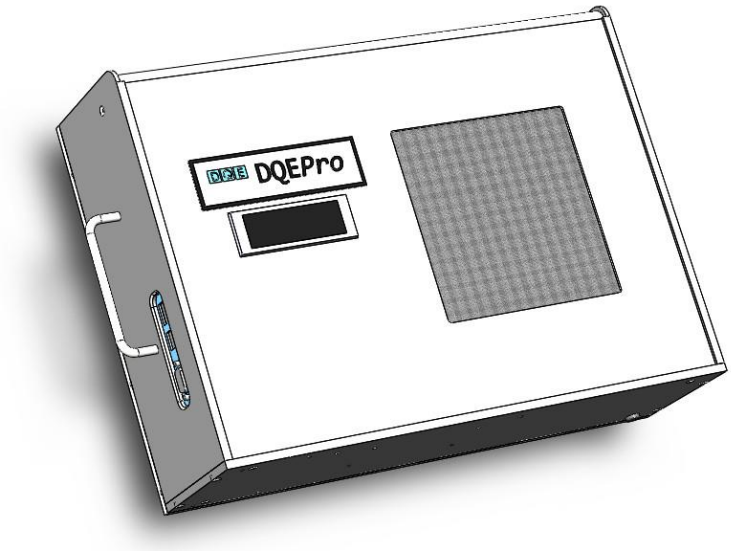
DQE*Pro*

Dynamic (Fluoroscopic) Pulsed DQE Sample Report

- Clinical-environment test



DQE Instruments Inc., London, Ontario, Canada N6G 4X8
www.dqeinstruments.com

This report summarizes the analysis of a new CsI-based flat-panel detector in a clinical environment. The dynamic DQE is evaluated according to IEC 62220-1-3 guidelines, operating the detector at 5 frames/sec pulsed fluoroscopy, 2.6 uGy per frame, using an RQA-5 (70 kV) spectrum. The assessment was completed in 20 min and required the acquisition of five image sequences (16 to 28 sec each) corresponding to a total of approximately 500 images that were exported in tiff format. The scatter-rejection grid was not in place.

1. Both x and y presampling MTF curves show excellent spatial resolution appropriate for 2x2 binning of detector elements. The MTF 50%, 10% and 5% frequencies were 1.2, 3.3 and 4.5 cycles/mm in the x direction and 1.2, 3.7 and 5.0 cycles/mm in the y direction.

2. The temporal NPS is nearly flat with temporal frequencies, and the temporal autocovariance function is a single sharp peak with very small tails. This indicates very little lag between frames. The dark-noise temporal NPS shows a little over-correction of DC stabilization. The dynamic DQE correction factor was 1.08.

3. The two-dimensional NPS shows smooth circular symmetry with no unexpected noise structure.

4. All exposure pulses are uniformly spaced and with uniform area with sharp on/off edges. Pulses are 20 msec wide.

5. The zero-frequency DQE value is approximately 77%.

6. The exposure waveform report shows near-uniform exposure at 5 pulses/sec.

7. DQE analysis was not affected by column defect is seen in thumbnail images.

DQE Report

20181203-092251

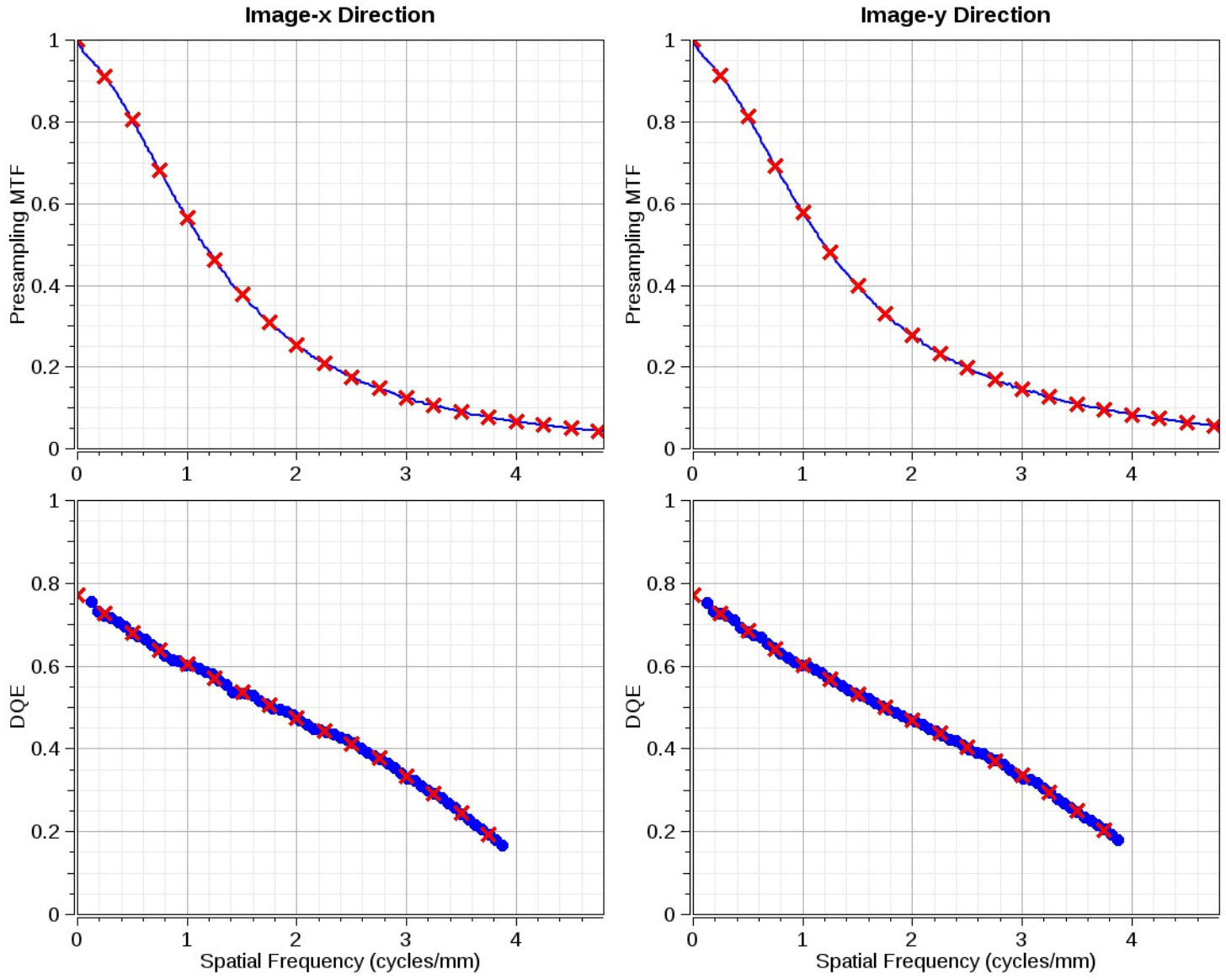
Study comment: Sample study
Study date-time: Mon 03 Dec 2018 09:22:51
Analysis date-time: Mon 03 Dec 2018 09:23:17
Grid:
X-ray spectrum: Dynamic, RQA-5 (70 kV)
Half-value layer: 7.1 mmAl
Set technique: 72 kV, 160 mA
Image-plane air KERMA, exposure: 2.61 uGy, 0.298 mR
Pixel size in image plane, x y: 127 x 127 um (Image headers)
System response: Not tested, assumed linear
Dynamic DQE correction factor: 0.92
Area under DQE curve, x y: 1.88 1.88 cycles/mm

Zero-frequency DQE sample values are extrapolated from low-frequency values. Review plots to confirm accuracy.

Warnings were generated that may affect accuracy of results. See Message Summary Report for details.

Sample MTF and DQE Values:

cy/mm	x-MTF	x-DQE	cy/mm	y-MTF	y-DQE
0.00	1.00	0.77	0.00	1.00	0.77
0.25	0.91	0.73	0.25	0.91	0.73
0.50	0.81	0.68	0.50	0.81	0.68
0.75	0.68	0.64	0.75	0.69	0.64
1.00	0.56	0.60	1.00	0.58	0.60
1.25	0.46	0.57	1.25	0.48	0.57
1.50	0.38	0.54	1.50	0.40	0.53
1.75	0.31	0.50	1.75	0.33	0.50
2.00	0.25	0.47	2.00	0.28	0.47
2.25	0.21	0.44	2.25	0.23	0.44
2.50	0.18	0.41	2.50	0.20	0.40
2.75	0.15	0.38	2.75	0.17	0.37
3.00	0.12	0.33	3.00	0.14	0.34
3.25	0.11	0.29	3.25	0.13	0.29
3.50	0.09	0.24	3.50	0.11	0.25
3.75	0.08	0.19	3.75	0.10	0.20
4.00	0.07		4.00	0.08	
4.25	0.06		4.25	0.07	
4.50	0.05		4.50	0.06	
4.75	0.04		4.75	0.06	



Presampling x-MTF Report

20181203-092251

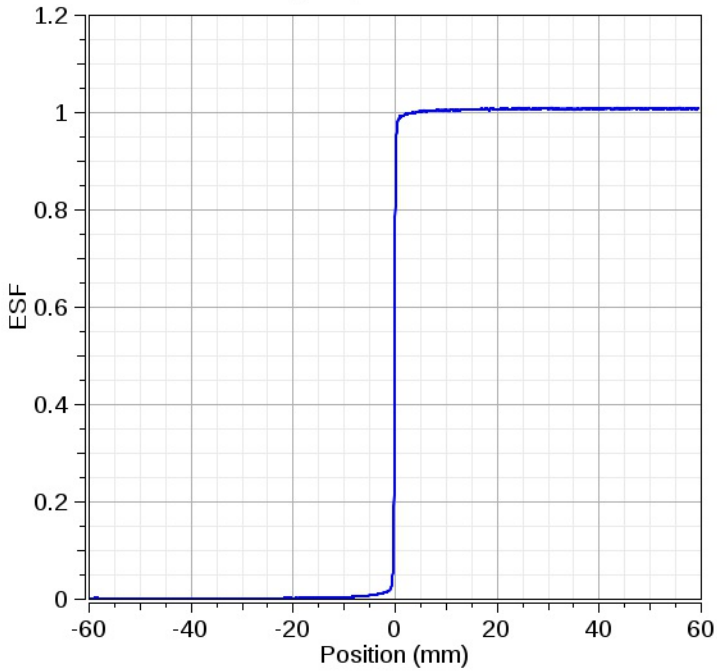
Study comment: Sample study
Study date-time: Mon 03 Dec 2018 09:22:51
Analysis date-time: Mon 03 Dec 2018 09:23:17
X-ray spectrum: Dynamic, RQA-5 (70 kV)
Image-plane air KERMA, exposure: 2.61 uGy, 0.298 mR
Window width: 100 mm
Pixel size in image plane: 127 um (Image headers)
Sampling cut-off frequency: 3.9 cycles/mm
MTF 50%, 10% and 5% frequencies: 1.2 3.3 4.5 cycles/mm
Estimated low-frequency drop: 2.0%

The dashed green line in the MTF plot illustrates a sinc function corresponding to the aperture MTF for the stated pixel size.

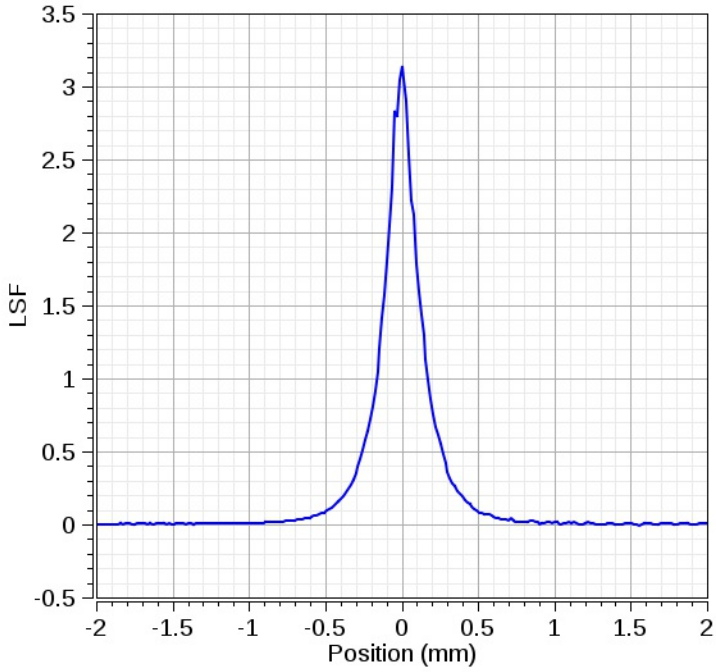
Selected MTF Values:

cycles/mm	MTF
0.00	1.00
0.25	0.91
0.50	0.81
0.75	0.68
1.00	0.56
1.25	0.46
1.50	0.38
1.75	0.31
2.00	0.25
2.25	0.21
2.50	0.18
2.75	0.15
3.00	0.12
3.25	0.11
3.50	0.09
3.75	0.08
4.00	0.07
4.25	0.06
4.50	0.05
4.75	0.04
5.00	0.04
5.25	0.03
5.50	0.03
5.75	0.02
6.00	0.02
6.25	0.02
6.50	0.02
6.75	0.01
7.00	0.02
7.25	0.02

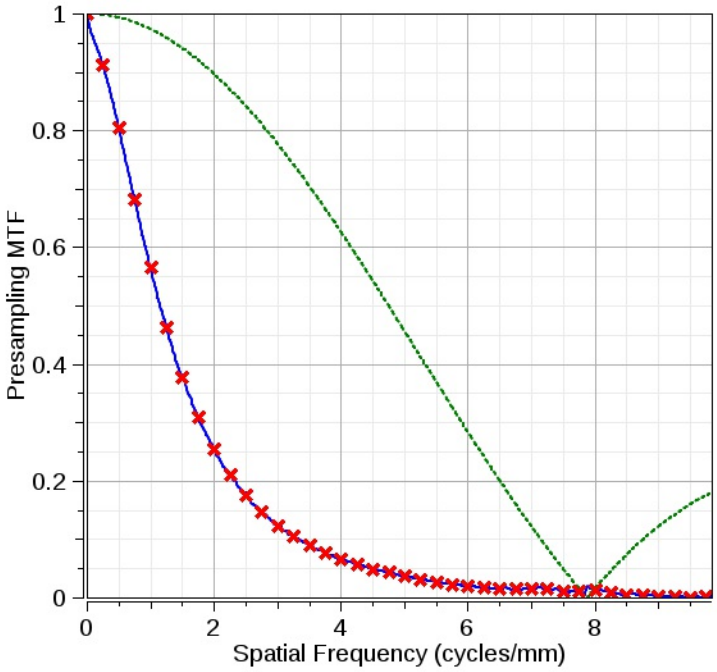
Edge-Spread Function



Line-Spread Function



Modulation Transfer Function



Presampling y-MTF Report

20181203-092251

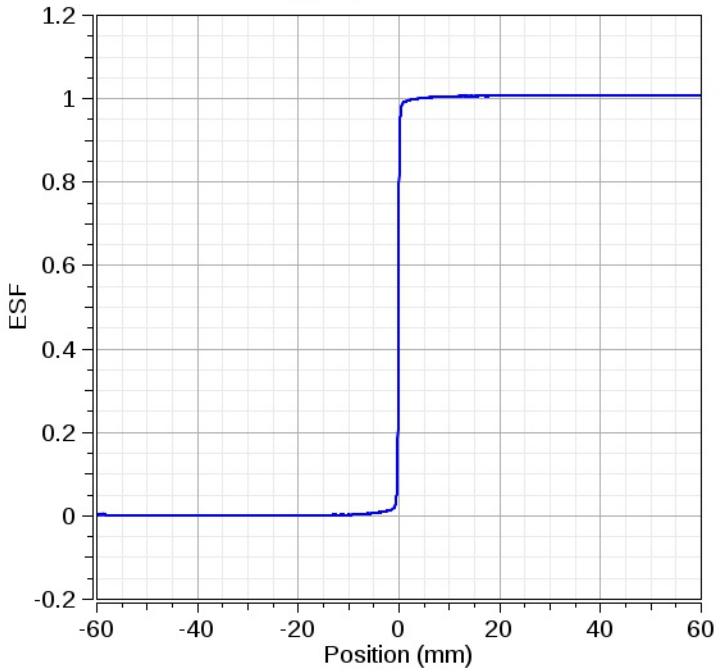
Study comment: Sample study
Study date-time: Mon 03 Dec 2018 09:22:51
Analysis date-time: Mon 03 Dec 2018 09:23:17
X-ray spectrum: Dynamic, RQA-5 (70 kV)
Image-plane air KERMA, exposure: 2.61 uGy, 0.298 mR
Window width: 100 mm
Pixel size in image plane: 127 um (Image headers)
Sampling cut-off frequency: 3.9 cycles/mm
MTF 50%, 10% and 5% frequencies: 1.2 3.7 5.0 cycles/mm
Estimated low-frequency drop: 1.9%

The dashed green line in the MTF plot illustrates a sinc function corresponding to the aperture MTF for the stated pixel size.

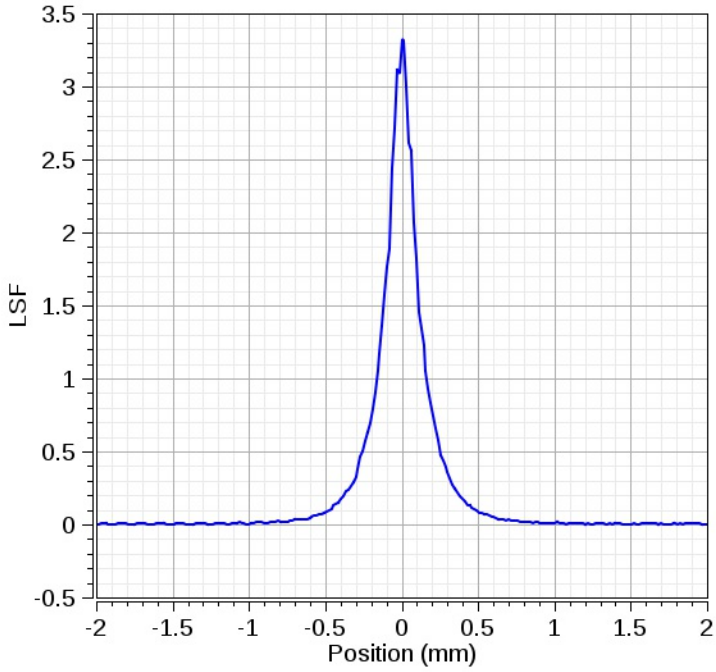
Selected MTF Values:

cycles/mm	MTF
0.00	1.00
0.25	0.91
0.50	0.81
0.75	0.69
1.00	0.58
1.25	0.48
1.50	0.40
1.75	0.33
2.00	0.28
2.25	0.23
2.50	0.20
2.75	0.17
3.00	0.14
3.25	0.13
3.50	0.11
3.75	0.10
4.00	0.08
4.25	0.07
4.50	0.06
4.75	0.06
5.00	0.05
5.25	0.04
5.50	0.04
5.75	0.03
6.00	0.03
6.25	0.02
6.50	0.02
6.75	0.02
7.00	0.01
7.25	0.01

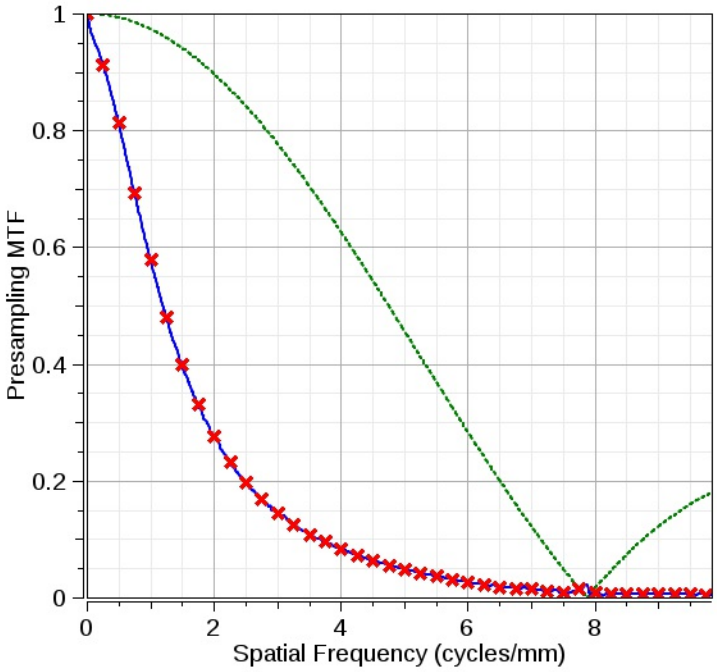
Edge-Spread Function



Line-Spread Function



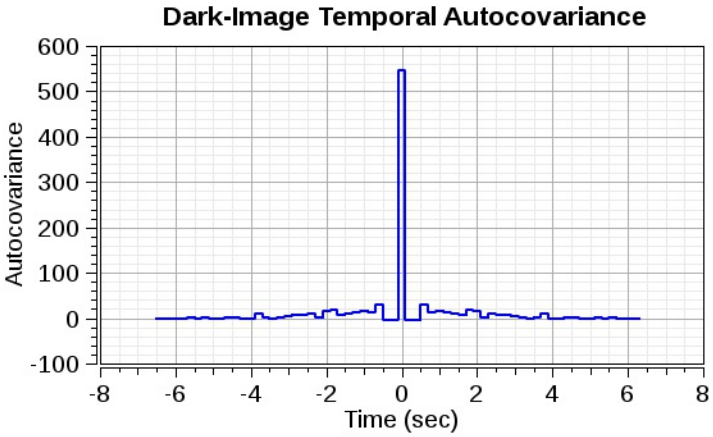
Modulation Transfer Function

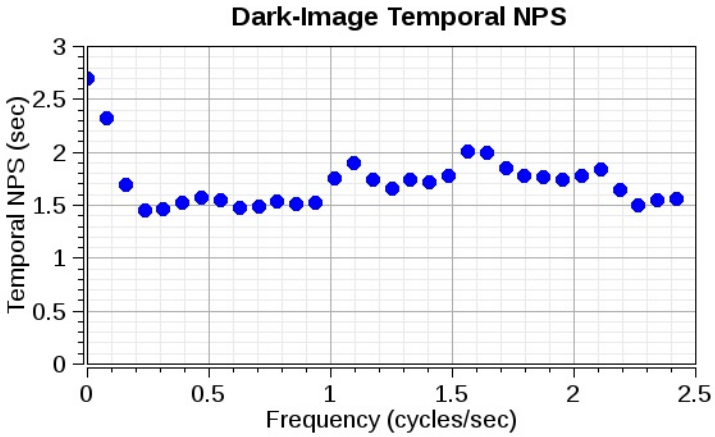


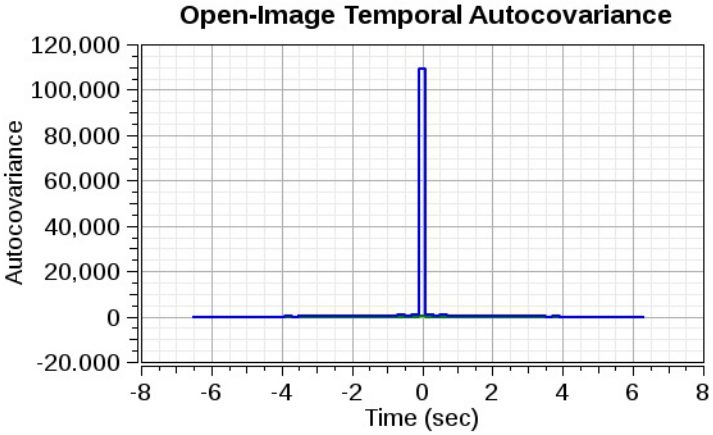
Wiener Temporal NPS Report

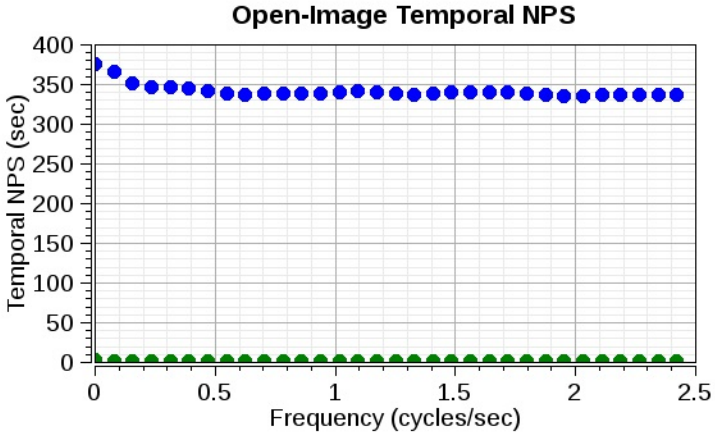
20181203-092251

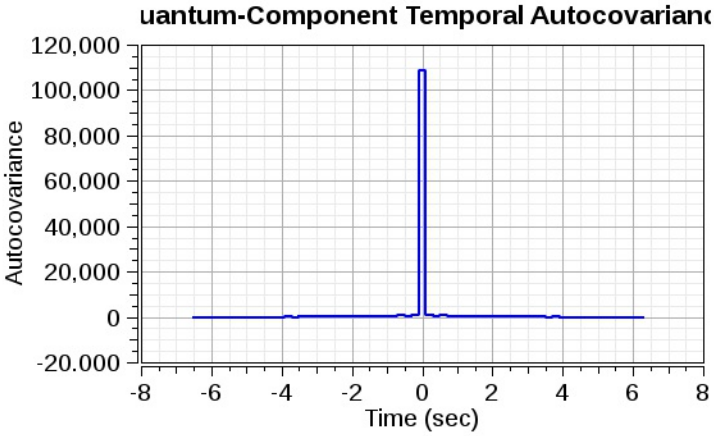
Study comment: Sample study
Study date-time: Mon 03 Dec 2018 09:22:51
Analysis date-time: Mon 03 Dec 2018 09:23:17
X-ray spectrum: Dynamic, RQA-5 (70 kV)
Image-plane exposure, air KERMA: 0.298 mR, 2.61 uGy
Specified frame rate: 5.00 images/sec
Dynamic NPS quantum-component zero value: 367.986
Dynamic NPS quantum-correction factor: 1.08

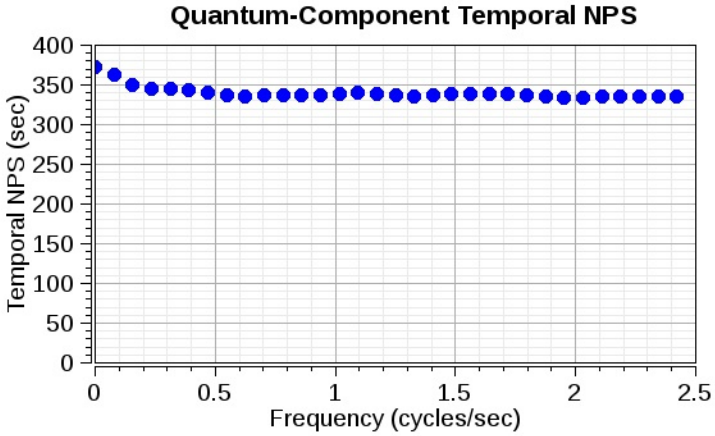












Wiener NPS Report

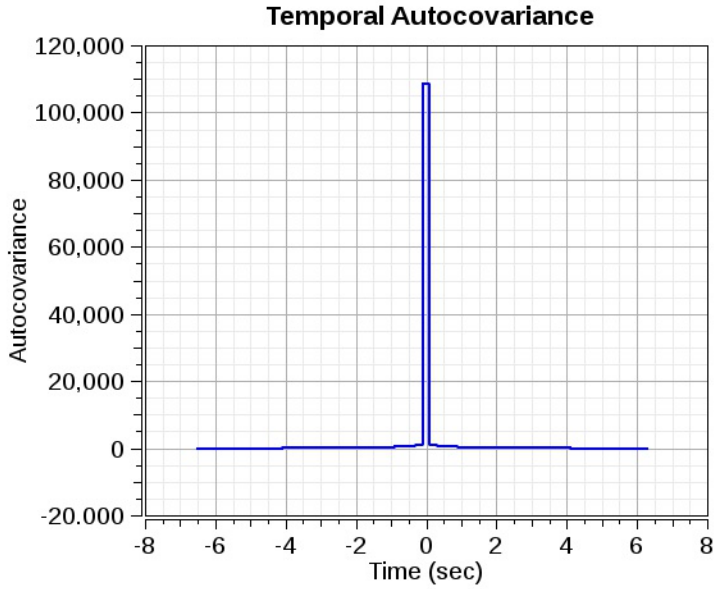
20181203-092251

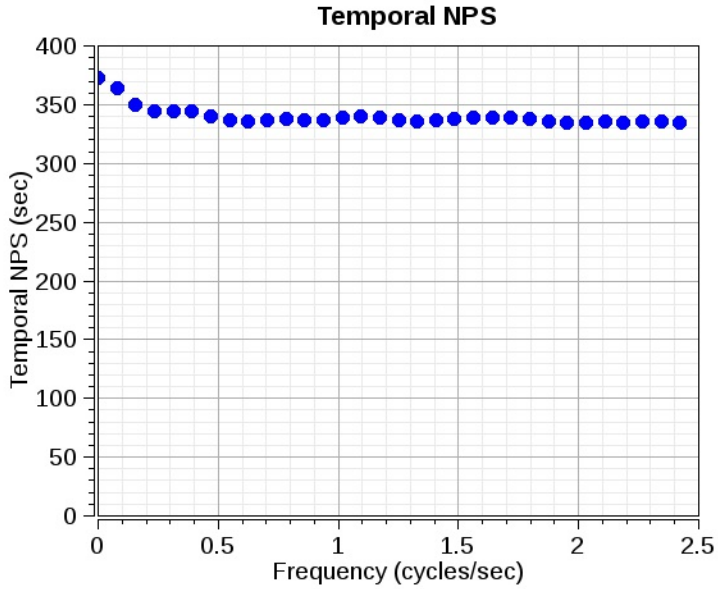
Study comment: Sample study
Study date-time: Mon 03 Dec 2018 09:22:51
Analysis date-time: Mon 03 Dec 2018 09:23:17
X-ray spectrum: Dynamic, RQA-5 (70 kV)
Image-plane exposure, air KERMA: 0.298 mR, 2.61 uGy
Frame rate: 5.00 images/sec
Pixel size in image plane: 127 x 127 um (Image headers)
Average dark and open pixel values: 1718.8 14349.7
Average dark-subtracted open pixel value: 12976.4
Dynamic NPS zero value: 367.99
Dynamic NPS quantum-correction factor: 1.08

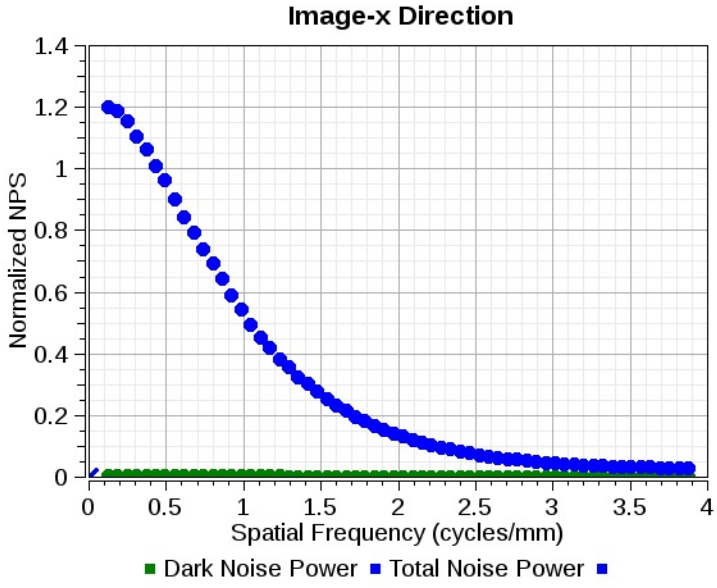
Two-dimensional Wiener NPS is shown on the right with zero-frequency in the center.

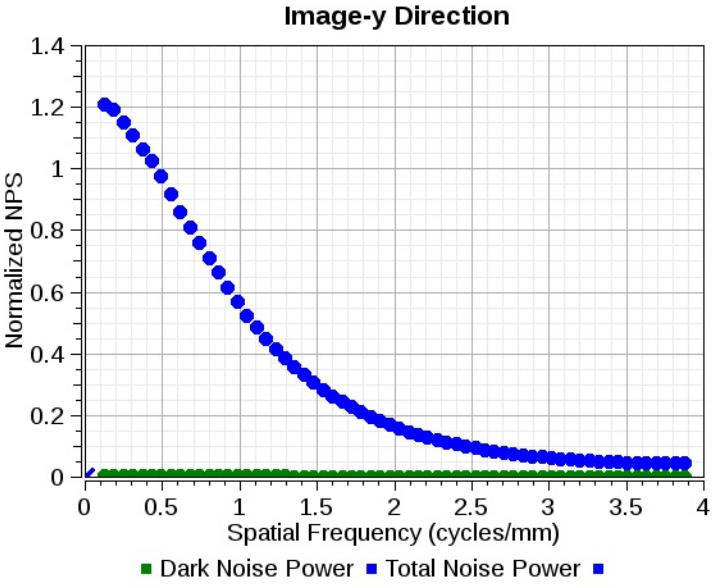
Normalized NPS has been corrected for lag and scaled by (incident-q/mm2) / (mean-pixel-value)^2 (0.000506) such that an ideal detector has unity zero-frequency NPS.

In the NPS plots below, blue markers indicate total image noise while green markers indicate detector readout noise (for linear systems only). Images are quantum-noise limited only when readout noise is a small fraction of total image noise.









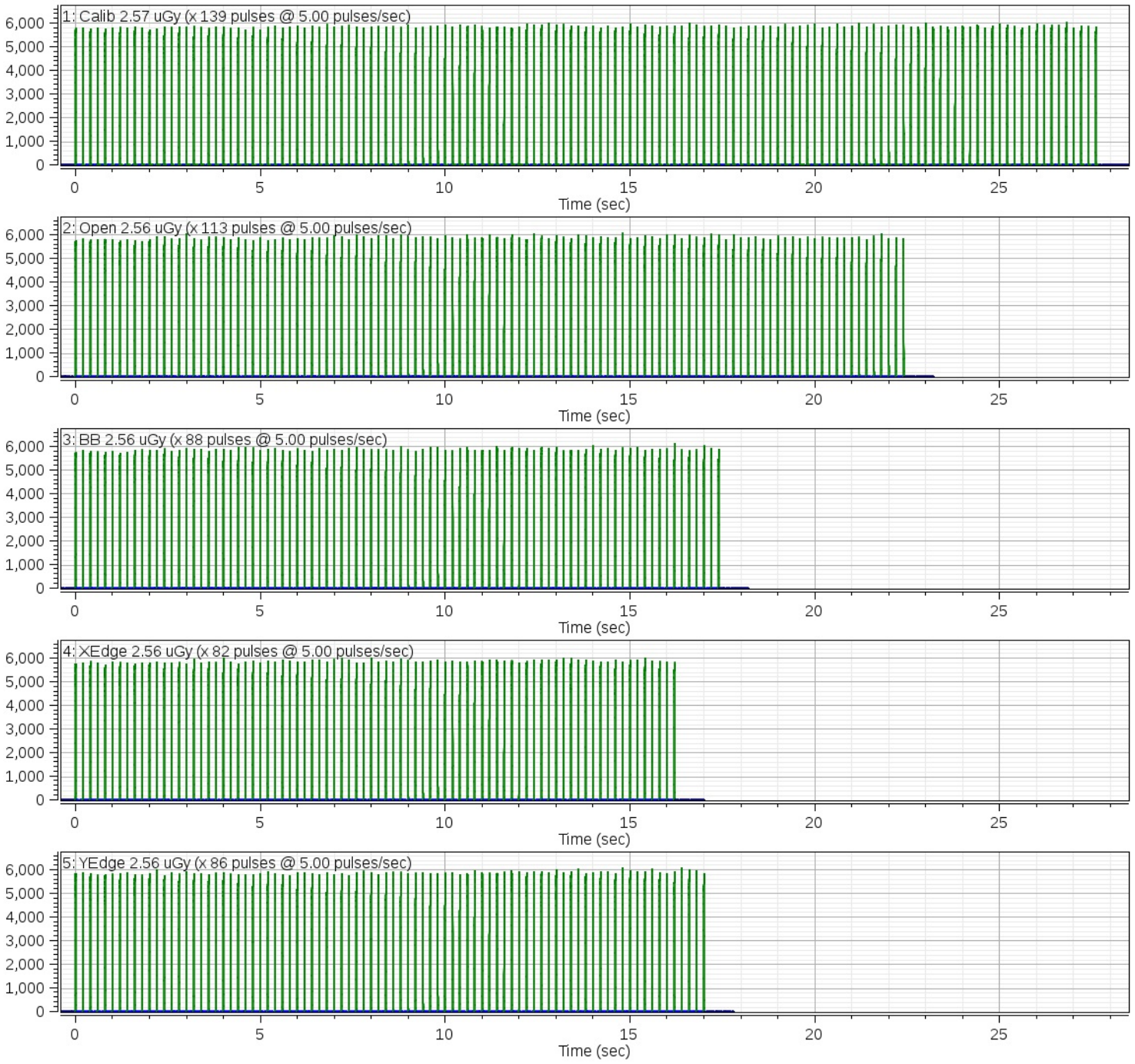
Waveform Report

DQEPro 4.7.0-rc7 00000000
DQE Instruments
Mon 03 Dec 2018

20181203-092251

Data folder: /Users/DQE/data

These waveforms show x-ray exposure profiles measured by DQEPro. Green line segments correspond to identified exposure pulses. Leading and trailing baselines are dark blue and inter-pulse baselines are light blue. The first pulse should start at 0 sec. Ensure pulses are correctly identified and free of undesirable artifacts that may indicate problems with the x-ray generator or tube. Exposure values correspond to image plane based on Pro-image distance entered on panel. Double-click on any waveform to open a review window.

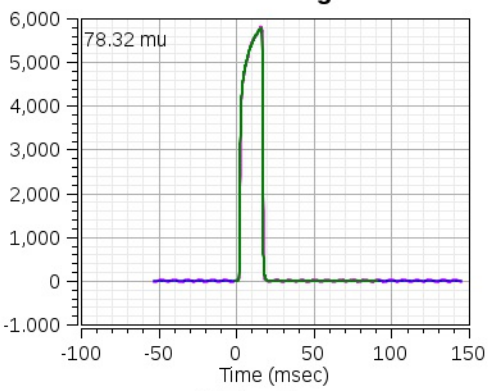


Pulse Profile Report

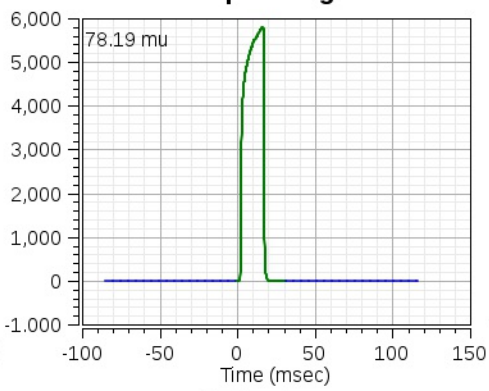
20181203-092251

These profiles show the average pulse shape for each exposure. The trigger sensor curve is green in the integration window and blue outside. The exposure sensor curve is magenta and may lag behind the trigger sensor slightly. Ensure pulses are free of artifacts that may indicate poor generator performance.

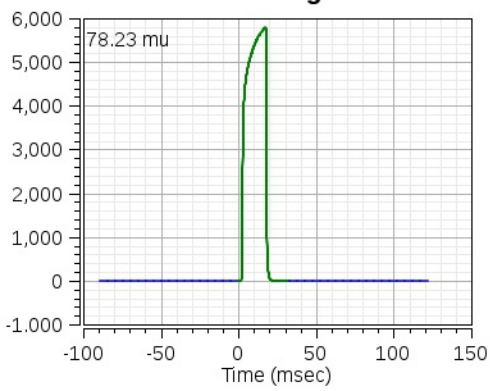
Calib Images



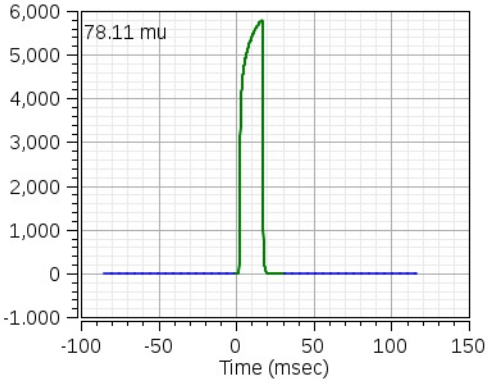
Open Images



BB Images



XEdge Images



YEdge Images

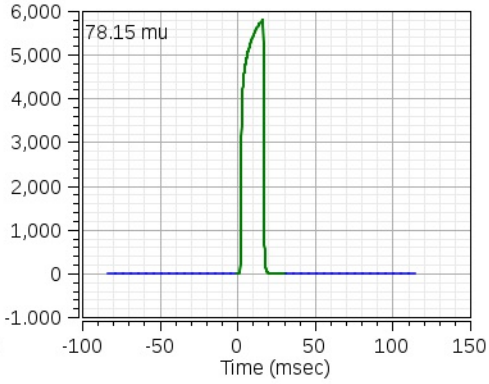


Image Waveform Report

DQEPro 4.7.0-rc7 00000000
DQE Instruments
Mon 03 Dec 2018

20181203-092251

These waveforms show average pixel-value profiles in the entire acquired images. Green line segments correspond to images selected for the dynamic analysis. The number of images used with Calib and Open type exposures will be the largest possible power of two. Double-click on plot to open a review window.

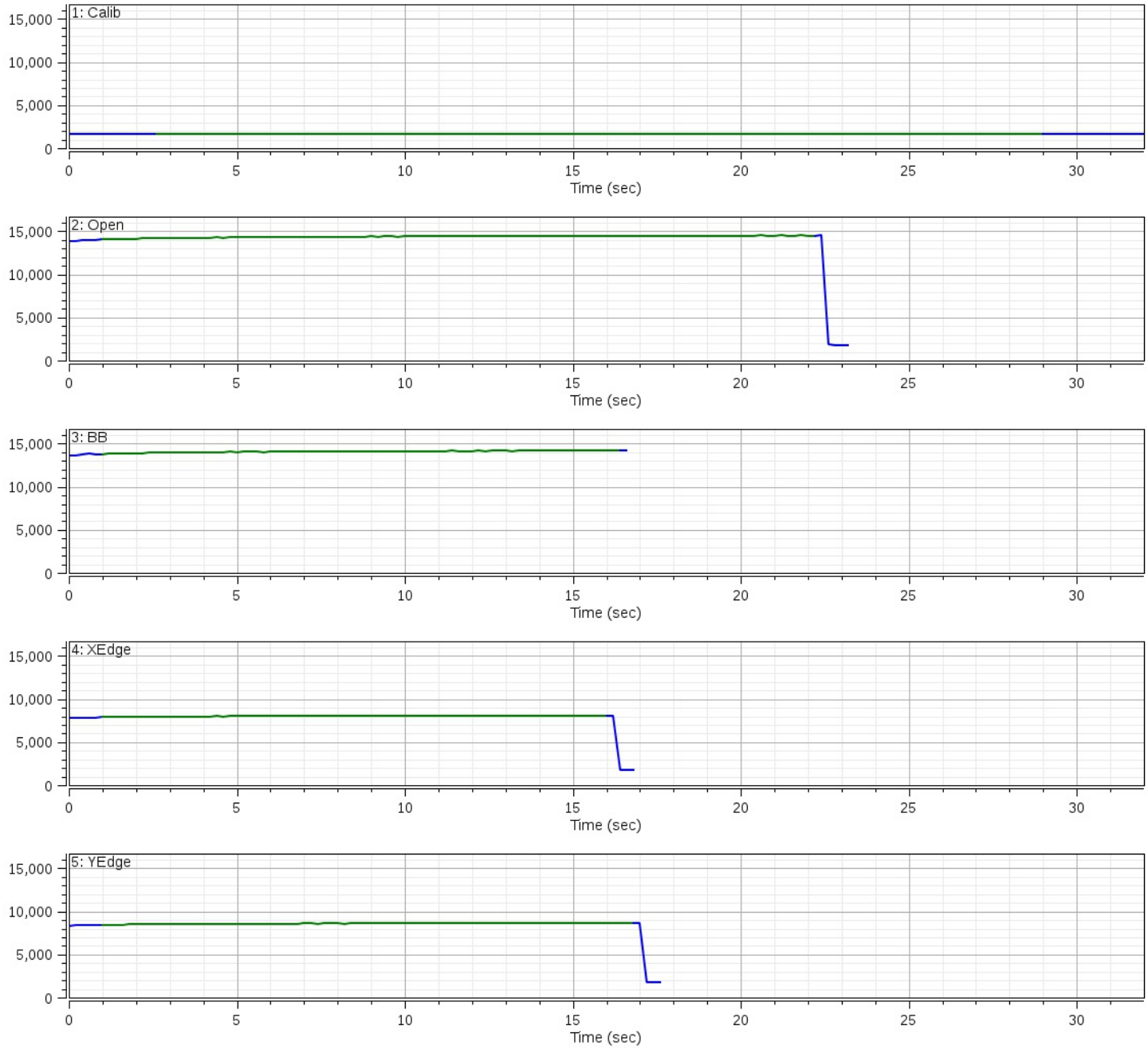


Image Details Report

20181203-092251

Image data folder: /Users/DQE/data/images

	FileName	Format	Width	Height	Depth	bits	kV	mA	msec	mAs	SID	Pixel um
1:	1/1_0000.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
2:	1/1_0001.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
3:	1/1_0002.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
4:	1/1_0003.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
5:	1/1_0004.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
6:	1/1_0005.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
7:	1/1_0006.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
8:	1/1_0007.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
9:	1/1_0008.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
10:	1/1_0009.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
11:	1/1_0010.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
12:	1/1_0011.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
13:	1/1_0012.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
14:	1/1_0013.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
15:	1/1_0014.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
16:	1/1_0015.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
17:	1/1_0016.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
18:	1/1_0017.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
19:	1/1_0018.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
20:	1/1_0019.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
21:	1/1_0020.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
22:	1/1_0021.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
23:	1/1_0022.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
24:	1/1_0023.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
25:	1/1_0024.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
26:	1/1_0025.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
27:	1/1_0026.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
28:	1/1_0027.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
29:	1/1_0028.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
30:	1/1_0029.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
31:	1/1_0030.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
32:	1/1_0031.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
33:	1/1_0032.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
34:	1/1_0033.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
35:	1/1_0034.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
36:	1/1_0035.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
37:	1/1_0036.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
38:	1/1_0037.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
39:	1/1_0038.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
40:	1/1_0039.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
41:	1/1_0040.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
42:	1/1_0041.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
43:	1/1_0042.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
44:	1/1_0043.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
45:	1/1_0044.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
46:	1/1_0045.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
47:	1/1_0046.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
48:	1/1_0047.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
49:	1/1_0048.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
50:	1/1_0049.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
51:	1/1_0050.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
52:	1/1_0051.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
53:	1/1_0052.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
54:	1/1_0053.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
55:	1/1_0054.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
56:	1/1_0055.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
57:	1/1_0056.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
58:	1/1_0057.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
59:	1/1_0058.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
60:	1/1_0059.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
61:	1/1_0060.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
62:	1/1_0061.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
63:	1/1_0062.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
64:	1/1_0063.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
65:	1/1_0064.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
66:	1/1_0065.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]

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20181203-092251

Image data folder: /Users/DQE/data/images

	FileName	Format	Width	Height	Depth	bits	kV	mA	msec	mAs	SID	Pixel um
67:	1/1_0066.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
68:	1/1_0067.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
69:	1/1_0068.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
70:	1/1_0069.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
71:	1/1_0070.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
72:	1/1_0071.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
73:	1/1_0072.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
74:	1/1_0073.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
75:	1/1_0074.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
76:	1/1_0075.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
77:	1/1_0076.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
78:	1/1_0077.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
79:	1/1_0078.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
80:	1/1_0079.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
81:	1/1_0080.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
82:	1/1_0081.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
83:	1/1_0082.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
84:	1/1_0083.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
85:	1/1_0084.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
86:	1/1_0085.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
87:	1/1_0086.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
88:	1/1_0087.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
89:	1/1_0088.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
90:	1/1_0089.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
91:	1/1_0090.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
92:	1/1_0091.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
93:	1/1_0092.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
94:	1/1_0093.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
95:	1/1_0094.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
96:	1/1_0095.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
97:	1/1_0096.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
98:	1/1_0097.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
99:	1/1_0098.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
100:	1/1_0099.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
101:	1/1_0100.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
102:	1/1_0101.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
103:	1/1_0102.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
104:	1/1_0103.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
105:	1/1_0104.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
106:	1/1_0105.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
107:	1/1_0106.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
108:	1/1_0107.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
109:	1/1_0108.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
110:	1/1_0109.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
111:	1/1_0110.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
112:	1/1_0111.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
113:	1/1_0112.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
114:	1/1_0113.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
115:	1/1_0114.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
116:	1/1_0115.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
117:	1/1_0116.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
118:	1/1_0117.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
119:	1/1_0118.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
120:	1/1_0119.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
121:	1/1_0120.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
122:	1/1_0121.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
123:	1/1_0122.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
124:	1/1_0123.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
125:	1/1_0124.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
126:	1/1_0125.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
127:	1/1_0126.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
128:	1/1_0127.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
129:	1/1_0128.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
130:	1/1_0129.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
131:	1/1_0130.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
132:	1/1_0131.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]

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Image data folder: /Users/DQE/data/images

	FileName	Format	Width	Height	Depth	bits	kV	mA	msec	mAs	SID	Pixel um
133:	1/1_0132.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
134:	1/1_0133.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
135:	1/1_0134.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
136:	1/1_0135.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
137:	1/1_0136.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
138:	1/1_0137.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
139:	1/1_0138.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
140:	1/1_0139.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
141:	1/1_0140.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
142:	1/1_0141.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
143:	1/1_0142.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
144:	1/1_0143.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
145:	1/1_0144.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
146:	1/1_0145.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
147:	1/1_0146.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
148:	1/1_0147.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
149:	1/1_0148.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
150:	1/1_0149.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
151:	1/1_0150.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
152:	1/1_0151.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
153:	1/1_0152.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
154:	1/1_0153.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
155:	1/1_0154.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
156:	1/1_0155.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
157:	1/1_0156.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
158:	1/1_0157.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
159:	1/1_0158.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
160:	1/1_0159.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
161:	1/1_0160.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
162:	2/2_0005.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
163:	2/2_0006.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
164:	2/2_0007.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
165:	2/2_0008.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
166:	2/2_0009.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
167:	2/2_0010.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
168:	2/2_0011.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
169:	2/2_0012.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
170:	2/2_0013.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
171:	2/2_0014.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
172:	2/2_0015.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
173:	2/2_0016.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
174:	2/2_0017.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
175:	2/2_0018.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
176:	2/2_0019.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
177:	2/2_0020.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
178:	2/2_0021.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
179:	2/2_0022.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
180:	2/2_0023.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
181:	2/2_0024.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
182:	2/2_0025.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
183:	2/2_0026.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
184:	2/2_0027.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
185:	2/2_0028.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
186:	2/2_0029.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
187:	2/2_0030.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
188:	2/2_0031.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
189:	2/2_0032.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
190:	2/2_0033.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
191:	2/2_0034.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
192:	2/2_0035.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
193:	2/2_0036.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
194:	2/2_0037.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
195:	2/2_0038.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
196:	2/2_0039.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
197:	2/2_0040.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
198:	2/2_0041.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]

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20181203-092251

Image data folder: /Users/DQE/data/images

	FileName	Format	Width	Height	Depth	bits	kV	mA	msec	mAs	SID	Pixel um
199:	2/2_0042.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
200:	2/2_0043.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
201:	2/2_0044.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
202:	2/2_0045.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
203:	2/2_0046.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
204:	2/2_0047.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
205:	2/2_0048.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
206:	2/2_0049.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
207:	2/2_0050.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
208:	2/2_0051.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
209:	2/2_0052.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
210:	2/2_0053.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
211:	2/2_0054.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
212:	2/2_0055.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
213:	2/2_0056.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
214:	2/2_0057.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
215:	2/2_0058.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
216:	2/2_0059.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
217:	2/2_0060.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
218:	2/2_0061.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
219:	2/2_0062.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
220:	2/2_0063.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
221:	2/2_0064.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
222:	2/2_0065.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
223:	2/2_0066.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
224:	2/2_0067.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
225:	2/2_0068.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
226:	2/2_0069.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
227:	2/2_0070.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
228:	2/2_0071.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
229:	2/2_0072.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
230:	2/2_0073.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
231:	2/2_0074.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
232:	2/2_0075.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
233:	2/2_0076.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
234:	2/2_0077.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
235:	2/2_0078.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
236:	2/2_0079.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
237:	2/2_0080.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
238:	2/2_0081.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
239:	2/2_0082.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
240:	2/2_0083.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
241:	2/2_0084.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
242:	2/2_0085.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
243:	2/2_0086.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
244:	2/2_0087.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
245:	2/2_0088.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
246:	2/2_0089.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
247:	2/2_0090.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
248:	2/2_0091.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
249:	2/2_0092.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
250:	2/2_0093.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
251:	2/2_0094.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
252:	2/2_0095.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
253:	2/2_0096.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
254:	2/2_0097.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
255:	2/2_0098.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
256:	2/2_0099.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
257:	2/2_0100.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
258:	2/2_0101.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
259:	2/2_0102.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
260:	2/2_0103.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
261:	2/2_0104.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
262:	2/2_0105.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
263:	2/2_0106.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
264:	2/2_0107.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]

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20181203-092251

Image data folder: /Users/DQE/data/images

	FileName	Format	Width	Height	Depth	bits	kV	mA	msec	mAs	SID	Pixel um
265:	2/2_0108.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
266:	2/2_0109.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
267:	2/2_0110.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
268:	2/2_0111.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
269:	2/2_0112.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
270:	2/2_0113.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
271:	2/2_0114.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
272:	2/2_0115.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
273:	2/2_0116.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
274:	2/2_0117.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
275:	2/2_0118.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
276:	2/2_0119.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
277:	2/2_0120.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
278:	2/2_0121.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
279:	3/3_0005.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
280:	3/3_0006.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
281:	3/3_0007.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
282:	3/3_0008.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
283:	3/3_0009.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
284:	3/3_0010.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
285:	3/3_0011.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
286:	3/3_0012.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
287:	3/3_0013.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
288:	3/3_0014.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
289:	3/3_0015.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
290:	3/3_0016.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
291:	3/3_0017.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
292:	3/3_0018.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
293:	3/3_0019.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
294:	3/3_0020.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
295:	3/3_0021.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
296:	3/3_0022.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
297:	3/3_0023.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
298:	3/3_0024.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
299:	3/3_0025.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
300:	3/3_0026.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
301:	3/3_0027.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
302:	3/3_0028.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
303:	3/3_0029.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
304:	3/3_0030.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
305:	3/3_0031.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
306:	3/3_0032.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
307:	3/3_0033.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
308:	3/3_0034.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
309:	3/3_0035.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
310:	3/3_0036.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
311:	3/3_0037.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
312:	3/3_0038.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
313:	3/3_0039.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
314:	3/3_0040.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
315:	3/3_0041.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
316:	3/3_0042.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
317:	3/3_0043.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
318:	3/3_0044.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
319:	3/3_0045.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
320:	3/3_0046.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
321:	3/3_0047.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
322:	3/3_0048.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
323:	3/3_0049.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
324:	3/3_0050.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
325:	3/3_0051.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
326:	3/3_0052.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
327:	3/3_0053.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
328:	3/3_0054.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
329:	3/3_0055.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
330:	3/3_0056.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]

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20181203-092251

Image data folder: /Users/DQE/data/images

	FileName	Format	Width	Height	Depth	bits	kV	mA	msec	mAs	SID	Pixel um
331:	3/3_0057.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
332:	3/3_0058.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
333:	3/3_0059.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
334:	3/3_0060.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
335:	3/3_0061.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
336:	3/3_0062.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
337:	3/3_0063.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
338:	3/3_0064.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
339:	3/3_0065.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
340:	3/3_0066.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
341:	3/3_0067.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
342:	3/3_0068.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
343:	3/3_0069.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
344:	3/3_0070.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
345:	3/3_0071.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
346:	3/3_0072.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
347:	3/3_0073.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
348:	3/3_0074.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
349:	3/3_0075.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
350:	3/3_0076.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
351:	3/3_0077.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
352:	3/3_0078.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
353:	3/3_0079.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
354:	3/3_0080.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
355:	3/3_0081.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
356:	3/3_0082.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
357:	3/3_0083.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
358:	3/3_0084.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
359:	3/3_0085.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
360:	3/3_0086.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
361:	3/3_0087.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
362:	3/3_0088.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
363:	4/4_0009.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
364:	4/4_0010.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
365:	4/4_0011.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
366:	4/4_0012.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
367:	4/4_0013.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
368:	4/4_0014.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
369:	4/4_0015.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
370:	4/4_0016.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
371:	4/4_0017.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
372:	4/4_0018.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
373:	4/4_0019.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
374:	4/4_0020.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
375:	4/4_0021.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
376:	4/4_0022.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
377:	4/4_0023.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
378:	4/4_0024.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
379:	4/4_0025.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
380:	4/4_0026.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
381:	4/4_0027.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
382:	4/4_0028.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
383:	4/4_0029.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
384:	4/4_0030.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
385:	4/4_0031.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
386:	4/4_0032.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
387:	4/4_0033.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
388:	4/4_0034.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
389:	4/4_0035.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
390:	4/4_0036.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
391:	4/4_0037.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
392:	4/4_0038.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
393:	4/4_0039.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
394:	4/4_0040.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
395:	4/4_0041.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
396:	4/4_0042.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]

Image Details Report - 7

DQEPro 4.7.0-rc7 00000000
DQE Instruments
Mon 03 Dec 2018

20181203-092251

Image data folder: /Users/DQE/data/images

	FileName	Format	Width	Height	Depth	bits	kV	mA	msec	mAs	SID	Pixel um
397:	4/4_0043.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
398:	4/4_0044.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
399:	4/4_0045.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
400:	4/4_0046.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
401:	4/4_0047.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
402:	4/4_0048.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
403:	4/4_0049.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
404:	4/4_0050.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
405:	4/4_0051.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
406:	4/4_0052.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
407:	4/4_0053.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
408:	4/4_0054.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
409:	4/4_0055.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
410:	4/4_0056.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
411:	4/4_0057.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
412:	4/4_0058.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
413:	4/4_0059.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
414:	4/4_0060.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
415:	4/4_0061.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
416:	4/4_0062.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
417:	4/4_0063.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
418:	4/4_0064.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
419:	4/4_0065.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
420:	4/4_0066.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
421:	4/4_0067.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
422:	4/4_0068.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
423:	4/4_0069.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
424:	4/4_0070.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
425:	4/4_0071.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
426:	4/4_0072.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
427:	4/4_0073.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
428:	4/4_0074.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
429:	4/4_0075.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
430:	4/4_0076.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
431:	4/4_0077.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
432:	4/4_0078.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
433:	4/4_0079.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
434:	4/4_0080.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
435:	4/4_0081.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
436:	4/4_0082.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
437:	4/4_0083.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
438:	4/4_0084.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
439:	4/4_0085.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
440:	4/4_0086.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
441:	4/4_0087.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
442:	4/4_0088.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
443:	4/4_0089.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
444:	4/4_0090.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
445:	4/4_0091.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
446:	4/4_0092.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
447:	4/4_0093.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
448:	5/5_0010.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
449:	5/5_0011.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
450:	5/5_0012.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
451:	5/5_0013.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
452:	5/5_0014.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
453:	5/5_0015.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
454:	5/5_0016.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
455:	5/5_0017.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
456:	5/5_0018.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
457:	5/5_0019.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
458:	5/5_0020.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
459:	5/5_0021.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
460:	5/5_0022.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
461:	5/5_0023.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
462:	5/5_0024.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]

Image Details Report - 8

20181203-092251

Image data folder: /Users/DQE/data/images

	FileName	Format	Width	Height	Depth	bits	kV	mA	msec	mAs	SID	Pixel um
463:	5/5_0025.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
464:	5/5_0026.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
465:	5/5_0027.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
466:	5/5_0028.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
467:	5/5_0029.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
468:	5/5_0030.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
469:	5/5_0031.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
470:	5/5_0032.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
471:	5/5_0033.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
472:	5/5_0034.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
473:	5/5_0035.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
474:	5/5_0036.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
475:	5/5_0037.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
476:	5/5_0038.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
477:	5/5_0039.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
478:	5/5_0040.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
479:	5/5_0041.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
480:	5/5_0042.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
481:	5/5_0043.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
482:	5/5_0044.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
483:	5/5_0045.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
484:	5/5_0046.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
485:	5/5_0047.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
486:	5/5_0048.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
487:	5/5_0049.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
488:	5/5_0050.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
489:	5/5_0051.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
490:	5/5_0052.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
491:	5/5_0053.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
492:	5/5_0054.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
493:	5/5_0055.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
494:	5/5_0056.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
495:	5/5_0057.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
496:	5/5_0058.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
497:	5/5_0059.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
498:	5/5_0060.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
499:	5/5_0061.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
500:	5/5_0062.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
501:	5/5_0063.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
502:	5/5_0064.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
503:	5/5_0065.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
504:	5/5_0066.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
505:	5/5_0067.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
506:	5/5_0068.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
507:	5/5_0069.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
508:	5/5_0070.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
509:	5/5_0071.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
510:	5/5_0072.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
511:	5/5_0073.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
512:	5/5_0074.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
513:	5/5_0075.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
514:	5/5_0076.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
515:	5/5_0077.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
516:	5/5_0078.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
517:	5/5_0079.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
518:	5/5_0080.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
519:	5/5_0081.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
520:	5/5_0082.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
521:	5/5_0083.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
522:	5/5_0084.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
523:	5/5_0085.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
524:	5/5_0086.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
525:	5/5_0087.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
526:	5/5_0088.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
527:	5/5_0089.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]
528:	5/5_0090.viv	viv-1152x1	[1152	1152	1]	0	0	0	0	0.0	0	[127 127]

Image Details Report - 9

20181203-092251

Image data folder: /Users/DQE/data/images

	FileName	Format	WidthHeightDepth	bits	kV	mA	msec	mAs	SID	Pixel um
529:	5/5_0091.viv	viv-1152x1	[1152 1152 1]	0	0	0	0	0.0	0	[127 127]
530:	5/5_0092.viv	viv-1152x1	[1152 1152 1]	0	0	0	0	0.0	0	[127 127]
531:	5/5_0093.viv	viv-1152x1	[1152 1152 1]	0	0	0	0	0.0	0	[127 127]
532:	5/5_0094.viv	viv-1152x1	[1152 1152 1]	0	0	0	0	0.0	0	[127 127]
533:	5/5_0095.viv	viv-1152x1	[1152 1152 1]	0	0	0	0	0.0	0	[127 127]
534:	5/5_0096.viv	viv-1152x1	[1152 1152 1]	0	0	0	0	0.0	0	[127 127]
535:	5/5_0097.viv	viv-1152x1	[1152 1152 1]	0	0	0	0	0.0	0	[127 127]
536:	5/5_0098.viv	viv-1152x1	[1152 1152 1]	0	0	0	0	0.0	0	[127 127]

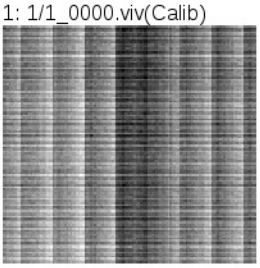
ROI Thumbnail Report

20181203-092251

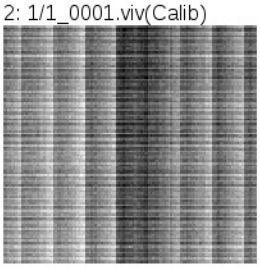
Image data folder: /Users/DQE/data

These images are thumbnail illustrations of each image. For dynamic systems, only the first few images are shown for each exposure. Ensure each image is free of undesirable artifacts that may indicate problems with the x-ray system. Double-click on thumbnail to open review window.

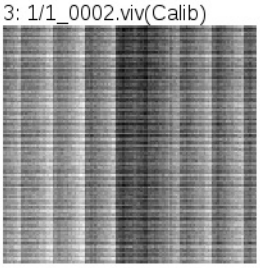
1: 1/1_0000.viv(Calib)



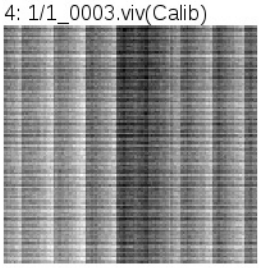
2: 1/1_0001.viv(Calib)



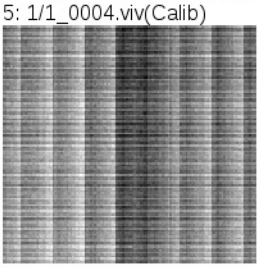
3: 1/1_0002.viv(Calib)



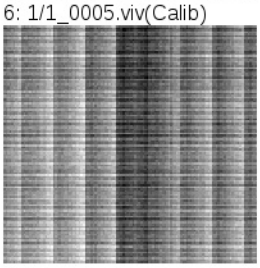
4: 1/1_0003.viv(Calib)



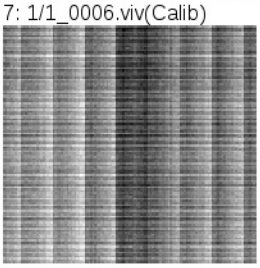
5: 1/1_0004.viv(Calib)



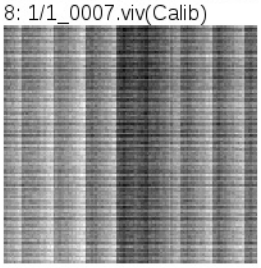
6: 1/1_0005.viv(Calib)



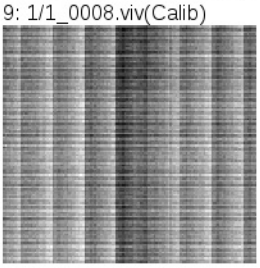
7: 1/1_0006.viv(Calib)



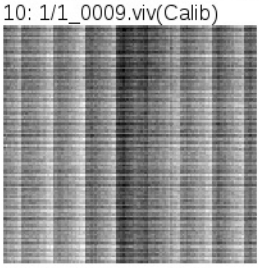
8: 1/1_0007.viv(Calib)



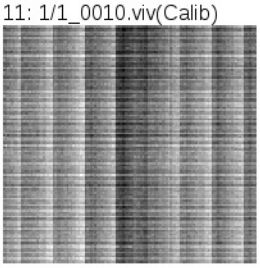
9: 1/1_0008.viv(Calib)



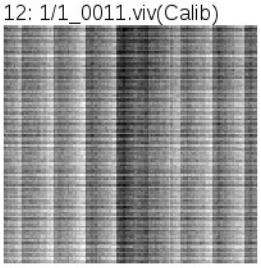
10: 1/1_0009.viv(Calib)



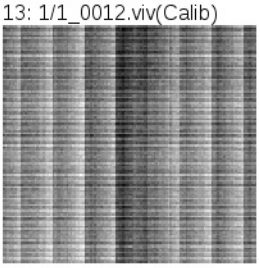
11: 1/1_0010.viv(Calib)



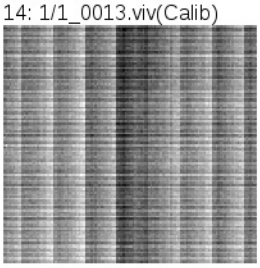
12: 1/1_0011.viv(Calib)



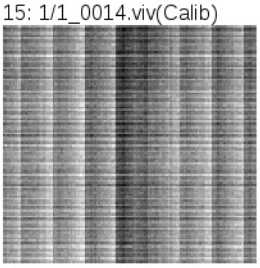
13: 1/1_0012.viv(Calib)



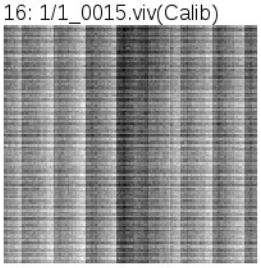
14: 1/1_0013.viv(Calib)



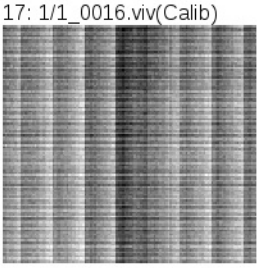
15: 1/1_0014.viv(Calib)



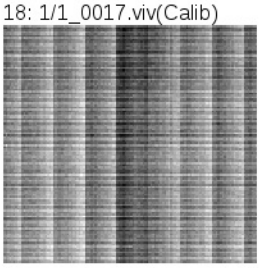
16: 1/1_0015.viv(Calib)



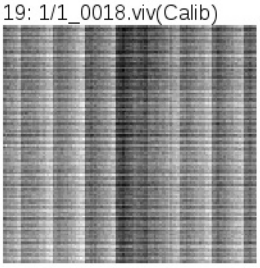
17: 1/1_0016.viv(Calib)



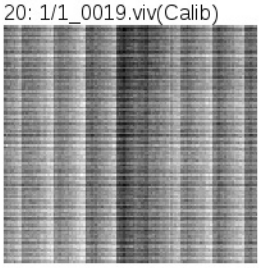
18: 1/1_0017.viv(Calib)



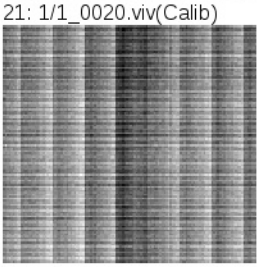
19: 1/1_0018.viv(Calib)



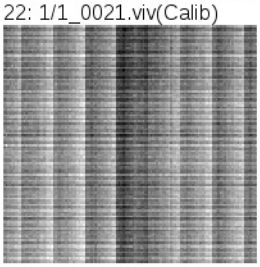
20: 1/1_0019.viv(Calib)



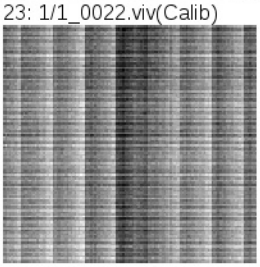
21: 1/1_0020.viv(Calib)



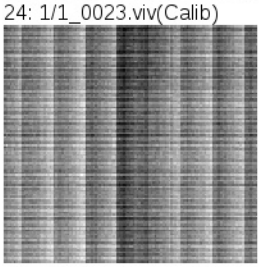
22: 1/1_0021.viv(Calib)



23: 1/1_0022.viv(Calib)



24: 1/1_0023.viv(Calib)

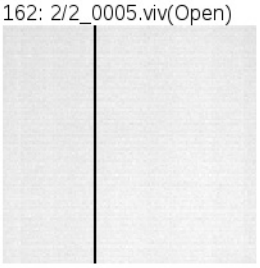


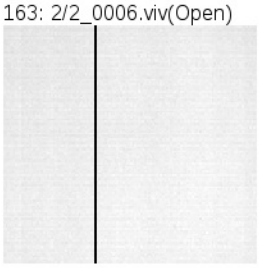
ROI Thumbnail Report - 2

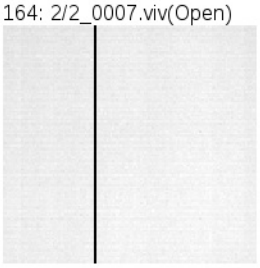
20181203-092251

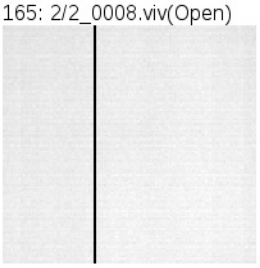
Image data folder: /Users/DQE/data

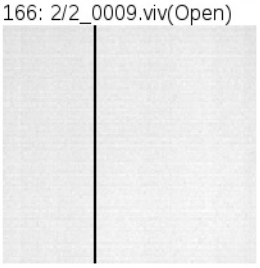
These images are thumbnail illustrations of each image. For dynamic systems, only the first few images are shown for each exposure. Ensure each image is free of undesirable artifacts that may indicate problems with the x-ray system. Double-click on thumbnail to open review window.

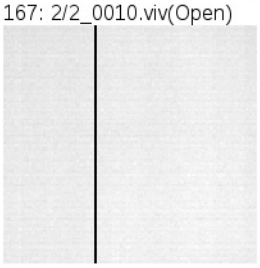
162: 2/2_0005.viv(Open)


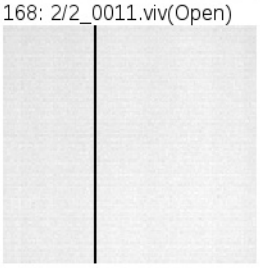
163: 2/2_0006.viv(Open)


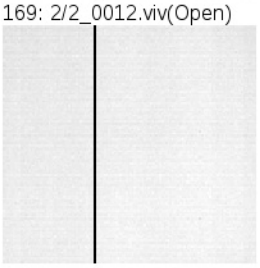
164: 2/2_0007.viv(Open)


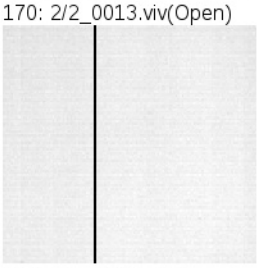
165: 2/2_0008.viv(Open)


166: 2/2_0009.viv(Open)


167: 2/2_0010.viv(Open)


168: 2/2_0011.viv(Open)


169: 2/2_0012.viv(Open)


170: 2/2_0013.viv(Open)


171: 2/2_0014.viv(Open)


172: 2/2_0015.viv(Open)

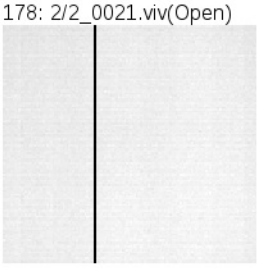

173: 2/2_0016.viv(Open)


174: 2/2_0017.viv(Open)

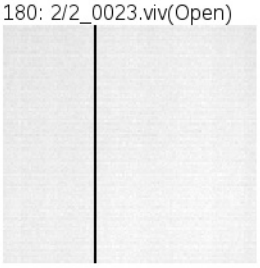

175: 2/2_0018.viv(Open)

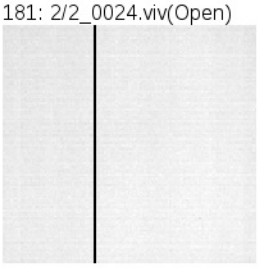

176: 2/2_0019.viv(Open)

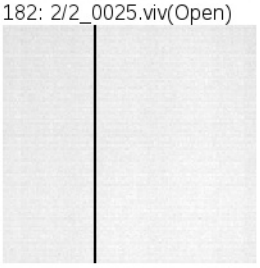

177: 2/2_0020.viv(Open)

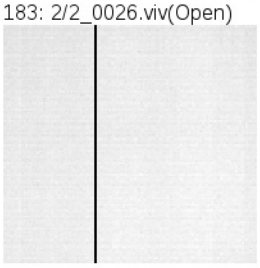

178: 2/2_0021.viv(Open)


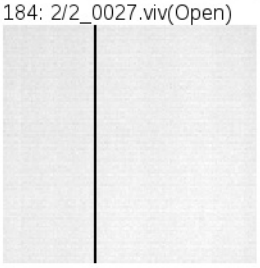
179: 2/2_0022.viv(Open)

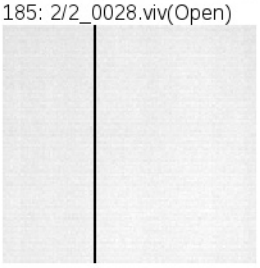

180: 2/2_0023.viv(Open)


181: 2/2_0024.viv(Open)


182: 2/2_0025.viv(Open)


183: 2/2_0026.viv(Open)


184: 2/2_0027.viv(Open)


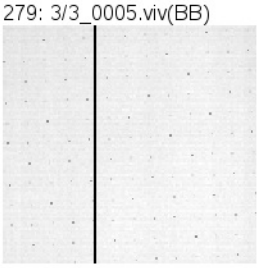
185: 2/2_0028.viv(Open)


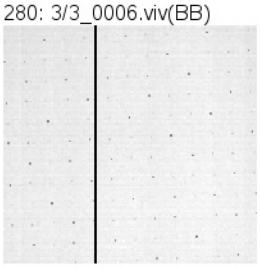
ROI Thumbnail Report - 3

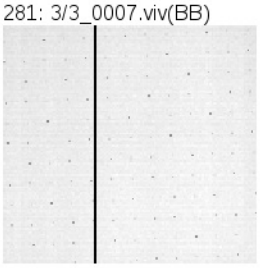
20181203-092251

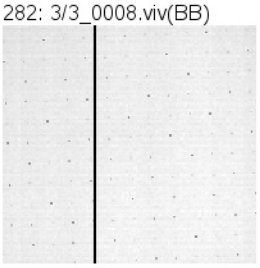
Image data folder: /Users/DQE/data

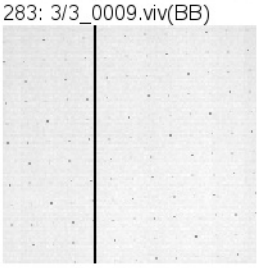
These images are thumbnail illustrations of each image. For dynamic systems, only the first few images are shown for each exposure. Ensure each image is free of undesirable artifacts that may indicate problems with the x-ray system. Double-click on thumbnail to open review window.

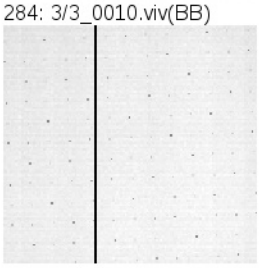
279: 3/3_0005.viv(BB)


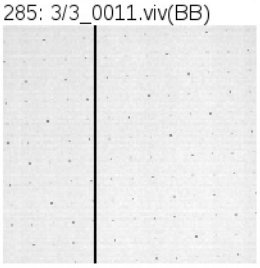
280: 3/3_0006.viv(BB)


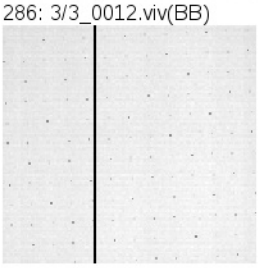
281: 3/3_0007.viv(BB)


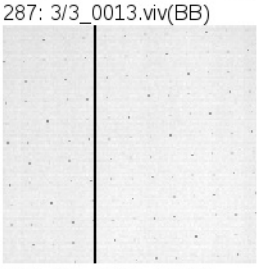
282: 3/3_0008.viv(BB)


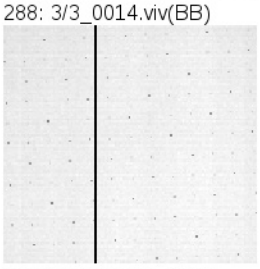
283: 3/3_0009.viv(BB)


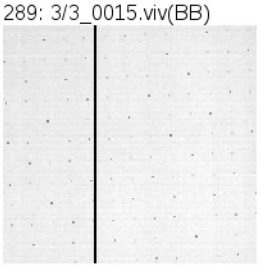
284: 3/3_0010.viv(BB)


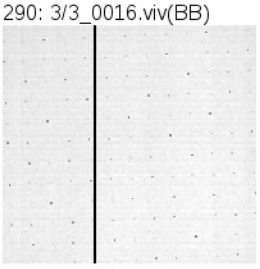
285: 3/3_0011.viv(BB)


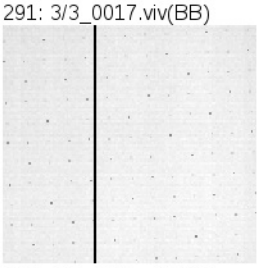
286: 3/3_0012.viv(BB)


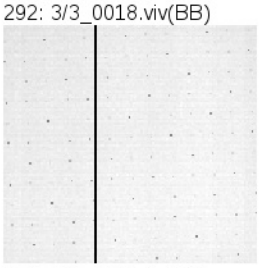
287: 3/3_0013.viv(BB)


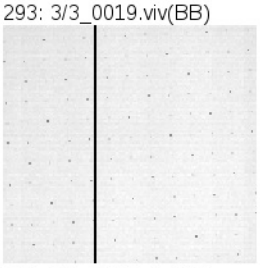
288: 3/3_0014.viv(BB)


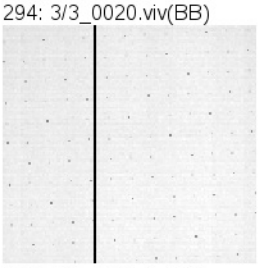
289: 3/3_0015.viv(BB)


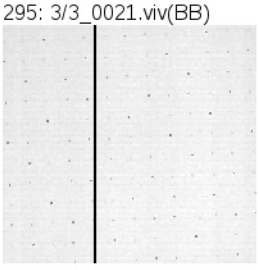
290: 3/3_0016.viv(BB)


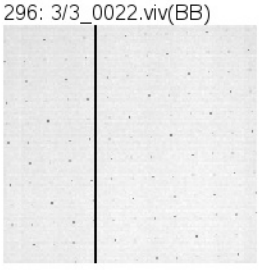
291: 3/3_0017.viv(BB)


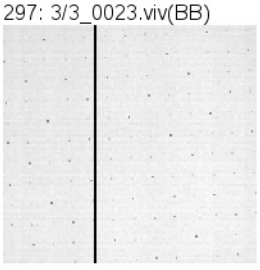
292: 3/3_0018.viv(BB)


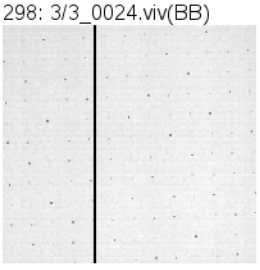
293: 3/3_0019.viv(BB)


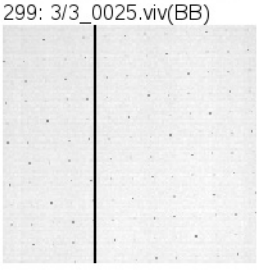
294: 3/3_0020.viv(BB)


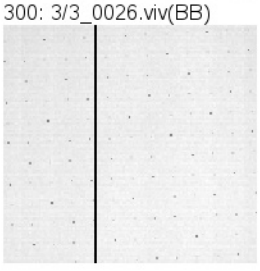
295: 3/3_0021.viv(BB)


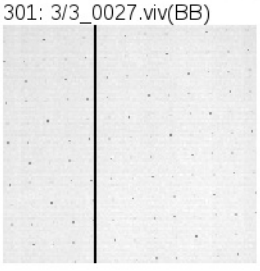
296: 3/3_0022.viv(BB)


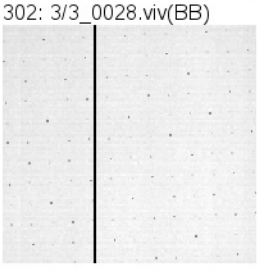
297: 3/3_0023.viv(BB)


298: 3/3_0024.viv(BB)


299: 3/3_0025.viv(BB)


300: 3/3_0026.viv(BB)


301: 3/3_0027.viv(BB)


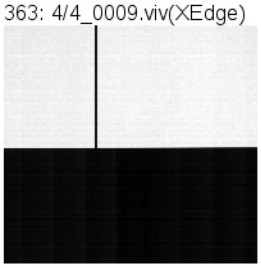
302: 3/3_0028.viv(BB)


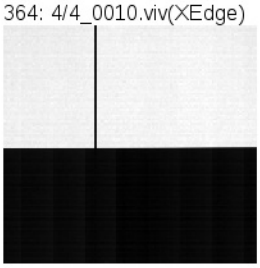
ROI Thumbnail Report - 4

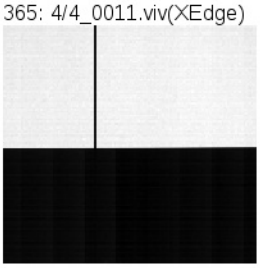
20181203-092251

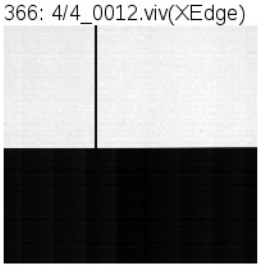
Image data folder: /Users/DQE/data

These images are thumbnail illustrations of each image. For dynamic systems, only the first few images are shown for each exposure. Ensure each image is free of undesirable artifacts that may indicate problems with the x-ray system. Double-click on thumbnail to open review window.

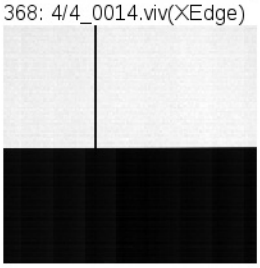
363: 4/4_0009.viv(XEdge)


364: 4/4_0010.viv(XEdge)


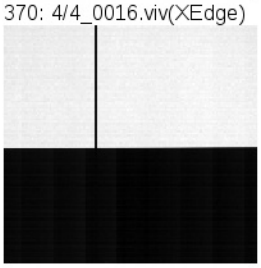
365: 4/4_0011.viv(XEdge)


366: 4/4_0012.viv(XEdge)


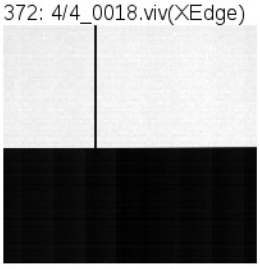
367: 4/4_0013.viv(XEdge)


368: 4/4_0014.viv(XEdge)


369: 4/4_0015.viv(XEdge)


370: 4/4_0016.viv(XEdge)


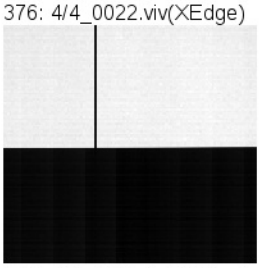
371: 4/4_0017.viv(XEdge)


372: 4/4_0018.viv(XEdge)


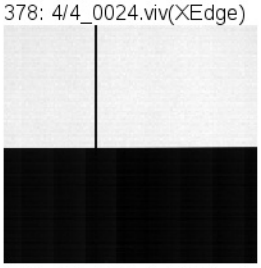
373: 4/4_0019.viv(XEdge)

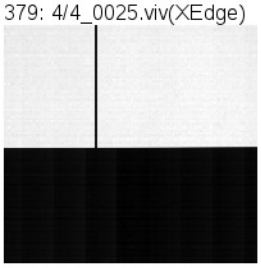

374: 4/4_0020.viv(XEdge)

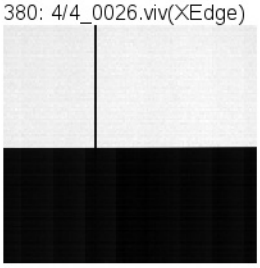

375: 4/4_0021.viv(XEdge)


376: 4/4_0022.viv(XEdge)


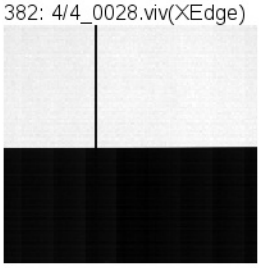
377: 4/4_0023.viv(XEdge)


378: 4/4_0024.viv(XEdge)


379: 4/4_0025.viv(XEdge)


380: 4/4_0026.viv(XEdge)


381: 4/4_0027.viv(XEdge)


382: 4/4_0028.viv(XEdge)


383: 4/4_0029.viv(XEdge)


384: 4/4_0030.viv(XEdge)


385: 4/4_0031.viv(XEdge)

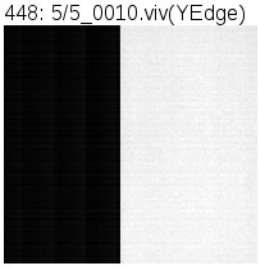

386: 4/4_0032.viv(XEdge)

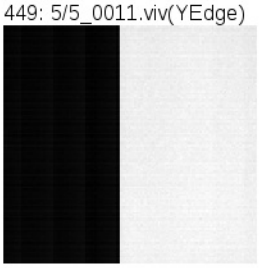

ROI Thumbnail Report - 5

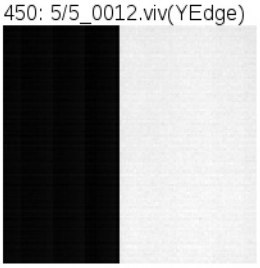
20181203-092251

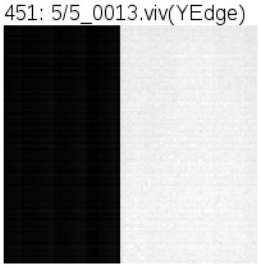
Image data folder: /Users/DQE/data

These images are thumbnail illustrations of each image. For dynamic systems, only the first few images are shown for each exposure. Ensure each image is free of undesirable artifacts that may indicate problems with the x-ray system. Double-click on thumbnail to open review window.

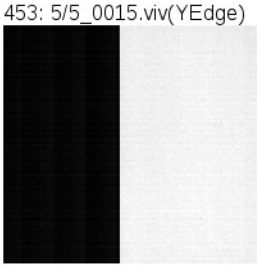
448: 5/5_0010.viv(YEdge)


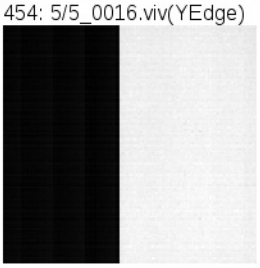
449: 5/5_0011.viv(YEdge)


450: 5/5_0012.viv(YEdge)


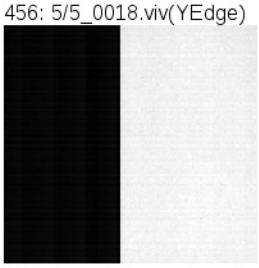
451: 5/5_0013.viv(YEdge)


452: 5/5_0014.viv(YEdge)

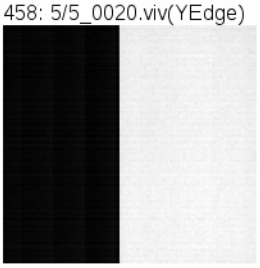

453: 5/5_0015.viv(YEdge)


454: 5/5_0016.viv(YEdge)


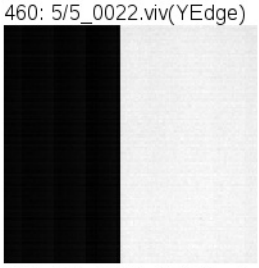
455: 5/5_0017.viv(YEdge)


456: 5/5_0018.viv(YEdge)


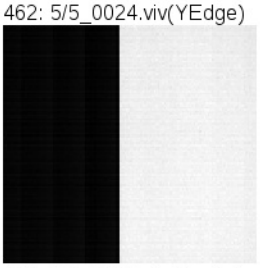
457: 5/5_0019.viv(YEdge)

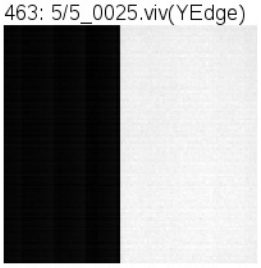

458: 5/5_0020.viv(YEdge)


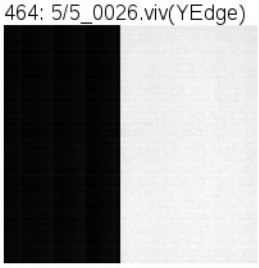
459: 5/5_0021.viv(YEdge)

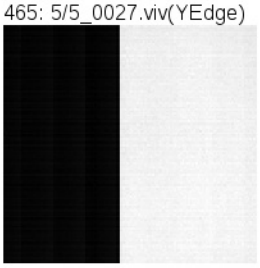

460: 5/5_0022.viv(YEdge)


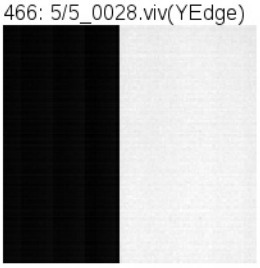
461: 5/5_0023.viv(YEdge)

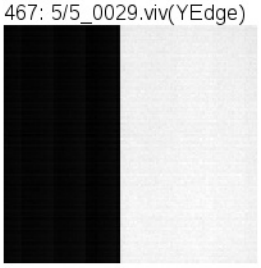

462: 5/5_0024.viv(YEdge)


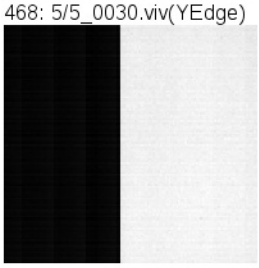
463: 5/5_0025.viv(YEdge)


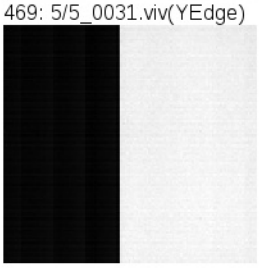
464: 5/5_0026.viv(YEdge)


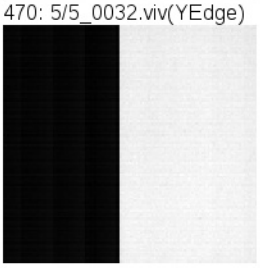
465: 5/5_0027.viv(YEdge)


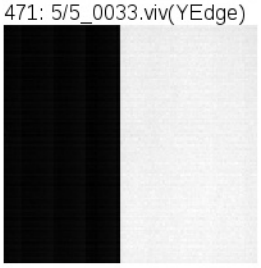
466: 5/5_0028.viv(YEdge)


467: 5/5_0029.viv(YEdge)


468: 5/5_0030.viv(YEdge)


469: 5/5_0031.viv(YEdge)


470: 5/5_0032.viv(YEdge)


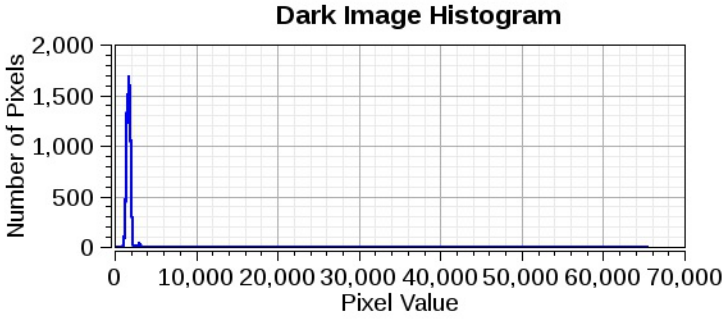
471: 5/5_0033.viv(YEdge)


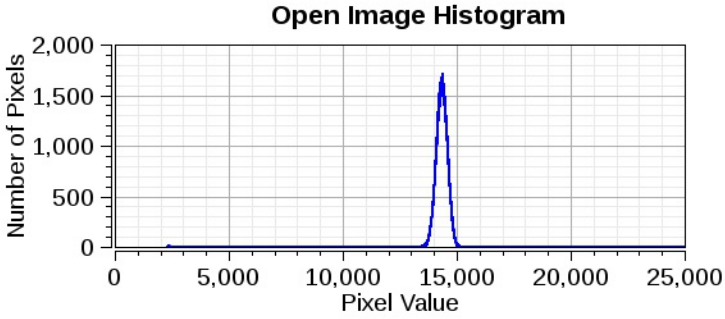
Defects Report

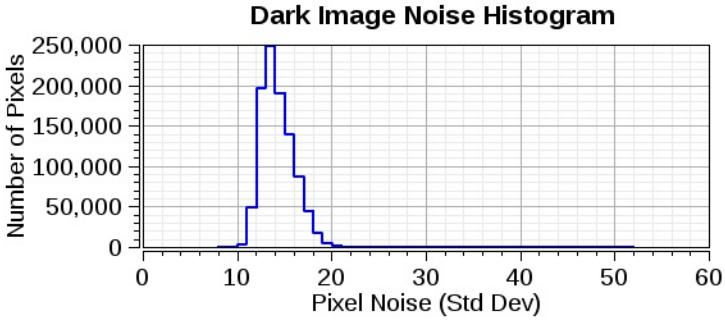
DQEPro 4.7.0-rc7 00000000
DQE Instruments
Mon 03 Dec 2018

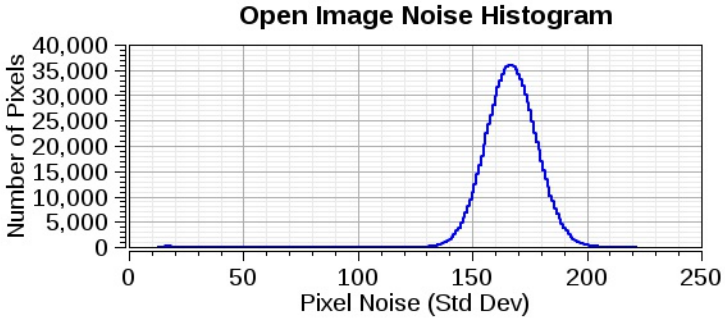
20181203-092251

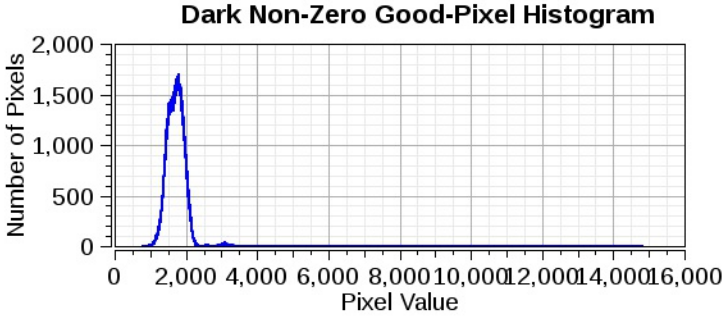
Study comment: Sample study
Study date-time: Mon 03 Dec 2018 09:22:51
Analysis date-time: Mon 03 Dec 2018 09:23:17
Detector:
Detector SN:
Possible defects include real defects and pixels obscured from x-ray beam.
Number (fraction) of possible defects in ROI: 966 of 983040 (9.8E-04)
Number (fraction) of zero dark pixels in ROI: 966 of 983040 (9.8E-04)
Dark image pixel mean and standard deviation: 1717.5 14.4
Dark image pixel mean and standard deviation, non-zero and non-defect pixels: 1717.7 14.4
Open image pixel mean and standard deviation: 14338.0 167.3
Open image pixel mean and standard deviation, non-defect pixels: 14349.7 167.4
ADC quantization-noise test: Pass

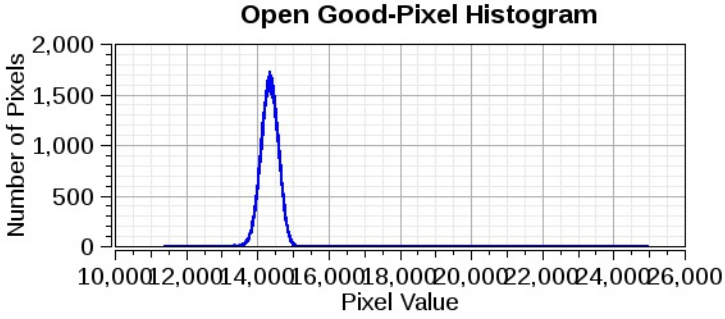


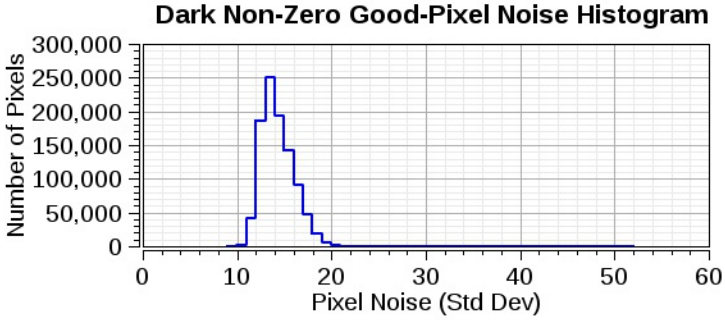


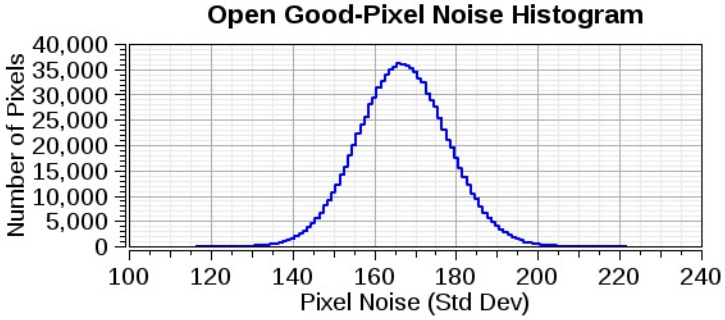








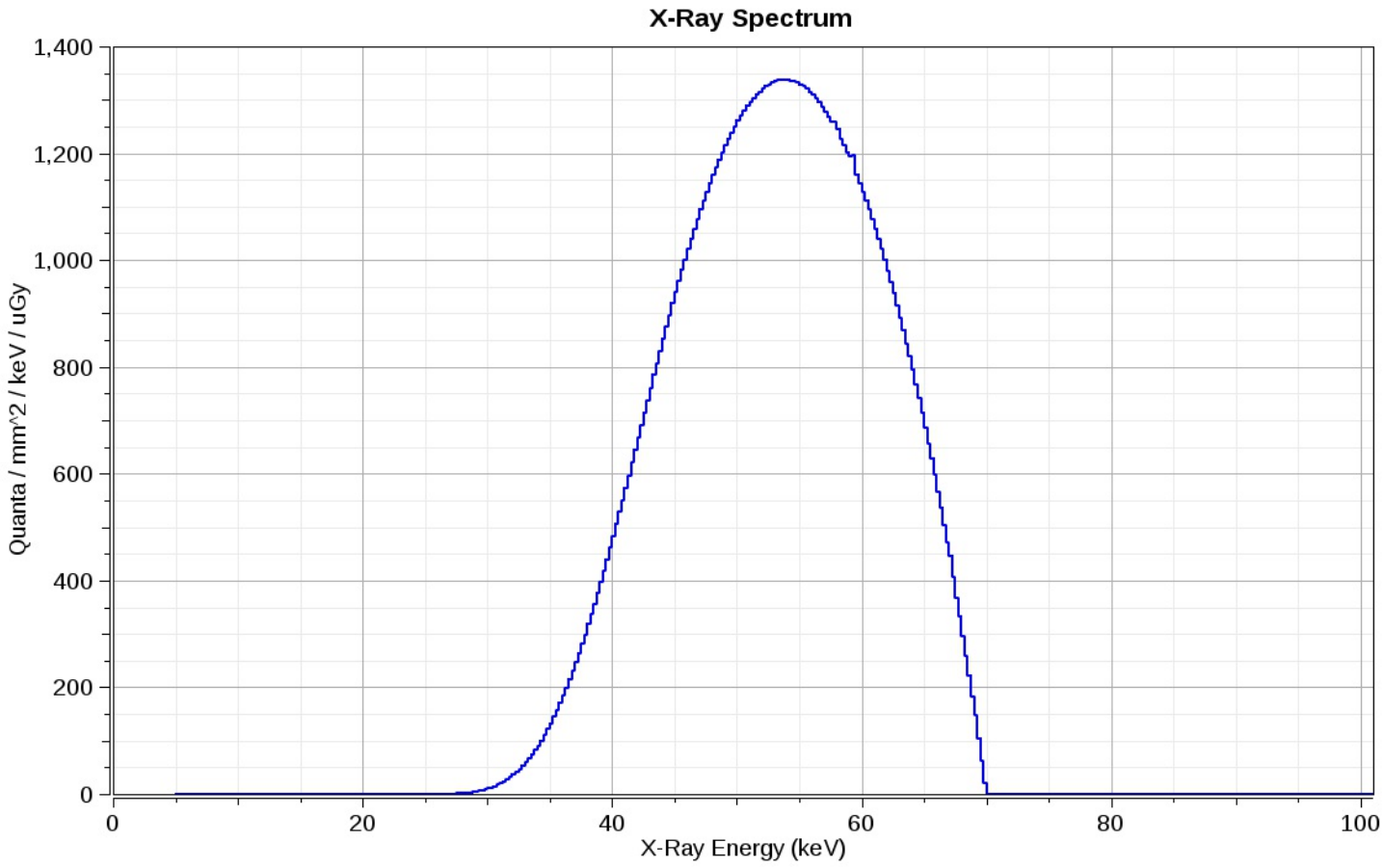




X-Ray Spectrum Report

20181203-092251

X-ray spectrum: Dynamic, RQA-5 (70 kV)
Target material: W
Set kV: 72
Set mA: 160.0
Half-value layer: 7.1 mmAl
Mean photon energy: 53.1 keV
Spectrum Q_o: 30.2 q/mm^2/nGy



Message Summary Report

20181203-092251

Study comment: Sample study
Study date and time: Mon 03 Dec 2018 09:22:51
DQEPro acquistion version: 4.6.14, Windows-64bit Windows 7 SP 1 hostname username
DQEPro analysis version: 4.7.0-rc7, Linux-64bit CentOS Linux 7 (Core) thor.imaging.robarts.ca icunning
DQEPro hardware version: 2.3, 000000
DQEPro firmware version: 4.1.10
Manufacturer:
DetectorModel:
DetectorDescription:
Model:
DetectorID:
DetectorSerialNumber:
PresentationType:
Grid:
X-ray spectrum: Dynamic, RQA-5 (70 kV)
Half-value layer: 7.1 mmAl
Set technique: 72 kV, 160 mA
Air Temperature and Pressure: 31.2 C, 104.5 kPa
Waveform sampling rate: 10.4 kHz
Specified frame rate: 5.00 per sec
Image-plane exposure rate, air KERMA rate: 1.49 mR/sec, 13.0 uGy/sec
Image-plane exposure, air KERMA: 297.7 uR/frame, 2609 nGy/frame
Source-image distance: 116.0 cm (DQEPro)
Specified DQEPro-image distance: 1.0 cm
DQEPro-image distance: 0.6 cm (Measured by DQEPro, consistent with user)
Angle of DQEPro with respect to image pixel grid: 2.9 degrees
Alignment of DQEPro axes with respect to image axes: Perpendicular
Pixel size from image headers, x y: 127 127 um
Pixel size in image plane, x y: 127 127 um (Image headers)
System response: Not tested, assumed Linear
Data Folder: /Users/DQE/data
Image Folder: /Users/DQE/data/images

Warnings:
1: The number of Open-type images (117) is greater than the correspondng number of exposure pulses (113). This may indicate extra images acquired during the test or when DQEPro was not ready, and may prevent proper completion of the analysis.

2: The number of BB-type images (84) is less than the corresponding number of exposure pulses (88). This may indicate missing images.

3: The number of XEdge-type images (85) is greater than the correspondng number of exposure pulses (82). This may indicate extra images acquired during the test or when DQEPro was not ready, and may prevent proper completion of the analysis.

4: The number of YEdge-type images (89) is greater than the correspondng number of exposure pulses (86). This may indicate extra images acquired during the test or when DQEPro was not ready, and may prevent proper completion of the analysis.

5: Images were saved in a non-dicom format. This means we cannot confirm "For Processing" or "Raw" images are used and that only linear post processing has been applied to image data according to NEMA standard XR 27-2012. The user must ensure only linear processing has been used to ensure IEC accuracy in results. In particular, noise-suppresion algorithms and lossy compression may cause unpredictable results and must not be used.

6: Average pixel value in open images varies by 5%. We will continue, but this may indicate a problem with image data.

7: Number of Open images available (107) is less than normal minimum (128). We will continue using a reduced vector size (64) but this may affect accuracy of DQE results.

8: A total of 966 defective pixels were ignored in each open image in the NPS analysis. This will not affect the results, but it does void IEC compliance. To achieve compliance, uncheck "Accomodate Defects" on the main panel and perform all image corrections before running this analysis.