

Protocol: adult\_head\_BRAIN ORBITS

LOC	<b>PATIENT POSITION</b>		<b>IMAGING PARAMETERS</b>		LOC
	Patient Entry	Head First	Imaging Mode	2D	
	Patient Position	Supine	Pulse Sequence	Gradient Echo	
	Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	Seq, Fast	
	<b>SCAN TIMING</b>		<b>SCAN RANGE</b>		
	Plane	3-PLANE	FOV	30.0	
	Series Description	LOC	Slice Thickness	5.0	
	Number of Echoes	1	Slice Spacing	5.0	
	<b>IMAGE ENHANCE</b>		<b>ACQ TIMING</b>		
	Filter Choice	None	Freq	256	
	<b>GATING/TRIGGER</b>		Phase	128	
	Auto Trigger Type	Off	Freq DIR	Unswap	
	<b>MULTI-PHASE</b>		NEX	1.00	
	Seperate Series	0	Phase FOV	1.00	
	Mask Phase	0	Auto Shim	Auto	
	Mask Pause	0	Phase Correction	No	
	<b>DIFFUSION</b>		<b>FMRI</b>		
	Recon All Images	On	PSD Trigger	Internal	
	<b>CONTRAST</b>		Slice Order	Interleaved	
	Contrast Yes/No	No	View Order	Bottom/Up	
		# of Repetitions REST	0		
		# of Repetitions ACTIVE	0		
		<b>SAT</b>			
		Tag Type	None		
		<b>TRICKS</b>			
		Pause On/Off	On		
		Auto Subtract	0		
		Auto SCIC	Off		
		<b>OTHERS</b>			
		Protocol Notes	<i>This protocol is built based on Express coil suite. Please select the appropriate coil which is available in your site and optimize the parameters accordingly.</i>		

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	FC, EDR, TRF, Fast, FR, ARC, MRF
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	Sag T2 frFSE	FOV	24.0
<b>SCAN TIMING</b>		Slice Thickness	5.0
Flip Angle	160	Slice Spacing	1.0
TE	102.0	<b>ACQ TIMING</b>	
Number of Echoes	1	Freq	320
TR	4980.0	Phase	256
Echo Train Length	21	Freq DIR	S/I
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (S)
<b>IMAGE ENHANCE</b>		NEX	2.00
Filter Choice	None	Phase FOV	1.00
<b>GATING/TRIGGER</b>		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	Yes
<b>FMRI</b>		Flow Direction Compensation	Freq
PSD Trigger	Internal	<b>USER CVS</b>	
Slice Order	Interleaved	User CV8	1.00
View Order	Bottom/Up	User CV21	1.00
# of Repetitions REST	0	TR Min	2500.0
# of Repetitions ACTIVE	0	TR Max	5000.0
<b>SAT</b>		<b>MULTI-PHASE</b>	
Tag Type	None	Seperate Series	0
<b>TRICKS</b>		Mask Phase	0
Pause On/Off	On	Mask Pause	0
Auto Subtract	0	<b>DIFFUSION</b>	
Auto SCIC	Off	Recon All Images	On
		<b>CONTRAST</b>	
		Contrast Yes/No	No

Sag T2 frFSE

Sag T2 frFSE

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Spin Echo
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	EPI, DIFF, Asset
Plane	AXIAL	<b>SCAN RANGE</b>	
Series Description	AX DWI	FOV	24.0
<b>SCAN TIMING</b>		Slice Thickness	5.0
TE	Minimum	Slice Spacing	1.0
Number of Echoes	1	<b>ACQ TIMING</b>	
TR	6188.0	Freq	128
Number of Shots	1	Phase	160
<b>IMAGE ENHANCE</b>		Freq DIR	R/L
Filter Choice	None	Phase FOV	1.00
<b>GATING/TRIGGER</b>		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	Yes
<b>FMRI</b>		<b>USER CVS</b>	
PSD Trigger	Internal	User CV0	1.00
Slice Order	Interleaved	User CV1	1.00
View Order	Bottom/Up	User CV5	1.00
# of Repetitions REST	0	User CV7	1.00
# of Repetitions ACTIVE	0	User CV17	1.00
<b>SAT</b>		TR Min	4000.0
Tag Type	None	TR Max	8000.0
<b>TRICKS</b>		<b>MULTI-PHASE</b>	
Pause On/Off	On	Seperate Series	0
Auto Subtract	0	Mask Phase	0
Auto SCIC	2	Mask Pause	0
		<b>DIFFUSION</b>	
		Optimized TE	Yes
		Diffusion Directions	All
		Number of Diffusion Directions	3
		Number of T2 Images	1
		Dual Spin Echo	Off
		Recon All Images	On
		<b>CONTRAST</b>	
		Contrast Yes/No	No

AX DWI

AX DWI

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	FC, EDR, TRF, Fast, ZIP512, T2flair
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	Ax T2 FLAIR	FOV	24.0
<b>SCAN TIMING</b>		Slice Thickness	5.0
Flip Angle	160	Slice Spacing	1.0
TE	120.0	<b>ACQ TIMING</b>	
Number of Echoes	1	Freq	288
TR	9000.0	Phase	192
TI	2360	Freq DIR	A/P
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (A)
<b>IMAGE ENHANCE</b>		NEX	1.00
Filter Choice	None	Auto Shim	Auto
<b>GATING/TRIGGER</b>		Phase Correction	Yes
Auto Trigger Type	Off	Flow Direction Compensation	Slice
<b>FMRI</b>		<b>USER CVS</b>	
PSD Trigger	Internal	User CV3	2.00
Slice Order	Interleaved	User CV11	1.00
View Order	Bottom/Up	User CV21	1.00
# of Repetitions REST	0	<b>MULTI-PHASE</b>	
# of Repetitions ACTIVE	0	Seperate Series	0
<b>SAT</b>		Mask Phase	0
SAT Location	S	Mask Pause	0
SAT Location	I	<b>DIFFUSION</b>	
Tag Type	None	Recon All Images	On
<b>TRICKS</b>		<b>CONTRAST</b>	
Pause On/Off	On	Contrast Yes/No	No
Auto Subtract	0		
Auto SCIC	2		

Ax T2 FLAIR

Ax T2 FLAIR

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Gradient Echo
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	EDR
Plane	OBLIQUE	SCAN RANGE	
Series Description	Ax T2* GRE	FOV	24.0
SCAN TIMING		Slice Thickness	5.0
Flip Angle	25	Slice Spacing	1.0
TE	15.0	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	500.0	Phase	192
Receiver Bandwidth	19.23	Freq DIR	A/P
IMAGE ENHANCE		NEX	1.00
Filter Choice	None	Phase FOV	1.00
GATING/TRIGGER		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	No
FMRI		USER CVS	
PSD Trigger	Internal	TR Min	200.0
Slice Order	Interleaved	TR Max	11000.0
View Order	Bottom/Up	MULTI-PHASE	
# of Repetitions REST	0	Seperate Series	0
# of Repetitions ACTIVE	0	Mask Phase	0
SAT		Mask Pause	0
Tag Type	None	DIFFUSION	
TRICKS		Recon All Images	On
Pause On/Off	On	CONTRAST	
Auto Subtract	0	Contrast Yes/No	No
Auto SCIC	2		

Ax T2\* GRE

Ax T2\* GRE

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	FC, EDR, TRF, Fast, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	Ax T1 FSE	FOV	24.0
SCAN TIMING		Slice Thickness	5.0
Flip Angle	160	Slice Spacing	1.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	499.0	Phase	192
Echo Train Length	2	Freq DIR	A/P
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (A)
IMAGE ENHANCE		NEX	1.00
Filter Choice	None	# of Acq. Before Pause	0
GATING/TRIGGER		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
FMRI		Phase Correction	No
PSD Trigger	Internal	Flow Direction Compensation	Slice
Slice Order	Interleaved	USER CVS	
View Order	Bottom/Up	TR Min	350.0
# of Repetitions REST	0	TR Max	750.0
# of Repetitions ACTIVE	0	MULTI-PHASE	
SAT		Seperate Series	0
SAT Location	I	Mask Phase	0
Tag Type	None	Mask Pause	0
TRICKS		DIFFUSION	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	CONTRAST	
Auto SCIC	2	Contrast Yes/No	No

Ax T1 FSE

Ax T1 FSE

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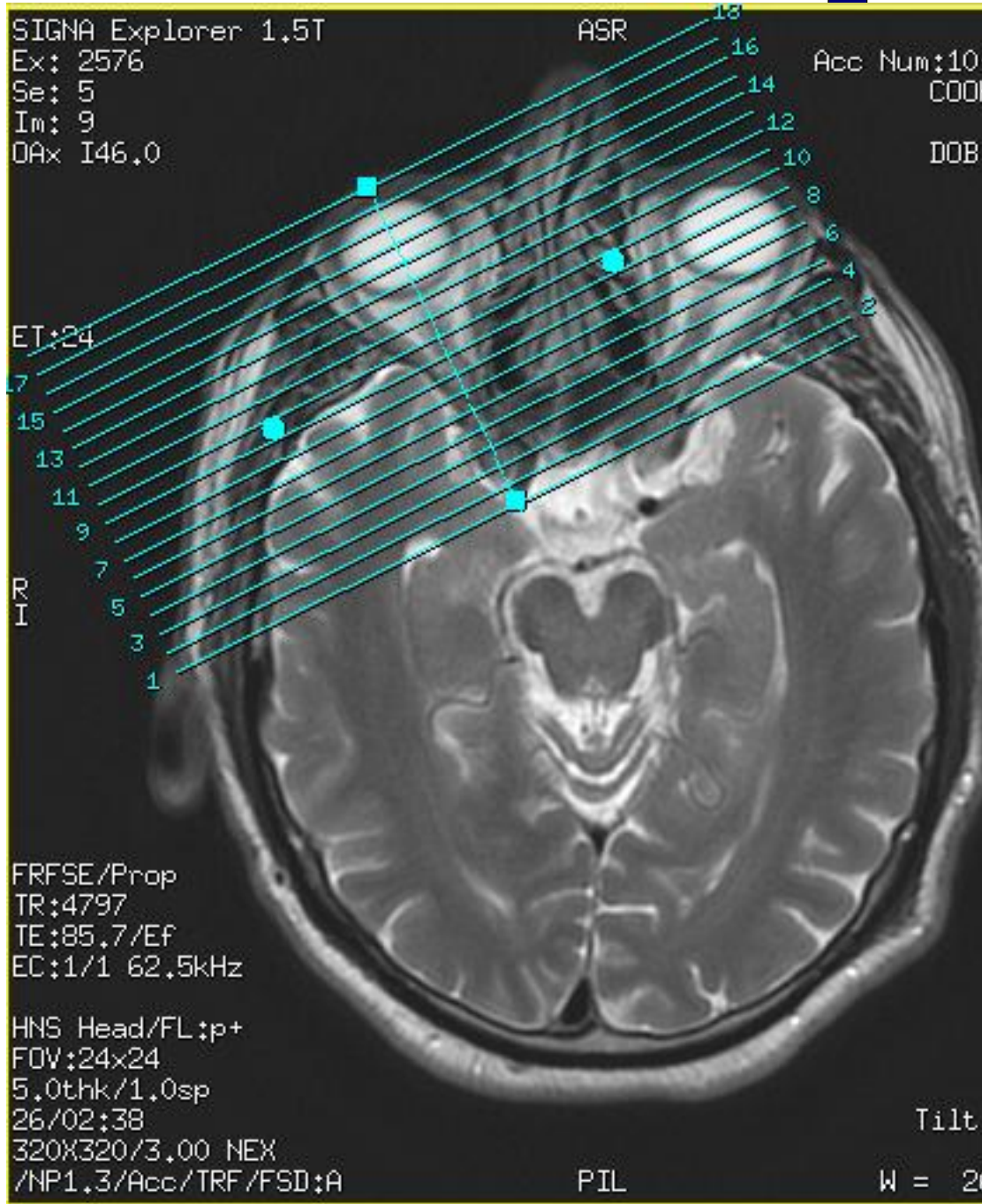
PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	FC, NPW, Seq, EDR, TRF, Fast, ARC, IrP
Plane	OBLIQUE	PSD Name	frfse-xl
Series Description	COR T2 STIR RT	<b>SCAN RANGE</b>	
<b>SCAN TIMING</b>		FOV	15.0
Flip Angle	160	Slice Thickness	3.0
TE	42.0	Slice Spacing	1.0
Number of Echoes	1	<b>ACQ TIMING</b>	
TR	5989.0	Freq	288
TI	150	Phase	192
Echo Train Length	15	Freq DIR	Unswap
Receiver Bandwidth	31.25	Fat Shift DIR	Normal
<b>IMAGE ENHANCE</b>		NEX	2.00
Filter Choice	None	Phase FOV	1.00
<b>GATING/TRIGGER</b>		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	No
<b>FMRI</b>		Flow Direction	Freq
PSD Trigger	Internal	<b>USER CVS</b>	
Slice Order	Interleaved	User CV21	1.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	3500.0
# of Repetitions ACTIVE	0	TR Max	15000.0
<b>SAT</b>		<b>MULTI-PHASE</b>	
SAT Location	S	Seperate Series	0
SAT Location	I	Mask Phase	0
Tag Type	None	Mask Pause	0
<b>TRICKS</b>		<b>DIFFUSION</b>	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	<b>CONTRAST</b>	
Auto SCIC	Off	Contrast Yes/No	No

COR T2 STIR RT

COR T2 STIR RT

OTHERS

Protocol Notes



ANGLE THRU OPTIC  
NERVE. GLOBE THRU  
APEX.



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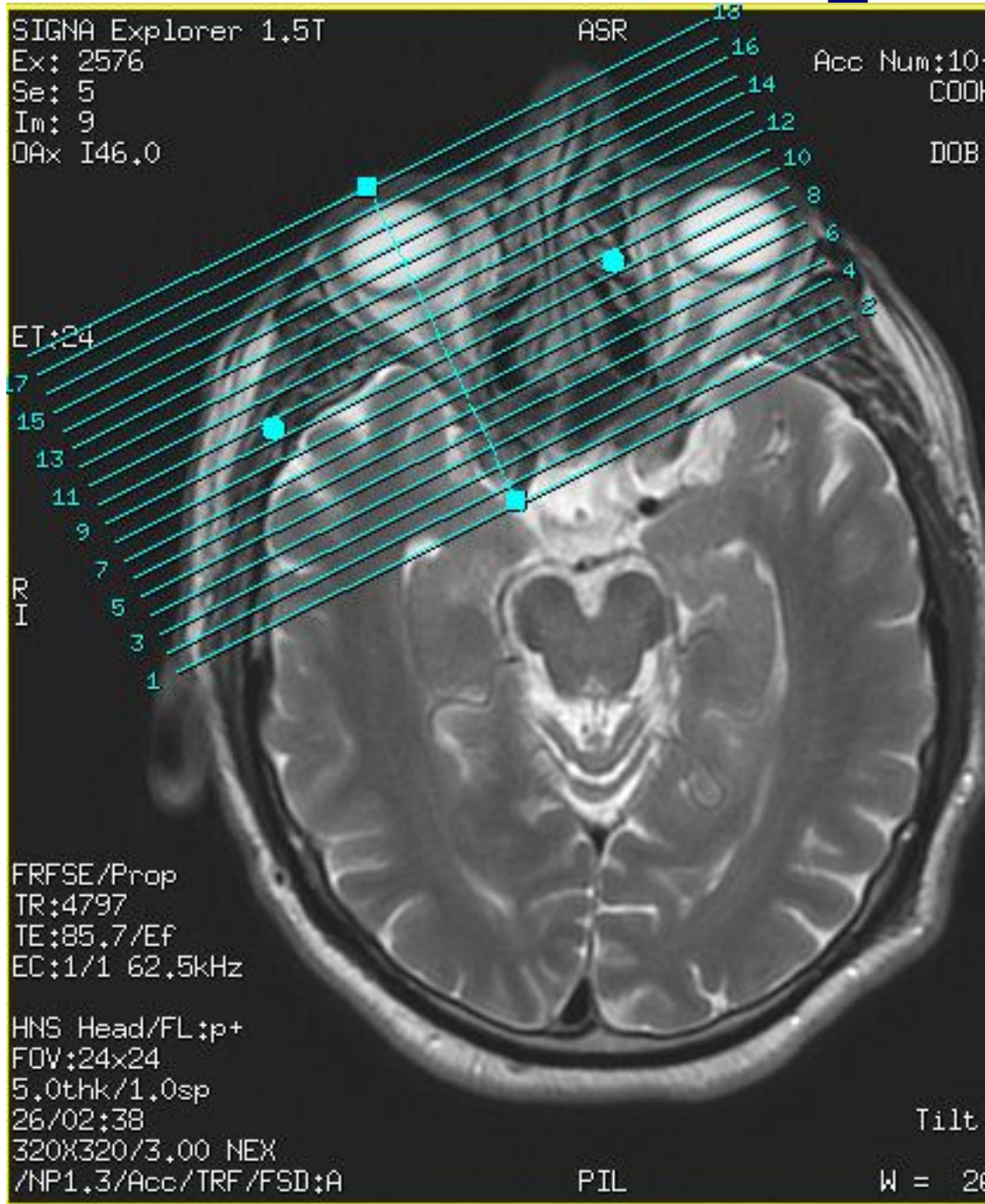
PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	FC, NPW, Seq, EDR, TRF, Fast, ARC, IrP
Plane	OBLIQUE	PSD Name	frfse-xl
Series Description	COR T2 STIR LT	<b>SCAN RANGE</b>	
<b>SCAN TIMING</b>		FOV	15.0
Flip Angle	160	Slice Thickness	3.0
TE	42.0	Slice Spacing	1.0
Number of Echoes	1	<b>ACQ TIMING</b>	
TR	5989.0	Freq	288
TI	150	Phase	192
Echo Train Length	15	Freq DIR	Unswap
Receiver Bandwidth	31.25	Fat Shift DIR	Normal
<b>IMAGE ENHANCE</b>		NEX	2.00
Filter Choice	None	Phase FOV	1.00
<b>GATING/TRIGGER</b>		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	No
<b>FMRI</b>		Flow Direction	Freq
PSD Trigger	Internal	<b>USER CVS</b>	
Slice Order	Interleaved	User CV21	1.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	3500.0
# of Repetitions ACTIVE	0	TR Max	15000.0
<b>SAT</b>		<b>MULTI-PHASE</b>	
SAT Location	S	Seperate Series	0
SAT Location	I	Mask Phase	0
Tag Type	None	Mask Pause	0
<b>TRICKS</b>		<b>DIFFUSION</b>	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	<b>CONTRAST</b>	
Auto SCIC	Off	Contrast Yes/No	No

COR T2 STIR LT

COR T2 STIR LT

OTHERS

Protocol Notes



ANGLE THRU OPTIC  
NERVE. GLOBE THRU  
APEX.

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	TRF, Fast
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	Ax T1 FSE THIN	FOV	18.0
<b>SCAN TIMING</b>		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	0.5
TE	Min Full	<b>ACQ TIMING</b>	
Number of Echoes	1	Freq	320
TR	583.0	Phase	224
Echo Train Length	4	Freq DIR	Unswap
Receiver Bandwidth	20.83	Fat Shift DIR	Normal
<b>IMAGE ENHANCE</b>		NEX	2.00
Filter Choice	None	# of Acq. Before Pause	0
<b>GATING/TRIGGER</b>		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
<b>FMRI</b>		Phase Correction	No
PSD Trigger	Internal	<b>USER CVS</b>	
Slice Order	Interleaved	User CV22	1.00
View Order	Bottom/Up	TR Min	500.0
# of Repetitions REST	0	TR Max	700.0
# of Repetitions ACTIVE	0	<b>MULTI-PHASE</b>	
<b>SAT</b>		Seperate Series	0
SAT Location	S	Mask Phase	0
SAT Location	I	Mask Pause	0
Tag Type	None	<b>DIFFUSION</b>	
<b>TRICKS</b>		Recon All Images	On
Pause On/Off	On	<b>CONTRAST</b>	
Auto Subtract	0	Contrast Yes/No	No
Auto SCIC	Off		

Ax T1 FSE THIN

Ax T1 FSE THIN

Protocol: adult\_head\_BRAIN ORBITS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	TRF, Fast
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	+C Ax T1 FSE F/S THIN	FOV	18.0
<b>SCAN TIMING</b>		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	0.5
TE	Min Full	<b>ACQ TIMING</b>	
Number of Echoes	1	Freq	320
TR	540.0	Phase	192
Echo Train Length	4	Freq DIR	Unswap
Receiver Bandwidth	20.83	Fat Shift DIR	Normal
<b>IMAGE ENHANCE</b>		NEX	2.00
Filter Choice	None	# of Acq. Before Pause	0
<b>GATING/TRIGGER</b>		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
<b>FMRI</b>		Phase Correction	No
PSD Trigger	Internal	<b>USER CVS</b>	
Slice Order	Interleaved	User CV19	1.00
View Order	Bottom/Up	User CV22	1.00
# of Repetitions REST	0	TR Min	500.0
# of Repetitions ACTIVE	0	TR Max	700.0
<b>SAT</b>		<b>MULTI-PHASE</b>	
SAT Location	S	Seperate Series	0
SAT Location	I	Mask Phase	0
Tag Type	None	Mask Pause	0
Fat/Water Saturation	Fat	<b>DIFFUSION</b>	
<b>TRICKS</b>		Recon All Images	On
Pause On/Off	On	<b>CONTRAST</b>	
Auto Subtract	0	Contrast Yes/No	Yes
Auto SCIC	Off		

+C Ax T1 FSE F/S THIN

+C Ax T1 FSE F/S THIN

Protocol: adult\_head\_BRAIN ORBITS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	FC, EDR, TRF, Fast, MRF
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	+C COR T1 FSE F/S THIN	FOV	18.0
<b>SCAN TIMING</b>		Slice Thickness	3.0
Flip Angle	160	Slice Spacing	1.0
TE	Min Full	<b>ACQ TIMING</b>	
Number of Echoes	1	Freq	288
TR	722.0	Phase	192
Echo Train Length	4	Freq DIR	Unswap
Receiver Bandwidth	31.25	Fat Shift DIR	Normal
<b>IMAGE ENHANCE</b>		NEX	2.00
Filter Choice	None	# of Acq. Before Pause	0
<b>GATING/TRIGGER</b>		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
<b>FMRI</b>		Phase Correction	No
PSD Trigger	Internal	Flow Direction Compensation	Freq
Slice Order	Interleaved	<b>USER CVS</b>	
View Order	Bottom/Up	User CV19	1.00
# of Repetitions REST	0	TR Min	350.0
# of Repetitions ACTIVE	0	TR Max	750.0
<b>SAT</b>		<b>MULTI-PHASE</b>	
Tag Type	None	Seperate Series	0
Fat/Water Saturation	Fat	Mask Phase	0
<b>TRICKS</b>		Mask Pause	0
Pause On/Off	On	<b>DIFFUSION</b>	
Auto Subtract	0	Recon All Images	On
Auto SCIC	2	<b>CONTRAST</b>	
		Contrast Yes/No	Yes

+C COR T1 FSE F/S THIN

+C COR T1 FSE F/S THIN

Protocol: adult\_head\_BRAIN ORBITS

AX 3D BRAVO +C	<b>PATIENT POSITION</b>		<b>IMAGING PARAMETERS</b>	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	BRAVO
	Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	EDR, Fast, ZIP2, ARC, IrP
	Plane	AXIAL	<b>SCAN RANGE</b>	
	Series Description	AX 3D BRAVO +C	FOV	25.6
	<b>SCAN TIMING</b>		Slice Thickness	2.0
	Flip Angle	12	Location per Slab	90
	Number of Echoes	1	Overlap Locations	0
	TI	450	<b>ACQ TIMING</b>	
	Receiver Bandwidth	31.25	Freq	256
	<b>IMAGE ENHANCE</b>		Phase	256
	Filter Choice	None	Freq DIR	A/P
	<b>GATING/TRIGGER</b>		NEX	1.00
	Auto Trigger Type	Off	Phase FOV	1.00
	<b>MULTI-PHASE</b>		Auto Shim	Auto
	Seperate Series	0	Phase Correction	No
	Trigger Delay without AV	0	<b>FMRI</b>	
	Mask Phase	0	PSD Trigger	Internal
	Mask Pause	0	Slice Order	Interleaved
	<b>DIFFUSION</b>		View Order	Bottom/Up
	Recon All Images	On	# of Repetitions REST	0
	<b>CONTRAST</b>		# of Repetitions ACTIVE	0
	Contrast Yes/No	Yes	<b>SAT</b>	
			Tag Type	None
		<b>TRICKS</b>		
		Pause On/Off	On	
		Auto Subtract	0	
		Auto SCIC	Off	
		<b>OTHERS</b>		
		Protocol Notes	Do not use IR prepared with post contrast series. IR Prepared defaults to an on state. For optimum image quality, it is critical that IR prep remain on for non-contrast enhanced series.	

AX 3D BRAVO +C

Protocol: adult\_head\_BRAIN ORBITS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HD 8Ch High Res Brain Array by Invivo	Imaging Options	FC, EDR, TRF, Fast, MRF
Plane	OBLIQUE	SCAN RANGE	
Series Description	+C Ax T1 FSE	FOV	24.0
SCAN TIMING		Slice Thickness	5.0
Flip Angle	160	Slice Spacing	1.0
TE	Min Full	ACQ TIMING	
Number of Echoes	1	Freq	288
TR	526.0	Phase	192
Echo Train Length	2	Freq DIR	A/P
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (A)
IMAGE ENHANCE		NEX	1.00
Filter Choice	None	# of Acq. Before Pause	0
GATING/TRIGGER		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
FMRI		Phase Correction	No
PSD Trigger	Internal	Flow Direction Compensation	Slice
Slice Order	Interleaved	USER CVS	
View Order	Bottom/Up	TR Min	350.0
# of Repetitions REST	0	TR Max	750.0
# of Repetitions ACTIVE	0	MULTI-PHASE	
SAT		Seperate Series	0
SAT Location	I	Mask Phase	0
Tag Type	None	Mask Pause	0
TRICKS		DIFFUSION	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	CONTRAST	
Auto SCIC	2	Contrast Yes/No	Yes

+C Ax T1 FSE

+C Ax T1 FSE

Protocol: adult\_head\_BRAIN ORBITS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Spin Echo
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	Fast, SS
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	---OPTIONS---	FOV	22.0
<b>SCAN TIMING</b>		Slice Thickness	5.0
TE	Minimum	Slice Spacing	1.0
TR	Minimum	<b>ACQ TIMING</b>	
Receiver Bandwidth	83.33	Freq	128
<b>IMAGE ENHANCE</b>		Phase	128
Filter Choice	None	Freq DIR	A/P
<b>GATING/TRIGGER</b>		NEX	1.0
Auto Trigger Type	Off	# of Acq. Before Pause	0
<b>FMRI</b>		Phase FOV	1.00
PSD Trigger	Internal	Auto Shim	Auto
Slice Order	Interleaved	Phase Correction	No
View Order	Bottom/Up	<b>USER CVS</b>	
# of Repetitions REST	0	User CV2	240.00
# of Repetitions ACTIVE	0	User CV13	1.00
<b>SAT</b>		TR Min	0.0
Tag Type	None	TR Max	0.0
<b>TRICKS</b>		<b>MULTI-PHASE</b>	
Pause On/Off	On	Seperate Series	0
Auto Subtract	0	Mask Phase	0
Auto SCIC	Off	Mask Pause	0
		<b>DIFFUSION</b>	
		Recon All Images	On
		<b>CONTRAST</b>	
		Contrast Yes/No	No



Protocol: adult\_head\_BRAIN ORBITS

PATIENT POSITION		IMAGING PARAMETERS	
Coil Configuration	HNS Head	Gradient Mode	NA
Plane	Oblique	<b>SCAN RANGE</b>	
SCAN TIMING		FOV	20.0cm
Flip Angle	140.0Degrees	Slice Thickness	3.0mm
TE	38.688ms	Slice Spacing	0.3mm
TR	2.782s		
TI	150.0ms		
Echo Train Length	12		
Receiver Bandwidth	83.333KHz		
ACQ TIMING			
Freq	288		
Phase	16		
Freq DIR	S/I		
Fat Shift DIR	Normal (I)		
NEX	3.5		
Phase FOV	20.0cm		

COR STIR PROP THIN

COR STIR PROP THIN

Protocol: adult\_head\_BRAIN ORBITS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	FC, Seq, TRF, Fast, Asset, MRF, T1flair
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	Ax T1 FLAIR	FOV	24.0
<b>SCAN TIMING</b>		Slice Thickness	5.0
Flip Angle	160	Slice Spacing	1.0
TE	Min Full	<b>ACQ TIMING</b>	
Number of Echoes	1	Freq	320
TR	1750.0	Phase	224
TI	957	Freq DIR	A/P
Echo Train Length	10	Fat Shift DIR	Normal (A)
Receiver Bandwidth	31.25	NEX	2.00
<b>IMAGE ENHANCE</b>		# of Acq. Before Pause	0
Filter Choice	None	Phase FOV	1.00
<b>GATING/TRIGGER</b>		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	Yes
<b>FMRI</b>		Flow Direction Compensation	Slice
PSD Trigger	Internal	<b>USER CVS</b>	
Slice Order	Interleaved	User CV8	1.00
View Order	Bottom/Up	User CV12	1.00
# of Repetitions REST	0	User CV21	1.00
# of Repetitions ACTIVE	0	<b>MULTI-PHASE</b>	
<b>SAT</b>		Seperate Series	0
SAT Location	S	Mask Phase	0
SAT Location	I	Mask Pause	0
Tag Type	None	<b>DIFFUSION</b>	
<b>TRICKS</b>		Recon All Images	On
Pause On/Off	On	<b>CONTRAST</b>	
Auto Subtract	0	Contrast Yes/No	No
Auto SCIC	2		

Ax T1 FLAIR

Ax T1 FLAIR

Protocol: adult\_head\_BRAIN ORBITS

Sag T2 PROPELLER	<b>PATIENT POSITION</b>		<b>IMAGING PARAMETERS</b>	
	Coil Configuration	HNS Head	Gradient Mode	NA
	Plane	Oblique	<b>SCAN RANGE</b>	
	<b>SCAN TIMING</b>		FOV	24.0cm
	Flip Angle	160.0Degrees	Slice Thickness	5.0mm
	TE	123.76ms	Slice Spacing	1.0mm
	TR	4.981s	<b>MRECHO</b>	
	Echo Train Length	28	Gating Disable	true
	Receiver Bandwidth	62.5KHz		
	<b>ACQ TIMING</b>			
	Freq	320		
	Phase	48		
	Freq DIR	S/I		
	Fat Shift DIR	Normal (S)		
NEX	2.0			
Phase FOV	24.0cm			

Sag T2 PROPELLER

Protocol: adult\_head\_BRAIN ORBITS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	FC, EDR, TRF, Fast, FR, ARC, MRF
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	Ax T2 frFSE	FOV	24.0
<b>SCAN TIMING</b>		Slice Thickness	5.0
Flip Angle	160	Slice Spacing	1.0
TE	102.0	<b>ACQ TIMING</b>	
Number of Echoes	1	Freq	320
TR	4497.0	Phase	256
Echo Train Length	21	Freq DIR	A/P
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (A)
<b>IMAGE ENHANCE</b>		NEX	4.00
Filter Choice	None	Phase FOV	1.00
<b>GATING/TRIGGER</b>		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	Yes
<b>FMRI</b>		Flow Direction Compensation	Slice
PSD Trigger	Internal	<b>USER CVS</b>	
Slice Order	Interleaved	User CV8	1.00
View Order	Bottom/Up	User CV21	1.00
# of Repetitions REST	0	TR Min	2500.0
# of Repetitions ACTIVE	0	TR Max	5000.0
<b>SAT</b>		<b>MULTI-PHASE</b>	
Tag Type	None	Seperate Series	0
<b>TRICKS</b>		Mask Phase	0
Pause On/Off	On	Mask Pause	0
Auto Subtract	0	<b>DIFFUSION</b>	
Auto SCIC	2	Recon All Images	On
		<b>CONTRAST</b>	
		Contrast Yes/No	No

Ax T2 frFSE

Ax T2 frFSE

Protocol: adult\_head\_BRAIN ORBITS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Spin Echo
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	EDR
Plane	OBLIQUE	PSD Name	t1memp
Series Description	Ax T1 SE MEMP	SCAN RANGE	
SCAN TIMING		FOV	24.0
Flip Angle	74	Slice Thickness	5.0
TE	Min Full	Slice Spacing	1.0
Number of Echoes	1	ACQ TIMING	
TR	480.0	Freq	288
Receiver Bandwidth	20.83	Phase	192
IMAGE ENHANCE		Freq DIR	A/P
Filter Choice	None	NEX	2.00
GATING/TRIGGER		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
FMRI		Phase Correction	No
PSD Trigger	Internal	USER CVS	
Slice Order	Interleaved	TR Min	400.0
View Order	Bottom/Up	TR Max	700.0
# of Repetitions REST	0	MULTI-PHASE	
# of Repetitions ACTIVE	0	Seperate Series	0
SAT		Mask Phase	0
Tag Type	None	Mask Pause	0
TRICKS		DIFFUSION	
Pause On/Off	On	Recon All Images	On
Auto Subtract	0	CONTRAST	
Auto SCIC	2	Contrast Yes/No	No

Ax T1 SE MEMP

Ax T1 SE MEMP

Protocol: adult\_head\_BRAIN ORBITS

PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	FSE-XL
Coil Configuration	HNS by GE (PosteriorHead, Face)	Imaging Options	FC, EDR, TRF, Fast, FR, ARC, MRF
Plane	OBLIQUE	<b>SCAN RANGE</b>	
Series Description	Sag T2 frFSE	FOV	25.0
<b>SCAN TIMING</b>		Slice Thickness	5.0
Flip Angle	160	Slice Spacing	1.0
TE	102.0	<b>ACQ TIMING</b>	
Number of Echoes	1	Freq	320
TR	4129.0	Phase	256
Echo Train Length	21	Freq DIR	S/I
Receiver Bandwidth	31.25	Fat Shift DIR	Normal (S)
<b>IMAGE ENHANCE</b>		NEX	4.00
Filter Choice	None	Phase FOV	1.00
<b>GATING/TRIGGER</b>		Auto Shim	Auto
Auto Trigger Type	Off	Phase Correction	Yes
<b>FMRI</b>		Flow Direction Compensation	Freq
PSD Trigger	Internal	<b>USER CVS</b>	
Slice Order	Interleaved	User CV8	1.00
View Order	Bottom/Up	User CV21	1.00
# of Repetitions REST	0	TR Min	2500.0
# of Repetitions ACTIVE	0	TR Max	5000.0
<b>SAT</b>		<b>MULTI-PHASE</b>	
Tag Type	None	Seperate Series	0
<b>TRICKS</b>		Mask Phase	0
Pause On/Off	On	Mask Pause	0
Auto Subtract	0	<b>DIFFUSION</b>	
Auto SCIC	2	Recon All Images	On
		<b>CONTRAST</b>	
		Contrast Yes/No	No

Sag T2 frFSE

Sag T2 frFSE