## SIEMENS MAGNETOM Terra

# Table of contents

\\USER				
	Alessio			
		Simon		
			Simon	
				AAHead_Scout_32ch-head-coil localizer
				b1map_sag_p2 b0shim_3mm
				mp2rage_sag_p3_0.6mm cmrr_mb2_bw1120_TOPUP2 cmrr_mb2_bw1120_PA_E1_FLEET
				cmrr_mb2_bw1120_PA_E1_FLEET cmrr_mb2_bw1120_PA_FLEET cmrr_mb2_bw1120_PA_FLEET
				cmrr_mb2_bw1120_TOPUP_PA_FLEET_RST

## \\USER\Alessio\Simon\Simon\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**

Ave	erages	1	
Ave	eraging mode	Short term	
Red	construction	Magnitude	
Me	asurements	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

# **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**

Clab group	1
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
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

## **Geometry - Tim Planning Suite**

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

Positioning mode	REF
Table position	Н
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

## **System - Miscellaneous**

Coil Select Mode	Default

## **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 F >> H	350 mm
F >> H	350 mm
Reset	Off

# System - Tx/Rx

Frequency 1H	297.170387 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

<u> </u>		
Save original images	On	
MapIt	None	
Flip angle	16 deg	
Measurements	1	
Contrasts	1	
TR	3.25 ms	
TF	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

Mode	Off	

## \\USER\Alessio\Simon\Simon\localizer

TA: 0:15 PM: REF Voxel size: 0.5×0.5×5.0 mmPAT: Off Rel. SNR: 1.00 : qfl

### **Properties**

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

## Routine

Routine	
Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	
Phase oversampling	0 %
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	8.6 ms
TE	3.69 ms
Averages	2
Concatenations	3
Filter	Elliptical filter
Coil elements	A32

### **Contrast - Common**

TR	8.6 ms
TE	3.69 ms
TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	20 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

## **Contrast - Dynamic**

Averages	2
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

### **Contrast - Dynamic**

Multiple series	Each measurement
Resolution - Common	
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	On

#### **Resolution - iPAT**

## **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	On

### **Geometry - Common**

Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	8.6 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	3

# Geometry - AutoAlign

Slice group	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Position	Isocenter
Orientation	Transversal

## **Geometry - AutoAlign**

Phase enc. dir.	A >> P
Slice group	3
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
AutoAlign	
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

# **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	Н
Table position	0 mm
Inline Composing	Off

## **Geometry - Tim CT**

Tim CT mode	Off
Slices	1
Slice thickness	5.0 mm
Dist. factor	20 %
FoV read	250 mm
FoV phase	100.0 %
Segments	1

### **System - Miscellaneous**

Cyclom imoconanocae	
Positioning mode	REF
Table position	F
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	Off - AutoCoilSelect

# **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	297.170387 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	8.6 ms
Concatenations	3
Segments	1

# Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	250 mm
FoV phase	100.0 %
Phase resolution	100 %

# **Physio - PACE**

Resp. control	Off
Concatenations	3

### **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	20 deg
Measurements	1
Contrasts	1
TR	8.6 ms
TE	3.69 ms

# Sequence - Part 1

Introduction	On
--------------	----

# SIEMENS MAGNETOM Terra

# Sequence - Part 1

Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Flow comp.	No
Multi-slice mode	Sequential
Bandwidth	320 Hz/Px

# Sequence - Part 2

Segments	1
Acoustic noise reduction	Active
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

Mode	Off	

# \\USER\Alessio\Simon\Simon\b1map\_sag\_p2

TA: 9.2 s PM: REF Voxel size: 4.0×4.0×4.0 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

Slice group	1
Slices	25
Dist. factor	100 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	4.0 mm
TR	4000.0 ms
TE	1.72 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	A32

#### **Contrast - Common**

TR	4000.0 ms
TE	1.72 ms
Magn. preparation	None
Flip angle	10 deg
Fat suppr.	None
Water suppr.	None

## **Contrast - Dynamic**

Averages	1
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

#### **Resolution - Common**

FoV read	256 mm
FoV phase	100.0 %
Slice thickness	4.0 mm
Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### **Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	16
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**

Slice group	1
Slices	25
Dist. factor	100 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	4.0 mm
TR	4000.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice group	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	Isocenter
L	0.0 mm
Р	0.0 mm
Н	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

## **Geometry - Tim Planning Suite**

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

### **System - Miscellaneous**

Positioning mode	REF
Table position	Н
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	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	297.170387 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	Off
Dimension	2D
Asymmetric echo	Allowed
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	3.9 ms
Bandwidth	490 Hz/Px

# Sequence - Part 2

RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On
Turbo factor	64

Mode	Off	

## \\USER\Alessio\Simon\Simon\b0shim\_3mm

TA: 1:10 PM: FIX Voxel size: 3.0×3.0×3.0 mmPAT: Off Rel. SNR: 1.00 : WIP\_gre

### **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	Off
preparation	
Wait for user to start	On
Start measurements	Single measurement

## Routine

Slab group	1
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	60
FoV read	228 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
TR	15.0 ms
TE 1	2.04 ms
TE 2	5.10 ms
Concatenations	1
Filter	None
Coil elements	A32

### **Contrast - Common**

TR	15.0 ms
TE 1	2.04 ms
TE 2	5.10 ms
MTC	Off
Magn. preparation	None
Flip angle	25 deg
Fat suppr.	Water excit. fast
Water suppr.	None

## **Contrast - Dynamic**

Reconstruction	Magn./Phase
Measurements	1
Multiple series	Each measurement

#### **Resolution - Common**

FoV read	228 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
Base resolution	76
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off

#### **Resolution - iPAT**

B1 filter

PAT mode	None
Resolution - Filter Imag	e
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off

### **Resolution - Filter Rawdata**

Raw filter	Off	
Elliptical filter	Off	

Off

## **Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	60
FoV read	228 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
TR	15.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

## **Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	Isocenter
L	0.0 mm
Р	0.0 mm
Н	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

## **Geometry - Saturation**

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

# **Geometry - Tim Planning Suite**

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

## **Geometry - Tim CT**

Tim CT mode	Off
Slabs	1
Slices per slab	60
Slice thickness	3.00 mm

# Geometry - Tim CT

Dist. factor	20 %
FoV read	228 mm
FoV phase	100.0 %
Segments	1

## **System - Miscellaneous**

Positioning mode	FIX
Table position	F
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	Standard
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	228 mm
! R >> L	228 mm
! F >> H	180 mm
Reset	Off

# System - Tx/Rx

Frequency 1H	297.170387 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	15.0 ms
Concatenations	1
Segments	1

## Physio - Cardiac

Tagging	None
Magn. preparation	None
Fat suppr.	Water excit. fast
Dark blood	Off
FoV read	228 mm
FoV phase	100.0 %
Phase resolution	100 %

## Physio - PACE

Resp. control	Off
Concatenations	1

## **Inline - Common**

Measurements	1	
Inline - Composing		
Inline Composing	Off	
Distortion Corr	Off	

## 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	500 Hz/Px
Bandwidth 2	500 Hz/Px

## Sequence - Part 2

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

# Sequence - Special

Mode	Calculate Shims
Masking	Atlas Based
Shim Algorithm	UnConstrained (QRdecomposition)
Use 3rd order shims	On
A00	On
A11	On
B11	On
A10	On
A20	On
A21	On
B21	On
A22	On
B22	On
A30	On
A31	On
B31	On
A31	On

Mode	Off

# \\USER\Alessio\Simon\mp2rage\_sag\_p3\_0.6mm

TA: 11:11 PM: REF Voxel size: 0.6×0.6×0.6 mmPAT: 3 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	Off
preparation	
Wait for user to start	On
Start measurements	Single measurement

## Routine

Slab group	1
Slabs	1
Dist. factor	50 %
Position	R0.6 A27.9 H2.7 mm
Orientation	S > C-6.2 > T0.5
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	256
FoV read	240 mm
FoV phase	93.8 %
Slice thickness	0.63 mm
TR	4680.0 ms
TE	2.07 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	A32

#### **Contrast - Common**

TR	4680.0 ms
TE	2.07 ms
Magn. preparation	Non-sel. IR
TI 1	840 ms
TI 2	2370 ms
Flip angle 1	5.0 deg
Flip angle 2	6.0 deg
Fat suppr.	Water excit. fast
Water suppr.	None

## **Contrast - Dynamic**

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

#### **Resolution - Common**

FoV read	240 mm	
FoV phase	93.8 %	
Slice thickness	0.63 mm	
Base resolution	384	
Phase resolution	100 %	
Slice resolution	100 %	
Phase partial Fourier	Off	

#### **Resolution - Common**

Slice partial Fourier	6/8	
Interpolation	Off	

#### **Resolution - iPAT**

PAT mode	GRAPPA	
Accel. factor PE	3	
Ref. lines PE	36	
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	R0.6 A27.9 H2.7 mm
Orientation	S > C-6.2 > T0.5
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	256
FoV read	240 mm
FoV phase	93.8 %
Slice thickness	0.63 mm
TR	4680.0 ms
Multi-slice mode	Single shot
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slab group	1
Position	R0.6 A27.9 H2.7 mm
Orientation	S > C-6.2 > T0.5
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.1 A15.3 F13.8
L	0.1 mm
A	15.3 mm
F	13.8 mm
Initial Rotation	0.01 deg
Initial Orientation	S > T
S > T	1.3
> C	0.0

### **Geometry - Navigator**

# **Geometry - Tim Planning Suite**

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

## **System - Miscellaneous**

Positioning mode	REF
Table position	Н
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	R4.1 A5.3 H20.3 mm
! Orientation	T > C-24.4 > S2.3
! Rotation	-3.72 deg
! A >> P	176 mm
! R >> L	176 mm
! F >> H	88 mm
Reset	Off

# System - Tx/Rx

Frequency 1H	297.170387 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	4680.0 ms
Concatenations	1

### Physio - Cardiac

,	
Magn. preparation	Non-sel. IR
TI 1	840 ms
TI 2	2370 ms
Fat suppr.	Water excit. fast
Dark blood	Off
FoV read	240 mm
FoV phase	93.8 %
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	None
Flip angle 1	5.0 deg
Flip angle 2	6.0 deg
Measurements	1
TR	4680.0 ms
TE	2.07 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	6.7 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	192

Mode	Off
------	-----

# \\USER\Alessio\Simon\Simon\cmrr\_mb2\_bw1120\_TOPUP2

TA: 0:30 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	Off
preparation	
Wait for user to start	On
Start measurements	Single measurement

## Routine

Slice group	1
Slices	50
Dist. factor	0 %
Position	L1.1 A5.9 F13.9 mm
Orientation	T > C15.2 > S2.1
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Phase oversampling	15 %
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2000 ms
TE	26.80 ms
Multi-band accel. factor	2
Filter	None
Coil elements	A32

#### **Contrast - Common**

TR	2000 ms
TE	26.80 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	None

## **Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magn./Phase
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	24
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	50
Dist. factor	0 %
Position	L1.1 A5.9 F13.9 mm
Orientation	T > C15.2 > S2.1
Phase enc. dir.	P >> A
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	2

### **Geometry - AutoAlign**

Slice group	1
Position	L1.1 A5.9 F13.9 mm
Orientation	T > C15.2 > S2.1
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L2.4 P9.1 F19.3
L	2.4 mm
Р	9.1 mm
F	19.3 mm
Initial Rotation	178.83 deg
Initial Orientation	T > C
T > C	24.6
> S	1.0

## **Geometry - Saturation**

Fat suppr.	None
Special sat.	None

## **Geometry - Tim Planning Suite**

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

Positioning mode	FIX
Table position	Н
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	Off - All

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	L1.1 A5.9 F13.9 mm
! Orientation	T > C15.2 > S2.1
! Rotation	179.49 deg
! A >> P	154 mm
! A >> P ! R >> L	155 mm
! F >> H	55 mm
Reset	Off

# System - Tx/Rx

Frequency 1H	297.170387 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	258.000 V

# Physio - Signal1

1st Signal/Mode	None
TR	2000 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	1.05 ms
Bandwidth	1120 Hz/Px

# Sequence - Part 2

EPI factor	186
Gradient mode	Fast*
RF spoiling	On

Excite pulse duration	3800 us
FLEET ref. prep. scans	0
FLEET ref. min. TR	0 ms
Single-band images	Off
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	On
Force Maxwell corr.	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
FLEET iPAT ref. FA	12.0 deg
Physio recording	Legacy
Triggering scheme	Standard

# \\USER\Alessio\Simon\Simon\cmrr\_mb2\_bw1120\_PA\_E1\_FLEET

TA: 4:32 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	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	50
Dist. factor	0 %
Position	L2.4 P8.9 F19.4 mm
Orientation	T > C15.2 > S-1.0
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Phase oversampling	15 %
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2000 ms
TE	26.80 ms
Multi-band accel. factor	2
Filter	None
Coil elements	A32

#### **Contrast - Common**

TR TE	2000 ms
TE	26.80 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	None

## **Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	126
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	24
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	50
Dist. factor	0 %
Position	L2.4 P8.9 F19.4 mm
Orientation	T > C15.2 > S-1.0
Phase enc. dir.	P >> A
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	2

## **Geometry - AutoAlign**

Slice group	1
Position	L2.4 P8.9 F19.4 mm
Orientation	T > C15.2 > S-1.0
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L2.4 P8.9 F19.4
L	2.4 mm
P	8.9 mm
F	19.4 mm
Initial Rotation	178.66 deg
Initial Orientation	T > C
T > C	15.2
> S	-1.0

# **Geometry - Saturation**

Fat suppr.	None
Special sat.	None

## **Geometry - Tim Planning Suite**

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

Positioning mode	FIX
Table position	Н
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	Off - All

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	L2.4 P8.9 F19.4 mm
! Orientation	T > C15.2 > S-1.0
! Rotation	-179.10 deg
! A >> P	155 mm
! R >> L	155 mm
! F >> H	55 mm
Reset	Off

# System - Tx/Rx

Frequency 1H	297.170387 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	2000 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	126
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	1.05 ms
Bandwidth	1120 Hz/Px

# Sequence - Part 2

EPI factor	186
Gradient mode	Fast*
RF spoiling	On

Excite pulse duration	3800 us
FLEET ref. prep. scans	0
FLEET ref. min. TR	0 ms
Single-band images	Off
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
Force Maxwell corr.	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
FLEET iPAT ref. FA	12.0 deg
Physio recording	Legacy
Triggering scheme	Standard

# \\USER\Alessio\Simon\Simon\cmrr\_mb2\_bw1120\_PA\_R1\_FLEET

TA: 6:20 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	Off
preparation	
Wait for user to start	On
Start measurements	Single measurement

## Routine

Slice group	1
Slices	50
Dist. factor	0 %
Position	L2.4 P8.9 F19.4 mm
Orientation	T > C15.2 > S-1.0
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Phase oversampling	15 %
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2000 ms
TE	26.80 ms
Multi-band accel. factor	2
Filter	None
Coil elements	A32

#### **Contrast - Common**

TR	2000 ms
TE	26.80 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	None

## **Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	180
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	24
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	50
Dist. factor	0 %
Position	L2.4 P8.9 F19.4 mm
Orientation	T > C15.2 > S-1.0
Phase enc. dir.	P >> A
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	2

## **Geometry - AutoAlign**

Slice group	1
Position	L2.4 P8.9 F19.4 mm
Orientation	T > C15.2 > S-1.0
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L2.4 P8.9 F19.4
L	2.4 mm
P	8.9 mm
F	19.4 mm
Initial Rotation	178.66 deg
Initial Orientation	T > C
T > C	15.2
> S	-1.0

### **Geometry - Saturation**

Fat suppr.	None
Special sat.	None

## **Geometry - Tim Planning Suite**

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

Positioning mode	FIX
Table position	Н
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	Off - All

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	L2.4 P8.9 F19.4 mm
! Orientation	T > C15.2 > S-1.0
! Rotation	-179.10 deg
! A >> P	155 mm
! R >> L	155 mm
! F >> H	55 mm
Reset	Off

# System - Tx/Rx

Frequency 1H	297.170387 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	2000 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	180
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	1.05 ms
Bandwidth	1120 Hz/Px

# Sequence - Part 2

EPI factor	186
Gradient mode	Fast*
RF spoiling	On

Excite pulse duration	3800 us
FLEET ref. prep. scans	0
FLEET ref. min. TR	0 ms
Single-band images	Off
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
Force Maxwell corr.	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
FLEET iPAT ref. FA	12.0 deg
Physio recording	Legacy
Triggering scheme	Standard

# \\USER\Alessio\Simon\Simon\cmrr\_mb2\_bw1120\_PA\_FLEET

TA: 10:40 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	On
Start measurements	Single measurement

## Routine

Slice group	1
Slices	54
Dist. factor	0 %
Position	L2.5 P16.8 H7.7 mm
Orientation	T > C-31.9
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Phase oversampling	15 %
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2000 ms
TE	26.80 ms
Multi-band accel. factor	2
Filter	None
Coil elements	A32

#### **Contrast - Common**

TR	2000 ms
TE	26.80 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	None

## **Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	310
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	24
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	L2.5 P16.8 H7.7 mm
Orientation	T > C-31.9
Phase enc. dir.	P >> A
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	2

## Geometry - AutoAlign

Slice group	1
Position	L2.5 P16.8 H7.7 mm
Orientation	T > C-31.9
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L2.5 P16.8 H7.7
L	2.5 mm
P	16.8 mm
Н	7.7 mm
Initial Rotation	-180.00 deg
Initial Orientation	T > C
T > C	-31.9
> S	0.0

### **Geometry - Saturation**

Fat suppr.	None
Special sat.	None

## **Geometry - Tim Planning Suite**

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

Positioning mode	FIX
Table position	Н
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	Off - All

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	L2.5 P16.8 H7.7 mm
! Orientation	T > C-31.9 > S-3.2
! Rotation	-84.50 deg
! R >> L	160 mm
! A >> P	160 mm
! F >> H	60 mm
Reset	Off

# System - Tx/Rx

Frequency 1H	297.170387 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	2000 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	310
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	1.05 ms
Bandwidth	1120 Hz/Px

# Sequence - Part 2

EPI factor	186
Gradient mode	Fast*
RF spoiling	On

Excite pulse duration	3800 us
FLEET ref. prep. scans	0
FLEET ref. min. TR	0 ms
Single-band images	Off
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
Force Maxwell corr.	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
FLEET iPAT ref. FA	12.0 deg
Physio recording	Legacy
Triggering scheme	Standard

# $\verb|\USER\Alessio\Simon\Cmrr_mb2_bw1120_TOPUP_PA_FLEET_RST| \\$

TA: 0:31 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	Off
preparation	
Wait for user to start	On
Start measurements	Single measurement

### Routine

Slice group	1
Slices	54
Dist. factor	0 %
Position	L2.5 P12.4 F6.1 mm
Orientation	T > C-9.1 > S-0.3
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Phase oversampling	15 %
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2000 ms
TE	26.80 ms
Multi-band accel. factor	2
Filter	None
Coil elements	A32

#### **Contrast - Common**

TR	2000 ms
TR TE	26.80 ms
MTC	Off
Magn. preparation	None
Flip angle	70 deg
Fat suppr.	None

## **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	24
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	L2.5 P12.4 F6.1 mm
Orientation	T > C-9.1 > S-0.3
Phase enc. dir.	P >> A
FoV read	148 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	2000 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	2

### **Geometry - AutoAlign**

Slice group	1
Position	L2.5 P12.4 F6.1 mm
Orientation	T > C-9.1 > S-0.3
Phase enc. dir.	P >> A
AutoAlign	Head > Brain
Initial Position	L2.5 P12.4 F6.1
L	2.5 mm
P	12.4 mm
F	6.1 mm
Initial Rotation	180.00 deg
Initial Orientation	T > C
T > C	-9.1
> S	-0.3

## **Geometry - Saturation**

Sat. region	1
Thickness	25 mm
Position	L2.3 A84.0 H14.5 mm
Orientation	C > T9.8 > S1.0
Special sat.	None

### **Geometry - Tim Planning Suite**

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

•	
Positioning mode	FIX
Table position	Н
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares

# System - Miscellaneous

Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

# **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	L2.5 P12.4 F6.1 mm
! Orientation	T > C-9.1 > S-0.3
! Rotation	-179.47 deg
! A >> P	155 mm
! R >> L	155 mm
! F >> H	55 mm
Reset	Off

# System - Tx/Rx

Frequency 1H	297.170387 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	2000 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

## **BOLD**

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	1.05 ms
Bandwidth	1120 Hz/Px

# Sequence - Part 2

EPI factor	186
Gradient mode	Fast*
RF spoiling	On

•	
Excite pulse duration	3800 us
FLEET ref. prep. scans	0
FLEET ref. min. TR	0 ms
Single-band images	Off
MB LeakBlock kernel	On
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
FLEET iPAT ref. FA	12.0 deg
Physio recording	Legacy
Triggering scheme	Standard