\\USER\FERN - TREADWAY\RCDC\20171129.protocol\localizer TA: 0:13 PAT: Off Voxel size: 1.1×1.0×7.0 mm Rel. SNR: 1.00 SIEMENS: gre

Prio Recon	Off	Phase partial Fourier Interpolation	Off On
Before measurement			
After measurement		PAT mode	None
Load to viewer	On	Matrix Coil Mode	Auto (CP)
Inline movie	Off	Image Filter	Off
Auto store images	On	Distortion Corr.	Off
Load to stamp segments	Off	Unfiltered images	Off
Load images to graphic	Off	Prescan Normalize	On
segments		Normalize	Off
Auto open inline display	Off	B1 filter	Off
Start measurement without	Off	Raw filter	Off
further preparation		Elliptical filter	On
Wait for user to start	Off	Mode	Inplane
Start measurements	single		p.a.i.e
outine		Geometry	Cognitial
Slice group 1		- Multi-slice mode	Sequential
Slices	1	Series	Interleaved
Dist. factor	20 %	Saturation mode	Standard
Position	L0.0 A20.0 H0.0	Special sat.	None
Orientation	Sagittal		
Phase enc. dir.	A >> P	Tim CT mode	Off
Rotation	0.00 deg	System	
Slice group 2		System	0"
Slices	1	Body HEP	Off On
Dist. factor	20 %	HEA	On
Position	L0.0 A24.1 H0.0	SP4	Off
Orientation	Transversal	SP2	Off
Phase enc. dir.	A >> P	SP8	Off
Rotation	0.00 deg	SP6	Off
Slice group 3		SP3	Off
Slices	1	SP1	Off
Dist. factor	20 %	SP7	Off
Position	L0.0 A24.1 H0.0	SP5	Off
Orientation	Coronal		OII
Phase enc. dir.	R >> L	Positioning mode	REF
Rotation	0.00 deg	Table position	Н
Phase oversampling	0 %	Table position	0 mm
FoV read	250 mm	MSMA	S - C - T
FoV phase	100.0 %	Sagittal	R >> L
Slice thickness TR	7.0 mm 8.6 ms	Coronal	A >> P
TE	4.00 ms	Transversal	F >> H
Averages	4.00 ms 2	Save uncombined	Off
Concatenations	3	Coil Combine Mode	Adaptive Combine
Filter	Prescan Normalize, Elliptical	Auto Coil Select	Default
	filter	Shim mode	Tune up
Coil elements	HEA;HEP	Adjust with body coil	Off
	—· · , · ·—·	Confirm freq. adjustment	Off
ontrast		Assume Silicone	Off
TD	0 ms	? Ref. amplitude 1H	0.000 V
MTC	Off	Adjustment Tolerance	Auto
Magn. preparation	None	Adjust volume	
Flip angle	20 deg	Position	Isocenter
Fat suppr.	None	Orientation	Transversal
Water suppr.	None	Rotation	0.00 deg
Averaging mode	Short term	R >> L	350 mm
Reconstruction	Magnitude	A >> P	263 mm
Measurements	1	F >> H	350 mm
Multiple series	Each measurement	Physio	
·		1st Signal/Mode	None
esolution			

Dark blood	Off
Resp. control	Off
Inline	
Subtract	Off
Liver registration Std-Dev-Sag	Off Off
Std-Dev-Sag Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	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
Sequence	
Introduction	On
Dimension Phase stabilisation	2D Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	320 Hz/Px
Flow comp.	No
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

\\USER\FERN - TREADWAY\RCDC\20171129.protocol\t1_mpr_sag_p2_1x1x1

	PAT: 2 Voxel size: 1.0×1	1.0×1.0 mm Rel. SNR: 1.00	SIEMENS: tfl
		Unfiltered images	Off
Properties		— Prescan Normalize	On
Prio Recon	Off	Normalize	Off
Before measurement		B1 filter	Off
After measurement		Raw filter	Off
Load to viewer	On	Elliptical filter	Off
Inline movie	Off	1 .	
Auto store images	On	Geometry	
Load to stamp segments	Off	Multi-slice mode	Single shot
Load images to graphic	Off	Series	Ascending
segments			
Auto open inline display	Off	System	
Start measurement without	On	Body	Off
further preparation	_	HEP	On
Wait for user to start	On	HEA	On
Start measurements	single	SP4	Off
Routine		SP2	Off
Slab group 1		SP8	Off
Slabs	1	SP6	Off
Dist. factor	50 %	SP3	Off
Position	Isocenter	SP1	Off
Orientation	Sagittal	SP7	Off
Phase enc. dir.	A >> P	SP5	Off
Rotation	0.00 deg	Positioning mode	REF
Phase oversampling	0.00 deg 0 %	Positioning mode	
Slice oversampling	16.7 %	Table position Table position	H 0 mm
Slices per slab	192	MSMA	S - C - T
FoV read	250 mm		8 - C - 1 R >> L
FoV phase	100.0 %	Sagittal Coronal	A >> P
Slice thickness	1.00 mm		
TR	1900 ms	Transversal	F >> H Off
TE	2.27 ms	Save uncombined	
Averages	1	Coil Combine Mode	Adaptive Combine
Concatenations	1	Auto Coil Select	Default
Filter	Prescan Normalize	Shim mode	Tune up
Coil elements	HEA;HEP	Adjust with body coil	On .
Coll elements	HEA,HEI	Confirm freq. adjustment	Off
Contrast		Assume Silicone	Off
Magn. preparation	Non-sel. IR	? Ref. amplitude 1H	0.000 V
TI	900 ms	Adjustment Tolerance	Auto
Flip angle	9 deg	Adjust volume	
Fat suppr.	None	Position	Isocenter
Water suppr.	None	Orientation	Transversal
Averaging mode	Long torm	Rotation	0.00 deg
Averaging mode Reconstruction	Long term	R >> L	350 mm
Measurements	Magnitude	A >> P	263 mm
	I Fach massurament	F >> H	350 mm
Multiple series	Each measurement	Dhysis	
Resolution		Physio	None
Base resolution	256	1st Signal/Mode	None
Phase resolution	100 %	Dark blood	Off
Slice resolution	100 %		
Phase partial Fourier	Off	Resp. control	Off
Slice partial Fourier	Off	Inline	
Interpolation	Off	Subtract	Off
PAT mode	CDADDA	Std-Dev-Sag	Off
	GRAPPA	Std-Dev-Cor	Off
Accel. factor PE	2	Std-Dev-Tra	Off
Ref. lines PE	24	Std-Dev-Time	Off
Accel. factor 3D	I Auto (Triple)	MIP-Sag	Off
Matrix Coil Mode	Auto (Triple)	MIP-Cor	Off
Reference scan mode	Integrated	MIP-Tra	Off
Image Filter	Off	MIP-Time	Off
Distortion Corr.	Off	Save original images	On
1		1	

Sequence

•	
Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Allowed
Bandwidth	200 Hz/Px
Flow comp.	No
Echo spacing	6.9 ms
RF pulse type	Normal
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
•	

\\USER\FERN - TREADWAY\RCDC\20171129.protocol\mbep2d_resting

TA: 6:10 PAT: Off Voxel size: 3.0×3.0×3.0 mm Rel. SNR: 1.00 USER: cmrr_mbep2d_bold

Properties		Special sat.	None
Prio Recon	Off	System	
Before measurement		Body	Off
After measurement		HEP	On
Load to viewer	On		On
Inline movie	Off	HEA	On
Auto store images	On	Positioning mode	FIX
Load to stamp segments	Off	Table position	Н
Load images to graphic	Off	Table position	0 mm
segments		MSMA	S - C - T
Auto open inline display	Off	Sagittal	R >> L
Start measurement without	On	Coronal	A >> P
further preparation	On	Transversal	F >> H
Wait for user to start	On		
Start measurements	single	Coil Combine Mode	Sum of Squares
Start measurements	Single	Auto Coil Select	Default
Routine		Shim mode	Standard
Slice group 1		Adjust with body coil	Off
Slices	52	Confirm freq. adjustment	Off
Dist. factor	0 %	Assume Silicone	Off
Position	L0.0 A0.6 H9.1	? Ref. amplitude 1H	0.000 V
Orientation	T > C-18.0		
		Adjustment Tolerance	Auto
Phase enc. dir.	A >> P	Adjust volume	
Rotation	0.00 deg	Position	L0.0 A0.6 H9.1
Phase oversampling	0 %	Orientation	T > C-18.0
FoV read	220 mm	Rotation	0.00 deg
FoV phase	100.0 %	R >> L	220 mm
Slice thickness	3.00 mm	A >> P	220 mm
TR	1000 ms	F >> H	156 mm
TE	30.0 ms		
Multi-band accel. factor	4	Physio	
Filter	Raw filter, Prescan Normalize	1st Signal/Mode	None
Coil elements	HEA;HEP	BOLD	
1	,	GLM Statistics	Off
Contrast		Dynamic t-maps	Off
MTC	Off		
Magn. preparation	None	Starting ignore meas	0
Flip angle	65 deg	Ignore after transition	0
Fat suppr.	Fat sat.	Model transition states	On
		Temp. highpass filter	On
Averaging mode	Long term	Threshold	4.00
Reconstruction	Magnitude	Paradigm size	3
Measurements	360	Meas[1]	Baseline
Delay in TR	0 ms	Meas[2]	Baseline
Multiple series	Off	Meas[3]	Active
Resolution		Motion correction	On
Base resolution	74	Interpolation	3D-K-space
	74	Spatial filter	Off
Phase resolution	100 %	1 .	-
Phase partial Fourier	6/8	Sequence	
Interpolation	Off	Introduction	On
PAT mode	None	Contrasts	1
Matrix Coil Mode		Bandwidth	2702 Hz/Px
IVIALIX COII IVIOUE	Auto (CP)	Flow comp.	No
Distortion Corr.	Off	Free echo spacing	Off
Unfiltered images	Off	Echo spacing	0.48 ms
Prescan Normalize	On		
Raw filter	On	EPI factor	74
	Weak	Gradient mode	Fast
Intensity		RF spoiling	Off
Slope	25		
Elliptical filter	Off	Excite pulse duration	5000 us
Hamming	Off	Single-band images	Off
Geometry		MB LeakBlock kernel	Off
Multi-slice mode	Interleaved	MB dual kernel	Off
Series	Interleaved	MB RF phase scramble	On
001100	IIICIICAVCU	·	

\\USER\FERN - TREADWAY\RCDC\20171129.protocol\mbep2d_fMRI1

TA: 12:30 PAT: Off Voxel size: 3.0×3.0×3.0 mm Rel. SNR: 1.00 USER: cmrr_mbep2d_bold

Properties		Special sat.	None
Prio Recon	Off	System	
Before measurement			Off
After measurement		Body HEP	On
Load to viewer	On	HEA	On
Inline movie	Off	TIEA	
Auto store images	On	Positioning mode	FIX
Load to stamp segments	Off	Table position	Н
Load images to graphic	Off	Table position	0 mm
segments		MSMA	S - C - T
Auto open inline display	Off	Sagittal	R >> L
Start measurement without	On	Coronal	A >> P
further preparation	_	Transversal	F >> H
Wait for user to start	On	Coil Combine Mode	Sum of Squares
Start measurements	single	Auto Coil Select	Default
Routine		Shim mode	Standard
Slice group 1		Adjust with body coil	Off
Slices	52	Confirm freq. adjustment	Off
Dist. factor	0 %	Assume Silicone	Off
Position	L0.0 A0.6 H9.1	? Ref. amplitude 1H	0.000 V
Orientation	T > C-18.0	Adjustment Tolerance	Auto
Phase enc. dir.	A >> P	Adjust volume	
Rotation	0.00 deg	Position	L0.0 A0.6 H9.1
Phase oversampling	0 %	Orientation	T > C-18.0
FoV read	220 mm	Rotation	0.00 deg
FoV phase	100.0 %	R >> L	220 mm
Slice thickness	3.00 mm	A >> P	220 mm
TR	1000 ms	F >> H	156 mm
TE	30.0 ms	Physio	
Multi-band accel. factor	4	1st Signal/Mode	None
Filter	Raw filter, Prescan Normalize	1	None
Coil elements	HEA;HEP	BOLD	
Contrast		GLM Statistics	Off
MTC	Off	Dynamic t-maps	Off
Magn. preparation	None	Starting ignore meas	0
Flip angle	65 deg	Ignore after transition	0
Fat suppr.	Fat sat.	Model transition states	On
Avaraging made	Long torm	Temp. highpass filter	On
Averaging mode Reconstruction	Long term Magnitude	Threshold	4.00
Measurements	740	Paradigm size	3 Pagalina
Delay in TR	0 ms	Meas[1]	Baseline Baseline
Multiple series	Off	Meas[2]	Active
1		Meas[3] Motion correction	On
Resolution		Interpolation	3D-K-space
Base resolution	74	Spatial filter	Off
Phase resolution	100 %	1 .	5 11
Phase partial Fourier	6/8	Sequence	
Interpolation	Off	Introduction	On
PAT mode	None	Contrasts	1
Matrix Coil Mode	Auto (CP)	Bandwidth	2702 Hz/Px
		Flow comp.	No O''
Distortion Corr.	Off	Free echo spacing	Off
Unfiltered images	Off	Echo spacing	0.48 ms
Prescan Normalize	On	EPI factor	74
Raw filter	On West	Gradient mode	Fast
Intensity	Weak	RF spoiling	Off
Slope	25		
Elliptical filter	Off	Excite pulse duration	5000 us
Hamming	Off	Single-band images	Off
Geometry		MB LeakBlock kernel	Off
Multi-slice mode	Interleaved	MB dual kernel	Off
Series	Interleaved	MB RF phase scramble	On
•		7/.	

\\USER\FERN - TREADWAY\RCDC\20171129.protocol\mbep2d_fMRI2

TA: 12:30 PAT: Off Voxel size: 3.0×3.0×3.0 mm Rel. SNR: 1.00 USER: cmrr_mbep2d_bold

Properties		Special sat.	None
Prio Recon	Off	System	
Before measurement		Body	Off
After measurement		HEP	On
Load to viewer	On O"	HEA	On
Inline movie	Off		
Auto store images	On Off	Positioning mode	FIX
Load to stamp segments	Off	Table position	Н
Load images to graphic	Off	Table position	0 mm
segments	Off	MSMA	S-C-T
Auto open inline display Start measurement without	Off On	Sagittal	R >> L
	Oli	Coronal	A >> P
further preparation Wait for user to start	On	Transversal Coil Combine Mode	F >> H
Start measurements	single	Auto Coil Select	Sum of Squares Default
	Sirigie	Auto Coil Select	Default
Routine		Shim mode	Standard
Slice group 1		Adjust with body coil	Off
Slices	52	Confirm freq. adjustment	Off
Dist. factor	0 %	Assume Silicone	Off
Position	L0.0 A0.6 H9.1	? Ref. amplitude 1H	0.000 V
Orientation	T > C-18.0	Adjustment Tolerance	Auto
Phase enc. dir.	A >> P	Adjust volume	
Rotation	0.00 deg	Position	L0.0 A0.6 H9.1
Phase oversampling	0 %	Orientation	T > C-18.0
FoV read	220 mm	Rotation	0.00 deg
FoV phase	100.0 %	R >> L	220 mm
Slice thickness	3.00 mm 1000 ms	A >> P	220 mm
TR TF	30.0 ms	F >> H	156 mm
Multi-band accel. factor	4	Physio	
Filter	Raw filter, Prescan Normalize	1st Signal/Mode	None
Coil elements	HEA;HEP	BOLD	
	11273,1121	GLM Statistics	Off
Contrast		Dynamic t-maps	Off
MTC	Off	Starting ignore meas	0
Magn. preparation	None	Ignore after transition	0
Flip angle	65 deg	Model transition states	On
Fat suppr.	Fat sat.	Temp. highpass filter	On
Averaging mode	Long term	Threshold	4.00
Reconstruction	Magnitude	Paradigm size	3
Measurements	740	Meas[1]	Baseline
Delay in TR	0 ms	Meas[2]	Baseline
Multiple series	Off	Meas[3]	Active
Resolution		Motion correction	On
Base resolution	74	Interpolation	3D-K-space
Phase resolution	100 %	Spatial filter	Off
Phase partial Fourier	6/8	Sequence	
Interpolation	Off	Introduction	On
		Contrasts	1
PAT mode	None	Bandwidth	2702 Hz/Px
Matrix Coil Mode	Auto (CP)	Flow comp.	No
Distortion Corr.	Off	Free echo spacing	Off
Unfiltered images	Off	Echo spacing	0.48 ms
Prescan Normalize	On		
Raw filter	On	EPI factor	74
Intensity	Weak	Gradient mode	Fast
Slope	25	RF spoiling	Off
Elliptical filter	Off	Excite pulse duration	5000 us
Hamming	Off	Single-band images	Off
•		MB LeakBlock kernel	Off
Geometry			
•	lata da aya d	MB dual kernel	Off
Multi-slice mode Series	Interleaved Interleaved	MB RF phase scramble	Off On

\\USER\FERN - TREADWAY\RCDC\20171129.protocol\mbep2d_fMRI3

TA: 12:30 PAT: Off Voxel size: 3.0x3.0x3.0 mm Rel. SNR: 1.00 USER: cmrr_mbep2d_bold

roperties		Special sat.	None
Prio Recon	Off	System	
Before measurement		Body	Off
After measurement		HEP	On
Load to viewer	On	HEA	On
Inline movie	Off	ПЕА	
Auto store images	On	Positioning mode	FIX
Load to stamp segments	Off	Table position	Н
Load images to graphic	Off	Table position	0 mm
segments		MSMA	S - C - T
Auto open inline display	Off	Sagittal	R >> L
Start measurement without	On	Coronal	A >> P
further preparation	-	Transversal	F >> H
Wait for user to start	On	Coil Combine Mode	Sum of Squares
Start measurements	single	Auto Coil Select	Default
	o.i.ig.o		
Clica group 1		Shim mode	Standard
Slice group 1	5 2	Adjust with body coil	Off
Slices	52	Confirm freq. adjustment	Off
Dist. factor	0 %	Assume Silicone	Off
Position	L0.0 A0.6 H9.1	? Ref. amplitude 1H	0.000 V
Orientation	T > C-18.0	Adjustment Tolerance	Auto
Phase enc. dir.	A >> P	Adjust volume	
Rotation	0.00 deg	Position	L0.0 A0.6 H9.1
Phase oversampling	0 %	Orientation	T > C-18.0
FoV read	220 mm	Rotation	0.00 deg
FoV phase	100.0 %	R >> L	220 mm
Slice thickness	3.00 mm	A >> P	220 mm
TR	1000 ms	F >> H	156 mm
TE	30.0 ms	Physic	
Multi-band accel. factor	4	Physio	
Filter	Raw filter, Prescan Normalize	1st Signal/Mode	None
Coil elements	HEA;HEP	BOLD	
Contrast		GLM Statistics	Off
MTC	Off	Dynamic t-maps	Off
Magn. preparation	None	Starting ignore meas	0
Flip angle	65 deg	Ignore after transition	0
Fat suppr.	Fat sat.	Model transition states	On
rat suppi.	Fat 5at.	Temp. highpass filter	On
Averaging mode	Long term	Threshold	4.00
Reconstruction	Magnitude	Paradigm size	3
Measurements	740	Meas[1]	Baseline
Delay in TR	0 ms	Meas[2]	Baseline
Multiple series	Off	Meas[3]	Active
•	-	Motion correction	On
esolution		Interpolation	3D-K-space
Base resolution	74		•
		Snatial filter	Off
Phase resolution	100 %	Spatial filter	Off
	100 % 6/8	Spatial filter Sequence	Off
Phase resolution	100 %	1 .	Off
Phase resolution Phase partial Fourier Interpolation	100 % 6/8 Off	Sequence	
Phase resolution Phase partial Fourier Interpolation PAT mode	100 % 6/8 Off None	Sequence Introduction	On
Phase resolution Phase partial Fourier Interpolation	100 % 6/8 Off	Sequence Introduction Contrasts Bandwidth	On 1
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode	100 % 6/8 Off None Auto (CP)	Sequence Introduction Contrasts Bandwidth Flow comp.	On 1 2702 Hz/Px No
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr.	100 % 6/8 Off None Auto (CP)	Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing	On 1 2702 Hz/Px No Off
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images	100 % 6/8 Off None Auto (CP) Off Off	Sequence Introduction Contrasts Bandwidth Flow comp.	On 1 2702 Hz/Px No
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize	100 % 6/8 Off None Auto (CP) Off Off On	Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing	On 1 2702 Hz/Px No Off
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter	100 % 6/8 Off None Auto (CP) Off Off On On	Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing	On 1 2702 Hz/Px No Off 0.48 ms
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity	100 % 6/8 Off None Auto (CP) Off Off On On Weak	Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode	On 1 2702 Hz/Px No Off 0.48 ms 74 Fast
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope	100 % 6/8 Off None Auto (CP) Off Off On On Weak 25	Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode RF spoiling	On 1 2702 Hz/Px No Off 0.48 ms 74 Fast Off
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope Elliptical filter	100 % 6/8 Off None Auto (CP) Off Off On On Weak 25 Off	Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode RF spoiling Excite pulse duration	On 1 2702 Hz/Px No Off 0.48 ms 74 Fast Off 5000 us
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope	100 % 6/8 Off None Auto (CP) Off Off On On Weak 25	Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode RF spoiling Excite pulse duration Single-band images	On 1 2702 Hz/Px No Off 0.48 ms 74 Fast Off 5000 us Off
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope Elliptical filter Hamming	100 % 6/8 Off None Auto (CP) Off Off On On Weak 25 Off	Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode RF spoiling Excite pulse duration	On 1 2702 Hz/Px No Off 0.48 ms 74 Fast Off 5000 us
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope Elliptical filter	100 % 6/8 Off None Auto (CP) Off Off On On Weak 25 Off	Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode RF spoiling Excite pulse duration Single-band images	On 1 2702 Hz/Px No Off 0.48 ms 74 Fast Off 5000 us Off

\\USER\FERN - TREADWAY\RCDC\20171129.protocol\mbep2d_RL1

TA: 20:10 PAT: Off Voxel size: 3.0×3.0×3.0 mm Rel. SNR: 1.00 USER: cmrr_mbep2d_bold

roperties		Special sat.	None
Prio Recon	Off	System	
Before measurement		Body	Off
After measurement		HEP	On
Load to viewer	On	HEA	On
Inline movie	Off	ПСА	On
Auto store images	On	Positioning mode	FIX
Load to stamp segments	Off	Table position	Н
Load images to graphic	Off	Table position	0 mm
segments		MSMA	S - C - T
Auto open inline display	Off	Sagittal	R >> L
Start measurement without	On	Coronal	A >> P
further preparation	-	Transversal	F >> H
Wait for user to start	On	Coil Combine Mode	Sum of Squares
Start measurements	single	Auto Coil Select	Default
	o.i.ig.o		
Clica group 1		Shim mode	Standard
Slice group 1	5 2	Adjust with body coil	Off
Slices	52	Confirm freq. adjustment	Off
Dist. factor	0 %	Assume Silicone	Off
Position	L0.0 A0.6 H9.1	? Ref. amplitude 1H	0.000 V
Orientation	T > C-18.0	Adjustment Tolerance	Auto
Phase enc. dir.	A >> P	Adjust volume	
Rotation	0.00 deg	Position	L0.0 A0.6 H9.1
Phase oversampling	0 %	Orientation	T > C-18.0
FoV read	220 mm	Rotation	0.00 deg
FoV phase	100.0 %	R >> L	220 mm
Slice thickness	3.00 mm	A >> P	220 mm
TR	1000 ms	F >> H	156 mm
TE	30.0 ms	Physic	
Multi-band accel. factor	4	Physio	
Filter	Raw filter, Prescan Normalize	1st Signal/Mode	None
Coil elements	HEA;HEP	BOLD	
Contrast		GLM Statistics	Off
MTC	Off	Dynamic t-maps	Off
Magn. preparation	None	Starting ignore meas	0
		Ignore after transition	0
Flip angle	65 deg	Model transition states	On
Fat suppr.	Fat sat.	Temp. highpass filter	On
Averaging mode	Long term	Threshold	4.00
Reconstruction	Magnitude	Paradigm size	3
Measurements	1200	Meas[1]	Baseline
Delay in TR	0 ms	Meas[1] Meas[2]	Baseline
Multiple series	Off	Meas[3]	Active
·		Motion correction	On
esolution	<u> </u>	Interpolation	3D-K-space
	7 4	i ilitelbolatioli	JD-IN-SPACE
Base resolution	74		∩ff
Phase resolution	100 %	Spatial filter	Off
			Off
Phase resolution	100 %	Spatial filter	Off
Phase resolution Phase partial Fourier Interpolation	100 % 6/8 Off	Spatial filter Sequence	
Phase resolution Phase partial Fourier Interpolation PAT mode	100 % 6/8 Off None	Spatial filter Sequence Introduction Contrasts	On 1
Phase resolution Phase partial Fourier Interpolation	100 % 6/8 Off	Spatial filter Sequence Introduction Contrasts Bandwidth	On 1 2702 Hz/Px
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode	100 % 6/8 Off None Auto (CP)	Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp.	On 1 2702 Hz/Px No
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr.	100 % 6/8 Off None Auto (CP)	Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing	On 1 2702 Hz/Px No Off
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images	100 % 6/8 Off None Auto (CP) Off Off	Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp.	On 1 2702 Hz/Px No
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize	100 % 6/8 Off None Auto (CP) Off Off On	Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing	On 1 2702 Hz/Px No Off
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter	100 % 6/8 Off None Auto (CP) Off Off On On	Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing	On 1 2702 Hz/Px No Off 0.48 ms
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity	100 % 6/8 Off None Auto (CP) Off Off On On Weak	Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode	On 1 2702 Hz/Px No Off 0.48 ms 74 Fast
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope	100 % 6/8 Off None Auto (CP) Off Off On On Weak 25	Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode RF spoiling	On 1 2702 Hz/Px No Off 0.48 ms 74 Fast Off
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope Elliptical filter	100 % 6/8 Off None Auto (CP) Off Off On On Weak 25 Off	Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode RF spoiling Excite pulse duration	On 1 2702 Hz/Px No Off 0.48 ms 74 Fast Off 5000 us
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope	100 % 6/8 Off None Auto (CP) Off Off On On Weak 25	Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode RF spoiling Excite pulse duration Single-band images	On 1 2702 Hz/Px No Off 0.48 ms 74 Fast Off 5000 us Off
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope Elliptical filter Hamming	100 % 6/8 Off None Auto (CP) Off Off On On Weak 25 Off	Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode RF spoiling Excite pulse duration	On 1 2702 Hz/Px No Off 0.48 ms 74 Fast Off 5000 us
Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope Elliptical filter	100 % 6/8 Off None Auto (CP) Off Off On On Weak 25 Off	Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode RF spoiling Excite pulse duration Single-band images	On 1 2702 Hz/Px No Off 0.48 ms 74 Fast Off 5000 us Off

TA: 12:30

\\USER\FERN - TREADWAY\RCDC\20171129.protocol\mbep2d_fMRI4 PAT: Off Voxel size: 3.0×3.0×3.0 mm Rel. SNR: 1.00 USER: cmrr_mbep2d_bold

roperties		Special sat.	None
Prio Recon	Off	System	
Before measurement		Body	Off
After measurement		HEP	On
Load to viewer	On	HEA	On
Inline movie	Off	ПЕА	
Auto store images	On	Positioning mode	FIX
Load to stamp segments	Off	Table position	Н
Load images to graphic	Off	Table position	0 mm
segments		MSMA	S - C - T
Auto open inline display	Off	Sagittal	R >> L
Start measurement without	On	Coronal	A >> P
further preparation		Transversal	F >> H
Wait for user to start	On	Coil Combine Mode	Sum of Squares
Start measurements	single	Auto Coil Select	Default
	om gro		
Outine Clies group 1		Shim mode	Standard
Slice group 1	52	Adjust with body coil	Off
Slices	52	Confirm freq. adjustment	Off
Dist. factor	0 %	Assume Silicone	Off
Position	L0.0 A0.6 H9.1	? Ref. amplitude 1H	0.000 V
Orientation	T > C-18.0	Adjustment Tolerance	Auto
Phase enc. dir.	A >> P	Adjust volume	
Rotation	0.00 deg	Position	L0.0 A0.6 H9.1
Phase oversampling	0 %	Orientation	T > C-18.0
FoV read	220 mm	Rotation	0.00 deg
FoV phase	100.0 %	R >> L	220 mm
Slice thickness	3.00 mm	A >> P	220 mm
TR	1000 ms	F >> H	156 mm
TE	30.0 ms	Dharaia	
Multi-band accel. factor	4	Physio	
Filter	Raw filter, Prescan Normalize	1st Signal/Mode	None
Coil elements	HEA;HEP	BOLD	
ontrast		GLM Statistics	Off
MTC	Off	Dynamic t-maps	Off
Magn. preparation	None	Starting ignore meas	0
Flip angle	65 deg	Ignore after transition	0
	•	Model transition states	On
Fat suppr.	Fat sat.	Temp. highpass filter	On
Averaging mode	Long term	Threshold	4.00
Reconstruction	Magnitude	Paradigm size	3
Measurements	740	Meas[1]	Baseline
Delay in TR	0 ms	Meas[1] Meas[2]	Baseline
Multiple series			
	Off	l Meas[3]	Active
•	Off	Meas[3]	Active
esolution		Motion correction	On
•	74	Motion correction Interpolation	On 3D-K-space
esolution Base resolution Phase resolution	74 100 %	Motion correction	On
esolution Base resolution	74	Motion correction Interpolation	On 3D-K-space
esolution Base resolution Phase resolution	74 100 %	Motion correction Interpolation Spatial filter	On 3D-K-space
esolution Base resolution Phase resolution Phase partial Fourier Interpolation	74 100 % 6/8 Off	Motion correction Interpolation Spatial filter Sequence	On 3D-K-space Off
esolution Base resolution Phase resolution Phase partial Fourier Interpolation PAT mode	74 100 % 6/8 Off None	Motion correction Interpolation Spatial filter Sequence Introduction Contrasts	On 3D-K-space Off On 1
esolution Base resolution Phase resolution Phase partial Fourier Interpolation	74 100 % 6/8 Off	Motion correction Interpolation Spatial filter Sequence Introduction Contrasts Bandwidth	On 3D-K-space Off On 1 2702 Hz/Px
esolution Base resolution Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode	74 100 % 6/8 Off None Auto (CP)	Motion correction Interpolation Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp.	On 3D-K-space Off On 1 2702 Hz/Px No
esolution Base resolution Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr.	74 100 % 6/8 Off None Auto (CP)	Motion correction Interpolation Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing	On 3D-K-space Off On 1 2702 Hz/Px No Off
esolution Base resolution Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images	74 100 % 6/8 Off None Auto (CP)	Motion correction Interpolation Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp.	On 3D-K-space Off On 1 2702 Hz/Px No
esolution Base resolution Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize	74 100 % 6/8 Off None Auto (CP) Off Off On	Motion correction Interpolation Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing	On 3D-K-space Off On 1 2702 Hz/Px No Off
esolution Base resolution Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter	74 100 % 6/8 Off None Auto (CP) Off Off On On	Motion correction Interpolation Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor	On 3D-K-space Off On 1 2702 Hz/Px No Off 0.48 ms
esolution Base resolution Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity	74 100 % 6/8 Off None Auto (CP) Off Off On On Weak	Motion correction Interpolation Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode	On 3D-K-space Off On 1 2702 Hz/Px No Off 0.48 ms 74 Fast
esolution Base resolution Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope	74 100 % 6/8 Off None Auto (CP) Off Off On On Weak 25	Motion correction Interpolation Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing EPI factor Gradient mode RF spoiling	On 3D-K-space Off On 1 2702 Hz/Px No Off 0.48 ms
esolution Base resolution Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope Elliptical filter	74 100 % 6/8 Off None Auto (CP) Off Off On On Weak 25 Off	Motion correction Interpolation Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing Echo spacing EPI factor Gradient mode RF spoiling Excite pulse duration	On 3D-K-space Off On 1 2702 Hz/Px No Off 0.48 ms 74 Fast
esolution Base resolution Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope	74 100 % 6/8 Off None Auto (CP) Off Off On On Weak 25	Motion correction Interpolation Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing Echo spacing EPI factor Gradient mode RF spoiling Excite pulse duration Single-band images	On 3D-K-space Off On 1 2702 Hz/Px No Off 0.48 ms 74 Fast Off 5000 us Off
esolution Base resolution Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope Elliptical filter Hamming	74 100 % 6/8 Off None Auto (CP) Off Off On On Weak 25 Off	Motion correction Interpolation Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing Echo spacing EPI factor Gradient mode RF spoiling Excite pulse duration	On 3D-K-space Off On 1 2702 Hz/Px No Off 0.48 ms 74 Fast Off 5000 us
esolution Base resolution Phase resolution Phase partial Fourier Interpolation PAT mode Matrix Coil Mode Distortion Corr. Unfiltered images Prescan Normalize Raw filter Intensity Slope Elliptical filter	74 100 % 6/8 Off None Auto (CP) Off Off On On Weak 25 Off	Motion correction Interpolation Spatial filter Sequence Introduction Contrasts Bandwidth Flow comp. Free echo spacing Echo spacing Echo spacing EPI factor Gradient mode RF spoiling Excite pulse duration Single-band images	On 3D-K-space Off On 1 2702 Hz/Px No Off 0.48 ms 74 Fast Off 5000 us Off

\\USER\FERN - TREADWAY\RCDC\20171129.protocol\ep2d_diff_NAPLS3_2.5mm_b1000 TA: 5:14 PAT: 2 Voxel size: 2.5×2.5×2.5 mm Rel. SNR: 1.00 USER: wip_ep2d_diff_NAPLS3

Properties		Special sat.	None
Prio Recon	Off	System	
Before measurement		System	
After measurement		Body	Off
Load to viewer	On	HEP	On
Inline movie	Off	HEA	On
Auto store images	On	Positioning mode	FIX
Load to stamp segments	Off	Table position	Н
Load images to graphic	Off	Table position	0 mm
segments		MSMA	S - C - T
Auto open inline display	Off	Sagittal	R >> L
Start measurement without	On	Coronal	A >> P
further preparation	OII		
Wait for user to start	On	Transversal	F >> H
	_	Coil Combine Mode	Sum of Squares
Start measurements	single	Auto Coil Select	Default
Routine		Shim mode	Standard
Slice group 1		Adjust with body coil	Off
Slices	60	Confirm freq. adjustment	Off
Dist. factor	0 %	Assume Silicone	Off
Position	R4.9 A28.2 F29.2	? Ref. amplitude 1H	0.000 V
Orientation	Transversal	Adjustment Tolerance	Auto
Phase enc. dir.	A >> P	Adjust volume	, with
Rotation	0.00 deg	Position	R4.9 A28.2 F29.2
Phase oversampling	0.00 deg 0 %		
FoV read	200 mm	Orientation Rotation	Transversal
FoV phase	100.0 %		0.00 deg
		R >> L	200 mm
Slice thickness	2.5 mm	A >> P	200 mm
TR	6400 ms	F >> H	150 mm
TE	79 ms	Physio	
Averages	1	1st Signal/Mode	None
Concatenations	1	13t Signal/Wode	
Filter	Prescan Normalize	Resp. control	Off
Coil elements	HEA;HEP	Diff	
Contrast		Diffusion mode	Free
MTC	Off	· 1	
Magn. preparation	None	Diff. weightings	1
Fat suppr.	Fat sat.	b-value	1000 s/mm²
ι αι συρρι.	1 at sat.	Diff. weighted images	On
Averaging mode	Long term	Trace weighted images	Off
Reconstruction	Magnitude	Average ADC maps	Off
Delay in TR	0 ms	Individual ADC maps	Off
Multiple series	Off	FA maps	Off
		Mosaic	On
Resolution		Tensor	Off
Base resolution	80	Noise level	40
Phase resolution	100 %	Diff. directions	46
Phase partial Fourier	6/8	I	
Interpolation	Off	Sequence	~"
		Introduction	Off
PAT mode	GRAPPA	Bandwidth	2084 Hz/Px
Accel. factor PE	2	Free echo spacing	Off
Ref. lines PE	24	Echo spacing	0.56 ms
Matrix Coil Mode	Auto (Triple)	EPI factor	90
Reference scan mode	Separate		80 Normal
Distortion Corr	Off	RF pulse type	
Distortion Corr. Prescan Normalize		Gradient mode	Fast
	On		
Raw filter	On		
Elliptical filter	O#		
· · · · · · · · · · · · · · · · · · ·	Off		
Hamming	Off Off		
Hamming			
Hamming Geometry	Off		
Hamming			

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