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\USER

CCNB

Projekte

MLVC

localizer \*

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gre\_field\_mapping\_3mm \*

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ep2d\_sms3\_A>P\_2.5x2.5x2.5\_TR1000\_436\_EXP\_UVC

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gre\_field\_mapping\_3mm \*

ep2d\_sms3\_A>P\_2.5x2.5x2.5\_TR1000\_484\_EXP\_MVC

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\\USER\CCNB\Projekte\MLVC\localizer \*

TA: 12 sec Coil Selection: Auto Voxel Size: 0.5×0.5×7.0 mm³ Acc.: None 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	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Load Images to Stamp Segments	On
Load Images to Graphic Segments	On
Graphic segment	All Segments
Inline Movie	Off

**Resolution - Common**

FoV Read	280 mm
FoV Phase	100.0 %
Slice Thickness	7.0 mm
Base Resolution	256
Phase Resolution	91 %
Interpolation	On

**Resolution - Acceleration**

Acceleration mode	None
Advanced Reconstruction	Off
Phase Partial Fourier	Off
Asymmetric Echo	Allowed

**Routine**

Slice Group	1
Slices	1
Distance Factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	2
Slices	1
Distance Factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	3
Slices	1
Distance Factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	280 mm
FoV Phase	100.0 %
Slice Thickness	7.0 mm
TR	7.5 ms
TE	3.69 ms
Averages	2
Concatenations	3
AutoAlign	---

**Resolution - Filter**

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

**Geometry - Common**

Slice Group	1
Slices	1
Distance Factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	2
Slices	1
Distance Factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	3
Slices	1
Distance Factor	20 %
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	280 mm
FoV Phase	100.0 %
Slice Thickness	7.0 mm
TR	7.5 ms
Multi-Slice Mode	Sequential
Series	Interleaved
Concatenations	3

**Contrast - Common**

TR	7.5 ms
TE	3.69 ms
TD	0.00 ms
MTC	Off
Magn. Preparation	None
Flip Angle	20 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
SWI	Off
Reconstruction	Magnitude

**Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

**Geometry - AutoAlign**

Slice Group	1
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	2
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slice Group	3
Position	L0.0 A20.0 H0.0 mm
Orientation	Sagittal

**Geometry - AutoAlign**

Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	L0.0 A20.0 H0.0
L	0.0 mm
A	20.0 mm
H	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	H
Inline Composing	Off

**System - Miscellaneous**

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

**System - Adjustments**

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

**System - Adjust Volume**

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

**System - pTx**

B1 Shim	TrueForm
Excitation	Slice-sel.
LR Balancing	Off

**System - Tx/Rx**

Frequency 1H	123.258997 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Physio - Signal**

1st Signal/Mode	None
TR	7.5 ms
Segments	1

**Physio - Signal**

Concatenations	3
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**Physio - Cardiac**

Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FoV Read	280 mm
FoV Phase	100.0 %
Phase Resolution	91 %
Dynamic Mode	Standard

**Physio - PACE**

Resp. Control	Off
Concatenations	3

**Inline - Liver**

Liver Registration	Off
Save Original Images	On

**Inline - Subtraction**

Subtract	Off
Measurements	1
StdDev	Off
Save Original Images	On

**Inline - Cardiac**

Magn. Preparation	None
Save Original Images	On
Contrasts	1
TE	3.69 ms
TR	7.5 ms

**Inline - MIP**

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

**Inline - Soft Tissue**

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

**Inline - Composing**

Inline Composing	Off
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**Inline - MapIt**

MapIt	None
Flip Angle	20 deg
Measurements	1
Contrasts	1
TE	3.69 ms
TR	7.5 ms
Save Original Images	On

**Sequence - Part 1**

Sequence Name	fl
Dimension	2D
Excitation	Slice-sel.
RF Pulse Type	Fast
Gradient Mode	Fast
Flow Compensation	None
Bandwidth	320 Hz/Px
Asymmetric Echo	Allowed
Segments	1

**Sequence - Part 2**

Introduction	On
RF Spoiling	On
Acoustic noise reduction	Off

**Sequence - Assistant**

SAR Assistant	Off
Allowed Delay	0 s

\\USER\CCNB\Projekte\MLVC\anat\_t1w\_mprage\_sag\_p3\_1mm \*

TA: 3:06 min Coil Selection: Auto Voxel Size: 1.0×1.0×1.0 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
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

**Routine**

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	176
Phase Oversampling	10 %
Slice Oversampling	18.2 %
FoV Read	225 mm
FoV Phase	112.5 %
Slice Thickness	1.0 mm
TR	1900.0 ms
TE	3.22 ms
Averages	1
Concatenations	1
AutoAlign	---

**Contrast - Common**

TR	1900.0 ms
TE	3.22 ms
Magn. Preparation	Non-sel. IR
T1	900 ms
Flip Angle	8 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Reconstruction	Magnitude

**Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement
Reordering	Linear

**Resolution - Common**

FoV Read	225 mm
FoV Phase	112.5 %
Slice Thickness	1.0 mm
Base Resolution	224
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

**Resolution - Acceleration**

Acceleration mode	GRAPPA
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**Resolution - Acceleration**

Reference Scans	Integrated
Acceleration Factor PE	3
Reference Lines PE	24
Acceleration Factor 3D	1
Phase Partial Fourier	7/8
Slice Partial Fourier	Off
Asymmetric Echo	Allowed
Elliptical Scanning	Off

**Resolution - Filter**

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

**Geometry - Common**

Slab Group	1
Slabs	1
Distance Factor	50 %
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	176
Phase Oversampling	10 %
Slice Oversampling	18.2 %
FoV Read	225 mm
FoV Phase	112.5 %
Slice Thickness	1.0 mm
TR	1900.0 ms
Multi-Slice Mode	Single Shot
Series	Ascending
Concatenations	1

**Geometry - AutoAlign**

Slab Group	1
Position	Isocenter
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	L0.0 P0.0 H1.0
L	0.0 mm
P	0.0 mm
H	1.0 mm
Initial Orientation	Sagittal
Initial Rotation	0.00 deg

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

Set-n-Go Protocol	Off
Table Position	1 mm
Table Position	H
Inline Composing	Off

**System - Miscellaneous**

Coil Selection	Auto Coil Select
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P

**System - Miscellaneous**

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

**System - Adjustments**

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

**System - Adjust Volume**

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

**System - pTx**

B1 Shim	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	123.258997 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Physio - Signal**

1st Signal/Mode	None
TR	1900.0 ms
Concatenations	1

**Physio - Cardiac**

Fat-Water Contrast	Standard
Magn. Preparation	Non-sel. IR
TI	900 ms
Dark Blood	Off
FoV Read	225 mm
FoV Phase	112.5 %
Phase Resolution	100 %
Dynamic Mode	Standard

**Physio - PACE**

Resp. Control	Off
Concatenations	1

**Inline - Subtraction**

Subtract	Off
Measurements	1
StdDev	Off
Save Original Images	On

**Inline - Cardiac**

Magn. Preparation	Non-sel. IR
Save Original Images	On
TE	3.22 ms

**Inline - Cardiac**

TR	1900.0 ms
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**Inline - MIP**

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

**Inline - Composing**

Inline Composing	Off
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**Inline - MapIt**

MapIt	None
Flip Angle	8 deg
Measurements	1
TE	3.22 ms
TR	1900.0 ms
Save Original Images	On

**Sequence - Part 1**

Sequence Name	tfl_rr
Dimension	3D
Excitation	Non-sel.
RF Pulse Type	Normal
Gradient Mode	Normal
Flow Compensation	Read
Reordering	Linear
Bandwidth	200 Hz/Px
Echo Spacing	7.78 ms
Asymmetric Echo	Allowed
Turbo Factor	208

**Sequence - Part 2**

Introduction	On
RF Spoiling	On
Incr. Gradient Spoiling	Off

**Sequence - Assistant**

SAR Assistant	Off
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\\USER\CCNB\Projekte\MLVC\gre\_field\_mapping\_3mm \*

TA: 55 sec Coil Selection: Auto Voxel Size: 3.0×3.0×3.0 mm<sup>3</sup> Rel. SNR: 1.00**Properties**

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

**Routine**

Slice Group	1
Slices	38
Distance Factor	20 %
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FoV Read	198 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	400.0 ms
TE 1	4.92 ms
TE 2	7.38 ms
Averages	1
Concatenations	1
AutoAlign	---

**Contrast - Common**

TR	400.0 ms
TE 1	4.92 ms
TE 2	7.38 ms
MTC	Off
Flip Angle	60 deg
Fat-Water Contrast	Standard
Contrasts	2
Reconstruction	Magn./Phase

**Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

**Resolution - Common**

FoV Read	198 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	66
Phase Resolution	100 %
Interpolation	Off

**Resolution - Acceleration**

Phase Partial Fourier	Off
Asymmetric Echo	Off

**Resolution - Filter**

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

**Geometry - Common**

Slice Group	1
Slices	38
Distance Factor	20 %
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FoV Read	198 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	400.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice Group	1
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Orientation	T > C
T > C	-10.00
> S	0.00
Initial Rotation	90.00 deg

**Geometry - Saturation**

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

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

**System - Miscellaneous**

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

**System - Adjustments**

Adjustment Strategy	Standard
B0 Shim	Advanced
B1 Shim	TrueForm

**System - Adjustments**

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

**System - Adjust Volume**

Position	Isocenter
Orientation	T > C-10.0
Rotation	90.00 deg
R >> L	198 mm
A >> P	198 mm
F >> H	137 mm
Reset	Off

**System - pTx**

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

Frequency 1H	123.258997 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Sequence - Part 1**

Sequence Name	fm_r
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	On
Bandwidth	601 Hz/Px
Asymmetric Echo	Off

**Sequence - Part 2**

Introduction	On
RF Spoiling	On

**Sequence - Assistant**

SAR Assistant	Off
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\\USER\CCNB\Projekte\MLVC\lep2d\_sms3\_A&gt;P\_2.5x2.5x2.5\_TR1000\_300\_PRF \*

TA: 5:07 min Coil Selection: Auto Voxel Size: 2.5×2.5×2.5 mm³ Acc.: 3 Rel. SNR: 1.00

**Properties**

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

**Routine**

Slice Group	1
Slices	39
Distance Factor	10 %
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	205 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	1000.0 ms
TE	33.00 ms
Averages	1
Concatenations	1
AutoAlign	---

**Contrast - Common**

TR	1000.0 ms
TE	33.00 ms
MTC	Off
Flip Angle	70 deg
Fat-Water Contrast	Fat Saturation
Reconstruction	Magnitude

**Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	300
Delay in TR	0.00 ms

**Resolution - Common**

FoV Read	205 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
Base Resolution	82
Phase Resolution	100 %
Interpolation	Off

**Resolution - Acceleration**

Acceleration mode	SMS
Reference Scans	EPI/Separate
Acceleration Factor PE	1
SMS Factor	3
Advanced Reconstruction	Off
Phase Partial Fourier	Off

**Resolution - Filter**

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

**Geometry - Common**

Slice Group	1
Slices	39
Distance Factor	10 %
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	205 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	1000.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice Group	1
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Orientation	T > C
T > C	-10.00
> S	0.00
Initial Rotation	0.00 deg

**Geometry - Saturation**

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

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

**System - Miscellaneous**

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

**System - Adjustments**

Adjustment Strategy	Standard
B0 Shim	Advanced
B1 Shim	TrueForm

**System - Adjustments**

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

**System - Adjust Volume**

Position	Isocenter
Orientation	T > C-10.0
Rotation	0.00 deg
A >> P	205 mm
R >> L	205 mm
F >> H	107 mm
Reset	Off

**System - pTx**

B1 Shim	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.258997 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Physio - Signal**

1st Signal/Mode	None
TR	1000.0 ms
Concatenations	1

**BOLD**

GLM Statistics	Off
Ignore Meas. at Start	0
Ignore After Transition	0
Model Transition States	On
Temp. Highpass Filter	On
Threshold	4.00
Paradigm Size	20
Meas[1]	Active
Meas[2]	Active
Meas[3]	Active
Meas[4]	Active
Meas[5]	Active
Meas[6]	Active
Meas[7]	Active
Meas[8]	Active
Meas[9]	Active
Meas[10]	Active
Meas[11]	Ignore
Meas[12]	Ignore
Meas[13]	Ignore
Meas[14]	Ignore
Meas[15]	Ignore
Meas[16]	Ignore
Meas[17]	Ignore
Meas[18]	Ignore
Meas[19]	Ignore
Meas[20]	Ignore
Motion Correction	Off
Spatial Filter	Off
Measurements	300
Delay in TR	0.00 ms

**Sequence - Part 1**

Sequence Name	epfid
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Performance
Bandwidth	1794 Hz/Px
Echo Spacing	0.66 ms
Free Echo Spacing	Off
EPI Factor	82

**Sequence - Part 2**

Introduction	Off
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\\USER\CCNB\Projekte\MLVC\ep2d\_sms3\_A&gt;P\_2.5x2.5x2.5\_TR1000\_436\_EXP\_UVC \*

TA: 7:23 min Coil Selection: Auto Voxel Size: 2.5×2.5×2.5 mm³ Acc.: 3 Rel. SNR: 1.00

**Properties**

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

**Routine**

Slice Group	1
Slices	39
Distance Factor	10 %
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	205 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	1000.0 ms
TE	33.00 ms
Averages	1
Concatenations	1
AutoAlign	---

**Contrast - Common**

TR	1000.0 ms
TE	33.00 ms
MTC	Off
Flip Angle	70 deg
Fat-Water Contrast	Fat Saturation
Reconstruction	Magnitude

**Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	436
Delay in TR	0.00 ms

**Resolution - Common**

FoV Read	205 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
Base Resolution	82
Phase Resolution	100 %
Interpolation	Off

**Resolution - Acceleration**

Acceleration mode	SMS
Reference Scans	EPI/Separate
Acceleration Factor PE	1
SMS Factor	3
Advanced Reconstruction	Off
Phase Partial Fourier	Off

**Resolution - Filter**

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

**Geometry - Common**

Slice Group	1
Slices	39
Distance Factor	10 %
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	205 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	1000.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice Group	1
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Orientation	T > C
T > C	-10.00
> S	0.00
Initial Rotation	0.00 deg

**Geometry - Saturation**

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

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

**System - Miscellaneous**

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

**System - Adjustments**

Adjustment Strategy	Standard
B0 Shim	Advanced
B1 Shim	TrueForm

**System - Adjustments**

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

**System - Adjust Volume**

Position	Isocenter
Orientation	T > C-10.0
Rotation	0.00 deg
A >> P	205 mm
R >> L	205 mm
F >> H	107 mm
Reset	Off

**System - pTx**

B1 Shim	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.258997 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Physio - Signal**

1st Signal/Mode	None
TR	1000.0 ms
Concatenations	1

**BOLD**

GLM Statistics	Off
Ignore Meas. at Start	0
Ignore After Transition	0
Model Transition States	On
Temp. Highpass Filter	On
Threshold	4.00
Paradigm Size	20
Meas[1]	Active
Meas[2]	Active
Meas[3]	Active
Meas[4]	Active
Meas[5]	Active
Meas[6]	Active
Meas[7]	Active
Meas[8]	Active
Meas[9]	Active
Meas[10]	Active
Meas[11]	Ignore
Meas[12]	Ignore
Meas[13]	Ignore
Meas[14]	Ignore
Meas[15]	Ignore
Meas[16]	Ignore
Meas[17]	Ignore
Meas[18]	Ignore
Meas[19]	Ignore
Meas[20]	Ignore
Motion Correction	Off
Spatial Filter	Off
Measurements	436
Delay in TR	0.00 ms

**Sequence - Part 1**

Sequence Name	epfid
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Performance
Bandwidth	1794 Hz/Px
Echo Spacing	0.66 ms
Free Echo Spacing	Off
EPI Factor	82

**Sequence - Part 2**

Introduction	Off
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\\USER\CCNB\Projekte\MLVC\gre\_field\_mapping\_3mm \*

TA: 55 sec Coil Selection: Auto Voxel Size: 3.0×3.0×3.0 mm³ Rel. SNR: 1.00

**Properties**

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

**Routine**

Slice Group	1
Slices	38
Distance Factor	20 %
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FoV Read	198 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	400.0 ms
TE 1	4.92 ms
TE 2	7.38 ms
Averages	1
Concatenations	1
AutoAlign	---

**Contrast - Common**

TR	400.0 ms
TE 1	4.92 ms
TE 2	7.38 ms
MTC	Off
Flip Angle	60 deg
Fat-Water Contrast	Standard
Contrasts	2
Reconstruction	Magn./Phase

**Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	1
Multiple Series	Off

**Resolution - Common**

FoV Read	198 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
Base Resolution	66
Phase Resolution	100 %
Interpolation	Off

**Resolution - Acceleration**

Phase Partial Fourier	Off
Asymmetric Echo	Off

**Resolution - Filter**

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

**Geometry - Common**

Slice Group	1
Slices	38
Distance Factor	20 %
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	R >> L
Phase Oversampling	0 %
FoV Read	198 mm
FoV Phase	100.0 %
Slice Thickness	3.0 mm
TR	400.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice Group	1
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	R >> L
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Orientation	T > C
T > C	-10.00
> S	0.00
Initial Rotation	90.00 deg

**Geometry - Saturation**

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

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

**System - Miscellaneous**

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

**System - Adjustments**

Adjustment Strategy	Standard
B0 Shim	Advanced
B1 Shim	TrueForm

**System - Adjustments**

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

**System - Adjust Volume**

Position	Isocenter
Orientation	T > C-10.0
Rotation	90.00 deg
R >> L	198 mm
A >> P	198 mm
F >> H	137 mm
Reset	Off

**System - pTx**

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

Frequency 1H	123.258997 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Sequence - Part 1**

Sequence Name	fm_r
Dimension	2D
RF Pulse Type	Normal
Gradient Mode	Fast
Flow Compensation	On
Bandwidth	601 Hz/Px
Asymmetric Echo	Off

**Sequence - Part 2**

Introduction	On
RF Spoiling	On

**Sequence - Assistant**

SAR Assistant	Off
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\\USER\CCNB\Projekte\MLVC\ep2d\_sms3\_A&gt;P\_2.5x2.5x2.5\_TR1000\_484\_EXP\_MVC \*

TA: 8:11 min Coil Selection: Auto Voxel Size: 2.5×2.5×2.5 mm³ Acc.: 3 Rel. SNR: 1.00

**Properties**

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

**Routine**

Slice Group	1
Slices	39
Distance Factor	10 %
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	205 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	1000.0 ms
TE	33.00 ms
Averages	1
Concatenations	1
AutoAlign	---

**Contrast - Common**

TR	1000.0 ms
TE	33.00 ms
MTC	Off
Flip Angle	70 deg
Fat-Water Contrast	Fat Saturation
Reconstruction	Magnitude

**Contrast - Dynamic**

Dynamic Mode	Standard
Measurements	484
Delay in TR	0.00 ms

**Resolution - Common**

FoV Read	205 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
Base Resolution	82
Phase Resolution	100 %
Interpolation	Off

**Resolution - Acceleration**

Acceleration mode	SMS
Reference Scans	EPI/Separate
Acceleration Factor PE	1
SMS Factor	3
Advanced Reconstruction	Off
Phase Partial Fourier	Off

**Resolution - Filter**

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

**Geometry - Common**

Slice Group	1
Slices	39
Distance Factor	10 %
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	A >> P
Phase Oversampling	0 %
FoV Read	205 mm
FoV Phase	100.0 %
Slice Thickness	2.5 mm
TR	1000.0 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

**Geometry - AutoAlign**

Slice Group	1
Position	Isocenter
Orientation	T > C-10.0
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	Isocenter
L	0.0 mm
P	0.0 mm
H	0.0 mm
Initial Orientation	T > C
T > C	-10.00
> S	0.00
Initial Rotation	0.00 deg

**Geometry - Saturation**

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

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

**System - Miscellaneous**

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

**System - Adjustments**

Adjustment Strategy	Standard
B0 Shim	Advanced
B1 Shim	TrueForm

**System - Adjustments**

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

**System - Adjust Volume**

Position	Isocenter
Orientation	T > C-10.0
Rotation	0.00 deg
A >> P	205 mm
R >> L	205 mm
F >> H	107 mm
Reset	Off

**System - pTx**

B1 Shim	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	123.258997 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Image Scaling	1.000

**Physio - Signal**

1st Signal/Mode	None
TR	1000.0 ms
Concatenations	1

**BOLD**

GLM Statistics	Off
Ignore Meas. at Start	0
Ignore After Transition	0
Model Transition States	On
Temp. Highpass Filter	On
Threshold	4.00
Paradigm Size	20
Meas[1]	Active
Meas[2]	Active
Meas[3]	Active
Meas[4]	Active
Meas[5]	Active
Meas[6]	Active
Meas[7]	Active
Meas[8]	Active
Meas[9]	Active
Meas[10]	Active
Meas[11]	Ignore
Meas[12]	Ignore
Meas[13]	Ignore
Meas[14]	Ignore
Meas[15]	Ignore
Meas[16]	Ignore
Meas[17]	Ignore
Meas[18]	Ignore
Meas[19]	Ignore
Meas[20]	Ignore
Motion Correction	Off
Spatial Filter	Off
Measurements	484
Delay in TR	0.00 ms

**Sequence - Part 1**

Sequence Name	epfid
Excitation	Standard
RF Pulse Type	Normal
Gradient Mode	Performance
Bandwidth	1794 Hz/Px
Echo Spacing	0.66 ms
Free Echo Spacing	Off
EPI Factor	82

**Sequence - Part 2**

Introduction	Off
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