

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\localizer

TA: 0:13

PAT: Off

Voxel size: 1.1x1.0x7.0 mm

Rel. SNR: 1.00

SIEMENS: gre

## 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	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	7.0 mm
TR	8.6 ms
TE	4.00 ms
Averages	2
Concatenations	3
Filter	Elliptical filter
Coil elements	V32

## Contrast

TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	20 deg
Fat suppr.	None
Water suppr.	None
SWI	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
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Phase resolution	90 %
Phase partial Fourier	Off
Interpolation	On

PAT mode	None
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Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Geometry

Multi-slice mode	Sequential
Series	Interleaved

Saturation mode	Standard
Special sat.	None

Table position	H
Table position	0 mm
Inline Composing	Off

Tim CT mode	Off
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## System

T1	Off
M2	Off
B4	Off
M3	Off
V32	On
Positioning mode	REF
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	Tune up
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	350 mm
A >> P	263 mm
F >> H	350 mm

## Physio

1st Signal/Mode	None
Segments	1

Tagging	None
Dark blood	Off

Resp. control	Off
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## Inline

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Subtract	Off
Liver registration	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
<hr/>	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
<hr/>	
MapIt	None
Contrasts	1

## Sequence

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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\localizer\_200V

TA: 0:16 PAT: 2 Voxel size: 1.2x1.1x3.0 mm Rel. SNR: 1.00 SIEMENS: gre

## 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

Phase resolution	90 %
Phase partial Fourier	6/8
Interpolation	On
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Routine

Slice group 1	
Slices	5
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	5
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Slice group 3	
Slices	5
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	10.0 ms
TE	3.00 ms
Averages	1
Concatenations	15
Filter	None
Coil elements	B4;M2,3;T1

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off
Tim CT mode	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	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	200.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

## Contrast

TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	10 deg
Fat suppr.	None
Water suppr.	None
SWI	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
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## Physio

1st Signal/Mode	None
Segments	1
Tagging	None
Dark blood	Off
Resp. control	Off

## Inline

Subtract	Off
Liver registration	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
<hr/>	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
<hr/>	
MapIt	None
Contrasts	1

## Sequence

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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\M3F3P2\_flashref

TA: 5.5 s PAT: 2 Voxel size: 1.6x1.6x3.0 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sbmb\_cte\_ipat\_fov\_asym\_fl

## 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	24
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
TR	500 ms
TE	16 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	8
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	128
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	Off
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Ascending

## Special sat.

Table position	H
Table position	0 mm
Inline Composing	Off

## System

T1	On
M2	On
B4	On
M3	On
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	200 mm
A >> P	200 mm
F >> H	72 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

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

## Sequence

Introduction	Off
Asymmetric echo	Off
Bandwidth	2298 Hz/Px
Free echo spacing	Off
Echo spacing	0.63 ms
<hr/>	
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
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RF90 duration	5120
MB Number	3
DummyScan Number	1
FOV Shift Number	3
Shift K0 Center	1
Every Other Slice	1
SER Number	1
2nd RFOff(1)	0
Polarity(1)	0
Dephase(0)	0
Echo Distance	1.00
MB Measurements	4
Ramp On	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\M3F3P2\_SAT\_flashref

TA: 3.8 s PAT: 2 Voxel size: 1.6x1.6x3.0 mm Rel. SNR: 1.00 USER: ep2d\_venc\_ms\_sbmb\_SAT\_flashref

## 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	3
Dist. factor	600 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	272 ms
TE	30.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Flip angle	15 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	20
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	128
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	Off
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Ascending

## Sat. region 1

Thickness	50 mm
Position	Isocenter
Orientation	Coronal

## Sat. region 2

Thickness	50 mm
Position	L0.0 P60.0 H0.0
Orientation	Coronal
Special sat.	None

## Table position

Table position	H
Table position	0 mm
Inline Composing	Off

## System

T1	On
M2	On
B4	On
M3	On
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	200 mm
A >> P	200 mm
F >> H	45 mm

## Physio

1st Signal/Mode	None
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## Angio

Flow mode	Single dir.
Encodings	1
Velocity enc.	5 cm/s
Direction	Through plane
Magnitude sum	Off

## Sequence

Introduction	Off
Bandwidth	2790 Hz/Px
Free echo spacing	Off
Echo spacing	0.82 ms
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
RF90 duration	5120
MB Number	3
DummyScan Number	1

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FOV Shift Number	3
Shift K0 Center	1
Every Other Slice	1
SER Number	1
Venc Repetition	10
Spoil factor	5
Skew Direction	0
Dual On(1)	1
Venc Type(0off,1+,-,20+,3on)	1



# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\EPI\_P3Q2\_backup\_CAnew

TA: 1:53 PAT: 6 Voxel size: 3.1x3.1x3.0 mm Rel. SNR: 1.00 USER: ep3d\_epi\_backup\_CAnew

## 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

Slab group 1	
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	20.0 %
Slices per slab	20
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	3 mm
TR	10 ms
TE	1.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;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	64
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8
Slice partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	2
Ref. lines 3D	16
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	On
B4	On
M3	On
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	200 mm
A >> P	200 mm
F >> H	60 mm

## Physio

1st Signal/Mode	None
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## 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

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Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Dimension	3D
Bandwidth	4882 Hz/Px
Free echo spacing	Off
Echo spacing	0.53 ms
<hr/>	
EPI factor	64
RF pulse type	Normal
Gradient mode	Fast
<hr/>	
RF90 duration	5120
MB Number	1
DummyScan Number	1
TR Extent(us)	0
BwTimeProd	52
PhaseOffset	0
FOV Shift	1
Polarity	0
Interleaved	0

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\EVI\_P3Q2\_BACKUP\_CAnew

TA: 2:23 PAT: 6 Voxel size: 3.1x3.1x3.0 mm Rel. SNR: 1.00 USER: ep3d\_evi\_backup\_CAnew

## 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

Slab group 1	
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	20.0 %
Slices per slab	20
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	3 mm
TR	10 ms
TE	1.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Flip angle	15 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	20
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	2
Ref. lines 3D	16
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On

Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Ascending
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	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	200 mm
A >> P	200 mm
F >> H	60 mm

## Physio

1st Signal/Mode	None
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## 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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Dimension	3D
Bandwidth	4882 Hz/Px
Free echo spacing	Off
Echo spacing	0.53 ms
<hr/>	
EPI factor	64
RF pulse type	Normal
Gradient mode	Fast
<hr/>	
RF90 duration	5120
MB Number	1
DummyScan Number	1
TR Extent(us)	0
BwTimeProd	52
PhaseOffset	0
FOV Shift	0
Polarity	0
Interleaved	0

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\M3F1P4\_flashref\_fa60

TA: 0:16 PAT: 4 Voxel size: 1.5x1.5x1.5 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sbmb\_cte\_ipat\_fov\_asym\_flg

## 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	48
Dist. factor	0 %
Position	L1.2 A21.2 H18.8
Orientation	T > C-15.0
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	1130 ms
TE	16 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Flip angle	60 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	8
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	4
Ref. lines PE	24
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Ascending

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	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	L1.2 A21.2 H18.8
! Orientation	T > C-15.0
! Rotation	0.00 deg
! R >> L	192 mm
! A >> P	192 mm
! F >> H	72 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
Asymmetric echo	Off
Bandwidth	1776 Hz/Px
Free echo spacing	Off
Echo spacing	0.69 ms
<hr/>	
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
<hr/>	
RF90 duration	5120
MB Number	3
DummyScan Number	1
FOV Shift Number	1
Shift K0 Center	1
Every Other Slice	1
SER Number	1
2nd RFOff(1)	0
Polarity(1)	0
Dephase(0)	0
Echo Distance	1.00
MB Measurements	4
Ramp On	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\M2F4P4\_flashref\_fa60

TA: 0:15 PAT: 4 Voxel size: 1.5x1.5x1.5 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sbmb\_cte\_ipat\_fov\_asym\_flg

## 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	48
Dist. factor	0 %
Position	L1.2 A21.2 H18.8
Orientation	T > C-15.0
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	1130 ms
TE	16 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Flip angle	60 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	7
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	4
Ref. lines PE	24
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Ascending

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	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	L1.2 A21.2 H18.8
! Orientation	T > C-15.0
! Rotation	0.00 deg
! R >> L	192 mm
! A >> P	192 mm
! F >> H	72 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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Meas[20]	Active
Motion correction	Off
Spatial filter	Off

## Sequence

Introduction	Off
Asymmetric echo	Off
Bandwidth	1776 Hz/Px
Free echo spacing	Off
Echo spacing	0.69 ms
<hr/>	
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
<hr/>	
RF90 duration	5120
MB Number	2
DummyScan Number	1
FOV Shift Number	4
Shift K0 Center	1
Every Other Slice	1
SER Number	1
2nd RFoff(1)	0
Polarity(1)	0
Dephase(0)	0
Echo Distance	1.00
MB Measurements	4
Ramp On	On



## SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\M4F4P4\_flashref\_fa60

TA: 0:17 PAT: 4 Voxel size: 1.5x1.5x1.5 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sbmb\_cte\_ipat\_fov\_asym\_flk

## 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	48
Dist. factor	0 %
Position	L1.2 A21.2 H18.8
Orientation	T > C-15.0
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.50 mm
TR	1130 ms
TE	16 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Flip angle	60 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	9
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	4
Ref. lines PE	24
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Ascending

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	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	L1.2 A21.2 H18.8
Orientation	T > C-15.0
Rotation	0.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	72 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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

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

## Sequence

Introduction	Off
Asymmetric echo	Off
Bandwidth	1776 Hz/Px
Free echo spacing	Off
Echo spacing	0.73 ms
<hr/>	
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
<hr/>	
RF90 duration	5120
MB Number	4
DummyScan Number	1
FOV Shift Number	4
Shift K0 Center	1
Every Other Slice	1
SER Number	1
2nd RFOff(1)	0
Polarity(1)	0
Dephase(0)	0
Echo Distance	1.00
MB Measurements	4
Ramp On	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\ep2d\_venc5\_m3s\_sbmb\_SAT

TA: 1:00 PAT: 2 Voxel size: 1.7x1.7x5.0 mm Rel. SNR: 1.00 USER: ep2d\_venc\_ms\_sbmb\_SAT

## 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	3
Dist. factor	800 %
Position	L1.2 A5.4 F4.2
Orientation	T > C-15.0
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	2000 ms
TE	39.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;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	128
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	Off
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Ascending

## Sat. region 1

Thickness	50 mm
Position	L0.0 A123.8 H33.7
Orientation	C > T15.2

## Sat. region 2

Thickness	50 mm
Position	L0.0 P120.9 F33.0
Orientation	C > T15.2
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	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	L1.2 A5.4 F4.2
! Orientation	T > C-15.0
! Rotation	0.00 deg
! R >> L	220 mm
! A >> P	220 mm
! F >> H	95 mm

## Physio

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

## Angio

Flow mode	Single dir.
Encodings	1
Velocity enc.	5 cm/s
Direction	Through plane
Magnitude sum	Off

## Sequence

Introduction	Off
Bandwidth	2790 Hz/Px
Free echo spacing	Off
Echo spacing	0.78 ms
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
RF90 duration	5120
MB Number	3
DummyScan Number	5

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

FOV Shift Number	1
Shift K0 Center	1
Every Other Slice	1
SER Number	1
Venc Repetition	10
Spoil factor	5
Skew Direction	0
DualBand Sat	0
FOV Dir	0
Venc Type(0off,1+-,20+,3on,4 1 00++)	

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\m2p4\_1iso\_flashref

TA: 0:18 PAT: 4 Voxel size: 1.0x1.0x1.0 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sbmb\_cte\_ipat\_fov\_asym\_flg

## 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	48
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	68.8 %
Slice thickness	1.00 mm
TR	1400 ms
TE	22 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Flip angle	40 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	7
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	192
Phase resolution	96 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	4
Ref. lines PE	24
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Ascending

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	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	192 mm
A >> P	132 mm
F >> H	72 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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Meas[20]	Active
Motion correction	Off
Spatial filter	Off

## Sequence

Introduction	Off
Asymmetric echo	Off
Bandwidth	1736 Hz/Px
Free echo spacing	Off
Echo spacing	0.92 ms
<hr/>	
EPI factor	127
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
<hr/>	
RF90 duration	5120
MB Number	2
DummyScan Number	1
FOV Shift Number	3
Shift K0 Center	1
Every Other Slice	1
SER Number	1
2nd RFOff(1)	0
Polarity(1)	0
Dephase(0)	0
Echo Distance	1.00
MB Measurements	4
Ramp On	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\m2p4f1\_1iso\_flashref

TA: 0:18 PAT: 4 Voxel size: 1.5x1.0x1.0 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sbmb\_cte\_ipat\_fov\_asym\_flg

## 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	48
Dist. factor	50 %
Position	L1.2 A21.2 H18.8
Orientation	T > C-15.0
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	1400 ms
TE	16 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Flip angle	40 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	7
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	192
Phase resolution	66 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	4
Ref. lines PE	24
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Ascending

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	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	L1.2 A21.2 H18.8
! Orientation	T > C-15.0
! Rotation	0.00 deg
! R >> L	192 mm
! A >> P	192 mm
! F >> H	72 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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Meas[20]	Active
Motion correction	Off
Spatial filter	Off

## Sequence

Introduction	Off
Asymmetric echo	Off
Bandwidth	1302 Hz/Px
Free echo spacing	Off
Echo spacing	0.89 ms
<hr/>	
EPI factor	127
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
<hr/>	
RF90 duration	5120
MB Number	2
DummyScan Number	1
FOV Shift Number	1
Shift K0 Center	1
Every Other Slice	1
SER Number	1
2nd RFOff(1)	0
Polarity(1)	0
Dephase(0)	0
Echo Distance	1.00
MB Measurements	4
Ramp On	On



# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\m2p4f2\_1iso\_flashref

TA: 0:18 PAT: 4 Voxel size: 1.5x1.0x1.0 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sbmb\_cte\_ipat\_fov\_asym\_flg

## 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	48
Dist. factor	50 %
Position	L1.2 A21.2 H18.8
Orientation	T > C-15.0
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	1400 ms
TE	16 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Flip angle	40 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	7
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	192
Phase resolution	66 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	4
Ref. lines PE	24
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Ascending

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	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	L1.2 A21.2 H18.8
! Orientation	T > C-15.0
! Rotation	0.00 deg
! R >> L	192 mm
! A >> P	192 mm
! F >> H	72 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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Meas[20]	Active
Motion correction	Off
Spatial filter	Off

## Sequence

Introduction	Off
Asymmetric echo	Off
Bandwidth	1302 Hz/Px
Free echo spacing	Off
Echo spacing	0.89 ms
<hr/>	
EPI factor	127
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
<hr/>	
RF90 duration	5120
MB Number	2
DummyScan Number	1
FOV Shift Number	2
Shift K0 Center	1
Every Other Slice	1
SER Number	1
2nd RFoff(1)	0
Polarity(1)	0
Dephase(0)	0
Echo Distance	1.00
MB Measurements	4
Ramp On	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\ep2d\_fid\_sbmb\_cte\_ipat\_fov\_asym\_pcasl\_DE

TA: 0:44 PAT: Off Voxel size: 3.9x3.9x5.0 mm Rel. SNR: 1.00 USER: ep2d\_fid\_sbmb\_cte\_ipat\_fov\_asym\_pcasl\_DE

## 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	1
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	500 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	2910 ms
TE 1	98 ms
TE 2	278 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	V32

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	15
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Ascending
Special sat.	None
Table position	H

Table position	0 mm
Inline Composing	Off

## System

T1	Off
M2	Off
B4	Off
M3	Off
V32	On
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
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	500 mm
A >> P	500 mm
F >> H	5 mm

## Physio

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

## Perf

GBP	On
PBP	On
TTP	On
Original images	On
Starting ignore meas	2

## Sequence

Introduction	Off
Contrasts	2
Bandwidth	752 Hz/Px
Free echo spacing	Off
Echo spacing	1.4 ms
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
RF90 duration	5120
MB Number	1
DummyScan Number	1
FOV Shift Number	1
Shift K0 Center	1
Every Other Slice	1
SER Number	1
2nd RFOff(1)	0
Polarity(1)	0
Label Offset	80 mm
Echo Distance	1.00
MB Measurements	0

| Ramp On Off

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\M2F4P4\_flashref\_fa60

TA: 6:30 PAT: 4 Voxel size: 0.8x0.8x0.8 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sbmb\_cte\_ipat\_fov\_asym\_flg

## 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	12
Dist. factor	0 %
Position	L1.2 A21.2 H18.8
Orientation	T > C-15.0
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	50.0 %
Slice thickness	0.75 mm
TR	30000 ms
TE	200 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Flip angle	60 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	7
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	4
Ref. lines PE	48
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Ascending

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	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	L1.2 A21.2 H18.8
! Orientation	T > C-15.0
! Rotation	0.00 deg
! R >> L	192 mm
! A >> P	192 mm
! F >> H	72 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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

Meas[20]	Active
Motion correction	Off
Spatial filter	Off

## Sequence

Introduction	Off
Asymmetric echo	Off
Bandwidth	976 Hz/Px
Free echo spacing	Off
Echo spacing	1.33 ms
<hr/>	
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
<hr/>	
RF90 duration	5120
MB Number	2
DummyScan Number	1
FOV Shift Number	4
Shift K0 Center	1
Every Other Slice	1
SER Number	1
2nd RFoff(1)	0
Polarity(1)	0
Dephase(0)	0
Echo Distance	1.00
MB Measurements	4
Ramp On	On

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\ep2d\_M2P4\_OVS\_flash

TA: 1:40 PAT: 4 Voxel size: 0.8x0.8x5.0 mm Rel. SNR: 1.00 USER: ep2d\_bold\_OVS\_flash

## 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	12
Dist. factor	200 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	200 mm
FoV phase	81.3 %
Slice thickness	5.00 mm
TR	9120 ms
TE	379 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	4
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	Ascending

## Sat. region 1

Thickness	50 mm
Position	Isocenter
Orientation	Coronal

## Sat. region 2

Thickness	50 mm
Position	L0.0 P60.0 H0.0
Orientation	Coronal
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	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	200 mm
A >> P	163 mm
F >> H	170 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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

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	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Asymmetric echo	Off
Bandwidth	1220 Hz/Px
Free echo spacing	Off
Echo spacing	0.98 ms
<hr/>	
EPI factor	208
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
<hr/>	
RF90 duration	5120
MB Number	2
DummyScan Number	1
FOV Shift Number	2
SkewType(1ff)	0
OVS flash(1on)	1
SER Number	1
Spoil factor	5
Skew Direction	1
Sat RF90 duration	5120
Dual On(1)	1
Echo Distance	1.00
MB Measurements	2
Ramp On	On



# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

\\USER\Feinberglab\Test\ICE-FLASH\ep2d\_M2P4\_OVS\_flash\_D1

TA: 0:22 PAT: 4 Voxel size: 0.9x0.9x3.0 mm Rel. SNR: 1.00 USER: ep2d\_bold\_OVS\_flash

## 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	12
Dist. factor	200 %
Position	L1.2 A16.4 H26.2
Orientation	T > C-15.0
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	220 mm
FoV phase	81.3 %
Slice thickness	3.00 mm
TR	2000 ms
TE	23 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

## Contrast

MTC	Off
Flip angle	50 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	4
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	Ascending

## Sat. region 1

Thickness	50 mm
Position	L0.0 A99.0 H0.0
Orientation	Coronal

## Sat. region 2

Thickness	50 mm
Position	L0.0 P60.0 H0.0
Orientation	Coronal
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	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
! Position	L1.2 A21.2 H18.8
! Orientation	T > C-15.0
! Rotation	0.00 deg
! R >> L	192 mm
! A >> P	192 mm
! F >> H	72 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

# SIEMENS MAGNETOM Investigational\_Device\_7T syngo MR B17

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
Asymmetric echo	Off
Bandwidth	1220 Hz/Px
Free echo spacing	Off
Echo spacing	0.94 ms
<hr/>	
EPI factor	208
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On
<hr/>	
RF90 duration	5120
MB Number	2
DummyScan Number	1
FOV Shift Number	2
SkewType(1ff)	0
OVS flash(1on)	1
SER Number	1
Spoil factor	5
Skew Direction	1
Sat RF90 duration	5120
Dual On(1)	1
Echo Distance	1.00
MB Measurements	2
Ramp On	On