

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\AV\_ep2d\_bold\_sd1ipat2mb1\_pt35mm\_8ch\_hemloc

TA: 6:23 PAT: 2 Voxel size: 0.3x0.3x0.7 mm Rel. SNR: 1.00 USER: AV\_ep2d\_bold\_sd\_20140727

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	20
Dist. factor	0 %
Position	R0.7 P81.0 F14.2
Orientation	Coronal
Phase enc. dir.	F >> H
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	89 mm
FoV phase	75.0 %
Slice thickness	0.70 mm
TR	6000 ms
TE	34.0 ms
Multi-band accel. factor	1
Filter	None
Coil elements	B1-8

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	60
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	42
Reference scan mode	GRE
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

Special sat. None

Table position	H
Table position	0 mm
Inline Composing	Off

## System

B1	On
B2	On
B3	On
B4	On
B5	On
B6	On
B7	On
B8	On
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	125.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	R0.7 P81.0 F14.2
Orientation	Coronal
Rotation	90.00 deg
R >> L	89 mm
F >> H	67 mm
A >> P	14 mm

## Physio

1st Signal/Mode	None
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## BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Starting ignore meas	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

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

## Sequence

Introduction	Off
Bandwidth	574 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	1.91 ms
SIR accel. factor	1
EPI factor	192
Gradient mode	Normal
RF spoiling	Off
Excite pulse duration	4160 us
Slice multiplier	2
Fake MB factor for SB	1
No. of interleaved TEs	0
RF pulse shape	1
EPI noise scans	0
EPI full reference scan	0
SENSE1 coil combine	Off
Log physiology to file	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Readout slice trace	Off
Disable ramp sampling	Off
PF omits higher k-space	Off
FFT scale factor	0.05
GRE iPAT ref. FA	12.0 deg
Send B1 shim trigger	Never
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\fl2d10\_retro\_6slice\_36s\_FC\_FA8\_pulse  
TA: 10:16 PAT: 2 Voxel size: 0.3x0.3x1.0 mm Rel. SNR: 1.00 SIEMENS: CV

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	On
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	On
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	6
Dist. factor	100 %
Position	R0.7 P81.0 F14.2
Orientation	Coronal
Phase enc. dir.	F >> H
Rotation	90.00 deg
Auto	On
Phase oversampling	0 %
FoV read	89 mm
FoV phase	75.0 %
Slice thickness	1.0 mm
TR	1901.93 ms
TE	16.00 ms
Averages	1
Concatenations	6
Filter	Distortion Corr.(2D), Image Filter
Coil elements	B1-8

## Contrast

TD	0 ms
Magn. preparation	None
Flip angle	8 deg
Fat suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each slice

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	6/8
Trajectory	Cartesian
View sharing	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	44
Reference scan mode	Integrated
Image Filter	On
! Intensity	Medium
Edge Enhancement	1
Smoothing	3

Unfiltered images	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

## System

B1	On
B2	On
B3	On
B4	On
B5	On
B6	On
B7	On
B8	On
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Off
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	125.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	R0.7 P81.0 F14.2
! Orientation	Coronal
! Rotation	90.00 deg
! R >> L	89 mm
! F >> H	67 mm
! A >> P	15 mm

## Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	36000 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	89
Phases	18
Tagging	None
Dark blood	Off

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Cine	On
Dummy heartbeats	1
Inline ventricular function	Off
<hr/>	
Resp. control	Off

## Inline

Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
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## Sequence

Introduction	Off
Dimension	2D
Reordering	Linear
Asymmetric echo	Allowed
Bandwidth	199 Hz/Px
Flow comp.	Yes
Optimization	Min. TR
Allowed delay	0 s
Echo spacing	21.4 ms
Sequence type	Gre
<hr/>	
Define	Segments
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
Flip angle mode	Constant
RF spoiling	On
Phase Enc. Rewinder	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\fl3d\_retro\_pt35mm\_FC\_ipat3

TA: 7:32 PAT: 3 Voxel size: 0.3x0.3x0.7 mm Rel. SNR: 1.00 SIEMENS: CV

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	On
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	On
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	L0.8 P42.3 F11.8
Orientation	Coronal
Phase enc. dir.	F >> H
Rotation	90.00 deg
Auto	On
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	16
FoV read	89 mm
FoV phase	100.0 %
Slice thickness	0.70 mm
TR	2170.86 ms
TE	16.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

Magn. preparation	None
Flip angle	8 deg
Fat suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8
Slice partial Fourier	6/8
Trajectory	Cartesian
View sharing	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	1
Reference scan mode	Integrated
Image Filter	Off

Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

## System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Off
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	130.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	L0.8 P42.3 F11.8
! Orientation	Coronal
! Rotation	0.00 deg
! F >> H	89 mm
! R >> L	89 mm
! A >> P	12 mm

## Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	36000 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	97
Phases	16
Tagging	None
Dark blood	Off
Cine	On
Dummy heartbeats	1
Inline ventricular function	Off
Resp. control	Off

## Inline

Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

## Sequence

Introduction	Off
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Off
Bandwidth	149 Hz/Px
Flow comp.	Yes
Optimization	Min. TR
Allowed delay	0 s
Echo spacing	22.4 ms
Sequence type	Gre
Define	Segments
RF pulse type	Normal
Gradient mode	Normal*
Excitation	Slab-sel.
Flip angle mode	Constant
RF spoiling	On
Phase Enc. Rewinder	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\fl3d\_retro\_pt35mm\_FC

TA: 14:27 PAT: 2 Voxel size: 0.3x0.3x0.7 mm Rel. SNR: 1.00 SIEMENS: CV

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	On
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	On
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	L0.8 P42.3 F11.8
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Auto	On
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	16
FoV read	89 mm
FoV phase	100.0 %
Slice thickness	0.70 mm
TR	2166.98 ms
TE	16.00 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D), Image Filter
Coil elements	B4;M2,3;T1

## Contrast

Magn. preparation	None
Flip angle	8 deg
Fat suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8
Slice partial Fourier	6/8
Trajectory	Cartesian
View sharing	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Reference scan mode	Integrated

Image Filter	On
! Intensity	Medium
Edge Enhancement	1
Smoothing	3
Unfiltered images	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

## System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Off
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	130.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	L0.8 P42.3 F11.8
! Orientation	Coronal
! Rotation	0.00 deg
! F >> H	89 mm
! R >> L	89 mm
! A >> P	12 mm

## Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	36000 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	97
Phases	16
Tagging	None

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Dark blood	Off
Cine	On
Dummy heartbeats	1
Inline ventricular function	Off
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Resp. control	Off

## Inline

Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
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## Sequence

Introduction	Off
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Allowed
Bandwidth	149 Hz/Px
Flow comp.	Yes
Optimization	Min. TR
Allowed delay	0 s
Echo spacing	22.3 ms
Sequence type	Gre
<hr/>	
Define	Segments
RF pulse type	Normal
Gradient mode	Normal*
Excitation	Slab-sel.
Flip angle mode	Constant
RF spoiling	On
Phase Enc. Rewinder	On



# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\AV\_ep2d\_bold\_sd2ipat2mb2\_pt35mm\_8ch\_hemloc

TA: 6:56

PAT: 2

Voxel size: 0.3x0.3x0.7 mm

Rel. SNR: 1.00

USER: AV\_ep2d\_bold\_sd\_20140727

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	36
Dist. factor	0 %
Position	R0.7 P76.6 F8.8
Orientation	Coronal
Phase enc. dir.	F >> H
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	89 mm
FoV phase	87.5 %
Slice thickness	0.70 mm
TR	6000 ms
TE	38.0 ms
Multi-band accel. factor	2
Filter	None
Coil elements	B1-8

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	60
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	52
Reference scan mode	GRE
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

Table position	H
Table position	0 mm
Inline Composing	Off

## System

B1	On
B2	On
B3	On
B4	On
B5	On
B6	On
B7	On
B8	On
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	125.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	R0.7 P76.6 F8.8
Orientation	Coronal
Rotation	90.00 deg
R >> L	89 mm
F >> H	78 mm
A >> P	26 mm

## Physio

1st Signal/Mode	None
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## BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Starting ignore meas	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

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

## Sequence

Introduction	Off
Bandwidth	574 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	1.93 ms
SIR accel. factor	1
EPI factor	224
Gradient mode	Normal
RF spoiling	Off
Excite pulse duration	4160 us
Slice multiplier	2
Multi-band PE shift	0 1/FoV
zBlip scheme	0
MB kernel size	0
MB knockout band	0
No. of interleaved TEs	0
RF pulse shape	1
EPI noise scans	0
EPI full reference scan	0
Single-band images	On
MB RF phase scramble	Off
SENSE1 coil combine	Off
Log physiology to file	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Readout slice trace	Off
Disable ramp sampling	Off
PF omits higher k-space	Off
Online multi-band recon.	Online
FFT scale factor	0.05
GRE iPAT ref. FA	12.0 deg
Send B1 shim trigger	Never
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\AV\_ep2d\_bold\_sd2ipat2mb1\_pt35mm\_8ch\_hemloc

TA: 6:25 PAT: 2 Voxel size: 0.3x0.3x0.7 mm Rel. SNR: 1.00 USER: AV\_ep2d\_bold\_sd\_20140727

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	18
Dist. factor	0 %
Position	L0.8 P42.3 F11.8
Orientation	Coronal
Phase enc. dir.	F >> H
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	89 mm
FoV phase	87.5 %
Slice thickness	0.70 mm
TR	6000 ms
TE	38.0 ms
Multi-band accel. factor	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	60
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	52
Reference scan mode	GRE
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

Special sat. None

Table position	H
Table position	0 mm
Inline Composing	Off

## System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	125.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	L0.8 P42.3 F11.8
! Orientation	Coronal
! Rotation	0.00 deg
! F >> H	89 mm
! R >> L	89 mm
! A >> P	12 mm

## Physio

1st Signal/Mode	None
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## BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Starting ignore meas	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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Meas[20]	Active
Motion correction	Off
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	574 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	1.91 ms
<hr/>	
SIR accel. factor	1
EPI factor	224
Gradient mode	Normal
RF spoiling	Off
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Excite pulse duration	4160 us
Slice multiplier	2
Fake MB factor for SB	1
No. of interleaved TEs	0
RF pulse shape	1
EPI noise scans	0
EPI full reference scan	0
SENSE1 coil combine	Off
Log physiology to file	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Readout slice trace	Off
Disable ramp sampling	Off
PF omits higher k-space	Off
FFT scale factor	0.05
GRE iPAT ref. FA	12.0 deg
Send B1 shim trigger	Never
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\ep2d\_bold

TA: 3:22 PAT: 2 Voxel size: 0.7x0.7x5.0 mm Rel. SNR: 1.00 SIEMENS: ep2d\_bold

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	60
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	140 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	8780 ms
TE	50 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	T1

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	20
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	208
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

Special sat. None

Table position	H
Table position	0 mm
Inline Composing	Off

## System

T1	On
M2	Off
B4	Off
M3	Off
V32	Off

Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default

Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	140 mm
A >> P	140 mm
F >> H	448 mm

## Physio

1st Signal/Mode	None
-----------------	------

## BOLD

GLM Statistics	On
Dynamic t-maps	Off
Starting ignore meas	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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	752 Hz/Px
Free echo spacing	Off
Echo spacing	1.44 ms
<hr/>	
EPI factor	208
RF pulse type	Normal
Gradient mode	Normal

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\fl3d\_retro\_pt35mm\_FC\_ipat3\_24s

TA: 5:12 PAT: 3 Voxel size: 0.3x0.3x0.7 mm Rel. SNR: 1.00 SIEMENS: CV

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	On
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	On
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	L0.8 P42.3 F11.8
Orientation	Coronal
Phase enc. dir.	F >> H
Rotation	90.00 deg
Auto	On
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	16
FoV read	89 mm
FoV phase	100.0 %
Slice thickness	0.70 mm
TR	1969.44 ms
TE	16.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

Magn. preparation	None
Flip angle	8 deg
Fat suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8
Slice partial Fourier	6/8
Trajectory	Cartesian
View sharing	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	1
Reference scan mode	Integrated
Image Filter	Off

Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

## System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Off
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	130.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	L0.8 P42.3 F11.8
! Orientation	Coronal
! Rotation	0.00 deg
! F >> H	89 mm
! R >> L	89 mm
! A >> P	12 mm

## Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	24000 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	88
Phases	12
Tagging	None
Dark blood	Off
Cine	On
Dummy heartbeats	1
Inline ventricular function	Off
Resp. control	Off

## Inline

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

## Sequence

Introduction	Off
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Off
Bandwidth	149 Hz/Px
Flow comp.	Yes
Optimization	Min. TR
Allowed delay	0 s
Echo spacing	22.4 ms
Sequence type	Gre
Define	Segments
RF pulse type	Normal
Gradient mode	Normal*
Excitation	Slab-sel.
Flip angle mode	Constant
RF spoiling	On
Phase Enc. Rewinder	On



# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\AV\_ep2d\_bold\_sd1ipat2mb1\_pt35mm\_8ch\_hemloc

TA: 7:05 PAT: 2 Voxel size: 0.3x0.3x0.3 mm Rel. SNR: 1.00 USER: AV\_ep2d\_bold\_sd\_20140727

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	40
Dist. factor	0 %
Position	L0.8 P42.3 F11.8
Orientation	Coronal
Phase enc. dir.	F >> H
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	89 mm
FoV phase	75.0 %
Slice thickness	0.35 mm
TR	6000 ms
TE	38.0 ms
Multi-band accel. factor	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	65
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	44
Reference scan mode	GRE
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

Special sat. None

Table position	H
Table position	0 mm
Inline Composing	Off

## System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	125.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	L0.8 P42.3 F11.8
! Orientation	Coronal
! Rotation	0.00 deg
! F >> H	89 mm
! R >> L	89 mm
! A >> P	12 mm

## Physio

1st Signal/Mode	None
-----------------	------

## BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Starting ignore meas	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

## Sequence

Introduction	Off
Bandwidth	574 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	1.91 ms
<hr/>	
SIR accel. factor	1
EPI factor	192
Gradient mode	Normal
RF spoiling	Off
<hr/>	
Excite pulse duration	8320 us
Slice multiplier	1
Fake MB factor for SB	1
No. of interleaved TEs	0
RF pulse shape	1
EPI noise scans	0
EPI full reference scan	0
SENSE1 coil combine	Off
Log physiology to file	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Readout slice trace	Off
Disable ramp sampling	Off
PF omits higher k-space	Off
FFT scale factor	0.05
GRE iPAT ref. FA	12.0 deg
Send B1 shim trigger	Never
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\fl3d\_retro\_pt35mm\_FC\_ipat3\_24s\_TE24

TA: 7:36 PAT: 3 Voxel size: 0.3x0.3x0.4 mm Rel. SNR: 1.00 SIEMENS: CV

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	On
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	On
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	R0.6 P85.5 F12.5
Orientation	Coronal
Phase enc. dir.	F >> H
Rotation	90.00 deg
Auto	On
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	24
FoV read	89 mm
FoV phase	100.0 %
Slice thickness	0.35 mm
TR	2619.56 ms
TE	24.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B1-8

## Contrast

Magn. preparation	None
Flip angle	8 deg
Fat suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8
Slice partial Fourier	6/8
Trajectory	Cartesian
View sharing	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	1
Reference scan mode	Integrated
Image Filter	Off

Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

## System

B1	On
B2	On
B3	On
B4	On
B5	On
B6	On
B7	On
B8	On
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Off
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	130.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	R0.6 P85.5 F12.5
Orientation	Coronal
Rotation	90.00 deg
R >> L	89 mm
F >> H	89 mm
A >> P	9 mm

## Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	24000 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	86
Phases	9
Tagging	None
Dark blood	Off
Cine	On
Dummy heartbeats	1
Inline ventricular function	Off

Resp. control	Off
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#### Inline

Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

#### Sequence

Introduction	Off
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Off
Bandwidth	149 Hz/Px
Flow comp.	Slice/Read
Optimization	Min. TR
Allowed delay	0 s
Echo spacing	30.5 ms
Sequence type	Gre
Define	Segments
RF pulse type	Normal
Gradient mode	Normal*
Excitation	Slab-sel.
Flip angle mode	Constant
RF spoiling	On
Phase Enc. Rewinder	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\fl3d\_retro\_pt35mm\_FC\_ipat3\_24s\_TE16

TA: 7:36 PAT: 3 Voxel size: 0.3x0.3x0.4 mm Rel. SNR: 1.00 SIEMENS: CV

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	On
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
Auto open inline display	On
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off
POCS	Off

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	R0.6 P85.5 F12.5
Orientation	Coronal
Phase enc. dir.	F >> H
Rotation	90.00 deg
Auto	On
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	24
FoV read	89 mm
FoV phase	100.0 %
Slice thickness	0.35 mm
TR	2425.68 ms
TE	16.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B1-8

## System

B1	On
B2	On
B3	On
B4	On
B5	On
B6	On
B7	On
B8	On
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Off
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	130.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	R0.6 P85.5 F12.5
Orientation	Coronal
Rotation	90.00 deg
R >> L	89 mm
F >> H	89 mm
A >> P	9 mm

## Contrast

Magn. preparation	None
Flip angle	8 deg
Fat suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8
Slice partial Fourier	6/8
Trajectory	Cartesian
View sharing	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	1
Reference scan mode	Integrated
Image Filter	Off

## Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal ms
Captured cycle	-not set-
Acquisition window	24000 ms
Trigger pulse	1
Trigger delay	0 ms
Segments	108
Phases	9
Tagging	None
Dark blood	Off
Cine	On
Dummy heartbeats	1
Inline ventricular function	Off

Resp. control	Off
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#### Inline

Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On

#### Sequence

Introduction	Off
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Off
Bandwidth	149 Hz/Px
Flow comp.	Slice/Read
Optimization	Min. TR
Allowed delay	0 s
Echo spacing	22.5 ms
Sequence type	Gre
Define	Segments
RF pulse type	Normal
Gradient mode	Normal*
Excitation	Slab-sel.
Flip angle mode	Constant
RF spoiling	On
Phase Enc. Rewinder	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\AV\_ep2d\_bold\_sd1ipat2mb1\_pt35mm\_8ch\_ret

TA: 4:47 PAT: 2 Voxel size: 0.3x0.3x0.3 mm Rel. SNR: 1.00 USER: AV\_ep2d\_bold\_sd\_20140727

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	40
Dist. factor	0 %
Position	R9.3 P82.8 F8.5
Orientation	Coronal
Phase enc. dir.	F >> H
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	89 mm
FoV phase	75.0 %
Slice thickness	0.35 mm
TR	6000 ms
TE	38.0 ms
Multi-band accel. factor	1
Filter	None
Coil elements	B1-8

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	42
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	44
Reference scan mode	GRE
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

Special sat. None

Table position	H
Table position	0 mm
Inline Composing	Off

## System

B1	On
B2	On
B3	On
B4	On
B5	On
B6	On
B7	On
B8	On
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	130.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	R9.3 P82.8 F8.5
Orientation	Coronal
Rotation	90.00 deg
R >> L	89 mm
F >> H	67 mm
A >> P	14 mm

## Physio

1st Signal/Mode	None
-----------------	------

## BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Starting ignore meas	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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	574 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	1.91 ms
SIR accel. factor	1
EPI factor	192
Gradient mode	Normal
RF spoiling	Off
Excite pulse duration	8320 us
Slice multiplier	1
Fake MB factor for SB	1
No. of interleaved TEs	0
RF pulse shape	1
EPI noise scans	0
EPI full reference scan	0
SENSE1 coil combine	Off
Log physiology to file	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Readout slice trace	Off
Disable ramp sampling	Off
PF omits higher k-space	Off
FFT scale factor	0.05
GRE iPAT ref. FA	12.0 deg
Send B1 shim trigger	Never
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0



# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\AV\_ep2d\_bold\_sd2ipat2mb1\_pt35mm\_8ch\_ret

TA: 4:43 PAT: 2 Voxel size: 0.3x0.3x0.7 mm Rel. SNR: 1.00 USER: AV\_ep2d\_bold\_sd\_20140727

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	20
Dist. factor	0 %
Position	R9.3 P82.8 F8.5
Orientation	Coronal
Phase enc. dir.	F >> H
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	89 mm
FoV phase	75.0 %
Slice thickness	0.70 mm
TR	6000 ms
TE	38.0 ms
Multi-band accel. factor	1
Filter	None
Coil elements	B1-8

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	80 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	42
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	44
Reference scan mode	GRE
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

Special sat. None

Table position	H
Table position	0 mm
Inline Composing	Off

## System

B1	On
B2	On
B3	On
B4	On
B5	On
B6	On
B7	On
B8	On
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	130.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	R9.3 P82.8 F8.5
! Orientation	Coronal
! Rotation	90.00 deg
! R >> L	89 mm
! F >> H	67 mm
! A >> P	14 mm

## Physio

1st Signal/Mode	None
-----------------	------

## BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Starting ignore meas	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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	574 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	1.91 ms
SIR accel. factor	1
EPI factor	192
Gradient mode	Normal
RF spoiling	Off
Excite pulse duration	8320 us
Slice multiplier	2
Fake MB factor for SB	1
No. of interleaved TEs	0
RF pulse shape	1
EPI noise scans	0
EPI full reference scan	0
SENSE1 coil combine	Off
Log physiology to file	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Readout slice trace	Off
Disable ramp sampling	Off
PF omits higher k-space	Off
FFT scale factor	0.05
GRE iPAT ref. FA	12.0 deg
Send B1 shim trigger	Never
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Joseph\20170629\AV\_ep2d\_bold\_sd2ipat2mb1\_pt35mm\_8ch\_pt5slc\_ret

TA: 4:44 PAT: 2 Voxel size: 0.3x0.3x0.5 mm Rel. SNR: 1.00 USER: AV\_ep2d\_bold\_sd\_20140727

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	20
Dist. factor	40 %
Position	R9.3 P82.8 F8.5
Orientation	Coronal
Phase enc. dir.	F >> H
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	89 mm
FoV phase	75.0 %
Slice thickness	0.50 mm
TR	6000 ms
TE	38.0 ms
Multi-band accel. factor	1
Filter	None
Coil elements	B1-8

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	85 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	42
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	44
Reference scan mode	GRE
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

Special sat. None

Table position	H
Table position	0 mm
Inline Composing	Off

## System

B1	On
B2	On
B3	On
B4	On
B5	On
B6	On
B7	On
B8	On
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	130.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	R9.3 P82.8 F8.5
! Orientation	Coronal
! Rotation	90.00 deg
! R >> L	89 mm
! F >> H	67 mm
! A >> P	14 mm

## Physio

1st Signal/Mode	None
-----------------	------

## BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Starting ignore meas	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
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# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

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Meas[19]	Active
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Spatial filter	Off

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EPI noise scans	0
EPI full reference scan	0
SENSE1 coil combine	Off
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Invert RO/PE polarity	Off
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Readout slice trace	Off
Disable ramp sampling	Off
PF omits higher k-space	Off
FFT scale factor	0.05
GRE iPAT ref. FA	12.0 deg
Send B1 shim trigger	Never
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

## Table of contents

\\USER

Feinberglab

Joseph

20170629

AV\_ep2d\_bold\_sd1ipat2mb1\_pt35mm\_8ch\_hemloc  
fl2d10\_retro\_6slice\_36s\_FC\_FA8\_pulse  
fl3d\_retro\_pt35mm\_FC\_ipat3  
fl3d\_retro\_pt35mm\_FC  
AV\_ep2d\_bold\_sd2ipat2mb2\_pt35mm\_8ch\_hemloc  
AV\_ep2d\_bold\_sd2ipat2mb1\_pt35mm\_8ch\_hemloc  
ep2d\_bold  
fl3d\_retro\_pt35mm\_FC\_ipat3\_24s  
AV\_ep2d\_bold\_sd1ipat2mb1\_pt35mm\_8ch\_hemloc  
fl3d\_retro\_pt35mm\_FC\_ipat3\_24s\_TE24  
fl3d\_retro\_pt35mm\_FC\_ipat3\_24s\_TE16  
AV\_ep2d\_bold\_sd1ipat2mb1\_pt35mm\_8ch\_ret  
AV\_ep2d\_bold\_sd2ipat2mb1\_pt35mm\_8ch\_ret  
AV\_ep2d\_bold\_sd2ipat2mb1\_pt35mm\_8ch\_pt5slc\_ret