

Table of contents

\\USER

WBIC Protocols In Progress

Protocol 418

26195_021019

AAHead_Scout_32ch-head-coil
 b1_mapping_2mm
 mp2rage_sag_p2_0.65mm
 single shot EPI to check position if required (no shim)
 gre_b0map_more_slices
 WBIC_mbep2d_bold_run1_FH
 WBIC_mbep2d_bold_run1_HF
 WBIC_mbep2d_bold_run2_FH
 WBIC_mbep2d_bold_run2_HF
 quick cmrr_mbep2d_bold to check position
 gre_b0map_more_slices
 cmrr_mbep2d_bold_FLEET_MB3_run1_invPE
 cmrr_mbep2d_bold_FLEET_MB3_run1
 cmrr_mbep2d_bold_FLEET_MB3_run2_invPE
 cmrr_mbep2d_bold_FLEET_MB3_run2

\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\AAHead_Scout_32ch-head-coil

TA: 0:14 PM: REF Voxel size: 1.6×1.6×1.6 mmPAT: 3 Rel. SNR: 1.00 : fl

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	Single measurement

Routine

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A30.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	128
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
TR	3.25 ms
TE	1.53 ms
Averages	1
Concatenations	1
Filter	B1 filter
Coil elements	A32

Contrast - Common

TR	3.25 ms
TE	1.53 ms
Flip angle	16 deg

Contrast - Dynamic

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

Resolution - Common

FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
Base resolution	160
Phase resolution	100 %
Slice resolution	69 %
Phase partial Fourier	6/8
Slice partial Fourier	6/8
Trajectory	Cartesian

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	1

Resolution - iPAT

Reference scan mode	Integrated
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Resolution - Filter Image

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	On
Unfiltered images	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

Geometry - Common

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A30.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	128
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
TR	3.25 ms
Multi-slice mode	Sequential
Series	Ascending
Concatenations	1

Geometry - AutoAlign

Slab group	1
Position	L0.0 A30.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Initial Position	Isocenter
Phase	0.0 mm
Read	0.0 mm
Shift	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off

System - Miscellaneous

Coil Select Mode	Default
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System - Adjustments

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - PACE

Resp. control	Off
Concatenations	1

Inline - Common

Flip angle	16 deg
Measurements	1
Time to center	6.3 s

Inline - Inline

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

Inline - MIP

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

Inline - Composing

Inline Composing	Off
Distortion Corr.	Off

Inline - MapIt

Save original images	On
MapIt	None
Flip angle	16 deg
Measurements	1
Contrasts	1
TR	3.25 ms
TE	1.53 ms

Sequence - Part 1

Introduction	On
Dimension	3D
Asymmetric echo	Weak
Contrasts	1
Multi-slice mode	Sequential
Bandwidth	540 Hz/Px

Sequence - Part 2

RF pulse type	Fast
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On

Sequence - Nuclei

TX/RX Nucleus	1H
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	A32

Sequence - Assistant

Mode	Off
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\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\b1_mapping_2mm

TA: 0:40 PM: REF Voxel size: 2.0×2.0×2.0 mmPAT: Off Rel. SNR: 1.00 : tfl

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

Routine

Slice group	1
Slices	35
Dist. factor	100 %
Position	L3.4 A31.6 H35.8 mm
Orientation	T > C-3.7 > S0.9
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	18750.0 ms
TE	2.28 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	VC1

Contrast - Common

TR	18750.0 ms
TE	2.28 ms
Magn. preparation	None
Flip angle	8 deg
Fat suppr.	None
Water suppr.	None

Contrast - Dynamic

Averages	1
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution - Common

FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
Base resolution	112
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

Resolution - iPAT

PAT mode	None
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Resolution - Filter Image

Image Filter	Off
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Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

Geometry - Common

Slice group	1
Slices	35
Dist. factor	100 %
Position	L3.4 A31.6 H35.8 mm
Orientation	T > C-3.7 > S0.9
Phase enc. dir.	A >> P
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	18750.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slice group	1
Position	L3.4 A31.6 H35.8 mm
Orientation	T > C-3.7 > S0.9
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.2 A3.1 H1.8
Phase	-3.2 mm
Read	-0.3 mm
Shift	1.6 mm
Initial Rotation	2.36 deg
Initial Orientation	T > C
T > C	-3.2
> S	0.0

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

Position	L3.4 A31.6 H35.8 mm
Orientation	T > C-3.7 > S0.9
Rotation	2.95 deg
A >> P	220 mm
R >> L	220 mm
F >> H	138 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

Inline - Common

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

Inline - MIP

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

Inline - Composing

Inline Composing	Off
Distortion Corr.	Off

Sequence - Part 1

Introduction	On
Dimension	2D
Asymmetric echo	Allowed
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	4.8 ms
Bandwidth	490 Hz/Px

Sequence - Part 2

RF pulse type	Low SAR
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On
Turbo factor	112

Sequence - Assistant

Mode	Off
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\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\mp2rage_sag_p2_0.65mm

TA: 10:57 PM: REF Voxel size: 0.7×0.7×0.7 mmPAT: 2 Rel. SNR: 1.00 : tfl

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

Routine

Slab group	1
Slabs	1
Dist. factor	50 %
Position	L3.5 A32.4 H2.2 mm
Orientation	S > T-1.0 > C0.5
Phase enc. dir.	A >> P
AutoAlign	Head > Basis
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	240
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	0.65 mm
TR	5000.0 ms
TE	2.56 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	A32

Contrast - Common

TR	5000.0 ms
TE	2.56 ms
Magn. preparation	Non-sel. IR
TI 1	900 ms
TI 2	2750 ms
Flip angle 1	5.0 deg
Flip angle 2	3.0 deg
Fat suppr.	Water excit. normal
Water suppr.	None

Contrast - Dynamic

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution - Common

FoV read	208 mm
FoV phase	100.0 %
Slice thickness	0.65 mm
Base resolution	320
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8

Resolution - Common

Slice partial Fourier	Off
Interpolation	Off

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Reference scan mode	Integrated

Resolution - Filter Image

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

Geometry - Common

Slab group	1
Slabs	1
Dist. factor	50 %
Position	L3.5 A32.4 H2.2 mm
Orientation	S > T-1.0 > C0.5
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	240
FoV read	208 mm
FoV phase	100.0 %
Slice thickness	0.65 mm
TR	5000.0 ms
Multi-slice mode	Single shot
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slab group	1
Position	L3.5 A32.4 H2.2 mm
Orientation	S > T-1.0 > C0.5
Phase enc. dir.	A >> P
AutoAlign	Head > Basis
Initial Position	L0.0 P5.1 F3.8
Phase	5.1 mm
Read	-3.8 mm
Shift	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

Geometry - Navigator**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Basis
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

Position	L3.5 A32.4 H2.2 mm
Orientation	S > T-1.0 > C0.5
Rotation	-16.05 deg
A >> P	208 mm
F >> H	208 mm
R >> L	156 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - Signal1

1st Signal/Mode	None
TR	5000.0 ms
Concatenations	1

Physio - Cardiac

Magn. preparation	Non-sel. IR
TI 1	900 ms
TI 2	2750 ms
Fat suppr.	Water excit. normal
Dark blood	Off
FoV read	208 mm
FoV phase	100.0 %
Phase resolution	100 %

Physio - PACE

Resp. control	Off
Concatenations	1

Inline - Common

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

Inline - MIP

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

Inline - Composing

Inline Composing	Off
Distortion Corr.	Off

Inline - MapIt

Save original images	On
MapIt	T1 map
Flip angle 1	5.0 deg
Flip angle 2	3.0 deg
Measurements	1
TR	5000.0 ms
TE	2.56 ms

Sequence - Part 1

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Allowed
Flow comp.	No
Multi-slice mode	Single shot
Echo spacing	7.2 ms
Bandwidth	250 Hz/Px

Sequence - Part 2

RF pulse type	Fast
Gradient mode	Fast*
Excitation	Non-sel.
RF spoiling	On
Incr. Gradient spoiling	Off
Turbo factor	240

Sequence - Nuclei

TX/RX Nucleus	1H
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	A32

Sequence - Assistant

Mode	Off
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\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\single shot EPI to check position if required (no shim)

TA: 0:41 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : epfid

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

Routine

Slice group	1
Slices	56
Dist. factor	0 %
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2060 ms
TE	26.40 ms
Multi-band accel. factor	2
Filter	None
Coil elements	A32

Contrast - Common

TR	2060 ms
TE	26.40 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	Fat sat.

Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

Resolution - Common

FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
Base resolution	186
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	60

Resolution - iPAT

Reference scan mode	GRE
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Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry - Common

Slice group	1
Slices	56
Dist. factor	0 %
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2060 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	2

Geometry - AutoAlign

Slice group	1
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
AutoAlign	Head > Brain
Initial Position	L0.8 P47.3 H18.5
Phase	14.9 mm
Read	-0.8 mm
Shift	48.5 mm
Initial Rotation	-90.11 deg
Initial Orientation	C > T
C > T	-38.4
> S	0.0

Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P

System - Miscellaneous

Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

! Position	L4.2 P19.0 H52.2 mm
! Orientation	C > T-37.9 > S0.2
! Rotation	-88.87 deg
! F >> H	160 mm
! R >> L	155 mm
! A >> P	55 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - Signal1

1st Signal/Mode	None
TR	2060 ms
Multi-band accel. factor	2

BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Active
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active

BOLD

Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

Sequence - Part 1

Introduction	On
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	1.09 ms
Bandwidth	1034 Hz/Px

Sequence - Part 2

EPI factor	186
Gradient mode	Fast*
RF spoiling	Off

Sequence - Special

Excite pulse duration	3800 us
Single-band images	On
MB LeakBlock kernel	Off
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	On
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.0 deg
GRE iPAT ref. FA	12.0 deg
Physio recording	Legacy
Triggering scheme	Standard

\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\gre_b0map_more_slices

TA: 0:54 PM: FIX Voxel size: 2.0×2.0×1.6 mmPAT: 2 Rel. SNR: 1.00 : fm

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

Routine

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L4.4 A39.4 H6.7 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	128
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.60 mm
TR	5.5 ms
TE 1	1.11 ms
TE 2	3.06 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	A32

Contrast - Common

TR	5.5 ms
TE 1	1.11 ms
TE 2	3.06 ms
MTC	Off
Magn. preparation	None
Flip angle	10 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

Contrast - Dynamic

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Off

Resolution - Common

FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.60 mm
Base resolution	128
Phase resolution	100 %
Slice resolution	100 %

Resolution - Common

Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Reference scan mode	Integrated

Resolution - Filter Image

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

Geometry - Common

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L4.4 A39.4 H6.7 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	128
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.60 mm
TR	5.5 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slab group	1
Position	L4.4 A39.4 H6.7 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Initial Position	L0.8 A10.7 F27.5
Phase	0.8 mm
Read	14.9 mm
Shift	-25.5 mm
Initial Rotation	-0.11 deg
Initial Orientation	C > T
C > T	-38.4
> S	0.0

Geometry - Saturation

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

! Position	L4.2 P19.0 H52.2 mm
! Orientation	C > T-37.9 > S0.2
! Rotation	-88.87 deg
! F >> H	160 mm
! R >> L	155 mm
! A >> P	55 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - Signal1

1st Signal/Mode	None
TR	5.5 ms
Concatenations	1
Segments	1

Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	256 mm
FoV phase	100.0 %
Phase resolution	100 %

Physio - PACE

Resp. control	Off
Concatenations	1

Inline - Common

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

Inline - MIP

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

Inline - Soft Tissue

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

Inline - Composing

Inline Composing	Off
Distortion Corr.	Off

Inline - MapIt

Save original images	On
MapIt	None
Flip angle	10 deg
Measurements	1
Contrasts	2
TR	5.5 ms
TE 1	1.11 ms
TE 2	3.06 ms

Sequence - Part 1

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	2
Flow comp. 1	No
Readout mode	Monopolar
Multi-slice mode	Interleaved
Bandwidth 1	910 Hz/Px
Bandwidth 2	910 Hz/Px

Sequence - Part 2

Segments	1
Acoustic noise reduction	None
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On

Sequence - Nuclei

TX/RX Nucleus	1H
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	A32

Sequence - Assistant

Mode	Off
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\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\WBIC_mbep2d_bold_run1_FH

TA: 0:49 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : epfid

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	On
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

Routine

Slice group	1
Slices	56
Dist. factor	0 %
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2060 ms
TE	26.40 ms
Multi-band accel. factor	2
Filter	None
Coil elements	A32

Contrast - Common

TR	2060 ms
TE	26.40 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	Fat sat.

Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Delay in TR	0 ms
Multiple series	Off

Resolution - Common

FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
Base resolution	186
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	60
Reference scan mode	GRE

Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry - Common

Slice group	1
Slices	56
Dist. factor	0 %
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2060 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	2

Geometry - AutoAlign

Slice group	1
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
AutoAlign	Head > Brain
Initial Position	L0.8 P47.3 H18.5
Phase	14.9 mm
Read	-0.8 mm
Shift	48.5 mm
Initial Rotation	-90.11 deg
Initial Orientation	C > T
C > T	-38.4
> S	0.0

Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

! Position	L4.2 P19.0 H52.2 mm
! Orientation	C > T-37.9 > S0.2
! Rotation	-88.87 deg
! F >> H	160 mm
! R >> L	155 mm
! A >> P	55 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - Signal1

1st Signal/Mode	None
TR	2060 ms
Multi-band accel. factor	2

BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Active
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	5
Delay in TR	0 ms
Multiple series	Off

Sequence - Part 1

Introduction	On
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	1.09 ms
Bandwidth	1034 Hz/Px

Sequence - Part 2

EPI factor	186
Gradient mode	Fast*
RF spoiling	Off

Sequence - Special

Excite pulse duration	3800 us
Single-band images	On
MB LeakBlock kernel	Off
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	On
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.0 deg
GRE iPAT ref. FA	12.0 deg
Physio recording	Legacy
Triggering scheme	Standard

\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\WBIC_mbep2d_bold_run1_HF

TA: 4:01 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : epfid

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	On
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

Routine

Slice group	1
Slices	56
Dist. factor	0 %
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2060 ms
TE	26.40 ms
Multi-band accel. factor	2
Filter	None
Coil elements	A32

Contrast - Common

TR	2060 ms
TE	26.40 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	Fat sat.

Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	98
Delay in TR	0 ms
Multiple series	Off

Resolution - Common

FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
Base resolution	186
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	60
Reference scan mode	GRE

Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry - Common

Slice group	1
Slices	56
Dist. factor	0 %
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2060 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	2

Geometry - AutoAlign

Slice group	1
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
AutoAlign	Head > Brain
Initial Position	L0.8 P47.3 H18.5
Phase	14.9 mm
Read	-0.8 mm
Shift	48.5 mm
Initial Rotation	-90.11 deg
Initial Orientation	C > T
C > T	-38.4
> S	0.0

Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

! Position	L4.2 P19.0 H52.2 mm
! Orientation	C > T-37.9 > S0.2
! Rotation	-88.87 deg
! F >> H	160 mm
! R >> L	155 mm
! A >> P	55 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - Signal1

1st Signal/Mode	None
TR	2060 ms
Multi-band accel. factor	2

BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Active
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	98
Delay in TR	0 ms
Multiple series	Off

Sequence - Part 1

Introduction	On
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	1.09 ms
Bandwidth	1034 Hz/Px

Sequence - Part 2

EPI factor	186
Gradient mode	Fast*
RF spoiling	Off

Sequence - Special

Excite pulse duration	3800 us
Single-band images	On
MB LeakBlock kernel	Off
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.0 deg
GRE iPAT ref. FA	12.0 deg
Physio recording	DICOM
Triggering scheme	Standard

\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\WBIC_mbep2d_bold_run2_FH

TA: 0:49 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : epfid

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	On
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

Routine

Slice group	1
Slices	56
Dist. factor	0 %
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2060 ms
TE	26.40 ms
Multi-band accel. factor	2
Filter	None
Coil elements	A32

Contrast - Common

TR	2060 ms
TE	26.40 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	Fat sat.

Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Delay in TR	0 ms
Multiple series	Off

Resolution - Common

FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
Base resolution	186
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	60
Reference scan mode	GRE

Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry - Common

Slice group	1
Slices	56
Dist. factor	0 %
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2060 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	2

Geometry - AutoAlign

Slice group	1
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
AutoAlign	Head > Brain
Initial Position	L0.8 P47.3 H18.5
Phase	14.9 mm
Read	-0.8 mm
Shift	48.5 mm
Initial Rotation	-90.11 deg
Initial Orientation	C > T
C > T	-38.4
> S	0.0

Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

! Position	L4.2 P19.0 H52.2 mm
! Orientation	C > T-37.9 > S0.2
! Rotation	-88.87 deg
! F >> H	160 mm
! R >> L	155 mm
! A >> P	55 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - Signal1

1st Signal/Mode	None
TR	2060 ms
Multi-band accel. factor	2

BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Active
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	5
Delay in TR	0 ms
Multiple series	Off

Sequence - Part 1

Introduction	On
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	1.09 ms
Bandwidth	1034 Hz/Px

Sequence - Part 2

EPI factor	186
Gradient mode	Fast*
RF spoiling	Off

Sequence - Special

Excite pulse duration	3800 us
Single-band images	On
MB LeakBlock kernel	Off
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	On
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.0 deg
GRE iPAT ref. FA	12.0 deg
Physio recording	Legacy
Triggering scheme	Standard

\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\WBIC_mbep2d_bold_run2_HF

TA: 4:01 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 3 Rel. SNR: 1.00 : epfid

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	On
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

Routine

Slice group	1
Slices	56
Dist. factor	0 %
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2060 ms
TE	26.40 ms
Multi-band accel. factor	2
Filter	None
Coil elements	A32

Contrast - Common

TR	2060 ms
TE	26.40 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	Fat sat.

Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	98
Delay in TR	0 ms
Multiple series	Off

Resolution - Common

FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
Base resolution	186
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	60
Reference scan mode	GRE

Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry - Common

Slice group	1
Slices	56
Dist. factor	0 %
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2060 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	2

Geometry - AutoAlign

Slice group	1
Position	L4.2 P19.0 H52.2 mm
Orientation	C > T-37.9 > S0.2
Phase enc. dir.	H >> F
AutoAlign	Head > Brain
Initial Position	L0.8 P47.3 H18.5
Phase	14.9 mm
Read	-0.8 mm
Shift	48.5 mm
Initial Rotation	-90.11 deg
Initial Orientation	C > T
C > T	-38.4
> S	0.0

Geometry - Saturation

Fat suppr.	Fat sat.
Special sat.	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

! Position	L4.2 P19.0 H52.2 mm
! Orientation	C > T-37.9 > S0.2
! Rotation	-88.87 deg
! F >> H	160 mm
! R >> L	155 mm
! A >> P	55 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - Signal1

1st Signal/Mode	None
TR	2060 ms
Multi-band accel. factor	2

BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Active
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	98
Delay in TR	0 ms
Multiple series	Off

Sequence - Part 1

Introduction	On
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	1.09 ms
Bandwidth	1034 Hz/Px

Sequence - Part 2

EPI factor	186
Gradient mode	Fast*
RF spoiling	Off

Sequence - Special

Excite pulse duration	3800 us
Single-band images	On
MB LeakBlock kernel	Off
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.0 deg
GRE iPAT ref. FA	12.0 deg
Physio recording	DICOM
Triggering scheme	Standard

\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\quick cmrr_mbep2d_bold to check position

TA: 0:26 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 2 Rel. SNR: 1.00 : epfid

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

Routine

Slice group	1
Slices	54
Dist. factor	0 %
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
TR	2160 ms
TE	26.60 ms
Multi-band accel. factor	3
Filter	None
Coil elements	A32

Contrast - Common

TR	2160 ms
TE	26.60 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	Fat sat.

Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

Resolution - Common

FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
Base resolution	240
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	48

Resolution - iPAT

Reference scan mode	FLEET
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Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry - Common

Slice group	1
Slices	54
Dist. factor	0 %
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
TR	2160 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	3

Geometry - AutoAlign

Slice group	1
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L4.3 A29.8 H15.7
Phase	-26.1 mm
Read	-4.5 mm
Shift	21.2 mm
Initial Rotation	0.18 deg
Initial Orientation	T > C
T > C	11.3
> S	0.1

Geometry - Saturation

Sat. region	1
Thickness	67 mm
Position	L1.8 A95.3 F52.8 mm
Orientation	C > T-29.0 > S0.9
Special sat.	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm

System - Miscellaneous

MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Rotation	0.18 deg
A >> P	188 mm
R >> L	192 mm
F >> H	44 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	0.500
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - Signal1

1st Signal/Mode	None
TR	2160 ms
Multi-band accel. factor	3

BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Active
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active

BOLD

Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	1
Delay in TR	0 ms
Multiple series	Off

Sequence - Part 1

Introduction	On
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	1.22 ms
Bandwidth	946 Hz/Px

Sequence - Part 2

EPI factor	234
Gradient mode	Fast*
RF spoiling	Off

Sequence - Special

Excite pulse duration	3800 us
FLEET ref. prep. scans	0
FLEET ref. min. TR	0 ms
Single-band images	On
MB LeakBlock kernel	Off
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.0 deg
FLEET iPAT ref. FA	12.0 deg
Physio recording	Off
Triggering scheme	Standard

\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\gre_b0map_more_slices

TA: 0:54 PM: FIX Voxel size: 2.0×2.0×1.6 mmPAT: 2 Rel. SNR: 1.00 : fm

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

Routine

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	128
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.60 mm
TR	5.5 ms
TE 1	1.11 ms
TE 2	3.06 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	A32

Contrast - Common

TR	5.5 ms
TE 1	1.11 ms
TE 2	3.06 ms
MTC	Off
Magn. preparation	None
Flip angle	10 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

Contrast - Dynamic

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Off

Resolution - Common

FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.60 mm
Base resolution	128
Phase resolution	100 %
Slice resolution	100 %

Resolution - Common

Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Reference scan mode	Integrated

Resolution - Filter Image

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

Geometry - Common

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	128
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.60 mm
TR	5.5 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slab group	1
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	R >> L
AutoAlign	---
Initial Position	L4.3 A29.8 H15.7
Phase	4.5 mm
Read	-26.1 mm
Shift	21.2 mm
Initial Rotation	90.18 deg
Initial Orientation	T > C
T > C	11.3
> S	0.1

Geometry - Saturation

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

! Position	L4.3 A29.8 H15.7 mm
! Orientation	T > C11.3 > S0.1
! Rotation	0.18 deg
! A >> P	188 mm
! R >> L	192 mm
! F >> H	44 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - Signal1

1st Signal/Mode	None
TR	5.5 ms
Concatenations	1
Segments	1

Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	256 mm
FoV phase	100.0 %
Phase resolution	100 %

Physio - PACE

Resp. control	Off
Concatenations	1

Inline - Common

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

Inline - MIP

MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

Inline - Soft Tissue

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

Inline - Composing

Inline Composing	Off
Distortion Corr.	Off

Inline - MapIt

Save original images	On
MapIt	None
Flip angle	10 deg
Measurements	1
Contrasts	2
TR	5.5 ms
TE 1	1.11 ms
TE 2	3.06 ms

Sequence - Part 1

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	2
Flow comp. 1	No
Readout mode	Monopolar
Multi-slice mode	Interleaved
Bandwidth 1	910 Hz/Px
Bandwidth 2	910 Hz/Px

Sequence - Part 2

Segments	1
Acoustic noise reduction	None
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On

Sequence - Nuclei

TX/RX Nucleus	1H
TX/RX delta frequency	0 Hz
TX Nucleus	None
TX delta frequency	0 Hz
Coil elements	A32

Sequence - Assistant

Mode	Off
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\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\cmrr_mbep2d_bold_FLEET_MB3_r
un1_invPE

TA: 0:35 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 2 Rel. SNR: 1.00 : epfid

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

Routine

Slice group	1
Slices	54
Dist. factor	0 %
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
TR	2160 ms
TE	26.60 ms
Multi-band accel. factor	3
Filter	None
Coil elements	A32

Contrast - Common

TR	2160 ms
TE	26.60 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	Fat sat.

Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Delay in TR	0 ms
Multiple series	Off

Resolution - Common

FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
Base resolution	240
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	48

Resolution - iPAT

Reference scan mode	FLEET
---------------------	-------

Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry - Common

Slice group	1
Slices	54
Dist. factor	0 %
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
TR	2160 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	3

Geometry - AutoAlign

Slice group	1
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L4.3 A29.8 H15.7
Phase	-26.1 mm
Read	-4.5 mm
Shift	21.2 mm
Initial Rotation	0.18 deg
Initial Orientation	T > C
T > C	11.3
> S	0.1

Geometry - Saturation

Sat. region	1
Thickness	67 mm
Position	L1.8 A95.3 F52.8 mm
Orientation	C > T-29.0 > S0.9
Special sat.	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm

System - Miscellaneous

MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

! Position	L4.3 A29.8 H15.7 mm
! Orientation	T > C11.3 > S0.1
! Rotation	0.18 deg
! A >> P	188 mm
! R >> L	192 mm
! F >> H	44 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	0.500
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - Signal1

1st Signal/Mode	None
TR	2160 ms
Multi-band accel. factor	3

BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Active
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active

BOLD

Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	5
Delay in TR	0 ms
Multiple series	Off

Sequence - Part 1

Introduction	On
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	1.22 ms
Bandwidth	946 Hz/Px

Sequence - Part 2

EPI factor	234
Gradient mode	Fast*
RF spoiling	Off

Sequence - Special

Excite pulse duration	3800 us
FLEET ref. prep. scans	0
FLEET ref. min. TR	0 ms
Single-band images	On
MB LeakBlock kernel	Off
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	On
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.0 deg
FLEET iPAT ref. FA	12.0 deg
Physio recording	Off
Triggering scheme	Standard

\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\cmrr_mbep2d_bold_FLEET_MB3_r un1
TA: 3:56 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 2 Rel. SNR: 1.00 : epfid

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

Routine

Slice group	1
Slices	54
Dist. factor	0 %
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
TR	2160 ms
TE	26.60 ms
Multi-band accel. factor	3
Filter	None
Coil elements	A32

Contrast - Common

TR	2160 ms
TE	26.60 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	Fat sat.

Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	98
Delay in TR	0 ms
Multiple series	Off

Resolution - Common

FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
Base resolution	240
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	48

Resolution - iPAT

Reference scan mode	FLEET
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Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry - Common

Slice group	1
Slices	54
Dist. factor	0 %
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
TR	2160 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	3

Geometry - AutoAlign

Slice group	1
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L4.3 A29.8 H15.7
Phase	-26.1 mm
Read	-4.5 mm
Shift	21.2 mm
Initial Rotation	0.18 deg
Initial Orientation	T > C
T > C	11.3
> S	0.1

Geometry - Saturation

Sat. region	1
Thickness	67 mm
Position	L1.8 A95.3 F52.8 mm
Orientation	C > T-29.0 > S0.9
Special sat.	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm

System - Miscellaneous

MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

! Position	L4.3 A29.8 H15.7 mm
! Orientation	T > C11.3 > S0.1
! Rotation	0.18 deg
! A >> P	188 mm
! R >> L	192 mm
! F >> H	44 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	0.500
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - Signal1

1st Signal/Mode	None
TR	2160 ms
Multi-band accel. factor	3

BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Active
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active

BOLD

Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	98
Delay in TR	0 ms
Multiple series	Off

Sequence - Part 1

Introduction	On
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	1.22 ms
Bandwidth	946 Hz/Px

Sequence - Part 2

EPI factor	234
Gradient mode	Fast*
RF spoiling	Off

Sequence - Special

Excite pulse duration	3800 us
FLEET ref. prep. scans	0
FLEET ref. min. TR	0 ms
Single-band images	On
MB LeakBlock kernel	Off
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.0 deg
FLEET iPAT ref. FA	12.0 deg
Physio recording	DICOM
Triggering scheme	Standard

\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\cmrr_mbep2d_bold_FLEET_MB3_r
un2_invPE

TA: 0:35 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 2 Rel. SNR: 1.00 : epfid

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	On
Start measurements	Single measurement

Routine

Slice group	1
Slices	54
Dist. factor	0 %
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
TR	2160 ms
TE	26.60 ms
Multi-band accel. factor	3
Filter	None
Coil elements	A32

Contrast - Common

TR	2160 ms
TE	26.60 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	Fat sat.

Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Delay in TR	0 ms
Multiple series	Off

Resolution - Common

FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
Base resolution	240
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	48

Resolution - iPAT

Reference scan mode	FLEET
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Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry - Common

Slice group	1
Slices	54
Dist. factor	0 %
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
TR	2160 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	3

Geometry - AutoAlign

Slice group	1
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L4.3 A29.8 H15.7
Phase	-26.1 mm
Read	-4.5 mm
Shift	21.2 mm
Initial Rotation	0.18 deg
Initial Orientation	T > C
T > C	11.3
> S	0.1

Geometry - Saturation

Sat. region	1
Thickness	67 mm
Position	L1.8 A95.3 F52.8 mm
Orientation	C > T-29.0 > S0.9
Special sat.	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm

System - Miscellaneous

MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

! Position	L4.3 A29.8 H15.7 mm
! Orientation	T > C11.3 > S0.1
! Rotation	0.18 deg
! A >> P	188 mm
! R >> L	192 mm
! F >> H	44 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	0.500
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - Signal1

1st Signal/Mode	None
TR	2160 ms
Multi-band accel. factor	3

BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Active
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active

BOLD

Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	5
Delay in TR	0 ms
Multiple series	Off

Sequence - Part 1

Introduction	On
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	1.22 ms
Bandwidth	946 Hz/Px

Sequence - Part 2

EPI factor	234
Gradient mode	Fast*
RF spoiling	Off

Sequence - Special

Excite pulse duration	3800 us
FLEET ref. prep. scans	0
FLEET ref. min. TR	0 ms
Single-band images	On
MB LeakBlock kernel	Off
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	On
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.0 deg
FLEET iPAT ref. FA	12.0 deg
Physio recording	Off
Triggering scheme	Standard

\\USER\WBIC Protocols In Progress\Protocol 418\26195_021019\cmrr_mbep2d_bold_FLEET_MB3_r un2
TA: 3:56 PM: FIX Voxel size: 0.8×0.8×0.8 mmPAT: 2 Rel. SNR: 1.00 : epfid

Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

Routine

Slice group	1
Slices	54
Dist. factor	0 %
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
TR	2160 ms
TE	26.60 ms
Multi-band accel. factor	3
Filter	None
Coil elements	A32

Contrast - Common

TR	2160 ms
TE	26.60 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	Fat sat.

Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	98
Delay in TR	0 ms
Multiple series	Off

Resolution - Common

FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
Base resolution	240
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off

Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	48

Resolution - iPAT

Reference scan mode	FLEET
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Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off
Hamming	Off

Geometry - Common

Slice group	1
Slices	54
Dist. factor	0 %
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
FoV read	192 mm
FoV phase	97.5 %
Slice thickness	0.80 mm
TR	2160 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	3

Geometry - AutoAlign

Slice group	1
Position	L4.3 A29.8 H15.7 mm
Orientation	T > C11.3 > S0.1
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L4.3 A29.8 H15.7
Phase	-26.1 mm
Read	-4.5 mm
Shift	21.2 mm
Initial Rotation	0.18 deg
Initial Orientation	T > C
T > C	11.3
> S	0.1

Geometry - Saturation

Sat. region	1
Thickness	67 mm
Position	L1.8 A95.3 F52.8 mm
Orientation	C > T-29.0 > S0.9
Special sat.	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm

System - Miscellaneous

MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

System - Adjustments

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

System - Adjust Volume

! Position	L4.3 A29.8 H15.7 mm
! Orientation	T > C11.3 > S0.1
! Rotation	0.18 deg
! A >> P	188 mm
! R >> L	192 mm
! F >> H	44 mm
Reset	Off

System - Tx/Rx

Frequency 1H	297.200761 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	0.500
Reset	Off
? Ref. amplitude 1H	0.000 V

Physio - Signal1

1st Signal/Mode	None
TR	2160 ms
Multi-band accel. factor	3

BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Active
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active

BOLD

Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	98
Delay in TR	0 ms
Multiple series	Off

Sequence - Part 1

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EPI factor	234
Gradient mode	Fast*
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MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.0 deg
FLEET iPAT ref. FA	12.0 deg
Physio recording	DICOM
Triggering scheme	Standard