

MRI-Neuro Protocols

Brain Protocols.....	2
BRAIN WITH AND WITHOUT	3
BRAIN WITHOUT CONTRAST	4
HHT	5
MS WITH AND WITHOUT CONTRAST	6
MS BRAIN WITHOUT CONTRAST	7
PEDIATRIC BRAIN.....	8
PEDIATRIC BRAIN WITH CONTRAST	9
PITUITARY NO OP	10
PITUITARY POST OP	11
TEMPORAL LOBES HIGH RESOLUTION.....	Error! Bookmark not defined.
VENOUS INFARCT/ SINUS THROMBOSIS	Error! Bookmark not defined.

Brain Protocols

BRAIN WITHOUT CONTRAST

		SAG T1	AXIAL T2	AXIAL FLAIR	AXIAL DWI				
PATIENT	COIL TYPE	HEAD	HEAD	HEAD	HEAD				
POSITION	PLANE	SAG	AXIAL	AXIAL	AXIAL				
PARAMETERS	MODE	2D	2D	2D	2D				
	PULSE SEQUENCE	SE	SE	IR	EPI				
USER CV'S	PSD			FLAIR					
SCAN TIMING	FLIP ANGLE								
	TE	MIN-FULL	85	130					
	TR	400-800	3000-6000	9000					
	TI			2200					
	AUTO CF	WATER	WATER	WATER	WATER				
	FLOW DIRECTION		SLICE	SLICE					
SCANNING RANGE	FOV	21-24	20	20	24-28				
	SLICE THICKNESS	5/0	5/0	5/0	5/0				
	# SLICES	AS NEEDED	28	28	28-32				
	SAT	I	I	I	I				
AT THIS LEAST AMOUNT	MATRIX	256X192	256X256	256X192	256X192				
	FREQ DIRECTION	S/I	A/P	A/P	A/P				
COMMENTS		COVER ENTIRE BRAIN	LOOK AT ANGLE ON EXAMPLES	LOOK AT ANGLE ON EXAMPLES	LOOK AT ANGLE ON EXAMPLES				

HHT

		SAG T1	AXIAL T2	AXIAL GRE	AXIAL DWI	AXIAL FLAIR	AXIAL T1	AXIAL T1 POST FS	COR T1 POST	MRA COW +/- GADO
PATIENT	COIL TYPE	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD
POSITION	PLANE	SAG	AXIAL	AXIAL	AXIAL	AXIAL	AXIAL	AXIAL	COR	AXIAL
PARAMETER	MODE	2D	2D	2D	2D	2D	2D	2D	2D	3D
	PULSE SEQUENCE	SE	SE	GRE	EPI	IR	SE	SE	SE	
USER CV'S	PSD					FLAIR				
SCAN TIMING	FLIP ANGLE			20						30
	TE	MIN-FULL	85	15		130	MIN-FULL	MIN-FULL	MIN-FULL	4.6
	TR	400-800	3000-6000	650		9000	400-800	400-800	400-800	35
	TI					2200				
	AUTO CF	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
	FLOW DIRECTION		SLICE			SLICE				
SCANNING RANGE	FOV	21-24	20	20	24-28	20	20	20	20	22
	SLICE THICKNESS	5/0	5/0	5/0	5/0	5/0	5/0	5/0	5/0	0.9
	# SLICES	AS NEEDED	28	28	28-32	28	28	28	28	SLAB
	SAT	I	I	I	I	I	I	I/FS	I	S
AT THIS LEAST AMOUNT	MATRIX	256X192	256X256	256X192	256X192	256X192	256X256	256X256	256X256	512X256
	FREQ DIRECTION	S/I	A/P	A/P	A/P	A/P	A/P	A/P	S/I	A/P
COMMENTS		COVER ENTIRE BRAIN	LOOK AT ANGLE ON IMAGES	LOOK AT ANGLE ON IMAGES		LOOK AT ANGLE ON IMAGES	LOOK AT ANGLE ON IMAGES	LOOK AT ANGLE ON IMAGES	LOOK AT ANGLE ON IMAGES	HOSP IS 2 SLABS HCH AND CAMT IS 1 SLAB

MS WITH AND WITHOUT CONTRAST

		SAG T1	AXIAL T2	SAG FLAIR	AXIAL FLAIR	AXIAL DWI	AXIAL T1	AXIAL T1 POST	COR T1 POST
PATIENT	COIL TYPE	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD
POSITION	PLANE	SAG	AXIAL	SAG	AXIAL	AXIAL	AXIAL	AXIAL	COR
PARAMETERS	MODE	2D	2D	2D	2D	2D	2D	2D	2D
	PULSE SEQUENCE	SE	SE	IR	IR	EPI	SE	SE	SE
USER CV'S	PSD			FLAIR	FLAIR				
SCAN TIMING	FLIP ANGLE								
	TE	MIN-FULL	85	160	130		MIN-FULL	MIN-FULL	MIN-FULL
	TR	400-800	3000-6000	9000	9000		400-800	400-800	400-800
	TI			2200	2200				
	AUTO CF	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
	FLOW DIRECTION		SLICE	FREQ	SLICE				
SCANNING RANGE	FOV	21-24	20	21	20	24-28	20	20	20
	SLICE THICKNESS	5/0	5/0	3/0	5/0	5/0	5/0	5/0	5/0
	# SLICES	AS NEEDED	28	16	28	28-32	28	28	28
	SAT	I	I	I	I	I	I	I/FS	I
AT THIS LEAST AMOUNT	MATRIX	256X192	256X256	256X256	256X192	256X192	256X256	256X256	256X256
	FREQ DIRECTION	S/I	A/P	S/I	A/P	A/P	A/P	A/P	S/I
COMMENTS		COVER ENTIRE BRAIN	LOOK AT ANGLE ON IMAGES		LOOK AT ANGLE ON IMAGES		LOOK AT ANGLE ON IMAGES	LOOK AT ANGLE ON IMAGES	LOOK AT ANGLE ON IMAGES

MS BRAIN WITHOUT CONTRAST

		SAG T1	AXIAL T2	AXIAL FLAIR	AXIAL DWI	SAG FLAIR			
PATIENT	COIL TYPE	HEAD	HEAD	HEAD	HEAD	HEAD			
POSITION	PLANE	SAG	AXIAL	AXIAL	AXIAL	SAG			
PARAMETERS	MODE	2D	2D	2D	2D	2D			
	PULSE SEQUENCE	SE	SE	IR	EPI	IR			
USER CV'S	PSD			FLAIR		FLAIR			
SCAN TIMING	FLIP ANGLE								
	TE	MIN-FULL	85	130		160			
	TR	400-800	3000-6000	9000		9000			
	TI			2200		2200			
	AUTO CF	WATER	WATER	WATER	WATER	WATER			
	FLOW DIRECTION		SLICE	SLICE		FREQ			
SCANNING RANGE	FOV	21-24	20	20	24-28	21			
	SLICE THICKNESS	5/0	5/0	5/0	5/0	3/0			
	# SLICES	AS NEEDED	28	28	28-32	16			
	SAT	I	I	I	I	I			
AT THIS LEAST AMOUNT	MATRIX	256X192	256X256	256X192	256X192	256X256			
	FREQ DIRECTION	S/I	A/P	A/P	A/P	S/I			
COMMENTS		COVER ENTIRE BRAIN	LOOK AT ANGLE ON IMAGES	LOOK AT ANGLE ON IMAGES					

PEDIATRIC BRAIN

		SAG T1 IR	AXIAL T2	AXIAL FLAIR	AXIAL DWI	AXIAL PD	OPTIONAL MRA HEAD	OPTIONAL 2D COR MRV	OPTIONAL AXIAL GRE
PATIENT	COIL TYPE	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD
POSITION	PLANE	SAG	AXIAL	AXIAL	AXIAL	AXIAL	AXIAL	COR	AXIAL
PARAMETERS	MODE	2D	2D	2D	2D	2D	3D	2D	2D
	PULSE SEQUENCE	FSE	SE	IR	EPI		FL OR SPGR	FL	GRE
USER CV'S	PSD			FLAIR					
SCAN TIMING	FLIP ANGLE	180				15	30	60	20
	TE	11	85	130		25	4	7.5-11	15
	TR	2000-2800	3000-6000	9000			35	28	650
	TI	800		2200					
	AUTO CF	WATER	WATER	WATER	WATER				WATER
	FLOW DIRECTION		SLICE	SLICE					
SCANNING RANGE	FOV	ACCORDING TO HEAD SIZE	ACCORDING TO HEAD SIZE	ACCORDING TO HEAD SIZE	ACCORDING TO HEAD SIZE	ACCORDING TO HEAD SIZE	ACCORDING TO HEAD SIZE	220	ACCORDING TO HEAD SIZE
	SLICE THICKNESS	4/4	3/0	3/0	3/0	3/0	0.8	2	5/0
	# SLICES	AS NEEDED	AS NEEDED	AS NEEDED	AS NEEDED	AS NEEDED	AS NEEDED	128	AS NEEDED
	SAT								
AT THIS LEAST AMOUNT	MATRIX	256X256	256X256	256X192	256X192		256X192	256X192 INTERP	256X192
	FREQ DIRECTION	S/I	A/P	A/P	A/P	A/P	A/P		A/P
COMMENTS		INCLUDE ALL OF BRAIN					DO FOR STROKE	DO FOR VENOUS ISSUES DO SAG PC ALSO	DO IF L/F HEMMORAGE, VASC MALFORMATION, OR BIRTH TRAUMA

PITUITARY NO OP

		SAGITTAL T1	CORONAL T1	CORONAL T2	CORONAL DYNAMIC	SAGITTAL T1 POST FS	CORONAL T1 POST FS		
PATIENT	COIL TYPE	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD		
POSITION	PLANE	SAG	COR	SAG	COR	SAG	COR		
PARAMETERS	MODE	2D	2D	2D	2D	2D	2D		
	PULSE SEQUENCE	SE	SE	SE	SE	SE	SE		
USER CV'S	PSD								
SCAN TIMING	FLIP ANGLE								
	TE	MIN-FULL	MIN-FULL	MIN-FULL	17	MIN-FULL	MIN-FULL		
	TR	400-800	400-800	400-800	400	400-800	400-800		
	TI								
	AUTO CF	WATER	WATER	WATER	WATER	WATER	WATER		
	FLOW DIRECTION								
SCANNING RANGE	FOV	16	16	16	16	16	16		
	SLICE THICKNESS	3/0	3/0	3/0	3/0	3/0	3/0		
	# SLICES	12+	12+	12+	LOOK AT THE SCANNER	12+	12+		
	SAT	I	I	I	S/I	I	I		
AT THIS LEAST AMOUNT	MATRIX	256X256	256X256	256X256	256X192	256X256	256X256		
	FREQ DIRECTION	S/I	S/I	S/I	R/L	S/I	S/I		
COMMENTS		PITUITARY ONLY	PITUITARY ONLY	PITUITARY ONLY	PIT ONLY REPEAT AS NEEDED PER SCANNER	PITUITARY ONLY	PITUITARY ONLY		

PITUITARY POST OP

		SAGITTAL T1	CORONAL T1	CORONAL T2	SAGITTAL T1 POST FS	CORONAL T1 POST FS			
PATIENT	COIL TYPE	HEAD	HEAD	HEAD	HEAD	HEAD			
POSITION	PLANE	SAG	COR	SAG	SAG	COR			
PARAMETERS	MODE	2D	2D	2D	2D	2D			
	PULSE SEQUENCE	SE	SE	SE	SE	SE			
USER CV'S	PSD								
SCAN TIMING	FLIP ANGLE								
	TE	MIN-FULL	MIN-FULL	MIN-FULL	MIN-FULL	MIN-FULL			
	TR	400-800	400-800	400-800	400-800	400-800			
	TI								
	AUTO CF	WATER	WATER	WATER	WATER	WATER			
	FLOW DIRECTION								
SCANNING RANGE	FOV	16	16	16	16	16			
	SLICE THICKNESS	3/0	3/0	3/0	3/0	3/0			
	# SLICES	12+	12+	12+	12+	12+			
	SAT	I	I	I	I	I			
AT THIS LEAST AMOUNT	MATRIX	256X256	256X256	256X256	256X256	256X256			
	FREQ DIRECTION	S/I	S/I	S/I	S/I	S/I			
COMMENTS		PITUITARY ONLY	PITUITARY ONLY	PITUITARY ONLY	PITUITARY ONLY	PITUITARY ONLY			

STROKE (LIMITED-NON-STUDY PTS)

		AXIAL T2	AXIAL FLAIR	AXIAL DWI	OPTIONAL PERFUSION				
PATIENT	COIL TYPE	HEAD	HEAD	HEAD					
POSITION	PLANE	AXIAL	AXIAL	AXIAL					
PARAMETERS	MODE	2D	2D	2D					
	PULSE SEQUENCE	SE	IR	EPI					
USER CV'S	PSD		FLAIR						
SCAN TIMING	FLIP ANGLE								
	TE	85	130						
	TR	3000-6000	9000						
	TI		2200						
	AUTO CF	WATER	WATER	WATER					
	FLOW DIRECTION	SLICE	SLICE						
SCANNING RANGE	FOV	20	20	24-28					
	SLICE THICKNESS	5/0	5/0	5/0					
	# SLICES	28	28	28-32					
	SAT	I	I	I					
AT THIS LEAST AMOUNT	MATRIX	256X256	256X192	256X192					
	FREQ DIRECTION	A/P	A/P	A/P					
COMMENTS		MD CHECK WHEN COMPLETED TO SEE IF ADDITIONAL IMAGES ARE NEEDED							

VENOUS INFARCT/ SINUS THROMBOSIS

		SAG T1	AXIAL T2	AXIAL FLAIR	AXIAL DWI	AXIAL T1	AXIAL T1 POST	COR 3D	2D COR MRV
PATIENT	COIL TYPE	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD
POSITION	PLANE	SAG	AXIAL	AXIAL	AXIAL	AXIAL	AXIAL	COR	COR
PARAMETERS	MODE	2D	2D	2D	2D	2D	2D	3D	2D
	PULSE SEQUENCE	SE	SE	IR	EPI	SE	SE	FL OR SPGR	FL
USER CV'S	PSD			FLAIR					
SCAN TIMING	FLIP ANGLE							35	60
	TE	MIN-FULL	85	130		MIN-FULL	MIN-FULL	4-6	7.5-11
	TR	400-800	3000-6000	9000		400-800	400-800	11	28
	TI			2200					
	AUTO CF	WATER	WATER	WATER	WATER	WATER	WATER	WATER	
	FLOW DIRECTION		SLICE	SLICE					
SCANNING RANGE	FOV	21-24	20	20	24-28	20	20	256	220
	SLICE THICKNESS	5/0	5/0	5/0	5/0	5/0	5/0	1.4	2
	# SLICES	AS NEEDED	28	28	28-32	28	28	160-210*	128
	SAT	I	I	I	I	I	I/FS		I
AT THIS LEAST AMOUNT	MATRIX	256X192	256X256	256X192	256X192	256X256	256X256	256X256	256X90 INTERP
	FREQ DIRECTION	S/I	A/P	A/P	A/P	A/P	A/P	COVER FROM BACK OF HEAD THRU NOSE	
COMMENTS		COVER ENTIRE BRAIN	LOOK AT ANGLE ON IMAGES	LOOK AT ANGLE ON IMAGES		LOOK AT ANGLE ON IMAGES	LOOK AT ANGLE ON IMAGES	*IS DEPENDENT UPON PT HEAD SIZE	DO SAG PC ALSO

		3-PLANE LOC	AXIAL T1	AXIAL FSE	CORONAL T1	AXIAL T1 POST FS	CORONAL T1 POST FS
PATIENT	COIL TYPE	HEAD	HI RES COIL	HI RES COIL	HI RES COIL	HI RES COIL	HI RES COIL
POSITION	PLANE		AXIAL	AXIAL	CORONAL	AXIAL	CORONAL
PARAMETERS	MODE	2D	2D	2D	2D	2D	2D
	PULSE SEQUENCE		FSE	FSE	FSE	FSE	FSE
USER CV'S	PSD						
SCAN TIMING	FLIP ANGLE						
	TE		MIN#	85-105	MIN #	MIN #	MIN #
	TR		350-800	3000-6000	350-800	350-800	350-800
	TI						
	AUTO CF		WATER	WATER	WATER	WATER	WATER
	FLOW DIRECTION			SLICE			
SCANNING RANGE	FOV		16	16	16	16	16
	SLICE THICKNESS		3/0	3/0	3/0	3/0	3/0
	# SLICES	AS NEEDED TO COVER THE ENTIRE AREA OF THE IAC'S					
	SAT		S/I	S/I	S/I	S/I/ FS	S/I/ FS
AT THIS LEAST AMOUNT	MATRIX		256X256	256X256	256X256	256X256	256X256
	FREQ DIRECTION						
COMMENTS		USE THE HEAD COIL IF YOU DO NOT HAVE A HI RES TMJ COIL THIS SCAN IS OF THE IAC'S ONLY NO WHOLE BRAIN IMAGING UNLESS SPECIFIED BY THE RADIOLOGIST					

Head & Neck Protocols

HORNERS SYNDROME

		3-PLANE LOC	AXIAL T1 FS	CORONAL T1	AXIAL T2 FS	CORONAL STIR	AXIAL T1 POST	CORONAL T1 POST FS	MRA DYNAMIC ARCH
PATIENT	COIL TYPE	HEAD/NECK	HEAD/NECK	HEAD/NECK	HEAD/NECK	HEAD/NECK	HEAD/NECK	HEAD/NECK	HEAD/NECK
POSITION	PLANE								
PARAMETERS	MODE	2D	2D	2D	2D	2D	2D	2D	
	PULSE SEQUENCE		FSE	FSE	FSE		FSE	FSE	
USER CV'S	PSD								
SCANNING TIMING	FLIP ANGLE								
	TE		MIN #	MIN #	85-105		MIN #	MIN #	
	TR		350-800	350-800	3000-6000	4000-6000	350-800	350-800	
	TI								
	AUTO CF		WATER	WATER	WATER	WATER	WATER	WATER	
	FLOW DIRECTION				SLICE				
SCANNING RANGE	FOV	FOV NEEDS TO GO FROM TOP OF TEMPORAL BONE TO AORTIC ARCH							
	SLICE THICKNESS		5/0	5/0	5/0	5/0	5/0	5/0	
	# SLICES	AS NEEDED TO COVER AREA OF INTEREST							
	SAT		S/I/FS	S/I	S/I/FS	S/I	S/I	S/I/FS	
AT THIS LEAST AMOUNT	MATRIX		256X256	256X256	256X256	256X256	256X256	256X256	
	FREQ DIRECTION								
COMMENTS		IF HISTORY IS ASSOCIATED WITH TRAUMA OR NECK FRACTURE A TRIPLE SAG C-SPINE MAY BE ADDED. DOUBLE CHECK WITH THE RADIOLOGIST BEFORE PROCEEDING WITH THIS. YOU WILL ALSO NEED TO ORDER A LIMITED C-SPINE.							

		3-PLANE LOCALIZER	AXIAL 3D FSE	OPTIONAL CORONAL 3D FSE	OPTIONAL SAGITTAL 3D FSE	OPTIONAL CISS
PATIENT	COIL TYPE	HI RES COIL	HI RES COIL	HI RES COIL	HI RES COIL	HI RES COIL
POSITION	PLANE		AXIAL	CORONAL	SAGITTAL	VARIES
PARAMETERS	MODE		3D	3D	3D	3D
	PULSE SEQUENCE					

USER CV'S	PSD					
SCAN TIMING	FLIP ANGLE					
	TE					
	TR					
	TI					
	AUTO CF		WATER	WATER	WATER	WATER
	FLOW DIRECTION					
SCANNING RANGE	FOV					
	SLICE THICKNESS					
	# SLICES		SLAB	SLAB	2 SLABS COVER THE NERVE OF EACH IAC	SLAB
	SAT					
AT THIS LEAST AMOUNT	MATRIX					
	FREQ DIRECTION					
COMMENTS			REFORMAT TO CORONAL COVER ENTIRE IAC	COVER ENTIRE IAC	DO ON PATIENTS 18 OR YOUNGER	DO IF SPECIFIED BY RADIOLOGIST

PATIENT	COIL TYPE	HEAD/NECK	HEAD/NECK	HEAD/NECK	HEAD/NECK	HEAD/NECK	HEAD/NECK	HEAD/NECK	HEAD/NECK
POSITION	PLANE		AXIAL	AXIAL	CORONAL	CORONAL	AXIAL	CORONAL	SAGITTAL
PARAMETERS	MODE		2D	2D	2D	2D	2D	2D	2D
	PULSE SEQUENCE		FSE	FSE	FSE	FSE	FSE	FSE	FSE
USER CV'S	PSD								
SCAN TIMING	FLIP ANGLE								
	TE		MIN#	85	MIN#	45	MIN#	MIN#	MIN#
	TR		350-800	3000-6000	350-800	3000-6000	350-800	350-800	350-800
	TI					150			
	AUTO CF		WATER	WATER	WATER	WATER	WATER	WATER	WATER
	FLOW DIRECTION			SLICE					
SCANNING RANGE	FOV		24	24	24	24	24	24	24
	SLICE THICKNESS		4/0	4/0	4/0	4/0	4/0	4/0	4/0
	# SLICES		AS NEEDED	AS NEEDED	AS NEEDED	AS NEEDED	AS NEEDED	AS NEEDED	AS NEEDED
	SAT			FS				FS	FS
AT THIS LEAST AMOUNT	MATRIX		256X256	256X256	256X256	256X256	256X256	256X256	256X256
	FREQ DIRECTION		A/P	A/P	S/I	S/I	A/P	S/I	
COMMENTS		SET-UP BY EACH AREA	INCLUDE ALL OF T-BONE TO HYOID	INCLUDE ALL OF T-BONE TO HYOID	BACK OF CORD-NOSE	BACK OF CORD-NOSE	INCLUDE ALL OF T-BONE TO HYOID	BACK OF CORD-NOSE	IF ABNORMAL FACIAL NERVE ENHANCEMENT

PULSATILE TINNITUS

		SAGITTAL T1	AXIAL T2	AXIAL FLAIR	AXIAL PRE T1	AXIAL T1 POST FS	CORONAL T1 POST FS	MRA COW POST CONTRAST	
PATIENT	COIL TYPE	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD	HEAD	
POSITION	PLANE	SAGITTAL	AXIAL	AXIAL	AXIAL	AXIAL	CORONAL	AXIAL	
PARAMETERS	MODE	2D	2D	2D	2D	2D	2D	3D	
	PULSE SEQUENCE	FSE	FSE		FSE	FSE	FSE	FL	

USER CV'S	PSD								
SCAN TIMING	FLIP ANGLE							30	
	TE	MIN-FULL	85	130	MIN #	MIN #	MIN #	4	
	TR	400-800	3000-6000	9000	350-800	350-800	350-800	35	
	TI			2200					
	AUTO CF	WATER	WATER	WATER	WATER	WATER	WATER		
	FLOW DIRECTION		SLICE	SLICE					
SCANNING RANGE	FOV	21-24	20	20	16	16	16	21	
	SLICE THICKNESS	5/0	5/0	5/0	3/0	3/0	3/0	0.8	
	# SLICES	AS NEEDED	28	28				SLAB	
	SAT	I	I	I	16	16	16		
AT THIS LEAST AMOUNT	MATRIX	256X192	256X256	256X192	3/0	3/0	3/0	256X192	
	FREQ DIRECTION	S/I	A/P	A/P	A/P	A/P		A/P	
COMMENTS		COVER ENTIRE BRAIN	WHOLE BRAIN	WHOLE BRAIN	IAC ONLY	IAC ONLY	IAC ONLY	CUT OUTS INCLUDE ALL THE VESSELS	

TRIGEMINAL/TIC DOULOUREUX

DO ON 3T WHENEVER POSSIBLE

		3-PLANE LOC	AXIAL FSE T2	AXIAL FLAIR	TOF MRA COW AND VB	AXIAL SPGR POST GADO	CORONAL T1 POST FS		
PATIENT	COIL TYPE		HEAD	HEAD	HEAD	HEAD/TEMP COILS	HEAD		
POSITION	PLANE		AXIAL	AXIAL	AXIAL	COR	COR		
PARAMETERS	MODE		2D	2D	3D	3D	2D		
	PULSE SEQUENCE		FSE		FL	SPGR OR FL	SE		
USER CV'S	PSD								

SCAN TIMING	FLIP ANGLE					45			
	TE		85	130		MIN	MIN-FULL		
	TR		3000-6000	9000		23	400-800		
	TI			2200					
	AUTO CF		WATER	WATER		WATER	WATER		
	FLOW DIRECTION		SLICE	SLICE					
SCANNING RANGE	FOV		20	20	21	21+	20		
	SLICE THICKNESS		5/0	5/0		1.2/0	5/0		
	# SLICES		28	28	2- SLABS COW AND VERTIBULAR BASILAR	SLAB	28		
	SAT								
AT THIS LEAST AMOUNT	MATRIX		256X256	256X192		256X192	256X256		
	FREQ DIRECTION		A/P	A/P		S/I	S/I		
COMMENTS		SET-UP IN THE SCANNER	LOOK AT ANGLE ON EXAMPLES	LOOK AT ANGLE ON EXAMPLES	THIS WILL BE TWO SCANS	ENTIRE BRAIN	LOOK AT ANGLE ON EXAMPLES		