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ADNI4_VE11E_20220901
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\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\3 Plane Localizer

TA: 0:12 PM: ISO Voxel size: 1.5×1.5×8.0 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	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**

Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	20.0 ms
TE	5.00 ms
Averages	1
Concatenations	3
Filter	Raw filter, Distortion Corr.(2D), Normalize
Coil elements	HC1-7;NC1,2

**Contrast - Common**

TR	20.0 ms
TE	5.00 ms
TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	40 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

**Contrast - Dynamic**

Multiple series	Each measurement
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**Resolution - Common**

FoV read	280 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
Base resolution	192
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	None
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**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off
Prescan Normalize	Off
Normalize	On
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	On
Elliptical filter	Off

**Geometry - Common**

Slice group	1
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Slice group	3
Slices	1
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	8.0 mm
TR	20.0 ms
Multi-slice mode	Sequential
Series	Ascending
Concatenations	3

**Geometry - AutoAlign**

Slice group	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2

**Geometry - AutoAlign**

Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Slice group	3
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	Transversal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	None

**System - Miscellaneous**

Positioning mode	ISO
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
AutoAlign	---
Coil Select Mode	Default

**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

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	20.0 ms
Concatenations	3
Segments	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	280 mm
FoV phase	100.0 %
Phase resolution	100 %

**Physio - PACE**

Resp. control	Off
Concatenations	3

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

**Inline - MIP**

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

**Inline - Soft Tissue**

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	On
Mode	2D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	Off
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Sequential
Bandwidth	180 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	None
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
Allowed delay	0 s

\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\Accelerated Sagittal MPRAGE (MSV21)

TA: 5:12 PM: ISO Voxel size: 1.0×1.0×1.0 mmPAT: 2 Rel. SNR: 1.00 : tfl

**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	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
Dist. factor	50 %
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	1.00 mm
TR	2300.0 ms
TE	2.98 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(3D), Prescan Normalize
Coil elements	HC1-7;NC1,2

**Contrast - Common**

TR	2300.0 ms
TE	2.98 ms
Magn. preparation	Non-sel. IR
TI	900 ms
Flip angle	9 deg
Fat suppr.	None
Water suppr.	None

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	256 mm
FoV phase	93.8 %
Slice thickness	1.00 mm
Base resolution	256
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	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	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
Dist. factor	50 %
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	1.00 mm
TR	2300.0 ms
Multi-slice mode	Single shot
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L0.0 P5.4 H0.4
L	0.0 mm
P	5.4 mm
H	0.4 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

**Geometry - Navigator****System - Miscellaneous**

Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T

**System - Miscellaneous**

Sagittal	L >> R
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	On - AutoCoilSelect

**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	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Rotation	0.00 deg
A >> P	240 mm
F >> H	256 mm
R >> L	208 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	2300.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	Non-sel. IR
TI	900 ms
Fat suppr.	None
Dark blood	Off
FoV read	256 mm
FoV phase	93.8 %
Phase resolution	100 %

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

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**

Inline Composing	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Off
Flow comp.	No
Multi-slice mode	Single shot
Echo spacing	7.1 ms
Bandwidth	240 Hz/Px

**Sequence - Part 2**

RF pulse type	Fast
Gradient mode	Normal
Excitation	Non-sel.
RF spoiling	On
Incr. Gradient spoiling	Off
Turbo factor	208

**Sequence - Assistant**

Mode	Off
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\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\Sagittal 3D FLAIR (MSV22)

TA: 6:37 PM: ISO Voxel size: 1.0×1.0×1.0 mmPAT: 2 Rel. SNR: 1.00 : spcir

**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
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	1.00 mm
TR	5000 ms
TE	393 ms
Averages	1.0
Concatenations	1
Filter	Raw filter, Distortion Corr.(3D), Prescan Normalize
Coil elements	HC1-7;NC1,2

**Contrast - Common**

TR	5000 ms
TE	393 ms
MTC	Off
Magn. preparation	Non-sel. T2 prep. IR
T1	1700 ms
T2 prep. duration	125 ms
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Blood suppr.	Off
Restore magn.	Off

**Contrast - Dynamic**

Averages	1.0
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	256 mm
FoV phase	93.8 %
Slice thickness	1.00 mm
Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Allowed

**Resolution - Common**

Slice partial Fourier	7/8
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	28
Accel. factor 3D	1
Reference scan mode	Integrated

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	On
Elliptical filter	Off

**Geometry - Common**

Slab group	1
Slabs	1
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	1.00 mm
TR	5000 ms
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L0.0 P5.4 H0.4
L	0.0 mm
P	5.4 mm
H	0.4 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Strong
Restore magn.	Off
Special sat.	None

**Geometry - Navigator**

**System - Miscellaneous**

Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	On - AutoCoilSelect

**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	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Rotation	0.00 deg
A >> P	240 mm
F >> H	256 mm
R >> L	208 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
Trigger delay	0 ms
TR	5000 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	Non-sel. T2 prep. IR
T1	1700 ms
T2 prep. duration	125 ms
Fat suppr.	Fat sat.
Dark blood	Off
FoV read	256 mm
FoV phase	93.8 %
Phase resolution	100 %

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

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**

Inline Composing	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Flow comp.	No
Echo spacing	3.42 ms
Adiabatic-mode	Off
Bandwidth	781 Hz/Px

**Sequence - Part 2**

Echo train duration	923 ms
RF pulse type	Normal
Gradient mode	Fast
Excitation	Non-sel.
Flip angle mode	T2 var
Turbo factor	312

**Sequence - Assistant**

Allowed delay	30 s
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\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\Sagittal 3D T2 SPACE (MSV21)

TA: 4:53 PM: ISO Voxel size: 1.0×1.0×1.0 mmPAT: 2 Rel. SNR: 1.00 : spc

**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
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	1.00 mm
TR	3200 ms
TE	564 ms
Averages	1.0
Concatenations	1
Filter	Distortion Corr.(3D), Prescan Normalize
Coil elements	HC1-7;NC1,2

**Contrast - Common**

TR	3200 ms
TE	564 ms
MTC	Off
Magn. preparation	None
Fat suppr.	None
Blood suppr.	Off
Restore magn.	Off

**Contrast - Dynamic**

Averages	1.0
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	256 mm
FoV phase	93.8 %
Slice thickness	1.00 mm
Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Allowed
Slice partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	32
Accel. factor 3D	1
Reference scan mode	Integrated

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	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	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	208
FoV read	256 mm
FoV phase	93.8 %
Slice thickness	1.00 mm
TR	3200 ms
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 P5.4 H0.4 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L0.0 P5.4 H0.4
L	0.0 mm
P	5.4 mm
H	0.4 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

Fat suppr.	None
Restore magn.	Off
Special sat.	None

**Geometry - Navigator****System - Miscellaneous**

Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T

**System - Miscellaneous**

Sagittal	L >> R
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	On - 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

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
Trigger delay	0 ms
TR	3200 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	256 mm
FoV phase	93.8 %
Phase resolution	100 %

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

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**

Inline Composing	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Flow comp.	No
Echo spacing	3.46 ms
Adiabatic-mode	Off
Bandwidth	751 Hz/Px

**Sequence - Part 2**

Echo train duration	1083 ms
RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
Flip angle mode	T2 var
Turbo factor	314

**Sequence - Assistant**

Allowed delay	30 s
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\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\Axial 3D ME T2 GRE (MSV21)

TA: 8:44 PM: ISO Voxel size: 0.5×0.5×1.8 mmPAT: 2 Rel. SNR: 1.00 : fl\_r

**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 A12.2 H0.4 mm
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	0 %
Slice oversampling	9.1 %
Slices per slab	88
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	1.80 mm
TR	37.0 ms
TE 1	6.71 ms
TE 2	10.62 ms
TE 3	14.53 ms
TE 4	18.44 ms
TE 5	22.35 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(3D), Prescan Normalize
Coil elements	HC1-7;NC1

**Contrast - Common**

TR	37.0 ms
TE 1	6.71 ms
TE 2	10.62 ms
TE 3	14.53 ms
TE 4	18.44 ms
TE 5	22.35 ms
MTC	Off
Magn. preparation	None
Flip angle	15 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

**Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magn./Phase
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	200 mm
FoV phase	100.0 %
Slice thickness	1.80 mm
Base resolution	384
Phase resolution	70 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Accel. factor 3D	1
Reference scan mode	Integrated

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	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
Dist. factor	20 %
Position	L0.0 A12.2 H0.4 mm
Orientation	Transversal
Phase enc. dir.	R >> L
Slice oversampling	9.1 %
Slices per slab	88
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	1.80 mm
TR	37.0 ms
Multi-slice mode	Sequential
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	L0.0 A12.2 H0.4 mm
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	---
Initial Position	L0.0 A12.2 H0.4
R	0.0 mm
A	12.2 mm
H	0.4 mm
Initial Rotation	90.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Saturation mode	Standard
Fat suppr.	None
Water suppr.	None
Special sat.	Tracking F
Gap	11 mm
Thickness	40 mm

**System - Miscellaneous**

Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	On - AutoCoilSelect

**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	L0.0 A12.2 H0.4 mm
Orientation	Transversal
Rotation	90.00 deg
R >> L	200 mm
A >> P	200 mm
F >> H	159 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	37.0 ms
Concatenations	1
Segments	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	200 mm
FoV phase	100.0 %

**Physio - Cardiac**

Phase resolution	70 %
------------------	------

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Liver registration	Off
Save original images	On

**Inline - MIP**

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

**Inline - Soft Tissue**

Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
Measurements	1

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	3D
Elliptical scanning	Off
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	5
Flow comp. 1	Yes
Readout mode	Bipolar
Multi-slice mode	Sequential
Bandwidth 1	280 Hz/Px
Bandwidth 2	280 Hz/Px
Bandwidth 3	280 Hz/Px
Bandwidth 4	280 Hz/Px
Bandwidth 5	280 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	None
RF pulse type	Fast
Gradient mode	Normal
Excitation	Slab-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Min flip angle
Min flip angle	90 deg
Allowed delay	30 s

\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\Axial 3D PASL 1000 (Eyes Open) (MSV22)  
 TA: 1:08 PM: ISO Voxel size: 1.9x1.9x4.5 mmRel. SNR: 1.00 : tgse

**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

**Resolution - Common**

FoV phase	100.0 %
Slice thickness	4.50 mm
Base resolution	64
Phase resolution	97 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	On

**Resolution - Filter Image**

Distortion Corr.	On
Mode	2D
Prescan Normalize	On

**Routine**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.50 mm
TR	4000 ms
TE	20.26 ms
Averages	1
Concatenations	1
Filter	Raw filter, Distortion Corr.(2D), Prescan Normalize
Coil elements	HC1-7

**Resolution - Filter Rawdata**

Raw filter	On
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
Slice oversampling	0.0 %
Slices per slab	32
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.50 mm
TR	4000 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

**Contrast - Common**

TR	4000 ms
TE	20.26 ms
Flip angle	180 deg
Fat suppr.	Fat sat.

**Geometry - AutoAlign**

Slab group	1
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	R0.7 P0.0 H0.2
R	0.7 mm
P	0.0 mm
H	0.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Transversal

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	2
Delay in TR	0 ms
Multiple series	Off

**Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

**Contrast - ASL**

Perfusion mode	FAIR QII
Suppression Mode	GRAY-WHITE
Bolus Duration	800 ms
Inversion Time	1000 ms
Averaging mode	CONSTANT
Inversion Array Size	1

**System - Miscellaneous**

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

**Resolution - Common**

FoV read	240 mm
----------	--------

**System - Miscellaneous**

Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Off - All

**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	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Rotation	180.00 deg
A >> P	240 mm
R >> L	240 mm
F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
--------------	----------

**System - Tx/Rx**

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	4000 ms
Concatenations	1
Segments	4

**Sequence - Part 1**

Introduction	Off
Dimension	3D
Reordering	Centric
Multi-slice mode	Interleaved
Echo spacing	0.49 ms
Bandwidth	2442 Hz/Px

**Sequence - Part 2**

EPI factor	31
Segments	4
RF pulse type	Normal
Gradient mode	Performance
Turbo factor	16

\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\Axial 3D PASL 1500 (Eyes Open) (MSV22)

TA: 1:08 PM: ISO Voxel size: 1.9×1.9×4.5 mmRel. SNR: 1.00 : tgse

**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
Dist. factor	50 %
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.50 mm
TR	4000 ms
TE	20.26 ms
Averages	1
Concatenations	1
Filter	Raw filter, Distortion Corr.(2D), Prescan Normalize
Coil elements	HC1-7

**Contrast - Common**

TR	4000 ms
TE	20.26 ms
Flip angle	180 deg
Fat suppr.	Fat sat.

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	2
Delay in TR	0 ms
Multiple series	Off

**Contrast - ASL**

Perfusion mode	FAIR QII
Suppression Mode	GRAY-WHITE
Bolus Duration	800 ms
Inversion Time	1500 ms
Averaging mode	CONSTANT
Inversion Array Size	1

**Resolution - Common**

FoV read	240 mm
----------	--------

**Resolution - Common**

FoV phase	100.0 %
Slice thickness	4.50 mm
Base resolution	64
Phase resolution	97 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	On

**Resolution - Filter Image**

Distortion Corr.	On
Mode	2D
Prescan Normalize	On

**Resolution - Filter Rawdata**

Raw filter	On
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
Slice oversampling	0.0 %
Slices per slab	32
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.50 mm
TR	4000 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	R0.7 P0.0 H0.2
R	0.7 mm
P	0.0 mm
H	0.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

**System - Miscellaneous**

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

**System - Miscellaneous**

Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Off - All

**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	R0.7 P0.0 H0.2 mm
! Orientation	Transversal
! Rotation	179.00 deg
! A >> P	240 mm
! R >> L	240 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
--------------	----------

**System - Tx/Rx**

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	4000 ms
Concatenations	1
Segments	4

**Sequence - Part 1**

Introduction	Off
Dimension	3D
Reordering	Centric
Multi-slice mode	Interleaved
Echo spacing	0.49 ms
Bandwidth	2442 Hz/Px

**Sequence - Part 2**

EPI factor	31
Segments	4
RF pulse type	Normal
Gradient mode	Performance
Turbo factor	16



\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\Axial 3D PASL 2000 (Eyes Open) (MSV22)

TA: 1:08 PM: ISO Voxel size: 1.9×1.9×4.5 mmRel. SNR: 1.00 : tgse

**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
Dist. factor	50 %
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.50 mm
TR	4000 ms
TE	20.26 ms
Averages	1
Concatenations	1
Filter	Raw filter, Distortion Corr.(2D), Prescan Normalize
Coil elements	HC1-7

**Contrast - Common**

TR	4000 ms
TE	20.26 ms
Flip angle	180 deg
Fat suppr.	Fat sat.

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	2
Delay in TR	0 ms
Multiple series	Off

**Contrast - ASL**

Perfusion mode	FAIR QII
Suppression Mode	GRAY-WHITE
Bolus Duration	800 ms
Inversion Time	2000 ms
Averaging mode	CONSTANT
Inversion Array Size	1

**Resolution - Common**

FoV read	240 mm
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**Resolution - Common**

FoV phase	100.0 %
Slice thickness	4.50 mm
Base resolution	64
Phase resolution	97 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	On

**Resolution - Filter Image**

Distortion Corr.	On
Mode	2D
Prescan Normalize	On

**Resolution - Filter Rawdata**

Raw filter	On
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
Slice oversampling	0.0 %
Slices per slab	32
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.50 mm
TR	4000 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	R0.7 P0.0 H0.2
R	0.7 mm
P	0.0 mm
H	0.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

**System - Miscellaneous**

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

**System - Miscellaneous**

Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Off - All

**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	R0.7 P0.0 H0.2 mm
! Orientation	Transversal
! Rotation	179.00 deg
! A >> P	240 mm
! R >> L	240 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
--------------	----------

**System - Tx/Rx**

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	4000 ms
Concatenations	1
Segments	4

**Sequence - Part 1**

Introduction	Off
Dimension	3D
Reordering	Centric
Multi-slice mode	Interleaved
Echo spacing	0.49 ms
Bandwidth	2442 Hz/Px

**Sequence - Part 2**

EPI factor	31
Segments	4
RF pulse type	Normal
Gradient mode	Performance
Turbo factor	16

\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\Axial 3D PASL 2510 (Eyes Open) (MSV22)

TA: 1:08 PM: ISO Voxel size: 1.9×1.9×4.5 mmRel. SNR: 1.00 : tgse

**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
Dist. factor	50 %
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.50 mm
TR	4000 ms
TE	20.26 ms
Averages	1
Concatenations	1
Filter	Raw filter, Distortion Corr.(2D), Prescan Normalize
Coil elements	HC1-7

**Contrast - Common**

TR	4000 ms
TE	20.26 ms
Flip angle	180 deg
Fat suppr.	Fat sat.

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	2
Delay in TR	0 ms
Multiple series	Off

**Contrast - ASL**

Perfusion mode	FAIR QII
Suppression Mode	GRAY-WHITE
Bolus Duration	800 ms
Inversion Time	2510 ms
Averaging mode	CONSTANT
Inversion Array Size	1

**Resolution - Common**

FoV read	240 mm
----------	--------

**Resolution - Common**

FoV phase	100.0 %
Slice thickness	4.50 mm
Base resolution	64
Phase resolution	97 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	On

**Resolution - Filter Image**

Distortion Corr.	On
Mode	2D
Prescan Normalize	On

**Resolution - Filter Rawdata**

Raw filter	On
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
Slice oversampling	0.0 %
Slices per slab	32
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.50 mm
TR	4000 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	R0.7 P0.0 H0.2
R	0.7 mm
P	0.0 mm
H	0.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

**System - Miscellaneous**

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

**System - Miscellaneous**

Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Off - All

**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	R0.7 P0.0 H0.2 mm
! Orientation	Transversal
! Rotation	179.00 deg
! A >> P	240 mm
! R >> L	240 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

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

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	4000 ms
Concatenations	1
Segments	4

**Sequence - Part 1**

Introduction	Off
Dimension	3D
Reordering	Centric
Multi-slice mode	Interleaved
Echo spacing	0.49 ms
Bandwidth	2442 Hz/Px

**Sequence - Part 2**

EPI factor	31
Segments	4
RF pulse type	Normal
Gradient mode	Performance
Turbo factor	16

\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\Axial 3D PASL 3000 (Eyes Open) (MSV22)

TA: 1:08 PM: ISO Voxel size: 1.9×1.9×4.5 mmRel. SNR: 1.00 : tgse

**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
Dist. factor	50 %
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.50 mm
TR	4000 ms
TE	20.26 ms
Averages	1
Concatenations	1
Filter	Raw filter, Distortion Corr.(2D), Prescan Normalize
Coil elements	HC1-7

**Contrast - Common**

TR	4000 ms
TE	20.26 ms
Flip angle	180 deg
Fat suppr.	Fat sat.

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	2
Delay in TR	0 ms
Multiple series	Off

**Contrast - ASL**

Perfusion mode	FAIR QII
Suppression Mode	GRAY-WHITE
Bolus Duration	800 ms
Inversion Time	3000 ms
Averaging mode	CONSTANT
Inversion Array Size	1

**Resolution - Common**

FoV read	240 mm
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**Resolution - Common**

FoV phase	100.0 %
Slice thickness	4.50 mm
Base resolution	64
Phase resolution	97 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	On

**Resolution - Filter Image**

Distortion Corr.	On
Mode	2D
Prescan Normalize	On

**Resolution - Filter Rawdata**

Raw filter	On
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
Slice oversampling	0.0 %
Slices per slab	32
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.50 mm
TR	4000 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slab group	1
Position	R0.7 P0.0 H0.2 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	R0.7 P0.0 H0.2
R	0.7 mm
P	0.0 mm
H	0.2 mm
Initial Rotation	-180.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

**System - Miscellaneous**

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

**System - Miscellaneous**

Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Off - All

**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	R0.7 P0.0 H0.2 mm
! Orientation	Transversal
! Rotation	179.00 deg
! A >> P	240 mm
! R >> L	240 mm
! F >> H	144 mm
Reset	Off

**System - pTx Volumes**

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

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	4000 ms
Concatenations	1
Segments	4

**Sequence - Part 1**

Introduction	Off
Dimension	3D
Reordering	Centric
Multi-slice mode	Interleaved
Echo spacing	0.49 ms
Bandwidth	2442 Hz/Px

**Sequence - Part 2**

EPI factor	31
Segments	4
RF pulse type	Normal
Gradient mode	Performance
Turbo factor	16

\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\Axial MB DTI PA (MSV21)

TA: 7:25 PM: ISO Voxel size: 2.0×2.0×2.0 mmPAT: 3 Rel. SNR: 1.00 : epse

**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**

Slice group	1
Slices	81
Dist. factor	0 %
Position	L1.4 P3.4 H50.8 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Phase oversampling	0 %
FoV read	232 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	3400 ms
TE	71.0 ms
Averages	1
Concatenations	1
Filter	Raw filter, Prescan Normalize
Coil elements	HC1-7

**Contrast - Common**

TR	3400 ms
TE	71.0 ms
MTC	Off
Magn. preparation	None
Fat suppr.	Fat sat.
Fat sat. mode	Strong

**Contrast - Dynamic**

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

**Resolution - Common**

FoV read	232 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
Base resolution	116
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

**Resolution - iPAT**

Accel. mode	Slice accel.
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**Resolution - iPAT**

Accel. factor PE	1
Ref. lines PE	20
Accel. factor slice	3
Reference scan mode	EPI/separate

**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	On
Dynamic Field Corr.	Off

**Resolution - Filter Rawdata**

Raw filter	On
Elliptical filter	Off

**Geometry - Common**

Slice group	1
Slices	81
Dist. factor	0 %
Position	L1.4 P3.4 H50.8 mm
Orientation	Transversal
Phase enc. dir.	P >> A
FoV read	232 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	3400 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	L1.4 P3.4 H50.8 mm
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	L1.4 P3.4 H50.8
L	1.4 mm
P	3.4 mm
H	50.8 mm
Initial Rotation	-180.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Strong
Special sat.	None

**Geometry - Navigator****System - Miscellaneous**

Positioning mode	ISO
Table position	H
Table position	51 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Matrix Optimization	Performance
AutoAlign	---

**System - Miscellaneous**

Coil Select Mode	On - AutoCoilSelect
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**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	L1.4 P3.4 H50.8 mm
Orientation	Transversal
Rotation	180.00 deg
A >> P	232 mm
R >> L	232 mm
F >> H	162 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	3.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	3400 ms
Concatenations	1

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Diff - Neuro**

Diffusion mode	Free
Diff. directions	126
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	2000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	10

**Diff - Body**

Diffusion mode	Free
Diff. directions	126
Diffusion Scheme	Monopolar
Diff. weightings	2

**Diff - Body**

b-value 1	0 s/mm <sup>2</sup>
b-value 2	2000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm <sup>2</sup>
Noise level	10

**Diff - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Sequence - Part 1**

Introduction	Off
Optimization	None
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.55 ms
Bandwidth	2268 Hz/Px

**Sequence - Part 2**

EPI factor	116
RF pulse type	Low SAR
Gradient mode	Performance
Excitation	Standard

**Sequence - pTX Pulses**



\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\Axial MB DTI AP (MSV21)

TA: 0:37 PM: ISO Voxel size: 2.0×2.0×2.0 mmPAT: 3 Rel. SNR: 1.00 : epse

**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**

Slice group	1
Slices	81
Dist. factor	0 %
Position	L1.4 P3.4 H50.8 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	232 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	3400 ms
TE	71.0 ms
Averages	1
Concatenations	1
Filter	Raw filter, Prescan Normalize
Coil elements	HC1-7

**Contrast - Common**

TR	3400 ms
TE	71.0 ms
MTC	Off
Magn. preparation	None
Fat suppr.	Fat sat.
Fat sat. mode	Strong

**Contrast - Dynamic**

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

**Resolution - Common**

FoV read	232 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
Base resolution	116
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

**Resolution - iPAT**

Accel. mode	Slice accel.
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**Resolution - iPAT**

Accel. factor PE	1
Ref. lines PE	20
Accel. factor slice	3
Reference scan mode	EPI/separate

**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	On
Dynamic Field Corr.	Off

**Resolution - Filter Rawdata**

Raw filter	On
Elliptical filter	Off

**Geometry - Common**

Slice group	1
Slices	81
Dist. factor	0 %
Position	L1.4 P3.4 H50.8 mm
Orientation	Transversal
Phase enc. dir.	A >> P
FoV read	232 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	3400 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	L1.4 P3.4 H50.8 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L1.4 P3.4 H50.8
L	1.4 mm
P	3.4 mm
H	50.8 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Fat sat. mode	Strong
Special sat.	None

**Geometry - Navigator****System - Miscellaneous**

Positioning mode	ISO
Table position	H
Table position	51 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Matrix Optimization	Performance
AutoAlign	---

**System - Miscellaneous**

Coil Select Mode	On - AutoCoilSelect
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**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	L1.4 P3.4 H50.8 mm
Orientation	Transversal
Rotation	0.00 deg
A >> P	232 mm
R >> L	232 mm
F >> H	162 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	3.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	3400 ms
Concatenations	1

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Diff - Neuro**

Diffusion mode	Free
Diff. directions	6
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm <sup>2</sup>
b-value 2	2000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	On
Tensor	Off
Noise level	10

**Diff - Body**

Diffusion mode	Free
Diff. directions	6
Diffusion Scheme	Monopolar
Diff. weightings	2

**Diff - Body**

b-value 1	0 s/mm <sup>2</sup>
b-value 2	2000 s/mm <sup>2</sup>
b-value 1	1
b-value 2	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm <sup>2</sup>
Noise level	10

**Diff - Composing**

Inline Composing	Off
Distortion Corr.	Off

**Sequence - Part 1**

Introduction	Off
Optimization	None
Multi-slice mode	Interleaved
Free echo spacing	On
Echo spacing	0.55 ms
Bandwidth	2268 Hz/Px

**Sequence - Part 2**

EPI factor	116
RF pulse type	Low SAR
Gradient mode	Performance
Excitation	Standard

**Sequence - pTX Pulses**

\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\Axial MB rsfMRI (Eyes Open) (MSV21)

TA: 5:00 PM: ISO Voxel size: 2.5×2.5×2.5 mmPAT: 8 Rel. SNR: 1.00 : epfid

**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**

Slice group	1
Slices	64
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Phase oversampling	0 %
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.5 mm
TR	607 ms
TE	32.0 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	HC1-7

**Contrast - Common**

TR	607 ms
TE	32.0 ms
MTC	Off
Flip angle	50 deg
Fat suppr.	Fat sat.

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	482
Delay in TR	0 ms
Multiple series	Off

**Resolution - Common**

FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.5 mm
Base resolution	88
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

**Resolution - iPAT**

Accel. mode	Slice accel.
Accel. factor PE	1
Ref. lines PE	12

**Resolution - iPAT**

Accel. factor slice	8
Reference scan mode	EPI/separate

**Resolution - Filter Image**

Distortion Corr.	Off
Prescan Normalize	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off
Hamming	Off

**Geometry - Common**

Slice group	1
Slices	64
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
FoV read	220 mm
FoV phase	100.0 %
Slice thickness	2.5 mm
TR	607 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	P >> A
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	-180.00 deg
Initial Orientation	Transversal

**Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

**System - Miscellaneous**

Positioning mode	ISO
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	L >> R
Coronal	P >> A
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Performance
AutoAlign	---
Coil Select Mode	On - AutoCoilSelect

**System - Adjustments**

B0 Shim mode	Standard
B1 Shim mode	TrueForm

**System - Adjustments**

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	180.00 deg
A >> P	220 mm
R >> L	220 mm
F >> H	160 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	607 ms
Concatenations	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	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]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Baseline
Meas[12]	Baseline
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	482

**BOLD**

Delay in TR	0 ms
Multiple series	Off

**Sequence - Part 1**

Introduction	Off
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.57 ms
Bandwidth	2368 Hz/Px

**Sequence - Part 2**

EPI factor	88
RF pulse type	Normal
Gradient mode	Performance
Excitation	Standard

**Sequence - pTX Pulses**

\\RESEARCH\ADNI4\_VE11E\_20220901\ADNI4\Human\HighResHippocampus (MSV21)

TA: 4:18 PM: ISO Voxel size: 0.4×0.4×2.0 mmPAT: 2 Rel. SNR: 1.00 : tse

**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**

Slice group	1
Slices	30
Dist. factor	0 %
Position	Isocenter
Orientation	C > T-25.0
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	100 %
FoV read	175 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	8020.0 ms
TE	50 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(3D), Prescan Normalize, Elliptical filter
Coil elements	HC1-7;NC1,2

**Contrast - Common**

TR	8020.0 ms
TE	50 ms
MTC	Off
Magn. preparation	None
Flip angle	122 deg
Fat suppr.	None
Water suppr.	None
Restore magn.	Off

**Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

**Resolution - Common**

FoV read	175 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
Base resolution	448
Phase resolution	100 %
Phase partial Fourier	Off
Trajectory	Cartesian
Interpolation	Off

**Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	34
Reference scan mode	Integrated

**Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	Off
Prescan Normalize	On
Unfiltered images	Off
Normalize	Off
B1 filter	Off

**Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

**Geometry - Common**

Slice group	1
Slices	30
Dist. factor	0 %
Position	Isocenter
Orientation	C > T-25.0
Phase enc. dir.	R >> L
FoV read	175 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	8020.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice group	1
Position	Isocenter
Orientation	C > T-25.0
Phase enc. dir.	R >> L
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	C > T
C > T	-25.0
> S	0.0

**Geometry - Saturation**

Fat suppr.	None
Water suppr.	None
Restore magn.	Off
Special sat.	None

**Geometry - Navigator****System - Miscellaneous**

Positioning mode	ISO
Table position	H

**System - Miscellaneous**

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
AutoAlign	---
Coil Select Mode	On - AutoCoilSelect

**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	C > T-25.0
Rotation	0.00 deg
R >> L	175 mm
F >> H	175 mm
A >> P	60 mm
Reset	Off

**System - pTx Volumes**

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

Frequency 1H	123.251206 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	8020.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	175 mm
FoV phase	100.0 %
Phase resolution	100 %
Trajectory	Cartesian

**Physio - PACE**

Resp. control	Off
Concatenations	1

**Inline - Common**

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**

Inline Composing	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	Off

**Sequence - Part 1**

Introduction	On
Dimension	2D
Compensate T2 decay	Off
Reduce Motion Sens.	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	16.5 ms
Bandwidth	100 Hz/Px

**Sequence - Part 2**

Define	Turbo factor
Echo trains per slice	31
Phase correction	Automatic
Acoustic noise reduction	None
RF pulse type	Fast
Gradient mode	Normal
Hyperecho	Off
WARP	Off
Red. EC sensitivity	Off
Turbo factor	15

**Sequence - Assistant**

Mode	Min flip angle
Min flip angle	130 deg
Allowed delay	180 s