DoseLab CT Imaging QA Results
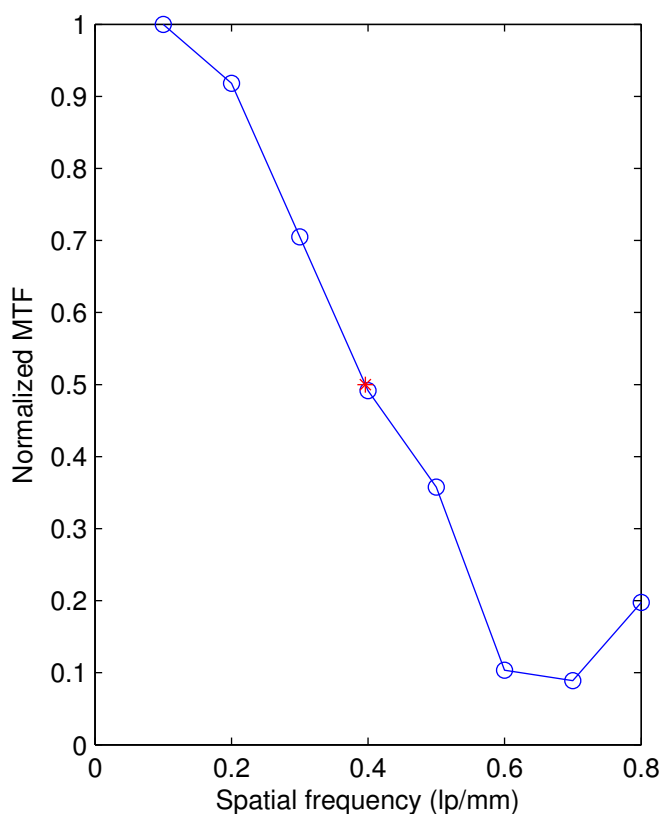
Summary: Some tests generated a warning

DoseLab version: 6.80
Date: February 18, 2020
Machine: Unit 6, #:0000
Phantom: Catphan 504
Magnification: 99.69%
Energy: 120 kV
Expected slice width: 2.0 mm
Matrix size: 512x512
Performed by: Devin VanElburg
Tolerance set: Unit 6 Large FOV

Scaling discrepancy: 1.4 mm (Warning)
Geometric distortion: 0.1 mm (Pass)
Spatial resolution (50% MTF): 0.40 lp/mm (Pass)
Minimum uniformity (ROI 21): 99.2% (Pass)

CTP404 module results

Contrast ROI details
Measured HU
1: 342
2: 87

HU constancy ROI details
Reference / Measured / Difference
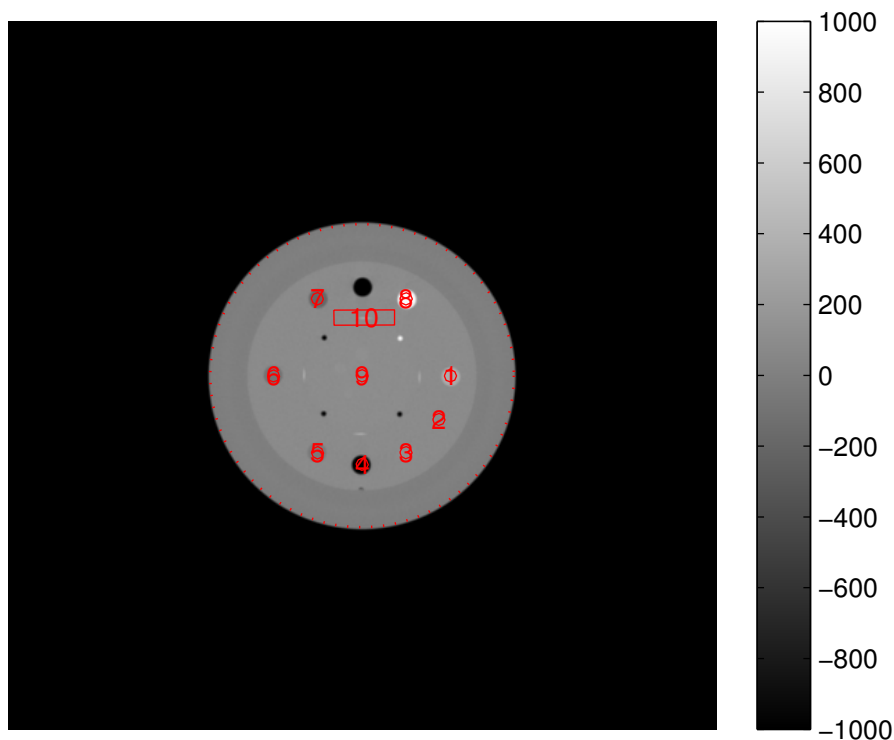3 (Acrylic): 120 / 114 / −6
4 (Air): −1000 / −1000 / 0
5 (Polystyrene): −35 / −45 / −10
6 (LDPE): −100 / −100 / 0
7 (PMP): −200 / −194 / 6
8 (Teflon): 990 / 961 / −29
9 (CTP404): 100 / 94 / −6

CTP528 module results

Spatial resolution ROI details
Phantom lp/mm / Normalized MTF
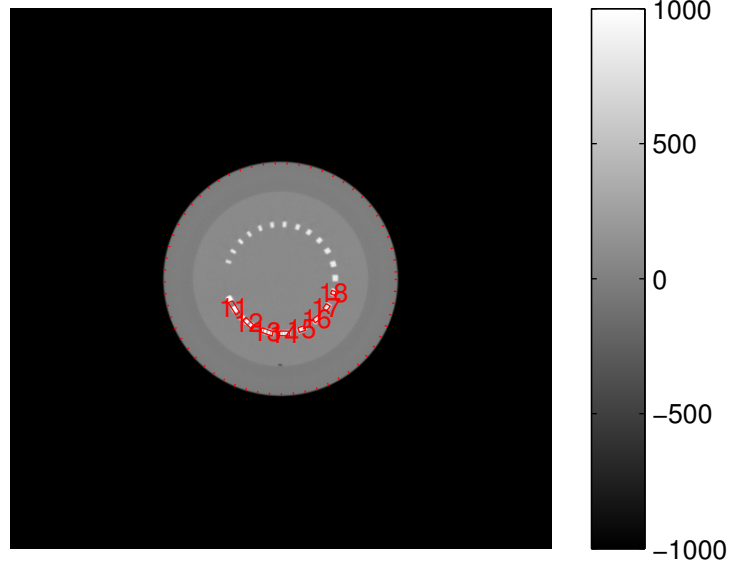11: 0.1 / 1.00
12: 0.2 / 0.92
13: 0.3 / 0.71
14: 0.4 / 0.49
15: 0.5 / 0.36
16: 0.6 / 0.10
17: 0.7 / 0.09
18: 0.8 / 0.20

CTP486 module results

Uniformity ROI details
Measured HU / Uniformity
19: 19 / 99.3%
20: 12 / 99.3%
21: 11 / 99.2%
22: 12 / 99.4%
23: 8 / 99.3%