

## Sample Report

### MRI Small Phantom QC Report

By  
**Shahriar Shalika**

Supervisor  
**Dr Abbas Nasiraei-Moghaddam**

Acquisition date: **1401/07/28**

Report date: **1401/09/13**

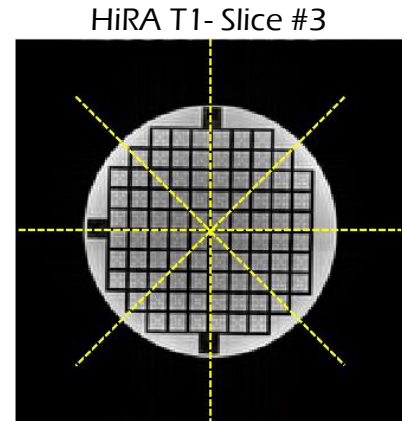
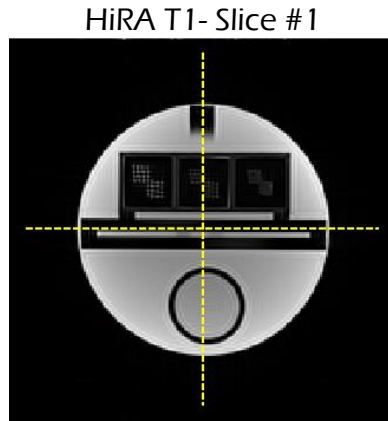
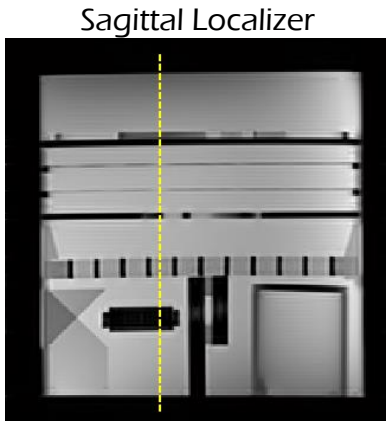
Scanner: **3T- TrioTim**

Phantom: **???**

### QUICK VIEW

Test	Status	Description
1. Geometric Accuracy Measurements	Pass	
2. High-Contrast Spatial Resolution	Pass	
3. Slice Thickness Accuracy	Pass	
4. Slice Position Accuracy	Pass	
5. Percent Image Uniformity	Not- Pass	Knee coil: Tx/Rx
6. Percent-Signal Ghosting	Pass	
7. Low-Contrast Object Detectability	Pass	

# 1. Geometric Accuracy Measurements



Dir	Len	Real	Status	Dir	Len	Real	Status	Dir	Len	Real	Status
UL	100	98.43	Pass	LR	100	98.84	Pass	LR	100	99.04	Pass
				UL	100	98.84	Pass	ULr	100	98.77	Pass
								UL	100	99.04	Pass
								UrLI	100	98.09	Pass

\* UL: Upper-Lower  
 \* LR: Left-Right  
 \* ULr: Upperleft-Lowerright  
 \* UrLI: Upperright-Lowerleft

\* Dir: Direction  
 \* Len: Length

**NOTE:** All the measurements are in mm

Test Status	Pass
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## 2. High-Contrast Spatial Resolution

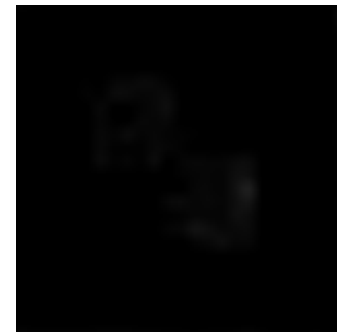
HiRA Small T1- Slice #1



<b>Resolution:</b> 1.1 mm	<b>Resolution:</b> 1.0 mm	<b>Resolution:</b> 0.9 mm
Horizontal status: Pass	Horizontal status: Pass	Horizontal status: Fail
Vertical status: Pass	Vertical status: Pass	Vertical status: Fail

Test Status: Pass

HiRA Small T2- Slice #1

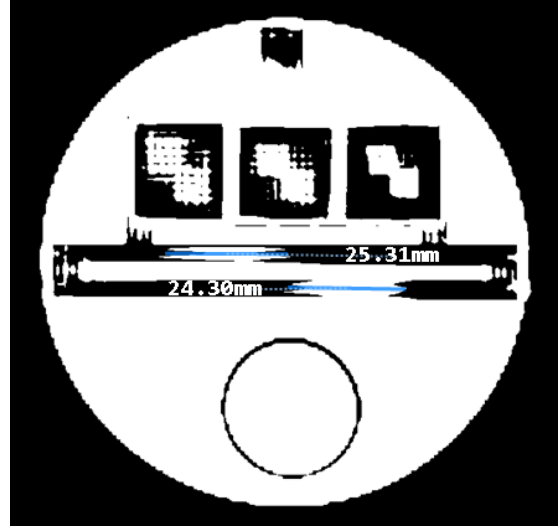
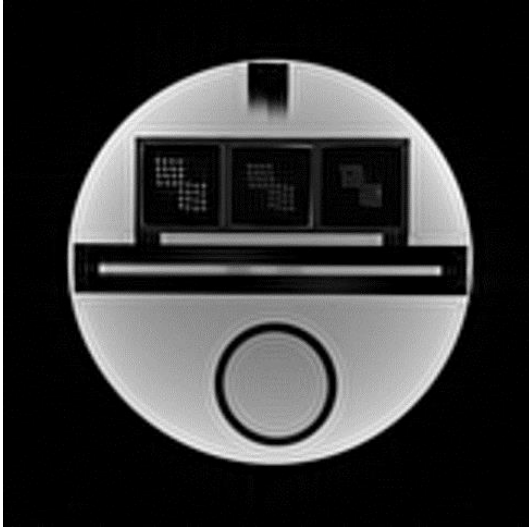


<b>Resolution:</b> 1.1 mm	<b>Resolution:</b> 1.0 mm	<b>Resolution:</b> 0.9 mm
Horizontal status: Pass	Horizontal status: Pass	Horizontal status: Fail
Vertical status: Pass	Vertical status: Pass	Vertical status: Fail

Test Status: Pass



### 3. Slice Thickness Accuracy

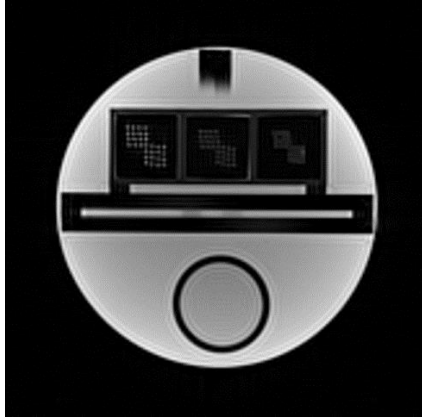


Slice #1	Signal Ramp (mm)		Slice Thickness (mm)		Limit (mm)		Status
	Upper	Bottom	Real	Prescribed	Upper	Bottom	
	25.31	24.30	4.95	5	5.7	4.3	Pass
Test status				Pass			



## 4. Slice Position Accuracy

HiRA T1- Slice #1



Slice #1 SPA



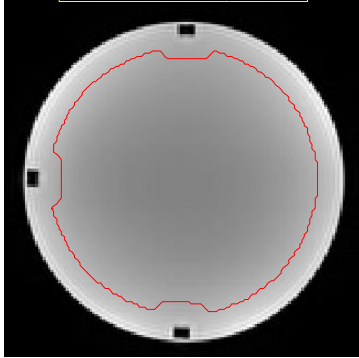
		Upper Insert		
		Bars Diff (mm)	Location (mm)	Status
Slice #1		- 1.50	- 0.75	Pass
Test status				Pass



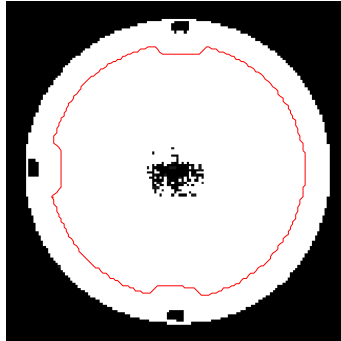


## 5. Percent Image Uniformity

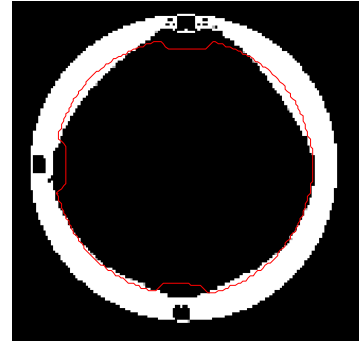
HiRA T1- Slice #4



Smean: 1376



Smin: 1169



Smax: 1710

$$PIU = 100 \times \left[ 1 - \frac{(\bar{S}_{max} - \bar{S}_{min})}{(\bar{S}_{max} + \bar{S}_{min})} \right]$$

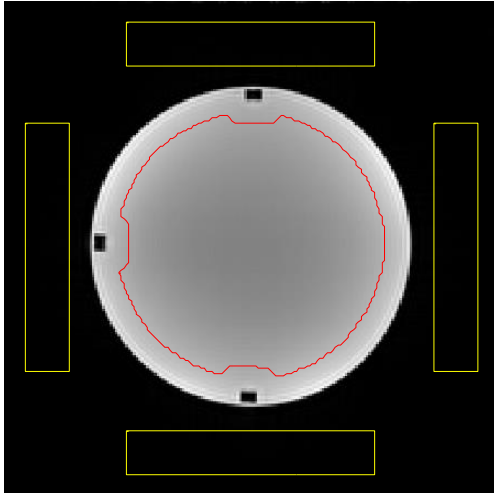
PIU = 81.21%

Test status	Not-Pass
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## 6. Percent-Signal Ghosting



HiRA T1- Slice #4

Smean	Sfe1	Sfe2	Spe1	Spe2
1376	7.28	6.62	7.20	6.88

$$PSG = 100 \times \left| \frac{(\bar{S}_{FE1} + \bar{S}_{FE2}) - (\bar{S}_{PE1} + \bar{S}_{PE2})}{2\bar{S}} \right|$$

PSG = 0.006%

Status

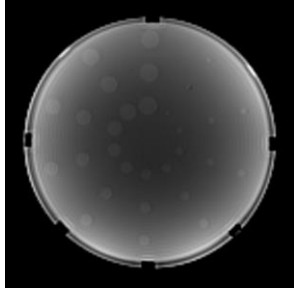
Pass



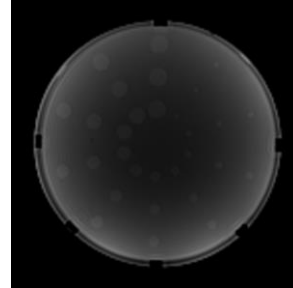


## 7. Low-Contrast Object Detectability

HiRA T1- Slice #7



HiRA T1- Slice #8



Spokes  
10/10

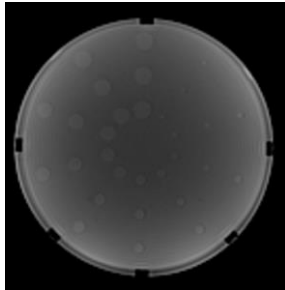
Spokes  
10/10

Total Score: 20/20

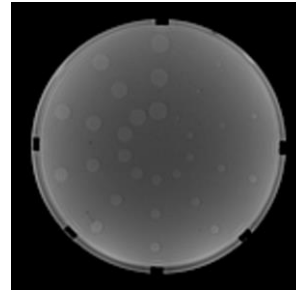
Test Status:

Pass

HiRA T2- Slice #7



HiRA T2- Slice #8



Spokes  
10/10

Spokes  
10/10

Total Score: 20/20

Test Status:

Pass

