

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CMIHBN\V1\Abdomen Localizer

TA: 0:31

PAT: Off

Voxel size: 2.0x1.6x7.0 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	On
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	single

Phase resolution	80 %
Phase partial Fourier	Off
Interpolation	On
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	50 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	50 %
Position	L21.0 P0.0 H0.0
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	13 %
FoV read	400 mm
FoV phase	100.0 %
Slice thickness	7.0 mm
TR	7.0 ms
TE	2.60 ms
Averages	2
Concatenations	9
Filter	Distortion Corr.(2D), Elliptical filter
Coil elements	BO1,2;SP2-4

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
BO1	On
BO2	On
SP4	On
SP2	On
SP8	Off
SP6	Off
SP3	On
SP1	Off
SP7	Off
SP5	Off
Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
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## Physio

1st Signal/Mode	None
Segments	1

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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\Abdomen Dixon Breathhold

TA: 0:11

PAT: 2

Voxel size: 2.2x1.6x5.0 mm

Rel. SNR: 1.00

SIEMENS: fl3d\_vibe

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	Off
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	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	40
FoV read	400 mm
FoV phase	78.1 %
Slice thickness	5.00 mm
TR	6.82 ms
TE 1	2.38 ms
TE 2	4.76 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1,2;SP2,3

## Contrast

Flip angle	10.0 deg
Fat suppr.	None
Water suppr.	None
Dixon	Water + fat images
Save original images	On
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	70 %
Slice resolution	60 %
Phase partial Fourier	Off
Slice partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off

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

## Geometry

Multi-slice mode	Sequential
Series	Ascending
Special sat.	Parallel F/H
Gap	10.0 mm
Thickness	60 mm

## System

Body	Off
BO1	On
BO2	On
SP4	Off
SP2	On
SP8	Off
SP6	Off
SP3	On
SP1	Off
SP7	Off
SP5	Off
Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	400 mm
A >> P	313 mm
F >> H	200 mm

## Physio

1st Signal/Mode	None
Resp. control	Breath-hold

## Inline

3D centric reordering	Off
Time to center	5.2 s
Subtract	Off
Liver registration	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Strong
Contrasts	2
Bandwidth 1	480 Hz/Px
Bandwidth 2	480 Hz/Px
Readout mode	Monopolar
Optimization	In phase
<hr/>	
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\Brain Localizer

TA: 0:26

PAT: Off

Voxel size: 1.4x1.0x8.0 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	On
Start measurements	single

Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On

PAT mode	None
Matrix Coil Mode	Auto (CP)

Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
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## Physio

1st Signal/Mode	None
Segments	1

# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\Motion Training

TA: 1:35

PAT: Off

Voxel size: 3.0x3.0x10.0 mm

Rel. SNR: 1.00

USER: cmrr\_mbep2d\_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	9
Dist. factor	100 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	10.00 mm
TR	130 ms
TE	7.94 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	700
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	170 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

# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2442 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.51 ms
<hr/>	
EPI factor	64
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\Brain Localizer

TA: 0:26

PAT: Off

Voxel size: 1.4x1.0x8.0 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	On
Start measurements	single

Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On

PAT mode	None
Matrix Coil Mode	Auto (CP)

Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
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## Physio

1st Signal/Mode	None
Segments	1

# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\Resting State 2.5mm

TA: 10:18 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	420
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\Field Map

TA: 1:05

Voxel size: 3.0x3.0x3.0 mm

Rel. SNR: 1.00

SIEMENS: gre\_field\_mapping

## 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	42
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	492 ms
TE 1	3.28 ms
TE 2	8.04 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	None
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	192 mm
F >> H	126 mm

## Sequence

Introduction	On
Dimension	2D
Asymmetric echo	Allowed
Contrasts	2
Bandwidth	260 Hz/Px
Flow comp.	Yes
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\T1W MEMPRAGE - SAG

TA: 6:32 PAT: 2 Voxel size: 1.0x1.0x1.0 mm Rel. SNR: 1.00 USER: tfl\_mgh\_multiecho

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
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	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	2730 ms
TE 1	1.64 ms
TE 2	3.5 ms
TE 3	5.36 ms
TE 4	7.22 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

## Contrast

Magn. preparation	Non-sel. IR
TI	1000 ms
Flip angle	7.0 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated

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

## Geometry

Multi-slice mode	Single shot
Series	Interleaved

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	Sagittal
Rotation	0.00 deg
F >> H	256 mm
A >> P	256 mm
R >> L	176 mm

## Physio

1st Signal/Mode	None
Dark blood	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

# SIEMENS MAGNETOM Avanto syngo MR B17

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	4
Bandwidth 1	651 Hz/Px
Bandwidth 2	651 Hz/Px
Bandwidth 3	651 Hz/Px
Bandwidth 4	651 Hz/Px
Flow comp. 1	No
Flow comp. 2	No
Flow comp. 3	No
Flow comp. 4	No
Echo spacing	9.6 ms
<hr/>	
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
<hr/>	
Readout polarity	Positive
Readout trajectory	Bipolar
Add. scale factor	4.0
Gradient spoiling	Siemens
Gradient moment factor	1
Siemens reconstruction	On
Save raw k-space data	Off
Averaging	RMS

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\DWI B=0 PA - AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	180.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us



## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\DKI 64 Directions AP 3 WEIGHTS- AX

TA: 9:59 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	4500 ms
TE	93.8 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled

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

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

PAT mode	None
Matrix Coil Mode	Auto (CP)

Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	144 mm

## Physio

1st Signal/Mode	None
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## Diff

Diffusion mode	MDDW
Diff. weightings	3
b-value 1	0 s/mm <sup>2</sup>
b-value 2	1000 s/mm <sup>2</sup>
b-value 3	2000 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	On
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms

EPI factor	96
Gradient mode	Fast
RF spoiling	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

Excite pulse duration	2560 us
Refocus pulse duration	5120 us
Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\DWI B=0 PA- AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	180.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	144 mm

## Physio

1st Signal/Mode	None
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## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\DWI B=0 AP- AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	144 mm

## Physio

1st Signal/Mode None

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\Despot 1 -SAG

TA: 5:00

Voxel size: 1.8x1.7x1.8 mm

Rel. SNR: 1.00

USER: despot1\_baby

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	96
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.80 mm
TR	5.2 ms
TE	2.4 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	BC

## Contrast

Flip angle	16 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	8
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	95 %
Slice resolution	90 %
Phase partial Fourier	6/8
Slice partial Fourier	7/8
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off

B1 filter	Off
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending

## System

Body	On
HE2	Off
HE4	Off
HE1	Off
HE3	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default

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
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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	On
Contrasts	1
Bandwidth	350 Hz/Px
RF pulse type	Low SAR
Gradient mode	Fast
RF spoiling	On



## SIEMENS MAGNETOM Avanto syngo MR B17

IR Mode	Off
Dummy pulses	300
Incremented FA Mode	On
mcDESPOT FA Mode	On
Number of FA Increments	8
RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Spoil Increment	37.8 deg
Gradient Spoiler Factor	0.3
Baby Mode	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\IR SPGR -SAG

TA: 0:53

Voxel size: 1.7x1.7x3.6 mm

Rel. SNR: 1.00

USER: despot1\_baby

## Properties

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

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	48
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	3.60 mm
TR	5.3 ms
TE	2.4 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	BC

## Contrast

Flip angle	5 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	6/8
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
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## Series

## Ascending

## System

Body	On
HE2	Off
HE4	Off
HE1	Off
HE3	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default

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
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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	On
Contrasts	1
Bandwidth	350 Hz/Px
RF pulse type	Low SAR
Gradient mode	Fast
RF spoiling	On
IR Mode	On
Inversion time	400 ms
RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Spoil Increment	37.8 deg
Gradient Spoiler Factor	0.3
Baby Mode	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\Despot 2 -SAG

TA: 8:38

Voxel size: 1.8x1.7x1.8 mm

Rel. SNR: 1.00

USER: despot2\_baby2

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	96
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.80 mm
TR	5.40 ms
TE	2.700 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	BC

## Contrast

Flip angle	60 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	16
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	95 %
Slice resolution	90 %
Phase partial Fourier	5/8

Slice partial Fourier	7/8
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	On
Intensity	Medium
Slope	48
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending

## System

Body	On
HE2	Off
HE4	Off
HE1	Off
HE3	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
-----------------	------

## 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
--------------	-----

## SIEMENS MAGNETOM Avanto syngo MR B17

Dimension	3D
Elliptical scanning	Off
Contrasts	1
Bandwidth	350 Hz/Px
<hr/>	
RF pulse type	Low SAR
Gradient mode	Fast
RF spoiling	Off
<hr/>	
IR Mode	Off
Dummy pulses	300
Incremented FA Mode	On
mcDESPOT FA Mode	On
Number of FA Increments	8
RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Phase Increment	180 deg
Baby Mode	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\MT OFF -SAG

TA: 6:41

PAT: 2

Voxel size: 1.0x1.0x1.0 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	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	30 ms
TE	11.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
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
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off

Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Inline

Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	On
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	350 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\MT ON -SAG

TA: 6:41

PAT: 2

Voxel size: 1.0x1.0x1.0 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	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	30 ms
TE	11.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	On
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
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
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off

Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Inline

Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	On
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	350 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HBN\V1\T2 FLAIR

TA: 2:44

PAT: 2

Voxel size: 0.9x0.9x5.0 mm

Rel. SNR: 1.00

SIEMENS: tse

## 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	30 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	230 mm
FoV phase	87.5 %
Slice thickness	5.0 mm
TR	9000 ms
TE	89.0 ms
Averages	1
Concatenations	2
Filter	Normalize, Elliptical filter
Coil elements	HEA;HEP

## Contrast

TD	0.0 ms
MTC	Off
Magn. preparation	Slice-sel. IR
T1	2500 ms
Freeze suppressed tissue	On
Flip angle	150 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	On
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	31
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off

Distortion Corr.	Off
Prescan Normalize	Off
Normalize	On
Intensity	Medium
Cut off	20
Width	4
Unfiltered images	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	90.00 deg
A >> P	230 mm
R >> L	202 mm
F >> H	155 mm

## Physio

1st Signal/Mode	None
Dark blood	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

## SIEMENS MAGNETOM Avanto syngo MR B17

### Sequence

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	On
Contrasts	1
Bandwidth	190 Hz/Px
Flow comp.	No
Allowed delay	30 s
Echo spacing	9.92 ms
<hr/>	
Define	Turbo factor
Turbo factor	16
Echo trains per slice	8
RF pulse type	Normal
Gradient mode	Normal

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\Brain Localizer

TA: 0:26

PAT: Off

Voxel size: 1.4x1.0x8.0 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	On
Start measurements	single

Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
-----------------	-----

## Physio

1st Signal/Mode	None
Segments	1

# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\Motion Training

TA: 1:35 PAT: Off Voxel size: 3.0x3.0x10.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	9
Dist. factor	100 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	10.00 mm
TR	130 ms
TE	7.94 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	700
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 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
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active

# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2442 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.51 ms
<hr/>	
EPI factor	64
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\Brain Localizer

TA: 0:26

PAT: Off

Voxel size: 1.4x1.0x8.0 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	On
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On

PAT mode	None
Matrix Coil Mode	Auto (CP)

Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
-----------------	-----

## Physio

1st Signal/Mode	None
Segments	1

# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\Resting State 2.5mm

TA: 10:18 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	420
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\Field Map

TA: 1:05

Voxel size: 3.0x3.0x3.0 mm

Rel. SNR: 1.00

SIEMENS: gre\_field\_mapping

## 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	42
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	492 ms
TE 1	3.28 ms
TE 2	8.04 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	None
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	192 mm
F >> H	126 mm

## Sequence

Introduction	On
Dimension	2D
Asymmetric echo	Allowed
Contrasts	2
Bandwidth	260 Hz/Px
Flow comp.	Yes
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\T1W MEMPRAGE - SAG

TA: 6:32 PAT: 2 Voxel size: 1.0x1.0x1.0 mm Rel. SNR: 1.00 USER: tfl\_mgh\_multiecho

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
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	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	2730 ms
TE 1	1.64 ms
TE 2	3.5 ms
TE 3	5.36 ms
TE 4	7.22 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

## Contrast

Magn. preparation	Non-sel. IR
TI	1000 ms
Flip angle	7.0 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated

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

## Geometry

Multi-slice mode	Single shot
Series	Interleaved

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	Sagittal
Rotation	0.00 deg
F >> H	256 mm
A >> P	256 mm
R >> L	176 mm

## Physio

1st Signal/Mode	None
Dark blood	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

# SIEMENS MAGNETOM Avanto syngo MR B17

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	4
Bandwidth 1	651 Hz/Px
Bandwidth 2	651 Hz/Px
Bandwidth 3	651 Hz/Px
Bandwidth 4	651 Hz/Px
Flow comp. 1	No
Flow comp. 2	No
Flow comp. 3	No
Flow comp. 4	No
Echo spacing	9.6 ms
<hr/>	
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
<hr/>	
Readout polarity	Positive
Readout trajectory	Bipolar
Add. scale factor	4.0
Gradient spoiling	Siemens
Gradient moment factor	1
Siemens reconstruction	On
Save raw k-space data	Off
Averaging	RMS

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\DWI B=0 PA - AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	180.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\DKI 64 Directions AP 3 WEIGHTS- AX

TA: 9:59 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	4500 ms
TE	93.8 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	3
b-value 1	0 s/mm <sup>2</sup>
b-value 2	1000 s/mm <sup>2</sup>
b-value 3	2000 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	On
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off



## SIEMENS MAGNETOM Avanto syngo MR B17

Excite pulse duration	2560 us
Refocus pulse duration	5120 us
Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\DWI B=0 PA- AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	180.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\DWI B=0 AP- AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\Despot 1 -SAG

TA: 5:00

Voxel size: 1.8x1.7x1.8 mm

Rel. SNR: 1.00

USER: despot1\_baby

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	96
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.80 mm
TR	5.2 ms
TE	2.4 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	BC

## Contrast

Flip angle	16 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	8
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	95 %
Slice resolution	90 %
Phase partial Fourier	6/8
Slice partial Fourier	7/8
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off

B1 filter	Off
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending

## System

Body	On
HE2	Off
HE4	Off
HE1	Off
HE3	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default

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
-----------------	------

## 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	On
Contrasts	1
Bandwidth	350 Hz/Px
RF pulse type	Low SAR
Gradient mode	Fast
RF spoiling	On

## SIEMENS MAGNETOM Avanto syngo MR B17

IR Mode	Off
Dummy pulses	300
Incremented FA Mode	On
mcDESPOT FA Mode	On
Number of FA Increments	8
RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Spoil Increment	37.8 deg
Gradient Spoiler Factor	0.3
Baby Mode	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\IR SPGR -SAG

TA: 0:53

Voxel size: 1.7x1.7x3.6 mm

Rel. SNR: 1.00

USER: despot1\_baby

## Properties

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

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	48
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	3.60 mm
TR	5.3 ms
TE	2.4 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	BC

## Contrast

Flip angle	5 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	6/8
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
------------------	------------

## Series

## Ascending

## System

Body	On
HE2	Off
HE4	Off
HE1	Off
HE3	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default

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
-----------------	------

## 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	On
Contrasts	1
Bandwidth	350 Hz/Px
RF pulse type	Low SAR
Gradient mode	Fast
RF spoiling	On
IR Mode	On
Inversion time	400 ms
RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Spoil Increment	37.8 deg
Gradient Spoiler Factor	0.3
Baby Mode	Off



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\Despot 2 -SAG

TA: 8:38

Voxel size: 1.8x1.7x1.8 mm

Rel. SNR: 1.00

USER: despot2\_baby2

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	96
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.80 mm
TR	5.40 ms
TE	2.700 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	BC

## Contrast

Flip angle	60 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	16
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	95 %
Slice resolution	90 %
Phase partial Fourier	5/8

Slice partial Fourier	7/8
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	On
Intensity	Medium
Slope	48
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending

## System

Body	On
HE2	Off
HE4	Off
HE1	Off
HE3	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
-----------------	------

## 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
--------------	-----

# SIEMENS MAGNETOM Avanto syngo MR B17

Dimension	3D
Elliptical scanning	Off
Contrasts	1
Bandwidth	350 Hz/Px
<hr/>	
RF pulse type	Low SAR
Gradient mode	Fast
RF spoiling	Off
<hr/>	
IR Mode	Off
Dummy pulses	300
Incremented FA Mode	On
mcDESPOT FA Mode	On
Number of FA Increments	8
RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Phase Increment	180 deg
Baby Mode	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\MT OFF -SAG

TA: 6:41 PAT: 2 Voxel size: 1.0x1.0x1.0 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	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	30 ms
TE	11.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
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
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off

Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Inline

Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	On
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	350 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\MT ON -SAG

TA: 6:41

PAT: 2

Voxel size: 1.0x1.0x1.0 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	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	30 ms
TE	11.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	On
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
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
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off

Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Inline

Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	On
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	350 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\T2 FLAIR

TA: 2:44

PAT: 2

Voxel size: 0.9x0.9x5.0 mm

Rel. SNR: 1.00

SIEMENS: tse

## 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	25
Dist. factor	30 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	230 mm
FoV phase	87.5 %
Slice thickness	5.0 mm
TR	9000 ms
TE	89.0 ms
Averages	1
Concatenations	2
Filter	Normalize, Elliptical filter
Coil elements	HEA;HEP

## Contrast

TD	0.0 ms
MTC	Off
Magn. preparation	Slice-sel. IR
TI	2500 ms
Freeze suppressed tissue	On
Flip angle	150 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	On
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	31
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off

Distortion Corr.	Off
Prescan Normalize	Off
Normalize	On
Intensity	Medium
Cut off	20
Width	4
Unfiltered images	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	90.00 deg
A >> P	230 mm
R >> L	202 mm
F >> H	161 mm

## Physio

1st Signal/Mode	None
Dark blood	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

## SIEMENS MAGNETOM Avanto syngo MR B17

### Sequence

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	On
Contrasts	1
Bandwidth	190 Hz/Px
Flow comp.	No
Allowed delay	30 s
Echo spacing	9.92 ms
<hr/>	
Define	Turbo factor
Turbo factor	16
Echo trains per slice	8
RF pulse type	Normal
Gradient mode	Normal



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\HCP\_Working Memory

TA: 5:12 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	209
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\HCP\_Gambling

TA: 3:23 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	134
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CMI\SerialScanning\Scan1\HCP\_Motor

TA: 3:45 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	149
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\HCP\_Language

TA: 4:08 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	165
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CMI\SerialScanning\Scan1\HCP\_Social\_Cog

TA: 3:38 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	144
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\HCP\_Relational Processing

TA: 3:07 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	123
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\HCP\_Emoional Processing

TA: 2:26 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	95
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\Story\_Corps\_A

TA: 6:56 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	281
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\Story\_Corps\_B

TA: 8:42 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	354
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\Story\_Corps\_C

TA: 7:01 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	284
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\Story\_Corps\_D

TA: 7:54 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	321
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\Breathhold\_CMRR

TA: 3:30 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	57
Dist. factor	0 %
Position	L0.0 A24.4 F18.3
Orientation	T > C4.4
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1570 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	129
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	L0.0 A24.4 F18.3
Orientation	T > C4.4
Rotation	0.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	143 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

# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\BreathHold MGH

TA: 3:52 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sms\_mgh\_v22

## 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	Off
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	57
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.5 mm
TR	1570 ms
TE	40 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	129
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	143 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

SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off
Sequence	
Introduction	Off
Bandwidth	2374 Hz/Px
Free echo spacing	Off
Echo spacing	0.55 ms
EPI factor	78
RF pulse type	Normal
Gradient mode	Fast
Dummy Scans	4
Dummy Scans	4
SMS Factor	3
RF Clip	0
VERSE Factor	2.25
SMS Shift	1
Kernel Size	3x3
Compression Factor	1.00

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\MSIT\_ MGH

TA: 5:28 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sms\_mgh\_v22

## 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	Off
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	57
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.5 mm
TR	1570 ms
TE	40 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	190
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	143 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

# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
RF pulse type	Normal
Gradient mode	Fast
<hr/>	
Dummy Scans	4
Dummy Scans	4
SMS Factor	3
RF Clip	0
VERSE Factor	2.25
SMS Shift	1
Kernel Size	3x3
Compression Factor	1.00

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan1\MSIT\_CMRR

TA: 5:06 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	57
Dist. factor	0 %
Position	L0.0 A24.4 F18.3
Orientation	T > C4.4
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1570 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	190
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	L0.0 A24.4 F18.3
Orientation	T > C4.4
Rotation	0.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	143 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

# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\Brain Localizer

TA: 0:26

PAT: Off

Voxel size: 1.4x1.0x8.0 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	75 %
Phase partial Fourier	Off
Interpolation	On

PAT mode	None
Matrix Coil Mode	Auto (CP)

Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
-----------------	-----

## Physio

1st Signal/Mode	None
Segments	1

# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\Motion Training

TA: 1:35 PAT: Off Voxel size: 3.0x3.0x10.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	9
Dist. factor	100 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	10.00 mm
TR	130 ms
TE	7.94 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	700
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 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
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active

# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2442 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.51 ms
<hr/>	
EPI factor	64
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\Brain Localizer

TA: 0:26

PAT: Off

Voxel size: 1.4x1.0x8.0 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	On
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On

PAT mode	None
Matrix Coil Mode	Auto (CP)

Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
-----------------	-----

## Physio

1st Signal/Mode	None
Segments	1

# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\Resting State 2.5mm

TA: 10:18 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	420
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\Movie 2.5mm

TA: 10:18 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	420
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\Inscapes 2.5mm

TA: 10:18 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	420
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\Flanker\_Task

TA: 10:18 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	420
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\Field Map

TA: 1:05

Voxel size: 3.0x3.0x3.0 mm

Rel. SNR: 1.00

SIEMENS: gre\_field\_mapping

## 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	42
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	492 ms
TE 1	3.28 ms
TE 2	8.04 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	None
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	192 mm
F >> H	126 mm

## Sequence

Introduction	On
Dimension	2D
Asymmetric echo	Allowed
Contrasts	2
Bandwidth	260 Hz/Px
Flow comp.	Yes
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\T1W MEMPRAGE - SAG

TA: 6:32 PAT: 2 Voxel size: 1.0x1.0x1.0 mm Rel. SNR: 1.00 USER: tfl\_mgh\_multiecho

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
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	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	2730 ms
TE 1	1.64 ms
TE 2	3.5 ms
TE 3	5.36 ms
TE 4	7.22 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

## Contrast

Magn. preparation	Non-sel. IR
TI	1000 ms
Flip angle	7.0 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated

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

## Geometry

Multi-slice mode	Single shot
Series	Interleaved

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	Sagittal
Rotation	0.00 deg
F >> H	256 mm
A >> P	256 mm
R >> L	176 mm

## Physio

1st Signal/Mode	None
Dark blood	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

# SIEMENS MAGNETOM Avanto syngo MR B17

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	4
Bandwidth 1	651 Hz/Px
Bandwidth 2	651 Hz/Px
Bandwidth 3	651 Hz/Px
Bandwidth 4	651 Hz/Px
Flow comp. 1	No
Flow comp. 2	No
Flow comp. 3	No
Flow comp. 4	No
Echo spacing	9.6 ms
<hr/>	
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
<hr/>	
Readout polarity	Positive
Readout trajectory	Bipolar
Add. scale factor	4.0
Gradient spoiling	Siemens
Gradient moment factor	1
Siemens reconstruction	On
Save raw k-space data	Off
Averaging	RMS

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\DWI B=0 PA- AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	180.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us



## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\DKI 64 Directions AP 3 WEIGHTS- AX

TA: 9:59 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	4500 ms
TE	93.8 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled

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

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

PAT mode	None
Matrix Coil Mode	Auto (CP)

Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	3
b-value 1	0 s/mm <sup>2</sup>
b-value 2	1000 s/mm <sup>2</sup>
b-value 3	2000 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	On
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms

EPI factor	96
Gradient mode	Fast
RF spoiling	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

Excite pulse duration	2560 us
Refocus pulse duration	5120 us
Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\DWI B=0 PA - AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	180.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\DWI B=0 AP- AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled

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

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	144 mm

## Physio

1st Signal/Mode	None
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## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\HCP\_Working Memory

TA: 5:12 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	209
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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



# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\HCP\_Gambling

TA: 3:23 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	134
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CMI\SerialScanning\Scan2\HCP\_Motor

TA: 3:45 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	149
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\HCP\_Language

TA: 4:08 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	165
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\HCP\_Social\_Cog

TA: 3:38 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	144
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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



# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\HCP\_Relational Processing

TA: 3:07 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	123
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\HCP\_Emoional Processing

TA: 2:26 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	95
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\Story\_Corps\_A

TA: 6:56 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	281
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\Story\_Corps\_B

TA: 8:42 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	354
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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



# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\Story\_Corps\_C

TA: 7:01 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	284
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\Story\_Corps\_D

TA: 7:54 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	321
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\Breathhold\_CMRR

TA: 3:30 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	57
Dist. factor	0 %
Position	L0.0 A24.4 F18.3
Orientation	T > C4.4
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1570 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	129
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	L0.0 A24.4 F18.3
Orientation	T > C4.4
Rotation	0.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	143 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

# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\BreathHold MGH

TA: 3:52 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sms\_mgh\_v22

## 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	Off
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	57
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.5 mm
TR	1570 ms
TE	40 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	129
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	143 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



# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
RF pulse type	Normal
Gradient mode	Fast
<hr/>	
Dummy Scans	4
Dummy Scans	4
SMS Factor	3
RF Clip	0
VERSE Factor	2.25
SMS Shift	1
Kernel Size	3x3
Compression Factor	1.00

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\MSIT\_ MGH

TA: 5:28 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sms\_mgh\_v22

## 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	Off
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	57
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.5 mm
TR	1570 ms
TE	40 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	190
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	143 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

# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
RF pulse type	Normal
Gradient mode	Fast
<hr/>	
Dummy Scans	4
Dummy Scans	4
SMS Factor	3
RF Clip	0
VERSE Factor	2.25
SMS Shift	1
Kernel Size	3x3
Compression Factor	1.00

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\MSIT\_CMRR

TA: 5:06 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	57
Dist. factor	0 %
Position	L0.0 A24.4 F18.3
Orientation	T > C4.4
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1570 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	190
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	L0.0 A24.4 F18.3
Orientation	T > C4.4
Rotation	0.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	143 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

# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CMI\SerialScanning\Scan2\VAM\_ MGH

TA: 6:39 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sms\_mgh\_v22

## 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	Off
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	57
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.5 mm
TR	1570 ms
TE	40 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	235
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	143 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

# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
RF pulse type	Normal
Gradient mode	Fast
<hr/>	
Dummy Scans	4
Dummy Scans	4
SMS Factor	3
RF Clip	0
VERSE Factor	2.25
SMS Shift	1
Kernel Size	3x3
Compression Factor	1.00

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Scan2\VAM\_CMRR

TA: 6:17 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	57
Dist. factor	0 %
Position	L0.0 A24.4 F18.3
Orientation	T > C4.4
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1570 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	235
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	L0.0 A24.4 F18.3
Orientation	T > C4.4
Rotation	0.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	143 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



# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\Brain Localizer

TA: 0:26

PAT: Off

Voxel size: 1.4x1.0x8.0 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	On
Start measurements	single

Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On

PAT mode	None
Matrix Coil Mode	Auto (CP)

Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
-----------------	-----

## Physio

1st Signal/Mode	None
Segments	1

# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\Motion Training

TA: 1:35 PAT: Off Voxel size: 3.0x3.0x10.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	9
Dist. factor	100 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	10.00 mm
TR	130 ms
TE	7.94 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	700
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 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
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active

# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2442 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.51 ms
<hr/>	
EPI factor	64
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\Brain Localizer

TA: 0:26

PAT: Off

Voxel size: 1.4x1.0x8.0 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	On
Start measurements	single

Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
-----------------	-----

## Physio

1st Signal/Mode	None
Segments	1

# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\Raiders\_1

TA: 22:29 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	924
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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



# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\Raiders\_2

TA: 20:11 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	829
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\Raiders\_3

TA: 21:00 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	863
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\Raiders\_4

TA: 17:57 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	737
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\Raiders\_5

TA: 17:46 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	729
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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



# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\Raiders\_6

TA: 13:02 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	533
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\Field Map

TA: 1:05

Voxel size: 3.0x3.0x3.0 mm

Rel. SNR: 1.00

SIEMENS: gre\_field\_mapping

## 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	42
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	492 ms
TE 1	3.28 ms
TE 2	8.04 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	None
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	192 mm
F >> H	126 mm

## Sequence

Introduction	On
Dimension	2D
Asymmetric echo	Allowed
Contrasts	2
Bandwidth	260 Hz/Px
Flow comp.	Yes
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\HCP\_Working Memory

TA: 5:12 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	209
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\HCP\_Gambling

TA: 3:23 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	134
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\HCP\_Motor

TA: 3:45 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	149
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\HCP\_Language

TA: 4:08 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	165
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\HCP\_Social\_Cog

TA: 3:38 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	144
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\HCP\_Relational Processing

TA: 3:07 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	123
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\SerialScanning\Raiders\HCP\_Emoional Processing

TA: 2:26 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	95
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\localizer

TA: 0:26

PAT: Off

Voxel size: 1.4x1.0x8.0 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	Off
Wait for user to start	Off
Start measurements	single

Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Physio

1st Signal/Mode	None
Segments	1

## Resolution

Base resolution	256
-----------------	-----

# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\Despot 1 -SAG

TA: 5:49

Voxel size: 1.8x1.7x1.8 mm

Rel. SNR: 1.00

USER: despot1\_baby

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
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	20 %
Position	L0.0 A11.3 F1.3
Orientation	S > T-2.0
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	112
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.80 mm
TR	5.2 ms
TE	2.4 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	HEA;HEP

## Contrast

Flip angle	16 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	8
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	95 %
Slice resolution	89 %
Phase partial Fourier	6/8
Slice partial Fourier	7/8
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off

B1 filter	Off
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

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

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
-----------------	------

## 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	On

## SIEMENS MAGNETOM Avanto syngo MR B17

Contrasts	1
Bandwidth	350 Hz/Px
<hr/>	
RF pulse type	Low SAR
Gradient mode	Fast
RF spoiling	On
<hr/>	
IR Mode	Off
Dummy pulses	300
Incremented FA Mode	On
mcDESPOT FA Mode	On
Number of FA Increments	8
RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Spoil Increment	37.8 deg
Gradient Spoiler Factor	0.3
Baby Mode	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\IR SPGR -SAG

TA: 1:02

Voxel size: 1.7x1.7x3.6 mm

Rel. SNR: 1.00

USER: despot1\_baby

Properties		Series	Ascending
Prio Recon		System	
Before measurement	Off	Body	Off
After measurement		HEP	On
Load to viewer	On	HEA	On
Inline movie	Off	SP4	Off
Auto store images	On	SP2	Off
Load to stamp segments	On	SP8	Off
Load images to graphic segments	Off	SP6	Off
Auto open inline display	Off	SP3	Off
Start measurement without further preparation	Off	SP1	Off
Wait for user to start	Off	SP7	Off
Start measurements	single	SP5	Off
Routine		Positioning mode	FIX
Slab group 1		Table position	H
Slabs	1	Table position	0 mm
Dist. factor	20 %	MSMA	S - C - T
Position	L0.0 A11.3 F1.3	Sagittal	R >> L
Orientation	S > T-2.0	Coronal	A >> P
Phase enc. dir.	A >> P	Transversal	F >> H
Rotation	0.00 deg	Save uncombined	Off
Phase oversampling	0 %	Coil Combine Mode	Adaptive Combine
Slice oversampling	0.0 %	Auto Coil Select	Default
Slices per slab	56	Shim mode	Tune up
FoV read	220 mm	Adjust with body coil	Off
FoV phase	100.0 %	Confirm freq. adjustment	Off
Slice thickness	3.60 mm	Assume Silicone	Off
TR	5.3 ms	? Ref. amplitude 1H	0.000 V
TE	2.4 ms	Adjustment Tolerance	Auto
Averages	1	Adjust volume	
Concatenations	1	Position	Isocenter
Filter	Raw filter	Orientation	Transversal
Coil elements	HEA;HEP	Rotation	0.00 deg
Contrast		R >> L	350 mm
Flip angle	5 deg	A >> P	263 mm
Averaging mode	Short term	F >> H	350 mm
Reconstruction	Magnitude	Physio	
Measurements	1	1st Signal/Mode	None
Multiple series	Off	Inline	
Resolution		Subtract	Off
Base resolution	128	Std-Dev-Sag	Off
Phase resolution	100 %	Std-Dev-Cor	Off
Slice resolution	100 %	Std-Dev-Tra	Off
Phase partial Fourier	Off	Std-Dev-Time	Off
Slice partial Fourier	6/8	MIP-Sag	Off
Interpolation	Off	MIP-Cor	Off
Matrix Coil Mode	Auto (CP)	MIP-Tra	Off
Image Filter	Off	MIP-Time	Off
Distortion Corr.	Off	Save original images	On
Prescan Normalize	Off	Sequence	
Normalize	Off	Introduction	Off
B1 filter	Off	Dimension	3D
Raw filter	On	Elliptical scanning	On
Intensity	Weak	Contrasts	1
Slope	25	Bandwidth	350 Hz/Px
Elliptical filter	Off	RF pulse type	Low SAR
Geometry		Gradient mode	Fast
Multi-slice mode	Sequential	RF spoiling	On
		IR Mode	On
		Inversion time	400 ms

## SIEMENS MAGNETOM Avanto syngo MR B17

RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Spoil Increment	37.8 deg
Gradient Spoiler Factor	0.3
Baby Mode	Off



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\Despot 2 -SAG

TA: 10:04

Voxel size: 1.8x1.7x1.8 mm

Rel. SNR: 1.00

USER: despot2\_baby2

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
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	20 %
Position	L0.0 A11.3 F1.3
Orientation	S > T-2.0
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	112
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.80 mm
TR	5.40 ms
TE	2.700 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	HEA;HEP

## Contrast

Flip angle	60 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	16
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	95 %
Slice resolution	89 %
Phase partial Fourier	5/8

Slice partial Fourier	7/8
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	On
Intensity	Medium
Slope	48
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
-----------------	------

## 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Dimension	3D
Elliptical scanning	Off
Contrasts	1
Bandwidth	350 Hz/Px
<hr/>	
RF pulse type	Low SAR
Gradient mode	Fast
RF spoiling	Off
<hr/>	
IR Mode	Off
Dummy pulses	300
Incremented FA Mode	On
mcDESPOT FA Mode	On
Number of FA Increments	8
RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Phase Increment	180 deg
Baby Mode	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\MT OFF -SAG

TA: 7:53 PAT: 2 Voxel size: 1.0x1.0x1.0 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	On
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	20 %
Position	L0.0 A13.8 F6.3
Orientation	S > T-2.4
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	208
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	30 ms
TE	11.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
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
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off

Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Inline

Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	On
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	350 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\MT ON -SAG

TA: 7:53 PAT: 2 Voxel size: 1.0x1.0x1.0 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	On
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	20 %
Position	L0.0 A13.8 F6.3
Orientation	S > T-2.4
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	208
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	30 ms
TE	11.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	On
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
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
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off

Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Inline

Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	On
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	350 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\Isotropic Scan

TA: 6:09

PAT: Off

Voxel size: 1.1x1.1x1.1 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

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	256
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	1.10 mm
TR	5.6 ms
TE	2.72 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	10 deg
Fat suppr.	None
Water suppr.	None
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	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## 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

## SIEMENS MAGNETOM Avanto syngo MR B17

MIP-Time	Off
Save original images	On
<hr/>	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off

### Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	490 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\PD SNR

TA: 16:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	75.0 %
Slice thickness	6.0 mm
TR	5000 ms
TE	10.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	244 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\PD SNR

TA: 16:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	75.0 %
Slice thickness	6.0 mm
TR	5000 ms
TE	10.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	244 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 Mapping VFA 2

TA: 3:04 PAT: Off Voxel size: 1.0x1.0x5.0 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

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	36
FoV read	250 mm
FoV phase	75.0 %
Slice thickness	5.00 mm
TR	6.6 ms
TE	3.00 ms
Averages	4
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	2 deg
Fat suppr.	None
Water suppr.	None
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	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## 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

# SIEMENS MAGNETOM Avanto syngo MR B17

MIP-Time	Off
Save original images	On
<hr/>	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	490 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 Mapping VFA 5

TA: 3:04 PAT: Off Voxel size: 1.0x1.0x5.0 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

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	36
FoV read	250 mm
FoV phase	75.0 %
Slice thickness	5.00 mm
TR	6.6 ms
TE	3.00 ms
Averages	4
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	5 deg
Fat suppr.	None
Water suppr.	None
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	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## 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

# SIEMENS MAGNETOM Avanto syngo MR B17

MIP-Time	Off
Save original images	On
<hr/>	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	490 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 Mapping VFA 10

TA: 3:04 PAT: Off Voxel size: 1.0x1.0x5.0 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

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	36
FoV read	250 mm
FoV phase	75.0 %
Slice thickness	5.00 mm
TR	6.6 ms
TE	3.00 ms
Averages	4
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	10 deg
Fat suppr.	None
Water suppr.	None
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	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## 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

# SIEMENS MAGNETOM Avanto syngo MR B17

MIP-Time	Off
Save original images	On
<hr/>	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	490 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On



## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 Mapping VFA 15

TA: 3:04 PAT: Off Voxel size: 1.0x1.0x5.0 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

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	36
FoV read	250 mm
FoV phase	75.0 %
Slice thickness	5.00 mm
TR	6.6 ms
TE	3.00 ms
Averages	4
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
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	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## 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

# SIEMENS MAGNETOM Avanto syngo MR B17

MIP-Time	Off
Save original images	On
<hr/>	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	490 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 Mapping VFA 20

TA: 3:04 PAT: Off Voxel size: 1.0x1.0x5.0 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

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	36
FoV read	250 mm
FoV phase	75.0 %
Slice thickness	5.00 mm
TR	6.6 ms
TE	3.00 ms
Averages	4
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	20 deg
Fat suppr.	None
Water suppr.	None
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	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## 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

# SIEMENS MAGNETOM Avanto syngo MR B17

MIP-Time	Off
Save original images	On
<hr/>	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	490 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 Mapping VFA 25

TA: 3:04 PAT: Off Voxel size: 1.0x1.0x5.0 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

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	36
FoV read	250 mm
FoV phase	75.0 %
Slice thickness	5.00 mm
TR	6.6 ms
TE	3.00 ms
Averages	4
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	25 deg
Fat suppr.	None
Water suppr.	None
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	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## 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

# SIEMENS MAGNETOM Avanto syngo MR B17

MIP-Time	Off
Save original images	On
<hr/>	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	490 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 Mapping VFA 30

TA: 3:04 PAT: Off Voxel size: 1.0x1.0x5.0 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

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	36
FoV read	250 mm
FoV phase	75.0 %
Slice thickness	5.00 mm
TR	6.6 ms
TE	3.00 ms
Averages	4
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	30 deg
Fat suppr.	None
Water suppr.	None
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	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## 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

# SIEMENS MAGNETOM Avanto syngo MR B17

MIP-Time	Off
Save original images	On
<hr/>	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	490 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 MAP VTI 35

TA: 5:44 PAT: Off Voxel size: 1.0x1.0x6.0 mm Rel. SNR: 1.00 SIEMENS: tse

## 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	30
Dist. factor	10 %
Position	L4.4 A14.5 H4.4
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	87.5 %
Slice thickness	6.0 mm
TR	4500 ms
TE	6.8 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	Slice-sel. IR
TI	35 ms
Freeze suppressed tissue	Off
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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

## SIEMENS MAGNETOM Avanto syngo MR B17

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	391 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	6.8 ms
<hr/>	
Define	Turbo factor
Turbo factor	3
Echo trains per slice	75
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 MAP VTI 75

TA: 5:12 PAT: Off Voxel size: 1.0x1.0x6.0 mm Rel. SNR: 1.00 SIEMENS: tse

## 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	30
Dist. factor	10 %
Position	L4.4 A14.5 H4.4
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	4500 ms
TE	6.8 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	Slice-sel. IR
TI	75 ms
Freeze suppressed tissue	Off
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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

## SIEMENS MAGNETOM Avanto syngo MR B17

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	391 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	6.8 ms
<hr/>	
Define	Turbo factor
Turbo factor	3
Echo trains per slice	68
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 MAP VTI 100

TA: 5:12 PAT: Off Voxel size: 1.0x1.0x6.0 mm Rel. SNR: 1.00 SIEMENS: tse

## 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	30
Dist. factor	10 %
Position	L4.4 A14.5 H4.4
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	4500 ms
TE	6.8 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	Slice-sel. IR
TI	100 ms
Freeze suppressed tissue	Off
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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

## SIEMENS MAGNETOM Avanto syngo MR B17

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	391 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	6.8 ms
<hr/>	
Define	Turbo factor
Turbo factor	3
Echo trains per slice	68
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 MAP VTI 125

TA: 5:12 PAT: Off Voxel size: 1.0x1.0x6.0 mm Rel. SNR: 1.00 SIEMENS: tse

## 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	30
Dist. factor	10 %
Position	L4.4 A14.5 H4.4
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	4500 ms
TE	6.8 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	Slice-sel. IR
TI	125 ms
Freeze suppressed tissue	Off
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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

## SIEMENS MAGNETOM Avanto syngo MR B17

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	391 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	6.8 ms
<hr/>	
Define	Turbo factor
Turbo factor	3
Echo trains per slice	68
RF pulse type	Normal
Gradient mode	Fast



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 MAP VTI 150

TA: 5:12 PAT: Off Voxel size: 1.0x1.0x6.0 mm Rel. SNR: 1.00 SIEMENS: tse

## 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	30
Dist. factor	10 %
Position	L4.4 A14.5 H4.4
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	4500 ms
TE	6.8 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	Slice-sel. IR
TI	150 ms
Freeze suppressed tissue	Off
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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

## SIEMENS MAGNETOM Avanto syngo MR B17

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	391 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	6.8 ms
<hr/>	
Define	Turbo factor
Turbo factor	3
Echo trains per slice	68
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 MAP VTI 250

TA: 5:12 PAT: Off Voxel size: 1.0x1.0x6.0 mm Rel. SNR: 1.00 SIEMENS: tse

## 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	30
Dist. factor	10 %
Position	L4.4 A14.5 H4.4
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	4500 ms
TE	6.8 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	Slice-sel. IR
TI	250 ms
Freeze suppressed tissue	Off
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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

## SIEMENS MAGNETOM Avanto syngo MR B17

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	391 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	6.8 ms
<hr/>	
Define	Turbo factor
Turbo factor	3
Echo trains per slice	68
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 MAP VTI 1000

TA: 5:12 PAT: Off Voxel size: 1.0x1.0x6.0 mm Rel. SNR: 1.00 SIEMENS: tse

## 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	30
Dist. factor	10 %
Position	L4.4 A14.5 H4.4
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	4500 ms
TE	6.8 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	Slice-sel. IR
TI	1000 ms
Freeze suppressed tissue	Off
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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

## SIEMENS MAGNETOM Avanto syngo MR B17

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	391 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	6.8 ms
<hr/>	
Define	Turbo factor
Turbo factor	3
Echo trains per slice	68
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 MAP VTI 1500

TA: 5:12 PAT: Off Voxel size: 1.0x1.0x6.0 mm Rel. SNR: 1.00 SIEMENS: tse

## 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	30
Dist. factor	10 %
Position	L4.4 A14.5 H4.4
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	4500 ms
TE	6.8 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	Slice-sel. IR
TI	1500 ms
Freeze suppressed tissue	Off
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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

## SIEMENS MAGNETOM Avanto syngo MR B17

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	391 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	6.8 ms
<hr/>	
Define	Turbo factor
Turbo factor	3
Echo trains per slice	68
RF pulse type	Normal
Gradient mode	Fast



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 MAP VTI 2000

TA: 5:12    PAT: Off    Voxel size: 1.0x1.0x6.0 mm    Rel. SNR: 1.00    SIEMENS: tse

## 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	L57.9 A13.8 H3.1
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	4500 ms
TE	6.8 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	Slice-sel. IR
TI	2000 ms
Freeze suppressed tissue	Off
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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

## SIEMENS MAGNETOM Avanto syngo MR B17

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	391 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	6.8 ms
<hr/>	
Define	Turbo factor
Turbo factor	3
Echo trains per slice	68
RF pulse type	Normal
Gradient mode	Fast

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T1 MAP VTI 3000

TA: 5:12 PAT: Off Voxel size: 1.0x1.0x6.0 mm Rel. SNR: 1.00 SIEMENS: tse

## 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	L57.9 A13.8 H3.1
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	4500 ms
TE	6.8 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	Slice-sel. IR
TI	3000 ms
Freeze suppressed tissue	Off
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off

## Elliptical filter

Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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

## SIEMENS MAGNETOM Avanto syngo MR B17

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	391 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	6.8 ms
<hr/>	
Define	Turbo factor
Turbo factor	3
Echo trains per slice	68
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T2 Map 15s

TA: 17:07

PAT: Off

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se\_mc

## 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	30
Dist. factor	10 %
Position	L2.5 A14.5 H2.5
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE 1	15.0 ms
TE 2	30.0 ms
TE 3	45.0 ms
TE 4	60.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

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

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
Dark blood	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

## Sequence

Introduction	On
Contrasts	4
Bandwidth	391 Hz/Px
Allowed delay	0 s

## SIEMENS MAGNETOM Avanto syngo MR B17

RF pulse type  
Gradient mode

Low SAR  
Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T2 Map 25s

TA: 17:07

PAT: Off

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se\_mc

## 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	30
Dist. factor	10 %
Position	L2.5 A14.5 H2.5
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE 1	25.0 ms
TE 2	50.0 ms
TE 3	75.0 ms
TE 4	100.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

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

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
Dark blood	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

## Sequence

Introduction	On
Contrasts	4
Bandwidth	391 Hz/Px
Allowed delay	0 s

# SIEMENS MAGNETOM Avanto syngo MR B17

RF pulse type  
Gradient mode

Low SAR  
Fast



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\T2 Map 40s

TA: 17:07

PAT: Off

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se\_mc

## 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	30
Dist. factor	10 %
Position	L2.5 A14.5 H2.5
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE 1	40.0 ms
TE 2	80.0 ms
TE 3	120.0 ms
TE 4	160.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

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

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
Dark blood	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

## Sequence

Introduction	On
Contrasts	4
Bandwidth	391 Hz/Px
Allowed delay	0 s

## SIEMENS MAGNETOM Avanto syngo MR B17

RF pulse type  
Gradient mode

Low SAR  
Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\Resolution Insert

TA: 10:47 PAT: Off Voxel size: 0.5x0.5x4.0 mm Rel. SNR: 1.00 SIEMENS: tse

## 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	45
Dist. factor	10 %
Position	L2.5 A14.5 H2.5
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	4.0 mm
TR	5000 ms
TE	57.0 ms
Averages	2
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	512
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode Interleaved  
Series Interleaved

Special sat. None

Tim CT mode Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

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

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
Dark blood	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	On
Dimension	2D
Compensate T2 decay	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	244 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	9.48 ms
<hr/>	
Define	Turbo factor
Turbo factor	8
Echo trains per slice	64
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\Section Thickness 3mm

TA: 5:27 PAT: Off Voxel size: 1.0x0.5x3.0 mm Rel. SNR: 1.00 SIEMENS: tse

## 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	100 %
Position	L2.5 A14.5 H2.5
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	5000 ms
TE	8.6 ms
Averages	2
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	512
Phase resolution	50 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode Interleaved  
Series Interleaved

Special sat. None

Tim CT mode Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

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

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
Dark blood	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	On
Dimension	2D
Compensate T2 decay	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	488 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	8.6 ms
<hr/>	
Define	Turbo factor
Turbo factor	8
Echo trains per slice	32
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_quant\Section Thickness 5mm

TA: 5:27 PAT: Off Voxel size: 1.0x0.5x5.0 mm Rel. SNR: 1.00 SIEMENS: tse

## 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	100 %
Position	L2.5 A14.5 H2.5
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	5000 ms
TE	8.6 ms
Averages	2
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	180 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	512
Phase resolution	50 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode Interleaved  
Series Interleaved

Special sat. None

Tim CT mode Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

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

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
Dark blood	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	On
Dimension	2D
Compensate T2 decay	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	488 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	8.6 ms
<hr/>	
Define	Turbo factor
Turbo factor	8
Echo trains per slice	32
RF pulse type	Normal
Gradient mode	Fast



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_extras\T2 ME 15

TA: 17:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE	15.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

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

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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	391 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_extras\T2 ME 30

TA: 17:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE	30.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	391 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_extras\T2 ME 45

TA: 17:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE	45.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	391 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_extras\T2 ME 60

TA: 17:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE	60.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	391 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_extras\T2 ME 25

TA: 17:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE	25.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	391 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_extras\T2 ME 50

TA: 17:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE	50.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	391 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_extras\T2 ME 75

TA: 17:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE	75.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	391 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_extras\T2 ME 100

TA: 17:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE	75.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	391 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_extras\T2 ME 40

TA: 17:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE	40.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	391 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_extras\T2 ME 80

TA: 17:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE	80.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	391 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_extras\T2 ME 120

TA: 17:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE	120.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	391 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\phannie\_extras\T2 ME 160

TA: 17:07

Voxel size: 1.0x1.0x6.0 mm

Rel. SNR: 1.00

SIEMENS: se

## 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	30
Dist. factor	10 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	250 mm
FoV phase	79.7 %
Slice thickness	6.0 mm
TR	5000 ms
TE	160.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Asymmetric echo	Off
Contrasts	1
Bandwidth	391 Hz/Px
Allowed delay	0 s
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\fbirnx\Brain Localizer

TA: 0:13

PAT: Off

Voxel size: 1.9x1.5x8.0 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	On
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	3
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	8.9 ms
TE	4.32 ms
Averages	1
Concatenations	9
Filter	Raw filter, Normalize
Coil elements	HEA;HEP

## Contrast

TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	40 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

## Resolution

Base resolution	192
Phase resolution	75 %

Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	On
Intensity	Medium
Cut off	20
Width	4
Unfiltered images	Off
B1 filter	Off
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Inline

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	180 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\fbirnx\Resting State 2.5mm MB3\_CMRR

TA: 10:00 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	L0.0 A24.4 F18.3
Orientation	T > C4.4
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	408
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	L0.0 A24.4 F18.3
Orientation	T > C4.4
Rotation	0.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\fbirnx\Resting State 2.5mm noMB

TA: 11:00 PAT: Off Voxel size: 2.5x2.5x2.5 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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.5 mm
TR	4370 ms
TE	40 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	150
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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	Off
Temp. highpass filter	Off
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

## SIEMENS MAGNETOM Avanto syngo MR B17

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

### Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\fbirn\Resting State 2.5mm MB3 MGH

TA: 10:11 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sms\_mgh\_v22

## 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	Off
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	57
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.5 mm
TR	1570 ms
TE	40 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	370
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	143 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
RF pulse type	Normal
Gradient mode	Fast
<hr/>	
Dummy Scans	4
Dummy Scans	4
SMS Factor	3
RF Clip	0
VERSE Factor	2.25
SMS Shift	1
Kernel Size	3x3
Compression Factor	1.00

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\fbirnx\Brain Localizer w\FatHat

TA: 0:13 PAT: Off Voxel size: 1.9x1.5x8.0 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	On
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	3
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	8.9 ms
TE	4.32 ms
Averages	1
Concatenations	9
Filter	Raw filter, Normalize
Coil elements	HEA;HEP

## Contrast

TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	40 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

## Resolution

Base resolution	192
Phase resolution	75 %

Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	On
Intensity	Medium
Cut off	20
Width	4
Unfiltered images	Off
B1 filter	Off
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Inline

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	180 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\fbirn\Resting State 2.5mm MB3\_CMRR w\FatHat

TA: 10:00 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	L0.0 A24.4 F18.3
Orientation	T > C4.4
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	408
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	L0.0 A24.4 F18.3
Orientation	T > C4.4
Rotation	0.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\fbirn\Resting State 2.5mm noMB w\FatHat

TA: 11:00 PAT: Off Voxel size: 2.5x2.5x2.5 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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.5 mm
TR	4370 ms
TE	40 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	150
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Sequence	
Introduction	Off
Bandwidth	2374 Hz/Px
Free echo spacing	Off
Echo spacing	0.55 ms
EPI factor	78
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\fbirnx\Resting State 2.5mm MB3 MGH w\FatHat

TA: 10:11 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: ep2d\_bold\_sms\_mgh\_v22

## 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	Off
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	57
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.5 mm
TR	1570 ms
TE	40 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	370
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	143 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
RF pulse type	Normal
Gradient mode	Fast
<hr/>	
Dummy Scans	4
Dummy Scans	4
SMS Factor	3
RF Clip	0
VERSE Factor	2.25
SMS Shift	1
Kernel Size	3x3
Compression Factor	1.00

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\fbirnx\ep2d\_bold\_send\_motion

TA: 0:11 PAT: 2 Voxel size: 3.0x3.0x10.0 mm Rel. SNR: 1.00 USER: ep2d\_bold\_send\_motion

## 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	9
Dist. factor	100 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	10.0 mm
TR	359 ms
TE	12 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## 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 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Matrix Coil Mode	Auto (Triple)
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

## System

Body	Off
HEP	On
HEA	On
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	170 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
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

### Sequence

Introduction	Off
Bandwidth	2442 Hz/Px
Free echo spacing	Off
Echo spacing	0.49 ms
<hr/>	
EPI factor	64
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\DTI\phantom\Brain Localizer

TA: 0:13

PAT: Off

Voxel size: 1.9x1.5x8.0 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	On
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	single

## Routine

Slice group 1	
Slices	3
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	8.9 ms
TE	4.32 ms
Averages	1
Concatenations	9
Filter	Raw filter, Normalize
Coil elements	HEA;HEP

## Contrast

TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	40 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

## Resolution

Base resolution	192
Phase resolution	75 %

Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	On
Intensity	Medium
Cut off	20
Width	4
Unfiltered images	Off
B1 filter	Off
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Inline

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	180 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\DTIphantom\Diff Calibration

TA: 1:04 PAT: 2 Voxel size: 2.0x2.0x5.0 mm Rel. SNR: 1.00 SIEMENS: ep2d\_diff

## 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	8
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	8000 ms
TE	97 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Delay in TR	0 ms

## Resolution

Base resolution	128
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	Off
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	256 mm
A >> P	256 mm
F >> H	40 mm

## Physio

1st Signal/Mode	None
Resp. control	Off

## Diff

Diffusion mode	Read
Diff. weightings	5
b-value 1	0 s/mm <sup>2</sup>
b-value 2	300 s/mm <sup>2</sup>
b-value 3	900 s/mm <sup>2</sup>
b-value 4	1500 s/mm <sup>2</sup>
b-value 5	2000 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	On
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	1

## Sequence

Introduction	Off
Bandwidth	1698 Hz/Px
Free echo spacing	Off
Echo spacing	0.69 ms
EPI factor	128

# SIEMENS MAGNETOM Avanto syngo MR B17

RF pulse type  
Gradient mode

Normal  
Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\DTI\phantom\DWI B=0 PA - AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	180.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\DT\phantom\DKI 64 Directions AP 3 WEIGHTS- AX

TA: 7:50 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3533 ms
TE	93.8 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled

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

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	3
b-value 1	0 s/mm <sup>2</sup>
b-value 2	1000 s/mm <sup>2</sup>
b-value 3	2000 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	On
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

Excite pulse duration	2560 us
Refocus pulse duration	5120 us
Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\DTI\phantom\DWI B=0 PA- AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	180.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	144 mm

## Physio

1st Signal/Mode None

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off



## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\DTI\phantom\DWI B=0 AP- AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	90.00 deg
A >> P	192 mm
R >> L	192 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\DTI\phantom\Siemens DKI

TA: 27:04

PAT: 2

Voxel size: 1.5x1.5x2.0 mm

Rel. SNR: 1.00

SIEMENS: ep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	12300 ms
TE	101 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
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	32
Matrix Coil Mode	Auto (Triple)
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

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

## Positioning mode

REF

Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	144 mm

## Physio

1st Signal/Mode	None
Resp. control	Off

## Diff

Diffusion mode	MDDW
Diff. weightings	3
b-value 1	0 s/mm <sup>2</sup>
b-value 2	1000 s/mm <sup>2</sup>
b-value 3	2000 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	On
Average ADC maps	On
Individual ADC maps	Off
FA maps	On
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.78 ms
EPI factor	128

# SIEMENS MAGNETOM Avanto syngo MR B17

RF pulse type  
Gradient mode

Normal  
Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\headphone\t1\_mpr\_ns\_sag\_p2\_iso

TA: 2:54 PAT: 2 Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 SIEMENS: tfl

## 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	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	25 %
Slice oversampling	27.3 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	1900 ms
TE	2.65 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize, Elliptical filter
Coil elements	HE1-4

## Contrast

Magn. preparation	Non-sel. IR
TI	1100 ms
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	50 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off

Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Geometry

Multi-slice mode	Single shot
Series	Ascending

## System

Body	Off
HE2	On
HE4	On
HE1	On
HE3	On
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
Dark blood	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	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Allowed

## SIEMENS MAGNETOM Avanto syngo MR B17

Bandwidth	130 Hz/Px
Flow comp.	No
Echo spacing	7.6 ms
<hr/>	
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\test\_moco\localizer

TA: 0:26 PAT: Off Voxel size: 1.4x1.0x8.0 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	Off
Wait for user to start	Off
Start measurements	single

Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Physio

1st Signal/Mode	None
Segments	1

## Resolution

Base resolution	256
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# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\PhantomScanning\test\_moco\ep2d\_bold\_send\_motion

TA: 0:16 PAT: Off Voxel size: 3.0x3.0x10.0 mm Rel. SNR: 1.00 USER: ep2d\_bold\_send\_motion

## 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	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	190 mm
FoV phase	100.0 %
Slice thickness	10.0 mm
TR	658 ms
TE	20 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	BC

## 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 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	190 mm
A >> P	190 mm
F >> H	175 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

SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off
Sequence	
Introduction	Off
Bandwidth	2442 Hz/Px
Free echo spacing	Off
Echo spacing	0.48 ms
EPI factor	64
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\Abdomen Localizer

TA: 0:31 PAT: Off Voxel size: 2.0x1.6x7.0 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	On
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	single

Phase resolution	80 %
Phase partial Fourier	Off
Interpolation	On
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	50 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	50 %
Position	L21.0 P0.0 H0.0
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	13 %
FoV read	400 mm
FoV phase	100.0 %
Slice thickness	7.0 mm
TR	7.0 ms
TE	2.60 ms
Averages	2
Concatenations	9
Filter	Distortion Corr.(2D), Elliptical filter
Coil elements	BO1,2;SP2-4

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
BO1	On
BO2	On
SP4	On
SP2	On
SP8	Off
SP6	Off
SP3	On
SP1	Off
SP7	Off
SP5	Off
Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
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## Physio

1st Signal/Mode	None
Segments	1

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\Abdomen Dixon Breathhold

TA: 0:11 PAT: 2 Voxel size: 2.2x1.6x5.0 mm Rel. SNR: 1.00 SIEMENS: fl3d\_vibe

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	Off
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	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	40
FoV read	400 mm
FoV phase	78.1 %
Slice thickness	5.00 mm
TR	6.82 ms
TE 1	2.38 ms
TE 2	4.76 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1,2;SP2,3

## Contrast

Flip angle	10.0 deg
Fat suppr.	None
Water suppr.	None
Dixon	Water + fat images
Save original images	On
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	70 %
Slice resolution	60 %
Phase partial Fourier	Off
Slice partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off

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

## Geometry

Multi-slice mode	Sequential
Series	Ascending
Special sat.	Parallel F/H
Gap	10.0 mm
Thickness	60 mm

## System

Body	Off
BO1	On
BO2	On
SP4	Off
SP2	On
SP8	Off
SP6	Off
SP3	On
SP1	Off
SP7	Off
SP5	Off
Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	400 mm
A >> P	313 mm
F >> H	200 mm

## Physio

1st Signal/Mode	None
Resp. control	Breath-hold

## Inline

3D centric reordering	Off
Time to center	5.2 s
Subtract	Off
Liver registration	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Strong
Contrasts	2
Bandwidth 1	480 Hz/Px
Bandwidth 2	480 Hz/Px
Readout mode	Monopolar
Optimization	In phase
<hr/>	
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\Brain Localizer

TA: 0:26 PAT: Off Voxel size: 1.4x1.0x8.0 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	On
Start measurements	single

Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Physio

1st Signal/Mode	None
Segments	1

## Resolution

Base resolution	256
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# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\Motion Training

TA: 1:35 PAT: Off Voxel size: 3.0x3.0x10.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	9
Dist. factor	100 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	10.00 mm
TR	130 ms
TE	7.94 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	700
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 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
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active

# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2442 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.51 ms
<hr/>	
EPI factor	64
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\Brain Localizer

TA: 0:26

PAT: Off

Voxel size: 1.4x1.0x8.0 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	On
Start measurements	single

Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On

PAT mode	None
Matrix Coil Mode	Auto (CP)

Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
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## Physio

1st Signal/Mode	None
Segments	1

# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\Resting State 2.5mm

TA: 10:18 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1450 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	420
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	78
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2374 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.55 ms
<hr/>	
EPI factor	78
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\Field Map

TA: 1:05

Voxel size: 3.0x3.0x3.0 mm

Rel. SNR: 1.00

SIEMENS: gre\_field\_mapping

## 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	42
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	492 ms
TE 1	3.28 ms
TE 2	8.04 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	None
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	192 mm
F >> H	126 mm

## Sequence

Introduction	On
Dimension	2D
Asymmetric echo	Allowed
Contrasts	2
Bandwidth	260 Hz/Px
Flow comp.	Yes
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\T1W MEMPRAGE - SAG

TA: 6:32 PAT: 2 Voxel size: 1.0x1.0x1.0 mm Rel. SNR: 1.00 USER: tfl\_mgh\_multiecho

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
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	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	2730 ms
TE 1	1.64 ms
TE 2	3.5 ms
TE 3	5.36 ms
TE 4	7.22 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

## Contrast

Magn. preparation	Non-sel. IR
TI	1000 ms
Flip angle	7.0 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated

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

## Geometry

Multi-slice mode	Single shot
Series	Interleaved

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	Sagittal
Rotation	0.00 deg
F >> H	256 mm
A >> P	256 mm
R >> L	176 mm

## Physio

1st Signal/Mode	None
Dark blood	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



# SIEMENS MAGNETOM Avanto syngo MR B17

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	4
Bandwidth 1	651 Hz/Px
Bandwidth 2	651 Hz/Px
Bandwidth 3	651 Hz/Px
Bandwidth 4	651 Hz/Px
Flow comp. 1	No
Flow comp. 2	No
Flow comp. 3	No
Flow comp. 4	No
Echo spacing	9.6 ms
<hr/>	
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
<hr/>	
Readout polarity	Positive
Readout trajectory	Bipolar
Add. scale factor	4.0
Gradient spoiling	Siemens
Gradient moment factor	1
Siemens reconstruction	On
Save raw k-space data	Off
Averaging	RMS

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\DWI B=0 PA - AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled

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

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

PAT mode	None
Matrix Coil Mode	Auto (CP)

Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	180.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms

EPI factor	96
Gradient mode	Fast
RF spoiling	Off

Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\DKI 64 Directions AP 3 WEIGHTS- AX

TA: 9:59 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	4500 ms
TE	93.8 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled

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

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

PAT mode	None
Matrix Coil Mode	Auto (CP)

Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	144 mm

## Physio

1st Signal/Mode	None
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## Diff

Diffusion mode	MDDW
Diff. weightings	3
b-value 1	0 s/mm <sup>2</sup>
b-value 2	1000 s/mm <sup>2</sup>
b-value 3	2000 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	On
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms

EPI factor	96
Gradient mode	Fast
RF spoiling	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

Excite pulse duration	2560 us
Refocus pulse duration	5120 us
Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\DWI B=0 PA- AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	180.00 deg
R >> L	192 mm
A >> P	192 mm
F >> H	144 mm

## Physio

1st Signal/Mode	None
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## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\DWI B=0 AP- AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3110 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	96
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 mm
F >> H	144 mm

## Physio

1st Signal/Mode None

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1628 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	96
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us



## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\Despot 1 -SAG

TA: 5:00

Voxel size: 1.8x1.7x1.8 mm

Rel. SNR: 1.00

USER: despot1\_baby

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	96
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.80 mm
TR	5.2 ms
TE	2.4 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	BC

## Contrast

Flip angle	16 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	8
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	95 %
Slice resolution	90 %
Phase partial Fourier	6/8
Slice partial Fourier	7/8
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off

B1 filter	Off
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending

## System

Body	On
HE2	Off
HE4	Off
HE1	Off
HE3	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
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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	On
Contrasts	1
Bandwidth	350 Hz/Px
RF pulse type	Low SAR
Gradient mode	Fast
RF spoiling	On

## SIEMENS MAGNETOM Avanto syngo MR B17

IR Mode	Off
Dummy pulses	300
Incremented FA Mode	On
mcDESPOT FA Mode	On
Number of FA Increments	8
RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Spoil Increment	37.8 deg
Gradient Spoiler Factor	0.3
Baby Mode	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\IR SPGR -SAG

TA: 0:53

Voxel size: 1.7x1.7x3.6 mm

Rel. SNR: 1.00

USER: despot1\_baby

## Properties

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

## Routine

Slab group 1	
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	48
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	3.60 mm
TR	5.3 ms
TE	2.4 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	BC

## Contrast

Flip angle	5 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	6/8
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
------------------	------------

## Series

## Ascending

### System

Body	On
HE2	Off
HE4	Off
HE1	Off
HE3	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default

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
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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	On
Contrasts	1
Bandwidth	350 Hz/Px
RF pulse type	Low SAR
Gradient mode	Fast
RF spoiling	On
IR Mode	On
Inversion time	400 ms
RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Spoil Increment	37.8 deg
Gradient Spoiler Factor	0.3
Baby Mode	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\Despot 2 -SAG

TA: 8:38

Voxel size: 1.8x1.7x1.8 mm

Rel. SNR: 1.00

USER: despot2\_baby2

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	96
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.80 mm
TR	5.40 ms
TE	2.700 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	BC

## Contrast

Flip angle	60 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	16
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	95 %
Slice resolution	90 %
Phase partial Fourier	5/8

Slice partial Fourier	7/8
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	On
Intensity	Medium
Slope	48
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending

## System

Body	On
HE2	Off
HE4	Off
HE1	Off
HE3	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
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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
--------------	-----

# SIEMENS MAGNETOM Avanto syngo MR B17

Dimension	3D
Elliptical scanning	Off
Contrasts	1
Bandwidth	350 Hz/Px
<hr/>	
RF pulse type	Low SAR
Gradient mode	Fast
RF spoiling	Off
<hr/>	
IR Mode	Off
Dummy pulses	300
Incremented FA Mode	On
mcDESPOT FA Mode	On
Number of FA Increments	8
RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Phase Increment	180 deg
Baby Mode	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\MT OFF -SAG

TA: 6:41 PAT: 2 Voxel size: 1.0x1.0x1.0 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	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	30 ms
TE	11.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
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
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off

Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Inline

Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	On
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	350 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\MT ON -SAG

TA: 6:41 PAT: 2 Voxel size: 1.0x1.0x1.0 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	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	30 ms
TE	11.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	On
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
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
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off

Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Inline

Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	On
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	350 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\T2 FLAIR

TA: 2:44

PAT: 2

Voxel size: 0.9x0.9x5.0 mm

Rel. SNR: 1.00

SIEMENS: tse

## 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	22
Dist. factor	30 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	230 mm
FoV phase	87.5 %
Slice thickness	5.0 mm
TR	9000 ms
TE	89.0 ms
Averages	1
Concatenations	2
Filter	Normalize, Elliptical filter
Coil elements	HEA;HEP

## Contrast

TD	0.0 ms
MTC	Off
Magn. preparation	Slice-sel. IR
T1	2500 ms
Freeze suppressed tissue	On
Flip angle	150 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	On
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	31
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off

Distortion Corr.	Off
Prescan Normalize	Off
Normalize	On
Intensity	Medium
Cut off	20
Width	4
Unfiltered images	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	90.00 deg
A >> P	230 mm
R >> L	202 mm
F >> H	142 mm

## Physio

1st Signal/Mode	None
Dark blood	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

# SIEMENS MAGNETOM Avanto syngo MR B17

## Sequence

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	On
Contrasts	1
Bandwidth	190 Hz/Px
Flow comp.	No
Allowed delay	30 s
Echo spacing	9.92 ms
<hr/>	
Define	Turbo factor
Turbo factor	16
Echo trains per slice	8
RF pulse type	Normal
Gradient mode	Normal

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Mod\Abdomen Localizer

TA: 0:31 PAT: Off Voxel size: 2.0x1.6x7.0 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	On
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	single

Phase resolution	80 %
Phase partial Fourier	Off
Interpolation	On
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	50 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	50 %
Position	L21.0 P0.0 H0.0
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	13 %
FoV read	400 mm
FoV phase	100.0 %
Slice thickness	7.0 mm
TR	7.0 ms
TE	2.60 ms
Averages	2
Concatenations	9
Filter	Distortion Corr.(2D), Elliptical filter
Coil elements	BO1,2;SP2-4

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
BO1	On
BO2	On
SP4	On
SP2	On
SP8	Off
SP6	Off
SP3	On
SP1	Off
SP7	Off
SP5	Off
Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
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## Physio

1st Signal/Mode	None
Segments	1

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Modi\Abdomen Dixon Breathhold  
TA: 0:11 PAT: 2 Voxel size: 2.2x1.6x5.0 mm Rel. SNR: 1.00 SIEMENS: fl3d\_vibe

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	Off
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	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	40
FoV read	400 mm
FoV phase	78.1 %
Slice thickness	5.00 mm
TR	6.82 ms
TE 1	2.38 ms
TE 2	4.76 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(2D), Prescan Normalize
Coil elements	BO1,2;SP2,3

## Contrast

Flip angle	10.0 deg
Fat suppr.	None
Water suppr.	None
Dixon	Water + fat images
Save original images	On
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

## Resolution

Base resolution	256
Phase resolution	70 %
Slice resolution	60 %
Phase partial Fourier	Off
Slice partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off

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

## Geometry

Multi-slice mode	Sequential
Series	Ascending
Special sat.	Parallel F/H
Gap	10.0 mm
Thickness	60 mm

## System

Body	Off
BO1	On
BO2	On
SP4	Off
SP2	On
SP8	Off
SP6	Off
SP3	On
SP1	Off
SP7	Off
SP5	Off
Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	H >> F
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	400 mm
A >> P	313 mm
F >> H	200 mm

## Physio

1st Signal/Mode	None
Resp. control	Breath-hold

## Inline

3D centric reordering	Off
Time to center	5.2 s
Subtract	Off
Liver registration	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Strong
Contrasts	2
Bandwidth 1	480 Hz/Px
Bandwidth 2	480 Hz/Px
Readout mode	Monopolar
Optimization	In phase
<hr/>	
RF pulse type	Fast
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Modi\Brain Localizer

TA: 0:26 PAT: Off Voxel size: 1.4x1.0x8.0 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	On
Start measurements	single

Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
-----------------	-----

## Physio

1st Signal/Mode	None
Segments	1

# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Modi\Motion Training

TA: 1:35 PAT: Off Voxel size: 3.0x3.0x10.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	9
Dist. factor	100 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	192 mm
FoV phase	100.0 %
Slice thickness	10.00 mm
TR	130 ms
TE	7.94 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	700
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Phase partial Fourier	5/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	192 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
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active

# SIEMENS MAGNETOM Avanto syngo MR B17

Meas[19]	Active
Meas[20]	Active
Motion correction	On
Interpolation	3D-K-space
Spatial filter	Off

## Sequence

Introduction	Off
Bandwidth	2442 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.51 ms
<hr/>	
EPI factor	64
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Modi\Brain Localizer

TA: 0:26 PAT: Off Voxel size: 1.4x1.0x8.0 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	On
Start measurements	single

Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On
PAT mode	None
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Routine

Slice group 1	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	3
Dist. factor	300 %
Position	L0.0 A25.1 F0.7
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	7.0 ms
TE	2.95 ms
Averages	2
Concatenations	9
Filter	Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Contrast

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

## Resolution

Base resolution	256
-----------------	-----

## Physio

1st Signal/Mode	None
Segments	1

# SIEMENS MAGNETOM Avanto syngo MR B17

Tagging	None
Dark blood	Off
<hr/>	
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

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	290 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Mod\Resting State 2.5mm

TA: 10:35 PAT: Off Voxel size: 2.5x2.5x2.5 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_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	54
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR	1490 ms
TE	40.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	55 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	420
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	88
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	220 mm
A >> P	220 mm
F >> H	135 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

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	Off
Bandwidth	2368 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	0.54 ms
<hr/>	
EPI factor	88
Gradient mode	Fast
RF spoiling	Off
<hr/>	
Excite pulse duration	2560 us
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Modi\Field Map

TA: 1:05

Voxel size: 3.4x3.4x3.4 mm

Rel. SNR: 1.00

SIEMENS: gre\_field\_mapping

## 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	38
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	3.4 mm
TR	492 ms
TE 1	3.28 ms
TE 2	8.04 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Flip angle	90 deg
Fat suppr.	None
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	220 mm
A >> P	220 mm
F >> H	130 mm

## Sequence

Introduction	On
Dimension	2D
Asymmetric echo	Allowed
Contrasts	2
Bandwidth	260 Hz/Px
Flow comp.	Yes
RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Mod\T1W MEMPRAGE - SAG

TA: 6:32 PAT: 2 Voxel size: 1.0x1.0x1.0 mm Rel. SNR: 1.00 USER: tfl\_mgh\_multiecho

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
Load images to graphic segments	On
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	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	2730 ms
TE 1	1.64 ms
TE 2	3.5 ms
TE 3	5.36 ms
TE 4	7.22 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

## Contrast

Magn. preparation	Non-sel. IR
TI	1000 ms
Flip angle	7.0 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated

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

## Geometry

Multi-slice mode	Single shot
Series	Interleaved

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	Sagittal
Rotation	0.00 deg
F >> H	256 mm
A >> P	256 mm
R >> L	176 mm

## Physio

1st Signal/Mode	None
Dark blood	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

# SIEMENS MAGNETOM Avanto syngo MR B17

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Off
Contrasts	4
Bandwidth 1	651 Hz/Px
Bandwidth 2	651 Hz/Px
Bandwidth 3	651 Hz/Px
Bandwidth 4	651 Hz/Px
Flow comp. 1	No
Flow comp. 2	No
Flow comp. 3	No
Flow comp. 4	No
Echo spacing	9.6 ms
<hr/>	
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
<hr/>	
Readout polarity	Positive
Readout trajectory	Bipolar
Add. scale factor	4.0
Gradient spoiling	Siemens
Gradient moment factor	1
Siemens reconstruction	On
Save raw k-space data	Off
Averaging	RMS

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Mod\DWI B=0 PA - AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3240 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled

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

## Resolution

Base resolution	110
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	180.00 deg
R >> L	220 mm
A >> P	220 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1624 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	110
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Modi\DKI 64 Directions AP 3 WEIGHTS- AX

TA: 9:59 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	4500 ms
TE	98.0 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled

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

## Resolution

Base resolution	110
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

PAT mode	None
Matrix Coil Mode	Auto (CP)

Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	220 mm
A >> P	220 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	3
b-value 1	0 s/mm <sup>2</sup>
b-value 2	1000 s/mm <sup>2</sup>
b-value 3	2000 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	On
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1624 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms

EPI factor	110
Gradient mode	Fast
RF spoiling	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

Excite pulse duration	2560 us
Refocus pulse duration	5120 us
Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Modi\DWI B=0 PA- AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3240 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	110
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	180.00 deg
R >> L	220 mm
A >> P	220 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1624 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	110
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us



## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Mod\DWI B=0 AP- AX

TA: 0:16 PAT: Off Voxel size: 2.0x2.0x2.0 mm Rel. SNR: 1.00 USER: cmrr\_mbep2d\_diff

## 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	72
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3240 ms
TE	76.2 ms
Multi-band accel. factor	3
Filter	None
Coil elements	BC

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Delay in TR	0 ms
Multiple series	Off

## Resolution

Base resolution	110
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	None
Matrix Coil Mode	Auto (CP)
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved

## Special sat.

None

## System

Body	On
HEP	Off
HEA	Off
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
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	220 mm
A >> P	220 mm
F >> H	144 mm

## Physio

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

## Diff

Diffusion mode	MDDW
Diff. weightings	1
b-value	0 s/mm <sup>2</sup>
Diff. weighted images	On
Trace weighted images	Off
Average ADC maps	Off
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	64

## Sequence

Introduction	Off
Bandwidth	1624 Hz/Px
Free echo spacing	Off
Echo spacing	0.72 ms
EPI factor	110
Gradient mode	Fast
RF spoiling	Off
Excite pulse duration	2560 us
Refocus pulse duration	5120 us

## SIEMENS MAGNETOM Avanto syngo MR B17

Diffusion Scheme	Monopolar
Single-band images	Off
MB LeakBlock kernel	Off
MB RF phase scramble	Off
Time-shifted MB RF	Off
Invert RO/PE polarity	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Modi\Despot 1 -SAG

TA: 5:00

Voxel size: 1.8x1.7x1.8 mm

Rel. SNR: 1.00

USER: despot1\_baby

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	96
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.80 mm
TR	5.2 ms
TE	2.4 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	BC

## Contrast

Flip angle	16 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	8
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	95 %
Slice resolution	90 %
Phase partial Fourier	6/8
Slice partial Fourier	7/8
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off

B1 filter	Off
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending

## System

Body	On
HE2	Off
HE4	Off
HE1	Off
HE3	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default

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
-----------------	------

## 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	On
Contrasts	1
Bandwidth	350 Hz/Px
RF pulse type	Low SAR
Gradient mode	Fast
RF spoiling	On

## SIEMENS MAGNETOM Avanto syngo MR B17

IR Mode	Off
Dummy pulses	300
Incremented FA Mode	On
mcDESPOT FA Mode	On
Number of FA Increments	8
RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Spoil Increment	37.8 deg
Gradient Spoiler Factor	0.3
Baby Mode	Off

## SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human Phantom Mod\IR SPGR -SAG

TA: 0:53

Voxel size: 1.7×1.7×3.6 mm

Rel. SNR: 1.00

USER: despot1\_baby

Properties		Series	Ascending
Prio Recon	Off	System	
Before measurement		Body	On
After measurement		HE2	Off
Load to viewer	On	HE4	Off
Inline movie	Off	HE1	Off
Auto store images	On	HE3	Off
Load to stamp segments	On		
Load images to graphic segments	Off	Positioning mode	FIX
Auto open inline display	Off	Table position	H
Start measurement without further preparation	Off	Table position	0 mm
Wait for user to start	Off	MSMA	S - C - T
Start measurements	single	Sagittal	R >> L
		Coronal	A >> P
		Transversal	F >> H
		Save uncombined	Off
		Coil Combine Mode	Adaptive Combine
		Auto Coil Select	Default
Routine			
Slab group 1		Shim mode	Tune up
Slabs	1	Adjust with body coil	Off
Dist. factor	20 %	Confirm freq. adjustment	Off
Position	Isocenter	Assume Silicone	Off
Orientation	Sagittal	? Ref. amplitude 1H	0.000 V
Phase enc. dir.	A >> P	Adjustment Tolerance	Auto
Rotation	0.00 deg	Adjust volume	
Phase oversampling	0 %	Position	Isocenter
Slice oversampling	0.0 %	Orientation	Transversal
Slices per slab	48	Rotation	0.00 deg
FoV read	220 mm	R >> L	350 mm
FoV phase	100.0 %	A >> P	263 mm
Slice thickness	3.60 mm	F >> H	350 mm
TR	5.3 ms		
TE	2.4 ms	Physio	
Averages	1	1st Signal/Mode	None
Concatenations	1		
Filter	Raw filter	Inline	
Coil elements	BC	Subtract	Off
Contrast		Std-Dev-Sag	Off
Flip angle	5 deg	Std-Dev-Cor	Off
		Std-Dev-Tra	Off
		Std-Dev-Time	Off
Averaging mode	Short term	MIP-Sag	Off
Reconstruction	Magnitude	MIP-Cor	Off
Measurements	1	MIP-Tra	Off
Multiple series	Off	MIP-Time	Off
Resolution		Save original images	On
Base resolution	128	Sequence	
Phase resolution	100 %	Introduction	Off
Slice resolution	100 %	Dimension	3D
Phase partial Fourier	Off	Elliptical scanning	On
Slice partial Fourier	6/8	Contrasts	1
Interpolation	Off	Bandwidth	350 Hz/Px
Matrix Coil Mode	Auto (CP)	RF pulse type	Low SAR
		Gradient mode	Fast
Image Filter	Off	RF spoiling	On
Distortion Corr.	Off		
Prescan Normalize	Off	IR Mode	On
Normalize	Off	Inversion time	400 ms
B1 filter	Off	RF pulse duration	0.8 ms
Raw filter	On	RF pulse TBW	3.0
Intensity	Weak	RF Spoil Increment	37.8 deg
Slope	25	Gradient Spoiler Factor	0.3
Elliptical filter	Off	Baby Mode	Off
Geometry			
Multi-slice mode	Sequential		

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Modi\Despot 2 -SAG

TA: 8:38

Voxel size: 1.8x1.7x1.8 mm

Rel. SNR: 1.00

USER: despot2\_baby2

## Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	96
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	1.80 mm
TR	5.40 ms
TE	2.700 ms
Averages	1
Concatenations	1
Filter	Raw filter
Coil elements	BC

## Contrast

Flip angle	60 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	16
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Multiple series	Off

## Resolution

Base resolution	128
Phase resolution	95 %
Slice resolution	90 %
Phase partial Fourier	5/8

Slice partial Fourier	7/8
Interpolation	Off
Matrix Coil Mode	Auto (CP)
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	On
Intensity	Medium
Slope	48
Elliptical filter	Off

## Geometry

Multi-slice mode	Sequential
Series	Ascending

## System

Body	On
HE2	Off
HE4	Off
HE1	Off
HE3	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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
-----------------	------

## 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
--------------	-----

## SIEMENS MAGNETOM Avanto syngo MR B17

Dimension	3D
Elliptical scanning	Off
Contrasts	1
Bandwidth	350 Hz/Px
<hr/>	
RF pulse type	Low SAR
Gradient mode	Fast
RF spoiling	Off
<hr/>	
IR Mode	Off
Dummy pulses	300
Incremented FA Mode	On
mcDESPOT FA Mode	On
Number of FA Increments	8
RF pulse duration	0.8 ms
RF pulse TBW	3.0
RF Phase Increment	180 deg
Baby Mode	Off



# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Mod\MT OFF -SAG

TA: 6:41 PAT: 2 Voxel size: 1.0x1.0x1.0 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	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	30 ms
TE	11.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
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
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off

Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Inline

Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	On
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	350 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Mod\MT ON -SAG

TA: 6:41 PAT: 2 Voxel size: 1.0x1.0x1.0 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	On
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	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	176
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	30 ms
TE	11.00 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

MTC	On
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
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
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off

Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Default
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

## Inline

Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off

# SIEMENS MAGNETOM Avanto syngo MR B17

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

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	On
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Bandwidth	350 Hz/Px
Flow comp.	No
<hr/>	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER\CM\HumanPhantom\Human\_Phantom\_Mod\T2 FLAIR

TA: 2:44 PAT: 2 Voxel size: 0.9x0.9x5.0 mm Rel. SNR: 1.00 SIEMENS: tse

## 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	22
Dist. factor	30 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	230 mm
FoV phase	87.5 %
Slice thickness	5.0 mm
TR	9000 ms
TE	89.0 ms
Averages	1
Concatenations	2
Filter	Normalize, Elliptical filter
Coil elements	HEA;HEP

## Contrast

TD	0.0 ms
MTC	Off
Magn. preparation	Slice-sel. IR
T1	2500 ms
Freeze suppressed tissue	On
Flip angle	150 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Water suppr.	None
Restore magn.	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	On
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	31
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off

Distortion Corr.	Off
Prescan Normalize	Off
Normalize	On
Intensity	Medium
Cut off	20
Width	4
Unfiltered images	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Tim CT mode	Off

## System

Body	Off
HEP	On
HEA	On
Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
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	90.00 deg
A >> P	230 mm
R >> L	202 mm
F >> H	142 mm

## Physio

1st Signal/Mode	None
Dark blood	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

# SIEMENS MAGNETOM Avanto syngo MR B17

## Sequence

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	On
Contrasts	1
Bandwidth	190 Hz/Px
Flow comp.	No
Allowed delay	30 s
Echo spacing	9.92 ms
<hr/>	
Define	Turbo factor
Turbo factor	16
Echo trains per slice	8
RF pulse type	Normal
Gradient mode	Normal

## Table of contents

\\USER

CMI

HBN

V1

Abdomen Localizer  
 Abdomen Dixon Breathhold  
 -- Switch to Head Coil --  
 Brain Localizer  
 Motion Training  
 Brain Localizer  
 Resting State 2.5mm  
 Field Map  
 -- Anatomicals, Pt Can Watch Movie or Listen to Music --  
 T1W MEMPRAGE - SAG  
 DWI B=0 PA - AX  
 DKI 64 Directions AP 3 WEIGHTS- AX  
 DWI B=0 PA- AX  
 DWI B=0 AP- AX  
 -- Check In with Pt --  
 Despot 1 -SAG  
 IR SPGR -SAG  
 -- Check In with Pt --  
 Despot 2 -SAG  
 -- Check In with Pt --  
 MT OFF -SAG  
 MT ON -SAG  
 T2 FLAIR

SerialScanning  
Scan1

Brain Localizer  
 Motion Training  
 Brain Localizer  
 Resting State 2.5mm  
 --Insert HCP task here--  
 Field Map  
 -- Anatomicals, Pt Can Watch Movie or Listen to Music --  
 T1W MEMPRAGE - SAG  
 DWI B=0 PA - AX  
 DKI 64 Directions AP 3 WEIGHTS- AX  
 DWI B=0 PA- AX  
 DWI B=0 AP- AX  
 -- Check In with Pt --  
 Despot 1 -SAG  
 IR SPGR -SAG  
 -- Check In with Pt --  
 Despot 2 -SAG  
 -- Check In with Pt --  
 MT OFF -SAG  
 MT ON -SAG  
 T2 FLAIR  
 \_Pause\_ OPTIONS  
 HCP\_Working Memory  
 HCP\_Gambling  
 HCP\_Motor  
 HCP\_Language  
 HCP\_Social\_Cog  
 HCP\_Relational Processing  
 HCP\_Emotional Processing  
 Story\_Corps\_A  
 Story\_Corps\_B  
 Story\_Corps\_C  
 Story\_Corps\_D  
 Breathhold\_CMRR  
 BreathHold MGH

# SIEMENS MAGNETOM Avanto syngo MR B17

\\USER

CMI

SerialScanning

Scan1

MSIT\_MGH  
MSIT\_CMRR

Scan2

Brain Localizer  
Motion Training  
Brain Localizer  
Resting State 2.5mm  
Movie 2.5mm  
Inscapes 2.5mm  
Flanker\_Task  
Field Map  
-- Anatomicals, Pt Can Watch Movie or Listen to Music --  
T1W MEMPRAGE - SAG  
DWI B=0 PA- AX  
DKI 64 Directions AP 3 WEIGHTS- AX  
DWI B=0 PA - AX  
DWI B=0 AP- AX  
\_Pause\_ OPTIONS  
HCP\_Working Memory  
HCP\_Gambling  
HCP\_Motor  
HCP\_Language  
HCP\_Social\_Cog  
HCP\_Relational Processing  
HCP\_Emotiona Processing  
Story\_Corps\_A  
Story\_Corps\_B  
Story\_Corps\_C  
Story\_Corps\_D  
Breathhold\_CMRR  
BreathHold MGH  
MSIT\_MGH  
MSIT\_CMRR  
VAM\_MGH  
VAM\_CMRR

Raiders

Brain Localizer  
Motion Training  
Brain Localizer  
\_Pause\_ Insert HCP Task here\_Prior to video.  
Raiders\_1  
Raiders\_2  
Raiders\_3  
Raiders\_4  
Raiders\_5  
Raiders\_6  
Field Map  
\_ HCP\_OPTIONS\_  
HCP\_Working Memory  
HCP\_Gambling  
HCP\_Motor  
HCP\_Language  
HCP\_Social\_Cog  
HCP\_Relational Processing  
HCP\_Emotiona Processing

PhantomScanning

phannie\_quant

localizer  
Despot 1 -SAG  
IR SPGR -SAG



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CMI

PhantomScanning

phannie\_quant

Despot 2 -SAG  
MT OFF -SAG  
MT ON -SAG  
-- Phannie Recommended Protocol (GE) --  
Isotropic Scan  
PD SNR  
PD SNR  
T1 Mapping VFA 2  
T1 Mapping VFA 5  
T1 Mapping VFA 10  
T1 Mapping VFA 15  
T1 Mapping VFA 20  
T1 Mapping VFA 25  
T1 Mapping VFA 30  
-- Extended Protocol (GE) --  
T1 MAP VTI 35  
T1 MAP VTI 75  
T1 MAP VTI 100  
T1 MAP VTI 125  
T1 MAP VTI 150  
T1 MAP VTI 250  
T1 MAP VTI 1000  
T1 MAP VTI 1500  
T1 MAP VTI 2000  
T1 MAP VTI 3000  
T2 Map 15s  
T2 Map 25s  
T2 Map 40s  
Resolution Insert  
Section Thickness 3mm  
Section Thickness 5mm

phannie\_extras

T2 ME 15  
T2 ME 30  
T2 ME 45  
T2 ME 60  
T2 ME 25  
T2 ME 50  
T2 ME 75  
T2 ME 100  
T2 ME 40  
T2 ME 80  
T2 ME 120  
T2 ME 160

fbirnx

Brain Localizer  
Resting State 2.5mm MB3\_CMRR  
Resting State 2.5mm noMB  
Resting State 2.5mm MB3 MGH  
Brain Localizer w/FatHat  
Resting State 2.5mm MB3\_CMRR w/FatHat  
Resting State 2.5mm noMB w/FatHat  
Resting State 2.5mm MB3 MGH w/FatHat  
ep2d\_bold\_send\_motion

DTIphantom

Brain Localizer  
Diff Calibration  
DWI B=0 PA - AX  
DKI 64 Directions AP 3 WEIGHTS- AX  
DWI B=0 PA- AX

# SIEMENS MAGNETOM Avanto syngo MR B17

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CMI

PhantomScanning

DTIphantom

DWI B=0 AP- AX  
Siemens DKI

headphone

t1\_mpr\_ns\_sag\_p2\_iso

test\_moco

localizer  
ep2d\_bold\_send\_motion

HumanPhantom

Human\_Phantom

Abdomen Localizer  
Abdomen Dixon Breathhold  
-- Switch to Head Coil --  
Brain Localizer  
Motion Training  
Brain Localizer  
Resting State 2.5mm  
Field Map  
-- Anatomicals, Pt Can Watch Movie or Listen to Music --  
T1W MEMPRAGE - SAG  
DWI B=0 PA - AX  
DKI 64 Directions AP 3 WEIGHTS- AX  
DWI B=0 PA- AX  
DWI B=0 AP- AX  
-- Check In with Pt --  
Despot 1 -SAG  
IR SPGR -SAG  
-- Check In with Pt --  
Despot 2 -SAG  
-- Check In with Pt --  
MT OFF -SAG  
MT ON -SAG  
T2 FLAIR

Human\_Phantom\_Modi

Abdomen Localizer  
Abdomen Dixon Breathhold  
-- Switch to Head Coil --  
Brain Localizer  
Motion Training  
Brain Localizer  
Resting State 2.5mm  
Field Map  
-- Anatomicals, Pt Can Watch Movie or Listen to Music --  
T1W MEMPRAGE - SAG  
DWI B=0 PA - AX  
DKI 64 Directions AP 3 WEIGHTS- AX  
DWI B=0 PA- AX  
DWI B=0 AP- AX  
-- Check In with Pt --  
Despot 1 -SAG  
IR SPGR -SAG  
-- Check In with Pt --  
Despot 2 -SAG  
-- Check In with Pt --  
MT OFF -SAG  
MT ON -SAG  
T2 FLAIR