASL
	•	-·	ep3d_bold_multiecho_ASL
Properties Prio Recon Before measurement	Off	Prescan Normalize Raw filter Elliptical filter Hamming	Off Off Off Off
After measurement Load to viewer Inline movie Auto store images Load to stamp segments Load images to graphic segments	On Off On Off Off	Geometry Multi-slice mode Series Special sat. Gap	Interleaved Ascending Parallel F 25.0 mm
Auto open inline display Start measurement without further preparation Wait for user to start Start measurements	Off On Off single	Thickness Table position Table position Inline Composing System	H 0 mm Off
Routine Slab group 1 Slabs Dist. factor Position Orientation Phase enc. dir.	1 50 % Isocenter Transversal A >> P	T1 M2 B4 M3 V32 Positioning mode	On Off Off Off Off
Rotation Phase oversampling Slice oversampling Slices per slab FoV read FoV phase Slice thickness	0.00 deg 0 % 0.0 % 32 150.0 mm 300.0 % 1.00 mm	MSMA Sagittal Coronal Transversal Save uncombined Coil Combine Mode AutoAlign	S - C - T R >> L A >> P F >> H Off Sum of Squares
TR TE Averages Concatenations Filter Coil elements	5000.00 ms 52 ms 1 1 None T1	Auto Coil Select Shim mode Adjust with body coil Confirm freq. adjustment Assume Silicone ? Ref. amplitude 1H Adjustment Tolerance	Default Standard Off Off Off 0.000 V Auto
Contrast Perfusion mode TI2 TI1 TI1s Flip angle Fat suppr.	SS-SI VASO 1100 ms 50 ms 50 ms 90 deg None	Adjust volume Position Orientation Rotation A >> P R >> L F >> H	Isocenter Transversal 90.00 deg 450 mm 150 mm 32 mm
Averaging mode Reconstruction Measurements Delay in TR Multiple series	Long term Magnitude 2 0 ms Off	Physio 1st Signal/Mode BOLD Motion correction	None
Perfusion mode Inversion time 1 Saturation stop time Inversion time 2 Flow limit	PICORE Q2T 50 ms 50 ms 1100.0 ms 100 cm/s	Spatial filter Sequence Introduction Dimension Reordering	Off On 3D Linear
Resolution Base resolution Phase resolution Slice resolution Phase partial Fourier Slice partial Fourier Interpolation	64 33 % 100 % Off Off	Contrasts Bandwidth Free echo spacing Echo spacing EPI factor RF pulse type Gradient mode	1 752 Hz/Px Off 1.4 ms 63 Normal Fast
DAT 1		Excitation	Slah-sel

PAT mode

None

Excitation

Slab-sel.

On

Ampl 100 BWDTH 150 3.1kHz ph.skip 4 Robert (the one) 30 use Ernst angle Off Maxwell Correction Off log physio files Off FFT scale 1.00 dummy prepscan time 3 s z shim 0.00 mT/m*ms RF duration 2560 us **RF BWTP** 5.2 Renzo: Delta TI 102 ms 160000 ms **EFFECTIVE TR** PatPartitions 32

local

EPI phase correction

\\USER\Feinber	rglab\Tanja\20180510\BP_	_ep3d_bold_multiecho_ASL_f	ReconAlgoNONE
TA: 0:10 PAT: Off Voxe	el size: 7.1×2.3×1.0 mm R	el. SNR: 1.00 USER: BP_ep	3d_bold_multiecho_ASL_Reco
Properties		Prescan Normalize	Off
Prio Recon	Off	— Raw filter	Off
Before measurement	Oil	Elliptical filter	Off
After measurement		Hamming	Off
Load to viewer	On	Geometry	
Inline movie	Off	Multi-slice mode	Interleaved
Auto store images	On	Series	Ascending
Load to stamp segments	Off		
Load images to graphic	Off	Special sat.	Parallel F
segments		Gap	25.0 mm
Auto open inline display	Off	Thickness	100 mm
Start measurement without	On	Table position	Н
further preparation		Table position	0 mm
Wait for user to start	Off	Inline Composing	Off
Start measurements	single		
Routine		System T1	On
Slab group 1			Off
Slabs	1	M2 B4	Off
Dist. factor	50 %	M3	Off
Position	Isocenter	V32	Off
Orientation	Transversal	V 32	
Phase enc. dir.	A >> P	Positioning mode	REF
Rotation 0.00 deg MSMA		MSMA	S - C - T
Phase oversampling	0 %	Sagittal	R >> L
Slice oversampling	oversampling 0.0 % Coronal		A >> P
Slices per slab	32	Transversal	F >> H
FoV read	150.0 mm	Save uncombined	Off
FoV phase	300.0 %	Coil Combine Mode	Sum of Squares
Slice thickness	1.00 mm	AutoAlign	
TR	5000.00 ms	Auto Coil Select	Default
TE	52 ms	Shim mode	Standard
Averages	1	Adjust with body coil	Off
Concatenations	1	Confirm freq. adjustment	Off
Filter	None	Assume Silicone	Off
Coil elements	T1	? Ref. amplitude 1H	0.000 V
Contrast		Adjustment Tolerance	Auto
Perfusion mode	SS-SI VASO	Adjust volume	
TI2	1100 ms	Position	Isocenter
TI1	50 ms	Orientation	Transversal
TI1s	50 ms	Rotation	90.00 deg
Flip angle	90 deg	A >> P	450 mm
Fat suppr.	None	R >> L	150 mm
		. F >> H	32 mm
Averaging mode	Long term	Physio	
Reconstruction	Magnitude	1st Signal/Mode	None
Measurements	2		None
Delay in TR	0 ms	BOLD	
Multiple series	Off	Motion correction	Off
Perfusion mode	PICORE Q2T	Spatial filter	Off
Inversion time 1	50 ms	Sequence	
Saturation stop time	50 ms	Introduction	On
Inversion time 2	1100.0 ms	Dimension	3D
Flow limit	100 cm/s	Reordering	Linear
		Contrasts	Linear 1
Resolution		Bandwidth	т 752 Hz/Px
Base resolution	64	Free echo spacing	Off
Phase resolution	33 %	Echo spacing	1.4 ms
Slice resolution	100 %	Long spacing	1.1110

RF pulse type

Gradient mode

EPI factor

Excitation

RF spoiling

Normal

Slab-sel.

Fast

On

63

Phase partial Fourier

Slice partial Fourier

100 %

Off

Off

Off

None

Slice resolution

Interpolation

PAT mode

 Ampl	100
BWDTH	150 3.1kHz
ph.skip 4 Robert (the one)	30
use Ernst angle	Off
Maxwell Correction	Off
log physio files	Off
FFT scale	1.00
dummy prepscan time	3 s
z shim	0.00 mT/m*ms
RF duration	2560 us
RF BWTP	5.2
Renzo: Delta TI	102 ms
EFFECTIVE TR	160000 ms
PatPartitions	32
EDI phase correction	local

\\U	SER\Feink	oerglab\Tanja\20180510)\BP_ep3d_bold_	multiecho_ASL	_ReconAlgoPE
ΓA: 0:10 PAT	Off Vox	el size: 7.1×2.3×1.0 mm	Rel. SNR: 1.00	USER: BP_ep	3d_bold_multiecho_ASL_Rec
Properties			Prescan I	Normalize	Off
Prio Recon		Off	Raw filter		Off
	mont	Oii	Elliptical f		Off
Before measure After measurem			Hamming	l	Off
Load to viewer	ient	On	Geometry		
Inline movie		Off	Multi-slice	n mode	Interleaved
		On	Series	emode	
Auto store imag Load to stamp s		Off	361163		Ascending
Load images to		Off	Special s	at.	Parallel F
segments	grapriic	Oll	Gap		25.0 mm
Auto open inline	dienlay	Off	Thickness	S	100 mm
Start measurem		On	Toble nee	sition	
further preparat		Oli	Table pos		H
Wait for user to		Off	Table pos		0 mm
Start measurem		single	Inline Cor	nposing	Off
Start measuren	iciito	Sirigie	System		
Routine			T1		On
Slab group 1	·		M2		Off
Slabs		1	B4		Off
Dist. factor		50 %	M3		Off
Position		Isocenter	V32		Off
Orientation		Transversal			DEE
Phase enc. di	r.	A >> P	Positionin	ng mode	REF
Rotation		0.00 deg	MSMA		S-C-T
Phase oversam	pling	0 %	Sagittal		R >> L
Slice oversamp	ling	0.0 %	Coronal		A >> P
Slices per slab		32	Transvers		F >> H
FoV read		150.0 mm	Save unc		Off
FoV phase		300.0 %		bine Mode	Sum of Squares
Slice thickness		1.00 mm	AutoAlign		
TR		5000.00 ms	Auto Coil	Select	Default
TE		52 ms	Shim mod	de	Standard
Averages		1		th body coil	Off
Concatenations		1		req. adjustment	Off
Filter		None	Assume S		Off
Coil elements		T1		plitude 1H	0.000 V
Contrast				nt Tolerance	Auto
		SS-SI VASO	Adjust vo		
Perfusion mode	,		Positio		Isocenter
TI2 TI1		1100 ms 50 ms	Orient	ation	Transversal
TI1s		50 ms	Rotatio		90.00 deg
			A >> F		450 mm
Flip angle		90 deg	R >> L		150 mm
Fat suppr.		None	F >> F		32 mm
Averaging mod	Э	Long term	D		
Reconstruction		Magnitude	Physio		
Measurements		2	1st Signa	I/Mode	None
Delay in TR		0 ms	BOLD		
Multiple series		Off	Motion co	rrection	Off
			Spatial file		Off
Perfusion mode		PICORE Q2T	1 .		-
Inversion time 1		50 ms	Sequence		
Saturation stop		50 ms	Introducti	on	On
Inversion time 2		1100.0 ms	Dimensio		3D
Flow limit		100 cm/s	Reorderin	ng	Linear
Resolution			Contrasts		1
Base resolution		64	Bandwidt	h	752 Hz/Px
Phase resolution		33 %	Free echo	o spacing	Off
		/-	Echo spa	cina	1 4 ms

Echo spacing

RF pulse type

Gradient mode

EPI factor

Excitation

RF spoiling

1.4 ms

Normal

Slab-sel.

Fast

On

63

Slice partial Fourier

Slice resolution Phase partial Fourier

Interpolation

PAT mode

Off

Off

Off

None

100 %

 Ampl	100
BWDTH	150 3.1kHz
ph.skip 4 Robert (the one)	30
use Ernst angle	Off
Maxwell Correction	Off
log physio files	Off
FFT scale	1.00
dummy prepscan time	3 s
z shim	0.00 mT/m*ms
RF duration	2560 us
RF BWTP	5.2
Renzo: Delta TI	102 ms
EFFECTIVE TR	160000 ms
PatPartitions	32
EPI phase correction	local

\\USER\Feinberglab\Tanja\20180510\mp2rage_0.7mm_TR4500

TA: 3:51 PAT: 3	Voxel size: 0.8×0.8×0.8	mm Rel. SNR: 1.00 USER	: mp2rage_wip602B
Proportios		Image Filter	Off
Properties Properties	0"	Distortion Corr.	Off
Prio Recon	Off	Prescan Normalize	Off
Before measurement		Normalize	Off
After measurement	0	B1 filter	Off
Load to viewer	On	Raw filter	Off
Inline movie	Off	Elliptical filter	Off
Auto store images	On		
Load to stamp segments	Off	Geometry	
Load images to graphic	Off	Multi-slice mode	Single shot
segments		Series	Interleaved
Auto open inline display	Off		
Start measurement without	On	Table position	Н
further preparation		Table position	0 mm
Wait for user to start	On	Inline Composing	Off
Start measurements	single		
Pautina		System	
Routine		T1	On
Slab group 1		M2	On
Slabs	1	B4	On
Dist. factor	50 %	M3	On
Position	R3.0 A28.1 H16.8	V32	Off
Orientation	Transversal	Positioning mode	FIX
Phase enc. dir.	R >> L	Positioning mode MSMA	S - C - T
Rotation	90.00 deg		
Phase oversampling	0 %	Sagittal	R >> L
Slice oversampling	11.1 %	Coronal	A >> P
Slices per slab	72	Transversal	F >> H
FoV read	154 mm	Save uncombined	Off
FoV phase	84.4 %	Coil Combine Mode	Adaptive Combine
Slice thickness	0.80 mm	AutoAlign	
TR	3530 ms	Auto Coil Select	Default
TE	3.33 ms	Chim mada	Ctandard
Averages	1	Shim mode	Standard
Concatenations	1	Adjust with body coil	Off
Filter	None	Confirm freq. adjustment	Off
Coil elements		Assume Silicone	Off
Con elements	B4;M2,3;T1	! Ref. amplitude 1H	230.000 V
Contrast		Adjustment Tolerance	Auto
Magn. preparation	Non-sel. IR	Adjust volume	
TI 1	1000 ms	! Position	L1.9 A24.9 F9.3
TI 2	3200 ms	! Orientation	Sagittal
Flip angle 1	4 deg	! Rotation	0.00 deg
Flip angle 2	4 deg	! F >> H	108 mm
Fat suppr.	Water excit. fast	! A >> P	160 mm
Water suppr.	None	! R >> L	127 mm
2nd Inversion-Contrast	On	Dhuaia	
Zna inversion-Contrast	On	Physio	
Averaging mode	Long term	1st Signal/Mode	None
Reconstruction	Magnitude	Dark blood	Off
Measurements	1		
Multiple series	Each measurement	Resp. control	Off
·	Zacii ilicacarollicii	Inline	
Resolution	400	Subtract	Off
Base resolution	192	Std-Dev-Sag	Off
Phase resolution	100 %	Std-Dev-Sag Std-Dev-Cor	Off
Slice resolution	100 %		_
Phase partial Fourier	6/8	Std-Dev-Tra	Off Off
Slice partial Fourier	6/8	Std-Dev-Time	Off
Interpolation	Off	MIP-Sag	Off
DAT mode	CDADDA	MIP-Cor	Off
PAT mode	GRAPPA	MIP-Tra	Off
Accel. factor PE	3	MIP-Time	Off
D-4 E DE	36	Save original images	On
Ref. lines PE		Save Original images	OII
Accel. factor 3D	1	Save original images	

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	200 Hz/Px
Flow comp.	Slice
Echo spacing	8.1 ms
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
FFT Scale Factor	200 %
Line/Partition Swap	Off
Homodyne Phase Filter	Off
Flat Image	On
T1 Map	On
Division Image	Off
ExtInvPulseOn	On
OffResFreqInv	0
Invflipangle	970

\\USER\Feinberglab\Tanja\20180510\BP_grase_clean_BOLDonly_V04_TR3000

TA: 12:03 PAT: Off	Voxel size: 0.8×0.8×1.5 mi	m Rel. SNR: 1.00 USER: BF	P_grase_clean_VASO_V04
Properties		Orientation Special sat.	C > S26.2 > T16.1 None
Prio Recon	Off		
Before measurement		Table position	Н
After measurement		Table position	0 mm
Load to viewer	On	Inline Composing	Off
Inline movie	Off	System	
Auto store images	On	T1	On
Load to stamp segments	Off	M2	On
Load images to graphic	Off	B4	On
segments		M3	On
Auto open inline display	Off	V32	Off
Start measurement without	On	V 32	OII
further preparation		Positioning mode	FIX
Wait for user to start	Off	MSMA	S - C - T
Start measurements	single	Sagittal	R >> L
Douting		Coronal	A >> P
Routine		— Transversal	F >> H
Slab group 1	1	Save uncombined	Off
Slabs	1	Coil Combine Mode	Adaptive Combine
Dist. factor	0%	AutoAlign	
Position	R34.6 A6.7 H18.2	Auto Coil Select	Default
Orientation	T > S32.4 > C-12.7		
Phase enc. dir.	A >> P	Shim mode	Standard
Rotation	-20.00 deg	Adjust with body coil	Off
Phase oversampling	0 %	Confirm freq. adjustment	Off
Slice oversampling	0.0 %	Assume Silicone	Off
Slices per slab	8	! Ref. amplitude 1H	220.000 V
FoV read	99 mm	Adjustment Tolerance	Auto
FoV phase	25.8 %	Adjust volume	
Slice thickness	1.5 mm	Position	R34.6 A6.7 H18.2
TR	3000 ms	Orientation	T > S32.4 > C-12.7
TE	45.92 ms	Rotation	-20.00 deg
Averages	1	R >> L	99 mm
Concatenations	1	A >> P	26 mm
Filter	None	F >> H	12 mm
Coil elements	B4;M2,3;T1	Discosio	
Contrast		Physio 1/Marks	Maria
Magn. preparation	None	1st Signal/Mode	None
Flip angle	180 deg	Composing	
	Fat sat.	2	
Fat suppr. Fat sat. mode		Sequence	
rat Sat. Mode	Strong	Introduction	Off
Averaging mode	Long term	Dimension	3D
Reconstruction	Magnitude	Reordering	Centric
Measurements	241	Contrasts	1
Pause after meas.	0.0 s	Bandwidth	1052 Hz/Px
Multiple series	Off	Echo spacing	1.1 ms
Desclution		Turbo factor	8
Resolution	400	EPI factor	34
Base resolution	132	RF pulse type	Normal
Phase resolution	100 %	Gradient mode	Fast
Slice resolution	100 %		. 401
Slice partial Fourier	Off Off	flip angle excit	90
Interpolation	Off	phase encoding	ON
PAT mode	None	Maxwell compensation	Off
		ICE program	single
Prescan Normalize	Off	prepscans	0
Raw filter	Off	·	
Geometry			
Series	Interleaved		
Sat ragion 1			
Sat. region 1 Thickness	26 mm		
Position	26 mm L7.2 P5.9 F7.0		
I OSILIOII	L1.21 J.31 1.U		

	\\USER\Feinberglab\Tanja\20180510\VASO_116_phantom_M1paper_CSgraseComp					
	TA: 12:05	PAT: 2	Voxel size: 0.7×0.7×1.5 mm	Rel. SNR: 1.00	USER: VASO_116	
Droportion			P	AT mode	GRAPPA	

Properties		PAT mode	GRAPPA
Prio Recon	Off	- Accel. factor PE	2
Before measurement	Oli	Ref. lines PE	36
		Accel. factor 3D	1
After measurement	0.5	Ref. lines 3D	8
Load to viewer	On Off	Reference scan mode	Separate
Inline movie	Off		············
Auto store images	On	Prescan Normalize	Off
Load to stamp segments	Off	Raw filter	Off
Load images to graphic	Off	Elliptical filter	Off
segments		Hamming	Off
Auto open inline display	Off	Coomotimic	
Start measurement without	On	Geometry	
further preparation		Multi-slice mode	Interleaved
Wait for user to start	Off	Series	Ascending
Start measurements	single	Special sat.	Parallel F
Clart modear omente	onigio	· •	25.0 mm
Routine		Gap	
Slab group 1		- Thickness	100 mm
Slabs	1	Table position	H
Dist. factor	50 %	Table position	0 mm
Position	R37.8 A6.9 H16.3	Inline Composing	Off
Orientation	T > S25.8 > C-11.1	I mine composing	Oil
	R >> L	System	
Phase enc. dir.	—	T1	On
Rotation	70.00 deg	M2	On
Phase oversampling	0 %	B4	On
Slice oversampling	0.0 %		
Slices per slab	8	M3	On O"
FoV read	32.8 mm	V32	Off
FoV phase	300.0 %	Positioning mode	FIX
Slice thickness	1.50 mm	MSMA	S - C - T
TR	1500.00 ms	Sagittal	R >> L
TE	24 ms		
Averages	1	Coronal	A >> P
	1	Transversal	F >> H
Concatenations	l N	Save uncombined	Off
Filter	None	Coil Combine Mode	Sum of Squares
Coil elements	B4;M2,3;T1	AutoAlign	
Contrast		Auto Coil Select	Default
Perfusion mode	Picore Q2TIPS		
TI2		Shim mode	Standard
	900 ms	Adjust with body coil	Off
TI1	50 ms	Confirm freq. adjustment	Off
TI1s	50 ms	Assume Silicone	Off
Flip angle	26 deg	! Ref. amplitude 1H	230.000 V
Fat suppr.	Fat sat.	Adjustment Tolerance	Auto
Fat sat. mode	Strong	Adjust volume	
		Position	R37.8 A6.9 H16.3
Averaging mode	Long term	Orientation	T > S25.8 > C-11.1
Reconstruction	Magn./Phase	Rotation	160.00 deg
Measurements	483		•
Delay in TR	0 ms	R >> L	99 mm
Multiple series	Off	A >> P	33 mm
		F >> H	12 mm
Perfusion mode	PICORE Q2T	Physio	
Inversion time 1	50 ms	1st Signal/Mode	None
Saturation stop time	50 ms	rst signal/ivioue	None
Inversion time 2	900.0 ms	BOLD	
Flow limit	100.0 cm/s	Motion correction	Off
		Spatial filter	Off
Resolution		- Opaliai IIII.ei	Jii
Base resolution	44	Sequence	
Phase resolution	100 %	Introduction	On
Slice resolution	100 %	Dimension	3D
Slice resolution		ווויסווטוטוו	
		Peordering	Lingar
Phase partial Fourier	6/8	Reordering	Linear
Phase partial Fourier Slice partial Fourier	6/8 Off	Contrasts	1
Phase partial Fourier	6/8	•	

Echo spacing	1.07 ms
EPI factor RF pulse type Gradient mode Excitation RF spoiling	132 Normal Normal Slab-sel. On
Ampl BWDTH ph.skip 4 Robert (the one) use Ernst angle Maxwell Correction log physio files FFT scale dummy prepscan time z shim RF duration RF BWTP Renzo: Delta TI EFFECTIVE TR PatPartitions EPI phase correction PAT refscan mode FlashRef BaseRes FlashRef BW FlashRef TE FlashRef FA use CAIPI	120 150 3.1kHz 30 Off Off Off Off 1.00 3 s 0.00 mT/m*ms 2560 us 25.0 71 ms 12000 ms 8 local Flash 44 136 Hz/px 5000 us 5 deg Off

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\\USER	l Esiah saalah		
	Feinberglab		
	Tanja		
		20180510	
		localizer_200V	
		b1map 230V	
		mp2rage_0.7mm_TR4500	
		BP_grase_clean_VASO_V10t	
		BP_grase_clean_VASO_V10t_noClip	
		VASO_116_phantom_M1paper	
		VASO_116_phantom_V1	
		Clipping test	
		BP_grase_clean_VASO_V10_noClip_tSNR_2560_20.8_2560_5.2	2
		BP_grase_clean_VASO_V10_noClip_tSNR_2560_10.4_2560_5.2	2
		EPI from Renzo (added 11.01.2018)	
		BP_ep3d_bold_multiecho_ASL	
		BP_ep3d_bold_multiecho_ASL_ReconAlgoNONE	
		BP_ep3d_bold_multiecho_ASL_ReconAlgoPE	
		mp2rage_0.7mm_TR4500	
		BP_grase_clean_BOLDonly_V04_TR3000	
		VASO_116_phantom_M1paper_CSgraseComp	
		VA3O_110_priantoni_wripaper_C3graseComp	