

SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ZAHID RESEARCH001\HAACKE_MS_092809\haacke_ms_cp_head_01192010\localizer

Scan Time: 0:17 Voxel size: 2.5x1.3x7.0 [mm] Rel. SNR: 1.00 SIEMENS: gre

Routine

Slice group 1	
Slices	1
Dist. factor	20 [%]
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0 [deg]
Slice group 2	
Slices	1
Dist. factor	20 [%]
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0 [deg]
Slice group 3	
Slices	1
Dist. factor	20 [%]
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0 [deg]
Phase oversampling	0 [%]
FoV read	320 [mm]
FoV phase	100.0 [%]
Slice thickness	7 [mm]
TR	20 [ms]
TE	5 [ms]
Averages	2
Concatenations	3
Filter	Elliptical filter
Coil elements	HE

Contrast

TD	0 [ms]
MTC	0
Magn. preparation	None
Flip angle	40 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Water suppr.	None
Measurements	1

Resolution

Base resolution	256
Phase resolution	50 [%]
Phase partial Fourier	Off
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	On
Interpolation	1

PAT mode

PAT mode	None
----------	------

Geometry

Multi-slice mode	Sequential
Series	Interleaved

Saturation mode	Standard
Special sat.	None

System

Save uncombined	0
Scan at current TP	1
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Spine Array / SP3	0
CP Spine Array / SP4	0
CP Spine Array / SP5	0
CP Spine Array / SP6	0
CP Spine Array / SP1	0
CP Spine Array / SP2	0
CP Neck Array / NE1	0
CP Neck Array / NE2	0
CP Head Array / HE	1
Body	0

Shim mode	Tune up
Adjust with body coil	0
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	180.000 [V]
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0 [deg]
R >> L	350 [mm]
A >> P	263 [mm]
F >> H	350 [mm]

Physio

1st Signal/Mode	None
Segments	1

Tagging	None
Dark blood	0

Resp. control	Off

Inline

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	0
MIP-Cor	0
MIP-Tra	0
MIP-Time	0
Save original images	1

Wash - In	0
Wash - Out	0
TTP	0
PEI	0
MIP - time	0

Sequence

Introduction	1
Dimension	2D
Phase stabilisation	0
Averaging mode	Short term
Asymmetric echo	Off
Contrasts	1
Bandwidth	180 [Hz/Px]
Flow comp.	No

SIEMENS MAGNETOM Sonata syngo MR 2004A

RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	1

SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ZAHID RESEARCH001\HAACKE_MS_092809\haacke_ms_cp_head_01192010\SWI_1X.5X2_HEAD_80sl

Scan Time: 12:50 Voxel size: 1.0x0.5x2.0 [mm] Rel. SNR: 1.00 USER: swilPAT

Routine

Slab group 1	
Slabs	1
Dist. factor	20 [%]
Position	R3.9 A22.6 F11.2 [mm]
Orientation	T > C-6.5
Phase enc. dir.	R >> L
Rotation	90 [deg]
Phase oversampling	0 [%]
Slice oversampling	0 [%]
Slices per slab	80
FoV read	256 [mm]
FoV phase	75.0 [%]
Slice thickness	2 [mm]
TR	50 [ms]
TE	40 [ms]
Averages	1
Concatenations	1
Filter	None
Coil elements	HE

CP Spine Array / SP5	0
CP Spine Array / SP6	0
CP Spine Array / SP1	0
CP Spine Array / SP2	0
CP Neck Array / NE1	0
CP Neck Array / NE2	0
CP Head Array / HE	1
Body	0

Shim mode	Standard
Adjust with body coil	0
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	180.000 [V]
Adjust volume	
Position	R3.9 A22.6 F11.2 [mm]
Orientation	T > C-6.5
Rotation	90 [deg]
A >> P	256 [mm]
R >> L	192 [mm]
F >> H	160 [mm]

Contrast

MTC	0
Magn. preparation	None
Flip angle	15 [deg]
Reconstruction	Magn./Phase
Fat suppr.	None
Water suppr.	None
Measurements	1

Physio

1st Signal/Mode	None
Segments	1

Tagging	None
Dark blood	0

Resp. control	Off

Resolution

Base resolution	512
Phase resolution	50 [%]
Slice resolution	100 [%]
Phase partial Fourier	Off
Slice partial Fourier	Off
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	Off
Interpolation	0

PAT mode	None

Inline

Sequence

Introduction	1
Dimension	3D
Elliptical scanning	0
Phase stabilisation	0
Averaging mode	Short term
Asymmetric echo	Off
Contrasts	1
Bandwidth	80 [Hz/Px]
Flow comp.	Yes

RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	1

RO polarity	bipolar
SWI	Off

Geometry

Multi-slice mode	Interleaved
Series	Interleaved

Saturation mode	Standard
Special sat.	None

System

Save uncombined	0
Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Spine Array / SP3	0
CP Spine Array / SP4	0

SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ZAHID RESEARCH001\HAACKE_MS_092809\haacke_ms_cp_head_01192010\tof_fl2d_tra

Scan Time: 8:47 Voxel size: 1.0x0.5x2.5 [mm] Rel. SNR: 1.00 SIEMENS: fl_tof

Routine

Slice group 1	
Slices	128
Dist. factor	-33.00 [%]
Position	R3.9 A24.9 F25.9 [mm]
Orientation	T > C-6.5
Phase enc. dir.	R >> L
Rotation	90 [deg]
Phase oversampling	0 [%]
FoV read	256 [mm]
FoV phase	75.0 [%]
Slice thickness	2.5 [mm]
TR	26 [ms]
TE	7.2 [ms]
Averages	1
Concatenations	128
Filter	None
Coil elements	HE

Contrast

TD	0 [ms]
MTC	0
Flip angle	70 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Water suppr.	None
Measurements	1

Resolution

Base resolution	512
Phase resolution	50 [%]
Phase partial Fourier	6/8
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	Off
Interpolation	0

PAT mode	None

Geometry

Multi-slice mode	Sequential
Series	Ascending

Special sat.	Tracking F
Gap	10 [mm]
Thickness	40 [mm]

System

Save uncombined	0
Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Spine Array / SP3	0
CP Spine Array / SP4	0
CP Spine Array / SP5	0
CP Spine Array / SP6	0
CP Spine Array / SP1	0
CP Spine Array / SP2	0

CP Neck Array / NE1	0
CP Neck Array / NE2	0
CP Head Array / HE	1
Body	0

Shim mode	Tune up
Adjust with body coil	0
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	180.000 [V]
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0 [deg]
R >> L	350 [mm]
A >> P	263 [mm]
F >> H	350 [mm]

Physio

1st Signal/Mode	None

Dark blood	0

Angio

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	1
MIP-Cor	1
MIP-Tra	0
MIP-Time	0
Save original images	1

Sequence

Introduction	1
Dimension	2D
Averaging mode	Short term
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	81 [Hz/Px]
Flow comp.	Yes

Gradient mode	Fast
RF spoiling	1

SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ZAHID RESEARCH001\HAACKE_MS_092809\haacke_ms_cp_head_01192010\flash_50_through-plane

Scan Time: 1:23 Voxel size: 0.6x0.6x3.0 [mm] Rel. SNR: 1.00 SIEMENS: fl_fq_shphs

Routine

Slice group 1	
Slices	1
Dist. factor	20 [%]
Position	R3.9 P19.2 F37.3 [mm]
Orientation	T > C25.5
Phase enc. dir.	A >> P
Rotation	0 [deg]
Phase oversampling	1 [%]
FoV read	256 [mm]
FoV phase	75.0 [%]
Slice thickness	3 [mm]
TR	32 [ms]
TE	4.2 [ms]
Averages	1
Concatenations	1
Filter	None
Coil elements	HE

Contrast

Flip angle	30 [deg]
Reconstruction	Magnitude
Measurements	1

Resolution

Base resolution	448
Phase resolution	100 [%]
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	Off

Geometry

Multi-slice mode	Sequential
Series	Ascending

Special sat.	None

System

Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Spine Array / SP3	0
CP Spine Array / SP4	0
CP Spine Array / SP5	0
CP Spine Array / SP6	0
CP Spine Array / SP1	0
CP Spine Array / SP2	0
CP Neck Array / NE1	0
CP Neck Array / NE2	0
CP Head Array / HE	1
Body	0

Shim mode	Tune up
Adjust with body coil	1
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	180.000 [V]
Adjust volume	

Position	Isocenter
Orientation	Transversal
Rotation	0 [deg]
R >> L	350 [mm]
A >> P	263 [mm]
F >> H	350 [mm]

Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal [ms]
Acquisition window	700 [ms]
Trigger pulse	1
Trigger delay	0 [ms]
Segments	3
Phases	21

Angio

Flow mode	Single dir.
Encodings	1
Velocity enc.	50 [cm/s]
Direction	Through plane
Rephased images	1
Magnitude images	1
Phase images	1

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	0
MIP-Cor	0
MIP-Tra	0
MIP-Time	0
Save original images	1

Sequence

Introduction	0
Averaging mode	Long term
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	385 [Hz/Px]
Flow comp.	No

RF pulse type	Fast
Gradient mode	Normal
RF spoiling	1

SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ZAHID RESEARCH001\HAACKE_MS_092809\haacke_ms_cp_head_01192010\localizer-CENTER AT CHIN

Scan Time: 0:11 Voxel size: 3.1x1.6x10.0 [mm] Rel. SNR: 1.00 SIEMENS: gre

Routine

Slice group 1	
Slices	2
Dist. factor	50 [%]
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0 [deg]
Slice group 2	
Slices	1
Dist. factor	20 [%]
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0 [deg]
Phase oversampling	0 [%]
FoV read	400 [mm]
FoV phase	100.0 [%]
Slice thickness	10 [mm]
TR	24 [ms]
TE	6 [ms]
Averages	1
Concatenations	3
Filter	Elliptical filter
Coil elements	NE1,NE2,SP1,SP2

Contrast

TD	0 [ms]
MTC	0
Magn. preparation	None
Flip angle	30 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Water suppr.	None
Measurements	1

Resolution

Base resolution	256
Phase resolution	50 [%]
Phase partial Fourier	Off
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	On
Interpolation	1

PAT mode	None

Geometry

Multi-slice mode	Sequential
Series	Interleaved

Saturation mode	Standard
Special sat.	None

System

Save uncombined	0
Scan at current TP	1
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H

CP Spine Array / SP3	0
CP Spine Array / SP4	0
CP Spine Array / SP5	0
CP Spine Array / SP6	0
CP Spine Array / SP1	1
CP Spine Array / SP2	1
CP Neck Array / NE1	1
CP Neck Array / NE2	1
Body	0

Shim mode	Tune up
Adjust with body coil	0
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	180.000 [V]
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0 [deg]
R >> L	350 [mm]
A >> P	263 [mm]
F >> H	350 [mm]

Physio

1st Signal/Mode	None
Segments	1

Tagging	None
Dark blood	0

Resp. control	Off

Inline

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	0
MIP-Cor	0
MIP-Tra	0
MIP-Time	0
Save original images	1

Wash - In	0
Wash - Out	0
TTP	0
PEI	0
MIP - time	0

Sequence

Introduction	1
Dimension	2D
Phase stabilisation	0
Averaging mode	Short term
Asymmetric echo	Off
Contrasts	1
Bandwidth	130 [Hz/Px]
Flow comp.	No

RF pulse type	Fast
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	1

SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ZAHID RESEARCH001\HAACKE_MS_092809\haacke_ms_cp_head_01192010\tof_fl2d_tra-neck

Scan Time: 8:47 Voxel size: 1.0x0.5x2.5 [mm] Rel. SNR: 1.00 SIEMENS: fl_tof

Routine

Slice group 1	
Slices	128
Dist. factor	-33.00 [%]
Position	L0.0 A20.3 F1.0 [mm]
Orientation	Transversal
Phase enc. dir.	R >> L
Rotation	90 [deg]
Phase oversampling	0 [%]
FoV read	256 [mm]
FoV phase	75.0 [%]
Slice thickness	2.5 [mm]
TR	26 [ms]
TE	7.2 [ms]
Averages	1
Concatenations	128
Filter	None
Coil elements	HE,NE1,NE2,...

Contrast

TD	0 [ms]
MTC	0
Flip angle	70 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Water suppr.	None
Measurements	1

Resolution

Base resolution	512
Phase resolution	50 [%]
Phase partial Fourier	6/8
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	Off
Interpolation	0

PAT mode	None

Geometry

Multi-slice mode	Sequential
Series	Ascending

Special sat.	Tracking F
Gap	10 [mm]
Thickness	40 [mm]

System

Save uncombined	0
Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Spine Array / SP3	0
CP Spine Array / SP4	0
CP Spine Array / SP5	0
CP Spine Array / SP6	0
CP Spine Array / SP1	1
CP Spine Array / SP2	1

CP Neck Array / NE1	1
CP Neck Array / NE2	1
CP Head Array / HE	1
Body	0

Shim mode	Tune up
Adjust with body coil	0
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	180.000 [V]
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0 [deg]
R >> L	350 [mm]
A >> P	263 [mm]
F >> H	350 [mm]

Physio

1st Signal/Mode	None

Dark blood	0

Angio

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	1
MIP-Cor	1
MIP-Tra	1
MIP-Time	0
Save original images	1

Sequence

Introduction	1
Dimension	2D
Averaging mode	Short term
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	81 [Hz/Px]
Flow comp.	Yes

Gradient mode	Fast
RF spoiling	1

SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ZAHID RESEARCH001\HAACKE_MS_092809\haacke_ms_cp_head_01192010\flash_50_through-plane

Scan Time: 1:23 Voxel size: 0.6x0.6x4.0 [mm] Rel. SNR: 1.00 SIEMENS: fl_fq_shphs

Routine

Slice group 1	
Slices	1
Dist. factor	20 [%]
Position	R3.9 A36.1 F121.3 [mm]
Orientation	T > C7.4
Phase enc. dir.	A >> P
Rotation	0 [deg]
Phase oversampling	0 [%]
FoV read	256 [mm]
FoV phase	75.0 [%]
Slice thickness	4 [mm]
TR	32 [ms]
TE	4.2 [ms]
Averages	1
Concatenations	1
Filter	None
Coil elements	HE

Contrast

Flip angle	30 [deg]
Reconstruction	Magnitude
Measurements	1

Resolution

Base resolution	448
Phase resolution	100 [%]
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	Off

Geometry

Multi-slice mode	Sequential
Series	Ascending

Special sat.	None

System

Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Spine Array / SP3	0
CP Spine Array / SP4	0
CP Spine Array / SP5	0
CP Spine Array / SP6	0
CP Spine Array / SP1	0
CP Spine Array / SP2	0
CP Neck Array / NE1	0
CP Neck Array / NE2	0
CP Head Array / HE	1
Body	0

Shim mode	Tune up
Adjust with body coil	1
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	180.000 [V]
Adjust volume	

Position	Isocenter
Orientation	Transversal
Rotation	0 [deg]
R >> L	350 [mm]
A >> P	263 [mm]
F >> H	350 [mm]

Physio

1st Signal/Mode	Pulse/Trigger
Average cycle	No Signal [ms]
Acquisition window	700 [ms]
Trigger pulse	1
Trigger delay	0 [ms]
Segments	3
Phases	21

Angio

Flow mode	Single dir.
Encodings	1
Velocity enc.	50 [cm/s]
Direction	Through plane
Rephased images	1
Magnitude images	1
Phase images	1

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	0
MIP-Cor	0
MIP-Tra	0
MIP-Time	0
Save original images	1

Sequence

Introduction	0
Averaging mode	Long term
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	385 [Hz/Px]
Flow comp.	No

RF pulse type	Fast
Gradient mode	Normal
RF spoiling	1

SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ZAHID RESEARCH001\HAACKE_MS_092809\haacke_ms_cp_head_01192010\fl3d_pre_contrast-test

Scan Time: 0:16 Voxel size: 0.9x0.9x0.9 [mm] Rel. SNR: 1.00 SIEMENS: fl3d_ce

Routine

Slab group 1	
Slabs	1
Dist. factor	20 [%]
Position	L0.0 A37.6 F13.9 [mm]
Orientation	C > T6.8
Phase enc. dir.	R >> L
Rotation	0 [deg]
Phase oversampling	0 [%]
Slice oversampling	0 [%]
Slices per slab	96
FoV read	340 [mm]
FoV phase	75.0 [%]
Slice thickness	0.9 [mm]
TR	3.66 [ms]
TE	1.36 [ms]
Averages	1
Concatenations	1
Filter	None
Coil elements	HE,NE1,NE2,...

Contrast

Magn. preparation	None
Flip angle	30 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Water suppr.	None
Measurements	1

Resolution

Base resolution	384
Phase resolution	100 [%]
Slice resolution	60 [%]
Phase partial Fourier	6/8
Slice partial Fourier	6/8
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	Off
Interpolation	0

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24

Geometry

Multi-slice mode	Sequential
Series	Ascending

Special sat.	None

System

Save uncombined	0
Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Spine Array / SP3	0
CP Spine Array / SP4	0
CP Spine Array / SP5	0

CP Spine Array / SP6	0
CP Spine Array / SP1	1
CP Spine Array / SP2	1
CP Neck Array / NE1	1
CP Neck Array / NE2	1
CP Head Array / HE	1
Body	0

Shim mode	Tune up
Adjust with body coil	0
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	180.000 [V]
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0 [deg]
R >> L	350 [mm]
A >> P	263 [mm]
F >> H	350 [mm]

Physio

1st Signal/Mode	None
Segments	1

Angio

3D centric reordering	1
Time to center	0.5 [s]

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	0
MIP-Cor	1
MIP-Tra	0
MIP-Time	0
Save original images	1

Sequence

Introduction	0
Dimension	3D
Elliptical scanning	0
Averaging mode	Short term
Asymmetric echo	Allowed
Bandwidth	420 [Hz/Px]

RF pulse type	Normal
Gradient mode	Fast
RF spoiling	1

SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ZAHID RESEARCH001\HAACKE_MS_092809\haacke_ms_cp_head_01192010\DYNAMIC_fl3d_ce_cor-15

Scan Time: 4:02 Voxel size: 0.9x0.9x0.9 [mm] Rel. SNR: 1.00 SIEMENS: fl3d_ce

Routine	Series	Ascending
Slab group 1	Special sat.	None
Slabs	1	
Dist. factor	20 [%]	
Position	L0.0 A37.6 F13.9 [mm]	
Orientation	C > T6.8	
Phase enc. dir.	R >> L	
Rotation	0 [deg]	
Phase oversampling	0 [%]	
Slice oversampling	0 [%]	
Slices per slab	96	
FoV read	340 [mm]	
FoV phase	75.0 [%]	
Slice thickness	0.9 [mm]	
TR	3.66 [ms]	
TE	1.36 [ms]	
Averages	1	
Concatenations	1	
Filter	None	
Coil elements	HE,NE1,NE2,...	
	System	
	Save uncombined	0
	Scan at current TP	0
	Scan region position	H
	Scan region position	0 [mm]
	MSMA	S - C - T
	Sagittal	R >> L
	Coronal	A >> P
	Transversal	F >> H
	CP Spine Array / SP3	0
	CP Spine Array / SP4	0
	CP Spine Array / SP5	0
	CP Spine Array / SP6	0
	CP Spine Array / SP1	1
	CP Spine Array / SP2	1
	CP Neck Array / NE1	1
	CP Neck Array / NE2	1
	CP Head Array / HE	1
	Body	0
	Shim mode	Tune up
	Adjust with body coil	0
	Confirm freq. adjustment	0
	Assume Silicone	0
	Ref. amplitude [1H]	180.000 [V]
	Adjust volume	
	Position	Isocenter
	Orientation	Transversal
	Rotation	0 [deg]
	R >> L	350 [mm]
	A >> P	263 [mm]
	F >> H	350 [mm]
	Physio	
	1st Signal/Mode	None
	Segments	1
	Angio	
	3D centric reordering	1
	Time to center	0.5 [s]
	Subtract	0
	Std-Dev-Sag	0
	Std-Dev-Cor	0
	Std-Dev-Tra	0
	Std-Dev-Time	0
	MIP-Sag	0
	MIP-Cor	1
	MIP-Tra	0
	MIP-Time	0
	Save original images	1
	Sequence	
	Introduction	0
	Dimension	3D
	Elliptical scanning	0
	Averaging mode	Short term
	Asymmetric echo	Allowed
	Bandwidth	420 [Hz/Px]
	RF pulse type	Normal
	Gradient mode	Fast
	RF spoiling	1
Contrast		
Magn. preparation	None	
Flip angle	30 [deg]	
Reconstruction	Magnitude	
Fat suppr.	None	
Water suppr.	None	
Measurements	15	
Pause after meas. 1	0 [s]	
Pause after meas. 2	0 [s]	
Pause after meas. 3	0 [s]	
Pause after meas. 4	0 [s]	
Pause after meas. 5	0 [s]	
Pause after meas. 6	0 [s]	
Pause after meas. 7	0 [s]	
Pause after meas. 8	0 [s]	
Pause after meas. 9	0 [s]	
Pause after meas. 10	0 [s]	
Pause after meas. 11	0 [s]	
Pause after meas. 12	0 [s]	
Pause after meas. 13	0 [s]	
Pause after meas. 14	0 [s]	
Multiple series	1	
Resolution		
Base resolution	384	
Phase resolution	100 [%]	
Slice resolution	60 [%]	
Phase partial Fourier	6/8	
Slice partial Fourier	6/8	
Filter 1		
Raw filter	Off	
Filter 2		
Large FoV	Off	
Filter 3		
Normalize	Off	
Filter 4		
Elliptical filter	Off	
Interpolation	0	
PAT mode	GRAPPA	
Accel. factor PE	3	
Ref. lines PE	24	
Geometry		
Multi-slice mode	Sequential	

SIEMENS MAGNETOM Sonata syngo MR 2004A

\\USER\ZAHID RESEARCH001\HAACKE_MS_092809\haacke_ms_cp_head_01192010\HI RES COR 3D POST GAD

+ Scan Time: 7:20 Voxel size: 0.6x0.6x1.3 [mm] Rel. SNR: 1.00 SIEMENS: fl_tof

Routine

Slab group 1	
Slabs	1
Dist. factor	-11.25 [%]
Position	L0.0 A37.6 F13.9 [mm]
Orientation	C > T6.8
Phase enc. dir.	R >> L
Rotation	0 [deg]
Phase oversampling	0 [%]
Slice oversampling	10 [%]
Slices per slab	80
FoV read	400 [mm]
FoV phase	100.0 [%]
Slice thickness	1.25 [mm]
TR	15 [ms]
TE	3.77 [ms]
Averages	1
Concatenations	1
Filter	None
Coil elements	HE,NE1,NE2,...

Contrast

MTC	0
Flip angle	30 [deg]
Reconstruction	Magnitude
Fat suppr.	None
Water suppr.	None
Measurements	1

Resolution

Base resolution	640
Phase resolution	100 [%]
Slice resolution	100 [%]
Phase partial Fourier	Off
Slice partial Fourier	Off
Filter 1	
Raw filter	Off
Filter 2	
Large FoV	Off
Filter 3	
Normalize	Off
Filter 4	
Elliptical filter	Off
Interpolation	0

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24

Geometry

Multi-slice mode	Sequential
Series	Descending

Special sat.	None

System

Save uncombined	0
Scan at current TP	0
Scan region position	H
Scan region position	0 [mm]
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
CP Spine Array / SP3	0
CP Spine Array / SP4	0
CP Spine Array / SP5	0

CP Spine Array / SP6	0
CP Spine Array / SP1	1
CP Spine Array / SP2	1
CP Neck Array / NE1	1
CP Neck Array / NE2	1
CP Head Array / HE	1
Body	0

Shim mode	Standard
Adjust with body coil	0
Confirm freq. adjustment	0
Assume Silicone	0
Ref. amplitude [1H]	180.000 [V]
Adjust volume	
Position	L0.0 A37.6 F13.9 [mm]
Orientation	C > T6.8
Rotation	0 [deg]
F >> H	400 [mm]
R >> L	400 [mm]
A >> P	100 [mm]

Physio

1st Signal/Mode	None

Dark blood	0

Angio

Inflow	Slow
Flow direction	A >> P

Subtract	0
Std-Dev-Sag	0
Std-Dev-Cor	0
Std-Dev-Tra	0
Std-Dev-Time	0
MIP-Sag	1
MIP-Cor	1
MIP-Tra	1
MIP-Time	0
Save original images	1

Sequence

Introduction	1
Dimension	3D
Elliptical scanning	0
Averaging mode	Short term
Asymmetric echo	Allowed
Contrasts	1
Bandwidth	100 [Hz/Px]
Flow comp.	Yes

Gradient mode	Fast
RF spoiling	1

Table of contents

\\USER

ZAHID RESEARCH001

HAACKE_MS_092809

haacke_ms_cp_head_01192010

localizer

SWI_1X.5X2_HEAD_80sl

tof_fl2d_tra

flash_50_through-plane

localizer-CENTER AT CHIN

tof_fl2d_tra-neck

flash_50_through-plane

fl3d_pre_contrast-test

inject after the first seq

DYNAMIC_fl3d_ce_cor-15

HI RES COR 3D POST GAD