DoseLab CT Imaging QA Results

Summary: Some tests generated a warning

DoseLab version: 6.80
Date: November 08, 2019
Machine: Unit 10, #:1166
Phantom: Catphan 504
Magnification: 99.59%
Energy: 80 kV
Expected slice width: 2.5 mm
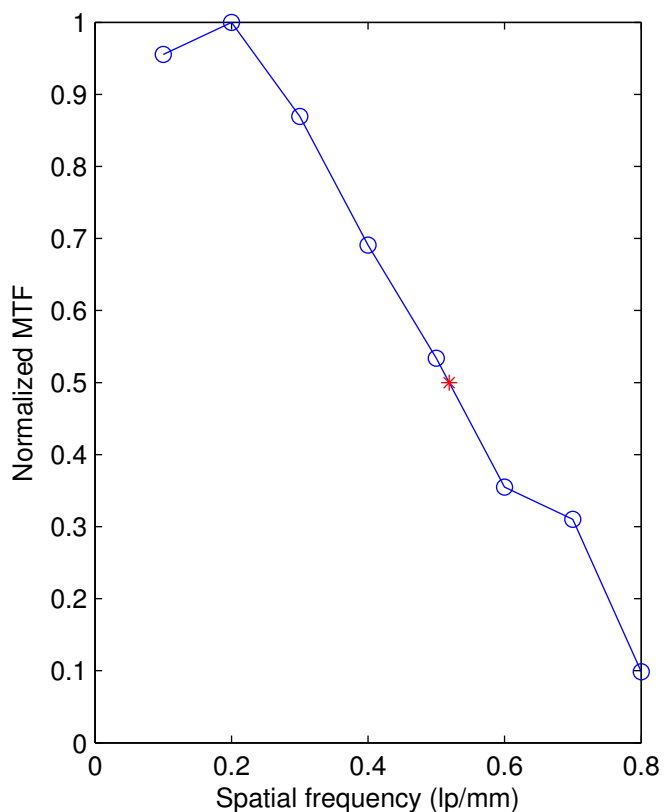Matrix size: 384x384
Performed by: Pedro Martinez
Tolerance set: Unit 10 Small FOV

Scaling discrepancy: 1.0 mm (Warning)
Geometric distortion: 0.3 mm (Pass)
Spatial resolution (50% MTF): 0.52 lp/mm (Pass)
Minimum uniformity (ROI 19): 98.4% (Pass)

CTP404 module results

Contrast ROI details
Measured HU
1: 321
2: 81

HU constancy ROI details
Reference / Measured / Difference
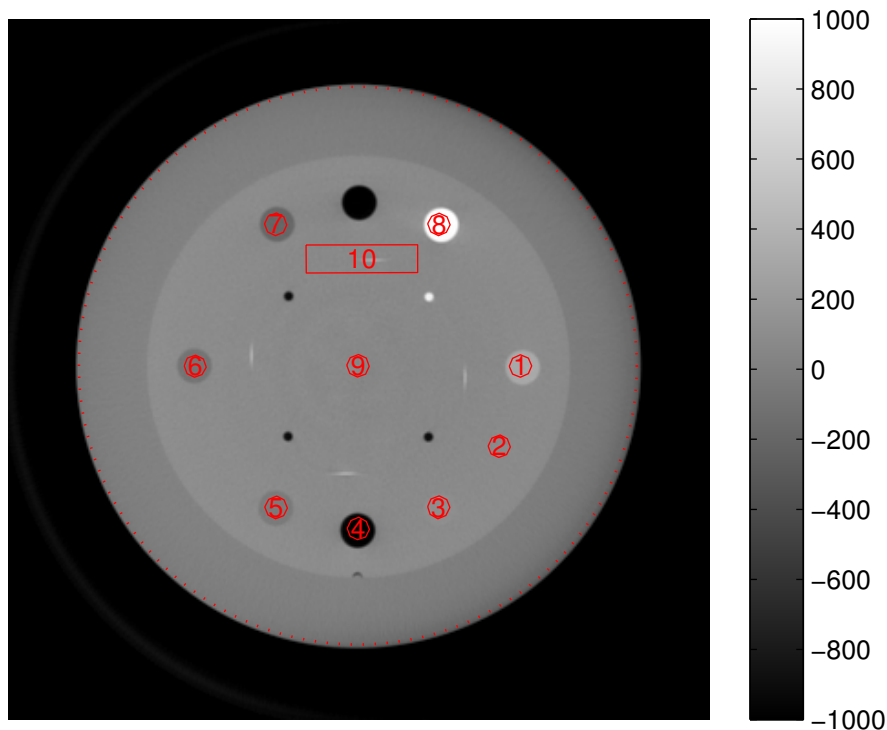3 (Acrylic): 120 / 115 / −5
4 (Air): −1000 / −996 / 4
5 (Polystyrene): −35 / −35 / 0
6 (LDPE): −100 / −90 / 10
7 (PMP): −200 / −195 / 5
8 (Teflon): 990 / 993 / 3
9 (CTP404): 100 / 62 / −38

CTP528 module results

Spatial resolution ROI details
Phantom lp/mm / Normalized MTF
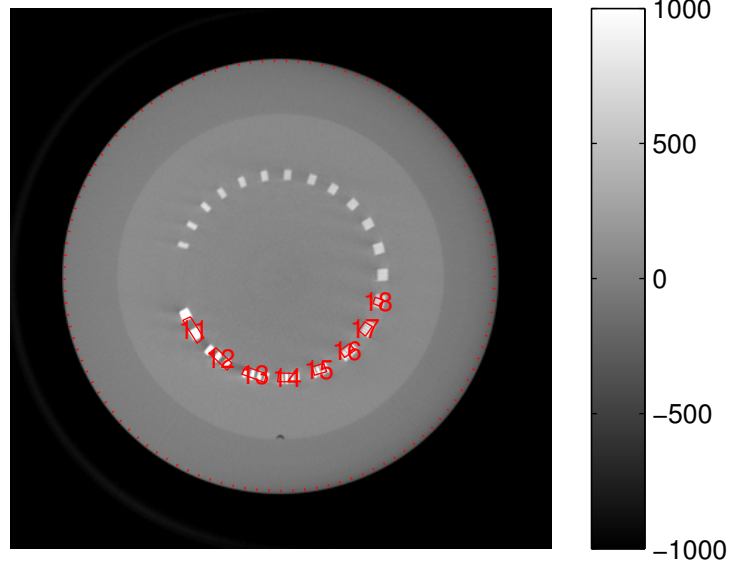11: 0.1 / 0.96
12: 0.2 / 1.00
13: 0.3 / 0.87
14: 0.4 / 0.69
15: 0.5 / 0.53
16: 0.6 / 0.35
17: 0.7 / 0.31
18: 0.8 / 0.10

CTP486 module results

Uniformity ROI details
Measured HU / Uniformity
19: −2 / 98.4%
20: 21 / 98.8%
21: 34 / 98.6%
22: 41 / 98.7%
23: 35 / 98.8%