\\USER\Feinberglab\Suhyung\GRASE w/ CS\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 w/ CS\BP_grase_IV_CS_VFA_24SL

TA: 0:00   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_IV_CS_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	24
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	20.26 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	92
Pause after meas.	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	20 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	24
EPI factor	12
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
actual ETL	10
excite duration	2560
refoc duration	2560
excite BWTP	12
refoc BWTP	8
Variable Flip Angle 01	98
Variable Flip Angle 02	58

Variable Flip Angle 03	53
Variable Flip Angle 04	51
Variable Flip Angle 05	55
Variable Flip Angle 06	60
Variable Flip Angle 07	67
Variable Flip Angle 08	76
Variable Flip Angle 09	90
Variable Flip Angle 10	133
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Crusher Gr	0

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_grase_IV_CS_VFA_24SL	
TA: 0:00 PAT: Off Voxel size: 0.8×0.8×0.8 mm Rel. SNR: 1.00 USER: BP_grase_IV_CS_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	24
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	20.26 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	92
Pause after meas.	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	20 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	24
EPI factor	12
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
actual ETL	10
excite duration	2560
refoc duration	2560
excite BWTP	12
refoc BWTP	8
Variable Flip Angle 01	82
Variable Flip Angle 02	47

Variable Flip Angle 03	43
Variable Flip Angle 04	42
Variable Flip Angle 05	45
Variable Flip Angle 06	49
Variable Flip Angle 07	57
Variable Flip Angle 08	66
Variable Flip Angle 09	82
Variable Flip Angle 10	130
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Crusher Gr	0

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_grase_IV_CS_VFA_24SL			
TA: 0:00	PAT: Off	Voxel size: 0.8×0.8×0.8 mm	Rel. SNR: 1.00	USER: BP_grase_IV_CS_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	24
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	20.26 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	92
Pause after meas.	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	20 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	24
EPI factor	12
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
actual ETL	10
excite duration	2560
refoc duration	2560
excite BWTP	12
refoc BWTP	8
Variable Flip Angle 01	68
Variable Flip Angle 02	38

Variable Flip Angle 03	36
Variable Flip Angle 04	35
Variable Flip Angle 05	38
Variable Flip Angle 06	42
Variable Flip Angle 07	48
Variable Flip Angle 08	58
Variable Flip Angle 09	75
Variable Flip Angle 10	126
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Crusher Gr	0

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_grase_IV_CS_CFA_24SL

TA: 0:00   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_IV_CS_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	24
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	22.82 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	92
Pause after meas.	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	20 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	24
EPI factor	12
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
actual ETL	10
excite duration	2560
refoc duration	2560
excite BWTP	12
refoc BWTP	8
Variable Flip Angle 01	180
Variable Flip Angle 02	180

Variable Flip Angle 03	180
Variable Flip Angle 04	180
Variable Flip Angle 05	180
Variable Flip Angle 06	180
Variable Flip Angle 07	180
Variable Flip Angle 08	180
Variable Flip Angle 09	180
Variable Flip Angle 10	180
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Crusher Gr	0

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_grase_IV_CS_VFA_36SL

TA: 0:00   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_IV_CS_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	36
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	20.26 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	92
Pause after meas.	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	29 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	36
EPI factor	12
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
actual ETL	14
excite duration	2560
refoc duration	2560
excite BWTP	12
refoc BWTP	8
Variable Flip Angle 01	83
Variable Flip Angle 02	46

Variable Flip Angle 03	42
Variable Flip Angle 04	40
Variable Flip Angle 05	41
Variable Flip Angle 06	43
Variable Flip Angle 07	46
Variable Flip Angle 08	50
Variable Flip Angle 09	54
Variable Flip Angle 10	59
Variable Flip Angle 11	65
Variable Flip Angle 12	74
Variable Flip Angle 13	89
Variable Flip Angle 14	135
Crusher Gr	0

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_grase_IV_CS_VFA_36SL	
TA: 0:00 PAT: Off Voxel size: 0.8×0.8×0.8 mm Rel. SNR: 1.00 USER: BP_grase_IV_CS_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	36
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	20.26 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	92
Pause after meas.	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	29 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	36
EPI factor	12
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
actual ETL	14
excite duration	2560
refoc duration	2560
excite BWTP	12
refoc BWTP	8
Variable Flip Angle 01	69
Variable Flip Angle 02	38

Variable Flip Angle 03	35
Variable Flip Angle 04	33
Variable Flip Angle 05	34
Variable Flip Angle 06	35
Variable Flip Angle 07	38
Variable Flip Angle 08	41
Variable Flip Angle 09	46
Variable Flip Angle 10	51
Variable Flip Angle 11	58
Variable Flip Angle 12	67
Variable Flip Angle 13	82
Variable Flip Angle 14	130
Crusher Gr	0

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_grase_IV_CS_VFA_36SL			
TA: 0:00	PAT: Off	Voxel size: 0.8×0.8×0.8 mm	Rel. SNR: 1.00	USER: BP_grase_IV_CS_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	36
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.8 mm
TR	3000 ms
TE	20.26 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	92
Pause after meas.	0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	29 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Turbo factor	36
EPI factor	12
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
actual ETL	14
excite duration	2560
refoc duration	2560
excite BWTP	12
refoc BWTP	8
Variable Flip Angle 01	57
Variable Flip Angle 02	31

Variable Flip Angle 03	29
Variable Flip Angle 04	27
Variable Flip Angle 05	29
Variable Flip Angle 06	30
Variable Flip Angle 07	32
Variable Flip Angle 08	35
Variable Flip Angle 09	40
Variable Flip Angle 10	45
Variable Flip Angle 11	53
Variable Flip Angle 12	64
Variable Flip Angle 13	82
Variable Flip Angle 14	136
Crusher Gr	0

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_grase_IV_CS_CFA_36SL

TA: 4:36   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_grase_IV_CS_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	36
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 mm
TR	3000 ms
TE	22.82 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	92
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	29 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1.2 ms
Turbo factor	36
EPI factor	12
RF pulse type	Normal
Gradient mode	Fast
refocussing type	sinc 2560
flip angle excit	90
phase encoding	ON
Maxwell compensation	Off
ICE program	Mosaic
prepscans	0
actual ETL	6
excite duration	2560
refoc duration	2560
excite BWTP	12.0
refoc BWTP	8.0
Variable Flip Angle 01	180

Variable Flip Angle 02	180
Variable Flip Angle 03	180
Variable Flip Angle 04	180
Variable Flip Angle 05	180
Variable Flip Angle 06	180
Variable Flip Angle 07	180
Variable Flip Angle 08	180
Variable Flip Angle 09	180
Variable Flip Angle 10	180
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Crusher Gr	40000

\\USER\Feinberglab\Suhyung\GRASE w/ CS\For_SetupFOV_36Slices

TA: 6.0 s	PAT: Off	Voxel size: 0.8×0.8×0.8 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	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	36
FoV read	89.6 mm
FoV phase	32.1 %
Slice thickness	0.80 mm
TR	3000 ms
TE	45.34 ms
Averages	1
Concatenations	1
Filter	None
Coil elements	B4;M2,3;T1

Contrast

Magn. preparation	None
Flip angle	110 deg
Fat suppr.	Fat sat.
Fat sat. mode	Strong
Averaging mode	Long term
Reconstruction	Magnitude
Measurements	2
Pause after meas. 1	0.0 s
Multiple series	Off

Resolution

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

Geometry

Series	Interleaved
Sat. region 1	
Thickness	25 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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	29 mm
F >> H	29 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	36
EPI factor	36
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	12.0
refoc BWTP	8.0
T2 Validation	Off
pre-crusher	40000

post-crusher1	40000
post-crusher2	40000
post-crusher3	40000
post-crusher4	40000
Variable Flip Angle 01	180
Variable Flip Angle 02	180
Variable Flip Angle 03	180
Variable Flip Angle 04	180
Variable Flip Angle 05	180
Variable Flip Angle 06	180
Variable Flip Angle 07	180
Variable Flip Angle 08	180
Variable Flip Angle 09	180
Variable Flip Angle 10	180
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_grase_IV_Regular

TA: 10:00   PAT: Off   Voxel size: 0.8×0.8×0.8 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	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 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	200
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	6/8
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	220.000 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	6
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	12.0
refoc BWTP	8.0
T2 Validation	Off
pre-crusher	40000

post-crusher1	40000
post-crusher2	40000
post-crusher3	40000
post-crusher4	40000
Variable Flip Angle 01	180
Variable Flip Angle 02	180
Variable Flip Angle 03	180
Variable Flip Angle 04	180
Variable Flip Angle 05	180
Variable Flip Angle 06	180
Variable Flip Angle 07	180
Variable Flip Angle 08	180
Variable Flip Angle 09	180
Variable Flip Angle 10	180
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_grase_IV_VFA

TA: 10:00	PAT: Off	Voxel size: 0.8×0.8×0.8 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	0.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	18
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 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	200
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	6/8
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	15 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	14
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	12.0
refoc BWTP	8.0
T2 Validation	Off
pre-crusher	40000

post-crusher1	40000
post-crusher2	40000
post-crusher3	40000
post-crusher4	40000
Variable Flip Angle 01	90
Variable Flip Angle 02	49
Variable Flip Angle 03	45
Variable Flip Angle 04	43
Variable Flip Angle 05	43
Variable Flip Angle 06	43
Variable Flip Angle 07	42
Variable Flip Angle 08	43
Variable Flip Angle 09	46
Variable Flip Angle 10	51
Variable Flip Angle 11	58
Variable Flip Angle 12	67
Variable Flip Angle 13	77
Variable Flip Angle 14	90
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_CS_VFA_24SL

TA: 10:00   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_GRASE_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	24
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 mm
TR	3000 ms
TE	22.82 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	200
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	20 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1.2 ms
Turbo factor	24
EPI factor	12
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	12.0
refoc BWTP	8.0
Variable Flip Angle 01	82
Variable Flip Angle 02	47

Variable Flip Angle 03	43
Variable Flip Angle 04	42
Variable Flip Angle 05	45
Variable Flip Angle 06	49
Variable Flip Angle 07	57
Variable Flip Angle 08	66
Variable Flip Angle 09	82
Variable Flip Angle 10	130
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	CS
actual ETL	10
Which areas?	Motor Cortex

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_CS_VFA_36SL

TA: 2:00   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_GRASE_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	36
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 mm
TR	2000 ms
TE	24.1 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	60
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
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Pause after meas. 16	0.0 s
Pause after meas. 17	0.0 s
Pause after meas. 18	0.0 s
Pause after meas. 19	0.0 s

Pause after meas. 20	0.0 s
Pause after meas. 21	0.0 s
Pause after meas. 22	0.0 s
Pause after meas. 23	0.0 s
Pause after meas. 24	0.0 s
Pause after meas. 25	0.0 s
Pause after meas. 26	0.0 s
Pause after meas. 27	0.0 s
Pause after meas. 28	0.0 s
Pause after meas. 29	0.0 s
Pause after meas. 30	0.0 s
Pause after meas. 31	0.0 s
Pause after meas. 32	0.0 s
Pause after meas. 33	0.0 s
Pause after meas. 34	0.0 s
Pause after meas. 35	0.0 s
Pause after meas. 36	0.0 s
Pause after meas. 37	0.0 s
Pause after meas. 38	0.0 s
Pause after meas. 39	0.0 s
Pause after meas. 40	0.0 s
Pause after meas. 41	0.0 s
Pause after meas. 42	0.0 s
Pause after meas. 43	0.0 s
Pause after meas. 44	0.0 s
Pause after meas. 45	0.0 s
Pause after meas. 46	0.0 s
Pause after meas. 47	0.0 s
Pause after meas. 48	0.0 s
Pause after meas. 49	0.0 s
Pause after meas. 50	0.0 s
Pause after meas. 51	0.0 s
Pause after meas. 52	0.0 s
Pause after meas. 53	0.0 s
Pause after meas. 54	0.0 s
Pause after meas. 55	0.0 s
Pause after meas. 56	0.0 s
Pause after meas. 57	0.0 s
Pause after meas. 58	0.0 s
Pause after meas. 59	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	29 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1.2 ms

Turbo factor	36
EPI factor	12
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	3840
excite BWTP	12.0
refoc BWTP	8.0
Variable Flip Angle 01	83
Variable Flip Angle 02	46
Variable Flip Angle 03	42
Variable Flip Angle 04	40
Variable Flip Angle 05	41
Variable Flip Angle 06	43
Variable Flip Angle 07	46
Variable Flip Angle 08	50
Variable Flip Angle 09	54
Variable Flip Angle 10	59
Variable Flip Angle 11	65
Variable Flip Angle 12	74
Variable Flip Angle 13	89
Variable Flip Angle 14	135
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	CS
actual ETL	14
Which areas?	Motor Cortex

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_CS_CFA_18SL

TA: 8:00   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_GRASE_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	18
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 mm
TR	3000 ms
TE	24.1 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	160
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	15 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1.2 ms
Turbo factor	18
EPI factor	12
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	3840
excite BWTP	12.0
refoc BWTP	8.0
Variable Flip Angle 01	180
Variable Flip Angle 02	180

Variable Flip Angle 03	180
Variable Flip Angle 04	180
Variable Flip Angle 05	180
Variable Flip Angle 06	180
Variable Flip Angle 07	180
Variable Flip Angle 08	180
Variable Flip Angle 09	180
Variable Flip Angle 10	180
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	CS
actual ETL	6
Which areas?	Motor Cortex

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_Regular

TA: 6.0 s   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_GRASE_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	36
FoV read	89.6 mm
FoV phase	32.1 %
Slice thickness	0.80 mm
TR	3000 ms
TE	49.7 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	2
Pause after meas. 1	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	6/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	28 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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	29 mm
F >> H	29 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1.1 ms
Turbo factor	27
EPI factor	36
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	12.0
refoc BWTP	8.0
Variable Flip Angle 01	180
Variable Flip Angle 02	180

Variable Flip Angle 03	180
Variable Flip Angle 04	180
Variable Flip Angle 05	180
Variable Flip Angle 06	180
Variable Flip Angle 07	180
Variable Flip Angle 08	180
Variable Flip Angle 09	180
Variable Flip Angle 10	180
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	Regular
actual ETL	6
Which areas?	Visual Cortex

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_grase_IV_Regular

TA: 3.0 s   PAT: Off   Voxel size: 1.0×1.0×1.0 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.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	22
FoV read	112.0 mm
FoV phase	25.0 %
Slice thickness	1.00 mm
TR	1500 ms
TE	36.94 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	2
Pause after meas. 1	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	6/8
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	26 mm
Position	Isocenter
Orientation	Sagittal
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
A >> P	112 mm
R >> L	28 mm
F >> H	22 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	17
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	12.0
refoc BWTP	8.0
T2 Validation	Off
pre-crusher	40000

post-crusher1	40000
post-crusher2	40000
post-crusher3	40000
post-crusher4	40000
Variable Flip Angle 01	180
Variable Flip Angle 02	180
Variable Flip Angle 03	180
Variable Flip Angle 04	180
Variable Flip Angle 05	180
Variable Flip Angle 06	180
Variable Flip Angle 07	180
Variable Flip Angle 08	180
Variable Flip Angle 09	180
Variable Flip Angle 10	180
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_CS_CFA_22SL_0.8mm

TA: 9:48   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_GRASE_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.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	22
FoV read	82.0 mm
FoV phase	37.3 %
Slice thickness	0.80 mm
TR	1500 ms
TE	32.72 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	392
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	102
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	30 mm
Position	Isocenter
Orientation	Sagittal
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
A >> P	82 mm
R >> L	31 mm
F >> H	18 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1140 Hz/Px
Echo spacing	1.1 ms
Turbo factor	22
EPI factor	20
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	3840
excite BWTP	12.0
refoc BWTP	8.0
Variable Flip Angle 01	180
Variable Flip Angle 02	180

Variable Flip Angle 03	180
Variable Flip Angle 04	180
Variable Flip Angle 05	180
Variable Flip Angle 06	180
Variable Flip Angle 07	180
Variable Flip Angle 08	180
Variable Flip Angle 09	180
Variable Flip Angle 10	180
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	CS
actual ETL	8
Which areas?	Visual Cortex

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_CS_CFA_22SL_1.0mm

TA: 9:48   PAT: Off   Voxel size: 1.0×1.0×1.0 mm   Rel. SNR: 1.00   USER: BP_GRASE_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.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	22
FoV read	102.0 mm
FoV phase	37.3 %
Slice thickness	1.00 mm
TR	1500 ms
TE	32.08 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	392
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	102
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	37 mm
Position	Isocenter
Orientation	Sagittal
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
A >> P	102 mm
R >> L	38 mm
F >> H	22 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1140 Hz/Px
Echo spacing	1.1 ms
Turbo factor	22
EPI factor	20
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	3840
excite BWTP	12.0
refoc BWTP	8.0
Variable Flip Angle 01	180
Variable Flip Angle 02	180

Variable Flip Angle 03	180
Variable Flip Angle 04	180
Variable Flip Angle 05	180
Variable Flip Angle 06	180
Variable Flip Angle 07	180
Variable Flip Angle 08	180
Variable Flip Angle 09	180
Variable Flip Angle 10	180
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	CS
actual ETL	8
Which areas?	Visual Cortex

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_CS_CFA_22SL_1.2mm

TA: 9:48   PAT: Off   Voxel size: 1.2×1.2×1.2 mm   Rel. SNR: 1.00   USER: BP_GRASE_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.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	22
FoV read	122.4 mm
FoV phase	37.3 %
Slice thickness	1.20 mm
TR	1500 ms
TE	31.52 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	392
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	102
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	45 mm
Position	Isocenter
Orientation	Sagittal
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
A >> P	123 mm
R >> L	46 mm
F >> H	27 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1140 Hz/Px
Echo spacing	1.1 ms
Turbo factor	22
EPI factor	20
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	3840
excite BWTP	12.0
refoc BWTP	8.0
Variable Flip Angle 01	180
Variable Flip Angle 02	180

Variable Flip Angle 03	180
Variable Flip Angle 04	180
Variable Flip Angle 05	180
Variable Flip Angle 06	180
Variable Flip Angle 07	180
Variable Flip Angle 08	180
Variable Flip Angle 09	180
Variable Flip Angle 10	180
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	CS
actual ETL	8
Which areas?	Visual Cortex

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_CS_VFA_36SL_1.2mm

TA: 9:48   PAT: Off   Voxel size: 1.2×1.2×1.2 mm   Rel. SNR: 1.00   USER: BP_GRASE_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.	R >> L
Rotation	90.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	36
FoV read	122.4 mm
FoV phase	37.3 %
Slice thickness	1.20 mm
TR	1500 ms
TE	31.52 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	392
Pause after meas.	0.0 s
Multiple series	Off

Resolution

Base resolution	102
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
Interpolation	Off
PAT mode	None
Prescan Normalize	Off
Raw filter	Off

Geometry

Series	Interleaved
Sat. region 1	
Thickness	45 mm
Position	Isocenter
Orientation	Sagittal
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	90.00 deg
A >> P	123 mm
R >> L	46 mm
F >> H	44 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1140 Hz/Px
Echo spacing	1.1 ms
Turbo factor	36
EPI factor	20
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	3840
excite BWTP	12.0
refoc BWTP	8.0
Variable Flip Angle 01	180
Variable Flip Angle 02	180

Variable Flip Angle 03	180
Variable Flip Angle 04	180
Variable Flip Angle 05	180
Variable Flip Angle 06	180
Variable Flip Angle 07	180
Variable Flip Angle 08	180
Variable Flip Angle 09	180
Variable Flip Angle 10	180
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	CS
actual ETL	14
Which areas?	Motor Cortex

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_grase_IV_Regular_PA

TA: 2:00   PAT: Off   Voxel size: 0.8×0.8×0.8 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.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	8
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 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	40
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
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Pause after meas. 16	0.0 s
Pause after meas. 17	0.0 s
Pause after meas. 18	0.0 s
Pause after meas. 19	0.0 s
Pause after meas. 20	0.0 s
Pause after meas. 21	0.0 s
Pause after meas. 22	0.0 s
Pause after meas. 23	0.0 s
Pause after meas. 24	0.0 s
Pause after meas. 25	0.0 s
Pause after meas. 26	0.0 s
Pause after meas. 27	0.0 s
Pause after meas. 28	0.0 s
Pause after meas. 29	0.0 s
Pause after meas. 30	0.0 s
Pause after meas. 31	0.0 s
Pause after meas. 32	0.0 s
Pause after meas. 33	0.0 s
Pause after meas. 34	0.0 s
Pause after meas. 35	0.0 s
Pause after meas. 36	0.0 s
Pause after meas. 37	0.0 s
Pause after meas. 38	0.0 s
Pause after meas. 39	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	6/8
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	180.00 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	6
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	12.0
refoc BWTP	8.0
T2 Validation	Off
pre-crusher	40000
post-crusher1	40000
post-crusher2	40000
post-crusher3	40000
post-crusher4	40000
Variable Flip Angle 01	90
Variable Flip Angle 02	49
Variable Flip Angle 03	45
Variable Flip Angle 04	43
Variable Flip Angle 05	43
Variable Flip Angle 06	43
Variable Flip Angle 07	42
Variable Flip Angle 08	43
Variable Flip Angle 09	46
Variable Flip Angle 10	51
Variable Flip Angle 11	58
Variable Flip Angle 12	67
Variable Flip Angle 13	77
Variable Flip Angle 14	90
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_grase_IV_VFA_PA

TA: 2:00   PAT: Off   Voxel size: 0.8×0.8×0.8 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.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	18
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 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	40
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
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Pause after meas. 16	0.0 s
Pause after meas. 17	0.0 s
Pause after meas. 18	0.0 s
Pause after meas. 19	0.0 s
Pause after meas. 20	0.0 s
Pause after meas. 21	0.0 s
Pause after meas. 22	0.0 s
Pause after meas. 23	0.0 s
Pause after meas. 24	0.0 s
Pause after meas. 25	0.0 s
Pause after meas. 26	0.0 s
Pause after meas. 27	0.0 s
Pause after meas. 28	0.0 s
Pause after meas. 29	0.0 s
Pause after meas. 30	0.0 s
Pause after meas. 31	0.0 s
Pause after meas. 32	0.0 s
Pause after meas. 33	0.0 s
Pause after meas. 34	0.0 s
Pause after meas. 35	0.0 s
Pause after meas. 36	0.0 s
Pause after meas. 37	0.0 s
Pause after meas. 38	0.0 s
Pause after meas. 39	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	6/8
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	180.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	15 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	14
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	12.0
refoc BWTP	8.0
T2 Validation	Off
pre-crusher	40000
post-crusher1	40000
post-crusher2	40000
post-crusher3	40000
post-crusher4	40000
Variable Flip Angle 01	90
Variable Flip Angle 02	49
Variable Flip Angle 03	45
Variable Flip Angle 04	43
Variable Flip Angle 05	43
Variable Flip Angle 06	43
Variable Flip Angle 07	42
Variable Flip Angle 08	43
Variable Flip Angle 09	46
Variable Flip Angle 10	51
Variable Flip Angle 11	58
Variable Flip Angle 12	67
Variable Flip Angle 13	77
Variable Flip Angle 14	90
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_CS_CFA_18SL_PA

TA: 2:00   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_GRASE_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.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	18
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 mm
TR	3000 ms
TE	22.82 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	40
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
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Pause after meas. 16	0.0 s
Pause after meas. 17	0.0 s
Pause after meas. 18	0.0 s
Pause after meas. 19	0.0 s
Pause after meas. 20	0.0 s
Pause after meas. 21	0.0 s
Pause after meas. 22	0.0 s
Pause after meas. 23	0.0 s
Pause after meas. 24	0.0 s
Pause after meas. 25	0.0 s
Pause after meas. 26	0.0 s
Pause after meas. 27	0.0 s
Pause after meas. 28	0.0 s
Pause after meas. 29	0.0 s
Pause after meas. 30	0.0 s
Pause after meas. 31	0.0 s
Pause after meas. 32	0.0 s
Pause after meas. 33	0.0 s
Pause after meas. 34	0.0 s
Pause after meas. 35	0.0 s
Pause after meas. 36	0.0 s
Pause after meas. 37	0.0 s
Pause after meas. 38	0.0 s
Pause after meas. 39	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	180.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	15 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1.2 ms
Turbo factor	18
EPI factor	12
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	12.0
refoc BWTP	8.0
Variable Flip Angle 01	180
Variable Flip Angle 02	180
Variable Flip Angle 03	180
Variable Flip Angle 04	180
Variable Flip Angle 05	180
Variable Flip Angle 06	180
Variable Flip Angle 07	180
Variable Flip Angle 08	180
Variable Flip Angle 09	180
Variable Flip Angle 10	180
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	CS
actual ETL	6
Which areas?	Visual Cortex

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_CS_VFA_24SL_PA

TA: 2:00   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_GRASE_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.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	24
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 mm
TR	3000 ms
TE	22.82 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	40
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
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Pause after meas. 16	0.0 s
Pause after meas. 17	0.0 s
Pause after meas. 18	0.0 s
Pause after meas. 19	0.0 s
Pause after meas. 20	0.0 s
Pause after meas. 21	0.0 s
Pause after meas. 22	0.0 s
Pause after meas. 23	0.0 s
Pause after meas. 24	0.0 s
Pause after meas. 25	0.0 s
Pause after meas. 26	0.0 s
Pause after meas. 27	0.0 s
Pause after meas. 28	0.0 s
Pause after meas. 29	0.0 s
Pause after meas. 30	0.0 s
Pause after meas. 31	0.0 s
Pause after meas. 32	0.0 s
Pause after meas. 33	0.0 s
Pause after meas. 34	0.0 s
Pause after meas. 35	0.0 s
Pause after meas. 36	0.0 s
Pause after meas. 37	0.0 s
Pause after meas. 38	0.0 s
Pause after meas. 39	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	180.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	20 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1.2 ms
Turbo factor	24
EPI factor	12
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	12.0
refoc BWTP	8.0
Variable Flip Angle 01	82
Variable Flip Angle 02	47
Variable Flip Angle 03	43
Variable Flip Angle 04	42
Variable Flip Angle 05	45
Variable Flip Angle 06	49
Variable Flip Angle 07	57
Variable Flip Angle 08	66
Variable Flip Angle 09	82
Variable Flip Angle 10	130
Variable Flip Angle 11	180
Variable Flip Angle 12	180
Variable Flip Angle 13	180
Variable Flip Angle 14	180
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	CS
actual ETL	10
Which areas?	Visual Cortex

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_CS_VFA_36SL_PA

TA: 2:00　　PAT: Off　　Voxel size: 0.8×0.8×0.8 mm　　Rel. SNR: 1.00　　USER: BP_GRASE_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.	P >> A
Rotation	180.00 deg
Phase oversampling	0 %
Slice oversampling	0.0 %
Slices per slab	36
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 mm
TR	3000 ms
TE	22.82 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	40
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
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Pause after meas. 16	0.0 s
Pause after meas. 17	0.0 s
Pause after meas. 18	0.0 s
Pause after meas. 19	0.0 s
Pause after meas. 20	0.0 s
Pause after meas. 21	0.0 s
Pause after meas. 22	0.0 s
Pause after meas. 23	0.0 s
Pause after meas. 24	0.0 s
Pause after meas. 25	0.0 s
Pause after meas. 26	0.0 s
Pause after meas. 27	0.0 s
Pause after meas. 28	0.0 s
Pause after meas. 29	0.0 s
Pause after meas. 30	0.0 s
Pause after meas. 31	0.0 s
Pause after meas. 32	0.0 s
Pause after meas. 33	0.0 s
Pause after meas. 34	0.0 s
Pause after meas. 35	0.0 s
Pause after meas. 36	0.0 s
Pause after meas. 37	0.0 s
Pause after meas. 38	0.0 s
Pause after meas. 39	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	180.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	29 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1.2 ms
Turbo factor	36
EPI factor	12
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	12.0
refoc BWTP	8.0
Variable Flip Angle 01	83
Variable Flip Angle 02	46
Variable Flip Angle 03	42
Variable Flip Angle 04	40
Variable Flip Angle 05	41
Variable Flip Angle 06	43
Variable Flip Angle 07	46
Variable Flip Angle 08	50
Variable Flip Angle 09	54
Variable Flip Angle 10	59
Variable Flip Angle 11	65
Variable Flip Angle 12	74
Variable Flip Angle 13	89
Variable Flip Angle 14	135
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	CS
actual ETL	14
Which areas?	Visual Cortex

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_CS_VFA_36SL

TA: 2:00   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_GRASE_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	36
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 mm
TR	3000 ms
TE	22.82 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	40
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
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Pause after meas. 16	0.0 s
Pause after meas. 17	0.0 s
Pause after meas. 18	0.0 s
Pause after meas. 19	0.0 s

Pause after meas. 20	0.0 s
Pause after meas. 21	0.0 s
Pause after meas. 22	0.0 s
Pause after meas. 23	0.0 s
Pause after meas. 24	0.0 s
Pause after meas. 25	0.0 s
Pause after meas. 26	0.0 s
Pause after meas. 27	0.0 s
Pause after meas. 28	0.0 s
Pause after meas. 29	0.0 s
Pause after meas. 30	0.0 s
Pause after meas. 31	0.0 s
Pause after meas. 32	0.0 s
Pause after meas. 33	0.0 s
Pause after meas. 34	0.0 s
Pause after meas. 35	0.0 s
Pause after meas. 36	0.0 s
Pause after meas. 37	0.0 s
Pause after meas. 38	0.0 s
Pause after meas. 39	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	29 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1.2 ms
Turbo factor	36
EPI factor	12
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	12.0
refoc BWTP	8.0
Variable Flip Angle 01	83
Variable Flip Angle 02	46
Variable Flip Angle 03	42
Variable Flip Angle 04	40
Variable Flip Angle 05	41
Variable Flip Angle 06	43
Variable Flip Angle 07	46
Variable Flip Angle 08	50
Variable Flip Angle 09	54
Variable Flip Angle 10	59
Variable Flip Angle 11	65
Variable Flip Angle 12	74
Variable Flip Angle 13	89
Variable Flip Angle 14	135
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	CS
actual ETL	12
Which areas?	Motor Cortex

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_CS_VFA_36SL

TA: 2:00   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_GRASE_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	36
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 mm
TR	3000 ms
TE	24.1 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	40
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
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Pause after meas. 16	0.0 s
Pause after meas. 17	0.0 s
Pause after meas. 18	0.0 s
Pause after meas. 19	0.0 s
Pause after meas. 20	0.0 s
Pause after meas. 21	0.0 s
Pause after meas. 22	0.0 s
Pause after meas. 23	0.0 s
Pause after meas. 24	0.0 s
Pause after meas. 25	0.0 s
Pause after meas. 26	0.0 s
Pause after meas. 27	0.0 s
Pause after meas. 28	0.0 s
Pause after meas. 29	0.0 s
Pause after meas. 30	0.0 s
Pause after meas. 31	0.0 s
Pause after meas. 32	0.0 s
Pause after meas. 33	0.0 s
Pause after meas. 34	0.0 s
Pause after meas. 35	0.0 s
Pause after meas. 36	0.0 s
Pause after meas. 37	0.0 s
Pause after meas. 38	0.0 s
Pause after meas. 39	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	29 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1.2 ms
Turbo factor	36
EPI factor	12
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	3840
excite BWTP	12.0
refoc BWTP	8.0
Variable Flip Angle 01	83
Variable Flip Angle 02	46
Variable Flip Angle 03	42
Variable Flip Angle 04	40
Variable Flip Angle 05	41
Variable Flip Angle 06	43
Variable Flip Angle 07	46
Variable Flip Angle 08	50
Variable Flip Angle 09	54
Variable Flip Angle 10	59
Variable Flip Angle 11	65
Variable Flip Angle 12	74
Variable Flip Angle 13	89
Variable Flip Angle 14	135
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	CS
actual ETL	12
Which areas?	Motor Cortex

\\USER\Feinberglab\Suhyung\GRASE w/ CS\BP_GRASE_CS_VFA_36SL

TA: 2:00   PAT: Off   Voxel size: 0.8×0.8×0.8 mm   Rel. SNR: 1.00   USER: BP_GRASE_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	36
FoV read	89.6 mm
FoV phase	25.0 %
Slice thickness	0.80 mm
TR	3000 ms
TE	25.38 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	40
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
Pause after meas. 10	0.0 s
Pause after meas. 11	0.0 s
Pause after meas. 12	0.0 s
Pause after meas. 13	0.0 s
Pause after meas. 14	0.0 s
Pause after meas. 15	0.0 s
Pause after meas. 16	0.0 s
Pause after meas. 17	0.0 s
Pause after meas. 18	0.0 s
Pause after meas. 19	0.0 s

Pause after meas. 20	0.0 s
Pause after meas. 21	0.0 s
Pause after meas. 22	0.0 s
Pause after meas. 23	0.0 s
Pause after meas. 24	0.0 s
Pause after meas. 25	0.0 s
Pause after meas. 26	0.0 s
Pause after meas. 27	0.0 s
Pause after meas. 28	0.0 s
Pause after meas. 29	0.0 s
Pause after meas. 30	0.0 s
Pause after meas. 31	0.0 s
Pause after meas. 32	0.0 s
Pause after meas. 33	0.0 s
Pause after meas. 34	0.0 s
Pause after meas. 35	0.0 s
Pause after meas. 36	0.0 s
Pause after meas. 37	0.0 s
Pause after meas. 38	0.0 s
Pause after meas. 39	0.0 s
Multiple series	Off

Resolution

Base resolution	112
Phase resolution	100 %
Slice resolution	100 %
Slice partial Fourier	Off
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	220.000 V
Adjustment Tolerance	Auto
Adjust volume	
Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
R >> L	90 mm
A >> P	23 mm
F >> H	29 mm

Physio

1st Signal/Mode	None

Composing

Sequence

Introduction	Off
Dimension	3D
Reordering	Centric
Contrasts	1
Bandwidth	1144 Hz/Px
Echo spacing	1.2 ms
Turbo factor	36
EPI factor	12
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	5120
excite BWTP	12.0
refoc BWTP	8.0
Variable Flip Angle 01	83
Variable Flip Angle 02	46
Variable Flip Angle 03	42
Variable Flip Angle 04	40
Variable Flip Angle 05	41
Variable Flip Angle 06	43
Variable Flip Angle 07	46
Variable Flip Angle 08	50
Variable Flip Angle 09	54
Variable Flip Angle 10	59
Variable Flip Angle 11	65
Variable Flip Angle 12	74
Variable Flip Angle 13	89
Variable Flip Angle 14	135
Variable Flip Angle 15	180
Variable Flip Angle 16	180
Variable Flip Angle 17	180
Variable Flip Angle 18	180
Variable Flip Angle 19	180
Variable Flip Angle 20	180
Regular or CS	CS
actual ETL	12
Which areas?	Motor Cortex

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\\USER
Feinberglab
Suhyung
GRASE w/ CS
localizer_200V_nova
For Effect of VFA Schemes
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BP_grase_IV_CS_VFA_24SL
BP_grase_IV_CS_VFA_24SL
BP_grase_IV_CS_CFA_24SL
BP_grase_IV_CS_VFA_36SL
BP_grase_IV_CS_VFA_36SL
BP_grase_IV_CS_VFA_36SL
BP_grase_IV_CS_CFA_36SL
For Comparisons with Current Techinques in M1
For_SetupFOV_36Slices
BP_grase_IV_Regular
BP_grase_IV_VFA
BP_GRASE_CS_VFA_24SL
BP_GRASE_CS_VFA_36SL
BP_GRASE_CS_CFA_18SL
BP_GRASE_Regular
For STG Functional Data
BP_grase_IV_Regular
BP_GRASE_CS_CFA_22SL_0.8mm
BP_GRASE_CS_CFA_22SL_1.0mm
BP_GRASE_CS_CFA_22SL_1.2mm
BP_GRASE_CS_VFA_36SL_1.2mm
--flipped PE dir--
BP_grase_IV_Regular_PA
BP_grase_IV_VFA_PA
BP_GRASE_CS_CFA_18SL_PA
BP_GRASE_CS_VFA_24SL_PA
BP_GRASE_CS_VFA_36SL_PA
BP_GRASE_CS_VFA_36SL
BP_GRASE_CS_VFA_36SL
BP_GRASE_CS_VFA_36SL