SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\Feinberglab\Suhyung\GRASE_IV\localizer_200V_nova

TA: 0:27   PAT: Off   Voxel size: 1.2×1.1×3.0 mm   Rel. SNR: 1.00   SIEMENS: gre

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	5
Dist. factor	20 %
Position	Isocenter
Orientation	Sagittal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Slice group 2	
Slices	5
Dist. factor	20 %
Position	Isocenter
Orientation	Coronal
Phase enc. dir.	R >> L
Rotation	0.00 deg
Slice group 3	
Slices	5
Dist. factor	20 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	280 mm
FoV phase	100.0 %
Slice thickness	3.0 mm
TR	10.0 ms
TE	3.00 ms
Averages	1
Concatenations	15
Filter	None
Coil elements	B4;M2,3;T1

Contrast

TD	0 ms
MTC	Off
Magn. preparation	None
Flip angle	10 deg
Fat suppr.	None
Water suppr.	None
SWI	Off
Averaging mode	Short term
Reconstruction	Magnitude
Measurements	1
Multiple series	Each measurement

Resolution

Base resolution	256
Phase resolution	90 %
Phase partial Fourier	6/8
Interpolation	On
PAT mode	None
Image Filter	Off
Distortion Corr.	Off
Prescan Normalize	Off
Normalize	Off
B1 filter	Off
Raw filter	Off
Elliptical filter	Off

Geometry

Multi-slice mode	Sequential
Series	Interleaved
Saturation mode	Standard
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off
Tim CT mode	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	On
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Off
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	200.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Physio

1st Signal/Mode	None
Segments	1
Tagging	None
Dark blood	Off
Resp. control	Off

Inline

Subtract	Off

Liver registration	Off
Std-Dev-Sag	Off
Std-Dev-Cor	Off
Std-Dev-Tra	Off
Std-Dev-Time	Off
MIP-Sag	Off
MIP-Cor	Off
MIP-Tra	Off
MIP-Time	Off
Save original images	On
Wash - In	Off
Wash - Out	Off
TTP	Off
PEI	Off
MIP - time	Off
MapIt	None
Contrasts	1

Sequence

Introduction	On
Dimension	2D
Phase stabilisation	Off
Asymmetric echo	Allowed
Bandwidth	320 Hz/Px
Flow comp.	No
RF pulse type	Normal
Gradient mode	Whisper
Excitation	Slice-sel.
RF spoiling	On

\\USER\Feinberglab\Suhyung\GRASE_IV\b1map_200V_TR1000_nova

TA: 1:09   Voxel size: 3.9×3.9×5.0 mm   Rel. SNR: 1.00   USER: b1map_658

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	10
Dist. factor	100 %
Position	R0.7 A36.4 H11.5
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
FoV read	250 mm
FoV phase	100.0 %
Slice thickness	5 mm
TR	1000 ms
TE 1	14 ms
TE 2	14 ms
Averages	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Flip angle 1	90 deg
Flip angle 2	120 deg
Flip angle 3	60 deg
Flip angle 4	135 deg
Flip angle 5	45 deg
Measurements	1

Resolution

Base resolution	64
Phase resolution	100 %
Raw filter	Off

Geometry

Series	Interleaved
Navigator 1	
Position	R2.0 P26.3 F10.8
Orientation	Transversal
Rotation	0.00 deg
Base size phase	50 mm
Base size read	119 mm
Thickness	50 mm
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Tune up
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	200.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	350 mm
A >> P	263 mm
F >> H	350 mm

Composing

Sequence

Contrasts	2
Bandwidth	260.416667 Hz/Px
T1 Compensation	Mean T1
Mean T1	1000.0 ms
Angles	1
Amplitude Weighting	Linear
Scale Bar	Enabled
Raw Data	Disabled

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Regular_PSF_Par8_SH

TA: 0:30   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	104 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	41.24 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None

Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	22 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	104 mm
A >> P	26 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1148 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	32
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	OFF
Maxwell compensation	Off

ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	40000
post-crusher1	40000
post-crusher2	40000
post-crusher3	40000
post-crusher4	40000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Regular_PSF_Par20_SH

TA: 0:30   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	20
FoV read	104 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	41.24 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None

Geometry

Prescan Normalize	Off
Raw filter	Off

Series	Interleaved
Sat. region 1	
Thickness	22 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	104 mm
A >> P	26 mm
F >> H	16 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1148 Hz/Px
Echo spacing	1 ms
Turbo factor	13
EPI factor	32
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	OFF
Maxwell compensation	Off

ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	40000
post-crusher1	40000
post-crusher2	40000
post-crusher3	40000
post-crusher4	40000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_VFL_PSF_SH

TA: 0:30   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	20
FoV read	104 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	41.24 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	10
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Pause after meas. 5	0.0 s
Pause after meas. 6	0.0 s
Pause after meas. 7	0.0 s
Pause after meas. 8	0.0 s
Pause after meas. 9	0.0 s
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None

Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	22 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	104 mm
A >> P	26 mm
F >> H	16 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1148 Hz/Px
Echo spacing	1 ms
Turbo factor	13
EPI factor	32
RF pulse type	Normal
Gradient mode	Fast
refocussing type	variable sinc
flip angle excit	90
phase encoding	OFF
Maxwell compensation	Off

ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	40000
post-crusher1	40000
post-crusher2	40000
post-crusher3	40000
post-crusher4	40000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_TE37_Regular_SH				
TA: 4:39	PAT: Off	Voxel size: 0.8×0.8×0.8 mm	Rel. SNR: 1.00	USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	96 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	41.32 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	93
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	96 mm
A >> P	24 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1148 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	32
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	38000

post-crusher1	38000
post-crusher2	38000
post-crusher3	38000
post-crusher4	38000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_TE37_VFL_SH	
TA: 4:39 PAT: Off Voxel size: 0.8×0.8×0.8 mm Rel. SNR: 1.00 USER: BP_grase_clean_IV_SH	

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	20
FoV read	94 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	37.7 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	93
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	94 mm
A >> P	24 mm
F >> H	16 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1 ms
Turbo factor	13
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	variable sinc
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	40000

post-crusher1	40000
post-crusher2	40000
post-crusher3	40000
post-crusher4	40000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Regular_MC_CGR_FA180

TA: 0:15   PAT: Off   Voxel size: 1.0×1.0×5.0 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_Regular_MC_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	112 mm
FoV phase	25.0 %
Slice thickness	5.0 mm
TR	3000 ms
TE	36.76 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	24 mm
Position	Isocenter
Orientation	Coronal

Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	112 mm
A >> P	28 mm
F >> H	5 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	2D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	37500
post-crusher1	37500

post-crusher2	37500
post-crusher3	37500
post-crusher4	37500

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Regular_MC_VGR_FA180

TA: 0:15   PAT: Off   Voxel size: 1.0×1.0×5.0 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_Regular_MC_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	112 mm
FoV phase	25.0 %
Slice thickness	5.0 mm
TR	3000 ms
TE	36.76 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	24 mm
Position	Isocenter
Orientation	Coronal

Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	112 mm
A >> P	28 mm
F >> H	5 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	2D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	37500
post-crusher1	25000

post-crusher2	50000
post-crusher3	25000
post-crusher4	50000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Regular_MC_CGR_FA140

TA: 0:15   PAT: Off   Voxel size: 1.0×1.0×5.0 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_Regular_MC_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	112 mm
FoV phase	25.0 %
Slice thickness	5.0 mm
TR	3000 ms
TE	36.76 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	140 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	24 mm
Position	Isocenter
Orientation	Coronal

Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	112 mm
A >> P	28 mm
F >> H	5 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	2D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	37500
post-crusher1	37500

post-crusher2	37500
post-crusher3	37500
post-crusher4	37500

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Regular_MC_VGR_FA140

TA: 0:15   PAT: Off   Voxel size: 1.0×1.0×5.0 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_Regular_MC_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	112 mm
FoV phase	25.0 %
Slice thickness	5.0 mm
TR	3000 ms
TE	36.76 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	140 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	24 mm
Position	Isocenter
Orientation	Coronal

Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	112 mm
A >> P	28 mm
F >> H	5 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	2D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	37500
post-crusher1	25000

post-crusher2	50000
post-crusher3	25000
post-crusher4	50000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_TE41_FA180_Regular_CGR

TA: 6:03　　PAT: Off　　Voxel size: 0.8×0.8×0.8 mm　　Rel. SNR: 1.00　　USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	90 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	37.74 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	121
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	37500

post-crusher1	37500
post-crusher2	37500
post-crusher3	37500
post-crusher4	37500

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_TE41_FA180_Regular_VGR

TA: 6:03   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	90 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	37.74 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	121
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	37500

post-crusher1	50000
post-crusher2	25000
post-crusher3	50000
post-crusher4	25000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_TE41_FA140_Regular_CGR

TA: 4:39	PAT: Off	Voxel size: 0.8×0.8×0.8 mm	Rel. SNR: 1.00	USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	96 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	41.32 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	140 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	93
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	96 mm
A >> P	24 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1148 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	32
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	38000

post-crusher1	38000
post-crusher2	38000
post-crusher3	38000
post-crusher4	38000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_TE41_FA180_Regular_VGR

TA: 4:39   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic	Off
segments	
Auto open inline display	Off
Start measurement without	On
further preparation	
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	96 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	41.32 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	93
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter

Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	96 mm
A >> P	24 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1148 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	32
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	38000

post-crusher1	50000
post-crusher2	26000
post-crusher3	50000
post-crusher4	26000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_TE41_FA140_Regular_VGR

TA: 4:39　　PAT: Off　　Voxel size: 0.8×0.8×0.8 mm　　Rel. SNR: 1.00　　USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	96 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	41.32 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	140 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	93
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	96 mm
A >> P	24 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1148 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	32
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	38000

post-crusher1	50000
post-crusher2	26000
post-crusher3	50000
post-crusher4	26000

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\Feinberglab\Suhyung\GRASE_IV\AV_ep2d_bold_sd1ipat2mb1_1mm_tSNR_32

TA: 1:12   PAT: 2   Voxel size: 1.0×1.0×1.0 mm   Rel. SNR: 1.00   USER: AV_ep2d_bold_sd_20140727

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic	Off
segments	
Auto open inline display	Off
Start measurement without	On
further preparation	
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	30
Dist. factor	0 %
Position	L0.0 P12.1 H17.5
Orientation	T > C-43.9
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	128 mm
FoV phase	100.0 %
Slice thickness	1.00 mm
TR	3000 ms
TE	24.4 ms
Multi-band accel. factor	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

MTC	Off
Magn. preparation	None
Flip angle	80 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	20
Delay in TR	0 ms
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Reference scan mode	Segmented
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

Geometry

Multi-slice mode	Interleaved
Series	Interleaved

Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	On
Assume Silicone	Off
! Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	L0.0 P12.1 H17.5
Orientation	T > C-43.9
Rotation	0.00 deg
R >> L	128 mm
A >> P	128 mm
F >> H	30 mm

Physio

1st Signal/Mode	None

BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Starting ignore meas	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
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active

Meas[20]	Active
Motion correction	Off
Spatial filter	Off

Sequence

Introduction	Off
Bandwidth	1086 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	1.03 ms

SIR accel. factor	1
EPI factor	128
Gradient mode	Normal
RF spoiling	Off

Excite pulse duration	5820 us
Slice multiplier	1
Fake MB factor for SB	1
No. of interleaved TEs	0
RF pulse shape	1
EPI noise scans	0
EPI full reference scan	0
SENSE1 coil combine	Off
Log physiology to file	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Readout slice trace	Off
Disable ramp sampling	Off
PF omits higher k-space	Off
FFT scale factor	0.02
Send B1 shim trigger	Never
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

\\USER\Feinberglab\Suhyung\GRASE_IV\AV_ep2d_bold_sd1ipat2mb1_p8mm_tSNR_32

TA: 4:54   PAT: 2   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: AV_ep2d_bold_sd_20140727

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	36
Dist. factor	0 %
Position	L0.0 P12.1 H17.5
Orientation	T > C-43.9
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	108 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	3000 ms
TE	25.4 ms
Multi-band accel. factor	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

MTC	Off
Magn. preparation	None
Flip angle	80 deg
Fat suppr.	Fat sat.
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	95
Delay in TR	0 ms
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Reference scan mode	Single-shot
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

Geometry

Multi-slice mode	Interleaved
Series	Interleaved

Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	On
Assume Silicone	Off
! Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	L0.0 P12.1 H17.5
Orientation	T > C-43.9
Rotation	0.00 deg
R >> L	108 mm
A >> P	108 mm
F >> H	29 mm

Physio

1st Signal/Mode	None

BOLD

GLM Statistics	Off
Dynamic t-maps	Off
Starting ignore meas	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
Meas[16]	Active
Meas[17]	Active
Meas[18]	Active
Meas[19]	Active

Meas[20]	Active
Motion correction	Off
Spatial filter	Off

Sequence

Introduction	Off
Bandwidth	1086 Hz/Px
Flow comp.	No
Free echo spacing	Off
Echo spacing	1.05 ms
SIR accel. factor	1
EPI factor	128
Gradient mode	Normal
RF spoiling	Off
Excite pulse duration	5820 us
Slice multiplier	1
Fake MB factor for SB	1
No. of interleaved TEs	0
RF pulse shape	1
EPI noise scans	0
EPI full reference scan	0
SENSE1 coil combine	Off
Log physiology to file	Off
Invert RO/PE polarity	Off
Save reduced raw data	Off
Readout slice trace	Off
Disable ramp sampling	Off
PF omits higher k-space	Off
FFT scale factor	0.02
Send B1 shim trigger	Never
Triggering scheme	Standard
Starting ignore meas	0
Paradigm size	2
Multiplier	1
Step [1]	1
Step [2]	0

\\USER\Feinberglab\Suhyung\GRASE_IV\cmrr_mbep2d_se

TA: 4:54   PAT: 2   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: cmrr_mbep2d_se

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic	Off
segments	
Auto open inline display	Off
Start measurement without	On
further preparation	
Wait for user to start	Off
Start measurements	single

Routine

Slice group 1	
Slices	30
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
FoV read	108 mm
FoV phase	100.0 %
Slice thickness	0.80 mm
TR	3000 ms
TE	38.8 ms
Multi-band accel. factor	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

MTC	Off
Magn. preparation	None
Flip angle	90 deg
Refocus flip angle	180 deg
Fat suppr.	Fat sat.
Grad. rev. fat suppr.	Enabled
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	95
Delay in TR	0 ms
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Phase partial Fourier	6/8
Interpolation	Off
PAT mode	GRAPPA
Accel. factor PE	2
Ref. lines PE	24
Reference scan mode	Single-shot
Distortion Corr.	Off
Prescan Normalize	Off
Raw filter	On
Elliptical filter	Off
Hamming	Off

Geometry

Multi-slice mode	Interleaved
Series	Interleaved
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combine Mode	Sum of Squares
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	230.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	108 mm
A >> P	108 mm
F >> H	25 mm

Physio

1st Signal/Mode	None

BOLD

GLM Statistics	On
Dynamic t-maps	On
Starting ignore meas	0
Ignore after transition	0
Model transition states	On
Temp. highpass filter	On
Threshold	4.00
Paradigm size	10
Meas[1]	Baseline
Meas[2]	Baseline
Meas[3]	Baseline
Meas[4]	Baseline
Meas[5]	Baseline
Meas[6]	Active
Meas[7]	Active
Meas[8]	Active
Meas[9]	Active
Meas[10]	Active
Motion correction	Off
Spatial filter	Off

Sequence

Introduction	Off
Contrasts	1
Bandwidth	1086 Hz/Px
Free echo spacing	Off

Echo spacing	1.03 ms
EPI factor	128
Gradient mode	Fast
Excite pulse duration	2560 us
Refocus pulse duration	5120 us
Slice multiplier	1
SENSE1 coil combine	Off
Invert RO/PE polarity	Off
PF omits higher k-space	Off
Force equal slice timing	Off
FFT scale factor	1.00
Physio recording	Off
Triggering scheme	Standard

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_TE37_STE_Regular_SH

TA: 6:03   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	L0.0 P37.9 F40.3
Orientation	T > C-39.8
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	96 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	41.32 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	121
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	21 mm
Position	L0.0 P37.9 F40.3
Orientation	C > T39.8
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	250.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	L0.0 P37.9 F40.3
Orientation	T > C-39.8
Rotation	0.00 deg
R >> L	96 mm
A >> P	24 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1148 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	32
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	38000

post-crusher1	38000
post-crusher2	38000
post-crusher3	38000
post-crusher4	38000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_TE37_nSTE_Regular_SH	
TA: 6:03 PAT: Off Voxel size: 0.8×0.8×0.8 mm Rel. SNR: 1.00 USER: BP_grase_clean_IV_SH	

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	L0.0 P37.9 F40.3
Orientation	T > C-39.8
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	96 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	41.32 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	121
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	128
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	21 mm
Position	L0.0 P37.9 F40.3
Orientation	C > T39.8
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	FIX
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
! Ref. amplitude 1H	250.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	L0.0 P37.9 F40.3
Orientation	T > C-39.8
Rotation	0.00 deg
R >> L	96 mm
A >> P	24 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1148 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	32
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0
refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	38000

post-crusher1	50000
post-crusher2	26000
post-crusher3	50000
post-crusher4	26000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_FA180_Regular_SH

TA: 0:15   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	94 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	37.7 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved

Sat. region 1

Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	94 mm
A >> P	24 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0

refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	40000
post-crusher1	40000
post-crusher2	40000
post-crusher3	40000
post-crusher4	40000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_FA180_nSTE_CurrentPT_SH

TA: 0:15   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	94 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	37.7 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved

Sat. region 1

Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	94 mm
A >> P	24 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0

refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	40000
post-crusher1	20000
post-crusher2	40000
post-crusher3	20000
post-crusher4	40000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_FA140_Regular_SH

TA: 0:15   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	94 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	37.7 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	140 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved

Sat. region 1

Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	94 mm
A >> P	24 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0

refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	40000
post-crusher1	40000
post-crusher2	40000
post-crusher3	40000
post-crusher4	40000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_FA140_nSTE_CurrentPT_SH

TA: 0:15   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	94 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	37.7 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	140 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved

Sat. region 1

Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	94 mm
A >> P	24 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0

refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	40000
post-crusher1	20000
post-crusher2	40000
post-crusher3	20000
post-crusher4	40000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_FA160_Regular_SH

TA: 0:15   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	94 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	37.7 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	160 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved

Sat. region 1

Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	94 mm
A >> P	24 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0

refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	40000
post-crusher1	40000
post-crusher2	40000
post-crusher3	40000
post-crusher4	40000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_FA160_nSTE_CurrentPT_SH

TA: 0:15   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	94 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	37.7 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	160 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	5
Pause after meas. 1	0.0 s
Pause after meas. 2	0.0 s
Pause after meas. 3	0.0 s
Pause after meas. 4	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved

Sat. region 1

Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	94 mm
A >> P	24 mm
F >> H	7 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1 ms
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16.0

refoc BWTP	8.0
Opposite Polarity Crusher	Off
pre-crusher	40000
post-crusher1	20000
post-crusher2	40000
post-crusher3	20000
post-crusher4	40000

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Reg_ForComparison

TA: 0:00	PAT: Off	Voxel size: 0.8×0.8×1.5 mm	Rel. SNR: 1.00	USER: BP_grase_clean_IV_Regular_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	90 mm
FoV phase	25.0 %
Slice thickness	1.5 mm
TR	3000 ms
TE	37.58 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	30
Pause after meas. 1	0 s
Pause after meas. 2	0 s
Pause after meas. 3	0 s
Pause after meas. 4	0 s
Pause after meas. 5	0 s
Pause after meas. 6	0 s
Pause after meas. 7	0 s
Pause after meas. 8	0 s
Pause after meas. 9	0 s
Pause after meas. 10	0 s
Pause after meas. 11	0 s
Pause after meas. 12	0 s
Pause after meas. 13	0 s
Pause after meas. 14	0 s
Pause after meas. 15	0 s
Pause after meas. 16	0 s
Pause after meas. 17	0 s
Pause after meas. 18	0 s
Pause after meas. 19	0 s
Pause after meas. 20	0 s
Pause after meas. 21	0 s
Pause after meas. 22	0 s
Pause after meas. 23	0 s
Pause after meas. 24	0 s
Pause after meas. 25	0 s
Pause after meas. 26	0 s
Pause after meas. 27	0 s
Pause after meas. 28	0 s
Pause after meas. 29	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	12 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px

Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast

refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16
refoc BWTP	8
T2 Validation	On
pre-crusher	37500
post-crusher1	37500
post-crusher2	37500
post-crusher3	37500
post-crusher4	37500
Variable Flip Angle 01	0
Variable Flip Angle 02	0
Variable Flip Angle 03	0
Variable Flip Angle 04	0
Variable Flip Angle 05	0
Variable Flip Angle 06	0
Variable Flip Angle 07	0
Variable Flip Angle 08	0
Variable Flip Angle 09	0
Variable Flip Angle 10	0
Variable Flip Angle 11	0
Variable Flip Angle 12	0
Variable Flip Angle 13	0
Variable Flip Angle 14	0
Variable Flip Angle 15	0
Variable Flip Angle 16	0
Variable Flip Angle 17	0
Variable Flip Angle 18	0
Variable Flip Angle 19	0
Variable Flip Angle 20	0

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Reg_nSTE_T2Map

TA: 0:00   PAT: Off   Voxel size: 0.8×0.8×1.5 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_Regular_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	90 mm
FoV phase	25.0 %
Slice thickness	1.5 mm
TR	3000 ms
TE	37.58 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	30
Pause after meas. 1	0 s
Pause after meas. 2	0 s
Pause after meas. 3	0 s
Pause after meas. 4	0 s
Pause after meas. 5	0 s
Pause after meas. 6	0 s
Pause after meas. 7	0 s
Pause after meas. 8	0 s
Pause after meas. 9	0 s
Pause after meas. 10	0 s
Pause after meas. 11	0 s
Pause after meas. 12	0 s
Pause after meas. 13	0 s
Pause after meas. 14	0 s
Pause after meas. 15	0 s
Pause after meas. 16	0 s
Pause after meas. 17	0 s
Pause after meas. 18	0 s
Pause after meas. 19	0 s
Pause after meas. 20	0 s
Pause after meas. 21	0 s
Pause after meas. 22	0 s
Pause after meas. 23	0 s
Pause after meas. 24	0 s
Pause after meas. 25	0 s
Pause after meas. 26	0 s
Pause after meas. 27	0 s
Pause after meas. 28	0 s
Pause after meas. 29	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	12 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px

Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast

refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16
refoc BWTP	8
T2 Validation	On
pre-crusher	37500
post-crusher1	50000
post-crusher2	25000
post-crusher3	50000
post-crusher4	25000
Variable Flip Angle 01	0
Variable Flip Angle 02	0
Variable Flip Angle 03	0
Variable Flip Angle 04	0
Variable Flip Angle 05	0
Variable Flip Angle 06	0
Variable Flip Angle 07	0
Variable Flip Angle 08	0
Variable Flip Angle 09	0
Variable Flip Angle 10	0
Variable Flip Angle 11	0
Variable Flip Angle 12	0
Variable Flip Angle 13	0
Variable Flip Angle 14	0
Variable Flip Angle 15	0
Variable Flip Angle 16	0
Variable Flip Angle 17	0
Variable Flip Angle 18	0
Variable Flip Angle 19	0
Variable Flip Angle 20	0

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Reg

TA: 0:00   PAT: Off   Voxel size: 0.8×0.8×1.5 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_Regular_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	90 mm
FoV phase	25.0 %
Slice thickness	1.5 mm
TR	3000 ms
TE	37.58 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	122
Pause after meas.	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	12 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16
refoc BWTP	8
T2 Validation	Off
pre-crusher	37500
post-crusher1	37500

post-crusher2	37500
post-crusher3	37500
post-crusher4	37500
Variable Flip Angle 01	0
Variable Flip Angle 02	0
Variable Flip Angle 03	0
Variable Flip Angle 04	0
Variable Flip Angle 05	0
Variable Flip Angle 06	0
Variable Flip Angle 07	0
Variable Flip Angle 08	0
Variable Flip Angle 09	0
Variable Flip Angle 10	0
Variable Flip Angle 11	0
Variable Flip Angle 12	0
Variable Flip Angle 13	0
Variable Flip Angle 14	0
Variable Flip Angle 15	0
Variable Flip Angle 16	0
Variable Flip Angle 17	0
Variable Flip Angle 18	0
Variable Flip Angle 19	0
Variable Flip Angle 20	0

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Reg_nSTE

TA: 0:00   PAT: Off   Voxel size: 0.8×0.8×1.5 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_Regular_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	90 mm
FoV phase	25.0 %
Slice thickness	1.5 mm
TR	3000 ms
TE	37.58 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	122
Pause after meas.	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	12 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16
refoc BWTP	8
T2 Validation	Off
pre-crusher	37500
post-crusher1	50000

post-crusher2	25000
post-crusher3	50000
post-crusher4	25000
Variable Flip Angle 01	0
Variable Flip Angle 02	0
Variable Flip Angle 03	0
Variable Flip Angle 04	0
Variable Flip Angle 05	0
Variable Flip Angle 06	0
Variable Flip Angle 07	0
Variable Flip Angle 08	0
Variable Flip Angle 09	0
Variable Flip Angle 10	0
Variable Flip Angle 11	0
Variable Flip Angle 12	0
Variable Flip Angle 13	0
Variable Flip Angle 14	0
Variable Flip Angle 15	0
Variable Flip Angle 16	0
Variable Flip Angle 17	0
Variable Flip Angle 18	0
Variable Flip Angle 19	0
Variable Flip Angle 20	0

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Reg_VFA	

TA: 0:00　　　PAT: Off　　　Voxel size: 0.8×0.8×1.5 mm　　　Rel. SNR: 1.00　　　USER: BP_grase_clean_IV_Regular_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	20
FoV read	90 mm
FoV phase	25.0 %
Slice thickness	1.5 mm
TR	3000 ms
TE	37.58 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	122
Pause after meas.	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	30 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	13
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	variable sinc
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16
refoc BWTP	8
T2 Validation	Off
pre-crusher	37500
post-crusher1	37500

post-crusher2	37500
post-crusher3	37500
post-crusher4	37500
Variable Flip Angle 01	0
Variable Flip Angle 02	0
Variable Flip Angle 03	0
Variable Flip Angle 04	0
Variable Flip Angle 05	0
Variable Flip Angle 06	0
Variable Flip Angle 07	0
Variable Flip Angle 08	0
Variable Flip Angle 09	0
Variable Flip Angle 10	0
Variable Flip Angle 11	0
Variable Flip Angle 12	0
Variable Flip Angle 13	0
Variable Flip Angle 14	0
Variable Flip Angle 15	0
Variable Flip Angle 16	0
Variable Flip Angle 17	0
Variable Flip Angle 18	0
Variable Flip Angle 19	0
Variable Flip Angle 20	0

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Reg_nSTE_VFA

TA: 0:00   PAT: Off   Voxel size: 0.8×0.8×1.5 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_Regular_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	20
FoV read	90 mm
FoV phase	25.0 %
Slice thickness	1.5 mm
TR	3000 ms
TE	37.58 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	122
Pause after meas.	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	30 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	13
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	variable sinc
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	single
prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16
refoc BWTP	8
T2 Validation	Off
pre-crusher	37500
post-crusher1	50000

post-crusher2	25000
post-crusher3	50000
post-crusher4	25000
Variable Flip Angle 01	0
Variable Flip Angle 02	0
Variable Flip Angle 03	0
Variable Flip Angle 04	0
Variable Flip Angle 05	0
Variable Flip Angle 06	0
Variable Flip Angle 07	0
Variable Flip Angle 08	0
Variable Flip Angle 09	0
Variable Flip Angle 10	0
Variable Flip Angle 11	0
Variable Flip Angle 12	0
Variable Flip Angle 13	0
Variable Flip Angle 14	0
Variable Flip Angle 15	0
Variable Flip Angle 16	0
Variable Flip Angle 17	0
Variable Flip Angle 18	0
Variable Flip Angle 19	0
Variable Flip Angle 20	0

SIEMENS MAGNETOM Investigational_Device_7T syngo MR B17

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Reg_PSF_20slc

TA: 0:00   PAT: Off   Voxel size: 0.8×0.8×1.5 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_Regular_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	20
FoV read	90 mm
FoV phase	25.0 %
Slice thickness	1.5 mm
TR	3000 ms
TE	37.58 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	10
Pause after meas. 1	0 s
Pause after meas. 2	0 s
Pause after meas. 3	0 s
Pause after meas. 4	0 s
Pause after meas. 5	0 s
Pause after meas. 6	0 s
Pause after meas. 7	0 s
Pause after meas. 8	0 s
Pause after meas. 9	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None

Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	30 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	13
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	OFF
Maxwell compensation	Off
ICE program	single

prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16
refoc BWTP	8
T2 Validation	Off
pre-crusher	37500
post-crusher1	37500
post-crusher2	37500
post-crusher3	37500
post-crusher4	37500
Variable Flip Angle 01	0
Variable Flip Angle 02	0
Variable Flip Angle 03	0
Variable Flip Angle 04	0
Variable Flip Angle 05	0
Variable Flip Angle 06	0
Variable Flip Angle 07	0
Variable Flip Angle 08	0
Variable Flip Angle 09	0
Variable Flip Angle 10	0
Variable Flip Angle 11	0
Variable Flip Angle 12	0
Variable Flip Angle 13	0
Variable Flip Angle 14	0
Variable Flip Angle 15	0
Variable Flip Angle 16	0
Variable Flip Angle 17	0
Variable Flip Angle 18	0
Variable Flip Angle 19	0
Variable Flip Angle 20	0

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Reg_PSF

TA: 0:00   PAT: Off   Voxel size: 0.8×0.8×1.5 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_Regular_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	90 mm
FoV phase	25.0 %
Slice thickness	1.5 mm
TR	3000 ms
TE	37.58 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	10
Pause after meas. 1	0 s
Pause after meas. 2	0 s
Pause after meas. 3	0 s
Pause after meas. 4	0 s
Pause after meas. 5	0 s
Pause after meas. 6	0 s
Pause after meas. 7	0 s
Pause after meas. 8	0 s
Pause after meas. 9	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None

Prescan Normalize / Raw filter

Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	12 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	5
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	OFF
Maxwell compensation	Off
ICE program	single

prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16
refoc BWTP	8
T2 Validation	Off
pre-crusher	37500
post-crusher1	37500
post-crusher2	37500
post-crusher3	37500
post-crusher4	37500
Variable Flip Angle 01	0
Variable Flip Angle 02	0
Variable Flip Angle 03	0
Variable Flip Angle 04	0
Variable Flip Angle 05	0
Variable Flip Angle 06	0
Variable Flip Angle 07	0
Variable Flip Angle 08	0
Variable Flip Angle 09	0
Variable Flip Angle 10	0
Variable Flip Angle 11	0
Variable Flip Angle 12	0
Variable Flip Angle 13	0
Variable Flip Angle 14	0
Variable Flip Angle 15	0
Variable Flip Angle 16	0
Variable Flip Angle 17	0
Variable Flip Angle 18	0
Variable Flip Angle 19	0
Variable Flip Angle 20	0

\\USER\Feinberglab\Suhyung\GRASE_IV\BP_grase_clean_IV_Reg_VFA_PSF

TA: 0:00   PAT: Off   Voxel size: 0.8×0.8×1.5 mm   Rel. SNR: 1.00   USER: BP_grase_clean_IV_Regular_SH

Properties

Prio Recon	Off
Before measurement	
After measurement	
Load to viewer	On
Inline movie	Off
Auto store images	On
Load to stamp segments	Off
Load images to graphic segments	Off
Auto open inline display	Off
Start measurement without further preparation	On
Wait for user to start	Off
Start measurements	single

Routine

Slab group 1	
Slabs	1
Dist. factor	0 %
Position	Isocenter
Orientation	Transversal
Phase enc. dir.	A >> P
Rotation	0 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	20
FoV read	90 mm
FoV phase	25.0 %
Slice thickness	1.5 mm
TR	3000 ms
TE	37.58 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	180 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	10
Pause after meas. 1	0 s
Pause after meas. 2	0 s
Pause after meas. 3	0 s
Pause after meas. 4	0 s
Pause after meas. 5	0 s
Pause after meas. 6	0 s
Pause after meas. 7	0 s
Pause after meas. 8	0 s
Pause after meas. 9	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	5/8
Interpolation	Off
PAT mode	None

Prescan Normalize / Raw filter

Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	20 mm
Position	Isocenter
Orientation	Coronal
Special sat.	None
Table position	H
Table position	0 mm
Inline Composing	Off

System

T1	On
M2	On
B4	On
M3	On
V32	Off
Positioning mode	REF
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Save uncombined	Off
Coil Combine Mode	Adaptive Combine
AutoAlign	---
Auto Coil Select	Default
Shim mode	Standard
Adjust with body coil	Off
Confirm freq. adjustment	Off
Assume Silicone	Off
? Ref. amplitude 1H	0.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	30 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	13
EPI factor	28
RF pulse type	Normal
Gradient mode	Fast
refocussing type	variable sinc
flip angle excit	90
phase encoding	OFF
Maxwell compensation	Off
ICE program	single

prepscans	0
excite duration	2560
refoc duration	2560
excite BWTP	16
refoc BWTP	8
T2 Validation	Off
pre-crusher	37500
post-crusher1	37500
post-crusher2	37500
post-crusher3	37500
post-crusher4	37500
Variable Flip Angle 01	0
Variable Flip Angle 02	0
Variable Flip Angle 03	0
Variable Flip Angle 04	0
Variable Flip Angle 05	0
Variable Flip Angle 06	0
Variable Flip Angle 07	0
Variable Flip Angle 08	0
Variable Flip Angle 09	0
Variable Flip Angle 10	0
Variable Flip Angle 11	0
Variable Flip Angle 12	0
Variable Flip Angle 13	0
Variable Flip Angle 14	0
Variable Flip Angle 15	0
Variable Flip Angle 16	0
Variable Flip Angle 17	0
Variable Flip Angle 18	0
Variable Flip Angle 19	0
Variable Flip Angle 20	0