# SIEMENS MAGNETOM Investigational\_Device\_7T

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# \\WIPs\WIP925B Sparse TFL\MP2RAGE\head\AAHead\_Scout\_32ch-head-coil

TA: 0:14 PM: REF Voxel size: 1.6×1.6×1.6 mmPAT: 3 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	Off
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further	On
preparation	
Wait for user to start	Off
Start measurements	Single measurement

## Routine

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A30.0 H0.0 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	3.25 ms
TE	1.53 ms
Averages	1
Concatenations	1
Filter	B1 filter
Coil elements	AC
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#### **Contrast - Common**

TR	3.25 ms
TE	1.53 ms
Flip angle	16 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	GRAPPA	
Accel. factor PE	3	
Ref. lines PE	24	
Accel. factor 3D	1	

#### **Resolution - iPAT**

Reference scar	n mode	Integrated	
Danalutian	Filton Images		

#### **Resolution - Filter Image**

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

#### **Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

#### **Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A30.0 H0.0 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	3.25 ms
Multi-slice mode	Sequential
Series	Ascending
Concatenations	1

## **Geometry - AutoAlign**

Slab group	1
Position	L0.0 A30.0 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Initial Position	Isocenter
L	0.0 mm
Р	0.0 mm
Н	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Transversal

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	0 mm
Inline Composing	Off

## **System - Miscellaneous**

Positioning mode	REF
Table position	Н
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

## System - Miscellaneous

Coil Select Mode Default
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## **System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
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	297.222429 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - PACE

Resp. control	Off
Concatenations	1

#### **Inline - Common**

Flip angle	16 deg
Measurements	1
Time to center	6.3 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**

Inline Composing	Off
Distortion Corr.	Off

## Inline - MapIt

Save original images	On	
MapIt	None	
Flip angle	16 deg	
Measurements	1	
Contrasts	1	

## Inline - MapIt

TR	3.25 ms
TE	1.53 ms

## Sequence - Part 1

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

# Sequence - Part 2

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

## **Sequence - Assistant**

Mode	Off	

## \\WIPs\WIP925B Sparse TFL\MP2RAGE\head\cstfl\_wip925b\_08mm\_iso\_sag

TA: 5:58 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 1.0 Rel. SNR: 1.00 : WIP\_cmp

#### **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	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

#### **Routine**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	224
FoV read	240 mm
FoV phase	94.4 %
Slice thickness	0.83 mm
TR	6000.0 ms
TE	1.94 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(3D)
Coil elements	AC

#### **Contrast - Common**

TR	6000.0 ms
TE	1.94 ms
Magn. preparation	Non-sel. IR
TI 1	800 ms
TI 2	2700 ms
Flip angle 1	4 deg
Flip angle 2	5 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	240 mm
FoV phase	94.4 %
Slice thickness	0.83 mm
Base resolution	288
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off

#### **Resolution - Common**

Slice partial Fourier	Off	
Interpolation	Off	

#### **Resolution - iPAT**

PAT mode	None

## **Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	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	50 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	224
FoV read	240 mm
FoV phase	94.4 %
Slice thickness	0.83 mm
TR	6000.0 ms
Multi-slice mode	Single shot
Series	Interleaved
Concatenations	1

# **Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

## **Geometry - Navigator**

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table position	Н
Table position	0 mm
Inline Composing	Off

#### System - Miscellaneous

Positioning mode	REF
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#### **System - Miscellaneous**

Table position	Н
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**

ĺ	B0 Shim mode	Brain
	B1 Shim mode	TrueForm
	Confirm freq. adjustment	Off
	Assume Dominant Fat	Off
	Assume Silicone	Off
l	Adjustment Tolerance	Auto

## **System - Adjust Volume**

Position	Isocenter
Orientation	Sagittal
Rotation	0.00 deg
A >> P	227 mm
F >> H	240 mm
R >> L	186 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Non-sel.

## System - Tx/Rx

Frequency 1H	297.222429 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	6000.0 ms
Concatenations	1

## Physio - Cardiac

Magn. preparation	Non-sel. IR
TI 1	800 ms
TI 2	2700 ms
Fat suppr.	None
Dark blood	Off
FoV read	240 mm
FoV phase	94.4 %
Phase resolution	100 %

# Physio - PACE

Resp. control	Off
Concatenations	1

#### **Inline - Common**

Subtract	Off
Measurements	1

#### **Inline - Common**

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	

## Inline - MapIt

Save original images	On
MapIt	None
Flip angle 1	4 deg
Flip angle 2	5 deg
Measurements	1
Contrasts	1
TR	6000.0 ms
TE	1.94 ms

## Sequence - Part 1

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Allowed
Contrasts	1
Flow comp.	No
Multi-slice mode	Single shot
Echo spacing	5.7 ms
Bandwidth	240 Hz/Px

# Sequence - Part 2

RF pulse type	Fast	
Gradient mode	Fast	
Excitation	Non-sel.	
RF spoiling	On	
Incr. Gradient spoiling	Off	
Turbo factor	224	

## **Sequence - pTX Pulses**

## Sequence - Special

•	
Sparse Sampling	On
US	4.0 x
Samples/TR	200
Density	0.50
Jitter Radius	1.2
Reference Scan	External
No. Ref-Lines	32
Centric	Off
Virtual Coils	Off
Shift Inv Pulse	0 Hz
No. Iterations	15
CSM RO Resolution	0
Regularisation INV1	0.00100
Regularisation INV2	0.00100

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# Sequence - Special

Uniform	On
Denoised UNI	On
FLAWS	Off
FLAWS-hc	Off
FLAWS-hc inv.	Off
Division image	Off
Synthetic TI 0	0 ms
Synthetic TI 1	0 ms
Denoise Lambda	1
Scaling	0 10^
Echo Averaging	Off
FID Monitoring	Off

# Sequence - Assistant

Mode	Off

# \\WIPs\WIP925B Sparse TFL\MP2RAGE\head\cstfl\_wip925b\_08mm\_iso\_sag\_pTX

TA: 5:58 PM: REF Voxel size: 0.8×0.8×0.8 mmPAT: 1.0 Rel. SNR: 1.00 : WIP\_cmp

#### **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	Off
preparation	
Wait for user to start	Off
Start measurements	Single measurement

#### **Routine**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	224
FoV read	240 mm
FoV phase	94.4 %
Slice thickness	0.83 mm
TR	6000.0 ms
TE	2.84 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(3D)
Coil elements	AC

#### **Contrast - Common**

TR	6000.0 ms
TE	2.84 ms
Magn. preparation	Non-sel. IR
TI 1	800 ms
TI 2	2700 ms
Flip angle 1	4 deg
Flip angle 2	5 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	240 mm
FoV phase	94.4 %
Slice thickness	0.83 mm
Base resolution	288
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off

#### **Resolution - Common**

Slice partial Fourier	Off	
Interpolation	Off	

#### **Resolution - iPAT**

PAT mode	None
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## **Resolution - Filter Image**

Image Filter	Off
Distortion Corr.	On
Mode	3D
Unfiltered images	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	50 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	224
FoV read	240 mm
FoV phase	94.4 %
Slice thickness	0.83 mm
TR	6000.0 ms
Multi-slice mode	Single shot
Series	Interleaved
Concatenations	1

# **Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

## **Geometry - Navigator**

## **Geometry - Tim Planning Suite**

Ī	Set-n-Go Protocol	Off
	Table position	Н
	Table position	0 mm
	Inline Composing	Off

#### System - Miscellaneous

Positioning mode	REF
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#### System - Miscellaneous

Table position	Н
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	Brain
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

## **System - Adjust Volume**

Position	Isocenter
Orientation	Sagittal
Rotation	0.00 deg
A >> P F >> H R >> L	227 mm
F >> H	240 mm
R >> L	186 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Non-sel.

## System - Tx/Rx

Frequency 1H	297.222429 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	6000.0 ms
Concatenations	1

## Physio - Cardiac

Magn. preparation	Non-sel. IR	
TI 1	800 ms	
TI 2	2700 ms	
Fat suppr.	None	
Dark blood	Off	
FoV read	240 mm	
FoV phase	94.4 %	
Phase resolution	100 %	

## **Physio - PACE**

Resp. control	Off
Concatenations	1

#### **Inline - Common**

Subtract	Off
Measurements	1

#### **Inline - Common**

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	

## Inline - MapIt

Save original images	On
MapIt	None
Flip angle 1	4 deg
Flip angle 2	5 deg
Measurements	1
Contrasts	1
TR	6000.0 ms
TE	2.84 ms

## Sequence - Part 1

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Single shot
Echo spacing	7.6 ms
Bandwidth	240 Hz/Px

# Sequence - Part 2

RF pulse type	Fast
Gradient mode	Fast
Excitation	Non-sel.
RF spoiling	On
Incr. Gradient spoiling	Off
Turbo factor	224

## **Sequence - pTX Pulses**

pTX Pulse	1
Pulse type	Excitation
pTX Pulse	2
Pulse type	Inversion

## Sequence - Special

Sparse Sampling	On
US	4.0 x
Samples/TR	200
Density	0.50
Jitter Radius	1.2
Reference Scan	External
No. Ref-Lines	32
Centric	Off
Virtual Coils	Off
Shift Inv Pulse	0 Hz

# Sequence - Special

No. Iterations	15
CSM RO Resolution	0
Regularisation INV1	0.00100
Regularisation INV2	0.00100
Uniform	On
Denoised UNI	On
FLAWS	Off
FLAWS-hc	Off
FLAWS-hc inv.	Off
Division image	Off
Synthetic TI 0	0 ms
Synthetic TI 1	0 ms
Denoise Lambda	1
Scaling	0 10^
Echo Averaging	Off
FID Monitoring	Off

# Sequence - Assistant

Mode	Off