

**Table of contents**

\\USER

Development

Dr. Cohen-Adad

acdc\_7t\_spine\_075\_fMRI

localizer\_Daniel  
tfl\_sag\_2p5mmISO\_largeFOV  
t1\_mp2rage\_cor\_nonSelHS1\_0.7iso  
localizer\_Daniel  
localizer\_Daniel  
tfl\_sag\_2p5mmISO\_largeFOV\_RefVol\_OptC4C5  
ep2d\_lgFOVc45\_0p85\_R2PF6\_TE30\_BW1132  
dzne\_ep3d\_fmri\_EPI16  
dzne\_ep3d\_fmri\_EPI10  
gre\_B0\_sag  
gre\_B0\_tra

\\USER\Development\Dr. Cohen-Adad\acdc 7t spine 075 fMRI\localizer Daniel

TA: 0:18 PM: REF Voxel size: 0.5×0.5×5.0 mmPAT: Off Rel. SNR: 1.00 : qfl

## Properties

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

## Routine

Slice group	1
Slices	3
Dist. factor	50 %
Position	L0.0 A14.6 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P

Slice group	2
Slices	3
Dist. factor	50 %
Position	L0.0 A44.7 H0.0 mm
Orientation	Coronal
Phase enc. dir.	F >> H

Slice group	3
Slices	3
Dist. factor	50 %
Position	R11.0 A7.5 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P

AutoAlign	---
Phase oversampling	25 %
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	7.7 ms
TE	3.67 ms
Averages	1
Concatenations	9
Filter	Distortion Corr.(2D), Elliptical filter
Coil elements	1H:1H:1H:1H:1H:1H

## Contrast - Common

TR	7.7 ms
TE	3.67 ms
TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	20 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

## Contrast - Dynamic

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

## Contrast - Dynamic

Multiple series	Each measurement
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## Resolution - Common

FoV read	280 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On

## Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

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

## Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	On

## Geometry - Common

Slice group	1
Slices	3
Dist. factor	50 %
Position	L0.0 A14.6 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P

Slice group	2
Slices	3
Dist. factor	50 %
Position	L0.0 A44.7 H0.0 mm
Orientation	Coronal
Phase enc. dir.	F >> H

Slice group	3
Slices	3
Disk factor	50 %
Position	R11.0 A7.5 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P

FoV read	280 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	7.7 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	9

## Geometry - AutoAlign

Slice group	1
Position	L0.0 A14.6 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2

**Geometry - AutoAlign**

Position	L0.0 A44.7 H0.0 mm
Orientation	Coronal
Phase enc. dir.	F >> H
Slice group	3
Position	R11.0 A7.5 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L0.0 A14.6 H0.0
L	0.0 mm
A	14.6 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

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

**Geometry - Tim Planning Suite**

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

**Geometry - Tim CT**

Tim CT mode	Off
Slices	3
Slice thickness	5.0 mm
Dist. factor	50 %
FoV read	280 mm
FoV phase	100.0 %
Segments	1

**System - Miscellaneous**

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

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A29.8 F11.0 mm
! Orientation	Transversal
! Rotation	0.00 deg
! A >> P	175 mm
! R >> L	201 mm

**System - Adjust Volume**

! F >> H	259 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	297.200543 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	7.7 ms
Concatenations	9
Segments	1

**Physio - Cardiac**

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	280 mm
FoV phase	100.0 %
Phase resolution	75 %

**Physio - PACE**

Resp. control	Off
Concatenations	9

**Inline - Common**

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

**Inline - MIP**

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

**Inline - Soft Tissue**

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

**Inline - Composing**

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

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	20 deg
Measurements	1
Contrasts	1
TR	7.7 ms
TE	3.67 ms

**Sequence - Part 1**

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Sequential
Bandwidth	320 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	Active
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
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\\USER\Development\Dr. Cohen-Adad\acdc\_7t\_spine\_075\_fMRI\tfl\_sag\_2p5mmISO\_largeFOV

TA: 1:10 PM: FIX Voxel size: 2.4×2.4×2.5 mmPAT: Off 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

Slice group	1
Slices	28
Dist. factor	100 %
Position	R3.0 A46.0 F9.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	28
Dist. factor	100 %
Position	R5.5 A46.0 F9.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	340 mm
FoV phase	61.1 %
Slice thickness	2.5 mm
TR	34420.0 ms
TE	2.31 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(3D)
Coil elements	1H;1H;1H;1H;1H;1H;1H;

## Contrast - Common

TR	34420.0 ms
TE	2.31 ms
Magn. preparation	None
Flip angle	10 deg
Fat suppr.	None
Water suppr.	None

## Contrast - Dynamic

Averages	1
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

### Resolution - Common

FoV read	340 mm
FoV phase	61.1 %
Slice thickness	2.5 mm
Base resolution	144
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

## Resolution - iPAT

PAT mode	None
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## Resolution - Filter Image

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

## Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

## Geometry - Common

Slice group	1
Slices	28
Dist. factor	100 %
Position	R3.0 A46.0 F9.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	28
Dist. factor	100 %
Position	R5.5 A46.0 F9.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
FoV read	340 mm
FoV phase	61.1 %
Slice thickness	2.5 mm
TR	34420.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice group	1
Position	R3.0 A46.0 F9.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Position	R5.5 A46.0 F9.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	R3.0 A46.0 F9.0
R	3.0 mm
A	46.0 mm
F	9.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

## Geometry - Tim Planning Suite

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

**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

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

**System - Adjust Volume**

Position	R4.3 A46.0 F9.0 mm
Orientation	Sagittal
Rotation	0.00 deg
A >> P	208 mm
F >> H	340 mm
R >> L	140 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	297.200543 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
? Ref. amplitude 1H	0.000 V

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

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

**Sequence - Part 1**

Introduction	Off
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**Sequence - Part 1**

Dimension	2D
Asymmetric echo	Allowed
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	5.1 ms
Bandwidth	400 Hz/Px

**Sequence - Part 2**

RF pulse type	Low SAR
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On
Turbo factor	88

**Sequence - Assistant**

Mode	Off
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\\USER\Development\Dr. Cohen-Adad\acdc 7t spine 075 fMRI\t1 mp2rage cor nonSelHS1 0.7iso

TA: 8:47 PM: FIX Voxel size: 0.7×0.7×0.7 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	R3.0 A46.0 F9.0 mm
Orientation	C > T-12.5
Phase enc. dir.	R >> L
AutoAlign	---
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	192
FoV read	260 mm
FoV phase	65.8 %
Slice thickness	0.70 mm
TR	5000.0 ms
TE	2.15 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(3D)
Coil elements	1H;1H;1H;1H;1H;1H;1H;

### Contrast - Common

TR	5000.0 ms
TE	2.15 ms
Magn. preparation	Non-sel. IR
TI 1	700 ms
TI 2	2400 ms
Flip angle 1	4.0 deg
Flip angle 2	5.0 deg
Fat suppr.	None
Water suppr.	None

## Contrast - Dynamic

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

## Resolution - Common

FoV read	260 mm
FoV phase	65.8 %
Slice thickness	0.70 mm
Base resolution	368
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	6/8

## Resolution - Common

Slice partial Fourier	Off
Interpolation	Off

## Resolution - iPAT

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

## Resolution - Filter Image

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

## Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

## Geometry - Common

Slab group	1
Slabs	1
Dist. factor	50 %
Position	R3.0 A46.0 F9.0 mm
Orientation	C > T-12.5
Phase enc. dir.	R >> L
Slice oversampling	0.0 %
Slices per slab	192
FoV read	260 mm
FoV phase	65.8 %
Slice thickness	0.70 mm
TR	5000.0 ms
Multi-slice mode	Single shot
Series	Ascending
Concatenations	1

## Geometry - AutoAlign

Slab group	1
Position	R3.0 A46.0 F9.0 mm
Orientation	C > T-12.5
Phase enc. dir.	R >> L
AutoAlign	---
Initial Position	R3.0 A46.0 F9.0
R	3.0 mm
A	46.0 mm
F	9.0 mm
Initial Rotation	0.00 deg
Initial Orientation	C > T
C > T	-12.5
> S	0.0

## Geometry - Navigator

## Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table position	H

**Geometry - Tim Planning Suite**

Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	R3.0 A47.0 F9.0 mm
! Orientation	T > C12.5
! Rotation	0.00 deg
! A >> P	56 mm
! R >> L	50 mm
! F >> H	246 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Non-sel.

**System - Tx/Rx**

Frequency 1H	297.200543 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	649.600 V

**Physio - Signal1**

1st Signal/Mode	None
TR	5000.0 ms
Concatenations	1

**Physio - Cardiac**

Magn. preparation	Non-sel. IR
TI 1	700 ms
TI 2	2400 ms
Fat suppr.	None
Dark blood	Off
FoV read	260 mm
FoV phase	65.8 %
Phase resolution	100 %

**Physio - PACE**

Resp. control	Off
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**Physio - PACE**

Concatenations	1
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**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

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

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle 1	4.0 deg
Flip angle 2	5.0 deg
Measurements	1
TR	5000.0 ms
TE	2.15 ms

**Sequence - Part 1**

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Allowed
Flow comp.	No
Multi-slice mode	Single shot
Echo spacing	6.4 ms
Bandwidth	220 Hz/Px

**Sequence - Part 2**

RF pulse type	Normal
Gradient mode	Normal*
Excitation	Non-sel.
RF spoiling	On
Incr. Gradient spoiling	Off
Turbo factor	192

**Sequence - Special**

Use Custom Inversion	On
Inv pulse type	HS1
HS pulse dur	10240 us
HS pulse offset	0 Hz
HS flip angle	360 deg
TR_FOCI B1	0.00 uT
Echo Spacing	6400 us
Denoise Weighting	100

**Sequence - Assistant**

Mode	Off
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\\USER\Development\Dr. Cohen-Adad\acdc 7t spine 075 fMRI\localizer Daniel

TA: 0:18 PM: REF Voxel size: 0.5×0.5×5.0 mmPAT: Off Rel. SNR: 1.00 : qfl

## Properties

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

## Routine

Slice group	1
Slices	3
Dist. factor	50 %
Position	L0.0 A14.6 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P

Slice group	2
Slices	3
Dist. factor	50 %
Position	L0.0 A44.7 H0.0 mm
Orientation	Coronal
Phase enc. dir.	F >> H

Slice group	3
Slices	3
Dist. factor	50 %
Position	R11.0 A7.5 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P

AutoAlign	---
Phase oversampling	25 %
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	7.7 ms
TE	3.67 ms
Averages	1
Concatenations	9
Filter	Distortion Corr.(2D), Elliptical filter
Coil elements	1H:1H:1H:1H:1H:1H:1H:

## Contrast - Common

TR	7.7 ms
TE	3.67 ms
TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	20 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

## Contrast - Dynamic

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

## Contrast - Dynamic

Multiple series	Each measurement
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## Resolution - Common

FoV read	280 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On

## Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

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

## Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	On

## Geometry - Common

Slice group	1
Slices	3
Dist. factor	50 %
Position	L0.0 A14.6 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P

Slice group	2
Slices	3
Dist. factor	50 %
Position	L0.0 A44.7 H0.0 mm
Orientation	Coronal
Phase enc. dir.	F >> H

Slice group	3
Slices	3
Distribution	1H;1H;1H;1H;1H;1H;1H;1H 50 %
Position	R11.0 A7.5 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P

FoV read	280 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	7.7 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	9

## Geometry - AutoAlign

Slice group	1
Position	L0.0 A14.6 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2

**Geometry - AutoAlign**

Position	L0.0 A44.7 H0.0 mm
Orientation	Coronal
Phase enc. dir.	F >> H
Slice group	3
Position	R11.0 A7.5 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L0.0 A14.6 H0.0
L	0.0 mm
A	14.6 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

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

**Geometry - Tim Planning Suite**

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

**Geometry - Tim CT**

Tim CT mode	Off
Slices	3
Slice thickness	5.0 mm
Dist. factor	50 %
FoV read	280 mm
FoV phase	100.0 %
Segments	1

**System - Miscellaneous**

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

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A29.8 F11.0 mm
! Orientation	Transversal
! Rotation	0.00 deg
! A >> P	175 mm
! R >> L	201 mm

**System - Adjust Volume**

! F >> H	259 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	297.200543 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	7.7 ms
Concatenations	9
Segments	1

**Physio - Cardiac**

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	280 mm
FoV phase	100.0 %
Phase resolution	75 %

**Physio - PACE**

Resp. control	Off
Concatenations	9

**Inline - Common**

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

**Inline - MIP**

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

**Inline - Soft Tissue**

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

**Inline - Composing**

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

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	20 deg
Measurements	1
Contrasts	1
TR	7.7 ms
TE	3.67 ms

**Sequence - Part 1**

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Sequential
Bandwidth	320 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	Active
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
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**\\USER\Development\Dr. Cohen-Adad\acdc 7t spine 075 fMRI\localizer Daniel**

TA: 0:18 PM: REF Voxel size: 0.5×0.5×5.0 mmPAT: Off Rel. SNR: 1.00 : qfl

## Properties

Prio recon	On
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	On
Load images to graphic segments	On
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

## Routine

Slice group	1
Slices	3
Dist. factor	50 %
Position	L0.0 A14.6 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P

Slice group	2
Slices	3
Dist. factor	50 %
Position	L0.0 A44.7 H0.0 mm
Orientation	Coronal
Phase enc. dir.	F >> H

Slice group	3
Slices	3
Dist. factor	50 %
Position	R11.0 A7.5 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P

AutoAlign	---
Phase oversampling	25 %
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	7.7 ms
TE	3.67 ms
Averages	1
Concatenations	9
Filter	Distortion Corr.(2D), Elliptical filter
Coil elements	1H:1H:1H:1H:1H:1H:1H:

## Contrast - Common

TR	7.7 ms
TE	3.67 ms
TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	20 deg
Fat suppr.	None
Water suppr.	None
SWI	Off

## Contrast - Dynamic

Averages	1
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1

## Contrast - Dynamic

Multiple series	Each measurement
-----------------	------------------

### Resolution - Common

FoV read	280 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
Base resolution	256
Phase resolution	75 %
Phase partial Fourier	Off
Interpolation	On

## Resolution - iPAT

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

### Resolution - Filter Image

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

## Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	On

## Geometry - Common

Slice group	1
Slices	3
Dist. factor	50 %
Position	L0.0 A14.6 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P

Slice group	2
Slices	3
Dist. factor	50 %
Position	L0.0 A44.7 H0.0 mm
Orientation	Coronal
Phase enc. dir.	F >> H

Slice group	3
Slices	3
Distribution	1H;1H;1H;1H;1H;1H;1H;1H;1H 50 %
Position	R11.0 A7.5 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P

FoV read	280 mm
FoV phase	100.0 %
Slice thickness	5.0 mm
TR	7.7 ms
Multi-slice mode	Sequential
Series	Interleaved
Concatenations	9

## Geometry - AutoAlign

Slice group	1
Position	L0.0 A14.6 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2

**Geometry - AutoAlign**

Position	L0.0 A44.7 H0.0 mm
Orientation	Coronal
Phase enc. dir.	F >> H
Slice group	3
Position	R11.0 A7.5 H0.0 mm
Orientation	Transversal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	L0.0 A14.6 H0.0
L	0.0 mm
A	14.6 mm
H	0.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

**Geometry - Saturation**

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

**Geometry - Tim Planning Suite**

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

**Geometry - Tim CT**

Tim CT mode	Off
Slices	3
Slice thickness	5.0 mm
Dist. factor	50 %
FoV read	280 mm
FoV phase	100.0 %
Segments	1

**System - Miscellaneous**

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

**System - Adjustments**

B0 Shim mode	Tune up
B1 Shim mode	TrueForm
Confirm freq. adjustment	Off
Assume Dominant Fat	Off
Assume Silicone	Off
Adjustment Tolerance	Auto

**System - Adjust Volume**

! Position	L0.0 A29.8 F11.0 mm
! Orientation	Transversal
! Rotation	0.00 deg
! A >> P	175 mm
! R >> L	201 mm

**System - Adjust Volume**

! F >> H	259 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	297.200543 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	7.7 ms
Concatenations	9
Segments	1

**Physio - Cardiac**

Tagging	None
Magn. preparation	None
Fat suppr.	None
Dark blood	Off
FoV read	280 mm
FoV phase	100.0 %
Phase resolution	75 %

**Physio - PACE**

Resp. control	Off
Concatenations	9

**Inline - Common**

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

**Inline - MIP**

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

**Inline - Soft Tissue**

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

**Inline - Composing**

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

**Inline - MapIt**

Save original images	On
MapIt	None
Flip angle	20 deg
Measurements	1
Contrasts	1
TR	7.7 ms
TE	3.67 ms

**Sequence - Part 1**

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Off
Contrasts	1
Flow comp.	No
Multi-slice mode	Sequential
Bandwidth	320 Hz/Px

**Sequence - Part 2**

Segments	1
Acoustic noise reduction	Active
RF pulse type	Normal
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On

**Sequence - Assistant**

Mode	Off
------	-----

\\USER\Development\Dr. Cohen-Adad\acdc\_7t\_spine\_075\_fMRI\tfl\_sag\_2p5mm\SO\_largeFOV\_RefV  
ol\_OptC4C5

TA: 1:10 PM: FIX Voxel size: 2.4×2.4×2.5 mmPAT: Off 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

Slice group	1
Slices	28
Dist. factor	100 %
Position	R3.0 A46.0 F9.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	28
Dist. factor	100 %
Position	R2.5 A46.4 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	340 mm
FoV phase	61.1 %
Slice thickness	2.5 mm
TR	34420.0 ms
TE	2.31 ms
Averages	1
Concatenations	1
Filter	Distortion Corr.(3D)
Coil elements	1H;1H;1H;1H;1H;1H;1H;1H

## Contrast - Common

TR	34420.0 ms
TE	2.31 ms
Magn. preparation	None
Flip angle	10 deg
Fat suppr.	None
Water suppr.	None

## Contrast - Dynamic

Averages	1
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

## Resolution - Common

FoV read	340 mm
FoV phase	61.1 %
Slice thickness	2.5 mm
Base resolution	144
Phase resolution	100 %
Phase partial Fourier	Off

## Resolution - Common

Interpolation	Off
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## Resolution - iPAT

PAT mode	None
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### Resolution - Filter Image

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

## Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

## Geometry - Common

Slice group	1
Slices	28
Dist. factor	100 %
Position	R3.0 A46.0 F9.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Slices	28
Dist. factor	100 %
Position	R2.5 A46.4 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
FoV read	340 mm
FoV phase	61.1 %
Slice thickness	2.5 mm
TR	34420.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice group	1
Position	R3.0 A46.0 F9.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
Slice group	2
Position	R2.5 A46.4 H0.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	R3.0 A46.0 F9.0
R	3.0 mm
A	46.0 mm
F	9.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

## Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
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**Geometry - Tim Planning Suite**

Table position	H
Table position	0 mm
Inline Composing	Off

**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

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

**System - Adjust Volume**

Position	R2.8 A46.2 F4.5 mm
Orientation	Sagittal
Rotation	0.00 deg
A >> P	209 mm
F >> H	349 mm
R >> L	138 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slice-sel.

**System - Tx/Rx**

Frequency 1H	297.200543 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	594.000 V

**Inline - Common**

Subtract	Off
Measurements	1
StdDev	Off
Save original images	On

**Inline - MIP**

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

**Inline - Composing**

Inline Composing	Off
Distortion Corr.	On

**Inline - Composing**

Mode	3D
Unfiltered images	On

**Sequence - Part 1**

Introduction	Off
Dimension	2D
Asymmetric echo	Allowed
Flow comp.	No
Multi-slice mode	Interleaved
Echo spacing	5.1 ms
Bandwidth	400 Hz/Px

**Sequence - Part 2**

RF pulse type	Low SAR
Gradient mode	Normal
Excitation	Slice-sel.
RF spoiling	On
Turbo factor	88

**Sequence - Assistant**

Mode	Off
------	-----



\\USER\Development\Dr. Cohen-Adad\acdc\_7t\_spine\_075\_fMRI\ep2d\_IgFOVc45\_0p85\_R2PF6\_TE30\_BW1132

TA: 10:10 PM: FIX Voxel size: 0.9×0.9×3.0 mmPAT: 2 Rel. SNR: 1.00 : epfid

### Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

### Routine

Slice group	1
Slices	16
Dist. factor	0 %
Position	R3.0 A57.9 H23.9 mm
Orientation	T > C7.0
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	164 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
TR	1290 ms
TE	30.00 ms
Multi-band accel. factor	1
Filter	Raw filter
Coil elements	1H;1H;1H;1H;1H;1H;1H;1H;1H;1H;1H;1H;1H;1H;1H;1H

### Contrast - Common

TR	1290 ms
TE	30.00 ms
MTC	Off
Magn. preparation	None
Flip angle	68 deg
Fat suppr.	None

### Contrast - Dynamic

Averaging mode	Long term
Reconstruction	Magnitude
Measurements	466
Delay in TR	0 ms
Multiple series	Off

### Resolution - Common

FoV read	164 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
Base resolution	192
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off

### Resolution - iPAT

PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	52

### Resolution - iPAT

Reference scan mode	GRE
---------------------	-----

### Resolution - Filter Image

Distortion Corr.	Off
Prescan Normalize	Off

### Resolution - Filter Rawdata

Raw filter	On
Elliptical filter	Off
Hamming	Off

### Geometry - Common

Slice group	1
Slices	16
Dist. factor	0 %
Position	R3.0 A57.9 H23.9 mm
Orientation	T > C7.0
Phase enc. dir.	A >> P
FoV read	164 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
TR	1290 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-band accel. factor	1

### Geometry - AutoAlign

Slice group	1
Position	R3.0 A57.9 H23.9 mm
Orientation	T > C7.0
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	R3.0 A57.9 H23.9
R	3.0 mm
A	57.9 mm
H	23.9 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	7.0
> S	0.0

### Geometry - Saturation

Fat suppr.	None
Special sat.	None

### Geometry - Tim Planning Suite

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

### System - Miscellaneous

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

**System - Miscellaneous**

Transversal	F >> H
Coil Combine Mode	Sum of Squares
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

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

**System - Adjust Volume**

! Position	R3.0 A49.3 H23.9 mm
! Orientation	T > C7.0
! Rotation	0.00 deg
! A >> P	40 mm
! R >> L	52 mm
! F >> H	60 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Standard

**System - Tx/Rx**

Frequency 1H	297.200543 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	594.000 V

**Physio - Signal1**

1st Signal/Mode	None
TR	1290 ms
Multi-band accel. factor	1

**BOLD**

GLM Statistics	Off
Dynamic t-maps	Off
Ignore meas. at start	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	20
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Baseline
Meas[7]	Baseline
Meas[8]	Baseline
Meas[9]	Baseline
Meas[10]	Baseline
Meas[11]	Active
Meas[12]	Active
Meas[13]	Active
Meas[14]	Active
Meas[15]	Active

**BOLD**

Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active
Meas[20]	Active
Motion correction	Off
Spatial filter	Off
Measurements	466
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	1 ms
Bandwidth	1132 Hz/Px

**Sequence - Part 2**

EPI factor	192
Gradient mode	Fast
Excitation	Standard
RF spoiling	Off

**Sequence - Special**

Excite pulse duration	3840 us
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Disable freq. update	Off
Force equal slice timing	Off
FFT scale factor	1.00
GRE iPAT ref. FA	12.0 deg
Physio recording	Legacy
Triggering scheme	Standard

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TA: 10:14 PM: FIX Voxel size: 0.9x0.9x3.0 mmPAT: 2 Rel. SNR: 1.00 : ep 7fc60e8

## 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
Position	R3.0 A57.9 H23.9 mm
Orientation	T > C7.0
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	16
FoV read	164 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
TR	2300 ms
TE 1	11.20 ms
Averages	1
Multi-echo Shots	1
Filter	Raw filter
Coil elements	1H;1H;1H;1H;1H;1H;1H;

## Contrast - Common

TR	2300 ms
TE 1	11.20 ms
Multi-echo spacing	17.18 ms
MTC	Off
Magn. preparation	None
TI	900 ms
Flip angle	11 deg
Fat suppr.	None

## Contrast - Dynamic

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	264
Pause after meas.	0.0 s

## Resolution - Common

FoV read	164 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
Base resolution	192
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off

## Resolution - iPAT

PAT mode	GRAPPA
Acc. factor PE	2
Ref. lines PE	52
Acc. factor 3D	1
Ref. lines 3D	16
Reference Scan Mode	GRE/separate

## Resolution - Filter Image

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off

## Resolution - Filter Rawdata

Raw filter	On
Elliptical filter	Off

## Geometry - Common

Slab group	1
Slabs	1
Position	R3.0 A57.9 H23.9 mm
Orientation	T > C7.0
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	16
FoV read	164 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
TR	2300 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

## Geometry - AutoAlign

Slab group	1
Position	R3.0 A57.9 H23.9 mm
Orientation	T > C7.0
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	R3.0 A57.9 H23.9
R	3.0 mm
A	57.9 mm
H	23.9 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	7.0
> S	0.0

## Geometry - Saturation

Saturation mode	Standard
Fat suppr.	None

## Geometry - Tim Planning Suite

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

**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

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

**System - Adjust Volume**

! Position	R3.0 A49.3 H23.9 mm
! Orientation	T > C7.0
! Rotation	0.00 deg
! A >> P	40 mm
! R >> L	52 mm
! F >> H	60 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	297.200543 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	594.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	1.01 ms
Bandwidth	1240 Hz/Px

**Sequence - Part 2**

EPI factor	16
Segmentation	6
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

**Sequence - Special**

PATRef FA	5 deg
-----------	-------

**Sequence - Special**

RF duration	2560 us
RF BWT product	30
Ernst T1	1300 ms
PATRef prep. shots	200
Volume dummy shots	0
Dummy Measurements	0
CHECK FLIP ANGLE!	On
Integrated PC	Off
Invert PE	Off
Water Exc.	-none-
Phase Correction	per Blade
EPI rise time factor	1.10
Mosaic DICOMs	On

**Sequence - Assistant**

Mode	Off
------	-----

\\USER\Development\Dr. Cohen-Adad\acdc\_7t\_spine\_075\_fmri\dzne\_ep3d\_fmri\_EPI10

TA: 10:17 PM: FIX Voxel size: 0.9×0.9×3.0 mmPAT: 2 Rel. SNR: 1.00 : ep 7fc60e8

## 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
Position	R3.0 A57.9 H23.9 mm
Orientation	T > C7.0
Phase enc. dir.	A >> P
AutoAlign	---
Slab Scale	-10 %
Slices per slab	16
FoV read	164 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
TR	2800 ms
TE 1	8.04 ms
Averages	1
Multi-echo Shots	1
Filter	Raw filter
Coil elements	1H;1H;1H;1H;1H;1H;1H;

## Contrast - Common

TR	2800 ms
TE 1	8.04 ms
Multi-echo spacing	11.32 ms
MTC	Off
Magn. preparation	None
TI	900 ms
Flip angle	9 deg
Fat suppr.	None

## Contrast - Dynamic

Averages	1
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	218
Pause after meas.	0.0 s

## Resolution - Common

FoV read	164 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
Base resolution	192
Phase resolution	100 %
Slice resolution	100 %
Phase partial Fourier	Off
Slice partial Fourier	Off
Interpolation	Off

## Resolution - iPAT

PAT mode	GRAPPA
Acc. factor PE	2
Ref. lines PE	52
Acc. factor 3D	1
Ref. lines 3D	16
Reference Scan Mode	GRE/separate

### Resolution - Filter Image

Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off

## Resolution - Filter Rawdata

Raw filter	On
Elliptical filter	Off

## Geometry - Common

Slab group	1
Slabs	1
Position	R3.0 A57.9 H23.9 mm
Orientation	T > C7.0
Phase enc. dir.	A >> P
Slab Scale	-10 %
Slices per slab	16
FoV read	164 mm
FoV phase	100.0 %
Slice thickness	3.00 mm
TR	2800 ms
Multi-slice mode	Interleaved
Series	Ascending
Multi-echo Shots	1

## Geometry - AutoAlign

Slab group	1
Position	R3.0 A57.9 H23.9 mm
Orientation	T > C7.0
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	R3.0 A57.9 H23.9
R	3.0 mm
A	57.9 mm
H	23.9 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	7.0
> S	0.0

## Geometry - Saturation

Saturation mode	Standard
Fat suppr.	None

## Geometry - Tim Planning Suite

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

**System - Miscellaneous**

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

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

**System - Adjust Volume**

! Position	R3.0 A49.3 H23.9 mm
! Orientation	T > C7.0
! Rotation	0.00 deg
! A >> P	40 mm
! R >> L	52 mm
! F >> H	60 mm
Reset	Off

**System - pTx Volumes**

B1 Shim mode	TrueForm
Excitation	Slab-sel.

**System - Tx/Rx**

Frequency 1H	297.200543 MHz
Correction factor	1
Gain	Low
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	594.000 V

**Sequence - Part 1**

Introduction	On
Dimension	3D
Elliptical scanning	Off
Reordering	Linear
Asymmetric echo	Off
Contrasts	1
Multi-slice mode	Interleaved
Echo spacing	1.03 ms
Bandwidth	1302 Hz/Px

**Sequence - Part 2**

EPI factor	10
Segmentation	10
RF pulse type	Normal
Gradient mode	Fast
Excitation	Slab-sel.
RF spoiling	On

**Sequence - Special**

PATRef FA	5 deg
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**Sequence - Special**

RF duration	2560 us
RF BWT product	30
Ernst T1	1300 ms
PATRef prep. shots	200
Volume dummy shots	0
Dummy Measurements	0
CHECK FLIP ANGLE!	On
Integrated PC	Off
Invert PE	Off
Water Exc.	-none-
Phase Correction	per Blade
EPI rise time factor	1.10
Mosaic DICOMs	On

**Sequence - Assistant**

Mode	Off
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\\USER\Development\Dr. Cohen-Adad\acdc_7t_spine_075_fMRI\gre_B0_sag
TA: 0:59 PM: FIX Voxel size: 1.1×1.1×2.0 mmRel. SNR: 1.00 : fm

## Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

## Routine

Slice group	1
Slices	20
Dist. factor	20 %
Position	R3.0 A46.0 F9.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	150.0 ms
TE 1	3.06 ms
TE 2	4.08 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	1H;1H;1H;1H;1H;1H;1H;1H

## Contrast - Common

TR	150.0 ms
TE 1	3.06 ms
TE 2	4.08 ms
MTC	Off
Flip angle	19 deg
Fat suppr.	None

## Contrast - Dynamic

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

## Resolution - Common

FoV read	200 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
Base resolution	190
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

### Resolution - Filter Image

Image Filter	Off
Distortion Corr.	Off

### Resolution - Filter Image

Prescan Normalize	Off
Normalize	Off
B1 filter	Off

## Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

## Geometry - Common

Slice group	1
Slices	20
Dist. factor	20 %
Position	R3.0 A46.0 F9.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	2.0 mm
TR	150.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice group	1
Position	R3.0 A46.0 F9.0 mm
Orientation	Sagittal
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	R3.0 A46.0 F9.0
R	3.0 mm
A	46.0 mm
F	9.0 mm
Initial Rotation	0.00 deg
Initial Orientation	Sagittal

## Geometry - Saturation

Fat suppr.	None
Special sat.	None

## Geometry - Tim Planning Suite

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

## System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---
Coil Select Mode	Default

**System - Adjustments**

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

**System - Adjust Volume**

! Position	R3.0 A49.3 H23.9 mm
! Orientation	T > C7.0
! Rotation	0.00 deg
! A >> P	40 mm
! R >> L	52 mm
! F >> H	60 mm
Reset	Off

**System - pTx Volumes**

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

Frequency 1H	297.200543 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	594.000 V

**Sequence - Part 1**

Introduction	On
Dimension	2D
Asymmetric echo	Off
Contrasts	2
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	797 Hz/Px

**Sequence - Part 2**

RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On

**Sequence - Assistant**

Mode	Off
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\\USER\Development\Dr. Cohen-Adad\acdc_7t_spine_075_fMRI\gre_B0_tra
TA: 0:59 PM: FIX Voxel size: 1.1×1.1×3.0 mmRel. SNR: 1.00 : fm

## Properties

Prio recon	Off
Load images to viewer	On
Inline movie	Off
Auto store images	On
Load images to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Auto close inline display	Off
Start measurement without further preparation	Off
Wait for user to start	Off
Start measurements	Single measurement

## Routine

Slice group	1
Slices	20
Dist. factor	20 %
Position	R3.0 A57.9 H23.9 mm
Orientation	T > C7.0
Phase enc. dir.	A >> P
AutoAlign	---
Phase oversampling	0 %
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	150.0 ms
TE 1	3.06 ms
TE 2	4.08 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	1H;1H;1H;1H;1H;1H;1H;1H

## Contrast - Common

TR	150.0 ms
TE 1	3.06 ms
TE 2	4.08 ms
MTC	Off
Flip angle	19 deg
Fat suppr.	None

## Contrast - Dynamic

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

## Resolution - Common

FoV read	200 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
Base resolution	190
Phase resolution	100 %
Phase partial Fourier	Off
Interpolation	Off

## Resolution - Filter Image

Image Filter	Off
Distortion Corr.	Off

## Resolution - Filter Image

Prescan Normalize	Off
Normalize	Off
B1 filter	Off

## Resolution - Filter Rawdata

Raw filter	Off
Elliptical filter	Off

## Geometry - Common

Slice group	1
Slices	20
Dist. factor	20 %
Position	R3.0 A57.9 H23.9 mm
Orientation	T > C7.0
Phase enc. dir.	A >> P
FoV read	200 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	150.0 ms
Multi-slice mode	Interleaved
Series	Interleaved
Concatenations	1

## Geometry - AutoAlign

Slice group	1
Position	R3.0 A57.9 H23.9 mm
Orientation	T > C7.0
Phase enc. dir.	A >> P
AutoAlign	---
Initial Position	R3.0 A57.9 H23.9
R	3.0 mm
A	57.9 mm
H	23.9 mm
Initial Rotation	0.00 deg
Initial Orientation	T > C
T > C	7.0
> S	0.0

## Geometry - Saturation

Fat suppr.	None
Special sat.	None

## Geometry - Tim Planning Suite

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

## System - Miscellaneous

Positioning mode	FIX
Table position	H
Table position	0 mm
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
Save uncombined	Off
Matrix Optimization	Off
AutoAlign	---

**System - Miscellaneous**

Coil Select Mode	Default
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**System - Adjustments**

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

**System - Adjust Volume**

! Position	R3.0 A49.3 H23.9 mm
! Orientation	T > C7.0
! Rotation	0.00 deg
! A >> P	40 mm
! R >> L	52 mm
! F >> H	60 mm
Reset	Off

**System - pTx Volumes**

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

Frequency 1H	297.200543 MHz
Correction factor	1
Gain	High
Img. Scale Cor.	1.000
Reset	Off
! Ref. amplitude 1H	594.000 V

**Sequence - Part 1**

Introduction	On
Dimension	2D
Asymmetric echo	Off
Contrasts	2
Flow comp.	No
Multi-slice mode	Interleaved
Bandwidth	797 Hz/Px

**Sequence - Part 2**

RF pulse type	Normal
Gradient mode	Fast
RF spoiling	On

**Sequence - Assistant**

Mode	Off
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