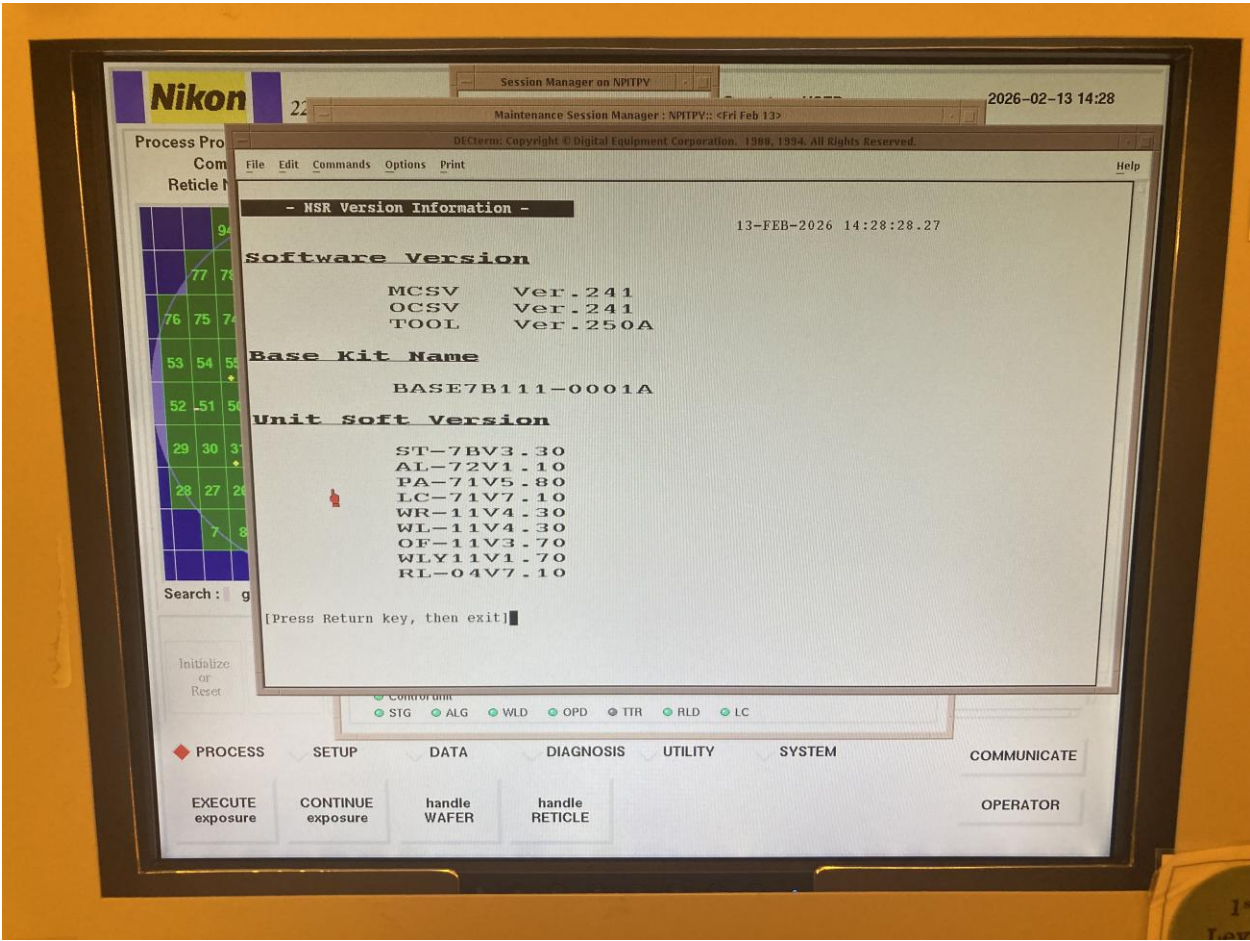


No	ITEM	SPEC	RESULT
1	Total Focus Deviation	Max-Min $\leq 0.30\mu\text{m}$	0.252 μm
2	Lens Astigmatism	$ V-H \leq 0.30\mu\text{m}$	0.139 μm
3	Lens Dynamic Distortion	X,Y = Within $\pm 50\text{nm}$	Data not available
4	Wafer Flatness Accuracy	1) Flat Within $\geq$ Max-Min 3.0 μm 2) L.F.S Within $\geq$ Max-Min 0.8 μm	1. 1.86 μm 2. 0.82 μm
5	Exposure Power	Within $\geq 700\text{mW}/\text{cm}^2$	590 mW/cm^2
6	Illumination Uniformity	Within $\pm 1.5\%$	1.07%
7	Stage Precision Accuracy 1) Stepping Accuracy	1) $3\sigma \leq 50\text{nm}$ 2) $3\sigma \leq 50\text{nm}$	1) X: 13nm Y: 13nm
8	Wafer Pre-Alignment Repeatability	$3\sigma \leq 15\mu\text{m}$	X : 4.966 μm Y : 7.625 μm T : 5.982 μm
9	Integrator Accuracy	Target: Ave $\leq 1\%$	Ave Max = 0.00125%
10	Alignment Accuracy 1) FIA-EGA 2) LSA-EGA	FIA-EGA = $ M + 3\sigma \leq 75\text{nm}$ LSA-EGA = $ M + 3\sigma \leq 75\text{nm}$	1) X = $\pm 60\text{nm}$ Y = $\pm 30\text{nm}$ 2) X = $\pm 50\text{nm}$ Y = $\pm 30\text{nm}$

Software

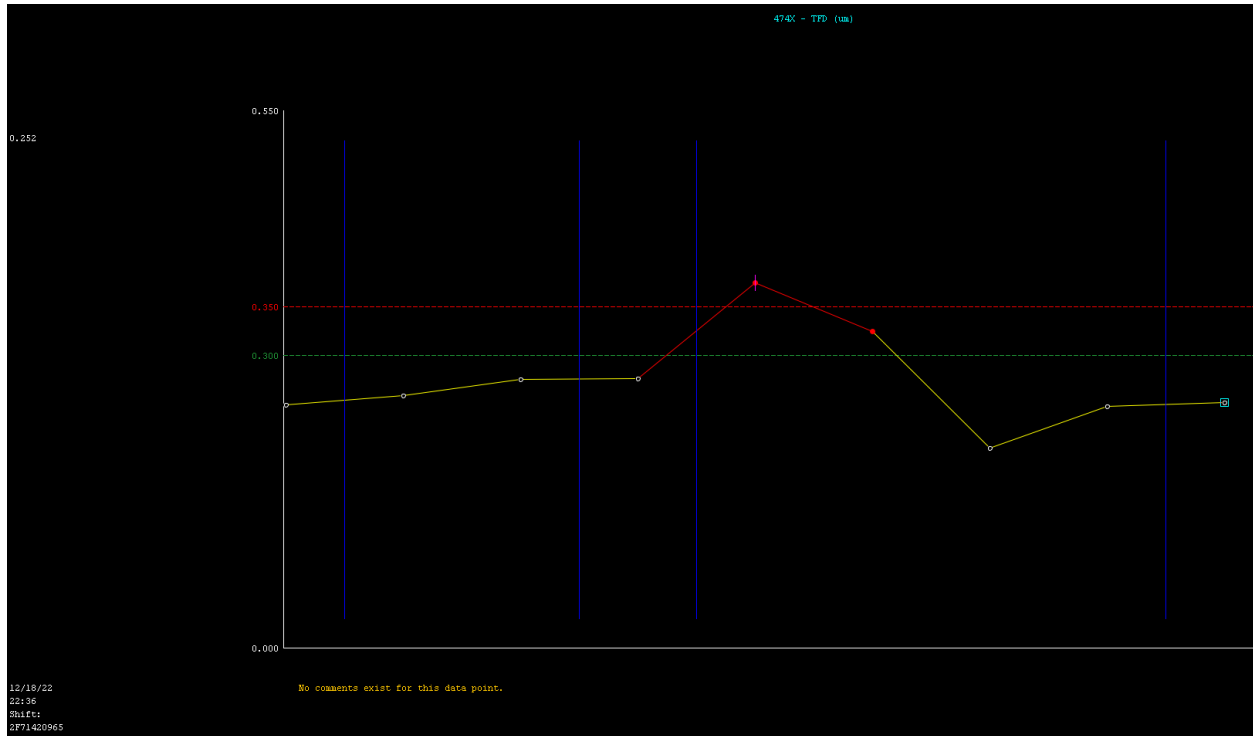


1. Total Focus Deviation (2018-2022):

(0.25 μ m L&S / 15Point V/H)

SPEC: Max-Min $\leq$ 0.30 μ m

Result: Max – Min = 0.252 μ m

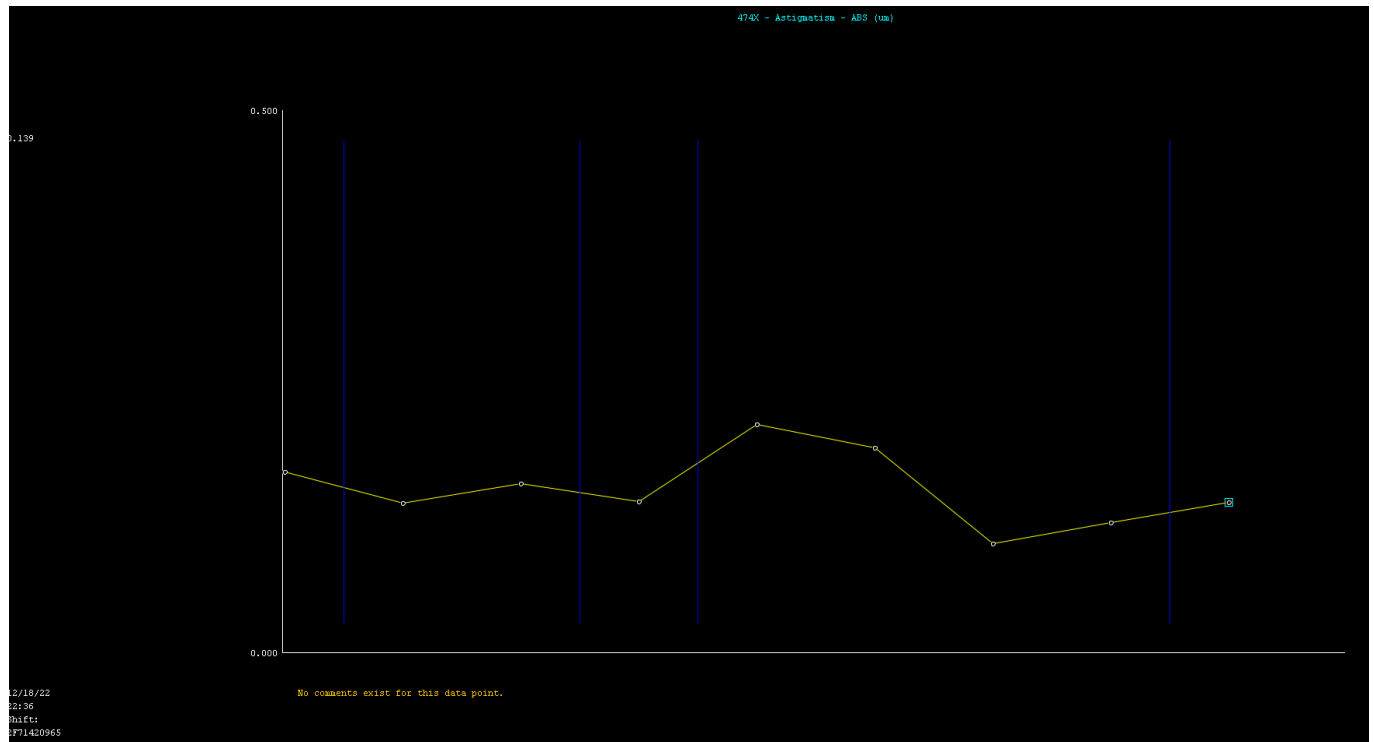


2. Lens Astigmatism (2018-2022):

(0.25 μ m L&S / 15Point V/H)

SPEC: $|V-H| \leq 0.30\mu\text{m}$

Result: $|V-H| = 0.139\mu\text{m}$



3. Lens Dynamic Distortion (2025):

SPEC: X,Y = Within $\pm 50\text{nm}$

Result: X = $-2\text{nm} \sim 40\text{nm}$

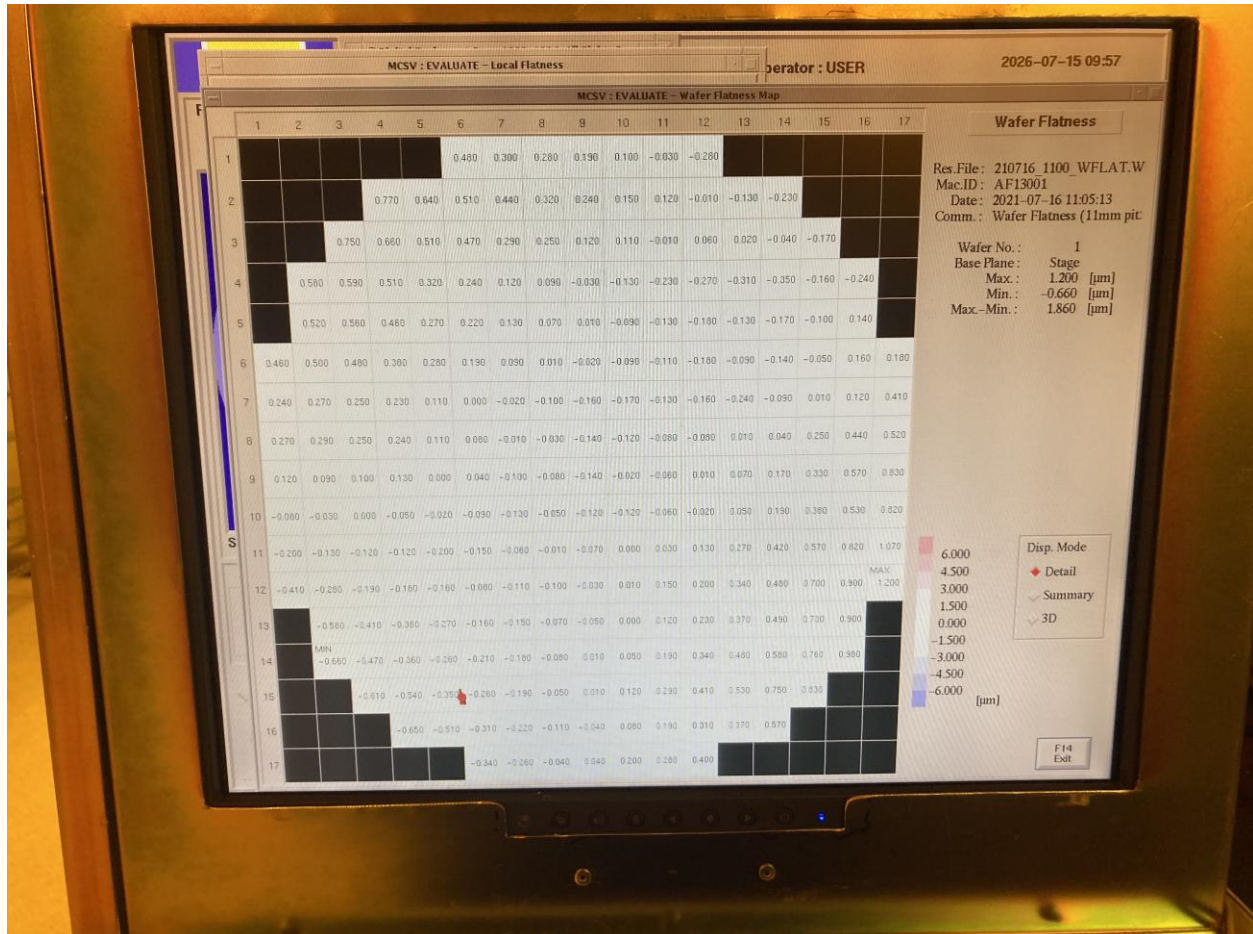
Y = $15\text{nm} \sim 42\text{nm}$

Data not available, no MESR files on tool

4. Wafer Flatness Accuracy (2021):

SPEC: 1) Flat Within $\geq$ Max-Min $3.0\mu\text{m}$

Result: Max-Min = $1.86\mu\text{m}$



SPEC: 2) L.F.S Within $\geq$ Max-Min $0.8\mu\text{m}$

Result: Max-Min = $0.820\mu\text{m}$

MCSV : EVALUATE - Local Flatness

Operator : USER

2026-07-15 09:57

MCSV : EVALUATE - Local Flatness Map

Local Flatness

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1						0.160	0.210	0.160	0.160	0.220	0.380	0.400					
2				0.260	0.260	0.220	0.230	0.200	0.170	0.200	0.400	0.340	0.240	0.250			
3			0.240	0.340	0.530	0.520	0.420	0.470	0.450	0.470	0.420	0.430	0.370	0.310	0.160		
4		0.170	0.190	0.480	0.440	0.380	0.400	0.280	0.340	0.250	0.340	0.330	0.370	0.370	0.300	0.360	
5		0.130	0.200	0.310	0.320	0.230	0.230	0.140	0.180	0.210	0.180	0.200	0.220	0.260	0.510	0.400	
6	0.220	0.320	0.310	0.450	0.460	0.290	0.320	0.290	0.240	0.140	0.090	0.110	0.150	0.150	0.300	0.510	0.230
7	0.260	0.230	0.260	0.370	0.390	0.290	0.220	0.230	0.170	0.150	0.060	0.170	0.280	0.340	0.580	0.570	0.340
8	0.180	0.200	0.160	0.250	0.190	0.210	0.140	0.130	0.120	0.150	0.180	0.200	0.330	0.570	0.660	0.820	0.420
9	0.350	0.330	0.340	0.290	0.330	0.240	0.180	0.110	0.120	0.120	0.100	0.130	0.270	0.370	0.490	0.570	0.390
10	0.320	0.300	0.260	0.300	0.280	0.190	0.170	0.090	0.120	0.170	0.190	0.330	0.410	0.500	0.650	0.740	0.290
11	0.330	0.410	0.230	0.170	0.180	0.140	0.140	0.120	0.090	0.270	0.320	0.400	0.500	0.650	0.710	0.820	0.540
12	0.260	0.450	0.460	0.260	0.230	0.210	0.150	0.090	0.110	0.190	0.230	0.340	0.360	0.460	0.480	0.500	0.380
13		0.390	0.480	0.310	0.280	0.150	0.110	0.150	0.150	0.220	0.330	0.330	0.380	0.420	0.500	0.440	
14		0.250	0.300	0.340	0.380	0.200	0.190	0.190	0.190	0.340	0.410	0.410	0.520	0.460	0.400	0.250	
15			0.250	0.290	0.440	0.330	0.230	0.230	0.170	0.280	0.290	0.290	0.340	0.390	0.410		
16				0.300	0.340	0.290	0.290	0.270	0.250	0.270	0.280	0.250	0.380	0.260			
17						0.170	0.300	0.300	0.240	0.240	0.200	0.210					

Res.File : 210716_1100_WFLAT.W
Mac.ID : AF13001
Date : 2021-07-16 11:05:13
Comm. : Wafer Flatness (11mm pit)

Wafer No. : 1
Base Plane : Stage
Max. : 1.200 [um]
Min. : -0.660 [um]
Max-Min. : 1.860 [um]
L.F.S. Mode : 3AST
L.F. Max. : 0.820 [um]

1.440
1.280
1.120
0.960
0.800
0.640
0.480
0.320
0.160
0.000 [um]

Disp. Mode

◆ Detail
◇ Summary
▽ 3D

F14
Exit

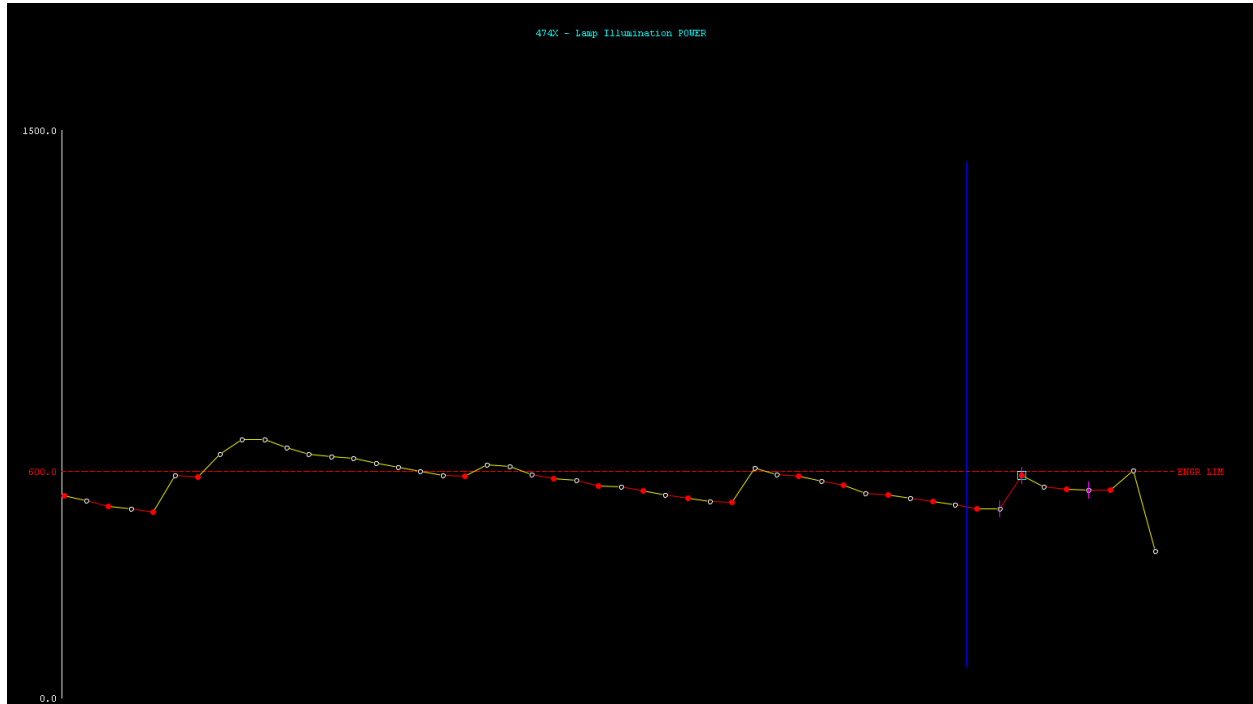
5/6 Exposure Power / Uniformity (2021-2022):

SPEC: Power = Within $\geq 700\text{mW/cm}^2$

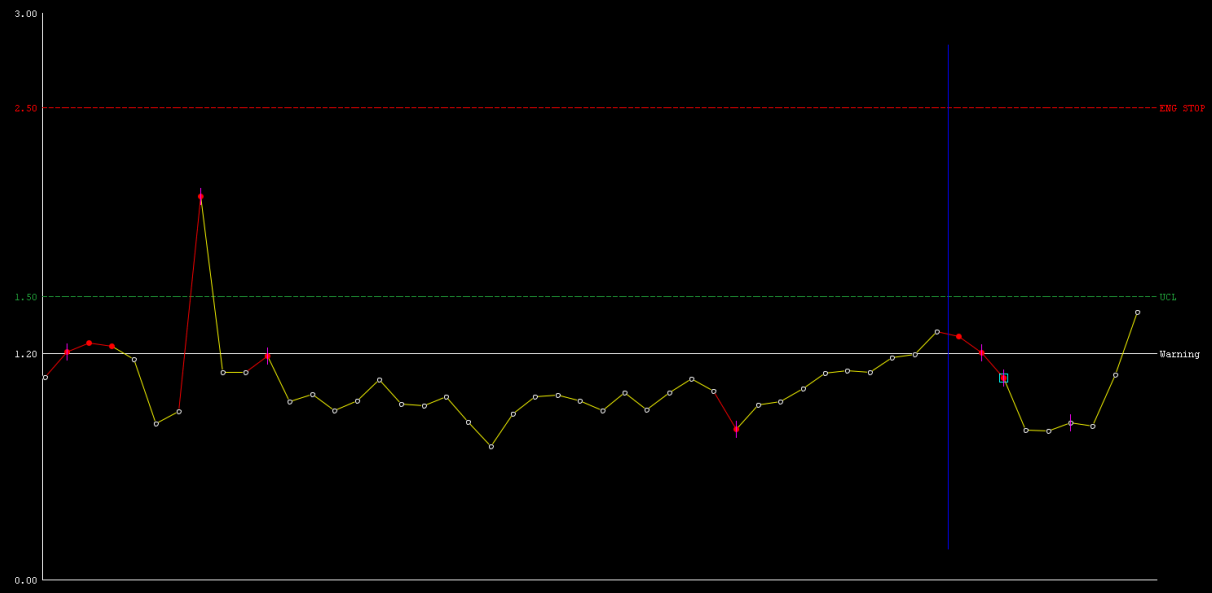
Spec: Uniformity Within $\pm 1.5\%$

Result: 1) Illumination Power = 590mW/cm^2

2) Uniformity = 1.07%



474X - Lamp Illumination Uniformity %



7. Stage Precision Accuracy (2018-2022):

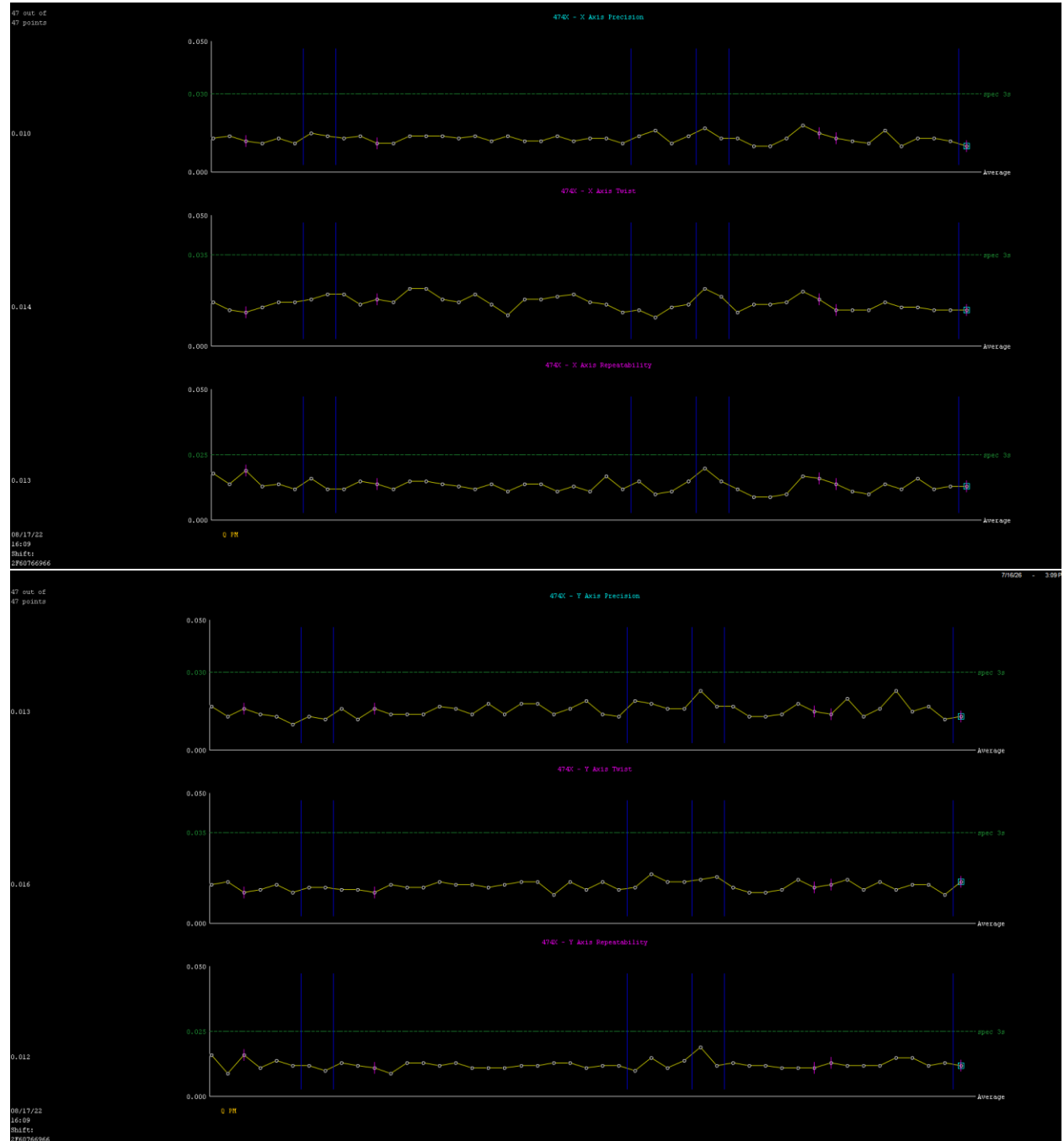
SPEC: Step X,Y $3\sigma \leq 50\text{nm}$

Result:

1) Stepping Accuracy

X(3σ) : 13nm

Y(3σ) : 13nm



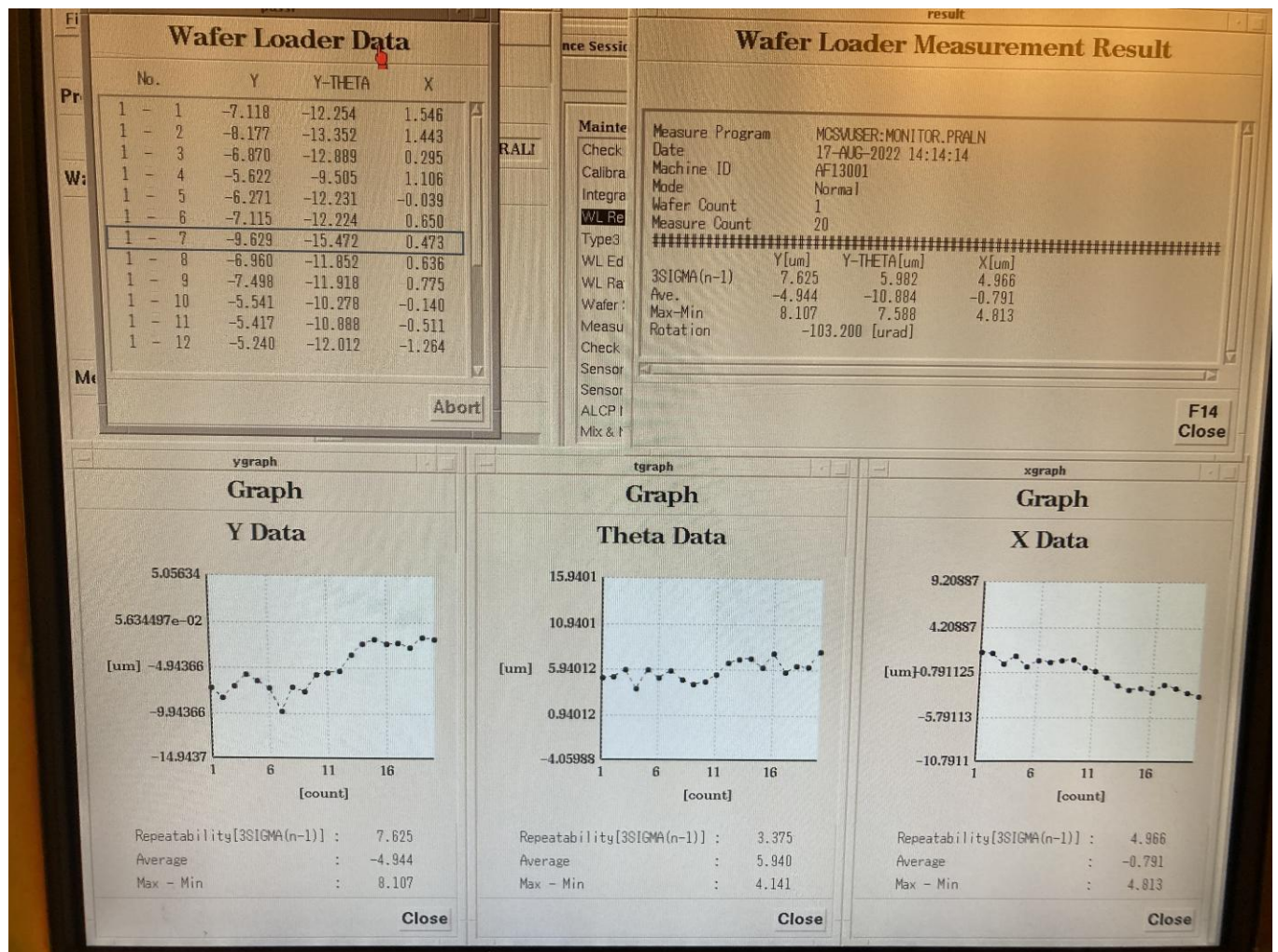
8. Wafer Pre-Alignment Repeatability (2022):

SPEC: $3\sigma \leq 15\mu\text{m}$

Result: $X(3\sigma) = 4.966\mu\text{m}$

$Y(3\sigma) = 7.625\mu\text{m}$

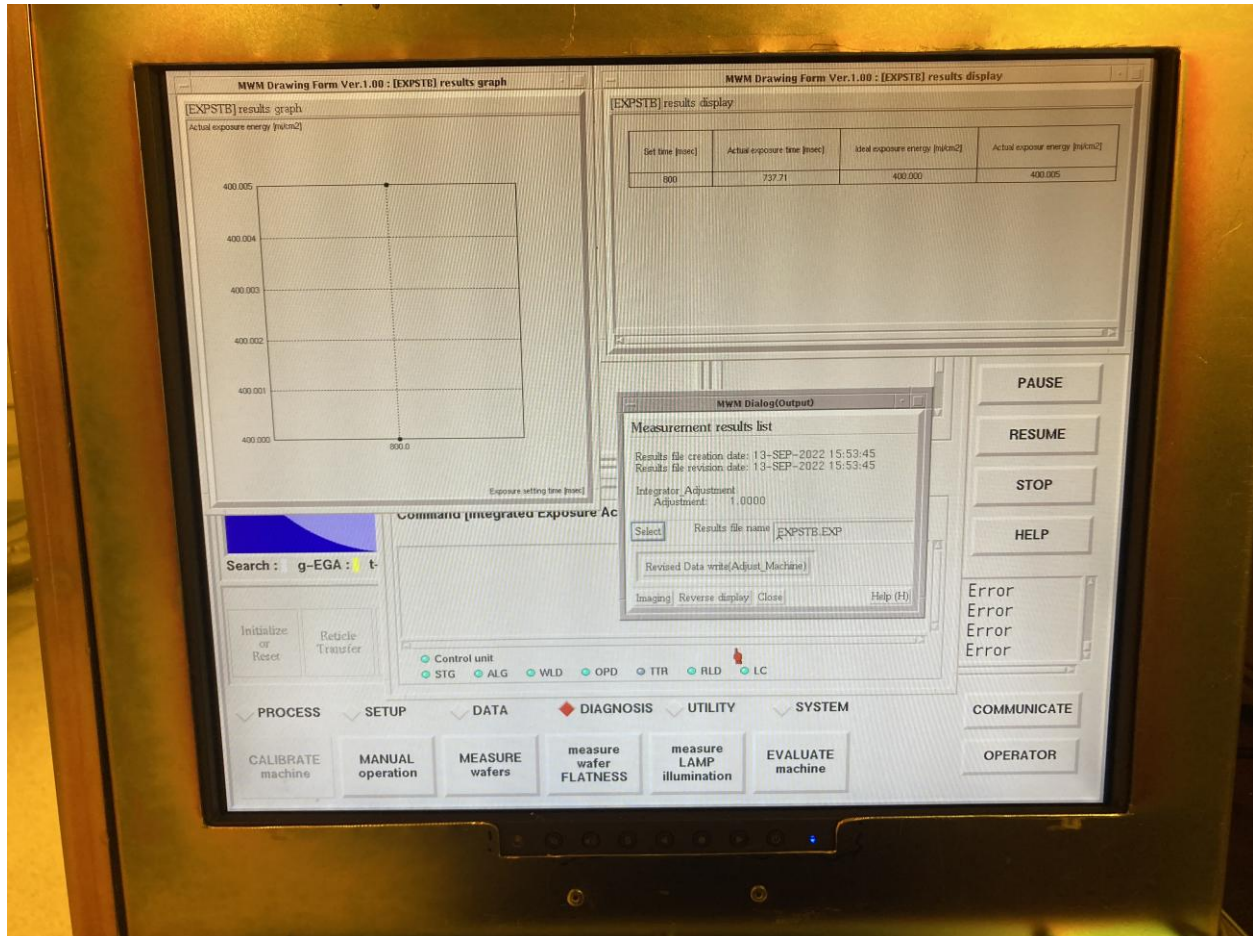
$T(3\sigma) = 5.982\mu\text{m}$



9. Integrator Accuracy (2022):

SPEC: Ave $\leq 1.0\%$

Result: Max = 0.00125%

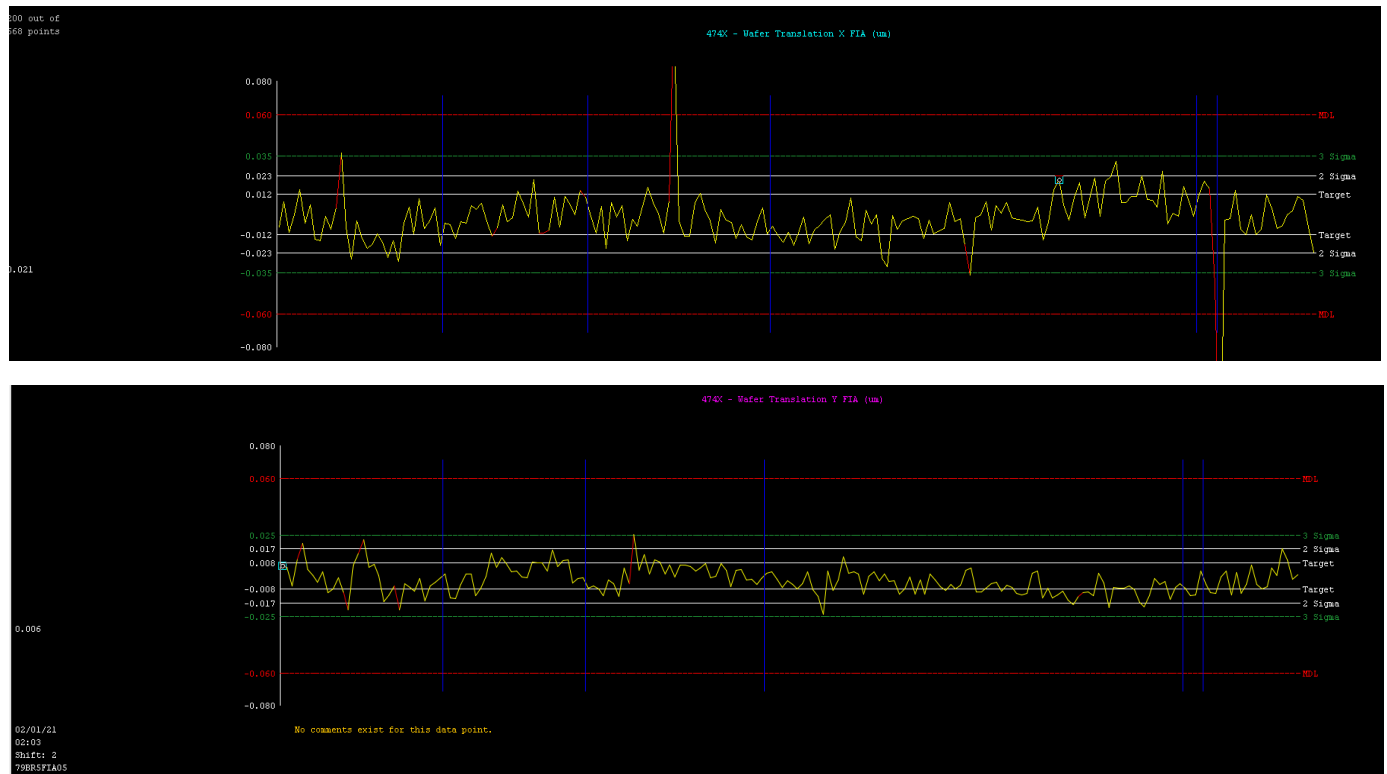


10-1 FIA (2021-2022):

SPEC: FIA-EGA = $|M| + 3\sigma \leq 70\text{nm}$

Result: FIA-EGA X = 60nm

FIA-EGA Y = 30nm



10-2 LSA (2021-2022):

SPEC: LSA-EGA = $|M| + 3\sigma \leq 70\text{nm}$

Result: LSA-EGA X = 50nm

LSA-EGA Y = 30nm

