DoseLab CT Imaging QA Results

Summary: All tests passed

DoseLab version: 6.80
Date: December 13, 2019
Machine: Unit 7, #:1245
Phantom: Catphan 504
Magnification: 99.92%
Energy: 125 kV
Expected slice width: 2.0 mm
Matrix size: 512x512
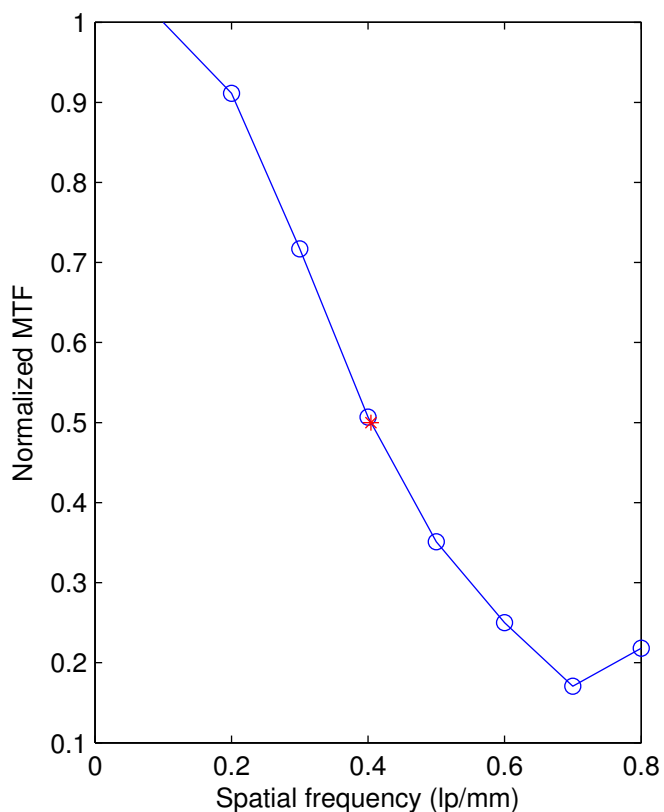Performed by: Joseph Madamesila
Tolerance set: Unit:1,6,7,8, 9 Large FOV

Scaling discrepancy: 0.2 mm (Pass)
Geometric distortion: 0.1 mm (Pass)
Spatial resolution (50% MTF): 0.40 lp/mm (Pass)
Minimum uniformity (ROI 19): 98.8% (Pass)

CTP404 module results

Contrast ROI details
Measured HU
1: 372
2: 111

HU constancy ROI details
Reference / Measured / Difference
3 (Acrylic): 120 / 140 / 20
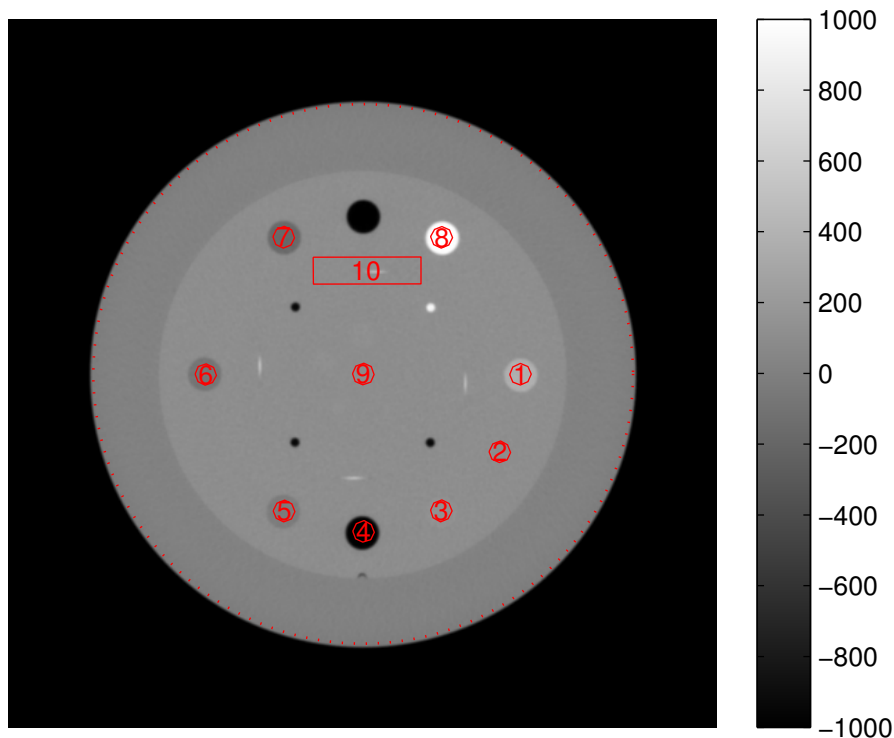4 (Air): −1000 / −998 / 2
5 (Polystyrene): −35 / −25 / 10
6 (LDPE): −100 / −82 / 18
7 (PMP): −200 / −177 / 23
8 (Teflon): 990 / 997 / 7
9 (CTP404): 100 / 99 / −1

CTP528 module results

Spatial resolution ROI details
Phantom lp/mm / Normalized MTF
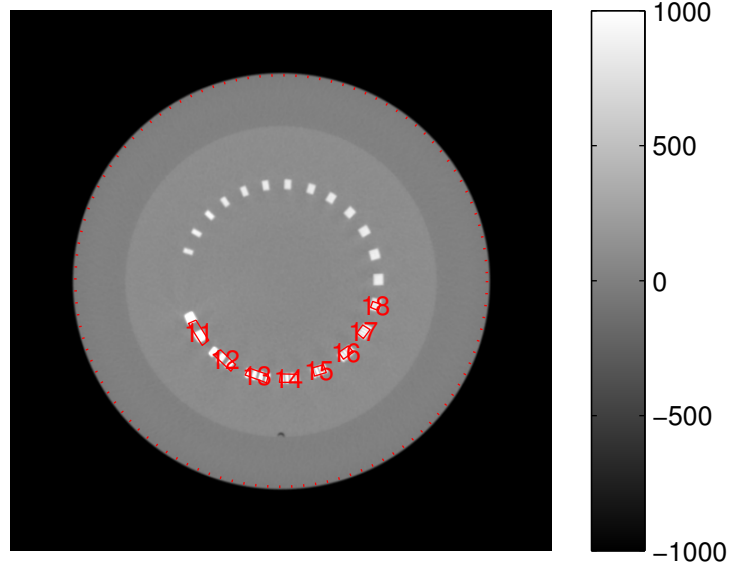11: 0.1 / 1.00
12: 0.2 / 0.91
13: 0.3 / 0.72
14: 0.4 / 0.51
15: 0.5 / 0.35
16: 0.6 / 0.25
17: 0.7 / 0.17
18: 0.8 / 0.22

CTP486 module results

Uniformity ROI details
Measured HU / Uniformity
19: 21 / 98.8%
20: 33 / 98.8%
21: 32 / 98.8%
22: 35 / 98.9%
23: 19 / 98.9%