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## \\USER

### PHANTOM

# **PHANTOM**

check\_MBfactor\_dcm2niix\_issue870

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PRODUCT\_\_ep2d\_bold\_\_p3\_sms5
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# $\verb|\USER\PHANTOM\PHANTOM\check\_MBfactor\_dcm2niix\_issue870\localizer|\\$

TA: 14 sec Coil Selection: Auto Voxel Size: 0.5×0.5×5.0 mm³ Acc:: 2 Rel. SNR: 1.00

## **Properties**

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

### Routine

Slice Group	1
Slices	7
Distance Factor	400 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	2
Slices	7
Distance Factor	400 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	3
Slices	7
Distance Factor	400 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FOV Read	256 mm
FOV Phase	100.0 %
Slice Thickness	5.0 mm
TR	7.0 ms
TE	3.11 ms
Averages	1
Concatenations	13
AutoAlign	
·	·

# **Contrast - Common**

TR	7.0 ms	
TE TD	3.11 ms	
TD	0.00 ms	
MTC	Off	
Magn. Preparation	None	
Flip Angle	10 deg	

### **Contrast - Common**

Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
SWI	Off
Reconstruction	Magnitude

## **Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

### **Resolution - Common**

FOV Read	256 mm
FOV Phase	100.0 %
Slice Thickness	5.0 mm
Base Resolution	256
Phase Resolution	100 %
Interpolation	On

# **Resolution - Acceleration**

Acceleration Mode	GRAPPA
Reference Scans	Integrated
Acceleration Factor PE	2
Reference Lines PE	24
Deep Resolve	Off
Phase Partial Fourier	Off
Asymmetric Echo	Off

### **Resolution - Filter**

Raw Filter	Off
Elliptical Filter	On
Distortion Correction	2D
Normalize	B1 Filter
Image Filter	Off

## **Geometry - Common**

Slice Group	1
Slices	7
Distance Factor	400 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	2
Slices	7
Distance Factor	400 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	3
Slices	7

# **Geometry - Common**

Distance Factor	400 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FOV Read	256 mm
FOV Phase	100.0 %
Slice Thickness	5.0 mm
TR	7.0 ms
Multi-Slice Mode	Sequential
Series	Interleaved
Concatenations	13

# Geometry - AutoAlign

Slice Group	1
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	2
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	3
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	
Initial Position	Isocenter
L	0.0 mm
Р	0.0 mm
Н	0.0 mm
Initial Orientation	Sagittal
Initial Rotation	0.00 deg

# **Geometry - Saturation**

Saturation Mode	Standard
Special Saturation	None

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	Н

## **System - Miscellaneous**

Coil Selection	Auto Coil Select
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Sum of Squares
Matrix Optimization	Off
Coil Focus	Flat

### **System - Adjustments**

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

# System - Adjust Volume

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

# System - pTx

B1 Shim	TrueForm
Excitation	Slice-sel.
LR Balancing	Off

## System - Tx/Rx

Frequency 1H	297.178714 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

# **Physio - Signal**

1st Signal/Mode	None
TR	7.0 ms
Segments	1
Concatenations	13

# Physio - Cardiac

Tagging	None
Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FOV Read	256 mm
FOV Phase	100.0 %
Phase Resolution	100 %

## **Physio - PACE**

Resp. Control	Off	
Concatenations	13	

## Inline - Liver

Liver Registration	Off	
Save Original Images	On	

## Inline - Subtraction

Subtract	Off
Measurements	1

### Inline - Subtraction

StdDev	Off
Save Original Images	On

## Inline - MIP

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

# Inline - Soft Tissue

Wash-in	Off
Wash-out	Off
TTP	Off
PEI	Off
MIP Time	Off
Measurements	1

## **Inline - Composing**

## Inline - MapIt

Maplt	None
Flip Angle	10 deg
Measurements	1
Contrasts	1
TE	3.11 ms
TR	7.0 ms
Save Original Images	On

# Inline - Open Recon

Algorithm	None

# Sequence - Part 1

Sequence Name	qfl
Dimension	2D
Excitation	Slice-sel.
RF Pulse Type	Normal
Gradient Mode	Whisper
Flow Compensation	None
Bandwidth	610 Hz/Px
Asymmetric Echo	Off
Segments	1

# Sequence - Part 2

ſ	Introduction	On
	RF Spoiling	On
	Acoustic noise reduction	On

# Sequence - Nuclei

TX/RX Nucleus	1H	

# Sequence - Nuclei

TX/RX Delta Frequency	0 Hz
TX Nucleus	None
TX Delta Frequency	0 Hz

SAR Assistant	Off
Allowed Delay	0 s

## \\USER\PHANTOM\PHANTOM\check\_MBfactor\_dcm2niix\_issue870\PRODUCT\_\_ep2d\_bold\_\_p3\_sms1

TA: 11 sec Coil Selection: Auto Voxel Size: 2.0×2.0×2.0 mm³ Acc:: 3 Rel. SNR: 1.00

## **Properties**

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

### Routine

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1230.0 ms
TE	20.00 ms
Averages	1
Concatenations	1
AutoAlign	

### **Contrast - Common**

TR	1230.0 ms
TE	20.00 ms
MTC	Off
Flip Angle	42 deg
Fat-Water Contrast	Fat Saturation
Reconstruction	Magnitude

### **Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	3
Delay in TR	0.00 ms

### **Resolution - Common**

FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	64

### **Resolution - Common**

Phase Resolution	100 %
Interpolation	Off

### **Resolution - Acceleration**

Acceleration Mode	SMS
Reference Scans	EPI/Separate
Acceleration Factor PE	3
Reference Lines PE	30
SMS Factor	1
Phase Partial Fourier	Off

#### **Resolution - Filter**

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

## **Geometry - Common**

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >>> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1230.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice Group	1
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
AutoAlign	
Initial Position	L0.0 P25.7 F12.9
L	0.0 mm
Р	25.7 mm
F	12.9 mm
Initial Orientation	Coronal
Initial Rotation	0.00 deg

# **Geometry - Saturation**

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

ſ	Set-n-Go Protocol	Off
ı	Table Position	0 mm
ı	Table Position	Н

# **System - Miscellaneous**

Coil Selection	Auto Coil Select
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Sum of Squares
Matrix Optimization	Off
Coil Focus	Flat

# **System - Adjustments**

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

# System - Adjust Volume

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

# System - pTx

B1 Shim	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	297.178714 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

# Physio - Signal

1st Signal/Mode	None
TR	1230.0 ms
Log Signals	Off
Concatenations	1

## **BOLD**

GLM Statistics	Off
Ignore Meas. at Start	0
Ignore After Transition	0
Model Transition States	On

### **BOLD**

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	3
Delay in TR	0.00 ms

## Inline - Open Recon

Algorithm	None	
3		

# Sequence - Part 1

Sequence Name	epfid
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Normal
Bandwidth	2368 Hz/Px
Echo Spacing	0.55 ms
Free Echo Spacing	Off
EPI Factor	64

## Sequence - Part 2

Introduction	Off

SAR Assistant	Off
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## \\USER\PHANTOM\PHANTOM\check\_MBfactor\_dcm2niix\_issue870\PRODUCT\_\_ep2d\_bold\_\_p3\_sms2

TA: 9 sec Coil Selection: Auto Voxel Size: 2.0×2.0×2.0 mm³ Acc:: 6 Rel. SNR: 1.00

### **Properties**

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

#### Routine

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1230.0 ms
TE	20.00 ms
Averages	1
Concatenations	1
AutoAlign	

### **Contrast - Common**

TR	1230.0 ms
TE	20.00 ms
MTC	Off
Flip Angle	42 deg
Fat-Water Contrast	Fat Saturation
Reconstruction	Magnitude

### **Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	3
Delay in TR	0.00 ms

### **Resolution - Common**

FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	64

### **Resolution - Common**

Phase Resolution	100 %
Interpolation	Off

#### **Resolution - Acceleration**

Acceleration Mode	SMS
Reference Scans	EPI/Separate
Acceleration Factor PE	3
Reference Lines PE	30
SMS Factor	2
Phase Partial Fourier	Off

#### **Resolution - Filter**

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

# **Geometry - Common**

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1230.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice Group	1
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
AutoAlign	
Initial Position	L0.0 P25.7 F12.9
L	0.0 mm
Р	25.7 mm
F	12.9 mm
Initial Orientation	Coronal
Initial Rotation	0.00 deg

# **Geometry - Saturation**

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

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	Н

# **System - Miscellaneous**

Coil Selection	Auto Coil Select
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >>> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Sum of Squares
Matrix Optimization	Off
Coil Focus	Flat

# **System - Adjustments**

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

# System - Adjust Volume

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

# System - pTx

B1 Shim	TrueForm
Excitation	Standard

# System - Tx/Rx

Frequency 1H	297.178714 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

# Physio - Signal

1st Signal/Mode	None
TR	1230.0 ms
Log Signals	Off
Concatenations	1

## **BOLD**

GLM Statistics	Off
Ignore Meas. at Start	0
Ignore After Transition	0
Model Transition States	On

### **BOLD**

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	3
Delay in TR	0.00 ms

## Inline - Open Recon

# Sequence - Part 1

Sequence Name	epfid
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Normal
Bandwidth	2368 Hz/Px
Echo Spacing	0.59 ms
Free Echo Spacing	Off
EPI Factor	64

## Sequence - Part 2

SAR Assistant (	Off
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## \\USER\PHANTOM\PHANTOM\check\_MBfactor\_dcm2niix\_issue870\PRODUCT\_\_ep2d\_bold\_\_p3\_sms5

TA: 9 sec Coil Selection: Auto Voxel Size: 2.0×2.0×2.0 mm³ Acc:: 15 Rel. SNR: 1.00

## **Properties**

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

### Routine

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1230.0 ms
TE	20.00 ms
Averages	1
Concatenations	1
AutoAlign	

### **Contrast - Common**

TR	1230.0 ms
TE	20.00 ms
MTC	Off
Flip Angle	42 deg
Fat-Water Contrast	Fat Saturation
Reconstruction	Magnitude

### **Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	3
Delay in TR	0.00 ms

### **Resolution - Common**

FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	64

### **Resolution - Common**

Phase Resolution	100 %
Interpolation	Off

### **Resolution - Acceleration**

Acceleration Mode	SMS
Reference Scans	EPI/Separate
Acceleration Factor PE	3
Reference Lines PE	30
SMS Factor	5
Phase Partial Fourier	Off

### **Resolution - Filter**

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

## **Geometry - Common**

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1230.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice Group	1
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
AutoAlign	
Initial Position	L0.0 P25.7 F12.9
L	0.0 mm
Р	25.7 mm
F	12.9 mm
Initial Orientation	Coronal
Initial Rotation	0.00 deg

# **Geometry - Saturation**

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

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	Н

## **System - Miscellaneous**

Coil Selection	Auto Coil Select
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Sum of Squares
Matrix Optimization	Off
Coil Focus	Flat

# **System - Adjustments**

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

# System - Adjust Volume

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

# System-pTx

B1 Shim	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	297.178714 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

# Physio - Signal

1st Signal/Mode	None
TR	1230.0 ms
Log Signals	Off
Concatenations	1

## **BOLD**

GLM Statistics	Off
Ignore Meas. at Start	0
Ignore After Transition	0
Model Transition States	On

### **BOLD**

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	3
Delay in TR	0.00 ms

## Inline - Open Recon

Algorithm	None
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# Sequence - Part 1

Sequence Name	epfid
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Normal
Bandwidth	2368 Hz/Px
Echo Spacing	0.69 ms
Free Echo Spacing	Off
EPI Factor	64

## Sequence - Part 2

SAR Assistant	Off

# \\USER\PHANTOM\PHANTOM\check\_MBfactor\_dcm2niix\_issue870\C2P\_\_cmrr\_mbep2d\_bold\_\_p3\_mb1

TA: 11 sec Coil Selection: Auto Voxel Size: 2.0×2.0×2.0 mm³ Acc:: 3 Rel. SNR: 1.00

### **Properties**

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

#### Routine

Slice Group	1
Slices	10
Distance Factor	O %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1230.0 ms
TE	20.00 ms
Averages	1
Multi-band accel. factor	1
AutoAlign	

### **Contrast - Common**

TR	1230.0 ms
TE	20.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	42 deg
Fat-Water Contrast	Fat Saturation
Contrasts	1
Reconstruction	Magnitude

# Contrast - Dynamic

Dynamic Mode	Standard
Measurements	3
Delay in TR	0.00 ms

## **Resolution - Common**

FOV Read	128 mm	
FOV Phase	100.0 %	

### **Resolution - Common**

Slice Thickness	2.0 mm
Base Resolution	64
Phase Resolution	100 %
Interpolation	Off

## **Resolution - Acceleration**

Acceleration Mode	GRAPPA
Reference scan mode	Segmented
Acceleration Factor PE	3
Reference Lines PE	30
Phase Partial Fourier	Off

## **Resolution - Filter**

Raw Filter	Off
Elliptical Filter	Off
Hamming	Off
Distortion Correction	2D
Static Field Correction	Off
Normalize	Off

## **Geometry - Common**

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1230.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

## Geometry - AutoAlign

Slice Group	1
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
AutoAlign	
Initial Position	L0.0 P25.7 F12.9
L	0.0 mm
Р	25.7 mm
F	12.9 mm
Initial Orientation	Coronal
Initial Rotation	0.00 deg

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

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	Н

# System - Miscellaneous

Coil Selection	Auto Coil Select
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Sum of Squares
Matrix Optimization	Off
Coil Focus	Flat

## **System - Adjustments**

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

# System - Adjust Volume

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

## System - pTx

B1 Shim	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	297.178714 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

# Physio - Signal

1st Signal/Mode	None
TR	1230.0 ms
Multi-band accel. factor	1

### **BOLD**

GLM Statistics	Off
Ignore Meas. at Start	0

### **BOLD**

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	3
Delay in TR	0.00 ms

## Inline - Open Recon

Algorithm None	Aldorithm	None
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# Sequence - Part 1

Sequence Name	epfid
Dimension	2D
Excitation	Standard
Gradient Mode	Normal
Flow Compensation	None
Bandwidth	2170 Hz/Px
Echo Spacing	0.59 ms
Free Echo Spacing	Off
EPI Factor	64

## Sequence - Part 2

Introduction	Off	
RF Spoiling	Off	

# Sequence - Special

Excite pulse duration	2560 us
Min. prep scans	0
Delay before PC scans	0 us
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Disable B1 control loop	Off
Disable freq. update	Off
Suppress 16-bit DICOM	Off
Force equal slice timing	Off
FFT scale factor	1.00
Fat saturation FA	110.00 deg
Fat sat. offset	0.00 Hz
Sinc exc. pulse BWTP	5.20
Physio recording	Off
Triggering scheme	Standard

SAR Assistant	Off	
JAN ASSISTALL	OII	

# \\USER\PHANTOM\PHANTOM\check\_MBfactor\_dcm2niix\_issue870\C2P\_\_cmrr\_mbep2d\_bold\_\_p3\_mb2

TA: 22 sec Coil Selection: Auto Voxel Size: 2.0×2.0×2.0 mm³ Acc:: 3 Rel. SNR: 1.00

## **Properties**

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

#### Routine

Slice Group	1
Slices	10
Distance Factor	O %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	O %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1230.0 ms
TE	20.00 ms
Averages	1
Multi-band accel. factor	2
AutoAlign	

### **Contrast - Common**

TR	1230.0 ms
TE	20.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	42 deg
Fat-Water Contrast	Fat Saturation
Contrasts	1
Reconstruction	Magnitude

# Contrast - Dynamic

Dynamic Mode	Standard
Measurements	3
Delay in TR	0.00 ms

## **Resolution - Common**

FOV Read	128 mm
FOV Phase	100.0 %

### **Resolution - Common**

Slice Thickness	2.0 mm
Base Resolution	64
Phase Resolution	100 %
Interpolation	Off

## **Resolution - Acceleration**

Acceleration Mode	GRAPPA
Reference scan mode	Segmented
Acceleration Factor PE	3
Reference Lines PE	30
Phase Partial Fourier	Off

### **Resolution - Filter**

Raw Filter	Off
Elliptical Filter	Off
Hamming	Off
Distortion Correction	2D
Static Field Correction	Off
Normalize	Off

## **Geometry - Common**

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1230.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Multi-band accel. factor	2

## Geometry - AutoAlign

Slice Group	1
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
AutoAlign	
Initial Position	L0.0 P25.7 F12.9
L	0.0 mm
P	25.7 mm
F	12.9 mm
Initial Orientation	Coronal
Initial Rotation	0.00 deg

Special Saturation None	
-------------------------	--

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	Н

# System - Miscellaneous

Coil Selection	Auto Coil Select
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Sum of Squares
Matrix Optimization	Off
Coil Focus	Flat

## **System - Adjustments**

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

# System - Adjust Volume

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

## System - pTx

B1 Shim	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	297.178714 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

# Physio - Signal

1st Signal/Mode	None
TR	1230.0 ms
Multi-band accel. factor	2

### **BOLD**

GL	M Statistics	Off
lgn	nore Meas. at Start	0

### **BOLD**

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	3
Delay in TR	0.00 ms

## Inline - Open Recon

Algorithm	None
-----------	------

## Sequence - Part 1

Sequence Name	epfid
Dimension	2D
Excitation	Standard
Gradient Mode	Normal
Flow Compensation	None
Bandwidth	2170 Hz/Px
Echo Spacing	0.63 ms
Free Echo Spacing	Off
EPI Factor	64

# Sequence - Part 2

Introduction	Off	
RF Spoiling	Off	

# Sequence - Special

Excite pulse duration	2560 us
Min. prep scans	0
Min. prep scans SB	0
Delay before PC scans	0 us
Single-band images	Off
MB LeakBlock kernel	On
MB dual kernel	Off
Opt. MB RF pulse BW	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Disable B1 control loop	Off
Disable freq. update	Off
Suppress 16-bit DICOM	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.00 deg
Fat sat. offset	0.00 Hz
Sinc exc. pulse BWTP	5.20
Physio recording	Off
Triggering scheme	Standard

# SIEMENS MAGNETOM 7.0T W60 Numaris/X VA60A-0CN3

SAR Assistant	Off	

# \\USER\PHANTOM\PHANTOM\check\_MBfactor\_dcm2niix\_issue870\C2P\_\_cmrr\_mbep2d\_bold\_\_p3\_mb5

TA: 44 sec Coil Selection: Auto Voxel Size: 2.0×2.0×2.0 mm³ Acc:: 3 Rel. SNR: 1.00

### **Properties**

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

#### Routine

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1230.0 ms
TE	20.00 ms
Averages	1
Multi-band accel. factor	5
AutoAlign	

### **Contrast - Common**

TR	1230.0 ms
TE	20.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	42 deg
Fat-Water Contrast	Fat Saturation
Contrasts	1
Reconstruction	Magnitude

# Contrast - Dynamic

Dynamic Mode	Standard
Measurements	3
Delay in TR	0.00 ms

## **Resolution - Common**

FOV Read	128 mm
FOV Phase	100.0 %

### **Resolution - Common**

Slice Thickness	2.0 mm
Base Resolution	64
Phase Resolution	100 %
Interpolation	Off

## **Resolution - Acceleration**

Acceleration Mode	GRAPPA
Reference scan mode	Segmented
Acceleration Factor PE	3
Reference Lines PE	30
Phase Partial Fourier	Off

## **Resolution - Filter**

Raw Filter	Off
Elliptical Filter	Off
Hamming	Off
Distortion Correction	2D
Static Field Correction	Off
Normalize	Off

## **Geometry - Common**

CI. C	
Slice Group	1
Slices	10
Distance Factor	O %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	1230.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Multi-band accel. factor	5

# Geometry - AutoAlign

Slice Group	1
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
AutoAlign	
Initial Position	L0.0 P25.7 F12.9
L	0.0 mm
Р	25.7 mm
F	12.9 mm
Initial Orientation	Coronal
Initial Rotation	0.00 deg

Special Saturation	None

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	Н

# System - Miscellaneous

Coil Selection	Auto Coil Select
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Sum of Squares
Matrix Optimization	Off
Coil Focus	Flat

# **System - Adjustments**

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

# System - Adjust Volume

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

# System - pTx

B1 Shim	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	297.178714 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

# Physio - Signal

1st Signal/Mode	None
TR	1230.0 ms
Multi-band accel. factor	5

### **BOLD**

GL	.M Statistics	Off
lgi	nore Meas. at Start	0

### **BOLD**

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	3
Delay in TR	0.00 ms

# Inline - Open Recon

f	
Algorithm	None

## Sequence - Part 1

Sequence Name	epfid
Dimension	2D
Excitation	Standard
Gradient Mode	Normal
Flow Compensation	None
Bandwidth	2170 Hz/Px
Echo Spacing	0.59 ms
Free Echo Spacing	Off
EPI Factor	64

## Sequence - Part 2

Introduction	Off
RF Spoiling	Off

### Sequence - Special

Sequence - Special	
Excite pulse duration	2560 us
Min. prep scans	0
Min. prep scans SB	0
Delay before PC scans	0 us
Single-band images	Off
MB LeakBlock kernel	On
MB dual kernel	Off
MB RF phase scramble	Off
Opt. MB RF pulse BW	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
Disable B1 control loop	Off
Disable freq. update	Off
Suppress 16-bit DICOM	Off
Force equal slice timing	Off
Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.00 deg
Fat sat. offset	0.00 Hz
Sinc exc. pulse BWTP	5.20
Physio recording	Off
Triggering scheme	Standard

# SIEMENS MAGNETOM 7.0T W60 Numaris/X VA60A-0CN3

SAR Assistant	Off	
3/ (I( / (33)3tallt	011	

# $\verb|\USER\PHANTOM\PHANTOM\check_MBfactor_dcm2niix_issue870\PRODUCT\_ep2d\_diff\_p3\_sms1| \\$

TA: 36 sec Coil Selection: Auto Voxel Size: 2.0×2.0×2.0 mm³ Acc:: 3 Rel. SNR: 1.00

## **Properties**

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

#### Routine

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3000.0 ms
TE	80.00 ms
Concatenations	1
AutoAlign	

### **Contrast - Common**

TR	3000.0 ms
TE	80.00 ms
MTC	Off
Magn. Preparation	None
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Reconstruction	Magnitude

### **Contrast - Dynamic**

Dynamic Mode	Standard
Multiple Series	Off
Delay in TR	0.00 ms

### **Resolution - Common**

FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	64

### **Resolution - Common**

Phase Resolution	100 %
Interpolation	Off

### **Resolution - Acceleration**

Acceleration Mode	SMS
Reference Scans	EPI/Separate
Acceleration Factor PE	3
Reference Lines PE	30
SMS Factor	1
Deep Resolve	Off
Phase Partial Fourier	6/8

### **Resolution - Filter**

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off

# **Geometry - Common**

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3000.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice Group	1
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
AutoAlign	
Initial Position	L0.0 P25.7 F12.9
L	0.0 mm
Р	25.7 mm
F	12.9 mm
Initial Orientation	Coronal
Initial Rotation	0.00 deg

# **Geometry - Navigator**

Special Saturation	None	
special saturation	None	

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	Н

# System - Miscellaneous

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

## **System - Adjustments**

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

### System - Adjust Volume

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

## System - pTx

B1 Shim	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	297.178714 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

# Physio - Signal

1st Signal/Mode	None
TR	3000.0 ms
Concatenations	1

# Physio - PACE

Resp. Control	Off	
Concatenations	1	

### Diff

Diffusion Mode	MDDW
Diff. Directions	6
Diffusion Scheme	Bipolar
Diff. Weightings	2
b-value 1	0 s/mm²
b-value 2	1000 s/mm²
Averages 1	1
Averages 2	1
Dynamic Field Correction	Off
Invert Gray Scale	Off
Diff. Weighted Images	On
Trace Weighted Images	Off
Tensor	Off
FA Maps	Off
ADC Maps	Off
Exponential ADC Maps	Off
Calculated Image	Off

# Inline - Open Recon

Algorithm	None

### Sequence - Part 1

Sequence Name	epse
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Normal
Bandwidth	2368 Hz/Px
Echo Spacing	0.55 ms
Free Echo Spacing	Off
Optimization	None
EPI Factor	64

# Sequence - Part 2

Introduction	Off
Phase Correction	Internal

SAR Assistant	Off
Optimization	None

# \\USER\PHANTOM\PHANTOM\check\_MBfactor\_dcm2niix\_issue870\PRODUCT\_\_ep2d\_diff\_\_p3\_sms2

TA: 28 sec Coil Selection: Auto Voxel Size: 2.0×2.0×2.0 mm³ Acc:: 6 Rel. SNR: 1.00

## **Properties**

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

#### Routine

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3000.0 ms
TE	81.00 ms
Concatenations	1
AutoAlign	

### **Contrast - Common**

TR	3000.0 ms
TE	81.00 ms
MTC	Off
Magn. Preparation	None
Fat-Water Contrast	Fat Saturation
Fat Saturation	Weak
Reconstruction	Magnitude

### **Contrast - Dynamic**

Dynamic Mode	Standard
Multiple Series	Off
Delay in TR	0.00 ms

### **Resolution - Common**

FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
Base Resolution	64

### **Resolution - Common**

Phase Resolution	100 %
Interpolation	Off

#### **Resolution - Acceleration**

Acceleration Mode	SMS
Reference Scans	EPI/Separate
Acceleration Factor PE	3
Reference Lines PE	30
SMS Factor	2
Deep Resolve	Off
Phase Partial Fourier	6/8

## **Resolution - Filter**

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off

# **Geometry - Common**

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3000.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice Group	1
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
AutoAlign	
Initial Position	L0.0 P25.7 F12.9
L	0.0 mm
Р	25.7 mm
F	12.9 mm
Initial Orientation	Coronal
Initial Rotation	0.00 deg

# **Geometry - Navigator**

Special Saturation	None

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	Н

# System - Miscellaneous

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

# **System - Adjustments**

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

## System - Adjust Volume

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

## System - pTx

B1 Shim	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	297.178714 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

# Physio - Signal

1st Signal/Mode	None
TR	3000.0 ms
Concatenations	1

# Physio - PACE

Resp. Control	Off
Concatenations	1

### Diff

Diffusion Mode	MDDW
Diff. Directions	6
Diffusion Scheme	Bipolar
Diff. Weightings	2
b-value 1	0 s/mm²
b-value 2	1000 s/mm <sup>2</sup>
Averages 1	1
Averages 2	1
Dynamic Field Correction	Off
Invert Gray Scale	Off
Diff. Weighted Images	On
Trace Weighted Images	Off
Tensor	Off
FA Maps	Off
ADC Maps	Off
Exponential ADC Maps	Off
Calculated Image	Off

# Inline - Open Recon

Algorithm	None

## Sequence - Part 1

Sequence Name	epse
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Normal
Bandwidth	2368 Hz/Px
Echo Spacing	0.59 ms
Free Echo Spacing	Off
Optimization	None
EPI Factor	64

# Sequence - Part 2

Introduction	Off
Phase Correction	Internal

SAR Assistant	Off
Optimization	None

# $\verb|\USER\PHANTOM\PHANTOM\check_MBfactor_dcm2niix_issue870\C2P\_cmrr_mbep2d\_diff\_p3\_mb1| \\$

TA: 36 sec Coil Selection: Auto Voxel Size: 2.0×2.0×2.0 mm³ Acc:: 3 Rel. SNR: 1.00

### **Properties**

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

#### Routine

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3000.0 ms
TE	80.00 ms
Multi-band accel. factor	1
AutoAlign	

### **Contrast - Common**

TR	3000.0 ms
TE	80.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	90 deg
Refocus flip angle	180 deg
Fat-Water Contrast	Fat Saturation
Grad. rev. fat suppr.	Enabled
Reconstruction	Magnitude

# Contrast - Dynamic

Dynamic Mode	Standard
Multiple Series	Off
Delay in TR	0.00 ms

### **Resolution - Common**

FOV Read	128 mm	
FOV Phase	100.0 %	

### **Resolution - Common**

Slice Thickness	2.0 mm
Base Resolution	64
Phase Resolution	100 %
Interpolation	Off

## **Resolution - Acceleration**

Acceleration Mode	GRAPPA
Reference scan mode	Segmented
Acceleration Factor PE	3
Reference Lines PE	30
Phase Partial Fourier	6/8

### **Resolution - Filter**

Raw Filter	Off	
Elliptical Filter	Off	
Distortion Correction	Off	
Static Field Correction	Off	
Normalize	Off	

## **Geometry - Common**

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3000.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Multi-band accel. factor	1

## Geometry - AutoAlign

Slice Group	1
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
AutoAlign	
Initial Position	L0.0 P25.7 F12.9
L	0.0 mm
P	25.7 mm
F	12.9 mm
Initial Orientation	Coronal
Initial Rotation	0.00 deg

### **Geometry - Navigator**

Special Saturation None	
I Special Saturation None	
Special Sataration	

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	Н

# System - Miscellaneous

Coil Selection	Auto Coil Select
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Sum of Squares
Matrix Optimization	Off
Coil Focus	Flat

# **System - Adjustments**

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

## System - Adjust Volume

Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Rotation	0.00 deg
R >> L	128 mm
F >> H	128 mm
A >> P	20 mm
Reset	Off

# System - pTx

B1 Shim	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	297.178714 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

# Physio - Signal

1st Signal/Mode	None
TR	3000.0 ms
Multi-band accel. factor	1

# Physio - PACE

Resp. Control	Off	
Multi-band accel. factor	1	

## Diff

Diffusion Mode	MDDW
Diff. Directions	6
Diffusion Scheme	Bipolar
Diff. Weightings	2
b-value 1	0 s/mm²
b-value 2	1000 s/mm²
Averages 1	1
Averages 2	1
Dynamic Field Correction	Off
Invert Gray Scale	Off
Diff. Weighted Images	On
Trace Weighted Images	Off
Tensor	Off
FA Maps	Off
ADC Maps	Off
Exponential ADC Maps	Off
Calculated Image	Off

# Inline - Open Recon

<u> </u>	Algorithm	None
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## Sequence - Part 1

Sequence Name	epse
Dimension	2D
Excitation	Standard
Gradient Mode	Normal
Bandwidth	2232 Hz/Px
Echo Spacing	0.57 ms
Free Echo Spacing	Off
EPI Factor	64

# Sequence - Part 2

Introduction	Off
RF Spoiling	Off
Phase Correction	Internal

# Sequence - Special

Excite pulse duration	2560 us
Refocus pulse duration	5120 us
Min. prep scans	0
Delay before PC scans	0 us
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Disable B1 control loop	Off
Disable freq. update	Off
Suppress 16-bit DICOM	Off
Force equal slice timing	Off
FFT scale factor	1.00
Fat saturation FA	110.00 deg
Fat sat. offset	0.00 Hz
Physio recording	Off

# SIEMENS MAGNETOM 7.0T W60 Numaris/X VA60A-0CN3

SAR Assistant	Off	
3/ (I( / (33)3tallt	011	

# $\verb|\USER\PHANTOM\PHANTOM\check_MBfactor_dcm2niix_issue870\C2P\_cmrr_mbep2d\_diff\_p3\_mb2| \\$

TA: 1:03 min Coil Selection: Auto Voxel Size: 2.0×2.0×2.0 mm³ Acc:: 3 Rel. SNR: 1.00

## **Properties**

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

#### Routine

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3000.0 ms
TE	80.00 ms
Multi-band accel. factor	2
AutoAlign	

### **Contrast - Common**

TR	3000.0 ms
TE	80.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	90 deg
Refocus flip angle	180 deg
Fat-Water Contrast	Fat Saturation
Grad. rev. fat suppr.	Enabled
Reconstruction	Magnitude

# Contrast - Dynamic

Dynamic Mode	Standard
Multiple Series	Off
Delay in TR	0.00 ms

### **Resolution - Common**

FOV Read	128 mm	
FOV Phase	100.0 %	

### **Resolution - Common**

Slice Thickness	2.0 mm
Base Resolution	64
Phase Resolution	100 %
Interpolation	Off

## **Resolution - Acceleration**

Acceleration Mode	GRAPPA
Reference scan mode	Segmented
Acceleration Factor PE	3
Reference Lines PE	30
Phase Partial Fourier	6/8

### **Resolution - Filter**

Raw Filter	Off	
Elliptical Filter	Off	
Distortion Correction	Off	
Static Field Correction	Off	
Normalize	Off	

## **Geometry - Common**

Slice Group	1
Slices	10
Distance Factor	0 %
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FOV Read	128 mm
FOV Phase	100.0 %
Slice Thickness	2.0 mm
TR	3000.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Multi-band accel. factor	2

## Geometry - AutoAlign

Slice Group	1
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
AutoAlign	
Initial Position	L0.0 P25.7 F12.9
L	0.0 mm
Р	25.7 mm
F	12.9 mm
Initial Orientation	Coronal
Initial Rotation	0.00 deg

## **Geometry - Navigator**

Special Saturation None
-------------------------

## **Geometry - Tim Planning Suite**

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	Н

# System - Miscellaneous

Coil Selection	Auto Coil Select
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >>> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Sum of Squares
Matrix Optimization	Off
Coil Focus	Flat

## **System - Adjustments**

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

### System - Adjust Volume

	•
Position	L0.0 P25.7 F12.9 mm
Orientation	Coronal
Rotation	0.00 deg
R >> L	128 mm
F >> H	128 mm
A >> P	20 mm
Reset	Off

## System - pTx

B1 Shim	TrueForm
Excitation	Standard

## System - Tx/Rx

Frequency 1H	297.178714 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

# Physio - Signal

1st Signal/Mode	None
TR	3000.0 ms
Multi-band accel. factor	2

## **Physio - PACE**

Dear Caratural	Off
Resp. Control	Off
Multi-band accel. factor	2

### Diff

Diffusion Mode	MDDW
Diff. Directions	6
Diffusion Scheme	Bipolar
Diff. Weightings	2
b-value 1	0 s/mm²
b-value 2	1000 s/mm <sup>2</sup>
Averages 1	1
Averages 2	1
Dynamic Field Correction	Off
Invert Gray Scale	Off
Diff. Weighted Images	On
Trace Weighted Images	Off
Tensor	Off
FA Maps	Off
ADC Maps	Off
Exponential ADC Maps	Off
Calculated Image	Off

# Inline - Open Recon

Algorithm
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## Sequence - Part 1

Sequence Name	epse
Dimension	2D
Excitation	Standard
Gradient Mode	Normal
Bandwidth	2232 Hz/Px
Echo Spacing	0.61 ms
Free Echo Spacing	Off
EPI Factor	64

# Sequence - Part 2

Introduction	Off
RF Spoiling	Off
Phase Correction	Internal

### Sequence - Special

sequence special	
Excite pulse duration	2560 us
Refocus pulse duration	5120 us
Min. prep scans	0
Min. prep scans SB	0
Delay before PC scans	0 us
Single-band images	Off
MB LeakBlock kernel	On
MB dual kernel	Off
Opt. MB RF pulse BW	Off
Time-shifted MB RF	Off
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Disable B1 control loop	Off
Disable freq. update	Off
Suppress 16-bit DICOM	Off
Force equal slice timing	Off

# SIEMENS MAGNETOM 7.0T W60 Numaris/X VA60A-0CN3

# Sequence - Special

Online multi-band recon.	Online
FFT scale factor	1.00
Fat saturation FA	110.00 deg
Fat sat. offset	0.00 Hz
Physio recording	Off

SAR Assistant	Off	
SAK ASSISTATIL	OII	