

BCCH/UBC 3T
GE 3T MR750

Protocol: pediatric_head_Research-DSBBEP-20180523_20180523135942153_6

PATIENT POSITION

Patient Entry *Head First*
Patient Position *Supine*
Coil Configuration *Nova 32ch-Brain*
Plane *3-PLANE*
Series Description *3Plane_Loc_SSFSE*

SCAN TIMING

TE *80.0*
Number of Echoes *1*
TR *Minimum*
Receiver Bandwidth *83.33*

IMAGE ENHANCE

Filter Choice *None*

GATING/TRIGGER

Auto Trigger Type *Off*

FMRI

PSD Trigger *Internal*
View Order *Bottom/Up*
of Repetitions REST *0*
of Repetitions ACTIVE *0*

SAT

Tag Type *None*

TRICKS

Pause On/Off *On*
Auto Subtract *0*
Auto SCIC *Off*

IMAGING PARAMETERS

Imaging Mode *2D*
Pulse Sequence *Spin Echo*
Imaging Options *Seq, EDR, Fast, SS, ARC*

SCAN RANGE

FOV *28.8*
Slice Thickness *8.0*
Slice Spacing *0.0*

ACQ TIMING

Freq *384*
Phase *160*
Freq DIR *Unswap*
of Acq. Before Pause *0*
Phase FOV *1.00*
Auto Shim *Auto*
Phase Correction *No*

USER CVS

User CV1 *1.00*
User CV2 *240.00*
User CV13 *1.00*

MULTI-PHASE

Seperate Series *0*
Mask Phase *0*
Mask Pause *0*

DIFFUSION

Recon All Images *On*

CONTRAST

Contrast Yes/No *No*

3Plane_Loc_SSFSE

3Plane_Loc_SSFSE

Protocol: pediatric_head_Research-DSBBEP-20180523_20180523135942153_6

Calibration

PATIENT POSITION	
Patient Entry	Head First
Patient Position	Supine
Coil Configuration	Nova 32ch-Brain
Plane	AXIAL
Series Description	Calibration
SCAN TIMING	
Number of Echoes	1
IMAGE ENHANCE	
Filter Choice	None
GATING/TRIGGER	
Auto Trigger Type	Off
MULTI-PHASE	
Seperate Series	0
Mask Phase	0
Mask Pause	0
DIFFUSION	
Recon All Images	On
CONTRAST	
Contrast Yes/No	No

IMAGING PARAMETERS	
Imaging Mode	3D
Pulse Sequence	SPGR
Imaging Options	EDR, Fast, ZIP2, Calib
SCAN RANGE	
FOV	30.0
Slice Thickness	11.4
ACQ TIMING	
Freq DIR	A/P
Auto Shim	Auto
Phase Correction	No
FMRI	
PSD Trigger	Internal
View Order	Bottom/Up
# of Repetitions REST	0
# of Repetitions ACTIVE	0
SAT	
Tag Type	None
TRICKS	
Pause On/Off	On
Auto Subtract	0
Auto SCIC	Off

Calibration

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MPRAGE_PROMO	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	SPGR
	Coil Configuration	Nova 32ch-Brain	Imaging Options	EDR, Fast, ARC, PROMO, IrP
	Plane	SAGITTAL	PSD Name	research/mprage_promo2
	Series Description	MPRAGE_PROMO	SCAN RANGE	
	SCAN TIMING		FOV	23.0
	Flip Angle	8	Slice Thickness	0.9
	TE	Min Full	Location per Slab	164
	Number of Echoes	1	Overlap Locations	0
	TI	900	ACQ TIMING	
	Receiver Bandwidth	31.25	Freq	256
	IMAGE ENHANCE		Phase	256
	Filter Choice	None	Freq DIR	S/I
	GATING/TRIGGER		NEX	1.00
	Auto Trigger Type	Off	Phase FOV	1.00
	FMRI		Auto Shim	Auto
	PSD Trigger	Internal	Phase Correction	No
	View Order	Bottom/Up	USER CVS	
	# of Repetitions REST	0	User CV6	1.00
	# of Repetitions ACTIVE	0	User CV8	1.00
	DIFFUSION		User CV9	24.00
	Recon All Images	On	User CV10	24.00
	CONTRAST		User CV23	100.00
	Contrast Yes/No	No	User CV24	2488.00
			MULTI-PHASE	
			Seperate Series	0
			Trigger Delay without AV	0
			Mask Phase	0
			Mask Pause	0
			TRICKS	
			Pause On/Off	On
			Auto Subtract	0
			Auto SCIC	2

MPRAGE_PROMO

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Gradient Echo
Coil Configuration	Nova 32ch-Brain	Imaging Options	EDR, MPh, EPI, ARC, HB
Plane	AXIAL	PSD Name	multiband/mux_epi
Series Description	fMRI_Resting_State_Inscapes_AP	SCAN RANGE	
SCAN TIMING		FOV	24.0
Flip Angle	52	Slice Thickness	3.0
TE	30.0	Slice Spacing	0.0
Number of Echoes	1	ACQ TIMING	
TR	600.0	Freq	80
Number of Shots	1	Phase	80
IMAGE ENHANCE		Freq DIR	R/L
Filter Choice	None	NEX	1.00
GATING/TRIGGER		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
FMRI		Phase Correction	Yes
PSD Trigger	Internal	USER CVS	
View Order	Bottom/Up	User CV0	1.00
# of Repetitions REST	0	MULTI-PHASE	
# of Repetitions ACTIVE	0	Slice per Location	710
SAT		Phase Acquisition Order	Interleaved
Tag Type	None	Delay after Acquisition	Minimum
TRICKS		Seperate Series	0
Pause On/Off	On	Delay after Acquisition without AV	2
Auto Subtract	0	Mask Phase	0
Auto SCIC	Off	Mask Pause	0
OTHERS		DIFFUSION	
Protocol Notes	Multi-Phase Tab Total Phases: 710 User CVs Check CV pepolar = 1	Recon All Images	On
		CONTRAST	
		Contrast Yes/No	No

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Gradient Echo
Coil Configuration	Nova 32ch-Brain	Imaging Options	EDR, MPh, EPI, ARC, HB
Plane	AXIAL	PSD Name	multiband/mux_epi
Series Description	fMRI_Resting_State_Inscapes s_TOPUP_PA	SCAN RANGE	
SCAN TIMING		FOV	24.0
Flip Angle	52	Slice Thickness	3.0
TE	30.0	Slice Spacing	0.0
Number of Echoes	1	ACQ TIMING	
TR	600.0	Freq	80
Number of Shots	1	Phase	80
IMAGE ENHANCE		Freq DIR	R/L
Filter Choice	None	NEX	1.00
GATING/TRIGGER		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
FMRI		Phase Correction	Yes
PSD Trigger	Internal	USER CVS	
View Order	Bottom/Up	User CV0	1.00
# of Repetitions REST	0	MULTI-PHASE	
# of Repetitions ACTIVE	0	Slice per Location	30
SAT		Phase Acquisition Order	Interleaved
Tag Type	None	Delay after Acquisition	Minimum
TRICKS		Seperate Series	0
Pause On/Off	On	Delay after Acquisition without AV	2
Auto Subtract	0	Mask Phase	0
Auto SCIC	Off	Mask Pause	0
OTHERS		DIFFUSION	
Protocol Notes	Multi-Phase Tab Total Phases: 30 User CVs Check CV pepolar = 0	Recon All Images	On
		CONTRAST	
		Contrast Yes/No	No

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PATIENT POSITION

Patient Entry *Head First*
Patient Position *Supine*
Coil Configuration *Nova 32ch-Brain*
Plane *AXIAL*
Series Description *HIGH_ORDER_SHIM*

SCAN TIMING

Flip Angle *60*
TE *7.0*
Number of Echoes *1*
TR *1558.0*

IMAGE ENHANCE

Filter Choice *None*

GATING/TRIGGER

Auto Trigger Type *Off*

FMRI

PSD Trigger *Internal*
Slice Order *Interleaved*
View Order *Bottom/Up*
of Repetitions REST *0*
of Repetitions ACTIVE *0*

SAT

Tag Type *None*

TRICKS

Pause On/Off *On*
Auto Subtract *0*
Auto SCIC *Off*

OTHERS

Protocol Notes *Set up DTI first
Once DTI set up, Open
HOS and Save without
changing anything
HOS will Copy DTI
coverage and apply itself to
the last exam SET UP, so
be sure that it is the DTI.
Pop up screen will open.
Drag and move Red Circle
to fully encompass the
Brain on all 3 planes. Hit
CALCULATE SHIM, DONE
and run DTI
HOS Shims the brain for
less distortion.
DTI CV Change:
image_size
140*

IMAGING PARAMETERS

Imaging Mode *2D*
Pulse Sequence *Gradient Echo*
Imaging Options *None*
PSD Name *sprl_hos*

SCAN RANGE

FOV *24.0*
Slice Thickness *5.8*
Slice Spacing *0.0*

ACQ TIMING

Freq *64*
Freq DIR *A/P*
NEX *1.00*
Auto Shim *Off*
Phase Correction *No*

USER CVS

User CV0 *2.00*
User CV1 *2.00*
User CV3 *99.00*
User CV4 *64.00*
User CV5 *0.50*

MULTI-PHASE

Seperate Series *0*
Mask Phase *0*
Mask Pause *0*

DIFFUSION

Recon All Images *On*

CONTRAST

Contrast Yes/No *No*

HIGH_ORDER_SHIM

HIGH_ORDER_SHIM

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PATIENT POSITION

Patient Entry *Head First*
Patient Position *Supine*
Coil Configuration *Nova 32ch-Brain*
Plane *OBLIQUE*
Series Description *B300_10dir_AP*

SCAN TIMING

TE *81.9*
Number of Echoes *1*
TR *4100.0*
Number of Shots *1*

IMAGE ENHANCE

Filter Choice *None*

GATING/TRIGGER

Auto Trigger Type *Off*

FMRI

PSD Trigger *Internal*
View Order *Bottom/Up*
of Repetitions REST *0*
of Repetitions ACTIVE *0*

SAT

Tag Type *None*
Fat/Water Saturation *Fat*

TRICKS

Pause On/Off *On*
Auto Subtract *0*
Auto SCIC *Off*

OTHERS

Protocol Notes *Ensure Autoshim is off and check "Retain HOS shim" Increase slice number to cover as much brain as you can: max slice should go up to 93 Phase acceleration = 2, MB factor = 3 CV Change: image_size = 140 CV Check: pepolar=1*

IMAGING PARAMETERS

Imaging Mode *2D*
Pulse Sequence *Spin Echo*
Imaging Options *EDR, Cla, EPI, DIFF, ARC, HB*

SCAN RANGE

FOV *25.2*
Slice Thickness *1.8*
Slice Spacing *0.0*

ACQ TIMING

Freq *140*
Phase *140*
Freq DIR *R/L*
Phase FOV *1.00*
Auto Shim *Off*
Phase Correction *Yes*

USER CVS

User CV5 *1.00*
User CV17 *1.00*

MULTI-PHASE

Seperate Series *0*
Mask Phase *0*
Mask Pause *0*

DIFFUSION

Optimized TE *Yes*
Diffusion Directions *Tensor*
Number of Diffusion Directions *10*
Number of T2 Images *1*
Dual Spin Echo *Off*
Diffusion Tensor Processing Output *No Selection*
Recon All Images *Off*

CONTRAST

Contrast Yes/No *No*

B300_10dir_AP

B300_10dir_AP

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PATIENT POSITION

Patient Entry *Head First*
Patient Position *Supine*
Coil Configuration *Nova 32ch-Brain*
Plane *OBLIQUE*
Series Description *B700_40dir_AP*

SCAN TIMING

TE *81.9*
Number of Echoes *1*
TR *4100.0*
Number of Shots *1*

IMAGE ENHANCE

Filter Choice *None*

GATING/TRIGGER

Auto Trigger Type *Off*

FMRI

PSD Trigger *Internal*
View Order *Bottom/Up*
of Repetitions REST *0*
of Repetitions ACTIVE *0*

SAT

Tag Type *None*
Fat/Water Saturation *Fat*

TRICKS

Pause On/Off *On*
Auto Subtract *0*
Auto SCIC *Off*

OTHERS

Protocol Notes *Ensure Autoshim is off and check "Retain HOS shim" Copy the coverage of b300 shell (i.e. slice number) Phase acceleration = 2, MB factor = 3 CV Change: image_size = 140 CV Check: pepolar=1*

IMAGING PARAMETERS

Imaging Mode *2D*
Pulse Sequence *Spin Echo*
Imaging Options *EDR, Cla, EPI, DIFF, ARC, HB*

SCAN RANGE

FOV *25.2*
Slice Thickness *1.8*
Slice Spacing *0.0*

ACQ TIMING

Freq *140*
Phase *140*
Freq DIR *R/L*
Phase FOV *1.00*
Auto Shim *Off*
Phase Correction *Yes*

USER CVS

User CV5 *1.00*
User CV17 *1.00*

MULTI-PHASE

Seperate Series *0*
Mask Phase *0*
Mask Pause *0*

DIFFUSION

Optimized TE *Yes*
Diffusion Directions *Tensor*
Number of Diffusion Directions *40*
Number of T2 Images *1*
Dual Spin Echo *Off*
Diffusion Tenser *No Selection*
Processing Output
Recon All Images *Off*

CONTRAST

Contrast Yes/No *No*

B700_40dir_AP

B700_40dir_AP

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PATIENT POSITION

Patient Entry *Head First*
Patient Position *Supine*
Coil Configuration *Nova 32ch-Brain*
Plane *OBLIQUE*
Series Description *B2000_90dir_AP*

SCAN TIMING

TE *81.9*
Number of Echoes *1*
TR *4100.0*
Number of Shots *1*

IMAGE ENHANCE

Filter Choice *None*

GATING/TRIGGER

Auto Trigger Type *Off*

FMRI

PSD Trigger *Internal*
View Order *Bottom/Up*
of Repetitions REST *0*
of Repetitions ACTIVE *0*

SAT

Tag Type *None*
Fat/Water Saturation *Fat*

TRICKS

Pause On/Off *On*
Auto Subtract *0*
Auto SCIC *Off*

OTHERS

Protocol Notes *Ensure Autoshim is off and check "Retain HOS shim" Copy the coverage of b300 (i.e. slice number) Phase acceleration = 2, MB factor = 3, TE = 81.9 CV Change: image_size = 140 CV Check: pepolar=1 Sometimes this sequence is "buggy" and need to re-enter parameters*

IMAGING PARAMETERS

Imaging Mode *2D*
Pulse Sequence *Spin Echo*
Imaging Options *EDR, Cla, EPI, DIFF, ARC, HB*

SCAN RANGE

FOV *25.2*
Slice Thickness *1.8*
Slice Spacing *0.0*

ACQ TIMING

Freq *140*
Phase *140*
Freq DIR *R/L*
Phase FOV *1.00*
Auto Shim *Off*
Phase Correction *Yes*

USER CVS

User CV5 *1.00*
User CV17 *1.00*

MULTI-PHASE

Seperate Series *0*
Mask Phase *0*
Mask Pause *0*

DIFFUSION

Optimized TE *Yes*
Diffusion Directions *Tensor*
Number of Diffusion Directions *90*
Number of T2 Images *1*
Dual Spin Echo *Off*
Diffusion Tenser *No Selection*
Processing Output
Recon All Images *Off*

CONTRAST

Contrast Yes/No *No*

B2000_90dir_AP

B2000_90dir_AP

BCCH/UBC 3T
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Protocol: pediatric_head_Research-DSBBEP-20180523_20180523135942153_6

PATIENT POSITION

Patient Entry *Head First*
Patient Position *Supine*
Coil Configuration *Nova 32ch-Brain*
Plane *OBLIQUE*
Series Description *B1000_6dir_TOPUP_PA*

SCAN TIMING

TE *81.9*
Number of Echoes *1*
TR *4100.0*
Number of Shots *1*

IMAGE ENHANCE

Filter Choice *None*

GATING/TRIGGER

Auto Trigger Type *Off*

FMRI

PSD Trigger *Internal*
View Order *Bottom/Up*
of Repetitions REST *0*
of Repetitions ACTIVE *0*

SAT

Tag Type *None*
Fat/Water Saturation *Fat*

TRICKS

Pause On/Off *On*
Auto Subtract *0*
Auto SCIC *Off*

OTHERS

Protocol Notes *Ensure Autoshim is off and check "Retain HOS shim" Copy the coverage of B300 (i.e. slice number) Phase acceleration = 2, MB factor = 3 CV Change: pepolar=0 image_size = 140*

IMAGING PARAMETERS

Imaging Mode *2D*
Pulse Sequence *Spin Echo*
Imaging Options *EDR, Cla, EPI, DIFF, ARC, HB*

SCAN RANGE

FOV *25.2*
Slice Thickness *1.8*
Slice Spacing *0.0*

ACQ TIMING

Freq *140*
Phase *140*
Freq DIR *R/L*
Phase FOV *1.00*
Auto Shim *Off*
Phase Correction *Yes*

USER CVS

User CV5 *1.00*
User CV17 *1.00*

MULTI-PHASE

Seperate Series *0*
Mask Phase *0*
Mask Pause *0*

DIFFUSION

Optimized TE *Yes*
Diffusion Directions *Tensor*
Number of Diffusion Directions *6*
Number of T2 Images *3*
Dual Spin Echo *Off*
Diffusion Tenser *No Selection*
Processing Output
Recon All Images *Off*

CONTRAST

Contrast Yes/No *No*

B1000_6dir_TOPUP_PA

B1000_6dir_TOPUP_PA

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PATIENT POSITION

Patient Entry *Head First*
Patient Position *Supine*
Coil Configuration *Nova 32ch-Brain*
Plane *SAGITTAL*
Series Description *MP2RAGE_PROMO*

SCAN TIMING

Flip Angle *7*
TE *Min Full*
Number of Echoes *2*
TI *700*
Blood Suppression TI *2000*
Receiver Bandwidth *62.50*

IMAGE ENHANCE

Filter Choice *None*

GATING/TRIGGER

Auto Trigger Type *Off*

FMRI

PSD Trigger *Internal*
Slice Order *Interleaved*
View Order *Bottom/Up*
of Repetitions REST *0*
of Repetitions ACTIVE *0*

SAT

Tag Type *None*

TRICKS

Pause On/Off *On*
Auto Subtract *0*
Auto SCIC *Off*

OTHERS

Protocol Notes *Check slice thickness=0.9
Freq. FOV = 23.0
Frequency Step: 256
Phase: 170
DO NOT CLOSE POST-
PROCESSING COMMAND
WINDOW AFTER SCAN IS
DONE!! -> Minimize and
continue*

IMAGING PARAMETERS

Imaging Mode *3D*
Pulse Sequence *SPGR*
Imaging Options *EDR, Fast, ARC, PROMO,
IrP*
PSD Name *research/mp2rage*

SCAN RANGE

FOV *23.0*
Slice Thickness *0.9*
Location per Slab *164*
Overlap Locations *0*

ACQ TIMING

Freq *256*
Phase *170*
Freq DIR *S/I*
NEX *1.00*
Phase FOV *1.00*
Auto Shim *Auto*
Phase Correction *No*

USER CVS

User CV6 *2.00*
User CV8 *1.00*
User CV9 *24.00*
User CV10 *24.00*
User CV20 *5.00*
User CV23 *100.00*
User CV24 *5000.00*

MULTI-PHASE

Seperate Series *0*
Trigger Delay without AV *0*
Mask Phase *0*
Mask Pause *0*

DIFFUSION

Recon All Images *On*

CONTRAST

Contrast Yes/No *No*

MP2RAGE_PROMO

MP2RAGE_PROMO

BCCH/UBC 3T
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PATIENT POSITION

Patient Entry *Head First*
Patient Position *Supine*
Coil Configuration *Nova 32ch-Brain*
Plane *SAGITTAL*
Series Description *3D_SAG_Cube_T2FLAIR_P
ROMO*

SCAN TIMING

TE *120.0*
Number of Echoes *1*
TR *6800.0*
TI *1770*
Echo Train Length *200*
Receiver Bandwidth *31.25*

IMAGE ENHANCE

Filter Choice *None*

GATING/TRIGGER

Auto Trigger Type *Off*

FMRI

PSD Trigger *Internal*
View Order *Bottom/Up*
of Repetitions REST *0*
of Repetitions ACTIVE *0*

SAT

Tag Type *None*
Fat/Water Saturation *Fat*

TRICKS

Pause On/Off *On*
Auto Subtract *0*
Auto SCIC *2*

IMAGING PARAMETERS

Imaging Mode *3D*
Pulse Sequence *Cube T2 FLAIR*
Imaging Options *EDR, Fast, T2P, ARC,
PROMO, IrP*
PSD Name *research/3dfse_promo2*

SCAN RANGE

FOV *23.0*
Slice Thickness *0.9*
Location per Slab *194*
Overlap Locations *0*

ACQ TIMING

Freq *256*
Phase *256*
Freq DIR *S/I*
Fat Shift DIR *Normal (S)*
NEX *1.00*
Phase FOV *1.00*
Auto Shim *Auto*
Phase Correction *No*

USER CVS

User CV5 *1.00*
User CV23 *1.00*

MULTI-PHASE

Seperate Series *0*
Mask Phase *0*
Mask Pause *0*

DIFFUSION

Recon All Images *On*

CONTRAST

Contrast Yes/No *No*

3D_SAG_Cube_T2FLAIR_PROMO

3D_SAG_Cube_T2FLAIR_PROMO

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fMRI_N-Back_AP	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	2D
	Patient Position	Supine	Pulse Sequence	Gradient Echo
	Coil Configuration	Nova 32ch-Brain	Imaging Options	EDR, MPh, EPI, ARC, HB
	Plane	AXIAL	PSD Name	multiband/mux_epi
	Series Description	fMRI_N-Back_AP	SCAN RANGE	
	SCAN TIMING		FOV	24.0
	Flip Angle	52	Slice Thickness	3.0
	TE	30.0	Slice Spacing	0.0
	Number of Echoes	1	ACQ TIMING	
	TR	600.0	Freq	80
	Number of Shots	1	Phase	80
	IMAGE ENHANCE		Freq DIR	R/L
	Filter Choice	None	NEX	1.00
	GATING/TRIGGER		Phase FOV	1.00
	Auto Trigger Type	Off	Auto Shim	Auto
	FMRI		Phase Correction	Yes
	PSD Trigger	Internal	USER CVS	
	View Order	Bottom/Up	User CV0	1.00
	# of Repetitions REST	0	MULTI-PHASE	
	# of Repetitions ACTIVE	0	Slice per Location	510
SAT			Phase Acquisition Order	Interleaved
Tag Type		None	Delay after Acquisition	Minimum
TRICKS			Seperate Series	0
Pause On/Off		On	Delay after Acquisition without AV	2
Auto Subtract		0	Mask Phase	0
Auto SCIC		Off	Mask Pause	0
OTHERS			DIFFUSION	
Protocol Notes		Multi-Phase Tab Total Phases: 510 User CVs Check CV pepolar = 1	Recon All Images	On
			CONTRAST	
			Contrast Yes/No	No

fMRI_N-Back_AP

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Gradient Echo
Coil Configuration	Nova 32ch-Brain	Imaging Options	EDR, MPh, EPI, ARC, HB
Plane	AXIAL	PSD Name	multiband/mux_epi
Series Description	fMRI_Semantic_Decision_A P	SCAN RANGE	
SCAN TIMING		FOV	24.0
Flip Angle	52	Slice Thickness	3.0
TE	30.0	Slice Spacing	0.0
Number of Echoes	1	ACQ TIMING	
TR	600.0	Freq	80
Number of Shots	1	Phase	80
IMAGE ENHANCE		Freq DIR	R/L
Filter Choice	None	NEX	1.00
GATING/TRIGGER		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
FMRI		Phase Correction	Yes
PSD Trigger	Internal	USER CVS	
View Order	Bottom/Up	User CV0	1.00
# of Repetitions REST	0	MULTI-PHASE	
# of Repetitions ACTIVE	0	Slice per Location	510
SAT		Phase Acquisition Order	Interleaved
Tag Type	None	Delay after Acquisition	Minimum
TRICKS		Seperate Series	0
Pause On/Off	On	Delay after Acquisition without AV	2
Auto Subtract	0	Mask Phase	0
Auto SCIC	Off	Mask Pause	0
OTHERS		DIFFUSION	
Protocol Notes	Multi-Phase Tab Total Phases: 510 User CVs Check CV pepolar = 1	Recon All Images	On
		CONTRAST	
		Contrast Yes/No	No

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Protocol: pediatric_head_Research-DSBBEP-20180523_20180523135942153_6

PATIENT POSITION

Patient Entry *Head First*
Patient Position *Supine*
Coil Configuration *Nova 32ch-Brain*
Plane *AXIAL*
Series Description *fMRI_RvL_Fingertap_Tonotopic_AP*

SCAN TIMING

Flip Angle *52*
TE *30.0*
Number of Echoes *1*
TR *600.0*
Number of Shots *1*

IMAGE ENHANCE

Filter Choice *None*

GATING/TRIGGER

Auto Trigger Type *Off*

FMRI

PSD Trigger *Internal*
View Order *Bottom/Up*
of Repetitions REST *0*
of Repetitions ACTIVE *0*

SAT

Tag Type *None*

TRICKS

Pause On/Off *On*
Auto Subtract *0*
Auto SCIC *Off*

OTHERS

Protocol Notes *Multi-Phase Tab
Total Phases: 490
User CVs
Check CV pepolar = 1*

IMAGING PARAMETERS

Imaging Mode *2D*
Pulse Sequence *Gradient Echo*
Imaging Options *EDR, MPh, EPI, ARC, HB*
PSD Name *multiband/mux_epi*

SCAN RANGE

FOV *24.0*
Slice Thickness *3.0*
Slice Spacing *0.0*

ACQ TIMING

Freq *80*
Phase *80*
Freq DIR *R/L*
NEX *1.00*
Phase FOV *1.00*
Auto Shim *Auto*
Phase Correction *Yes*

USER CVS

User CV0 *1.00*

MULTI-PHASE

Slice per Location *490*
Phase Acquisition Order *Interleaved*
Delay after Acquisition *Minimum*
Seperate Series *0*
Delay after Acquisition without AV *2*
Mask Phase *0*
Mask Pause *0*

DIFFUSION

Recon All Images *On*

CONTRAST

Contrast Yes/No *No*

fMRI_RvL_Fingertap_Tonotopic_AP

fMRI_RvL_Fingertap_Tonotopic_AP

Protocol: pediatric_head_Research-DSBBEP-20180523_20180523135942153_6

3D_Ax_ASL	PATIENT POSITION		IMAGING PARAMETERS	
	Patient Entry	Head First	Imaging Mode	3D
	Patient Position	Supine	Pulse Sequence	3DASL
	Coil Configuration	Nova 32ch-Brain	Imaging Options	EDR, Fast, Spiral
	Plane	AXIAL	SCAN RANGE	
	Series Description	3D_Ax_ASL	FOV	24.0
	SCAN TIMING		Slice Thickness	4.0
	Number of Echoes	1	ACQ TIMING	
	Receiver Bandwidth	62.50	Freq	512
	IMAGE ENHANCE		Phase	8
	Filter Choice	None	Freq DIR	R/L
	GATING/TRIGGER		NEX	3.00
	Auto Trigger Type	Off	Auto Shim	Auto
	FMRI		Phase Correction	No
	PSD Trigger	Internal	USER CVS	
	View Order	Bottom/Up	User CV1	1.00
	# of Repetitions REST	0	MULTI-PHASE	
	# of Repetitions ACTIVE	0	Seperate Series	0
	SAT		Delay after Acquisition without AV	0
	Tag Type	None	Mask Phase	0
	Fat/Water Saturation	Fat	Mask Pause	0
TRICKS		DIFFUSION		
Pause On/Off		On	Recon All Images	On
Auto Subtract		0	CONTRAST	
Auto SCIC		Off	Contrast Yes/No	No
OTHERS				
Protocol Notes		Please ensure that brain is not crookedly aligned (i.e. looks straight in the coronal view) -> crooked brain will have biased ASL tagging Get full brain coverage from top of brain to bottom of cerebellum		

3D_Ax_ASL

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PATIENT POSITION		IMAGING PARAMETERS	
Patient Entry	Head First	Imaging Mode	2D
Patient Position	Supine	Pulse Sequence	Gradient Echo
Coil Configuration	Nova 32ch-Brain	Imaging Options	EDR, MPh, EPI, ARC, HB
Plane	AXIAL	PSD Name	multiband/mux_epi
Series Description	fMRI_Resting_State_Present_AP	SCAN RANGE	
SCAN TIMING		FOV	24.0
Flip Angle	52	Slice Thickness	3.0
TE	30.0	Slice Spacing	0.0
Number of Echoes	1	ACQ TIMING	
TR	600.0	Freq	80
Number of Shots	1	Phase	80
IMAGE ENHANCE		Freq DIR	R/L
Filter Choice	None	NEX	1.00
GATING/TRIGGER		Phase FOV	1.00
Auto Trigger Type	Off	Auto Shim	Auto
FMRI		Phase Correction	Yes
PSD Trigger	Internal	USER CVS	
View Order	Bottom/Up	User CV0	1.00
# of Repetitions REST	0	MULTI-PHASE	
# of Repetitions ACTIVE	0	Slice per Location	360
SAT		Phase Acquisition Order	Interleaved
Tag Type	None	Delay after Acquisition	Minimum
TRICKS		Seperate Series	0
Pause On/Off	On	Delay after Acquisition without AV	2
Auto Subtract	0	Mask Phase	0
Auto SCIC	Off	Mask Pause	0
OTHERS		DIFFUSION	
Protocol Notes	Multi-Phase Tab Total Phases: 360 User CVs Check CV pepolar = 1	Recon All Images	On
		CONTRAST	
		Contrast Yes/No	No