

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\AAHScout

TA: 0:14    PAT: 3    Voxel size: 1.6x1.6x1.6 mm    Rel. SNR: 1.00    SIEMENS: AALScout

## 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	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 deg
AutoAlign	Head
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	128
FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
TR	3.15 ms
TE	1.37 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

## Contrast

Flip angle	8 deg
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

## Resolution

Base resolution	160
Phase resolution	100 %
Slice resolution	69 %
Phase partial Fourier	6/8
Slice partial Fourier	6/8
PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	1
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	Sequential
Series	Ascending
Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

## System

Body	Off
HEP	On
HEA	On
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
Auto Coil Select	Off
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

## Inline

Time to center	6.2 s
MapIt	None
Contrasts	1

## Sequence

Introduction	On
Dimension	3D
Asymmetric echo	Weak
Bandwidth	550 Hz/Px
RF pulse type	Fast
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\localizer

TA: 0:12    PAT: Off    Voxel size: 1.9x0.9x5.0 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

## Routine

Slice group 1	
Slices	3
Dist. factor	20 %
Position	L4.4 A28.0 H23.0
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	1
Dist. factor	20 %
Position	L0.0 A25.2 H0.0
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 3	
Slices	1
Dist. factor	20 %
Position	L0.0 A19.9 H5.2
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	300 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	8.0 ms
TE	2.00 ms
Averages	1
Concatenations	5
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Contrast

TD	1000 ms
MTC	Off
Magn. preparation	None
Flip angle	30 deg
Fat suppr.	None
Water suppr.	None
SWI	Off
-----	
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution

Base resolution	320
Phase resolution	50 %
Phase partial Fourier	Off
Interpolation	Off
-----	
PAT mode	None
Matrix Coil Mode	Auto (CP)
-----	
Image Filter	Off
Distortion Corr. Mode	On
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Geometry

Multi-slice mode	Sequential
Series	Interleaved
-----	
Saturation mode	Standard
Special sat.	None
-----	
Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

## System

Body	Off
NE2	Off
NE1	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
-----	
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
-----	
Shim mode	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

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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
MIP-Time	Off
Save original images	On
-----	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
-----	
MapIt	None
Contrasts	1

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Bandwidth	500 Hz/Px
Flow comp.	No
Allowed delay	0 s
-----	
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\ep2d\_diff\_3scan\_trace

TA: 1:44    PAT: 2    Voxel size: 1.8x1.8x3.0 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	On
Start measurements	single

## Routine

Slice group 1	
Slices	50
Dist. factor	0 %
Position	R2.7 A31.9 H29.8
Orientation	T > C-3.3 > S0.9
Phase enc. dir.	A >> P
Rotation	0.10 deg
Phase oversampling	0 %
FoV read	230 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	6000 ms
TE	77 ms
Averages	2
Concatenations	1
Filter	Raw filter, Distortion Corr.(2D), Prescan Normalize
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	On
-----	
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
-----	
Distortion Corr. Mode	On
Unfiltered images	2D
Prescan Normalize	Off
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
-----	
Special sat.	None
-----	
Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	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
MSMA	S - C - T
Sagittal	R >> L
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
-----	
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	R2.7 A31.9 H29.8
Orientation	T > C-3.3 > S0.9
Rotation	0.10 deg
R >> L	230 mm
A >> P	230 mm
F >> H	150 mm

## Physio

1st Signal/Mode	None
-----	
Resp. control	Off

## Diff

Diffusion mode	3-Scan Trace
Diff. weightings	3
b-value 1	0 s/mm <sup>2</sup>
b-value 2	500 s/mm <sup>2</sup>
b-value 3	1000 s/mm <sup>2</sup>
Diff. weighted images	Off
Trace weighted images	On
Average ADC maps	On
Individual ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40
Diff. directions	3

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-----  
Sequence

Introduction	On
Bandwidth	1446 Hz/Px
Free echo spacing	Off
Echo spacing	0.8 ms
-----	
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast*

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\dti\_30dir

TA: 3:46    PAT: 2    Voxel size: 1.8x1.8x3.0 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	On
Start measurements	single

## Routine

Slice group 1	
Slices	50
Dist. factor	0 %
Position	R2.7 A31.9 H29.8
Orientation	T > C-3.3 > S0.9
Phase enc. dir.	A >> P
Rotation	0.10 deg
Phase oversampling	0 %
FoV read	230 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	6600 ms
TE	88 ms
Averages	1
Concatenations	1
Filter	Raw filter, Prescan Normalize
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	On
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	On
Raw filter	On
Intensity	Weak
Slope	25
Elliptical filter	Off
Hamming	Off

## Geometry

Multi-slice mode	Interleaved
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## Series

Special sat.	None
--------------	------

## Set-n-Go Protocol

Table position	H
Table position	0 mm
Inline Composing	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

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

## Shim mode

Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	R2.7 A31.9 H29.8
Orientation	T > C-3.3 > S0.9
Rotation	0.10 deg
R >> L	230 mm
A >> P	230 mm
F >> H	150 mm

## Physio

1st Signal/Mode	None
Resp. control	Off

## Diff

Diffusion mode	MDDW
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	1000 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	On
Tensor	On
Noise level	40
Diff. directions	30

## Sequence

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

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Bandwidth	1446 Hz/Px
Free echo spacing	Off
Echo spacing	0.8 ms
-----	
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast*

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\T2 dual echo (T2 Map)

TA: 2:44    PAT: 2    Voxel size: 0.9x0.9x3.0 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	On
Start measurements	single

## Routine

Slice group 1	
Slices	50
Dist. factor	0 %
Position	R2.7 A38.0 H33.9
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.10 deg
Phase oversampling	0 %
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	6000 ms
TE 1	85.0 ms
TE 2	188 ms
Averages	1
Concatenations	3
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP

## Contrast

TD	0.0 ms
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	256
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
-----	
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.	On

Mode	2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
-----	
Special sat.	None
-----	
Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	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
MSMA	S - C - T
Sagittal	R >> L
Coronal	P >> A
Transversal	H >> F
Coil Combine Mode	Sum of Squares
AutoAlign	---
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

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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
Reduce Motion Sens.	Off
Contrasts	2
Bandwidth	210 Hz/Px
Flow comp.	No
Allowed delay	0 s
Echo spacing	9.4 ms

---

Define	Turbo factor
Turbo factor	18
Echo trains per slice	8
RF pulse type	Normal
Gradient mode	Fast

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\t2\_fl2d\_tra\_hemo

TA: 2:44    PAT: 2    Voxel size: 0.9x0.9x3.0 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

## Routine

Slice group 1	
Slices	50
Dist. factor	0 %
Position	L1.2 A41.6 H18.5
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	230 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	500 ms
TE	20.00 ms
Averages	1
Concatenations	3
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP;NE2

## Contrast

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

## Resolution

Base resolution	256
Phase resolution	100 %
Phase 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	On
Mode	Inplane

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
-----	
Saturation mode	Standard
Special sat.	None
-----	
Set-n-Go Protocol	Off
Table position	H
Table position	19 mm
Inline Composing	Off

## System

Body	Off
NE2	On
NE1	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

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

Shim mode	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

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Subtract	Off
Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
-----	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
-----	
MapIt	None
Contrasts	1

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Off
Bandwidth	300 Hz/Px
Flow comp.	Slice/Read
Allowed delay	60 s
-----	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\gre\_12echoes\_T2starMap  
 TA: 3:32 PAT: 2 Voxel size: 1.2x1.2x3.0 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

### Routine

Slice group 1	
Slices	50
Dist. factor	0 %
Position	L1.2 A41.6 H18.5
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	230 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	500 ms
TE 1	5.00 ms
TE 2	9.53 ms
TE 3	13.06 ms
TE 4	16.59 ms
TE 5	20.12 ms
TE 6	23.65 ms
TE 7	27.18 ms
TE 8	30.71 ms
TE 9	34.24 ms
TE 10	37.77 ms
TE 11	41.30 ms
TE 12	44.83 ms
Averages	1
Concatenations	5
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP;NE2

### Contrast

TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	25 deg
Fat suppr.	None
Water suppr.	None
SWI	Off
-----	
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

### Resolution

Base resolution	192
Phase resolution	100 %
Phase partial Fourier	6/8

### Interpolation

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. Mode	On
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	On
Mode	Inplane

### Geometry

Multi-slice mode	Interleaved
Series	Interleaved
-----	
Saturation mode	Standard
Special sat.	None
-----	
Set-n-Go Protocol	Off
Table position	H
Table position	19 mm
Inline Composing	Off

### System

Body	Off
NE2	On
NE1	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
-----	
Positioning mode	ISO
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
-----	
Shim mode	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

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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
MIP-Time	Off
Save original images	On
-----	
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
-----	
MapIt	T2* map
Contrasts	12

## Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Off
Bandwidth 1	300 Hz/Px
Bandwidth 2	300 Hz/Px
Bandwidth 3	300 Hz/Px
Bandwidth 4	300 Hz/Px
Bandwidth 5	300 Hz/Px
Bandwidth 6	300 Hz/Px
Bandwidth 7	300 Hz/Px
Bandwidth 8	300 Hz/Px
Bandwidth 9	300 Hz/Px
Bandwidth 10	300 Hz/Px
Bandwidth 11	300 Hz/Px
Bandwidth 12	300 Hz/Px
Flow comp. 1	Slice/Read
Flow comp. 2	No
Flow comp. 3	No
Flow comp. 4	No
Flow comp. 5	No
Flow comp. 6	No
Flow comp. 7	No
Flow comp. 8	No
Flow comp. 9	No
Flow comp. 10	No
Flow comp. 11	No
Flow comp. 12	No
Readout mode	Bipolar
Allowed delay	60 s
-----	
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\T2 Flair Axial p2

TA: 3:20    PAT: 2    Voxel size: 0.8x0.7x5.0 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	On
Start measurements	single

## Routine

Slice group 1	
Slices	25
Dist. factor	20 %
Position	L1.2 A41.6 H18.5
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	220 mm
FoV phase	86.3 %
Slice thickness	5.0 mm
TR	9000 ms
TE	88 ms
Averages	1
Concatenations	2
Filter	Distortion Corr.(2D), Prescan Normalize, Elliptical filter
Coil elements	HEA;HEP;NE2

## Contrast

TD	0.0 ms
MTC	Off
Magn. preparation	Slice-sel. IR
TI	2500 ms
Freeze suppressed tissue	Off
Flip angle	160 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	320
Phase resolution	85 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	26
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
Image Filter	Off

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

## Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Set-n-Go Protocol	Off
Table position	H
Table position	19 mm
Inline Composing	Off

## System

Body	Off
NE2	On
NE1	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

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

Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	L1.2 A41.6 H18.5
Orientation	Transversal
Rotation	90.00 deg
A >> P	220 mm
R >> L	190 mm
F >> H	149 mm

## Physio

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

## Inline

# SIEMENS MAGNETOM TrioTim syngo MR B17

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

---

## Sequence

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Bandwidth	182 Hz/Px
Flow comp.	Slice
Allowed delay	10 s
Echo spacing	11 ms

---

Define	Turbo factor
Turbo factor	13
Echo trains per slice	10
RF pulse type	Fast
Gradient mode	Fast

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\ASL\_PHC\_iPAT\_2s

TA: 3:34    PAT: 2    Voxel size: 3.4x3.4x5.0 mm    Rel. SNR: 1.00    USER: pgrs3d\_pcasl\_PHC\_iPAT

## 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	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	7.7 %
Slices per slab	26
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	3500 ms
TE	22.62 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

## Contrast

Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
-----	
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	30
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
Pause after meas. 16	0.0 s
Pause after meas. 17	0.0 s
Pause after meas. 18	0.0 s
Pause after meas. 19	0.0 s
Pause after meas. 20	0.0 s

Pause after meas. 21	0.0 s
Pause after meas. 22	0.0 s
Pause after meas. 23	0.0 s
Pause after meas. 24	0.0 s
Pause after meas. 25	0.0 s
Pause after meas. 26	0.0 s
Pause after meas. 27	0.0 s
Pause after meas. 28	0.0 s
Pause after meas. 29	0.0 s
Multiple series	Off

## Resolution

Base resolution	64
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	4/8
Interpolation	Off
-----	
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Ref. lines 3D	15
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
-----	
Raw filter	Off

## Geometry

Series	Interleaved
-----	
Sat. region 1	
Thickness	130 mm
Position	Isocenter
Orientation	Transversal
Special sat.	None
-----	
Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	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
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
-----	
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off

# SIEMENS MAGNETOM TrioTim syngo MR B17

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

## Physio

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

## Composing

## Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	2004 Hz/Px
Echo spacing	0.6 ms
-----	
Turbo factor	15
EPI factor	31
RF pulse type	Normal
Gradient mode	Fast
-----	
Label plane offset	90 mm
Background Suppr.	On
Suppress arteries	0 s/mm2
Start of time series	2000 ms
Increment time series	100 ms
Length of time series	1 ms
Use adaptive TR	Off
Number of echoes	1
Additional Echo Time	0
Pre sat	On
RF gap	360 usec
RF blocks	80
BS parameter[1]	1000 ms
BS parameter[2]	5 ms
BS parameter[3]	0 ms

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\ASL\_PHC\_iPAT\_M0

TA: 0:15    PAT: 2    Voxel size: 3.4x3.4x5.0 mm    Rel. SNR: 1.00    USER: pgrs3d\_pcasl\_PHC\_iPAT

### 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	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	7.7 %
Slices per slab	26
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	5000 ms
TE	22.62 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HEA;HEP

### Contrast

Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
-----	
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Off

### Resolution

Base resolution	64
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	4/8
Interpolation	Off
-----	
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Ref. lines 3D	15
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
-----	
Raw filter	Off

### Geometry

Series	Interleaved
--------	-------------

### Sat. region 1

Thickness	130 mm
Position	Isocenter
Orientation	Transversal
Special sat.	None

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	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
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	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

### Physio

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

### Composing

### Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	2004 Hz/Px
Echo spacing	0.6 ms

Turbo factor	15
EPI factor	31
RF pulse type	Normal
Gradient mode	Fast

Label plane offset	90 mm
Background Suppr.	Off

## SIEMENS MAGNETOM TrioTim syngo MR B17

Suppress arteries	0 s/mm2
Start of time series	4000 ms
Increment time series	100 ms
Length of time series	1 ms
Use adaptive TR	Off
Number of echoes	1
Additional Echo Time	0
Pre sat	On
RF gap	360 usec
RF blocks	80
BS parameter[1]	1000 ms
BS parameter[2]	5 ms
BS parameter[3]	0 ms

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\ASL\_fl\_pc\_VENC80cm

TA: 2.7 s    PAT: 2    Voxel size: 0.9x0.9x6.0 mm    Rel. SNR: 1.00    SIEMENS: fl\_pc

## Properties

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

## Routine

Slice group 1	
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
FoV read	220 mm
FoV phase	75.0 %
Slice thickness	6.0 mm
TR	33.30 ms
TE	3.28 ms
Averages	1
Concatenations	1
Filter	Elliptical filter
Coil elements	HEA;HEP

## Contrast

Flip angle	20 deg
-----	
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	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
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	On
Mode	Inplane

## Geometry

Multi-slice mode	Sequential
Series	Interleaved

Special sat.	None
--------------	------

Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	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
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default

Shim mode	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	3

## Angio

Flow mode	Single dir.
Encodings	1
Velocity enc.	80 cm/s
Direction	Through plane
Rephased images	On
Magnitude images	On
Magnitude sum	Off
Phase images	On

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 TrioTim syngo MR B17

## Sequence

Introduction	On
Dimension	2D
Asymmetric echo	Weak
Contrasts	1
Bandwidth	723 Hz/Px
Flow comp.	No
-----	
RF pulse type	Fast
Gradient mode	Fast
RF spoiling	On

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\t1\_mprage\_sag\_p2\_iso\_pre

TA: 4:53    PAT: 2    Voxel size: 1.0x1.0x1.0 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

Unfiltered images	Off
Prescan Normalize	On
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

## Geometry

Multi-slice mode	Single shot
Series	Ascending
-----	
Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

## Routine

Slab group 1	
Slabs	1
Dist. factor	50 %
Position	R1.2 A29.3 H0.7
Orientation	S > T-1.1
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	15.4 %
Slices per slab	208
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	2100 ms
TE	2.19 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

## 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
MSMA	S - C - T
Sagittal	R >> L
Coronal	P >> A
Transversal	H >> F
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
-----	

Shim mode	Tune up
Adjust with body coil	On
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

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	Each measurement

## Physio

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

## 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	24
Accel. factor 3D	1
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
-----	
Image Filter	Off
Distortion Corr.	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

# SIEMENS MAGNETOM TrioTim syngo MR B17

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

---

## Sequence

---

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Allowed
Bandwidth	210 Hz/Px
Flow comp.	No
Echo spacing	6.6 ms

---

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

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\DSC 2d epi\_perf\_p2

TA: 3:08    PAT: 2    Voxel size: 1.9x1.9x5.0 mm    Rel. SNR: 1.00    SIEMENS: ep2d\_fid

### 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

### Routine

Slice group 1	
Slices	20
Dist. factor	0 %
Position	L4.4 A26.7 H10.1
Orientation	T > C-2.2
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	1500 ms
TE	32 ms
Averages	1
Concatenations	1
Filter	Raw filter, Distortion Corr.(2D), Prescan Normalize
Coil elements	HEA;HEP

### Contrast

MTC	Off
Flip angle	35 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	120
Delay in TR	0 ms
Multiple series	Off

### Resolution

Base resolution	128
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	40
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Separate
Distortion Corr. Mode	On 2D
Unfiltered images	Off
Unfiltered images	Off
Prescan Normalize	On
Raw filter	On
Intensity	Weak

Slope	25
Elliptical filter	Off
Hamming	Off

### Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	Off

### System

Body	Off
NE2	Off
NE1	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off

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

Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	L4.4 A26.7 H10.1
Orientation	T > C-2.2
Rotation	0.00 deg
R >> L	240 mm
A >> P	240 mm
F >> H	100 mm

### Physio

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

### Perf

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

### Sequence

Introduction	On
Bandwidth	1346 Hz/Px
Free echo spacing	Off

# SIEMENS MAGNETOM TrioTim syngo MR B17

Echo spacing	0.83 ms
EPI factor	128
RF pulse type	Normal
Gradient mode	Fast*

# SIEMENS MAGNETOM TrioTim syngo MR B17

\\USER\Research Brain\Dr Gonzalez\ERSIAS\t1\_mprage\_sag\_p2\_iso\_post

TA: 4:53    PAT: 2    Voxel size: 1.0x1.0x1.0 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	R1.2 A29.3 H0.7
Orientation	S > T-1.1
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	15.4 %
Slices per slab	208
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	2100 ms
TE	2.19 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

## 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	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	24
Accel. factor 3D	1
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	Ascending
-----	
Set-n-Go Protocol	Off
Table position	H
Table position	0 mm
Inline Composing	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
MSMA	S - C - T
Sagittal	R >> L
Coronal	P >> A
Transversal	H >> F
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
-----	

Shim mode	Tune up
Adjust with body coil	On
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

# SIEMENS MAGNETOM TrioTim syngo MR B17

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

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## Sequence

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Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Allowed
Bandwidth	210 Hz/Px
Flow comp.	No
Echo spacing	6.6 ms

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

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\\USER\Research Brain\Dr Gonzalez\ERSIAS\TOF\_highres2

TA: 6:31    PAT: 2    Voxel size: 0.6x0.4x0.6 mm    Rel. SNR: 1.00    SIEMENS: fl\_tof

### 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	On
Start measurements	single

### Routine

Slab group 1	
Slabs	5
Dist. factor	-18.75 %
Position	L1.2 A41.6 H18.5
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
Slice oversampling	25.0 %
Slices per slab	32
FoV read	210 mm
FoV phase	81.3 %
Slice thickness	0.64 mm
TR	24 ms
TE	3.69 ms
Averages	1
Concatenations	5
Filter	Distortion Corr.(2D), Elliptical filter
Coil elements	HEA;HEP;NE2

### Contrast

TD	0.000 ms
MTC	Off
Flip angle	18 deg
Fat suppr.	None
Water suppr.	None
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

### Resolution

Base resolution	512
Phase resolution	65 %
Slice resolution	65 %
Phase partial Fourier	6/8
Slice partial Fourier	Off
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Matrix Coil Mode	Auto (Triple)
Reference scan mode	Integrated
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
POCS	Off

### Geometry

Multi-slice mode	Sequential
Series	Descending
Special sat.	Tracking H
Gap	10 mm
Thickness	40 mm
Set-n-Go Protocol	Off
Table position	H
Table position	19 mm
Inline Composing	Off

### System

Body	Off
NE2	On
NE1	Off
HEP	On
HEA	On
SP4	Off
SP2	Off
SP8	Off
SP6	Off
SP3	Off
SP1	Off
SP7	Off
SP5	Off
Positioning mode	ISO
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	L1.2 A41.6 H18.5
Orientation	Transversal
Rotation	90.00 deg
A >> P	210 mm
R >> L	171 mm
F >> H	88 mm

### Physio

1st Signal/Mode	None
Dark blood	Off

### Angio

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TONE ramp	70 %
Flow direction	F >> H
3D centric reordering	On
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Subtract	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	On
MIP-Cor	On
MIP-Tra	On
MIP-Time	Off
Save original images	On

## Sequence

Introduction	On
Dimension	3D
Elliptical scanning	Off
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	238 Hz/Px
Flow comp.	Yes
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Gradient mode	Fast
RF spoiling	On