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\\USER

Renzo

maas4j

inverted\_res

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\\USER\Renzo\maas4\inverted\_res\AAHScout

TA: 0:28 PM: REF Voxel size: 1.6×1.6×1.6 mmPAT: Off Rel. SNR: 1.00 : fl

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A2.0 F2.7 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
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	None
Coil elements	HC1-7

**Contrast - Common**

TR	3.15 ms
TE	1.37 ms
Flip angle	8 deg

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

**Resolution - Common**

FoV read	260 mm
FoV phase	100.0 %
Slice thickness	1.6 mm
Base resolution	160
Phase resolution	100 %
Slice resolution	69 %
Phase partial Fourier	6/8
Slice partial Fourier	6/8
Trajectory	Cartesian

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Image Filter	Off
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**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A2.0 F2.7 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
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
Multi-slice mode	Sequential
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A2.0 F2.7 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**System - Miscellaneous**

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	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
Coil Select Mode	Off - AutoCoilSelect

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

**Sequence - Part 2**

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

**Sequence - Assistant**

Mode	Off
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**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.250679 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Flip angle	8 deg
Measurements	1
Time to center	11.5 s

**Inline - Inline**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

Distortion Corr.	Off
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**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	8 deg
Measurements	1
Contrasts	1
TR	3.15 ms
TE	1.37 ms

**Sequence - Part 1**

Introduction	On
Dimension	3D
Asymmetric echo	Weak
Contrasts	1
Multi-slice mode	Sequential
Bandwidth	540 Hz/Px

\\USER\Renzo\maas4j\inverted\_res\save\_1

TA: 0:10 PM: REF Voxel size: 1.3×1.3×3.0 mmPAT: 3 Rel. SNR: 1.00 : 26dc5a59

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Position	L1.7 P49.6 H9.5 mm
Orientation	C > T-20.2 > S0.6
Phase enc. dir.	H >> F
AutoAlign	Head > Brain
Slab Scale	-10 %
Slices per slab	24
FoV read	192 mm
FoV phase	97.3 %
Slice thickness	3.00 mm
TR 1	45.0 ms
TR 2	2105 ms
TE 1	18.00 ms
Averages	1
Multi-echo Shots	1
Filter	Prescan Normalize
Coil elements	HC1-6

**Contrast - Common**

TR 1	45.0 ms
TR 2	2105 ms
TE 1	18.00 ms
Multi-echo spacing	34.13 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1261 ms
Flip angle	30 deg
Fat suppr.	Fat sat.
Magn. Prep. Shots	1

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	3
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s

**Resolution - Common**

FoV read	192 mm
FoV phase	97.3 %
Slice thickness	3.00 mm
Base resolution	148
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8

**Resolution - Common**

Slice partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	CAIPIRINHA
Acc. factor PE	1
Ref. lines PE	24
Acc. factor 3D	3
Ref. lines 3D	16
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPIRINHA mode	Free

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	L1.7 P49.6 H9.5 mm
Orientation	C > T-20.2 > S0.6
Phase enc. dir.	H >> F
Slab Scale	-10 %
Slices per slab	24
FoV read	192 mm
FoV phase	97.3 %
Slice thickness	3.00 mm
TR 1	45.0 ms
TR 2	2105 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

**Geometry - AutoAlign**

Slab group	1
Position	L1.7 P49.6 H9.5 mm
Orientation	C > T-20.2 > S0.6
Phase enc. dir.	H >> F
AutoAlign	Head > Brain
Initial Position	L1.7 P49.6 H9.5
L	1.7 mm
P	49.6 mm
H	9.5 mm
Initial Rotation	-93.17 deg
Initial Orientation	C > T
C > T	-20.2
> S	0.6

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	Fat sat.

**System - Miscellaneous**

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
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L1.7 P50.2 H9.4 mm
! Orientation	C > T-19.8 > S0.6
! Rotation	-6.13 deg
! R >> L	165 mm
! F >> H	133 mm
! A >> P	47 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	123.250679 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	250.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.93 ms
Bandwidth	1206 Hz/Px

**Sequence - Part 2**

EPI factor	36
Segmentation	3
RF pulse type	Normal
Gradient mode	Performance
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	24

**Sequence - Special**

PATRef FA	3 deg
RF duration	3000 us
RF BWT product	8
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
Invert PE	Off
Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Alternate RO	On
Invert RO	Off
Water Exc.	-none-
External PC	per Series
Saturation RF	per Shot
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	On
GRAPPA Regularization	50000 10^-6
HSN RF power scale	0.00
Inversion Delay	711 ms
Relaxation Delay	1 ms
Var. FA /MAGEC	0

**Sequence - Assistant**

Mode	Off
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\\USER\Renzo\maas4j\inverted\_res\high\_res

TA: 0:15 PM: REF Voxel size: 0.6×0.6×0.8 mmPAT: 3 Rel. SNR: 1.00 : 26dc5a59

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Position	L1.7 P49.6 H9.5 mm
Orientation	C > T-20.2 > S0.6
Phase enc. dir.	H >> F
AutoAlign	---
Slab Scale	-10 %
Slices per slab	24
FoV read	169 mm
FoV phase	95.7 %
Slice thickness	0.80 mm
TR 1	110.0 ms
TR 2	3665 ms
TE 1	34.60 ms
Averages	1
Multi-echo Shots	1
Filter	Prescan Normalize
Coil elements	HC1-6

**Contrast - Common**

TR 1	110.0 ms
TR 2	3665 ms
TE 1	34.60 ms
Multi-echo spacing	94 ms
Magn. preparation	Non-sel. HSN IR
TI 1	2041 ms
Flip angle	24 deg
Fat suppr.	Fat sat.
Magn. Prep. Shots	1

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	3
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s

**Resolution - Common**

FoV read	169 mm
FoV phase	95.7 %
Slice thickness	0.80 mm
Base resolution	280
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8

**Resolution - Common**

Slice partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	CAIPIRINHA
Acc. factor PE	1
Ref. lines PE	24
Acc. factor 3D	3
Ref. lines 3D	16
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPIRINHA mode	Free

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	L1.7 P49.6 H9.5 mm
Orientation	C > T-20.2 > S0.6
Phase enc. dir.	H >> F
Slab Scale	-10 %
Slices per slab	24
FoV read	169 mm
FoV phase	95.7 %
Slice thickness	0.80 mm
TR 1	110.0 ms
TR 2	3665 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

**Geometry - AutoAlign**

Slab group	1
Position	L1.7 P49.6 H9.5 mm
Orientation	C > T-20.2 > S0.6
Phase enc. dir.	H >> F
AutoAlign	---
Initial Position	L1.7 P49.6 H9.5
L	1.7 mm
P	49.6 mm
H	9.5 mm
Initial Rotation	-93.17 deg
Initial Orientation	C > T
C > T	-20.2
> S	0.6

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	Fat sat.

**System - Miscellaneous**

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
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L1.7 P50.2 H9.4 mm
! Orientation	C > T-19.8 > S0.6
! Rotation	-6.13 deg
! R >> L	165 mm
! F >> H	133 mm
! A >> P	47 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	123.250679 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	250.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	1.38 ms
Bandwidth	812 Hz/Px

**Sequence - Part 2**

EPI factor	67
Segmentation	3
RF pulse type	Normal
Gradient mode	Performance
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	24

**Sequence - Special**

PATRef FA	3 deg
RF duration	3000 us
RF BWT product	8
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
Invert PE	Off
Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Alternate RO	On
Invert RO	Off
Water Exc.	-none-
External PC	per Series
Saturation RF	per Shot
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	On
GRAPPA Regularization	50000 10^-6
HSN RF power scale	0.00
Inversion Delay	711 ms
Relaxation Delay	1 ms
Var. FA /MAGEC	0

**Sequence - Assistant**

Mode	Off
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\\USER\Renzo\maas4j\inverted\_res\0p53\_100

TA: 5:48 PM: REF Voxel size: 0.5×0.5×0.7 mmPAT: 3 Rel. SNR: 1.00 : 26dc5a59

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	24
FoV read	192 mm
FoV phase	99.4 %
Slice thickness	0.70 mm
TR 1	130.0 ms
TR 2	3434 ms
TE 1	43.20 ms
Averages	1
Multi-echo Shots	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

**Contrast - Common**

TR 1	130.0 ms
TR 2	3434 ms
TE 1	43.20 ms
Multi-echo spacing	120.77 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1570 ms
Flip angle	24 deg
Fat suppr.	Fat sat.
Magn. Prep. Shots	1

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	100
Pause after meas.	0.0 s

**Resolution - Common**

FoV read	192 mm
FoV phase	99.4 %
Slice thickness	0.70 mm
Base resolution	360
Phase resolution	90 %
Slice resolution	100 %
Phase partial Fourier	6/8
Slice partial Fourier	Off

**Resolution - Common**

Interpolation	Off
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**Resolution - iPAT**

PAT mode	CAIPIRINHA
Acc. factor PE	1
Ref. lines PE	24
Acc. factor 3D	3
Ref. lines 3D	16
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPIRINHA mode	Free

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	24
FoV read	192 mm
FoV phase	99.4 %
Slice thickness	0.70 mm
TR 1	130.0 ms
TR 2	3434 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

**Geometry - AutoAlign**

Slab group	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L1.3 P18.3 F4.9
L	1.3 mm
P	18.3 mm
F	4.9 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-36.1
> S	1.3

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	Fat sat.



**System - Miscellaneous**

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
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L1.3 P20.7 F4.1 mm
! Orientation	T > C-38.1 > S1.3
! Rotation	-0.47 deg
! A >> P	193 mm
! R >> L	169 mm
! F >> H	57 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	123.250679 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	250.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	1.47 ms
Bandwidth	730 Hz/Px

**Sequence - Part 2**

EPI factor	81
Segmentation	3
RF pulse type	Normal
Gradient mode	Performance
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	24

**Sequence - Special**

PATRef FA	3 deg
RF duration	3000 us
RF BWT product	8
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
Invert PE	Off
Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Alternate RO	On
Invert RO	Off
Water Exc.	-none-
External PC	per Series
Saturation RF	per Shot
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	0.00
Inversion Delay	0 ms
Relaxation Delay	1 ms
Var. FA /MAGEC	0

**Sequence - Assistant**

Mode	Off
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\\USER\Renzo\maas4j\inverted\_res\0p6\_100

TA: 5:23 PM: REF Voxel size: 0.6×0.6×0.7 mmPAT: 3 Rel. SNR: 1.00 : 26dc5a59

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	24
FoV read	192 mm
FoV phase	99.4 %
Slice thickness	0.70 mm
TR 1	120.0 ms
TR 2	3194 ms
TE 1	39.00 ms
Averages	1
Multi-echo Shots	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

**Contrast - Common**

TR 1	120.0 ms
TR 2	3194 ms
TE 1	39.00 ms
Multi-echo spacing	106.78 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1450 ms
Flip angle	24 deg
Fat suppr.	Fat sat.
Magn. Prep. Shots	1

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	100
Pause after meas.	0.0 s

**Resolution - Common**

FoV read	192 mm
FoV phase	99.4 %
Slice thickness	0.70 mm
Base resolution	320
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8
Slice partial Fourier	Off

**Resolution - Common**

Interpolation	Off
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**Resolution - iPAT**

PAT mode	CAIPIRINHA
Acc. factor PE	1
Ref. lines PE	24
Acc. factor 3D	3
Ref. lines 3D	16
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPIRINHA mode	Free

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	24
FoV read	192 mm
FoV phase	99.4 %
Slice thickness	0.70 mm
TR 1	120.0 ms
TR 2	3194 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

**Geometry - AutoAlign**

Slab group	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L1.3 P18.3 F4.9
L	1.3 mm
P	18.3 mm
F	4.9 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-36.1
> S	1.3

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	Fat sat.

**System - Miscellaneous**

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
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L1.3 P20.7 F4.1 mm
! Orientation	T > C-38.1 > S1.3
! Rotation	-0.47 deg
! A >> P	193 mm
! R >> L	169 mm
! F >> H	57 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	123.250679 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	250.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	1.32 ms
Bandwidth	822 Hz/Px

**Sequence - Part 2**

EPI factor	80
Segmentation	3
RF pulse type	Normal
Gradient mode	Performance
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	24

**Sequence - Special**

PATRef FA	3 deg
RF duration	3000 us
RF BWT product	8
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
Invert PE	Off
Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Alternate RO	On
Invert RO	Off
Water Exc.	-none-
External PC	per Series
Saturation RF	per Shot
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	0.00
Inversion Delay	0 ms
Relaxation Delay	1 ms
Var. FA /MAGEC	0

**Sequence - Assistant**

Mode	Off
------	-----

\\USER\Renzo\maas4j\inverted\_res\0p7\_100

TA: 0:11 PM: REF Voxel size: 2.5×2.5×2.5 mmPAT: Off Rel. SNR: 1.00 : 26dc5a59

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	48
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR 1	100.0 ms
TR 2	9620 ms
TE 1	37.00 ms
Averages	1
Multi-echo Shots	1
Filter	None
Coil elements	BC

**Contrast - Common**

TR 1	100.0 ms
TR 2	9620 ms
TE 1	37.00 ms
Multi-echo spacing	46.82 ms
Magn. preparation	Non-sel. HSN IR
TI 1	2410 ms
TI 2	7210 ms
Flip angle	5 deg
Fat suppr.	None
Magn. Prep. Shots	1

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1

**Resolution - Common**

FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
Base resolution	84
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off

**Resolution - Common**

Interpolation	Off
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**Resolution - iPAT**

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

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	48
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR 1	100.0 ms
TR 2	9620 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

**Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-36.1
> S	1.3

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H

**System - Miscellaneous**

Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	210 mm
R >> L	210 mm
F >> H	120 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	123.250679 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.55 ms
Bandwidth	2052 Hz/Px

**Sequence - Part 2**

EPI factor	84
Segmentation	1
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	48

**Sequence - Special**

RF duration	1000 us
RF BWT product	15
Ernst T1	1200 ms
Volume dummy shots	0
Dummy Measurements	0
Invert PE	Off
Echo Time Shift	On

**Sequence - Special**

Ramp Sampling	On
NORDIC	Off
SVDPC	Off
Sym VASO	Off
Alternate RO	Off
Invert RO	Off
Water Exc.	-none-
External PC	-none-
EPI rise time factor	1.10
Mosaic DICOMs	On
HSN RF power scale	2.00
Inversion Delay	0 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	4

**Sequence - Assistant**

Mode	Off
------	-----

\\USER\Renzo\maas4j\inverted\_res\0p8\_100

TA: 3:25 PM: REF Voxel size: 0.8×0.8×0.7 mmPAT: 3 Rel. SNR: 1.00 : 26dc5a59

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	24
FoV read	192 mm
FoV phase	99.2 %
Slice thickness	0.70 mm
TR 1	70.6 ms
TR 2	2008 ms
TE 1	24.70 ms
Averages	1
Multi-echo Shots	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

**Contrast - Common**

TR 1	70.6 ms
TR 2	2008 ms
TE 1	24.70 ms
Multi-echo spacing	64.54 ms
Magn. preparation	Non-sel. HSN IR
TI 1	857.2 ms
Flip angle	24 deg
Fat suppr.	Fat sat.
Magn. Prep. Shots	1

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	100
Pause after meas.	0.0 s

**Resolution - Common**

FoV read	192 mm
FoV phase	99.2 %
Slice thickness	0.70 mm
Base resolution	240
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8
Slice partial Fourier	Off

**Resolution - Common**

Interpolation	Off
---------------	-----

**Resolution - iPAT**

PAT mode	CAIPIRINHA
Acc. factor PE	1
Ref. lines PE	24
Acc. factor 3D	3
Ref. lines 3D	16
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPIRINHA mode	Free

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	24
FoV read	192 mm
FoV phase	99.2 %
Slice thickness	0.70 mm
TR 1	70.6 ms
TR 2	2008 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

**Geometry - AutoAlign**

Slab group	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L1.3 P18.3 F4.9
L	1.3 mm
P	18.3 mm
F	4.9 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-36.1
> S	1.3

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	Fat sat.

**System - Miscellaneous**

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
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L1.3 P20.7 F4.1 mm
! Orientation	T > C-38.1 > S1.3
! Rotation	-0.47 deg
! A >> P	193 mm
! R >> L	169 mm
! F >> H	57 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	123.250679 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	250.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	1.06 ms
Bandwidth	1042 Hz/Px

**Sequence - Part 2**

EPI factor	60
Segmentation	3
RF pulse type	Normal
Gradient mode	Performance
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	24

**Sequence - Special**

PATRef FA	3 deg
RF duration	3000 us
RF BWT product	8
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
Invert PE	Off
Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Alternate RO	On
Invert RO	Off
Water Exc.	-none-
External PC	per Series
Saturation RF	per Shot
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	0.00
Inversion Delay	0 ms
Relaxation Delay	1 ms
Var. FA /MAGEC	0

**Sequence - Assistant**

Mode	Off
------	-----

\\USER\Renzo\maas4j\inverted\_res\0p53\_100\_VASO

TA: 12:44 PM: REF Voxel size: 0.5×0.5×0.7 mmPAT: 3 Rel. SNR: 1.00 : 26dc5a59

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	24
FoV read	192 mm
FoV phase	99.4 %
Slice thickness	0.70 mm
TR 1	130.0 ms
TR 2	7596 ms
TE 1	43.20 ms
Averages	1
Multi-echo Shots	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

**Contrast - Common**

TR 1	130.0 ms
TR 2	7596 ms
TE 1	43.20 ms
Multi-echo spacing	120.77 ms
Magn. preparation	Non-sel. HSN IR
TI 1	2320 ms
TI 2	5440 ms
Flip angle	24 deg
Fat suppr.	Fat sat.
Magn. Prep. Shots	1

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	100
Pause after meas.	0.0 s

**Resolution - Common**

FoV read	192 mm
FoV phase	99.4 %
Slice thickness	0.70 mm
Base resolution	360
Phase resolution	90 %
Slice resolution	100 %
Phase partial Fourier	6/8

**Resolution - Common**

Slice partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	CAIPIRINHA
Acc. factor PE	1
Ref. lines PE	24
Acc. factor 3D	3
Ref. lines 3D	16
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPIRINHA mode	Free

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	24
FoV read	192 mm
FoV phase	99.4 %
Slice thickness	0.70 mm
TR 1	130.0 ms
TR 2	7596 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

**Geometry - AutoAlign**

Slab group	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L1.3 P18.3 F4.9
L	1.3 mm
P	18.3 mm
F	4.9 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-36.1
> S	1.3

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	Fat sat.



**System - Miscellaneous**

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
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L1.3 P20.7 F4.1 mm
! Orientation	T > C-38.1 > S1.3
! Rotation	-0.47 deg
! A >> P	193 mm
! R >> L	169 mm
! F >> H	57 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	123.250679 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	250.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	1.47 ms
Bandwidth	730 Hz/Px

**Sequence - Part 2**

EPI factor	81
Segmentation	3
RF pulse type	Normal
Gradient mode	Performance
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	24

**Sequence - Special**

PATRef FA	3 deg
RF duration	3000 us
RF BWT product	8
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
Invert PE	Off
Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Alternate RO	On
Invert RO	Off
Water Exc.	-none-
External PC	per Series
Saturation RF	per Shot
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	3.00
Inversion Delay	750 ms
Relaxation Delay	1 ms
Var. FA /MAGEC	0

**Sequence - Assistant**

Mode	Off
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\\USER\Renzo\maas4j\inverted\_res\0p53\_10\_uncomb

TA: 0:11 PM: REF Voxel size: 2.5×2.5×2.5 mmPAT: Off Rel. SNR: 1.00 : 26dc5a59

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	48
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR 1	100.0 ms
TR 2	9620 ms
TE 1	37.00 ms
Averages	1
Multi-echo Shots	1
Filter	None
Coil elements	BC

**Contrast - Common**

TR 1	100.0 ms
TR 2	9620 ms
TE 1	37.00 ms
Multi-echo spacing	46.82 ms
Magn. preparation	Non-sel. HSN IR
TI 1	2410 ms
TI 2	7210 ms
Flip angle	5 deg
Fat suppr.	None
Magn. Prep. Shots	1

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1

**Resolution - Common**

FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
Base resolution	84
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off

**Resolution - Common**

Interpolation	Off
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**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	48
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.50 mm
TR 1	100.0 ms
TR 2	9620 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

**Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-36.1
> S	1.3

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None

**System - Miscellaneous**

Positioning mode	REF
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H

**System - Miscellaneous**

Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	210 mm
R >> L	210 mm
F >> H	120 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	123.250679 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.55 ms
Bandwidth	2052 Hz/Px

**Sequence - Part 2**

EPI factor	84
Segmentation	1
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	48

**Sequence - Special**

RF duration	1000 us
RF BWT product	15
Ernst T1	1200 ms
Volume dummy shots	0
Dummy Measurements	0
Invert PE	Off
Echo Time Shift	On

**Sequence - Special**

Ramp Sampling	On
NORDIC	Off
SVDPC	Off
Sym VASO	Off
Alternate RO	Off
Invert RO	Off
Water Exc.	-none-
External PC	-none-
EPI rise time factor	1.10
Mosaic DICOMs	On
HSN RF power scale	2.00
Inversion Delay	0 ms
Relaxation Delay	0 ms
Var. FA /MAGEC	4

**Sequence - Assistant**

Mode	Off
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\\USER\Renzo\maas4j\inverted\_res\0p53\_300

TA: 17:14 PM: REF Voxel size: 0.5×0.5×0.7 mmPAT: 3 Rel. SNR: 1.00 : 26dc5a59

**Properties**

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

**Routine**

Slab group	1
Slabs	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	24
FoV read	192 mm
FoV phase	99.4 %
Slice thickness	0.70 mm
TR 1	130.0 ms
TR 2	3434 ms
TE 1	43.20 ms
Averages	1
Multi-echo Shots	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

**Contrast - Common**

TR 1	130.0 ms
TR 2	3434 ms
TE 1	43.20 ms
Multi-echo spacing	120.77 ms
Magn. preparation	Non-sel. HSN IR
TI 1	1570 ms
Flip angle	24 deg
Fat suppr.	Fat sat.
Magn. Prep. Shots	1

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magn./Phase
Measurements	300
Pause after meas.	0.0 s

**Resolution - Common**

FoV read	192 mm
FoV phase	99.4 %
Slice thickness	0.70 mm
Base resolution	360
Phase resolution	90 %
Slice resolution	100 %
Phase partial Fourier	6/8
Slice partial Fourier	Off

**Resolution - Common**

Interpolation	Off
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**Resolution - iPAT**

PAT mode	CAIPIRINHA
Acc. factor PE	1
Ref. lines PE	24
Acc. factor 3D	3
Ref. lines 3D	16
CAIPI 3D Shift	1
Reference Scan Mode	GRE/separate
CAIPIRINHA mode	Free

**Resolution - Filter Image**

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

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	24
FoV read	192 mm
FoV phase	99.4 %
Slice thickness	0.70 mm
TR 1	130.0 ms
TR 2	3434 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

**Geometry - AutoAlign**

Slab group	1
Position	L1.3 P18.3 F4.9 mm
Orientation	T > C-36.1 > S1.3
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L1.3 P18.3 F4.9
L	1.3 mm
P	18.3 mm
F	4.9 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-36.1
> S	1.3

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	Fat sat.

**System - Miscellaneous**

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
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L1.3 P20.7 F4.1 mm
! Orientation	T > C-38.1 > S1.3
! Rotation	-0.47 deg
! A >> P	193 mm
! R >> L	169 mm
! F >> H	57 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	123.250679 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	250.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	1.47 ms
Bandwidth	730 Hz/Px

**Sequence - Part 2**

EPI factor	81
Segmentation	3
RF pulse type	Normal
Gradient mode	Performance
Excitation	Slab-sel.
RF spoiling	On
Turbo factor	24

**Sequence - Special**

PATRef FA	3 deg
RF duration	3000 us
RF BWT product	8
Ernst T1	1200 ms
PATRef prep. shots	10
Volume dummy shots	0
Dummy Measurements	0
Invert PE	Off
Min. TE if PF	On
Echo Time Shift	On
Ramp Sampling	On
NORDIC	Off
SVDPC	On
Sym VASO	Off
Alternate RO	On
Invert RO	Off
Water Exc.	-none-
External PC	per Series
Saturation RF	per Shot
EPI rise time factor	1.10
Mosaic DICOMs	On
Modify Ice Config	Off
HSN RF power scale	0.00
Inversion Delay	0 ms
Relaxation Delay	1 ms
Var. FA /MAGEC	0

**Sequence - Assistant**

Mode	Off
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