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## \\USER

# **OHBA Projects VE11C**

# 2020\_108 CNS COVID

## CNS COVID v1

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# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\AAHead\_Scout

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 A10.0 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	3.15 ms
TE	1.37 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

## **Contrast - Common**

TR	3.15 ms
TE	1.37 ms
Flip angle	8 deg

## **Contrast - Dynamic**

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

## **Resolution - Common**

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

## **Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	24
Accel. factor 3D	1

#### **Resolution - iPAT**

Reference scan mode	Integrated	
Resolution - Filter Image		
Image Filter	Off	
Distortion Corr.	Off	
Prescan Normalize	On	
Unfiltered images	Off	
Normalize	Off	

## **Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

## **Geometry - Common**

B1 filter

Slab group	1
Slabs	1
Dist. factor	20 %
Position	L0.0 A10.0 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	3.15 ms
Multi-slice mode	Sequential
Series	Ascending
Concatenations	1

## **Geometry - AutoAlign**

Slab group	1
Position	L0.0 A10.0 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

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

# **System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Adjust with body coil	Off

# System - Adjustments

Confirm freq. adjustment	Off
oorminin nog. aajaoanone	OII
Assume Dominant Fat	Off
Assume Dominant Fat	Oli
Assume Silicone	Off
Assume Silicone	Oli
Adjustment Tolerance	Auto
Aujustinent roletance	Auto

## Sequence - Part 2

RF spoiling	On	
Sequence - Assistant		
Mode	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 Volumes

B1 Shim mode	TrueForm
Excitation	Non-sel.

# System - Tx/Rx

Frequency 1H	123.259293 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

## Physio - PACE

Resp. control	Off
Concatenations	1

## **Inline - Common**

Flip angle	8 deg
Measurements	1
Time to center	6.2 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

Biotoriion con:	Distortion Corr.	Off
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# 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.

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\T1\_p2\_1mm\_fov256\_sag\_TI\_88 0

TA: 4:54 PM: REF 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	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	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Basis
Phase oversampling	5 %
Slice oversampling	0.0 %
Slices per slab	208
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	2000.0 ms
TE	2.03 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

## **Contrast - Common**

Water suppr.	None
Fat suppr.	None
Flip angle	8 deg
ТІ	880 ms
Magn. preparation	Non-sel. IR
TE	2.03 ms
TR	2000.0 ms

## **Contrast - Dynamic**

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

## **Resolution - Common**

FoV read	256 mm
FoV phase	100.0 %
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

#### **Resolution - iPAT**

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

## **Resolution - Filter Image**

	0"
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	On
Normalize	Off
B1 filter	Off

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

Raw filter	Off	
Elliptical filter	Off	

## **Geometry - Common**

Clob group	1
Slab group	I
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	208
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	2000.0 ms
Multi-slice mode	Single shot
Series	Ascending
Concatenations	1

## Geometry - AutoAlign

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

## **Geometry - Navigator**

## **System - Miscellaneous**

Positioning mode	REF
Table position	Н
Table position	0 mm
MSMA	S - C - T

## System - Miscellaneous

Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Basis
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	Isocenter
Orientation	Sagittal
Rotation	0.00 deg
A >> P	256 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	123.259293 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	6.000
Reset	Off
? Ref. amplitude 1H	0.000 V

# Physio - Signal1

1st Signal/Mode	None
TR	2000.0 ms
Concatenations	1

# Physio - Cardiac

Magn. preparation	Non-sel. IR
ті	880 ms
Fat suppr.	None
Dark blood	Off
FoV read	256 mm
FoV phase	100.0 %
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

Distortion Corr.	Off
Biotortion Con.	<b>O</b> 11

# Sequence - Part 1

Introduction	Off
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Allowed
Flow comp.	No
Multi-slice mode	Single shot
Echo spacing	6.1 ms
Bandwidth	240 Hz/Px

## Sequence - Part 2

RF	pulse type	Fast	
Gr	adient mode	Fast*	
Ex	citation	Non-sel.	
RF	spoiling	On	
Inc	cr. Gradient spoiling	Off	
Tu	rbo factor	208	

# Sequence - Assistant

Mode	Off	

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\MB8\_FMRI\_fov210\_2.4mm\_rest ing

TA: 6:10 PM: REF Voxel size: 2.4×2.4×2.4 mmPAT: Off 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	Off
preparation	
Wait for user to start	On
Start measurements	Single measurement

#### Routine

Slice group	1
Slices	64
Dist. factor	0 %
Position	Isocenter
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.40 mm
TR	735 ms
TE	39.00 ms
Multi-band accel. factor	8
Filter	None
Coil elements	HEA;HEP

#### **Contrast - Common**

TR	735 ms
TR TE	39.00 ms
MTC	Off
Magn. preparation	None
Flip angle	52 deg
Fat suppr.	Fat sat.

## **Contrast - Dynamic**

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	490
Delay in TR	0 ms
Multiple series	Off

## **Resolution - Common**

FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.40 mm
Base resolution	88
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

#### **Resolution - iPAT**

PAT mode	None

## **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	T > C-16.0
Phase enc. dir.	A >> P
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.40 mm
TR	735 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	8

## Geometry - AutoAlign

Slice group	1
Position	Isocenter
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

## **Geometry - Saturation**

Fat suppr.	Fat sat.
Special sat.	None

## 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
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

## **System - Adjustments**

B0 Shim mode	Brain
B1 Shim mode	TrueForm
Adjust with body coil	Off

# System - Adjustments

Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Maximum

# **System - Adjust Volume**

Position	Isocenter
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P R >> L F >> H Reset	210 mm
R >> L	210 mm
F >> H	154 mm
Reset	Off

# System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Standard

# System - Tx/Rx

Frequency 1H	123.259293 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	2.000
Reset	Off
? Ref. amplitude 1H	0.000 V

# Physio - Signal1

1st Signal/Mode	None
TR	735 ms
Multi-band accel. factor	8

## **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	3
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Active
Motion correction	Off
Spatial filter	Off
Measurements	490
Delay in TR	0 ms
Multiple series	Off

# Sequence - Part 1

Introduction	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.64 ms
Bandwidth	2030 Hz/Px

# Sequence - Part 2

EPI factor	88
Gradient mode	Fast
Excitation	Standard
RF spoiling	Off

Excite pulse duration	7000 us
Single-band images	On
MB LeakBlock kernel	Off
MB dual kernel	Off
MB RF phase scramble	Off
SENSE1 coil combine	On
Invert RO/PE polarity	Off
Disable freq. update	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Physio recording	DICOM
Triggering scheme	Standard

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\diff\_PA\_MPopt\_MB3\_3b0\_lowfli p

TA: 0:36 PM: REF Voxel size: 2.0×2.0×2.0 mmPAT: Off 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	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	On
Start measurements	Single measurement

#### Routine

Slice group	1
Slices	72
Dist. factor	0 %
Position	Isocenter
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3600 ms
TE	92.00 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## **Contrast - Common**

TR	3600 ms
TE	92.00 ms
MTC	Off
Magn. preparation	None
Flip angle	78 deg
Refocus flip angle	160 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

## **Contrast - Dynamic**

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

## **Resolution - Common**

FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

# **Resolution - iPAT**

## **Resolution - Filter Image**

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

## **Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	Off

## **Geometry - Common**

Slice group	1
Slices	72
Dist. factor	0 %
Position	Isocenter
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3600 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	3

#### Geometry - AutoAlign

- · · · · · · · · · · · · · · · · · · ·	
Slice group	1
Position	Isocenter
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
Р	0.0 mm
Н	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

## **Geometry - Saturation**

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

## **Geometry - Navigator**

## **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
Matrix Optimization	Off
AutoAlign	Head > Brain
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	Maximum

# System - Adjust Volume

Position	Isocenter
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	210 mm
R >> L	210 mm
F >> H	144 mm
Reset	Off

# System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Standard

# System - Tx/Rx

Frequency 1H	123.259293 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	3600 ms
Multi-band accel. factor	3

# Physio - PACE

Resp. control	Off
Multi-band accel. factor	3

## **Diff - Neuro**

Diffusion mode	Free
Diff. directions	6
Diffusion Scheme	Monopolar
Diff. weightings	1
b-value	2000 s/mm <sup>2</sup>
b-value	1
Diff. weighted images	On
Trace weighted images	Off
ADC maps	Off
FA maps	Off
Mosaic	Off
Tensor	Off
Noise level	40

# Diff - Body

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

# Diff - Body

Exponential ADC Maps	Off
FA maps	Off
Invert Gray Scale	Off
Calculated Image	Off
b-Value >=	0 s/mm²
Noise level	40

# Diff - Composing

Distortion Corr. Off
----------------------

# Sequence - Part 1

Introduction	Off
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.67 ms
Bandwidth	1780 Hz/Px

# Sequence - Part 2

EPI factor	104
Gradient mode	Fast
Excitation	Standard
RF spoiling	Off

7	
Excite pulse duration	5120 us
Refocus pulse duration	10240 us
Single-band images	On
MB LeakBlock kernel	Off
MB dual kernel	Off
MB RF phase scramble	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
Physio recording	Off

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\diff\_AP\_MPopt\_MB3\_50b1000\_ 50b2000\_8b0\_lowflip

TA: 6:32 PM: REF Voxel size: 2.0×2.0×2.0 mmPAT: Off 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	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

Slice group	1
Slices	72
Dist. factor	0 %
Position	Isocenter
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Phase oversampling	0 %
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3600 ms
TE	92.00 ms
Multi-band accel. factor	3
Filter	None
Coil elements	HEA;HEP

## **Contrast - Common**

TR	3600 ms
TE	92.00 ms
MTC	Off
Magn. preparation	None
Flip angle	78 deg
Refocus flip angle	160 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled

## **Contrast - Dynamic**

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

## **Resolution - Common**

FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
Base resolution	104
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

# **Resolution - iPAT**

		_
PAT mode	None	

## **Resolution - Filter Image**

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

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

Raw filter	Off
Elliptical filter	Off

## **Geometry - Common**

Slice group	1
Slices	72
Dist. factor	0 %
Position	Isocenter
Orientation	T > C-16.0
Phase enc. dir.	A >> P
FoV read	210 mm
FoV phase	100.0 %
Slice thickness	2.00 mm
TR	3600 ms
Multi-slice mode	Interleaved
Series	Interleaved
Multi-band accel. factor	3

# Geometry - AutoAlign

Slice group	1
Position	Isocenter
Orientation	T > C-16.0
Phase enc. dir.	A >> P
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

## **Geometry - Saturation**

Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Disabled
Special sat.	None

## **Geometry - Navigator**

## **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
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Off - All

# System - Adjustments

B0 Shim mod	le	Standard
B1 Shim mod	le	TrueForm
Adjust with bo	ody coil	Off
Confirm freq.	adjustment	Off
Assume Dom	inant Fat	Off
Assume Silico	one	Off
Adjustment T	olerance	Maximum

# System - Adjust Volume

Position	Isocenter
Orientation	T > C-16.0
Rotation	0.00 deg
A >> P	210 mm
A >> P R >> L F >> H	210 mm
F >> H	144 mm
Reset	Off

# System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Standard

# System - Tx/Rx

Frequency 1H	123.259293 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	3600 ms
Multi-band accel. factor	3

# Physio - PACE

Resp. control	Off
Multi-band accel. factor	3

## **Diff - Neuro**

Diffusion mode	Free
Diff. directions	104
Diffusion Scheme	Monopolar
Diff. weightings	2
b-value 1	0 s/mm²
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	40

# Diff - Body

Diffusion mode	Free
Diff. directions	104
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

# Diff - Body

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/mm²
Noise level	40

# Diff - Composing

-	_	
Distortion Corr.		Off

# Sequence - Part 1

Introduction	Off
Multi-slice mode	Interleaved
Free echo spacing	Off
Echo spacing	0.67 ms
Bandwidth	1780 Hz/Px

## Sequence - Part 2

EPI factor	104
Gradient mode	Fast
Excitation	Standard
RF spoiling	Off

Excite pulse duration	5120 us
Refocus pulse duration	10240 us
Single-band images	On
MB LeakBlock kernel	Off
MB dual kernel	Off
MB RF phase scramble	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
Physio recording	DICOM

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\t2\_space\_dark-fluid\_sag\_p3

TA: 4:32 PM: REF Voxel size: 1.0×1.0×1.1 mmPAT: 3 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	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	On
Start measurements	Single measurement

## **Routine**

Slab group	1
Slabs	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Basis
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	192
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.05 mm
TR	5000 ms
TE	386 ms
Averages	1.0
Concatenations	1
Filter	Raw filter, Prescan
	Normalize
Coil elements	HEA;HEP

#### **Contrast - Common**

TR	5000 ms
TE	386 ms
MTC	Off
Magn. preparation	Non-sel. T2-IR
TI 1	1800 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	100.0 %
Slice thickness	1.05 mm
Base resolution	256
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Allowed
Slice partial Fourier	7/8

#### **Resolution - Common**

Interpolation	Off

#### **Resolution - iPAT**

PAT mode	GRAPPA
Accel. factor PE	3
Ref. lines PE	27
Accel. factor 3D	1
Reference scan mode	Integrated

## **Resolution - Filter Image**

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

## **Resolution - Filter Rawdata**

Raw filter	On	
Elliptical filter	Off	

## **Geometry - Common**

Slab group	1
Slabs	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice oversampling	0.0 %
Slices per slab	192
FoV read	256 mm
FoV phase	100.0 %
Slice thickness	1.05 mm
TR	5000 ms
Series	Interleaved
Concatenations	1

## **Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	Head > Basis
Initial Position	Isocenter
L	0.0 mm
Р	0.0 mm
Н	0.0 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 REF

#### 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	Adaptive Combine
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	Head > Basis
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	Isocenter
Orientation	Sagittal
Rotation	0.00 deg
A >> P	256 mm
F >> H	256 mm
R >> L	202 mm
Reset	Off

## System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Non-sel.

## System - Tx/Rx

Frequency 1H	123.259293 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	5.000
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-IR
TI 1	1800 ms
Fat suppr.	Fat sat.
Dark blood	Off
FoV read	256 mm
FoV phase	100.0 %
Phase resolution	100 %

## Physio - PACE

Resp. control	Off
Concatenations	1

# Inline - Common

Subtract	Off

#### **Inline - Common**

Measurements	1
StdDev	Off
Save original images	On

#### Inline - MIP

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

## **Inline - Composing**

-	_		
Distortion Corr.		Off	

## Sequence - Part 1

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

## Sequence - Part 2

Echo train duration	858 ms
RF pulse type	Normal
Gradient mode	Fast
Excitation	Non-sel.
Flip angle mode	T2 var
Turbo factor	278

## **Sequence - Assistant**

Allowed dolov	20.0
Allowed delay	30 s

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\SWI\_3mm\_Updated\_v1.1

TA: 2:08 PM: REF Voxel size: 0.9×0.9×3.0 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	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further	Off
preparation	
Wait for user to start	On
Start measurements	Single measurement

## Routine

Slab group	1
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	T > C-16.0
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	8.3 %
Slices per slab	48
FoV read	230 mm
FoV phase	90.6 %
Slice thickness	3.00 mm
TR	27.0 ms
TE 1	9.42 ms
TE 2	20.00 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize, Elliptical filter, Image Filter
Coil elements	HEA;HEP

## **Contrast - Common**

TR	27.0 ms
TE 1	9.42 ms
TE 2	20.00 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	230 mm
FoV phase	90.6 %
Slice thickness	3.00 mm
Base resolution	256
Phase resolution	100 %

#### **Resolution - Common**

Slice resolution	100 %
Phase partial Fourier	7/8
Slice partial Fourier	7/8
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	On
Intensity	Medium
Edge Enhancement	3
Smoothing	3
Unfiltered images	Off
Distortion Corr.	Off
Prescan Normalize	On
Unfiltered images	On
Normalize	Off
B1 filter	Off

## **Resolution - Filter Rawdata**

Raw filter	Off
Elliptical filter	On

## **Geometry - Common**

Cloh group	1
Slab group	· · · · · · · · · · · · · · · · · · ·
Slabs	1
Dist. factor	20 %
Position	Isocenter
Orientation	T > C-16.0
Phase enc. dir.	R >> L
Slice oversampling	8.3 %
Slices per slab	48
FoV read	230 mm
FoV phase	90.6 %
Slice thickness	3.00 mm
TR	27.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

# Geometry - AutoAlign

Slab group	1
Position	Isocenter
Orientation	T > C-16.0
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	90.00 deg
Initial Orientation	T > C
T > C	-16.0
> S	0.0

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

## 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	On
Matrix Optimization	Off
AutoAlign	Head > Brain
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	Maximum

## **System - Adjust Volume**

Position	Isocenter
Orientation	T > C-16.0
Rotation	90.00 deg
R >> L	209 mm
A >> P	230 mm
F >> H	144 mm
Reset	Off

# System - pTx Volumes

B1 Shim mode	TrueForm
Excitation	Slab-sel.

# System - Tx/Rx

Frequency 1H	123.259293 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	27.0 ms
Concatenations	1
Segments	1

## Physio - Cardiac

•	
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	230 mm
FoV phase	90.6 %
Phase resolution	100 %

## 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 MIP-Cor MIP-Tra MIP-Time	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

Distortion Corr.	Off	

#### Sequence - Part 1

1	
Introduction	On
Dimension	3D
Elliptical scanning	On
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	2
Flow comp. 1	Yes
Readout mode	Bipolar
Multi-slice mode	Interleaved
Bandwidth 1	140 Hz/Px
Bandwidth 2	140 Hz/Px

# Sequence - Part 2

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

# **Sequence - Assistant**

Mode	Off
Allowed delay	0 s

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\fme\_pCASL\_M0\_RL

TA: 0:16 PM: FIX Voxel size: 3.4×3.4×4.5 mmPAT: Off Rel. SNR: 1.00 : fme\_asl

## **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	On
Start measurements	Single measurement

## Routine

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
TR	5390 ms
TE	29.6 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

#### **Contrast - Common**

TR TE	5390 ms
TE	29.6 ms
Flip angle Fat suppr.	120 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak

## **Contrast - Dynamic**

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

#### **Contrast - ASL**

Perfusion mode	FAIR QII
Averaging mode	CONSTANT

## **Resolution - Common**

FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off

#### **Resolution - Common**

Slice partial Fourier	6/8	
Interpolation	Off	

#### **Resolution - iPAT**

PAT mode	None

# **Resolution - Filter Image**

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

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

Raw filter	Off
Elliptical filter	Off

## **Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	32
FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
TR	5390 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

# **Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	90.00 deg
Initial Orientation	Transversal

1
151.2 mm
Isocenter
Transversal
2
144 mm
Isocenter
Transversal
3
158.4 mm
Isocenter
Transversal

Fat sat. mode	Weak
Special sat.	None

# **System - Miscellaneous**

Positioning mode	FIX
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
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

# **System - Adjustments**

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

# **System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
R >> L	165 mm
A >> P F >> H	220 mm
	144 mm
Reset	Off

# System - pTx Volumes

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

# System - Tx/Rx

Frequency 1H	123.259293 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	5390 ms
Concatenations	1
Segments	2

# Sequence - Part 1

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.5 ms
Bandwidth	2298 Hz/Px

## Sequence - Part 2

EPI factor	48
Segments	2

# Sequence - Part 2

RF pulse type	Normal
Gradient mode	Fast
Turbo factor	12

ASL mode	M0 scan
set SAT region manually	Off
set SE region manually	Off
Saturation mode	var. I
Additional scaling factor	1.0
Start of time series	5000 ms
Increment time series	300 ms
Length of time series	1
Number of preparing scans	1

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\fme\_pCASL\_BL1800\_PLD400

TA: 0:26 PM: FIX Voxel size: 3.4×3.4×4.5 mmPAT: Off Rel. SNR: 1.00 : fme\_asl

## **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	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
TR	2620 ms
TE	29.6 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

#### **Contrast - Common**

TR TE	2620 ms
TE	29.6 ms
Flip angle Fat suppr.	120 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak

## **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
Averaging mode	CONSTANT

## **Resolution - Common**

FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off

#### **Resolution - Common**

Slice partial Fourier	6/8	
Interpolation	Off	

#### **Resolution - iPAT**

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

# **Resolution - Filter Image**

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

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

Raw filter	Off	
Elliptical filter	Off	

## **Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	32
FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
TR	2620 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

# **Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	90.00 deg
Initial Orientation	Transversal

Sat. region	1
Thickness	151.2 mm
Position	Isocenter
Orientation	Transversal
Sat. region	2
Thickness	17.07 mm
Position	L0.0 P0.0 F90.0 mm
Orientation	Transversal
Sat. region	3
Thickness	158.4 mm
Position	Isocenter
Orientation	Transversal

Fat sat. mode	Weak
Special sat.	None

# **System - Miscellaneous**

Positioning mode	FIX
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
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

# **System - Adjustments**

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

# **System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
R >> L	165 mm
A >> P	220 mm
F >> H	144 mm
Reset	Off

# System - pTx Volumes

B1 Shim mode	TrueForm

# System - Tx/Rx

Frequency 1H	123.259293 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	2620 ms
Concatenations	1
Segments	2

# Sequence - Part 1

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.5 ms
Bandwidth	2298 Hz/Px

## Sequence - Part 2

EPI factor	48
Segments	2

# Sequence - Part 2

RF pulse type	Normal
Gradient mode	Fast
Turbo factor	12

ASL mode	TE-pCASL
set SAT region manually	Off
set SE region manually	Off
Saturation mode	var. I
Background Suppr	twoT1opt
BS parameter_1 (T1 1)	700 ms
BS parameter_2	100 ms
Thickness of BS slice	200 mm
Additional scaling factor	10.0
Post Labeling Delay	400 ms
Number of preparing scans	2
Fix label plane offset	On
Label plane offset	90 mm
Labeling Duration	1800 ms
RF gap	360 usec
RF FA	23 deg
Time-encoded pCASL	Off

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\fme\_pCASL\_BL1800\_PLD800

TA: 0:30 PM: FIX Voxel size: 3.4×3.4×4.5 mmPAT: Off Rel. SNR: 1.00 : fme\_asl

## **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	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
TR	3020 ms
TE	29.6 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

#### **Contrast - Common**

TR	3020 ms
TE	29.6 ms
Flip angle	120 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak

## **Contrast - Dynamic**

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

#### **Contrast - ASL**

Perfusio	on mode	FAIR QII	
Averagi	ng mode	CONSTANT	

## **Resolution - Common**

FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off
Phase resolution	100 %

#### **Resolution - Common**

Slice partial Fourier	6/8	
Interpolation	Off	

#### **Resolution - iPAT**

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

# **Resolution - Filter Image**

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

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

Raw filter	Off	
Elliptical filter	Off	

## **Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	32
FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
TR	3020 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

# **Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	90.00 deg
Initial Orientation	Transversal

1
151.2 mm
Isocenter
Transversal
2
17.07 mm
L0.0 P0.0 F90.0 mm
Transversal
3
158.4 mm
Isocenter
Transversal

Fat sat. mode	Weak
Special sat.	None

# **System - Miscellaneous**

Positioning mode	FIX
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
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

# **System - Adjustments**

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

# **System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
R >> L	165 mm
A >> P F >> H	220 mm
	144 mm
Reset	Off

# System - pTx Volumes

TrueForm

# System - Tx/Rx

Frequency 1H	123.259293 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	3020 ms
Concatenations	1
Segments	2

# Sequence - Part 1

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.5 ms
Bandwidth	2298 Hz/Px

# Sequence - Part 2

EPI factor	48
Segments	2

# Sequence - Part 2

RF pulse type	Normal
Gradient mode	Fast
Turbo factor	12

ASL mode	TE-pCASL
set SAT region manually	Off
set SE region manually	Off
Saturation mode	var. I
Background Suppr	twoT1opt
BS parameter_1 (T1 1)	700 ms
BS parameter_2	100 ms
Thickness of BS slice	200 mm
Additional scaling factor	10.0
Post Labeling Delay	800 ms
Number of preparing scans	2
Fix label plane offset	On
Label plane offset	90 mm
Labeling Duration	1800 ms
RF gap	360 usec
RF FA	23 deg
Time-encoded pCASL	Off
	·-

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\fme\_pCASL\_BL1800\_PLD1200

TA: 0:34 PM: FIX Voxel size: 3.4×3.4×4.5 mmPAT: Off Rel. SNR: 1.00 : fme\_asl

## **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	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
TR	3420 ms
TE	29.6 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

#### **Contrast - Common**

TR TE	3420 ms
TE	29.6 ms
Flip angle Fat suppr.	120 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak

## **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
Averaging mode	CONSTANT

## **Resolution - Common**

FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off

#### **Resolution - Common**

Slice partial Fourier	6/8	
Interpolation	Off	

#### **Resolution - iPAT**

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

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

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

Raw filter	Off	
Elliptical filter	Off	

## **Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	32
FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
TR	3420 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

## **Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	90.00 deg
Initial Orientation	Transversal

1
151.2 mm
Isocenter
Transversal
2
17.07 mm
L0.0 P0.0 F90.0 mm
Transversal
3
158.4 mm
Isocenter
Transversal

Fat sat. mode	Weak
Special sat.	None

# **System - Miscellaneous**

Positioning mode	FIX
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
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

# **System - Adjustments**

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

# **System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
R >> L	165 mm
R >> L A >> P F >> H	220 mm
F >> H	144 mm
Reset	Off

# System - pTx Volumes

B1 Shim mode	TrueForm

# System - Tx/Rx

Frequency 1H	123.259293 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	3420 ms
Concatenations	1
Segments	2

# Sequence - Part 1

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.5 ms
Bandwidth	2298 Hz/Px

## Sequence - Part 2

EPI factor	48
Segments	2

# Sequence - Part 2

RF pulse type	Normal
Gradient mode	Fast
Turbo factor	12

ASL mode	TE-pCASL
set SAT region manually	Off
set SE region manually	Off
Saturation mode	var. I
Background Suppr	twoT1opt
BS parameter_1 (T1 1)	700 ms
BS parameter_2	100 ms
Thickness of BS slice	200 mm
Additional scaling factor	10.0
Post Labeling Delay	1200 ms
Number of preparing scans	2
Fix label plane offset	On
Label plane offset	90 mm
Labeling Duration	1800 ms
RF gap	360 usec
RF FA	23 deg
Time-encoded pCASL	Off

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\fme\_pCASL\_BL1800\_PLD1600

TA: 0:38 PM: FIX Voxel size: 3.4×3.4×4.5 mmPAT: Off Rel. SNR: 1.00 : fme\_asl

## **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	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
TR	3820 ms
TE	29.6 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

#### **Contrast - Common**

TR	3820 ms
TE	29.6 ms
Flip angle	120 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak

## **Contrast - Dynamic**

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

#### **Contrast - ASL**

Perfusio	on mode	FAIR QII	
Averagi	ng mode	CONSTANT	

## **Resolution - Common**

FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off

#### **Resolution - Common**

Slice partial Fourier	6/8	
Interpolation	Off	

#### **Resolution - iPAT**

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

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

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

Raw filter	Off	
Elliptical filter	Off	

## **Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	32
FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
TR	3820 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

# **Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
Р	0.0 mm
Н	0.0 mm
Initial Rotation	90.00 deg
Initial Orientation	Transversal

_	
Sat. region	1
Thickness	151.2 mm
Position	Isocenter
Orientation	Transversal
Sat. region	2
Thickness	17.07 mm
Position	L0.0 P0.0 F90.0 mm
Orientation	Transversal
Sat. region	3
Thickness	158.4 mm
Position	Isocenter
Orientation	Transversal

Fat sat. mode	Weak
Special sat.	None

# **System - Miscellaneous**

Positioning mode	FIX
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
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

# **System - Adjustments**

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

# **System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
R >> L	165 mm
A >> P F >> H	220 mm
F >> H	144 mm
Reset	Off

# System - pTx Volumes

TrueForm

## System - Tx/Rx

Frequency 1H	123.259293 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	3820 ms
Concatenations	1
Segments	2

# Sequence - Part 1

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.5 ms
Bandwidth	2298 Hz/Px

## Sequence - Part 2

EPI factor	48
Segments	2

# Sequence - Part 2

RF pulse type	Normal
Gradient mode	Fast
Turbo factor	12

ASL mode	TE-pCASL
set SAT region manually	Off
set SE region manually	Off
Saturation mode	var. I
Background Suppr	twoT1opt
BS parameter_1 (T1 1)	700 ms
BS parameter_2	100 ms
Thickness of BS slice	200 mm
Additional scaling factor	10.0
Post Labeling Delay	1600 ms
Number of preparing scans	2
Fix label plane offset	On
Label plane offset	90 mm
Labeling Duration	1800 ms
RF gap	360 usec
RF FA	23 deg
Time-encoded pCASL	Off

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\fme\_pCASL\_BL1800\_PLD2000

TA: 0:42 PM: FIX Voxel size: 3.4×3.4×4.5 mmPAT: Off Rel. SNR: 1.00 : fme\_asl

## **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	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	32
FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
TR	4220 ms
TE	29.6 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

#### **Contrast - Common**

TR	4220 ms
TE	29.6 ms
Flip angle	120 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak

## **Contrast - Dynamic**

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

#### **Contrast - ASL**

Perfusio	on mode	FAIR QII	
Averagi	ng mode	CONSTANT	

## **Resolution - Common**

FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off
Phase resolution	100 %

#### **Resolution - Common**

Slice partial Fourier	6/8	
Interpolation	Off	

#### **Resolution - iPAT**

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

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

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

Raw filter	Off
Elliptical filter	Off

## **Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	32
FoV read	220 mm
FoV phase	75.0 %
Slice thickness	4.50 mm
TR	4220 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

# **Geometry - AutoAlign**

Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	Head > Brain
Initial Position	Isocenter
L	0.0 mm
Р	0.0 mm
Н	0.0 mm
Initial Rotation	90.00 deg
Initial Orientation	Transversal

_	
Sat. region	1
Thickness	151.2 mm
Position	Isocenter
Orientation	Transversal
Sat. region	2
Thickness	17.07 mm
Position	L0.0 P0.0 F90.0 mm
Orientation	Transversal
Sat. region	3
Thickness	158.4 mm
Position	Isocenter
Orientation	Transversal

Fat sat. mode	Weak
Special sat.	None

# **System - Miscellaneous**

Positioning mode	FIX
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
Matrix Optimization	Off
AutoAlign	Head > Brain
Coil Select Mode	Default

# **System - Adjustments**

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

# **System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
R >> L	165 mm
R >> L A >> P F >> H	220 mm
F >> H	144 mm
Reset	Off

# System - pTx Volumes

B1 Shim mode	TrueForm

# System - Tx/Rx

Frequency 1H	123.259293 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	4220 ms
Concatenations	1
Segments	2

# Sequence - Part 1

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.5 ms
Bandwidth	2298 Hz/Px

## Sequence - Part 2

EPI factor	48
Segments	2

# Sequence - Part 2

RF pulse type	Normal
Gradient mode	Fast
Turbo factor	12

ASL mode	TE-pCASL
set SAT region manually	Off
set SE region manually	Off
Saturation mode	var. I
Background Suppr	twoT1opt
BS parameter_1 (T1 1)	700 ms
BS parameter_2	100 ms
Thickness of BS slice	200 mm
Additional scaling factor	10.0
Post Labeling Delay	2000 ms
Number of preparing scans	2
Fix label plane offset	On
Label plane offset	90 mm
Labeling Duration	1800 ms
RF gap	360 usec
RF FA	23 deg
Time-encoded pCASL	Off

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\fme\_pCASL\_GE\_PLD2025

TA: 4:46 PM: FIX Voxel size: 1.9×1.9×4.0 mmPAT: Off Rel. SNR: 1.00 : fme\_asl

## **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	On
Start measurements	Single measurement

## Routine

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	36
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.00 mm
TR	4330 ms
TE	12.62 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

#### **Contrast - Common**

TR	4330 ms
TE	12.62 ms
Flip angle	120 deg
Fat suppr.	Fat sat.
Fat sat. mode	Weak

## **Contrast - Dynamic**

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	4
Delay in TR	0 ms
Multiple series	Off

#### **Contrast - ASL**

Perfusion mode	FAIR QII
Averaging mode	CONSTANT

## **Resolution - Common**

FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.00 mm
Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off

#### **Resolution - Common**

Slice partial Fourier	Off	
Interpolation	On	

#### **Resolution - iPAT**

PAT mode	None

# **Resolution - Filter Image**

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

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

Raw filter	Off	
Elliptical filter	Off	

## **Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	36
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.00 mm
TR	4330 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

# **Geometry - AutoAlign**

,	
Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
Н	0.0 mm
Initial Rotation	90.00 deg
Initial Orientation	Transversal

1
151.2 mm
Isocenter
Transversal
2
17.07 mm
L0.0 P0.0 F90.0 mm
Transversal
3
158.4 mm
Isocenter
Transversal

Fat sat. mode	Weak
Special sat.	None

# **System - Miscellaneous**

Positioning mode	FIX
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
Matrix Optimization	Off
AutoAlign	
Coil Select Mode	Default

# **System - Adjustments**

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

# **System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
R >> L	240 mm
A >> P F >> H	240 mm
F >> H	144 mm
Reset	Off

# System - pTx Volumes

B1 Shim mode TrueFor	m
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## System - Tx/Rx

Frequency 1H	123.259293 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	4330 ms
Concatenations	1
Segments	8

# Sequence - Part 1

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.58 ms
Bandwidth	2298 Hz/Px

## Sequence - Part 2

EPI factor	8	
Segments	8	

# Sequence - Part 2

RF pulse type	Normal
Gradient mode	Fast
Turbo factor	36

ASL mode	TE-pCASL
set SAT region manually	Off
set SE region manually	Off
Saturation mode	var. I
Background Suppr	twoT1opt
BS parameter_1 (T1 1)	700 ms
BS parameter_2	100 ms
Thickness of BS slice	200 mm
Additional scaling factor	10.0
Post Labeling Delay	2025 ms
Number of preparing scans	2
Fix label plane offset	On
Label plane offset	90 mm
Labeling Duration	1800 ms
RF gap	360 usec
RF FA	23 deg
Time-encoded pCASL	Off

# \\USER\OHBA Projects VE11C\2020\_108 CNS COVID\CNS COVID v1\fme\_pCASL\_GE\_M0

TA: 0:50 PM: FIX Voxel size: 1.9×1.9×4.0 mmPAT: Off Rel. SNR: 1.00 : fme\_asl

## **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	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	36
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.00 mm
TR	5500 ms
TE	12.62 ms
Averages	1
Concatenations	1
Filter	Prescan Normalize
Coil elements	HEA;HEP

#### **Contrast - Common**

TR TE	5500 ms
TE	12.62 ms
Flip angle	120 deg
Flip angle Fat suppr.	Fat sat.
Fat sat. mode	Weak

## **Contrast - Dynamic**

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

#### **Contrast - ASL**

Perfusion mode	FAIR QII
Averaging mode	CONSTANT

## **Resolution - Common**

FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.00 mm
Base resolution	64
Phase resolution	100 %
Phase partial Fourier	Off

#### **Resolution - Common**

Slice partial Fourier	Off
Interpolation	On

#### **Resolution - iPAT**

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

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

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

Raw filter	Off	
Elliptical filter	Off	

## **Geometry - Common**

Slab group	1
Slabs	1
Dist. factor	50 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	36
FoV read	240 mm
FoV phase	100.0 %
Slice thickness	4.00 mm
TR	5500 ms
Multi-slice mode	Interleaved
Series	Ascending
Concatenations	1

# **Geometry - AutoAlign**

,	
Slab group	1
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	R >> L
AutoAlign	
Initial Position	Isocenter
L	0.0 mm
Р	0.0 mm
Н	0.0 mm
Initial Rotation	90.00 deg
Initial Orientation	Transversal

1
151.2 mm
Isocenter
Transversal
2
144 mm
Isocenter
Transversal
3
158.4 mm
Isocenter
Transversal

Fat sat. mode	Weak	
Special sat.	None	

# **System - Miscellaneous**

Positioning mode	FIX
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
Matrix Optimization	Off
AutoAlign	
Coil Select Mode	Default

# **System - Adjustments**

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

# **System - Adjust Volume**

Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
R >> L	240 mm
A >> P	240 mm
F >> H	144 mm
Reset	Off

# System - pTx Volumes

B1 Shim mode	TrueForm
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## System - Tx/Rx

Frequency 1H	123.259293 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	5500 ms
Concatenations	1
Segments	8

# Sequence - Part 1

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	0.58 ms
Bandwidth	2298 Hz/Px

## Sequence - Part 2

EPI factor	8	
Segments	8	

# Sequence - Part 2

RF pulse type	Normal
Gradient mode	Fast
Turbo factor	36

ASL mode	M0 scan
set SAT region manually	Off
set SE region manually	Off
Saturation mode	var. I
Additional scaling factor	1.0
Start of time series	5000 ms
Increment time series	300 ms
Length of time series	1
Number of preparing scans	1