

**PROTOCOL: MR ORBITS WWO**

**CLINICAL HISTORY/ INDICATIONS: OPTIC NEURITIS, MASS/TUMOR, INFECTION, THYROID EYE DISEASE**

- tips:
- Cover patient's eyes with a washcloth to prevent eye movement.
  - For CN 1, 3, 4, 6 palsy, be sure to add a FIESTA / CISS / T2 SPACE through the midbrain and pons.
  - If Sagittal 3D FLAIR not available, use coronal T2 FLAIR perpendicular to the optic nerve.
  - For Coronal T2 FS / STIR, ensure: (1) no motion (2) scan run perpendicular to optic nerve.
  - For T1 fat suppression, use a 3-point DIXON if possible.

SCAN ORDER	PLANE	IMAGE CONTRAST/ WEIGHTING	MODE	PULSE SEQ	COVERAGE		TR RANGE	TE RANGE	TI	FLIP ANGLE	THICKNESS/ GAP (mm)	FOV (cm)	Max Pixel (mm) x Ph	Fr PHASE AXIS	SEND TO PACS	Max scan time (target)
1	AX	DWI (b1200)	2D	EPI/ RESOLVE	FORAMEN MAGNUM	VERTEX	>4000	MIN	-	90	5/.5	24	2.5X2.5	AP	FULL SERIES + ADC MAP	3:00
2	AX	T1	2D	FSE	ENTIRE	ORBITS	<790	MIN	-	>130	3/0	14-16	1.0X1.0	RL	FULL SERIES	4:00
3	COR	T2 STIR	2D	FSE	PONS	LENS	4000-7000	85-105	-	>130	3/0	14-16	1.0X1.0	RL	IF 3D: AX & SAG, 1 MM	5:00
4	COR	T1	2D	FSE	ENTIRE	ORBITS	<790	MIN	-	>130	3/0	14-16	1.0X1.0	RL	FULL SERIES	4:00
5	SAG	T2FLAIR	3D	CUBE/ SPACE/ VISTA	ENTIRE HEAD	AND EARS	>5000	~140	VARIES	>130	1/OVLP	24-25	1.0X1.0	PA	FULL SERIES+ AX/COR 1X1 MPR	5:00
<b>CONTRAST</b>																
6+C	AX	T1 FS	2D	FSE	COVER ENTIRE ORBITS		<790	MIN	-	>130	3/0	14-16	1.0X1.0	RL	FULL SERIES	5:00
7+C	COR	T1 FS	2D	FSE	COVER FROM PONS TO LENS		<790	MIN	-	>130	3/0	14-16	1.0X1.0	RL	FULL SERIES	4:45
8+C	AX	T1	2D	SE w/ Flow Comp	FORAMEN MAGNUM	VERTEX	<790	MIN FULL	-	90	5/.5	24-25	.9X.9	RL	FULL SERIES	4:00