

Table of contents				
\\XA30				
Cheng				
test				
XA_validation				
AAHead_Scout				
anat-T1w_acq-tfl				
func-bold_task-fa_run-1				
gre_field_mapping				
DWI_dir80_PA				
DWI_dir80_AP				
asl_2d_tra				

## \\XA30\Cheng\test\XA\_validation\AAHead\_Scout

TA: 14 sec Coil Selection: Auto Voxel Size: 1.6×1.6×1.6 mm<sup>3</sup> Acc:: 3 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	Default
Inline Movie	Off

**Resolution - Acceleration**

Acceleration Factor 3D	1
Phase Partial Fourier	6/8
Slice Partial Fourier	6/8
Asymmetric Echo	Weak

**Resolution - Filter**

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	3D
Normalize	Prescan
Noise Masking	Off
Image Filter	Off

**Routine**

Slab Group	1
Slabs	1
Distance Factor	20 %
Position	L0.0 A10.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	128
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FoV Read	260 mm
FoV Phase	100.0 %
Slice Thickness	1.6 mm
TR	3.2 ms
TE	1.37 ms
Averages	1
Concatenations	1
AutoAlign	Head

**Geometry - Common**

Slab Group	1
Slabs	1
Distance Factor	20 %
Position	L0.0 A10.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	128
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FoV Read	260 mm
FoV Phase	100.0 %
Slice Thickness	1.6 mm
TR	3.2 ms
Multi-Slice Mode	Sequential
Series	Ascending
Concatenations	1

**Contrast - Common**

TR	3.2 ms
TE	1.37 ms
Flip Angle	8 deg
Fat-Water Contrast	Standard
Contrasts	1
Reconstruction	Magnitude

**Geometry - AutoAlign**

Slab Group	1
Position	L0.0 A10.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	Head
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Orientation	Transversal
Initial Rotation	0.00 deg

**Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	1
Time to Center	6.2 s

**Resolution - Common**

FoV Read	260 mm
FoV Phase	100.0 %
Slice Thickness	1.6 mm
Base Resolution	160
Phase Resolution	100 %
Slice Resolution	69 %
Trajectory	Cartesian

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

**System - Miscellaneous**

Coil Selection	ACS All but spine
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

**Resolution - Acceleration**

Acceleration mode	GRAPPA
Reference Scans	Integrated
Acceleration Factor PE	3
Reference Lines PE	24

**System - Adjustments**

Adjustment Strategy	Standard
B0 Shim	Tune up
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

**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

**System - pTx**

B1 Shim	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.262288 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Physio - PACE**

Resp. Control	Off
Concatenations	1

**Inline - Dynamic**

Dynamic Mode	Standard
Flip Angle	8 deg
Measurements	1
Time to Center	6.2 s

**Inline - Subtraction**

Subtract	Off
Measurements	1
StdDev	Off
Save Original Images	On

**Inline - Cardiac**

Save Original Images	On
Contrasts	1
TE	1.37 ms
TR	3.2 ms

**Inline - MIP**

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

**Inline - Composing**

Inline Composing	Off
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**Sequence - Part 1**

Sequence Name	fl
Dimension	3D
Excitation	Non-sel.
RF Pulse Type	Fast
Gradient Mode	Normal
Bandwidth	540 Hz/Px
Asymmetric Echo	Weak

**Sequence - Part 2**

Introduction	On
RF Spoiling	On
Breast Application	Off

**Sequence - Assistant**

SAR Assistant	Off
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\\XA30\Cheng\test\XA\_validation\anat-T1w\_acq-tfl

TA: 2:53 min Coil Selection: Auto Voxel Size: 2.0×2.0×2.0 mm<sup>3</sup> Acc.: 2 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	On
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

**Routine**

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	R5.4 A28.1 F14.8 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	96
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FoV Read	256 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1800.0 ms
TE	2.41 ms
Averages	1
Concatenations	1
AutoAlign	---

**Contrast - Common**

TR	1800.0 ms
TE	2.41 ms
Magn. Preparation	Non-sel. IR
TI	900 ms
Flip Angle	9 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Reconstruction	Magnitude

**Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement
Reordering	Linear

**Resolution - Common**

FoV Read	256 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	128
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

**Resolution - Acceleration**

Acceleration mode	GRAPPA
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**Resolution - Acceleration**

Reference Scans	Integrated
Acceleration Factor PE	2
Reference Lines PE	64
Acceleration Factor 3D	1
Phase Partial Fourier	Off
Slice Partial Fourier	Off
Asymmetric Echo	Allowed
Elliptical Scanning	Off

**Resolution - Filter**

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Prescan
Image Filter	Off

**Geometry - Common**

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	R5.4 A28.1 F14.8 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	96
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FoV Read	256 mm
FoV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1800.0 ms
Multi-Slice Mode	Sequential
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slab Group	1
Position	R5.4 A28.1 F14.8 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R5.4 A28.1 F14.8
R	5.4 mm
A	28.1 mm
F	14.8 mm
Initial Orientation	Sagittal
Initial Rotation	0.00 deg

**Geometry - Navigator****Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	15 mm
Table Position	F
Inline Composing	Off

**System - Miscellaneous**

Coil Selection	ACS All but spine
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P

**System - Miscellaneous**

Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

**System - Adjustments**

Adjustment Strategy	Standard
B0 Shim	Tune up
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	On
Confirm Frequency	Never
Assume Silicone	Off

**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

**System - pTx**

B1 Shim	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.262288 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Physio - Signal**

1st Signal/Mode	None
TR	1800.0 ms
Concatenations	1

**Physio - Cardiac**

Fat-Water Contrast	Standard
Magn. Preparation	Non-sel. IR
TI	900 ms
Dark Blood	Off
FoV Read	256 mm
FoV Phase	100.0 %
Phase Resolution	100 %
Dynamic Mode	Standard

**Physio - PACE**

Resp. Control	Off
Concatenations	1

**Inline - Subtraction**

Subtract	Off
Measurements	1
StdDev	Off
Save Original Images	On

**Inline - Cardiac**

Magn. Preparation	Non-sel. IR
Save Original Images	On
TE	2.41 ms

**Inline - Cardiac**

TR	1800.0 ms
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**Inline - MIP**

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

**Inline - Composing**

Inline Composing	Off
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**Sequence - Part 1**

Sequence Name	tfl
Dimension	3D
Excitation	Non-sel.
RF Pulse Type	Fast
Gradient Mode	Fast*
Flow Compensation	None
Reordering	Linear
Bandwidth	150 Hz/Px
Echo Spacing	6.98 ms
Asymmetric Echo	Allowed
Turbo Factor	96

**Sequence - Part 2**

Introduction	On
RF Spoiling	On
Incr. Gradient Spoiling	Off

**Sequence - Assistant**

SAR Assistant	Off
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## \\XA30\Cheng\test\XA\_validation\func-bold\_task-fa\_run-1

TA: 27 sec Coil Selection: Auto Voxel Size: 3.4×3.4×3.4 mm<sup>3</sup> Acc.: None Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	On
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

**Routine**

Slice Group	1
Slices	33
Distance Factor	0 %
Position	L0.0 A2.7 H20.3 mm
Orientation	T > C-17.8
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	216 mm
FoV Phase	100.0 %
Slice Thickness	3.4 mm
TR	1000.0 ms
TE	30.00 ms
Averages	1
Multi-band accel. factor	3
AutoAlign	Head > Brain

**Contrast - Common**

TR	1000.0 ms
TE	30.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	60 deg
Fat-Water Contrast	Fat Saturation
Contrasts	1
Reconstruction	Magnitude

**Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	20
Delay in TR	0.00 ms

**Resolution - Common**

FoV Read	216 mm
FoV Phase	100.0 %
Slice Thickness	3.4 mm
Base Resolution	64
Phase Resolution	100 %
Interpolation	Off

**Resolution - Acceleration**

Acceleration mode	None
Phase Partial Fourier	7/8

**Resolution - Filter**

Raw Filter	Off
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**Resolution - Filter**

Elliptical Filter	Off
Hamming	Off
Distortion Correction	Off
Normalize	Off

**Geometry - Common**

Slice Group	1
Slices	33
Distance Factor	0 %
Position	L0.0 A2.7 H20.3 mm
Orientation	T > C-17.8
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	216 mm
FoV Phase	100.0 %
Slice Thickness	3.4 mm
TR	1000.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Multi-band accel. factor	3

**Geometry - AutoAlign**

Slice Group	1
Position	L0.0 A2.7 H20.3 mm
Orientation	T > C-17.8
Phase Encoding Dir.	A >> P
AutoAlign	Head > Brain
Initial Position	L0.0 A2.7 H20.3
R	0.0 mm
A	2.7 mm
H	20.3 mm
Initial Orientation	T > C
T > C	-17.80
> S	0.00
Initial Rotation	0.00 deg

**Geometry - Saturation**

Special Saturation	None
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**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	20 mm
Table Position	H
Inline Composing	Off

**System - Miscellaneous**

Coil Selection	ACS All but spine
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Sum of Squares
Matrix Optimization	Off
Coil Focus	Flat

**System - Adjustments**

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off

**System - Adjustments**

Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

**System - Adjust Volume**

Position	L0.0 A2.7 H20.3 mm
Orientation	T > C-17.8
Rotation	0.00 deg
A >> P	216 mm
R >> L	216 mm
F >> H	113 mm
Reset	Off

**System - pTx**

B1 Shim	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.262288 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Physio - Signal**

1st Signal/Mode	None
TR	1000.0 ms
Multi-band accel. factor	3

**BOLD**

GLM Statistics	Off
Ignore Meas. at Start	0
Ignore After Transition	0
Model Transition States	On
Temp. Highpass Filter	On
Threshold	4.00
Paradigm Size	20
Meas[1]	Active
Meas[2]	Active
Meas[3]	Active
Meas[4]	Active
Meas[5]	Active
Meas[6]	Active
Meas[7]	Active
Meas[8]	Active
Meas[9]	Active
Meas[10]	Active
Meas[11]	Ignore
Meas[12]	Ignore
Meas[13]	Ignore
Meas[14]	Ignore
Meas[15]	Ignore
Meas[16]	Ignore
Meas[17]	Ignore
Meas[18]	Ignore
Meas[19]	Ignore
Meas[20]	Ignore
Motion Correction	Off
Spatial Filter	Off
Measurements	20
Delay in TR	0.00 ms

**Sequence - Part 1**

Dimension	2D
Excitation	Standard
Gradient Mode	Performance*
Flow Compensation	None
Bandwidth	2298 Hz/Px
Echo Spacing	0.54 ms
Free Echo Spacing	Off
EPI Factor	64

**Sequence - Part 2**

Introduction	Off
RF Spoiling	Off

**Sequence - Special**

Excite pulse duration	5660 us
Min. prep scans	0
Min. prep scans SB	0
Single-band images	Off
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Opt. MB RF pulse BW	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.00 deg
Fat sat. offset	0.00 Hz
Sinc exc. pulse BWTP	5.20
Physio recording	Off
Triggering scheme	Standard

**Sequence - Part 1**

Sequence Name	epfid
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## \\XA30\Cheng\test\XA\_validation\gre\_field\_mapping

TA: 1:20 min Coil Selection: Auto Voxel Size: 3.4×3.4×3.4 mm³ Rel. SNR: 1.00

**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

**Routine**

Slice Group	1
Slices	33
Distance Factor	0 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	216 mm
FoV Phase	100.0 %
Slice Thickness	3.4 mm
TR	600.0 ms
TE 1	10.00 ms
TE 2	12.46 ms
Averages	1
Concatenations	1
AutoAlign	---

**Contrast - Common**

TR	600.0 ms
TE 1	10.00 ms
TE 2	12.46 ms
MTC	Off
Flip Angle	90 deg
Fat-Water Contrast	Standard
Contrasts	2
Reconstruction	Magn./Phase

**Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

**Resolution - Common**

FoV Read	216 mm
FoV Phase	100.0 %
Slice Thickness	3.4 mm
Base Resolution	64
Phase Resolution	100 %
Interpolation	Off

**Resolution - Acceleration**

Phase Partial Fourier	Off
Asymmetric Echo	Off

**Resolution - Filter**

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	2D
Normalize	Off
Image Filter	Off

**Geometry - Common**

Slice Group	1
Slices	33
Distance Factor	0 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	216 mm
FoV Phase	100.0 %
Slice Thickness	3.4 mm
TR	600.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice Group	1
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Orientation	Transversal
Initial Rotation	0.00 deg

**Geometry - Saturation**

Special Saturation	None
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**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

**System - Miscellaneous**

Coil Selection	Auto Coil Select
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

**System - Adjustments**

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto



**System - Adjustments**

Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	216 mm
R >> L	216 mm
F >> H	113 mm
Reset	Off

**System - pTx**

B1 Shim	TrueForm
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**System - Tx/Rx**

Frequency 1H	123.262288 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Sequence - Part 1**

Sequence Name	fm_r
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	On
Bandwidth	260 Hz/Px
Asymmetric Echo	Off

**Sequence - Part 2**

Introduction	On
RF Spoiling	On

**Sequence - Assistant**

SAR Assistant	Off
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## \\XA30\Cheng\test\XA\_validation\DWI\_dir80\_PA

TA: 1:28 min Coil Selection: Auto Voxel Size: 3.0×3.0×3.0 mm<sup>3</sup> Acc:: None Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	On
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

**Routine**

Slice Group	1
Slices	39
Distance Factor	0 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	P >> A
Phase Oversampling	0 %
FoV Read	216 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	3516.0 ms
TE	68.00 ms
Multi-band accel. factor	3
AutoAlign	---

**Contrast - Common**

TR	3516.0 ms
TE	68.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	78 deg
Refocus flip angle	180 deg
Fat-Water Contrast	Fat Saturation
Grad. rev. fat suppr.	Enabled
Reconstruction	Magnitude

**Contrast - Dynamic**

Dynamic Mode	Standard
Multiple Series	Off
Delay in TR	0.00 ms

**Resolution - Common**

FoV Read	216 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	72
Phase Resolution	100 %
Interpolation	Off

**Resolution - Acceleration**

Acceleration mode	None
Phase Partial Fourier	6/8

**Resolution - Filter**

Raw Filter	Off
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**Resolution - Filter**

Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off

**Geometry - Common**

Slice Group	1
Slices	39
Distance Factor	0 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	P >> A
Phase Oversampling	0 %
FoV Read	216 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	3516.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Multi-band accel. factor	3

**Geometry - AutoAlign**

Slice Group	1
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	P >> A
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Orientation	Transversal
Initial Rotation	-180.00 deg

**Geometry - Navigator****Geometry - Saturation**

Special Saturation	None
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**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

**System - Miscellaneous**

Coil Selection	ACS All but spine
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Sum of Squares
Matrix Optimization	Off
Coil Focus	Flat

**System - Adjustments**

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto

**System - Adjustments**

Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	180.00 deg
A >> P	216 mm
R >> L	216 mm
F >> H	117 mm
Reset	Off

**System - pTx**

B1 Shim	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.262288 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Physio - Signal**

1st Signal/Mode	None
TR	3516.0 ms
Multi-band accel. factor	3

**Physio - PACE**

Resp. Control	Off
Multi-band accel. factor	3

**Diff**

Diffusion Mode	MDDW
Diff. Directions	20
Diffusion Scheme	Monopolar
Diff. Weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	2500 s/mm <sup>2</sup>
Averages 1	1
Averages 2	1
Dynamic Field Correction	Off
Invert Gray Scale	Off
Diff. Weighted Images	On
Trace Weighted Images	On
Tensor	On
FA Maps	On
ADC Maps	On
Exponential ADC Maps	Off
ADC Noise Threshold	40
Calculated Image	Off

**Sequence - Part 1**

Sequence Name	epse
Dimension	2D
Excitation	Standard
Gradient Mode	Performance
Bandwidth	1780 Hz/Px
Echo Spacing	0.67 ms
Free Echo Spacing	Off
EPI Factor	72

**Sequence - Part 2**

Introduction	Off
RF Spoiling	Off
Phase Correction	Internal

**Sequence - Special**

Excite pulse duration	5760 us
Refocus pulse duration	8960 us
Min. prep scans	0
Min. prep scans SB	0
Single-band images	Off
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Opt. MB RF pulse BW	Off
Time-shifted MB RF	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.00 deg
Fat sat. offset	0.00 Hz
Physio recording	Off

## \\XA30\Cheng\test\XA\_validation\DWI\_dir80\_AP

TA: 1:28 min Coil Selection: Auto Voxel Size: 3.0×3.0×3.0 mm<sup>3</sup> Acc:: None Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	On
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

**Routine**

Slice Group	1
Slices	39
Distance Factor	0 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	P >> A
Phase Oversampling	0 %
FoV Read	216 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	3516.0 ms
TE	68.00 ms
Multi-band accel. factor	3
AutoAlign	---

**Contrast - Common**

TR	3516.0 ms
TE	68.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	78 deg
Refocus flip angle	180 deg
Fat-Water Contrast	Fat Saturation
Grad. rev. fat suppr.	Enabled
Reconstruction	Magnitude

**Contrast - Dynamic**

Dynamic Mode	Standard
Multiple Series	Off
Delay in TR	0.00 ms

**Resolution - Common**

FoV Read	216 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	72
Phase Resolution	100 %
Interpolation	Off

**Resolution - Acceleration**

Acceleration mode	None
Phase Partial Fourier	6/8

**Resolution - Filter**

Raw Filter	Off
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**Resolution - Filter**

Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off

**Geometry - Common**

Slice Group	1
Slices	39
Distance Factor	0 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	P >> A
Phase Oversampling	0 %
FoV Read	216 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	3516.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Multi-band accel. factor	3

**Geometry - AutoAlign**

Slice Group	1
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	P >> A
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Orientation	Transversal
Initial Rotation	180.00 deg

**Geometry - Navigator****Geometry - Saturation**

Special Saturation	None
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**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

**System - Miscellaneous**

Coil Selection	ACS All but spine
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Sum of Squares
Matrix Optimization	Off
Coil Focus	Flat

**System - Adjustments**

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto

**System - Adjustments**

Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	-180.00 deg
A >> P	216 mm
R >> L	216 mm
F >> H	117 mm
Reset	Off

**System - pTx**

B1 Shim	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.262288 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Physio - Signal**

1st Signal/Mode	None
TR	3516.0 ms
Multi-band accel. factor	3

**Physio - PACE**

Resp. Control	Off
Multi-band accel. factor	3

**Diff**

Diffusion Mode	MDDW
Diff. Directions	20
Diffusion Scheme	Monopolar
Diff. Weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	2500 s/mm <sup>2</sup>
Averages 1	1
Averages 2	1
Dynamic Field Correction	Off
Invert Gray Scale	Off
Diff. Weighted Images	On
Trace Weighted Images	On
Tensor	On
FA Maps	On
ADC Maps	On
Exponential ADC Maps	Off
ADC Noise Threshold	40
Calculated Image	Off

**Sequence - Part 1**

Sequence Name	epse
Dimension	2D
Excitation	Standard
Gradient Mode	Performance
Bandwidth	1780 Hz/Px
Echo Spacing	0.67 ms
Free Echo Spacing	Off
EPI Factor	72

**Sequence - Part 2**

Introduction	Off
RF Spoiling	Off
Phase Correction	Internal

**Sequence - Special**

Excite pulse duration	5760 us
Refocus pulse duration	8960 us
Min. prep scans	0
Min. prep scans SB	0
Single-band images	Off
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Opt. MB RF pulse BW	Off
Time-shifted MB RF	Off
SENSE1 coil combine	On
Invert RO/PE polarity	On
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.00 deg
Fat sat. offset	0.00 Hz
Physio recording	Off

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TA: 35 sec Coil Selection: Auto Voxel Size: 4.0×4.0×6.0 mm<sup>3</sup> Acc.: None Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

**Routine**

Slice Group	1
Slices	12
Distance Factor	25 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	256 mm
FoV Phase	100.0 %
Slice Thickness	6.0 mm
TR	4800.0 ms
TE	11.00 ms
Averages	1
Concatenations	1
AutoAlign	---

**Contrast - Common**

TR	4800.0 ms
TE	11.00 ms
Flip Angle	90 deg
Fat-Water Contrast	Fat Saturation
Fat Saturation	Strong
Reconstruction	Magnitude

**Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	7
Multiple Series	Off
Delay in TR	0.00 ms

**Contrast - ASL**

Perfusion Mode	PCASL
Quality check	On
Labeling Duration	1800 ms
Postlabeling Delay	1800 ms
Flow Limit	100.00 cm/s

**Resolution - Common**

FoV Read	256 mm
FoV Phase	100.0 %
Slice Thickness	6.0 mm
Base Resolution	64
Phase Resolution	100 %
Interpolation	Off

**Resolution - Acceleration**

Acceleration mode	None
Advanced Reconstruction	Off
Phase Partial Fourier	6/8

**Resolution - Filter**

Raw Filter	Off
Elliptical Filter	Off
Hamming	Off
Distortion Correction	2D
Normalize	Prescan

**Geometry - Common**

Slice Group	1
Slices	12
Distance Factor	25 %
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	256 mm
FoV Phase	100.0 %
Slice Thickness	6.0 mm
TR	4800.0 ms
Multi-Slice Mode	Interleaved
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slice Group	1
Position	Isocenter
Orientation	Transversal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
F	0.0 mm
Initial Orientation	Transversal
Initial Rotation	0.00 deg

**Geometry - Saturation**

Special Saturation	Parallel F
Gap	35.00 mm

**Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H
Inline Composing	Off

**System - Miscellaneous**

Coil Selection	Auto Coil Select
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off
Coil Focus	Flat

**System - Adjustments**

Adjustment Strategy	Standard
B0 Shim	Standard
B1 Shim	TrueForm
CoilShim	Off
Adjustment Tolerance	Auto
Adjust with Body Coil	Off
Confirm Frequency	Never
Assume Silicone	Off

**System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	256 mm
R >> L	256 mm
F >> H	89 mm
Reset	Off

**System - pTx**

B1 Shim	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.262288 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Physio - Signal**

1st Signal/Mode	None
TR	4800.0 ms
Concatenations	1

**Perf**

Measurements	7
Motion Correction	Off
Spatial Filter	Off

**Sequence - Part 1**

Sequence Name	epfid
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Fast
Bandwidth	3004 Hz/Px
Echo Spacing	0.40 ms
Free Echo Spacing	Off
EPI Factor	64

**Sequence - Part 2**

Introduction	On
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