TA: 0:27

SIEMENS: gre

TA. 0.27 P.	AT. OII VOXEI SIZE. T.ZX	1.1x3.0 IIIII Rei. SINK. 1.00	SIEWENS. gre
		Dharran Lat	00.07
Properties		Phase resolution	90 %
Prio Recon	Off	Phase partial Fourier	6/8
Before measurement		Interpolation	On
After measurement		PAT mode	None
Load to viewer	On		
Inline movie	Off	Image Filter	Off
Auto store images	On	Distortion Corr.	Off
Load to stamp segments	Off	Prescan Normalize	Off
Load images to graphic	Off	Normalize	Off
segments	3	B1 filter	Off
Auto open inline display	Off	Raw filter	Off
Start measurement without	On	Elliptical filter	Off
further preparation	Oli	Geometry	
Wait for user to start	Off	Multi-slice mode	Sequential
Start measurements	single	Series	Interleaved
ļ.	Sirigio	Series	
Routine		Saturation mode	Standard
Slice group 1		Special sat.	None
Slices	5		
Dist. factor	20 %	Table position	Н
Position	L0.0 A8.8 F17.5	Table position	0 mm
Orientation	Sagittal	Inline Composing	Off
Phase enc. dir.	A >> P		
Rotation	0.00 deg	Tim CT mode	Off
Slice group 2	-	System	
Slices	5	B1	On
Dist. factor	20 %	B2	On
Position	L0.0 P68.8 H0.7	B3	On
Orientation	Coronal	B4	On
Phase enc. dir.	R >> L		_
Rotation	0.00 deg	B5	On On
Slice group 3	5.55 dog	B6	On
Slices	5	B7	On
Dist. factor	20 %	B8	On
Position	L0.0 P68.8 H0.7	Positioning mode	FIX
Orientation	Transversal	MSMA	S - C - T
Phase enc. dir.	A >> P	Sagittal	R >> L
Rotation	0.00 deg	Coronal	A >> P
Phase oversampling	0 %	Transversal	F >> H
FoV read	280 mm	Save uncombined	On
FoV phase	100.0 %	Coil Combine Mode	Sum of Squares
Slice thickness	3.0 mm	AutoAlign	
TR	10.0 ms	Auto Coil Select	Off
TE	3.00 ms		
Averages	3.00 ms 1	Shim mode	Tune up
Concatenations	15	Adjust with body coil	Off
Filter	None	Confirm freq. adjustment	Off
Coil elements	B1-8	Assume Silicone	Off
Con elements	D1-0	! Ref. amplitude 1H	50.000 V
Contrast		Adjustment Tolerance	Auto
TD	0 ms	Adjust volume	
MTC	Off	Position	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
		Dhysis	
Averaging mode	Short term	Physio	Name
Reconstruction	Magnitude	1st Signal/Mode	None
Measurements	1	Segments	1
Multiple series	Each measurement	Tagging	None
Resolution		Dark blood	Off
Base resolution	256		
		Resp. control	Off

Inline

Subtract Liver registration Std-Dev-Sag Std-Dev-Cor Std-Dev-Tra Std-Dev-Time MIP-Sag MIP-Cor MIP-Tra MIP-Time	Off
Save original images Wash - In Wash - Out TTP PEI MIP - time MapIt Contrasts	On Off Off Off Off Off Off Off Off

Sequence

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

\\USER\Feinberglab\Jen\Sam-8chcoil\AV_ep2d_bold_sd1ipat2mb2_pt5mm_visLoc_8

TA: 5:30	PAT: 2	Voxel size: 0.5×0.5×0.5 mm	Rel. SNR: 1.00	USER: AV_ep2d_bold_sd_20140727

Properties		Special sat.	None
Prio Recon	Off	Table position	Н
Before measurement		Table position	0 mm
After measurement		Inline Composing	Off
Load to viewer	On	1	
Inline movie	Off	System	
Auto store images	On	B1	On
Load to stamp segments	Off	B2	On
Load images to graphic	Off	B3	On
segments	5	B4	On
Auto open inline display	Off	B5	On
Start measurement without	On	B6	On
further preparation	OII	B7	On
Wait for user to start	Off	B8	On
			FIV
Start measurements	single	Positioning mode	FIX
Routine		MSMA	S - C - T
Slice group 1		- Sagittal	R >> L
Slices	60	Coronal	A >> P
Dist. factor	0 %	Transversal	F >> H
Position	L8.8 P72.2 F11.7	Coil Combine Mode	Sum of Squares
Orientation	Coronal	AutoAlign	
Phase enc. dir.	F >> H	Auto Coil Select	Default
Rotation	90.00 deg	Shim mada	Standard
Phase oversampling	90.00 deg 0 %	Shim mode	Standard
Foldse oversampling	90 mm	Adjust with body coil	Off
		Confirm freq. adjustment	On
FoV phase	88.9 %	Assume Silicone	Off
Slice thickness	0.50 mm	! Ref. amplitude 1H	0.000 V
TR	3000 ms	Adjustment Tolerance	Auto
TE	26.0 ms	Adjust volume	
Multi-band accel. factor	2	Position	L8.8 P72.2 F11.7
Filter	None	Orientation	Coronal
Coil elements	B1-8	Rotation	90.00 deg
Contrast		R >> L	90 mm
MTC	Off	- F >> H	80 mm
Magn. preparation	None	A >> P	30 mm
Flip angle	80 deg	Dhysia	
Fat suppr.	Fat sat.	Physio	Nana
rai suppi.	rai sai.	1st Signal/Mode	None
Averaging mode	Long term	BOLD	
Reconstruction	Magnitude	GLM Statistics	Off
Measurements	102	Dynamic t-maps	Off
Delay in TR	0 ms	Starting ignore meas	0
Multiple series	Off	Ignore after transition	0
•		Model transition states	On
Resolution		- Temp. highpass filter	On
Base resolution	180	Threshold	4.00
Phase resolution	100 %	Paradigm size	20
Phase partial Fourier	5/8	_	Baseline
Interpolation	Off	Meas[1]	
DAT mode	CDADDA	Meas[2]	Baseline
PAT mode	GRAPPA	Meas[3]	Baseline
Accel. factor PE	2	Meas[4]	Baseline
Ref. lines PE	36	Meas[5]	Baseline
Reference scan mode	Segmented	Meas[6]	Baseline
Distortion Corr.	Off	Meas[7]	Baseline
Prescan Normalize	Off	Meas[8]	Baseline
Raw filter	On	Meas[9]	Baseline
Elliptical filter	Off	Meas[10]	Baseline
	Off	Meas[11]	Active
Hamming	OII	Meas[12]	Active
Geometry		Meas[13]	Active
Multi-slice mode	Interleaved		Active
Series	Interleaved	Meas[15]	Active
		Meas[16]	Active
		3/13	

Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off

Sequence	
Introduction Bandwidth	Off 816 Hz/Px
Flow comp. Free echo spacing	No Off
Echo spacing	1.43 ms
SIR accel. factor	1
EPI factor Gradient mode	160 Normal
RF spoiling	Off
Excite pulse duration	5820 us
Slice multiplier Multi-band PE shift	1 0 1/FoV
zBlip scheme	0
MB kernel size	0
MB knockout band No. of interleaved TEs	0
RF pulse shape	1
EPI noise scans EPI full reference scan	0
Single-band images	On
MB RF phase scramble	Off
SENSE1 coil combine Log physiology to file	Off Off
Invert RO/PE polarity	Off
Save reduced raw data Readout slice trace	Off Off
Disable ramp sampling	Off
PF omits higher k-space	Off On line
Online multi-band recon. FFT scale factor	Online 0.02
Send B1 shim trigger	Never
Triggering scheme Starting ignore meas	Standard 0
Paradigm size	2
Multiplier	1
Step [1] Step [2]	1

\\USER\Feinberglab\Jen\Sam-8chcoil\AV_ep2d_bold_sd1ipat2mb2_pt5mm_visLoc_8

TA: 5:30	PAT: 2	Voxel size: 0.5×0.5×0.5 mm	Rel. SNR: 1.00	USER: AV_ep2d_bold_sd_20140727

Orientation Coronal AutoAlign Phase enc. dir. F >> H Rotation 90.00 deg Shim mode Standard Phase oversampling 0 % Adjust with body coil Off FoV read 90 mm Confirm freq. adjustment On FoV phase 88.9 % Assume Silicone Off Slice thickness 0.50 mm ! Ref. amplitude 1H 0.000 V TR 3000 ms Adjust volume	ne
Before measurement	
After measurement Load to viewer On Inline movie Off System	m
Load to viewer On	
Auto store images	
Auto Store Images On	
Load images to graphic	
Load images to graphic segments	
Segments	
Auto open inline display Off Start measurement without On B7 On B8 On B7 On B7 On B8 On D1 D1 D1 D1 D1 D1 D1 D	
Start measurement without further preparation wait for user to start was ingle Positioning mode FIX	
Further preparation Wait for user to start Start measurements Single Positioning mode FIX	
Wait for user to start Start measurements Single Positioning mode FIX MSMA S - C - T Since group 1 Since gro	
Start measurements	
Routine	
Silices Go	
Silices Go	
Silices 60	
Dist. factor	
Position	
Orientation Coronal Phase enc. dir. F >> H Auto Coil Select Default Phase enc. dir. F >> H Auto Coil Select Default Rotation 90.00 deg Shim mode Standard Phase oversampling 0 % Adjust with body coil Off FOV phase 88.9 % Assume Silicone Off Slice thickness 0.50 mm I Ref. amplitude 1H 0.000 V TR 3000 ms Adjust ment Tolerance Auto TE 26.0 ms Adjust volume Auto Tolerance Multi-band accel, factor 2 Position L8.8 P7. Filter None Orientation Coronal Coil elements B1-8 Rotation 90.00 de Rotation 90.00 de R > L 90 mm Contrast B1-8 Rotation 90.00 de Contrast B1-8 Rotation 90.00 de Contrast B1-8 Rotation 90.00 de Averaging mode Long term BOLD BOLD	n of Squares
Phase enc. dir. F > H Auto Coll Select Default Rotation 90.00 deg Shim mode Standard Phase oversampling 0 % Adjust with body coil Off FoV read 90 mm Confirm freq. adjustment On FoV phase 88.9 % Assume Silicone Off Slice thickness 0.50 mm I Ref. amplitude 1H 0.000 V TR 3000 ms Adjust voit body coil Off TR 3000 ms Adjust voit body coil Off TR 3000 ms I Ref. amplitude 1H 0.000 V Multi-band accel, factor 2 Position L8.8 P7? Filter None Orientation Coronal Coil elements B1-8 Rotation Orientation Coronal Contrast Toff R >> L 90 mm F> H 80 mm Mgn. preparation None Physio Fe at sat. 1st Signal/Mode None Averaging mode Long term BOLD GLM Statistics Off	
Rotation	ault
Phase oversampling 0 % Adjust with body coil Off FoV read 90 mm Confirm freq. adjustment On FoV phase 88.9 % Assume Silicone Off Slice thickness 0.50 mm ! Ref. amplitude 1H 0.000 V TE 26.0 ms Adjust volume Auto Multi-band accel. factor 2 Position L8.8 P72 Filter None Orientation Coronal Coil elements B1-8 Rotation 90.00 de Contrast R>> L 90 mm MTC Off A > P 30 mm MTC Magn. preparation None F >> H 80 mm Filip angle 80 deg Physio Tst Signal/Mode None Filip angle Bodeg Physio Tst Signal/Mode None Reconstruction Magnitude Ma	ndard
FoV read	lualu
FoV phase	
Slice thickness	
TR 3000 ms Adjustment Tolerance Auto TE 26.0 ms Adjust volume Auto Multi-band accel. factor 2 Position L8.8 P7Z Filter None Orientation Coronal Coil elements B1-8 Rotation 90.00 de Contrast Poff R >> L 90 mm MTC Off R >> H 90 mm Magn. preparation None Physio Physio Fat suppr. Fat sat. Ist Signal/Mode None Averaging mode Long term BOLD BOLD Resolution Magnitude BOLD GLM Statistics Off Measurements 102 Dynamic t-maps Off Delay in TR 0 ms Starting ignore meas 0 Multiple series Off Ignore after transition 0 Resolution 180 Paradigm size 20 Phase resolution 100 % Paradigm size 20 Meas[1] Baseline	20.17
TE Multi-band accel. factor Filter 26.0 ms Adjust volume L8.8 P77. Filter Coil elements B1-8 Position L8.8 P77. Contrast B1-8 Rotation 90.00 de Contrast RS > L 90 mm MTC Off F > H 80 mm Magn. preparation None F > H 80 mm Filip angle 80 deg Physio Physio Fat suppr. Fat sat. BOLD Stating ignore meas Off Reconstruction Magnitude BOLD GLM Statistics Off Measurements 102 Dynamic t-maps Off Delay in TR 0 ms Statring ignore meas 0 Multiple series Off Statring ignore meas 0 Resolution 180 Temp. highpass filter On Phase resolution 180 Temp. highpass filter On Phase partial Fourier 5/8 Meas[1] Baseline Interpolation Off Meas[2] Baseline	
Multi-band accel. factor Filter 2 Position Orientation L8.8 P72 Coil elements B1-8 Rotation 90.00 de R> Long term MTC Off A >> P 30 mm MTC Off A >> P 30 mm Magn. preparation Filip angle 80 deg Physio Physio Fat suppr. Fat sat. BOLD Stagnal/Mode None Averaging mode Reconstruction Measurements 102 BOLD Starting ignore meas Off Off Measurements 102 Delay in TR 0 ms Starting ignore meas 0 orientation Off Ugnore after transition 0 orientation None Starting ignore meas 0 orientation 0 orientation Off Ugnore after transition 0 orientation)
Filter	
Coil elements B1-8 Rotation 90.00 de Contrast R >> L 90 mm MTC Off F >> H 80 mm Magn. preparation None F >> H 80 mm Flip angle 80 deg Physio Physio Fat suppr. F at sat. T st Signal/Mode None Averaging mode Long term BOLD BOLD Reconstruction Magnitude BOLD GLM Statistics Off Measurements 102 Dynamic t-maps Off Delay in TR 0 ms Starting ignore meas 0 Multiple series Off Ignore after transition 0 Resolution 180 Threshold 4.00 Phase resolution 180 Threshold 4.00 Phase partial Fourier 5/8 Paradigm size 20 Interpolation Off Meas[2] Baseline Accel. factor PE 2 Meas[4] Baseline Reference scan mode Segmented	3 P72.2 F11.7
Contrast R > L 90 mm MTC Off F > H 80 mm Magn. preparation None F > H 80 mm Filip angle 80 deg Physio Physio Fat suppr. Fat sat. 1st Signal/Mode None Averaging mode Long term BOLD GLM Statistics Off Reconstruction Magnitude GLM Statistics Off Measurements 102 Dynamic t-maps Off Delay in TR 0 ms Starting ignore meas 0 Multiple series Off Ignore after transition 0 Resolution 180 Threshold 4.00 Phase resolution 100 % Threshold 4.00 Phase partial Fourier 5/8 Paradigm size 20 Interpolation Off Meas[1] Baseline Accel. factor PE 2 Meas[3] Baseline Accel. factor PE 2 Meas[4] Baseline Reference scan mode Segmented </td <td></td>	
MTC Off F >> H 80 mm Magn. preparation None Physio Fat suppr. Fat sat. 1st Signal/Mode None Averaging mode Long term BOLD Reconstruction Magnitude GLM Statistics Off Measurements 102 Dynamic t-maps Off Delay in TR 0 ms Starting ignore meas 0 Multiple series Off Ignore after transition 0 Resolution Model transition states On Temp. highpass filter On Temp. highpass filter On Threshold 4.00 Paradigm size 20 Meas [1] Baseline Meas[1] Baseline Meas[2] Baseline Meas[3] Baseline PAT mode GRAPPA Meas[4] Baseline Accel. factor PE 2 Meas[4] Baseline Reference scan mode Segmented Meas[6] Baseline Distortion Corr. Off Meas[7] Baseline<	•
MTC Off A >> P 80 mm Magn. preparation None Physio Fat suppr. Fat sat. 1st Signal/Mode None Averaging mode Long term BOLD None Reconstruction Magnitude GLM Statistics Off Measurements 102 Dynamic t-maps Off Delay in TR 0 ms Starting ignore meas 0 Multiple series Off Ignore after transition 0 Resolution 180 Temp. highpass filter On Phase resolution 100 % Threshold 4.00 Phase partial Fourier 5/8 Paradigm size 20 Interpolation Off Meas[1] Baseline PAT mode GRAPPA Meas[2] Baseline Accel. factor PE 2 Meas[3] Baseline Reference scan mode Segmented Meas[6] Baseline Distortion Corr. Off Meas[7] Baseline Meas[9] Baseline </td <td></td>	
Magn. preparation None Flip angle 80 deg Physio Fat suppr. Fat sat. 1st Signal/Mode None Averaging mode Long term BOLD Reconstruction Magnitude GLM Statistics Off Measurements 102 Dynamic t-maps Off Delay in TR 0 ms Starting ignore meas 0 Multiple series Off Ignore after transition 0 Model transition states On Temp. highpass filter On Phase resolution 180 Paradigm size 20 Phase partial Fourier 5/8 Meas[1] Baseline Interpolation Off Meas[1] Baseline PAT mode GRAPPA Meas[2] Baseline Accel. factor PE 2 Meas[3] Baseline Reference scan mode Segmented Meas[6] Baseline Distortion Corr. Off Meas[6] Baseline Prescan Normalize Off Meas[9] Baseline Raw filter On Meas[10] Meas[10]	nm
Flip angle Fat suppr. Fat sat. 1st Signal/Mode None Averaging mode Long term Reconstruction Magnitude Measurements 102 Delay in TR 0 ms Starting ignore meas 0 Multiple series Off Ignore after transition 0 Mode transition states On Temp. highpass filter On Threshold 4.00 Paradigm size 20 Meas[1] Baseline Reference scan mode Segmented Meas[3] Baseline Reference scan mode Segmented Meas[4] Baseline Raw filter On Meas[7] Baseline Raw filter On Meas[10] Baseline Raseline	nm
Fat suppr. Fat sat. 1st Signal/Mode None Averaging mode Long term Reconstruction Magnitude Measurements 102 Delay in TR 0 ms Multiple series Off Resolution Base resolution 180 Phase partial Fourier Interpolation Off PAT mode GRAPPA Accel. factor PE 2 Ref. lines PE 36 Reference scan mode Segmented Distortion Corr. Pressan Normalize Off Raw filter Con Distortion Corr. Pressan Normalize Off Resolution Fat sat. 1st Signal/Mode None BOLD GLM Statistics Off Dynamic t-maps Off Dynam	
Averaging mode Reconstruction Magnitude Reconstruction Magnitude Measurements 102 Delay in TR O ms Multiple series Off Base resolution Base resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE Ref. lines PE Ref. lines PE Reference scan mode Distortion Corr. Prescan Normalize Remety Averaging mode Long term Magnitude BOLD GLM Statistics Off Dynamic t-maps Off Model transition Off Model transition states On Temp. highpass filter On Threshold 4.00 Paradigm size 20 Meas[1] Meas[2] Baseline Meas[3] Baseline Meas[4] Baseline Meas[6] Baseline Meas[7] Meas[7] Meas[8] Meas[9] Baseline Meas[10] Meas[11] Meas[11] Meas[12] Active Meas[12] Meas[12] Meas[12] Meas[13]	
Reconstruction Magnitude Measurements 102 Delay in TR 0 ms Multiple series Off Resolution Resolution Base resolution 180 Phase partial Fourier 5/8 Interpolation Off Accel. factor PE 2 Ref. lines PE 36 Reference scan mode Segmented Distortion Corr. Off Prescan Normalize Reference Scan Mormalize Raw filter Distortion Corr. Off Raw filter Elliptical filter Hamming GLM Statistics Off Dynamic t-maps Off Model transition states On Temp. highpass filter Thesold 4.00 Paradigm size PAT westers On Temp. highpass filter Thesold 4.00 Paradigm size PAT westers On Temp. highpass filter Thesold 4.00 Paradigm size PAT westers On Temp. highpass filter Thesold 4.00 Paradigm size PAT westers On Temp. highpass filter Thesold 4.00 Paradigm size PAT westers On Temp. highpass filter Thesold 4.	16
Measurements102Dynamic t-mapsOffDelay in TR0 msStarting ignore meas0Multiple seriesOffIgnore after transition0Resolution180Model transition statesOnPhase resolution100 %Paradigm size20Phase partial Fourier5/8Paradigm size20InterpolationOffMeas[1]BaselinePAT modeGRAPPAMeas[2]BaselineAccel. factor PE2Meas[3]BaselineRef. lines PE36Meas[4]BaselineReference scan modeSegmentedMeas[6]BaselineDistortion Corr.OffMeas[7]BaselinePrescan NormalizeOffMeas[8]BaselineRaw filterOnMeas[9]BaselineElliptical filterOffMeas[10]BaselineHammingOffMeas[11]ActiveGeometryMeas[12]Active	
Delay in TR	
Delay in TR	
Multiple seriesOffResolution180Phase resolution Phase resolution Phase partial Fourier Interpolation100 %PAT mode Accel. factor PE Ref. lines PE Reference scan mode Prescan Normalize Raw filter On Model transition states On Temp. highpass filter On Threshold 4.0020 Meas[1] Baseline Meas[2] Baseline Meas[2] Baseline Meas[2] Baseline Meas[3] Baseline Meas[4] Baseline Meas[5] Baseline Meas[6] Baseline Meas[6] Baseline Meas[6] Baseline Meas[7] Baseline Meas[7] Baseline Meas[8] Baseline Meas[9] Baseline Meas[9] Baseline Meas[10] Baseline Meas[10] Baseline Meas[11] Active Meas[11] Active Meas[12] Active Meas[13]GeometryGeometryMeas[13] Active	
ResolutionBase resolution180Phase resolution100 %Temp. highpass filterOnPhase partial Fourier5/8Paradigm size20InterpolationOffMeas[1]BaselinePAT modeGRAPPAMeas[2]BaselineAccel. factor PE2Meas[4]BaselineRef. lines PE36Meas[5]BaselineReference scan modeSegmentedMeas[6]BaselineDistortion Corr.OffMeas[7]BaselinePrescan NormalizeOffMeas[8]BaselineRaw filterOnMeas[9]BaselineElliptical filterOffMeas[10]BaselineHammingOffMeas[11]ActiveGeometryMeas[12]Active	
Base resolution Phase resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE Reference scan mode Distortion Corr. Prescan Normalize Raw filter Faw filter Con Threshold Paradigm size Paradigm size Paradigm size Meas[1] Meas[2] Baseline Meas[3] Baseline Meas[4] Baseline Meas[5] Baseline Meas[6] Meas[7] Baseline Meas[7] Baseline Meas[7] Baseline Meas[8] Baseline Meas[9] Baseline Meas[10] Meas[11] Meas[11] Meas[12] Meas[12] Meas[13] Active	
Phase resolution 100 % Phase partial Fourier 5/8 Interpolation Off Meas[1] Baseline PAT mode GRAPPA Meas[3] Baseline Accel. factor PE 2 Meas[4] Baseline Ref. lines PE 36 Meas[5] Baseline Reference scan mode Segmented Meas[6] Baseline Distortion Corr. Off Meas[7] Baseline Raw filter On Meas[9] Baseline Elliptical filter Off Hamming Off Meas[12] Active Geometry Meas[13] Active	
Phase resolution Phase partial Fourier Interpolation Off PAT mode Accel. factor PE Ref. lines PE Reference scan mode Distortion Corr. Prescan Normalize Raw filter Raw filter Elliptical filter Hamming Paradigm size Meas[1] Meas[2] Baseline Meas[3] Meas[4] Baseline Meas[5] Meas[6] Meas[6] Meas[7] Meas[7] Meas[8] Meas[9] Meas[9] Meas[10] Meas[11] Meas[12] Meas[12] Meas[12] Meas[12] Meas[13])
Interpolation Off Meas[1] Baseline PAT mode GRAPPA Meas[3] Baseline Accel. factor PE 2 Meas[4] Baseline Ref. lines PE 36 Meas[5] Baseline Reference scan mode Segmented Meas[6] Baseline Distortion Corr. Off Meas[7] Baseline Prescan Normalize Off Meas[8] Baseline Raw filter On Meas[9] Baseline Elliptical filter Off Meas[11] Active Geometry Meas[13] Active	
Interpolation Off Meas[2] Baseline Meas[3] Baseline Meas[4] Baseline Meas[5] Baseline Meas[6] Baseline Meas[6] Baseline Meas[6] Baseline Meas[6] Baseline Meas[6] Baseline Meas[7] Baseline Meas[7] Baseline Meas[8] Baseline Meas[8] Baseline Meas[9] Baseline Baseline Raw filter On Meas[10] Baseline Baseline Elliptical filter Off Meas[10] Meas[11] Active Meas[12] Active Geometry Meas[13]	eline
PAT mode GRAPPA Meas[3] Baseline Accel. factor PE 2 Meas[4] Baseline Ref. lines PE 36 Meas[5] Baseline Reference scan mode Segmented Meas[6] Baseline Meas[6] Baseline Meas[7] Baseline Meas[7] Baseline Meas[7] Baseline Meas[8] Baseline Raw filter On Meas[9] Baseline Baseline Elliptical filter Off Meas[10] Baseline Meas[11] Active Meas[12] Active Geometry Meas[13]	
Accel. factor PE 2 Meas[4] Baseline Ref. lines PE 36 Meas[5] Baseline Reference scan mode Segmented Meas[6] Baseline Distortion Corr. Off Meas[7] Baseline Raw filter On Meas[9] Baseline Elliptical filter Off Meas[10] Meas[10] Baseline Hamming Off Meas[11] Active Geometry Meas[13] Active	
Ref. lines PE 36	
Reference scan mode Distortion Corr. Prescan Normalize Raw filter Elliptical filter Hamming Geometry Off Reference scan mode Segmented Meas[6] Meas[7] Meas[7] Meas[8] Meas[9] Meas[9] Meas[10] Meas[10] Meas[11] Active Meas[12] Active Meas[13]	
Distortion Corr. Off Prescan Normalize Off Raw filter On Elliptical filter Off Hamming Off Geometry Meas[7] Baseline Meas[8] Baseline Meas[9] Baseline Meas[10] Baseline Meas[11] Active Meas[12] Active Meas[13]	
Distortion Corr. Prescan Normalize Raw filter Elliptical filter Hamming Off Geometry Off Meas[8] Meas[9] Meas[9] Meas[10] Meas[11] Meas[12] Meas[12] Meas[13] Active Meas[13]	
Prescan Normalize Off Raw filter On Elliptical filter Off Hamming Off Geometry Off Meas[8] Meas[9] Meas[9] Meas[10] Meas[10] Meas[11] Meas[12] Meas[12] Meas[13] Active Meas[13]	
Raw filter On Heas[9] Baseline Baseline Meas[10] Baseline Meas[10] Baseline Meas[10] Baseline Meas[11] Active Meas[12] Active Meas[13] Active Meas[13]	
Elliptical filter Off Hamming Off Meas[10] Baseline Meas[11] Active Meas[12] Active Meas[12] Active Meas[13] Active	
Hamming Off Meas[17] Active Meas[12] Active Meas[13] Active	
Geometry Meas[12] Active Meas[13] Active	
Multi-slice mode Interleaved Meas[14] Active	ve
Series Interleaved Meas[15] Active	ve
	ve

Me	eas[17]	Active
Me	eas[18]	Active
Me	eas[19]	Active
Me	eas[20]	Active
Mo	otion correction	Off
Sp	atial filter	Off

Sequence	
Introduction	Off
Bandwidth	816 Hz/Px
Flow comp.	No O#
Free echo spacing	Off 1.43 ms
Echo spacing	1.43 IIIS
SIR accel. factor	1
EPI factor	160
Gradient mode	Normal
RF spoiling	Off
Excite pulse duration	5820 us
Slice multiplier	1
Multi-band PE shift	0 1/FoV
zBlip scheme	0
MB kernel size	0
MB knockout band	0
No. of interleaved TEs	0
RF pulse shape	1
EPI noise scans	0
EPI full reference scan	0
Single-band images	On
MB RF phase scramble	Off
SENSE1 coil combine	Off
Log physiology to file	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off Off
Readout slice trace	Off
Disable ramp sampling PF omits higher k-space	Off
Online multi-band recon.	Online
FFT scale factor	0.02
Send B1 shim trigger	Never
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

\\USER\Feinberglab\Jen\Sam-8chcoil\GE_p8mm_SB1IPAT3_pf6_te23_tr3000_sat_bowties_102i
TA: 5:29 PAT: 3 Voxel size: 0.8×0.8×0.8 mm Rel. SNR: 1.00 USER: AV_ep2d_bold_sd_20140727

Properties		Sat. region 1	
Prio Recon	Off	Thickness	50 mm
Before measurement	Oil	Position	L10.9 A51.7 F73.1
After measurement		Orientation	T > C-33.5 > S4.0
Load to viewer	On	Special sat.	None
Inline movie	Off	Table position	Н
		Table position	
Auto store images	On Off	Table position	0 mm
Load to stamp segments	Off	Inline Composing	Off
Load images to graphic	Off	System	
segments		T1	On
Auto open inline display	Off	M2	On
Start measurement without	On	B4	On
further preparation		M3	On
Wait for user to start	Off	V32	Off
Start measurements	single	V 32	
Routine		Positioning mode	FIX
Slice group 1		MSMA	S-C-T
Slices	43	Sagittal	R >> L
Dist. factor	0 %	Coronal	A >> P
Position	L2.1 A10.0 F9.9	Transversal	F >> H
Orientation	T > C29.9	Coil Combine Mode	Sum of Squares
Phase enc. dir.	A >> P	AutoAlign	
Rotation	0.00 deg	Auto Coil Select	Default
Phase oversampling	0.00 deg 0 %	Shim mode	Standard
FoV read	180 mm		Off
FoV phase	77.7 %	Adjust with body coil	_
Slice thickness	0.80 mm	Confirm freq. adjustment	On Off
		Assume Silicone	Off
TR	3000 ms	! Ref. amplitude 1H	230.000 V
TE	23.4 ms	Adjustment Tolerance	Auto
Multi-band accel. factor	1	Adjust volume	
Filter	None	Position	L2.1 A10.0 F9.9
Coil elements	B4;M2,3;T1	Orientation	T > C29.9
Contrast		Rotation	0.00 deg
MTC	Off	R >> L	180 mm
Magn. preparation	None	A >> P	140 mm
•		F >> H	35 mm
Flip angle	60 deg	Physic	
Fat suppr.	Fat sat.	Physio Physio	News
Averaging mode	Long term	1st Signal/Mode	None
Reconstruction	Magnitude	BOLD	
Measurements	102	GLM Statistics	Off
Delay in TR	0 ms	Dynamic t-maps	Off
Multiple series	Off	Starting ignore meas	0
•	.	Ignore after transition	0
Resolution		Model transition states	On
Base resolution	224		On On
Phase resolution	100 %	Temp. highpass filter	_
Phase partial Fourier	6/8	Threshold	4.00
Interpolation	Off	Paradigm size	12
	OD 4 DD 4	Meas[1]	Baseline
PAT mode	GRAPPA	Meas[2]	Baseline
Accel. factor PE	3	Meas[3]	Baseline
Ref. lines PE	48	Meas[4]	Baseline
Reference scan mode	GRE	Meas[5]	Baseline
Distortion Corr.	Off	Meas[6]	Baseline
	Off	Meas[7]	Baseline
Prescan Normalize	Off	Meas[8]	Baseline
Raw filter	On Off	Meas[9]	Baseline
Elliptical filter	Off	Meas[10]	Baseline
Hamming	Off	Meas[11]	Active
Geometry		Meas[12]	Active
Multi-slice mode	Interleaved	Motion correction	Off
Series	Interleaved	Spatial filter	Off

Sequence

	Ocquerioc	
	Introduction	Off
	Bandwidth	1174 Hz/Px
	Flow comp.	No
	Free echo spacing	Off
	Echo spacing	1 ms
	SIR accel. factor	1
	EPI factor	174
	Gradient mode	Normal
	RF spoiling	Off
		3640 us
	Excite pulse duration	3040 us 1
	Slice multiplier Fake MB factor for SB	1
	No. of interleaved TEs	0
	RF pulse shape	1
	EPI noise scans	0
	EPI full reference scan	0
	SENSE1 coil combine	Off
	Log physiology to file	Off
	Invert RO/PE polarity	Off
	Save reduced raw data	Off
	Readout slice trace	Off
	Disable ramp sampling	Off
	PF omits higher k-space	Off
	FFT scale factor	0.10
	GRE iPAT ref. FA	12.0 deg
	Send B1 shim trigger	Never
	Triggering scheme	Standard
	Starting ignore meas	0
	Paradigm size	2
	Multiplier	1
	Step [1]	1
	Step [2]	0
ľ	II.	

\\USER\Feinberglab\Jen\Sam-8chcoil\GE_p8mm_SB1IPAT3_pf6_te23_tr3000_sat_bowties_102i
TA: 5:29 PAT: 3 Voxel size: 0.8×0.8×0.8 mm Rel. SNR: 1.00 USER: AV_ep2d_bold_sd_20140727

Properties		Sat. region 1	
Prio Recon	Off	Thickness	50 mm
Before measurement	Oli	Position	L10.9 A51.7 F73.1
After measurement		Orientation	T > C-33.5 > S4.0
Load to viewer	On	Special sat.	None
	_	Table position	Ш
Inline movie	Off	Table position	H
Auto store images	On	Table position	0 mm
Load to stamp segments	Off	Inline Composing	Off
Load images to graphic	Off	System	
segments		T1	On
Auto open inline display	Off	M2	On
Start measurement without	On	B4	On
further preparation			_
Wait for user to start	Off	M3	On O"
Start measurements	single	V32	Off
Routine	3	Positioning mode	FIX
		MSMA	S - C - T
Slice group 1	42	Sagittal	R >> L
Slices	43	Coronal	A >> P
Dist. factor	0 %	Transversal	F >> H
Position	L2.1 A10.0 F9.9	Coil Combine Mode	Sum of Squares
Orientation	T > C29.9	AutoAlign	
Phase enc. dir.	A >> P	Auto Coil Select	 Default
Rotation	0.00 deg	Auto Coil Select	Delauit
Phase oversampling	0 %	Shim mode	Standard
FoV read	180 mm	Adjust with body coil	Off
FoV phase	77.7 %	Confirm freq. adjustment	On
Slice thickness	0.80 mm	Assume Silicone	Off
TR	3000 ms	! Ref. amplitude 1H	230.000 V
TE	23.4 ms		
Multi-band accel. factor	23.4 ms 1	Adjustment Tolerance	Auto
		Adjust volume	
Filter	None	Position	L2.1 A10.0 F9.9
Coil elements	B4;M2,3;T1	Orientation	T > C29.9
Contrast		Rotation	0.00 deg
MTC	Off	R >> L	180 mm
Magn. preparation	None	A >> P	140 mm
		F >> H	35 mm
Flip angle	60 deg		
Fat suppr.	Fat sat.	Physio	
Averaging mode	Long term	1st Signal/Mode	None
Reconstruction	Magnitude	BOLD	
Measurements	102		O#
Delay in TR	0 ms	GLM Statistics	Off
		Dynamic t-maps	Off
Multiple series	Off	Starting ignore meas	0
Resolution		Ignore after transition	0
			On
Base resolution	224	Model transition states	_
Base resolution	224	Temp. highpass filter	On
Phase resolution	100 %		_
Phase resolution Phase partial Fourier	100 % 6/8	Temp. highpass filter	On
Phase resolution	100 %	Temp. highpass filter Threshold Paradigm size	On 4.00
Phase resolution Phase partial Fourier Interpolation	100 % 6/8 Off	Temp. highpass filter Threshold Paradigm size Meas[1]	On 4.00 12 Baseline
Phase resolution Phase partial Fourier Interpolation PAT mode	100 % 6/8 Off GRAPPA	Temp. highpass filter Threshold Paradigm size Meas[1] Meas[2]	On 4.00 12 Baseline Baseline
Phase resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE	100 % 6/8 Off GRAPPA 3	Temp. highpass filter Threshold Paradigm size Meas[1] Meas[2] Meas[3]	On 4.00 12 Baseline Baseline Baseline
Phase resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE Ref. lines PE	100 % 6/8 Off GRAPPA 3 48	Temp. highpass filter Threshold Paradigm size Meas[1] Meas[2] Meas[3] Meas[4]	On 4.00 12 Baseline Baseline Baseline Baseline
Phase resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE	100 % 6/8 Off GRAPPA 3	Temp. highpass filter Threshold Paradigm size Meas[1] Meas[2] Meas[3] Meas[4] Meas[5]	On 4.00 12 Baseline Baseline Baseline Baseline Baseline
Phase resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE Ref. lines PE	100 % 6/8 Off GRAPPA 3 48	Temp. highpass filter Threshold Paradigm size Meas[1] Meas[2] Meas[3] Meas[4] Meas[5] Meas[6]	On 4.00 12 Baseline Baseline Baseline Baseline Baseline Baseline Baseline Baseline
Phase resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE Ref. lines PE Reference scan mode Distortion Corr.	100 % 6/8 Off GRAPPA 3 48 GRE	Temp. highpass filter Threshold Paradigm size Meas[1] Meas[2] Meas[3] Meas[4] Meas[5] Meas[6] Meas[7]	On 4.00 12 Baseline
Phase resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE Ref. lines PE Reference scan mode Distortion Corr. Prescan Normalize	100 % 6/8 Off GRAPPA 3 48 GRE Off	Temp. highpass filter Threshold Paradigm size Meas[1] Meas[2] Meas[3] Meas[4] Meas[5] Meas[6] Meas[7] Meas[8]	On 4.00 12 Baseline
Phase resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE Ref. lines PE Reference scan mode Distortion Corr. Prescan Normalize Raw filter	100 % 6/8 Off GRAPPA 3 48 GRE Off Off	Temp. highpass filter Threshold Paradigm size Meas[1] Meas[2] Meas[3] Meas[4] Meas[5] Meas[6] Meas[7] Meas[8] Meas[9]	On 4.00 12 Baseline
Phase resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE Ref. lines PE Reference scan mode Distortion Corr. Prescan Normalize Raw filter Elliptical filter	100 % 6/8 Off GRAPPA 3 48 GRE Off Off Off On	Temp. highpass filter Threshold Paradigm size Meas[1] Meas[2] Meas[3] Meas[4] Meas[5] Meas[6] Meas[7] Meas[8]	On 4.00 12 Baseline
Phase resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE Ref. lines PE Reference scan mode Distortion Corr. Prescan Normalize Raw filter	100 % 6/8 Off GRAPPA 3 48 GRE Off Off	Temp. highpass filter Threshold Paradigm size Meas[1] Meas[2] Meas[3] Meas[4] Meas[5] Meas[6] Meas[7] Meas[8] Meas[9]	On 4.00 12 Baseline
Phase resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE Ref. lines PE Reference scan mode Distortion Corr. Prescan Normalize Raw filter Elliptical filter Hamming	100 % 6/8 Off GRAPPA 3 48 GRE Off Off Off On	Temp. highpass filter Threshold Paradigm size Meas[1] Meas[2] Meas[3] Meas[4] Meas[5] Meas[6] Meas[7] Meas[8] Meas[9] Meas[10] Meas[11]	On 4.00 12 Baseline
Phase resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE Ref. lines PE Reference scan mode Distortion Corr. Prescan Normalize Raw filter Elliptical filter Hamming Geometry	100 % 6/8 Off GRAPPA 3 48 GRE Off Off Off On Off	Temp. highpass filter Threshold Paradigm size Meas[1] Meas[2] Meas[3] Meas[4] Meas[5] Meas[6] Meas[7] Meas[8] Meas[9] Meas[10] Meas[11] Meas[12]	On 4.00 12 Baseline Active Active
Phase resolution Phase partial Fourier Interpolation PAT mode Accel. factor PE Ref. lines PE Reference scan mode Distortion Corr. Prescan Normalize Raw filter Elliptical filter Hamming	100 % 6/8 Off GRAPPA 3 48 GRE Off Off Off On	Temp. highpass filter Threshold Paradigm size Meas[1] Meas[2] Meas[3] Meas[4] Meas[5] Meas[6] Meas[7] Meas[8] Meas[9] Meas[10] Meas[11]	On 4.00 12 Baseline Active

Sequence

Sequence	
Introduction	Off
Bandwidth	1174 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	1 ms
SIR accel. factor	1
EPI factor	174
Gradient mode	Normal
RF spoiling	Off
	2640 us
Excite pulse duration	3640 us 1
Slice multiplier Fake MB factor for SB	1
No. of interleaved TEs	<u>.</u>
	0 1
RF pulse shape EPI noise scans	0
EPI full reference scan	0
SENSE1 coil combine	Off
Log physiology to file	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Readout slice trace	Off
Disable ramp sampling	Off
PF omits higher k-space	Off
FFT scale factor	0.10
GRE iPAT ref. FA	12.0 deg
Send B1 shim trigger	Never
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	_ 1
Step [1]	1
Step [2]	0
1	

\\USER\Feinberglab\Jen\Sam-8chcoil\BP_ep3D_bold_multiecho_new_SH_CAIPI_noICE

TA: 4:50 PAT: 4 Voxel size: 0.9×0.9×0.9 mm Rel. SNR: 1.00 USER: BP_ep3D_bold_multiecho_SH

Properties		Elliptical filter - Hamming	Off Off
Prio Recon	Off	1 3	
Before measurement		Geometry	
After measurement	_	Multi-slice mode	Interleaved
Load to viewer	On	Series	Interleaved
Inline movie	Off	Special sat.	None
Auto store images	On		
Load to stamp segments	Off	Table position	Н
Load images to graphic	Off	Table position	0 mm
segments		Inline Composing	Off
Auto open inline display	Off		
Start measurement without	On	System	
further preparation		T1	On
Wait for user to start	Off	M2	On
Start measurements	single	B4	On
Į.	5g.5	M3	On
Routine		V32	Off
Slab group 1		Docitioning woods	DEE
Slabs	1	Positioning mode	REF
Dist. factor	50 %	MSMA	S-C-T
Position	Isocenter	Sagittal	R >> L
Orientation	Transversal	Coronal	A >> P
Phase enc. dir.	A >> P	Transversal	F >> H
Rotation	0.00 deg	Save uncombined	Off
Phase oversampling	0.00 deg 0 %	Coil Combine Mode	Sum of Squares
		AutoAlign	·
Slice oversampling	0.0 %	Auto Coil Select	Default
Slices per slab	80		
FoV read	198 mm	Shim mode	Standard
FoV phase	100.0 %	Adjust with body coil	Off
Slice thickness	0.90 mm	Confirm freq. adjustment	Off
TR	50 ms	Assume Silicone	Off
TE	20 ms	! Ref. amplitude 1H	200.000 V
Averages	1	Adjustment Tolerance	Auto
Concatenations	1	Adjust volume	, 1310
Filter	None	Position	Isocenter
Coil elements	B4;M2,3;T1	Orientation	Transversal
I	,,.,.	Rotation	
Contrast		- Rotation - R >> L	0.00 deg 198 mm
MTC	Off		
Flip angle	13 deg	A >> P	198 mm
Fat suppr.	None	F >> H	72 mm
A variation made	Lowertown	Physio	
Averaging mode	Long term	1st Signal/Mode	None
Reconstruction	Magnitude	1	140110
Measurements	92	BOLD	
Delay in TR	0 ms	Motion correction	Off
Multiple series	Off	Spatial filter	Off
Resolution		Coguence	
Base resolution	220	Sequence	0"
Phase resolution	100 %	Introduction	Off
		Dimension	3D
Slice resolution	100 %	Reordering	Linear
Phase partial Fourier	6/8	Contrasts	1
Slice partial Fourier	6/8	Bandwidth	1262 Hz/Px
Interpolation	Off	Free echo spacing	Off
PAT mode	GRAPPA	Echo spacing	0.9 ms
Accel. factor PE	4		
Ref. lines PE		EPI factor	220
	96	RF pulse type	Normal
Accel. factor 3D	1	Gradient mode	Fast
	00		Clab and
Ref. lines 3D	32	Excitation	Slab-sel.
Reference scan mode	32 Separate	Excitation RF spoiling	Siab-sei. On
Reference scan mode	Separate	RF spoiling	On
Reference scan mode Distortion Corr.	Separate Off	RF spoiling use Ernst angle	On Off
Reference scan mode	Separate	RF spoiling	On

FFT scale 1.00

 $\begin{array}{lll} \text{z shim} & 0.00 \text{ mT/m*ms} \\ \text{RF duration} & 2560 \text{ us} \\ \text{RF BWTP} & 5.2 \\ \text{EFFECTIVE TR} & 3000 \text{ ms} \\ \text{PatPartitions} & 60 \\ \text{EPI phase correction} & \text{local} \\ \end{array}$

PAT refscan mode segm LIN->PAR

use CAIPIOnCAIPI shift kz0CAIPI shift ky1dummy prepscan time3 ssilent gap0.000 s

Table of contents	

\\USER

Feinberglab	
Jen	
	Sam-8chcoil
	localizer_50V_newcoil
	AV_ep2d_bold_sd1ipat2mb2_pt5mm_visLoc_8
	AV_ep2d_bold_sd1ipat2mb2_pt5mm_visLoc_8
	32ch coil comparison
	GE_p8mm_SB1IPAT3_pf6_te23_tr3000_sat_bowties_102i
	GE_p8mm_SB1IPAT3_pf6_te23_tr3000_sat_bowties_102i
	BP_ep3D_bold_multiecho_new_SH_CAIPI_noICE