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RMA-6112
 Camera Test Report
 1100-189

Tested by: Rick Ybarra

Date: 01-10-2018

Final Approval: _____

Date: _____

System Information

Camera Type	1100S
Camera Serial Number	1100-189
Service Cabinet Serial Number	143
CCD Type	STA-4150 Grade 1
CCD Serial Number	169011-W17-19607
Digitization Precision	16 Bit
Number of Ports	4
Window Type	4" Dia Window ML BBAR Coated, Fused Silica
Shutter Type & Driver	n/a - s/n
Computer Interface Type & Serial Number	PCI AIA and Gigabit FO - s/n HT002249
Interface Cable Length	30m
Power Supply Type & Serial Number	Rackmount Power Supply for Cryo - p/n 5341 - s/n 102
Camera Power Cable Length	76 ft
Cooling Type	CryoTiger PT-30
Cooling Hose Length	75 ft
DSP Code Name	9627-
SET File Name	1100-189
CONFIGURATION File Name	9627-

Overall System Performance

Item	Specification	Measured Result
Maximum Dark Current	< 0.0005 e-/p/s	0.0002 e-/p/s @ -115.0°C
CCD Operating Temperature	-110°C to -115°C	-115.0 °C

Readout Modes

Mode	Readout Speed	Binning	DSI Sample Time	Analog Attenuation	CCD Attenuation
00	752 kHz	1x1	8	0	0
01	752 kHz	1x1	8	0	1
02	344 kHz	1x1	88	2	1
03	344 kHz	1x1	88	3	1
04	100 kHz	1x1	444	2	1
05	100 kHz	1x1	444	3	1

Channel A Performance

Parameter	Read Rate		Mode, Bin	Specification		Measured Result	
				Gain e-/adu	Noise (e-)	Gain e-/adu	Noise (e-)
Ana - CCD							
0 - 0	752 kHz	dsi=8	RM 00 1x1			2.63	11.76
0 - 1	752 kHz	dsi=8	RM 01 1x1			5.95	13.93
2 - 1	344 kHz	dsi=88	RM 02 1x1			2.08	5.69
3 - 1	344 kHz	dsi=88	RM 03 1x1			4.23	7.38
2 - 1	100 kHz	dsi=444	RM 04 1x1		< 4.5e- ~ 4e-	0.44	3.96
3 - 1	100 kHz	dsi=444	RM 05 1x1			0.86	4.05
Serial CTE	752 kHz	dsi=8	RM 00 1x1	500 e-	>0.99999	0.99999472	
Serial CTE	752 kHz	dsi=8	RM 00 1x1	80 ke-	>0.99999	1.00000000	
Parallel CTE	752 kHz	dsi=8	RM 00 1x1	500 e-	>0.99999	0.99999798	
Parallel CTE	752 kHz	dsi=8	RM 00 1x1	80 ke-	>0.99999	0.99999988	
Pixel Fullwell	752 kHz	dsi=8	RM 00 1x1		> 100 ke- Spec	114.2 ke-	
Pixel Fullwell	752 kHz	dsi=8	RM 01 1x1			260.7 ke-	
Linearity	752 kHz	dsi=8	RM 00 1x1	≤ 1% +50e-	to 90 ke-	pass -- see graph	

Channel B Performance

Parameter	Read Rate		Mode, Bin	Specification		Measured Result	
				Gain e-/adu	Noise (e-)	Gain e-/adu	Noise (e-)
Ana - CCD							
0 - 0	752 kHz	dsi=8	RM 00 1x1			2.62	11.91
0 - 1	752 kHz	dsi=8	RM 01 1x1			5.92	14.16
2 - 1	344 kHz	dsi=88	RM 02 1x1			2.07	5.75
3 - 1	344 kHz	dsi=88	RM 03 1x1			4.20	7.44
2 - 1	100 kHz	dsi=444	RM 04 1x1		< 4.5e- ~ 4e-	0.43	3.97
3 - 1	100 kHz	dsi=444	RM 05 1x1			0.86	4.19
Serial CTE	752 kHz	dsi=8	RM 00 1x1	500 e-	>0.99999	0.99999530	
Serial CTE	752 kHz	dsi=8	RM 00 1x1	80 ke-	>0.99999	1.00000000	
Parallel CTE	752 kHz	dsi=8	RM 00 1x1	500 e-	>0.99999	0.99999762	
Parallel CTE	752 kHz	dsi=8	RM 00 1x1	80 ke-	>0.99999	0.99999988	
Pixel Fullwell	752 kHz	dsi=8	RM 00 1x1		> 100 ke- Spec	106.3 ke-	
Pixel Fullwell	752 kHz	dsi=8	RM 01 1x1			240.0 ke-	
Linearity	752 kHz	dsi=8	RM 00 1x1	≤ 1% +50e-	to 90 ke-	pass -- see graph	

Channel C Performance

Parameter	Read Rate		Mode, Bin	Specification		Measured Result	
				Gain e-/adu	Noise (e-)	Gain e-/adu	Noise (e-)
Ana - CCD							
0 - 0	752 kHz	dsi=8	RM 00 1x1			2.65	11.74
0 - 1	752 kHz	dsi=8	RM 01 1x1			5.98	14.04
2 - 1	344 kHz	dsi=88	RM 02 1x1			2.08	5.69
3 - 1	344 kHz	dsi=88	RM 03 1x1			4.24	7.49
2 - 1	100 kHz	dsi=444	RM 04 1x1		< 4.5e- ~ 4e-	0.44	4.05
3 - 1	100 kHz	dsi=444	RM 05 1x1			0.87	4.26
Serial CTE	752 kHz	dsi=8	RM 00 1x1	500 e-	>0.99999	0.99999424	
Serial CTE	752 kHz	dsi=8	RM 00 1x1	80 ke-	>0.99999	1.00000000	
Parallel CTE	752 kHz	dsi=8	RM 00 1x1	500 e-	>0.99999	0.99999785	
Parallel CTE	752 kHz	dsi=8	RM 00 1x1	80 ke-	>0.99999	0.99999992	
Pixel Fullwell	752 kHz	dsi=8	RM 00 1x1		> 100 ke- Spec	122.3 ke-	
Pixel Fullwell	752 kHz	dsi=8	RM 01 1x1			263.9 ke-	
Linearity	752 kHz	dsi=8	RM 00 1x1	≤ 1% +50e-	to 90 ke-	pass -- see graph	

Channel D Performance

Parameter	Read Rate		Mode, Bin	Specification		Measured Result	
				Gain e-/adu	Noise (e-)	Gain e-/adu	Noise (e-)
Ana - CCD							
0 - 0	752 kHz	dsi=8	RM 00 1x1			2.62	11.53
0 - 1	752 kHz	dsi=8	RM 01 1x1			5.92	13.79
2 - 1	344 kHz	dsi=88	RM 02 1x1			2.07	5.53
3 - 1	344 kHz	dsi=88	RM 03 1x1			4.20	7.17
2 - 1	100 kHz	dsi=444	RM 04 1x1		< 4.5e- ~ 4e-	0.44	3.80
3 - 1	100 kHz	dsi=444	RM 05 1x1			0.86	3.98
Serial CTE	752 kHz	dsi=8	RM 00 1x1	500 e-	>0.99999	0.99999028	
Serial CTE	752 kHz	dsi=8	RM 00 1x1	80 ke-	>0.99999	1.00000000	
Parallel CTE	752 kHz	dsi=8	RM 00 1x1	500 e-	>0.99999	0.99999852	
Parallel CTE	752 kHz	dsi=8	RM 00 1x1	80 ke-	>0.99999	0.99999991	
Pixel Fullwell	752 kHz	dsi=8	RM 00 1x1		> 100 ke- Spec	105.3 ke-	
Pixel Fullwell	752 kHz	dsi=8	RM 01 1x1			241.7 ke-	
Linearity	752 kHz	dsi=8	RM 00 1x1	≤ 1% +50e-	to 90 ke-	pass -- see graph	

System Notes:

Reference 1100-189.vlt

Special Requirements

Requirements	Test Method	Measured Results

Supply Voltages @ Camera Head

Signal	Voltage
+5v	4.95
+28v	28.26
+24v	24.22 window heater off
+15v	13.09
-15v	-13.10
+13v	9.01
-13v	-9.40

Housekeeping Parameters

Signal	Value
cbcal	761 228
cfcal	759 222
gaini	325
cfgaini	350
gainp	7500
cfgainp	3000
pidmod	4094
vacuum offset	1024 0

1100-189_RM 4_A_1x1_Dark_9627-#4.FIT
WholeArray_STA-4150.tcfg
DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
Camera Type: 1100
Camera SN: 1100-189
CCD Type: CCD STA 4150 BI
CCD SN: 169011-W17-19607
Output Amp: A
Date: Thu, Jan 11, 2018
Time: 2:56:57 AM
Readout Mode 4
DSI Time: 444
Attenuation: 2
CCD Attenuation: 1
Parallel Shift Delay: 100
TDI Delay: 200
CCD Temp: -115.00
Gain (e-/ADU): 0.43791

Binning: 1x1

Average Dark Current (e-/p/s) = 0.00023801
Bias Level (adu) = 498.5
Dark Current Position 1 = 0.00024028
Dark Current Position 2 = 0.00021539
Dark Current Position 3 = 0.00024292
Dark Current Position 4 = 0.00028943
Dark Current Position 5 = 0.00020204

Gain

0.44

Dark Current Results

Avg. e-/p/s

0.0002

Dark Spec (e-/p/s)

e-/p/s
0.00022

0.20000

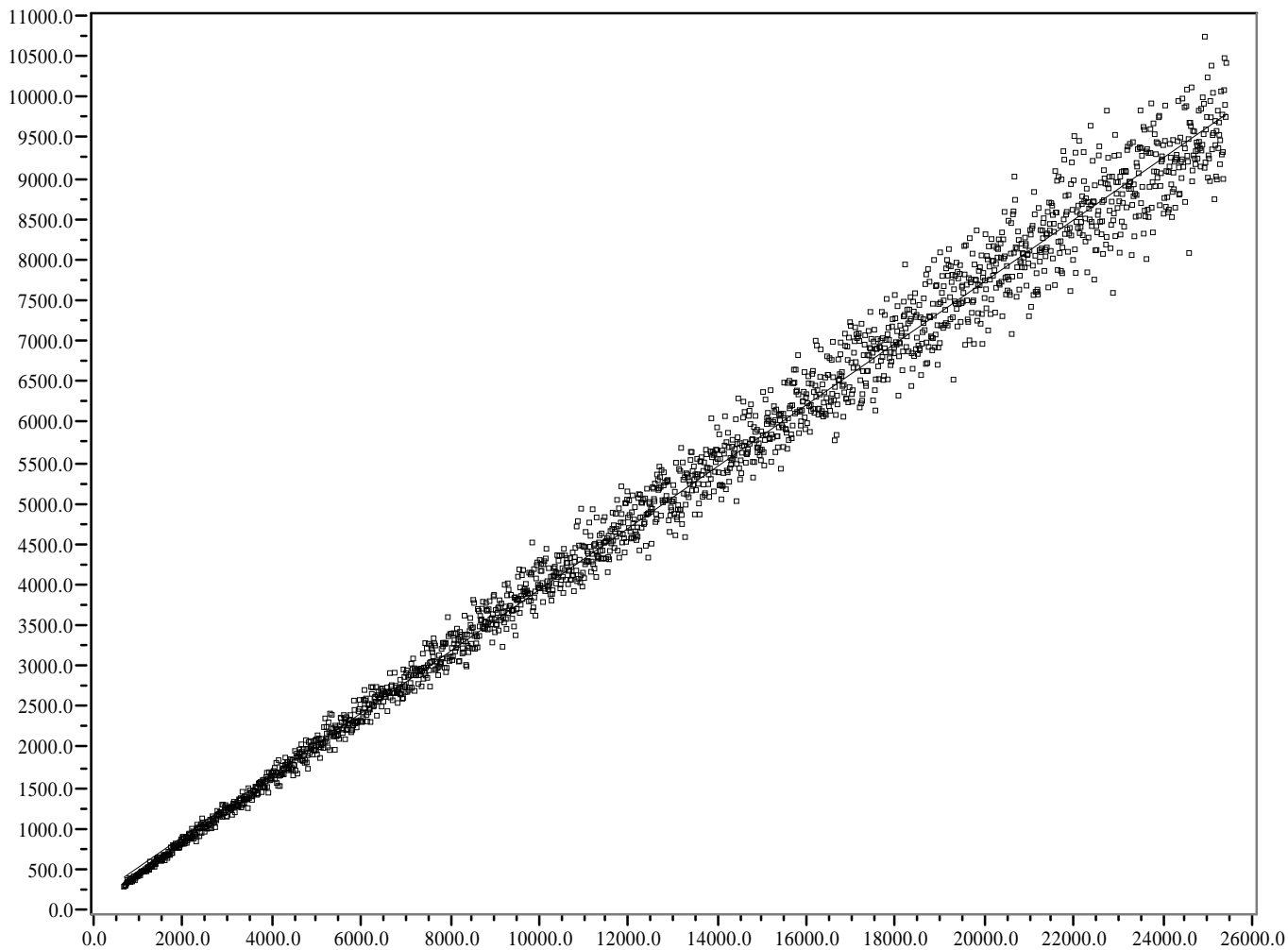
e-/p/s
0.00024

e-/p/s
0.00020

bias
(adu)
498.5

e-/p/s
0.00024

e-/p/s
0.00029



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: A
 Date: Wed, Jan 10, 2018
 Time: 10:57:10 AM
 Readout Mode 0
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 0
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.6342
 Read Noise: 11.756
 Binning: 1x1

File Name

1100-189_RM 0_A_1x1_MV_9627-.test

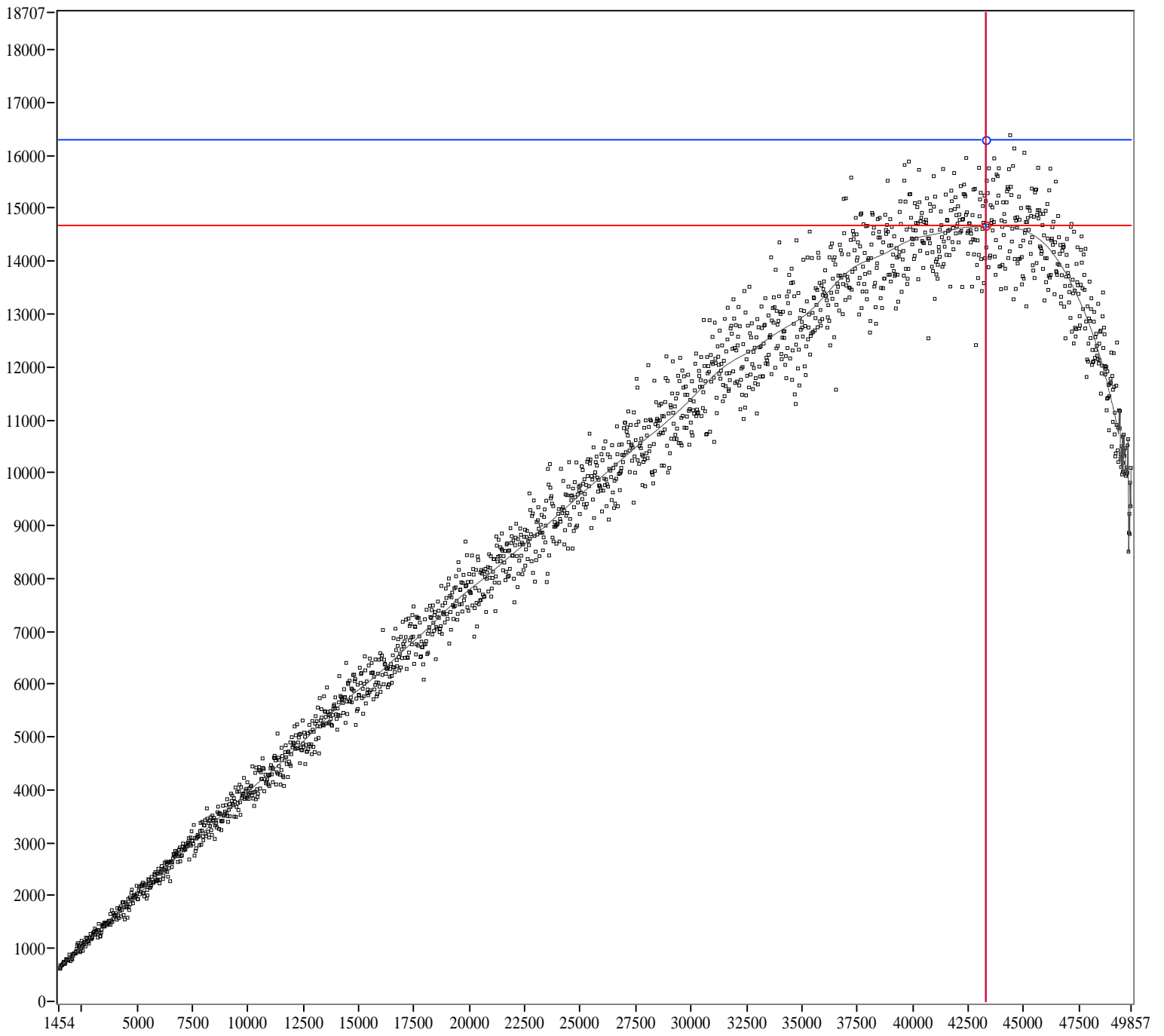
Gain (e-/ADU)

2.63

Read Noise

11.76

Comment:



Pts to Avg.
59

M-V Intercept
277.56

% Limit
90.0

Full Well (e-)
114150


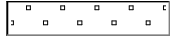
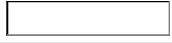
Gain(e-/ADU)
2.63

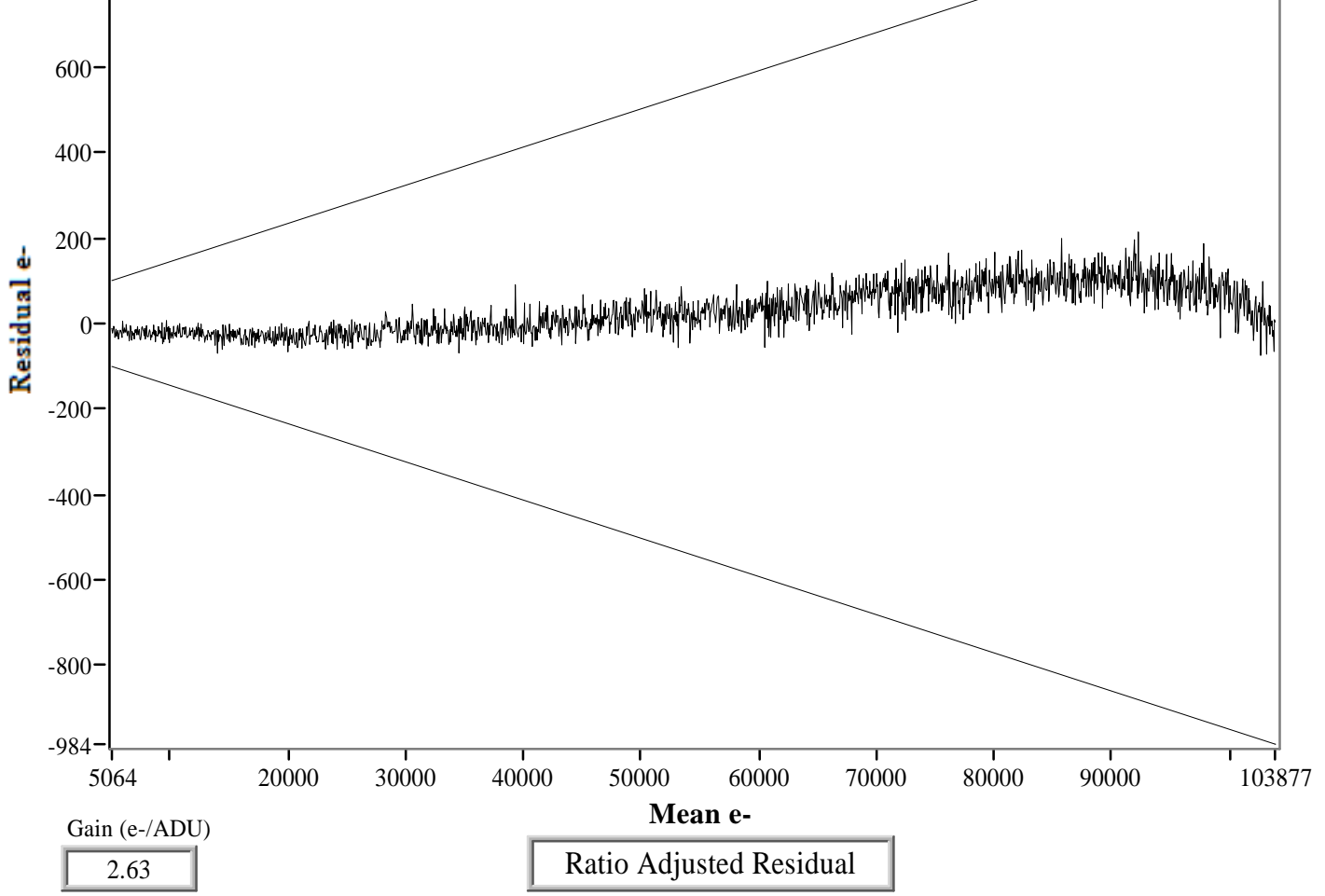
Test Info

QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: A
 Date: Wed, Jan 10, 2018
 Time: 10:57:58 AM
 Readout Mode 0
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 0
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.6342

Binning: 1x1

Gain from Full Well Test (e-/ADU): 2.6342
 Full Well (e-): 114152

Avg. Data	
M-V Data	
Fit	

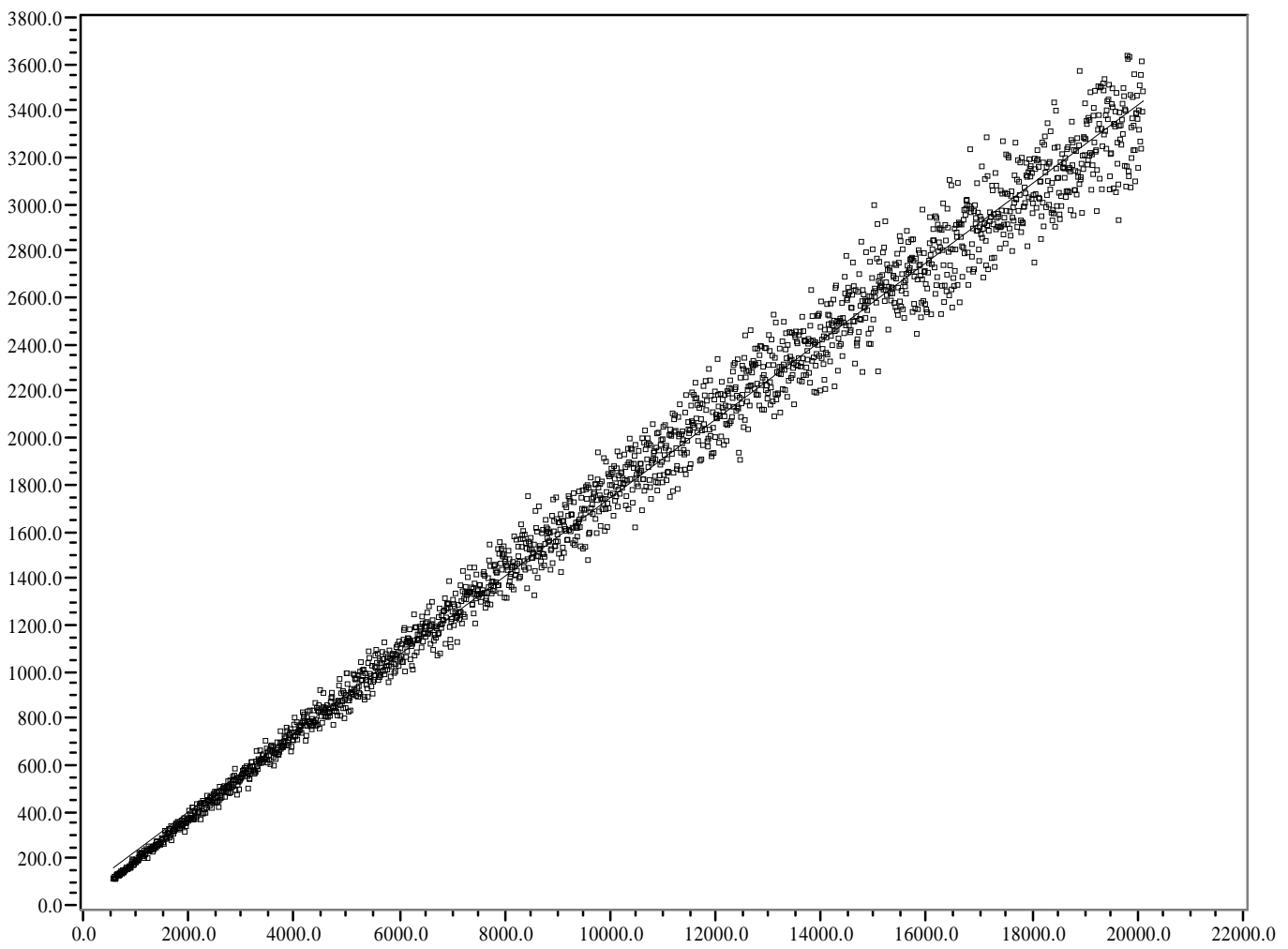


File Name

1100-189_RM 0_A_1x1_TDI Linearity Low Level_9627-.FIT

QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: A
 Date: Wed, Jan 10, 2018
 Time: 10:59:15 AM
 Readout Mode 0
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 0
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.6342

Binning: 1x1



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: A
 Date: Wed, Jan 10, 2018
 Time: 11:04:44 AM
 Readout Mode 1
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 5.9510
 Read Noise: 13.928
 Binning: 1x1

File Name

1100-189_RM 1_A_1x1_MV_9627-.test

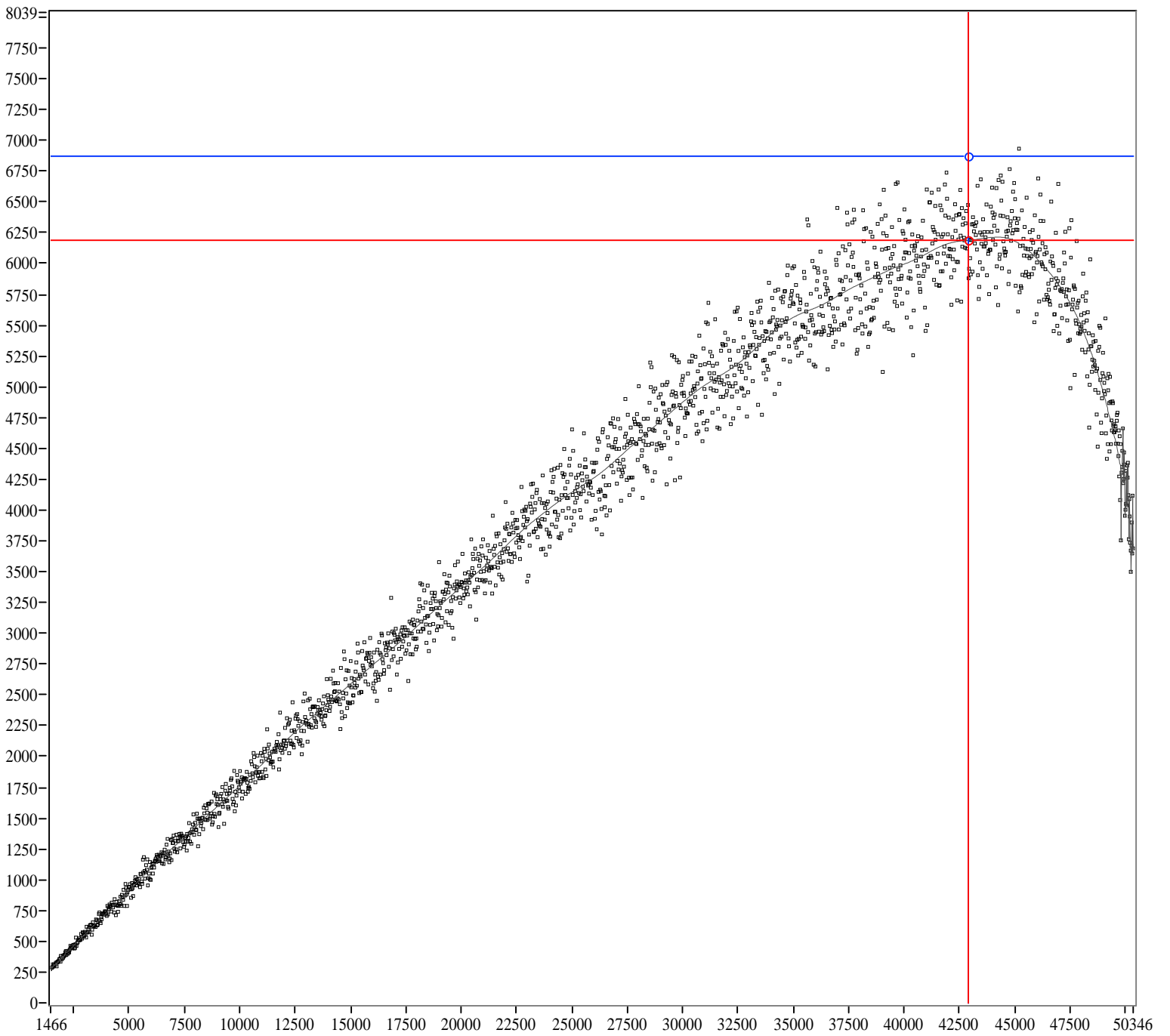
Gain (e-/ADU)

5.95

Read Noise

13.93

Comment:



Pts to Avg.

59

M-V Intercept

210.32

% Limit
90.0

Full Well (e-)

255138

Gain(e-/ADU)

5.95

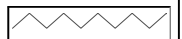
Test Info

QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: A
 Date: Wed, Jan 10, 2018
 Time: 11:05:32 AM
 Readout Mode 1
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 5.9510

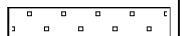
Binning: 1x1

Gain from Full Well Test (e-/ADU): 5.9510
 Full Well (e-): 255136

Avg. Data

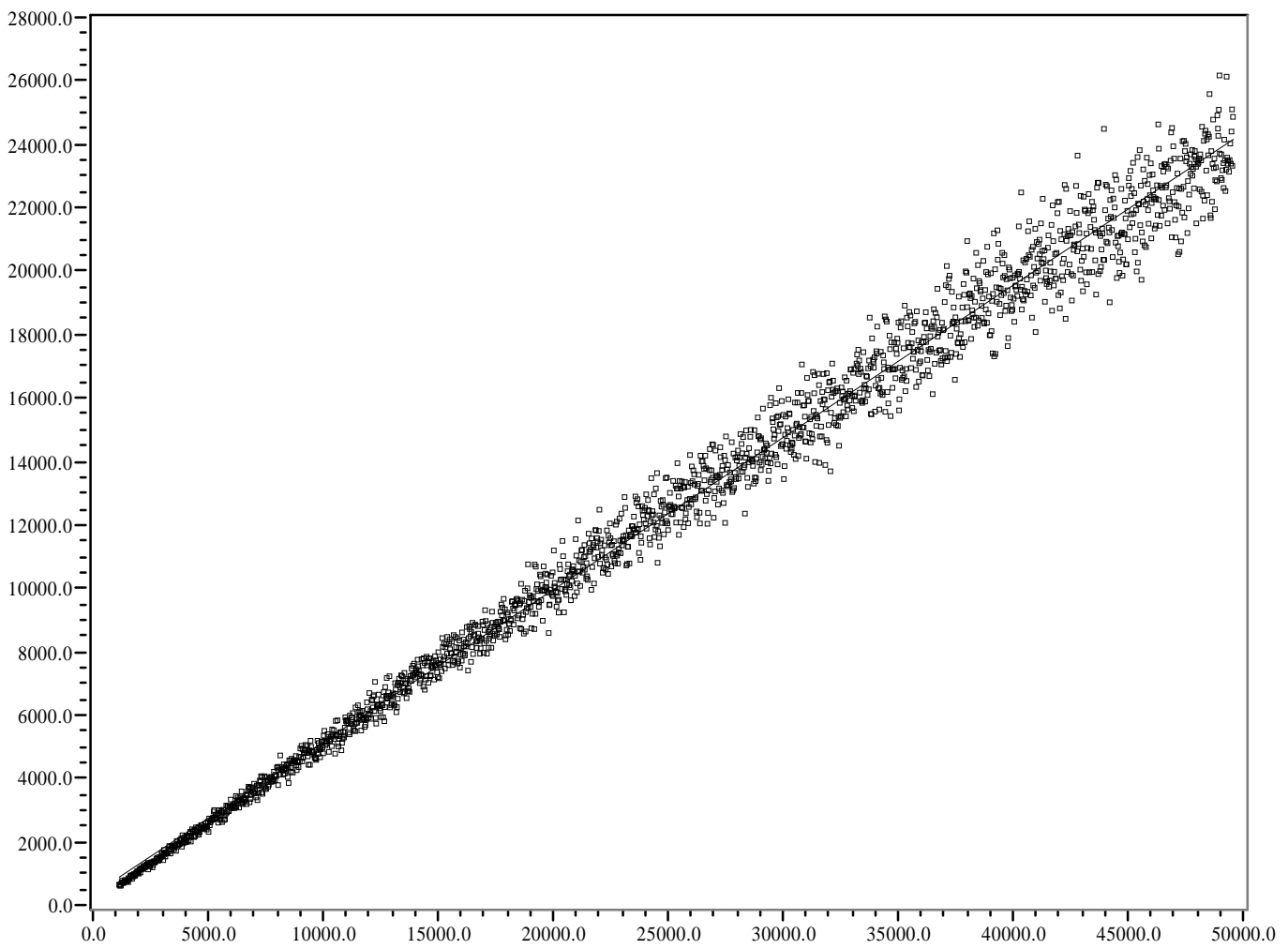


M-V Data



Fit





QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: A
 Date: Wed, Jan 10, 2018
 Time: 11:08:37 AM
 Readout Mode 2
 DSI Time: 88
 Attenuation: 2
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.0818
 Read Noise: 5.685
 Binning: 1x1

File Name

1100-189_RM 2_A_1x1_MV_9627-.test

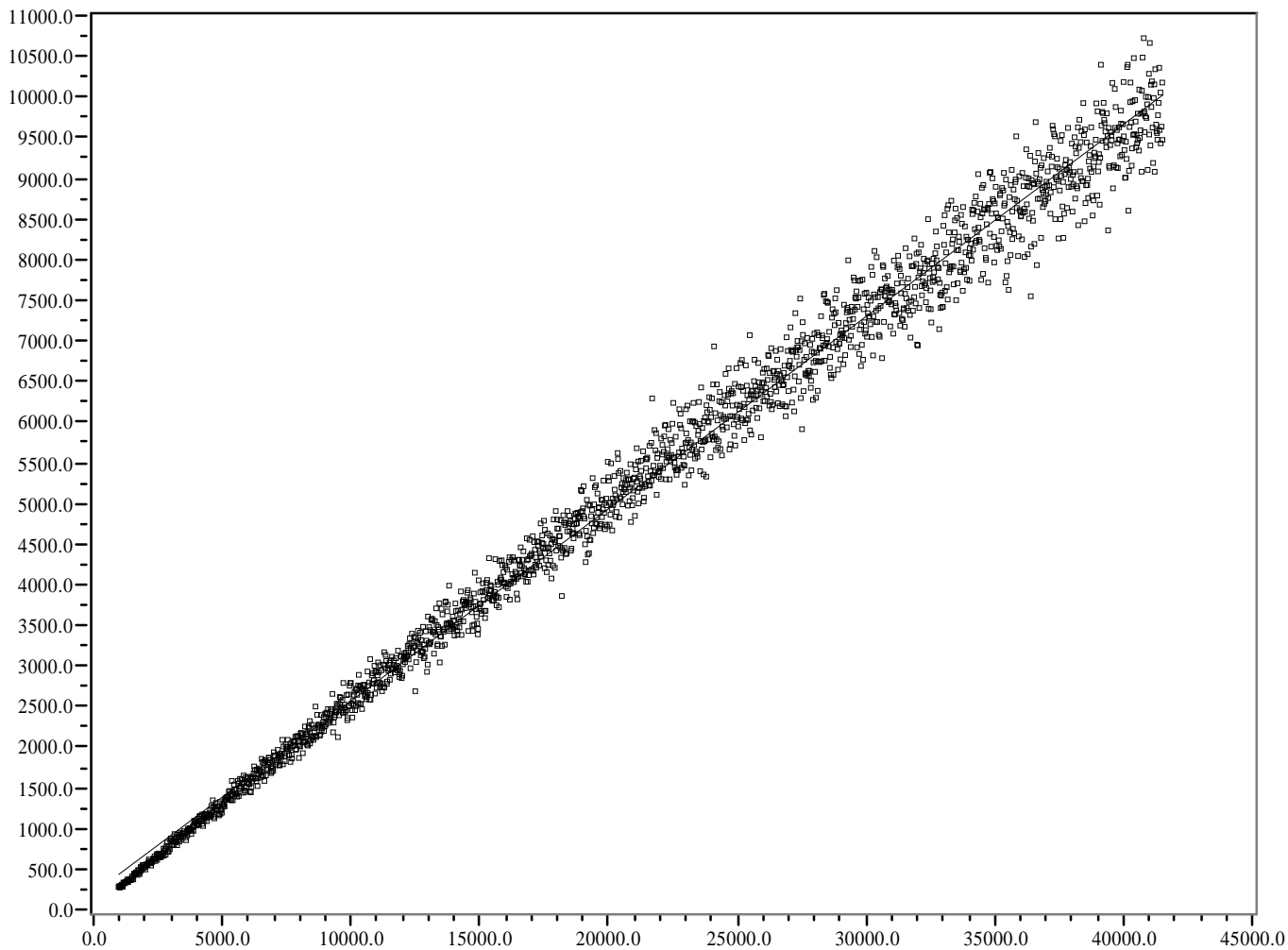
Gain (e-/ADU)

2.08

Read Noise

5.68

Comment:



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: A
 Date: Wed, Jan 10, 2018
 Time: 11:12:46 AM
 Readout Mode 3
 DSI Time: 88
 Attenuation: 3
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 4.2295
 Read Noise: 7.382
 Binning: 1x1

File Name

1100-189_RM 3_A_1x1_MV_9627-.test

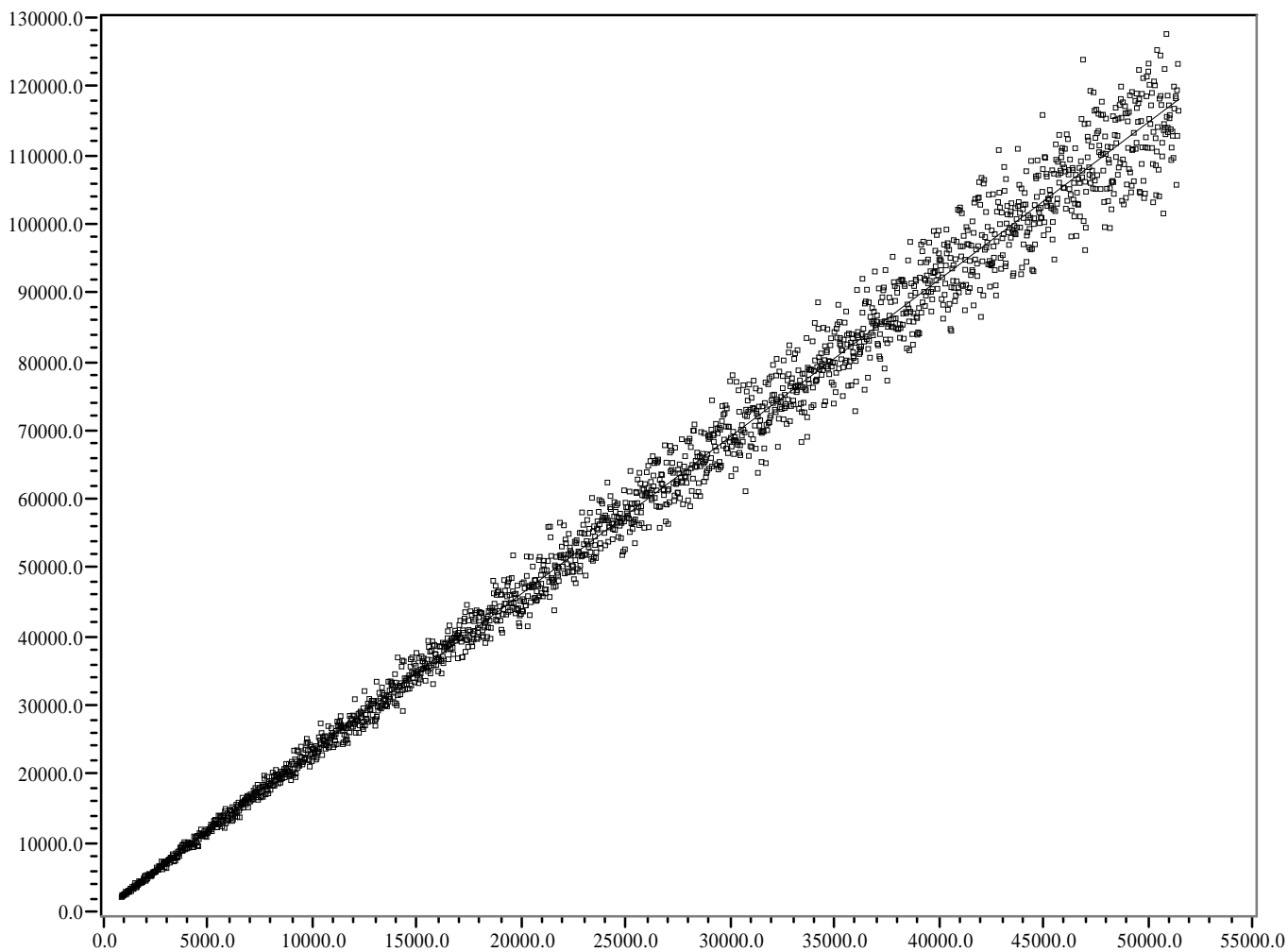
Gain (e-/ADU)

4.23

Read Noise

7.38

Comment:



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: A
 Date: Wed, Jan 10, 2018
 Time: 11:18:06 AM
 Readout Mode 4
 DSI Time: 444
 Attenuation: 2
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 0.43791
 Read Noise: 3.962
 Binning: 1x1

File Name

1100-189_RM 4_A_1x1_MV_9627-.test

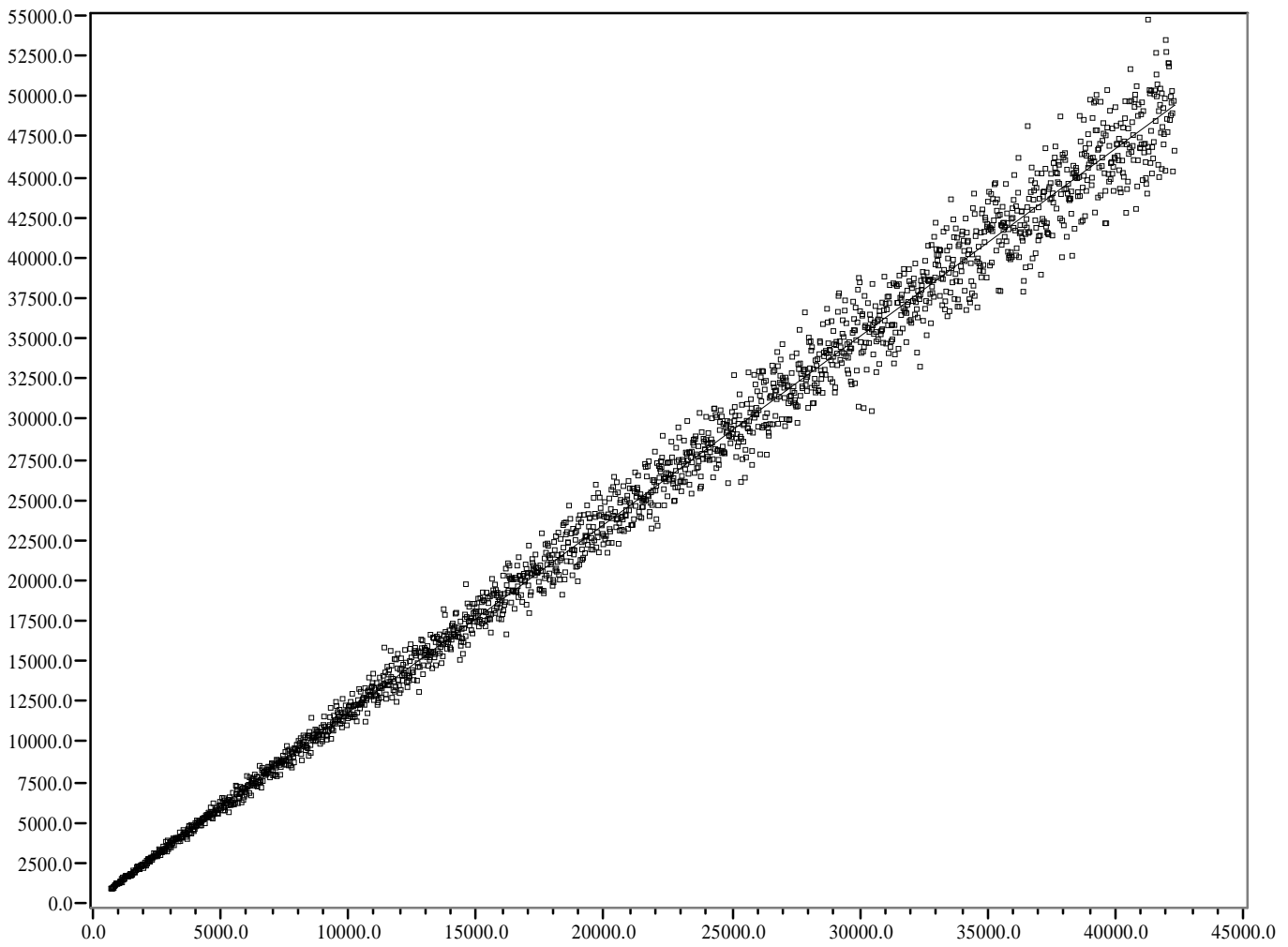
Gain (e-/ADU)

0.44

Read Noise

3.96

Comment:



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: A
 Date: Wed, Jan 10, 2018
 Time: 11:22:17 AM
 Readout Mode 5
 DSI Time: 444
 Attenuation: 3
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 0.85948
 Read Noise: 4.049
 Binning: 1x1

File Name

1100-189_RM 5_A_1x1_MV_9627-.test

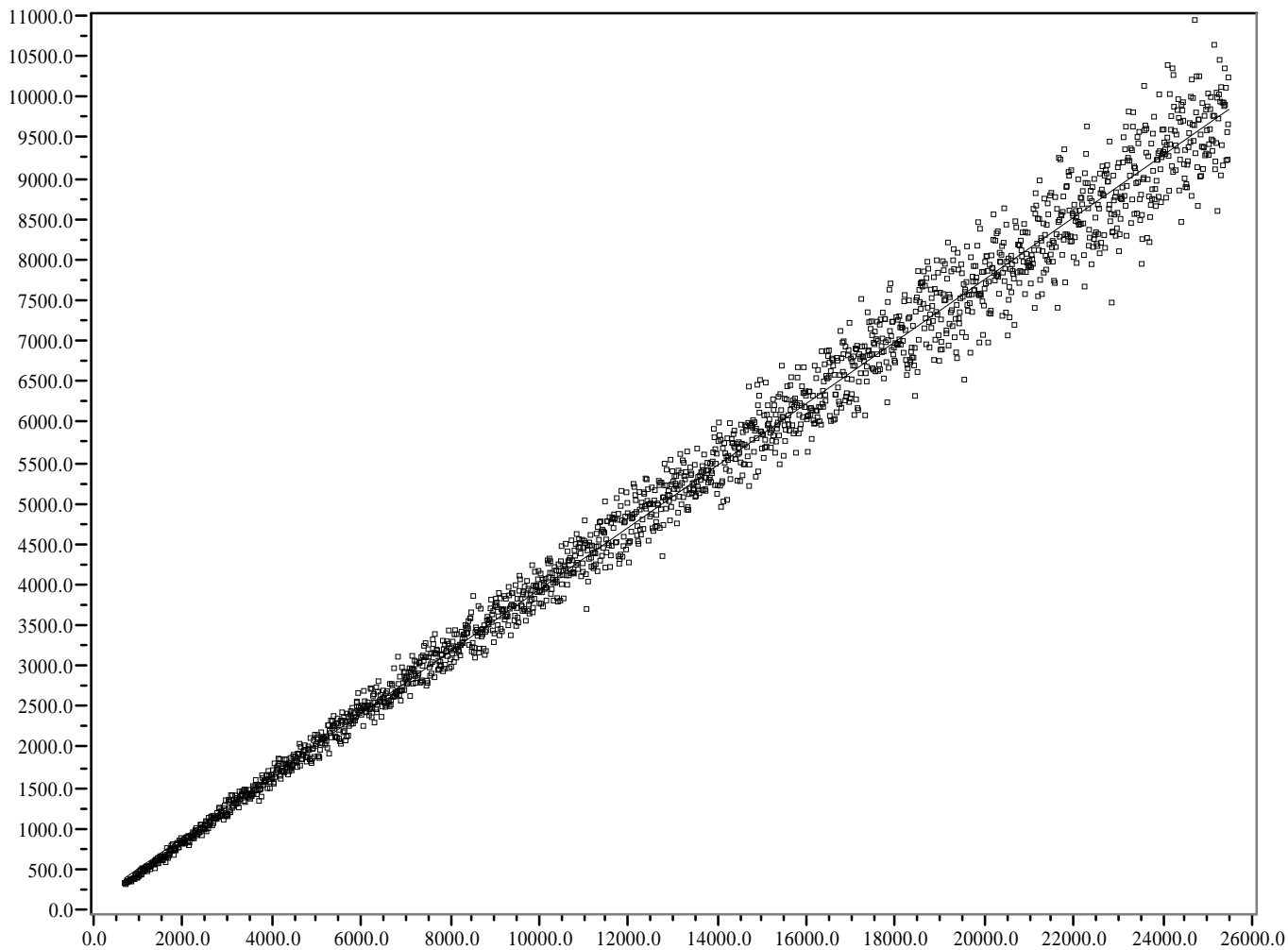
Gain (e-/ADU)

0.86

Read Noise

4.05

Comment:



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: B
 Date: Wed, Jan 10, 2018
 Time: 11:25:05 AM
 Readout Mode 0
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 0
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.6214
 Read Noise: 11.910
 Binning: 1x1

File Name

1100-189_RM 0_B_1x1_MV_9627-.test

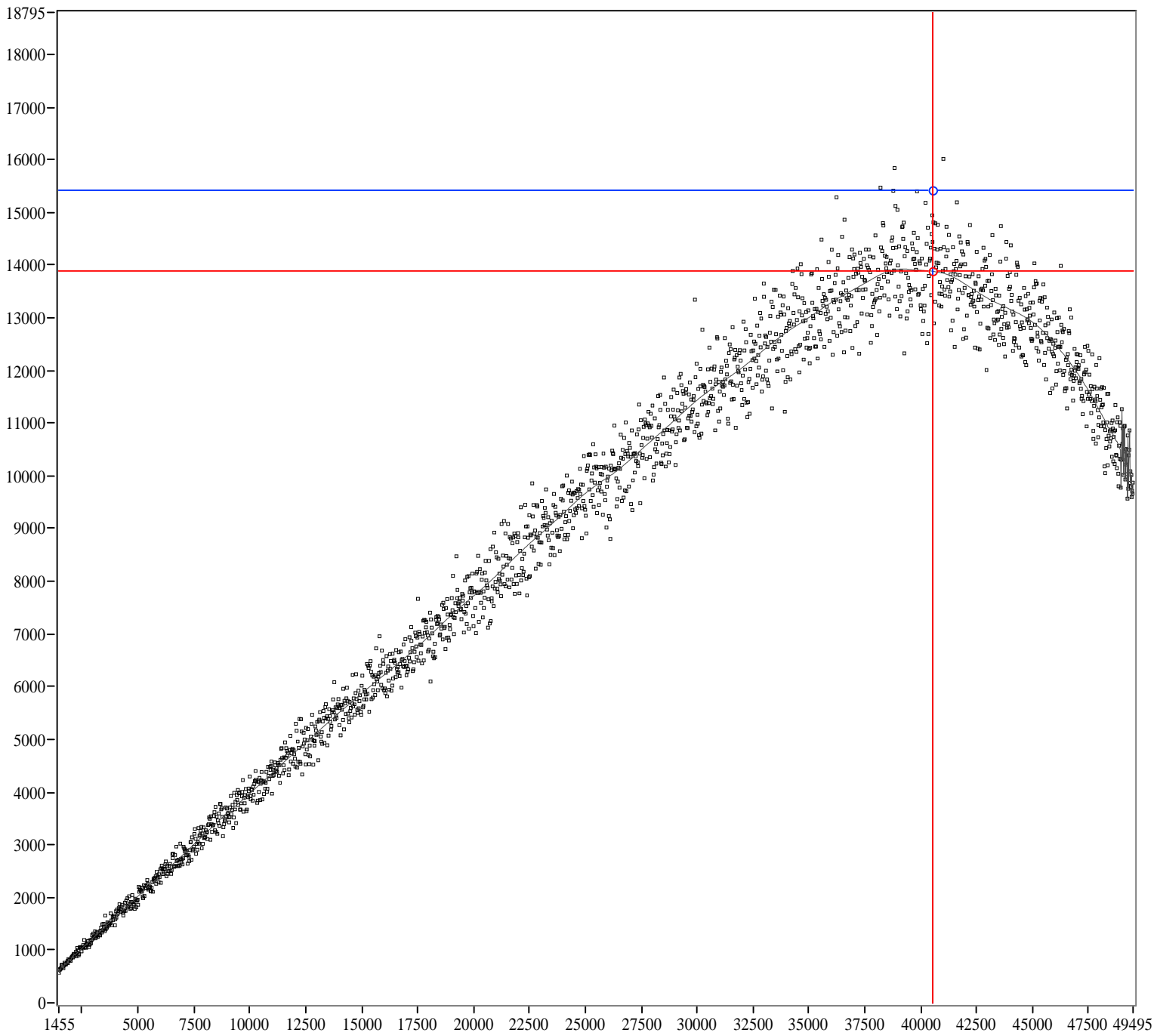
Gain (e-/ADU)

2.62

Read Noise

11.91

Comment:



Pts to Avg.
59

M-V Intercept
197.66

% Limit
90.0

Full Well (e-)
106282

Gain(e-/ADU)
2.62

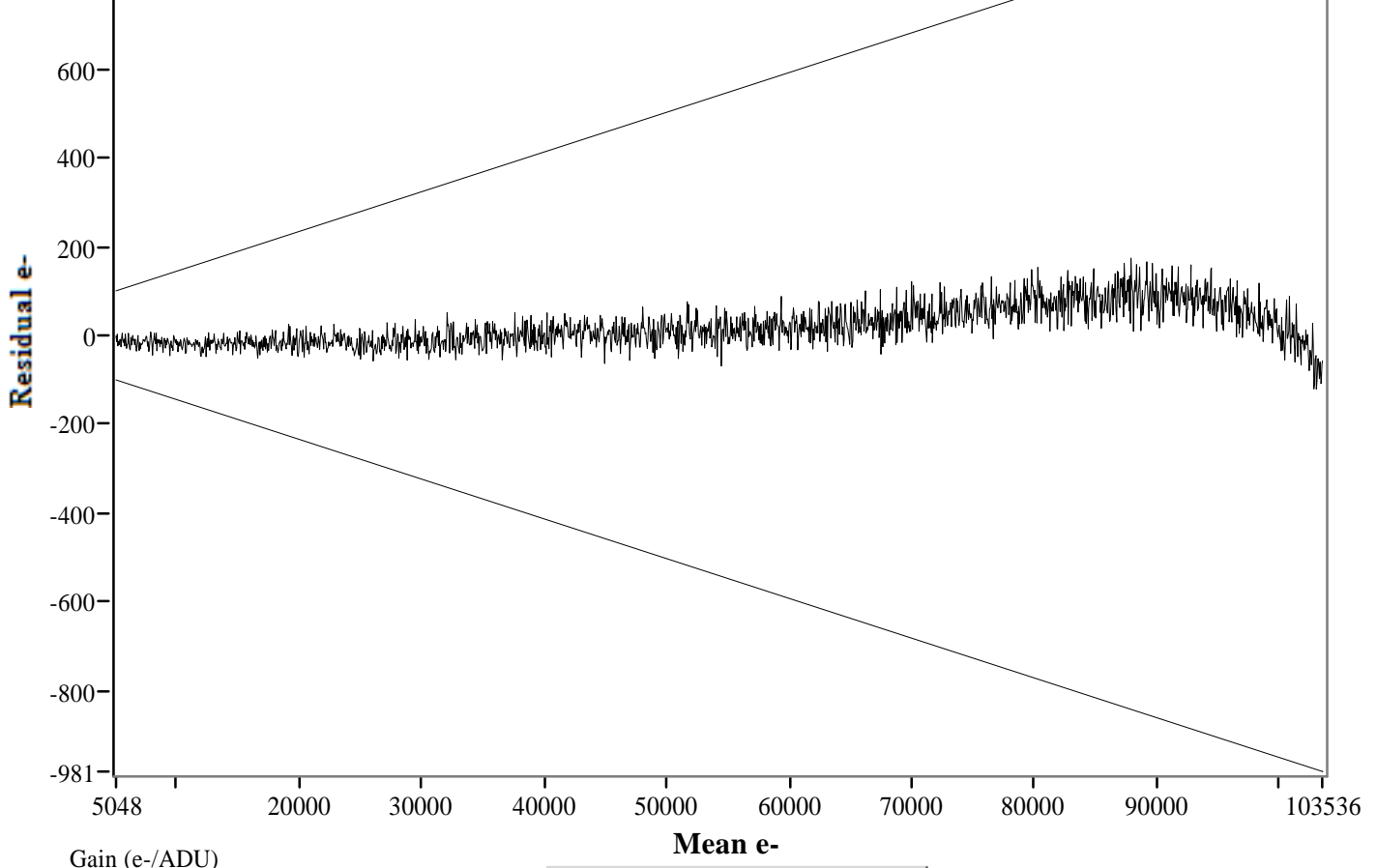
Test Info

QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: B
 Date: Wed, Jan 10, 2018
 Time: 11:25:52 AM
 Readout Mode 0
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 0
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.6214

Binning: 1x1

Gain from Full Well Test (e-/ADU): 2.6214
 Full Well (e-): 106282

Avg. Data	
M-V Data	
Fit	



Gain (e-/ADU)

2.62

Ratio Adjusted Residual

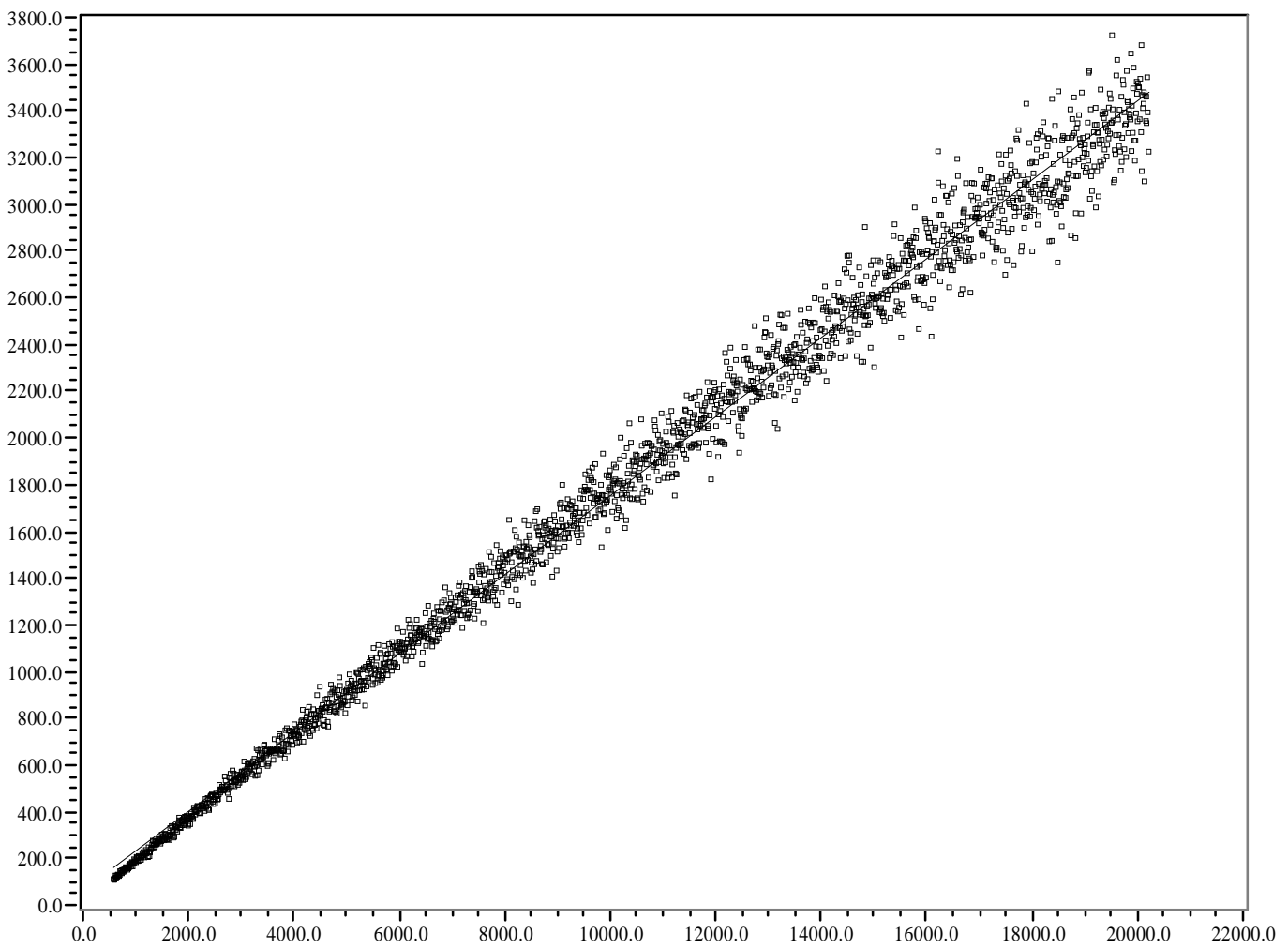
File Name

1100-189_RM 0_B_1x1_TDI Linearity Low Level_9627-.FIT

```

QuarterArray_STA-4150.tcfg
DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
Camera Type: 1100
Camera SN: 1100-189
CCD Type: CCD STA 4150 BI
CCD SN: 169011-W17-19607
Output Amp: B
Date: Wed, Jan 10, 2018
Time: 11:27:09 AM
Readout Mode 0
DSI Time: 8
Attenuation: 0
CCD Attenuation: 0
Parallel Shift Delay: 100
TDI Delay: 200
CCD Temp: -115.00
Gain (e-/ADU): 2.6214

Binning: 1x1
  
```



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: B
 Date: Wed, Jan 10, 2018
 Time: 11:32:41 AM
 Readout Mode 1
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 5.9175
 Read Noise: 14.155
 Binning: 1x1

File Name

1100-189_RM 1_B_1x1_MV_9627-.test

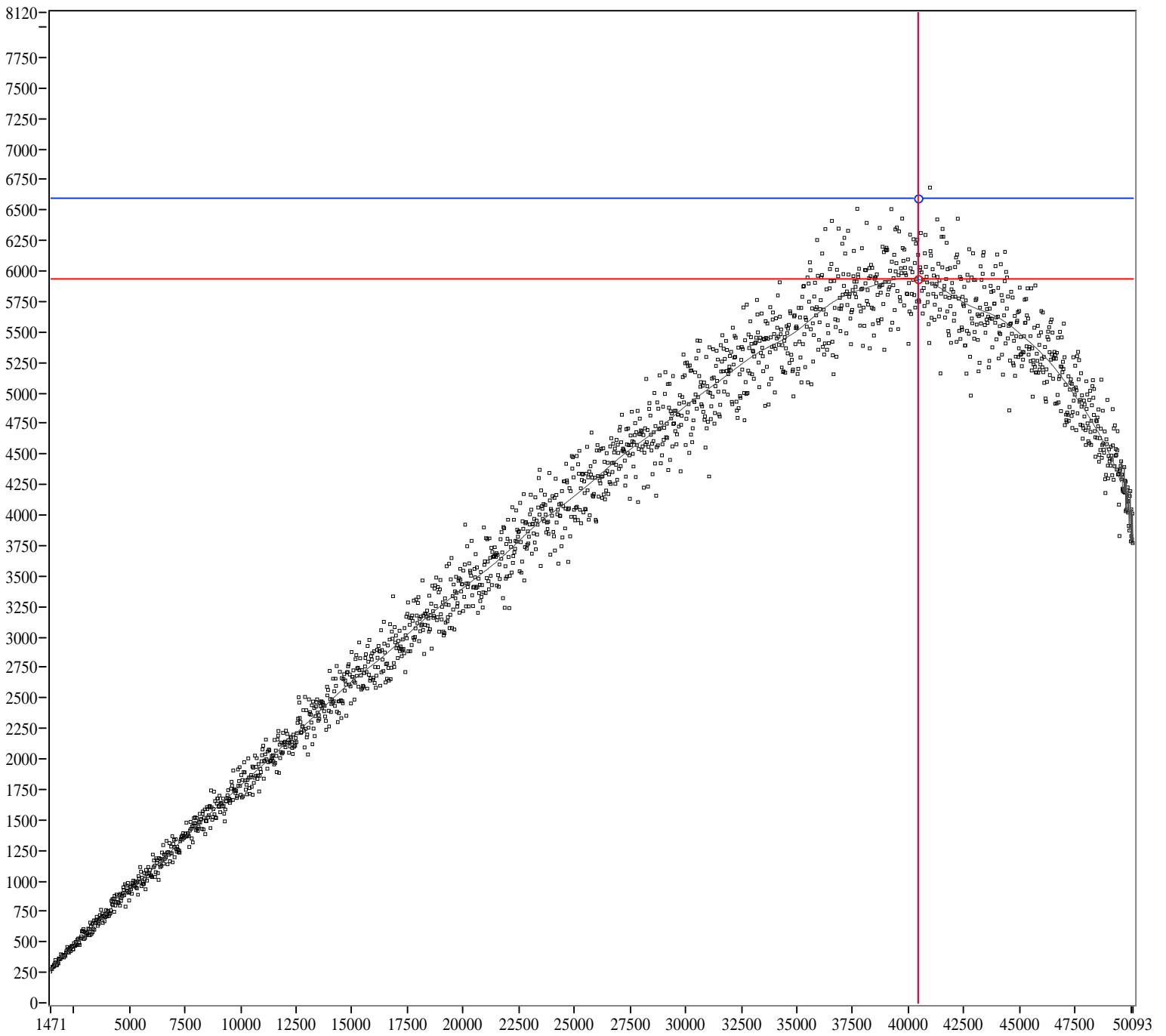
Gain (e-/ADU)

5.92

Read Noise

14.15

Comment:



Pts to Avg.

59

M-V Intercept

192.82

% Limit
90.0

Full Well (e-)

239364

Gain(e-/ADU)

5.92

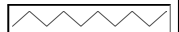
Test Info

QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: B
 Date: Wed, Jan 10, 2018
 Time: 11:33:28 AM
 Readout Mode 1
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 5.9175

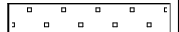
Binning: 1x1

Gain from Full Well Test (e-/ADU): 5.9175
 Full Well (e-): 239363

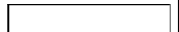
Avg. Data

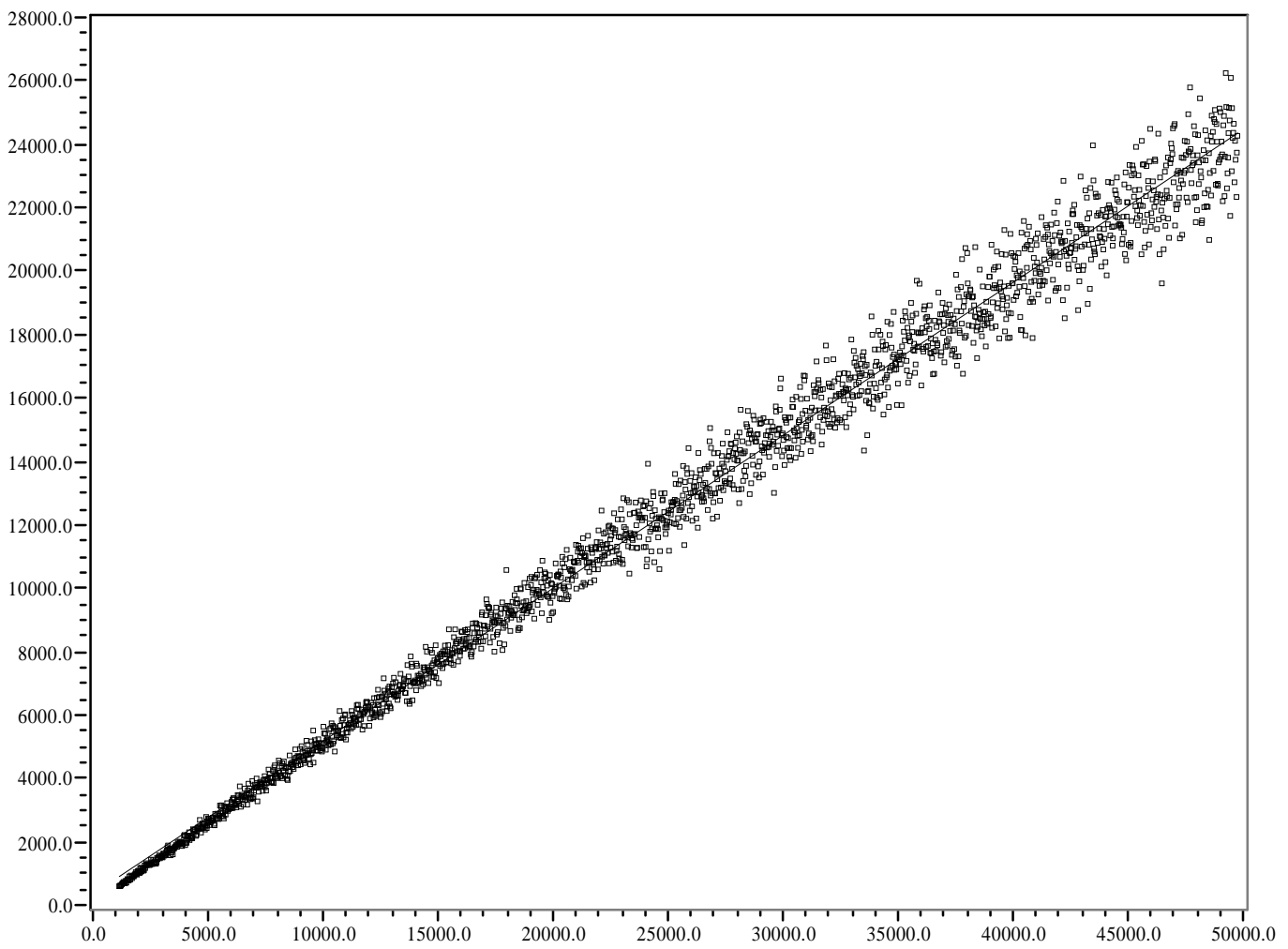


M-V Data



Fit





QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: B
 Date: Wed, Jan 10, 2018
 Time: 11:36:34 AM
 Readout Mode 2
 DSI Time: 88
 Attenuation: 2
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.0734
 Read Noise: 5.747
 Binning: 1x1

File Name

1100-189_RM 2_B_1x1_MV_9627-.test

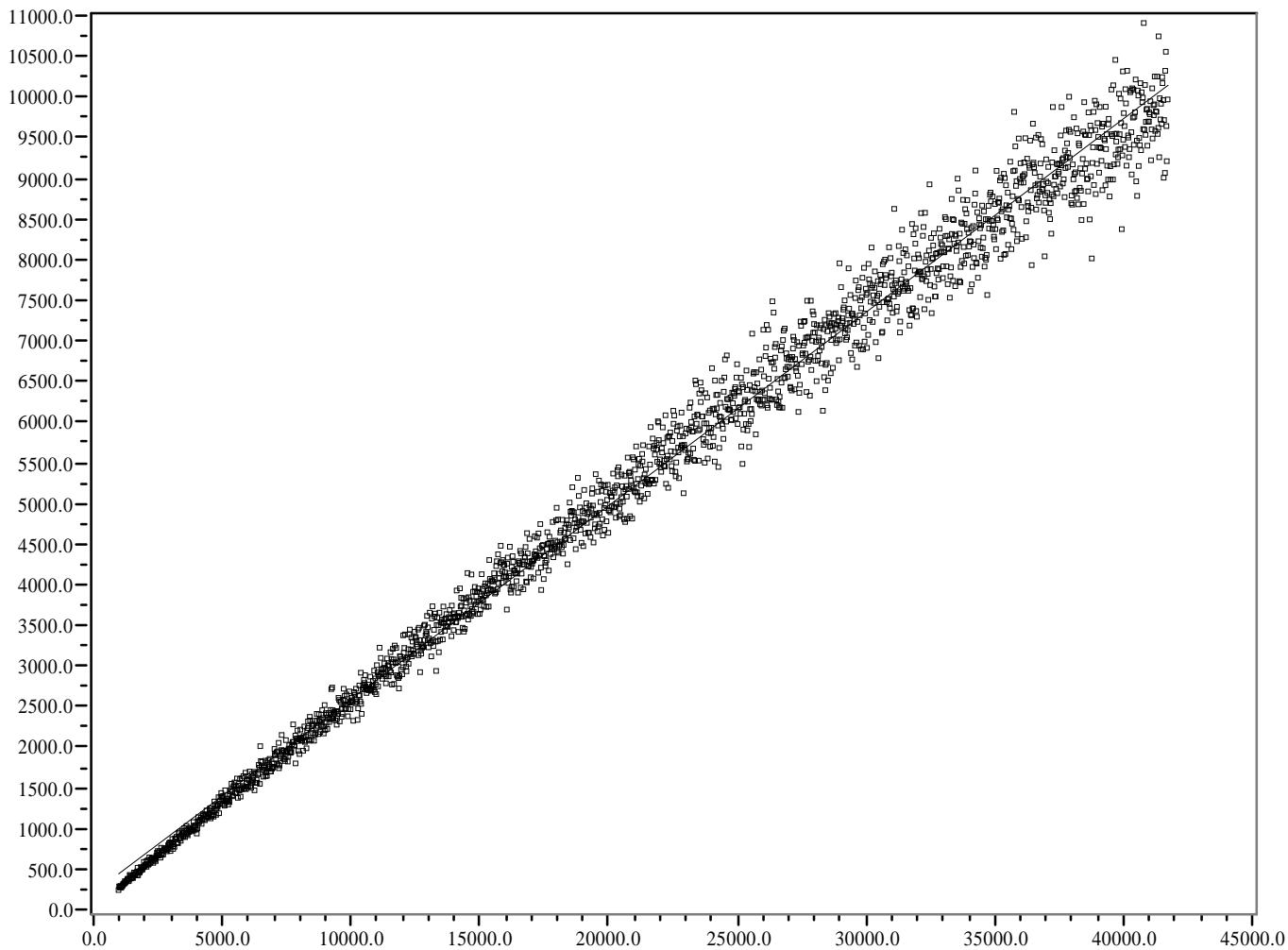
Gain (e-/ADU)

2.07

Read Noise

5.75

Comment:



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: B
 Date: Wed, Jan 10, 2018
 Time: 11:40:42 AM
 Readout Mode 3
 DSI Time: 88
 Attenuation: 3
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 4.1997
 Read Noise: 7.444
 Binning: 1x1

File Name

1100-189_RM 3_B_1x1_MV_9627-.test

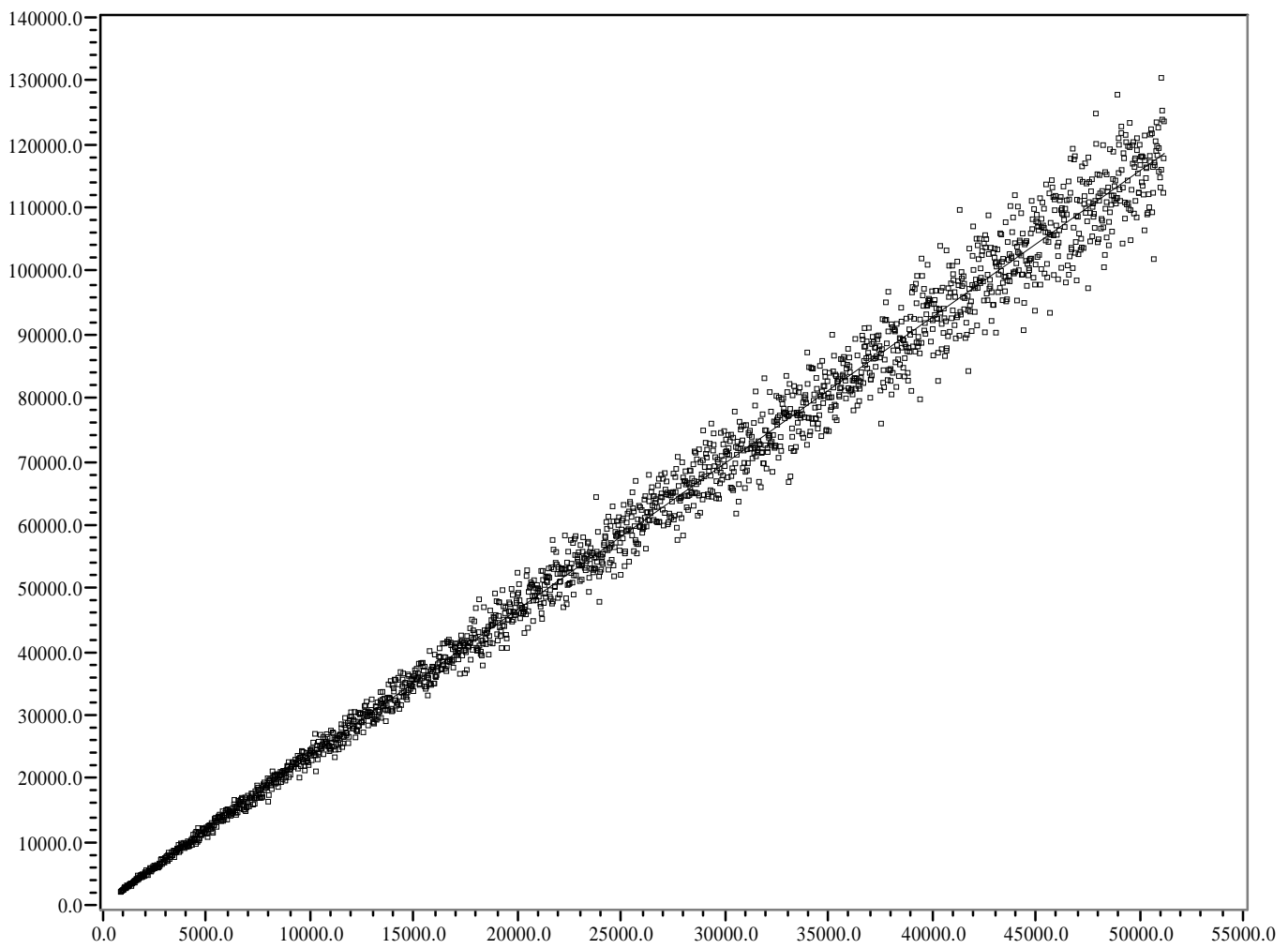
Gain (e-/ADU)

4.20

Read Noise

7.44

Comment:



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: B
 Date: Wed, Jan 10, 2018
 Time: 11:46:01 AM
 Readout Mode 4
 DSI Time: 444
 Attenuation: 2
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 0.43390
 Read Noise: 3.972
 Binning: 1x1

File Name

1100-189_RM 4_B_1x1_MV_9627-.test

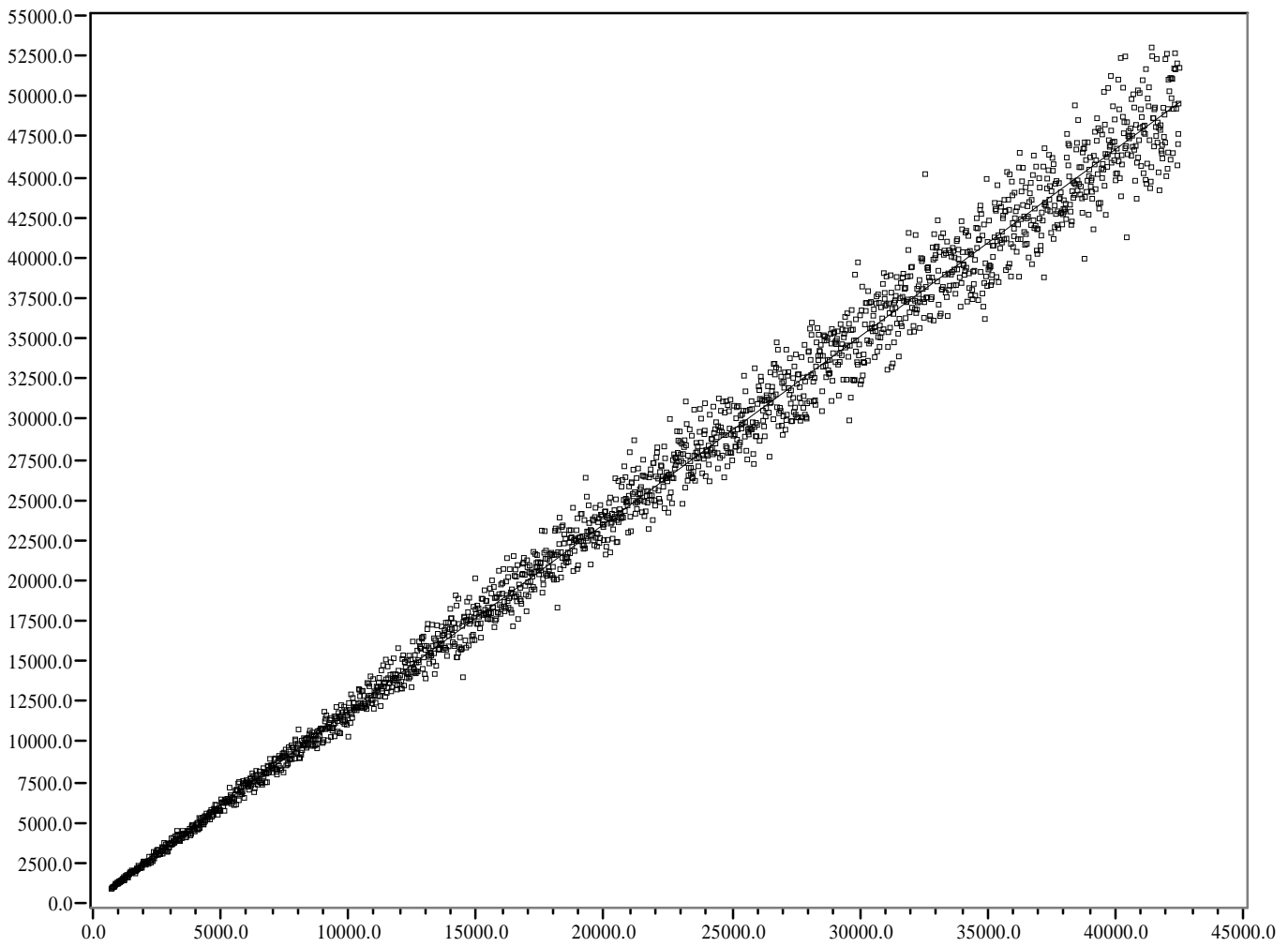
Gain (e-/ADU)

0.43

Read Noise

3.97

Comment:



QuarterArray_STA-4150.tcfg
DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
Camera Type: 1100
Camera SN: 1100-189
CCD Type: CCD STA 4150 BI
CCD SN: 169011-W17-19607
Output Amp: B
Date: Wed, Jan 10, 2018
Time: 11:50:13 AM
Readout Mode 5
DSI Time: 444
Attenuation: 3
CCD Attenuation: 1
Parallel Shift Delay: 100
TDI Delay: 200
CCD Temp: -115.00
Gain (e-/ADU): 0.86192
Read Noise: 4.188
Binning: 1x1

File Name

1100-189_RM 5_B_1x1_MV_9627-.test

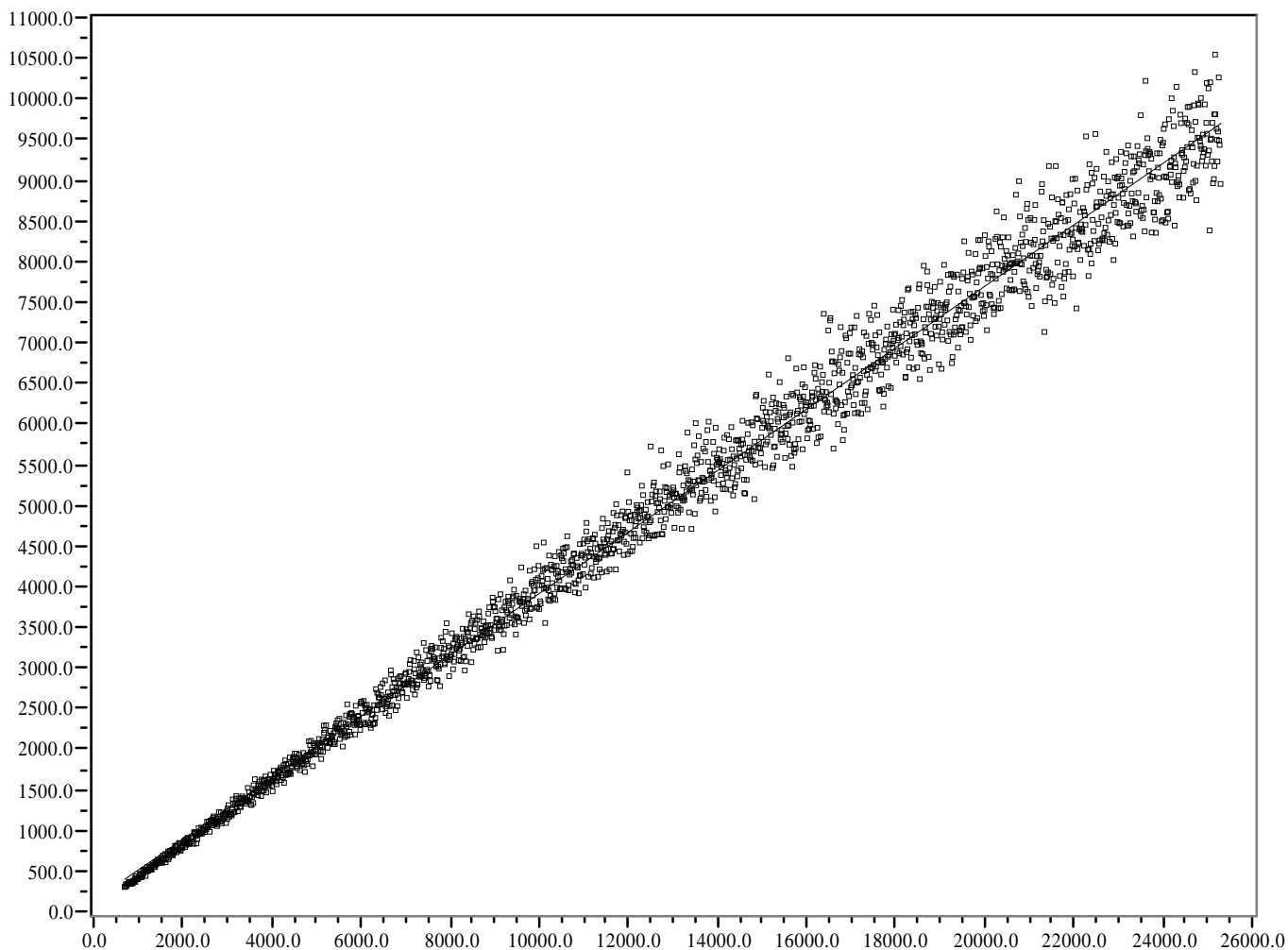
Gain (e-/ADU)

0.86

Read Noise

4.19

Comment:



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: C
 Date: Wed, Jan 10, 2018
 Time: 11:53:03 AM
 Readout Mode 0
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 0
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.6457
 Read Noise: 11.741
 Binning: 1x1

File Name

1100-189_RM 0_C_1x1_MV_9627-.test

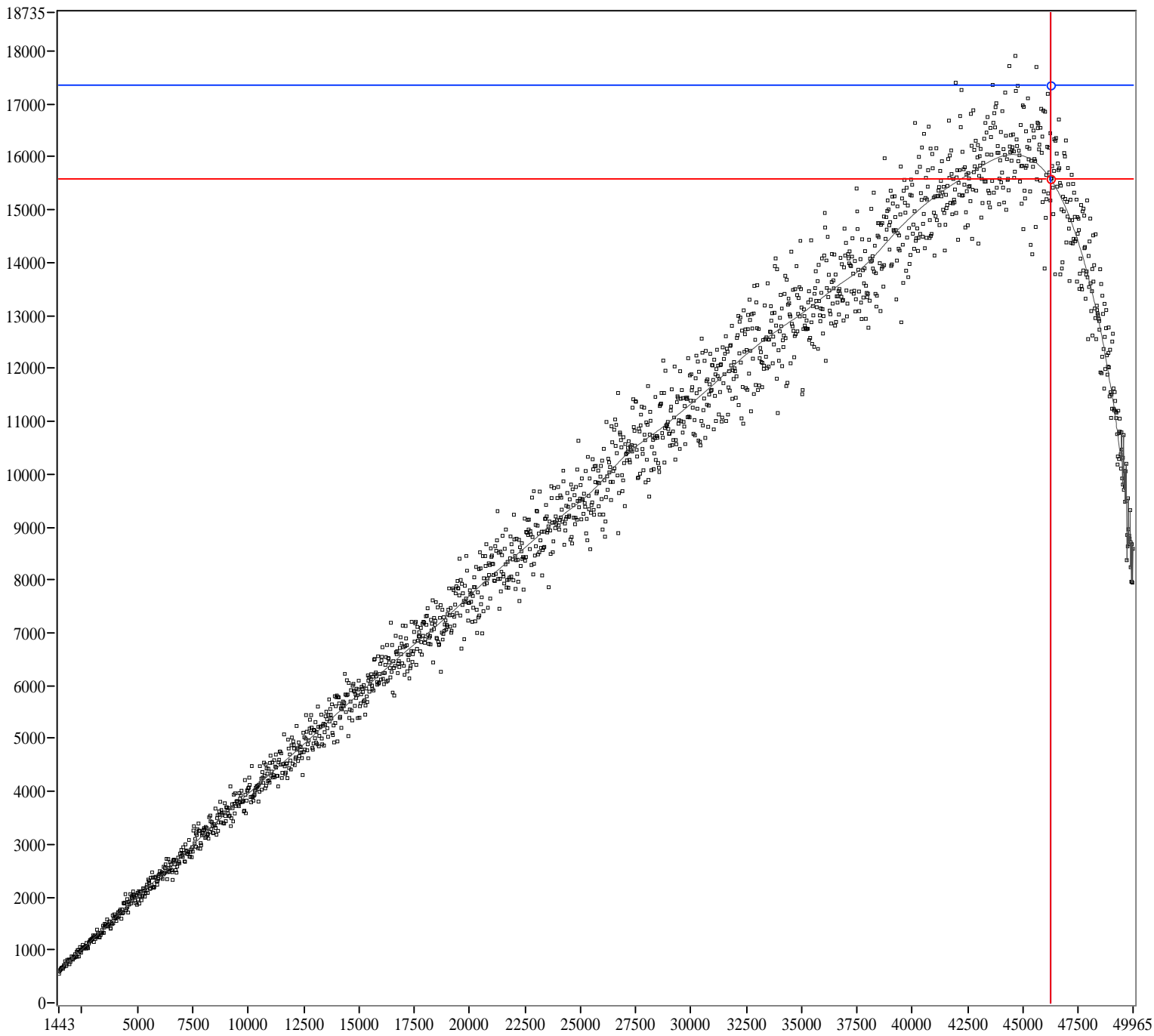
Gain (e-/ADU)

2.65

Read Noise

11.74

Comment:



Pts to Avg.
59

M-V Intercept
239.93

% Limit
90.0

Full Well (e-)
122314


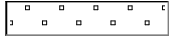
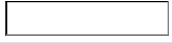
Gain(e-/ADU)
2.65

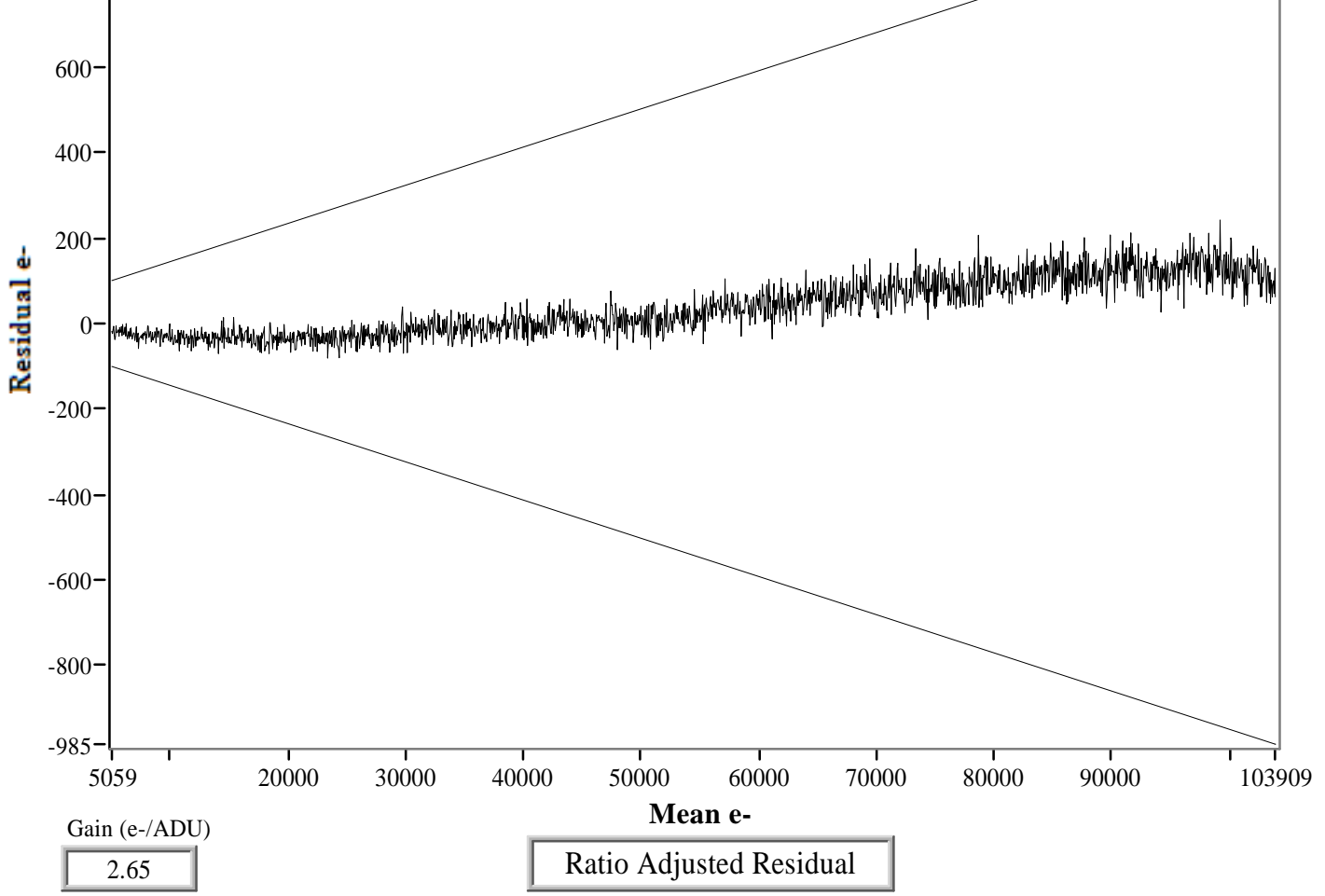
Test Info

QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: C
 Date: Wed, Jan 10, 2018
 Time: 11:53:50 AM
 Readout Mode 0
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 0
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.6457

Binning: 1x1

Gain from Full Well Test (e-/ADU): 2.6457
 Full Well (e-): 122313

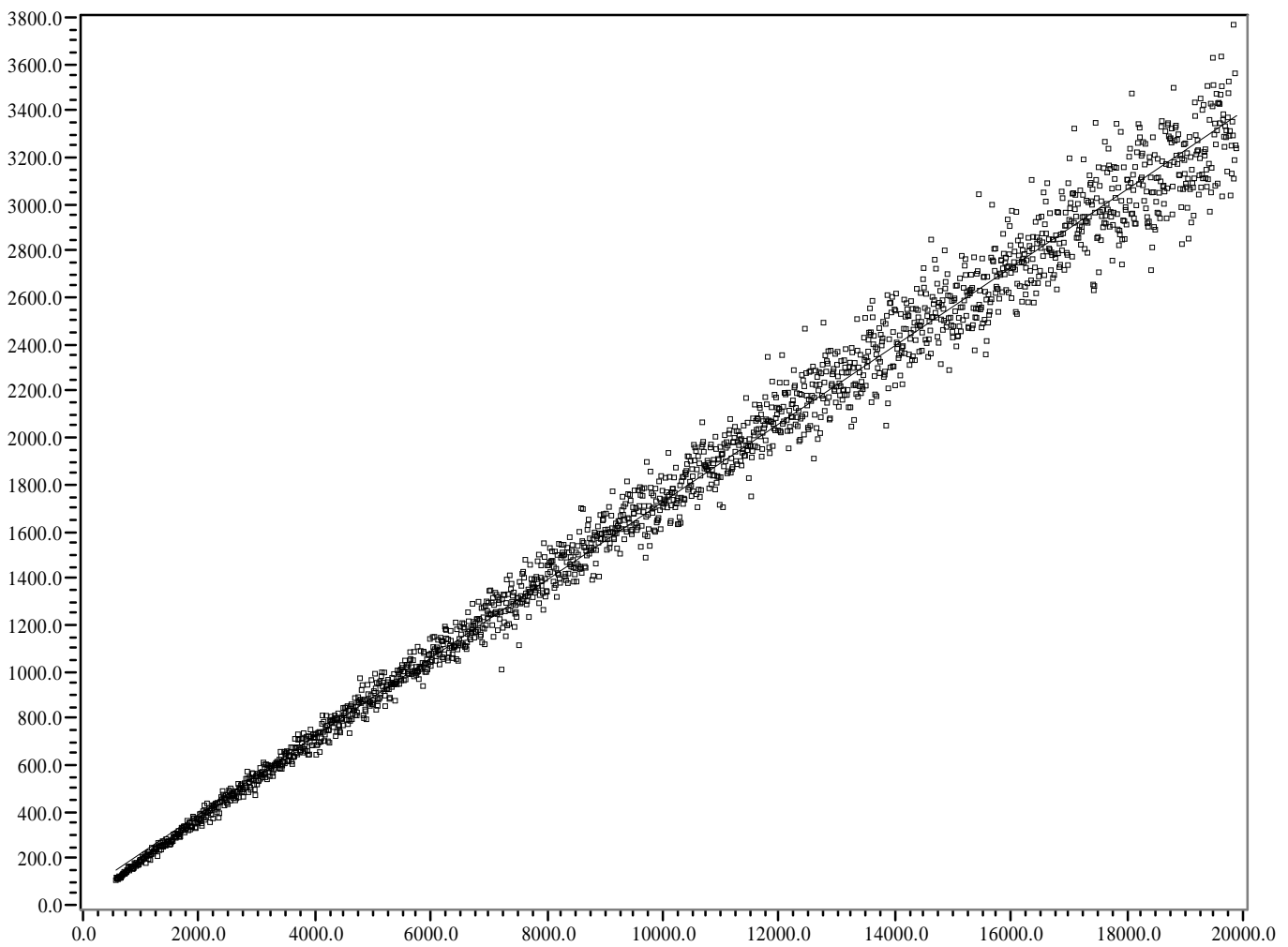
Avg. Data	
M-V Data	
Fit	



File Name

QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: C
 Date: Wed, Jan 10, 2018
 Time: 11:55:07 AM
 Readout Mode 0
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 0
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.6457

Binning: 1x1



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: C
 Date: Wed, Jan 10, 2018
 Time: 12:00:40 PM
 Readout Mode 1
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 5.9846
 Read Noise: 14.041
 Binning: 1x1

File Name

1100-189_RM 1_C_1x1_MV_9627-.test

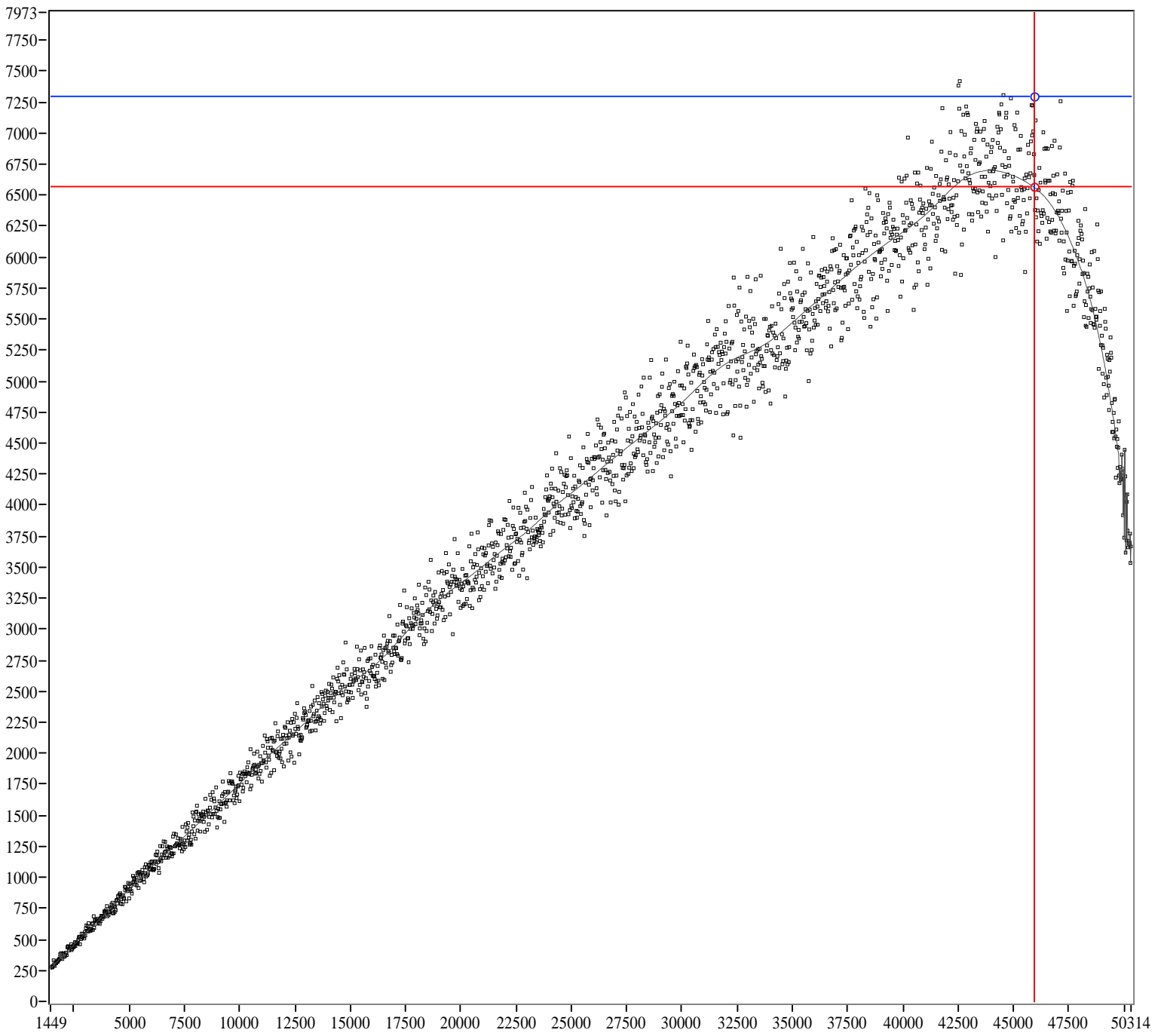
Gain (e-/ADU)

5.98

Read Noise

14.04

Comment:



Pts to Avg.

59

M-V Intercept

207.10

% Limit
90.0

Full Well (e-)

274847

Gain(e-/ADU)

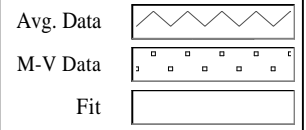
5.98

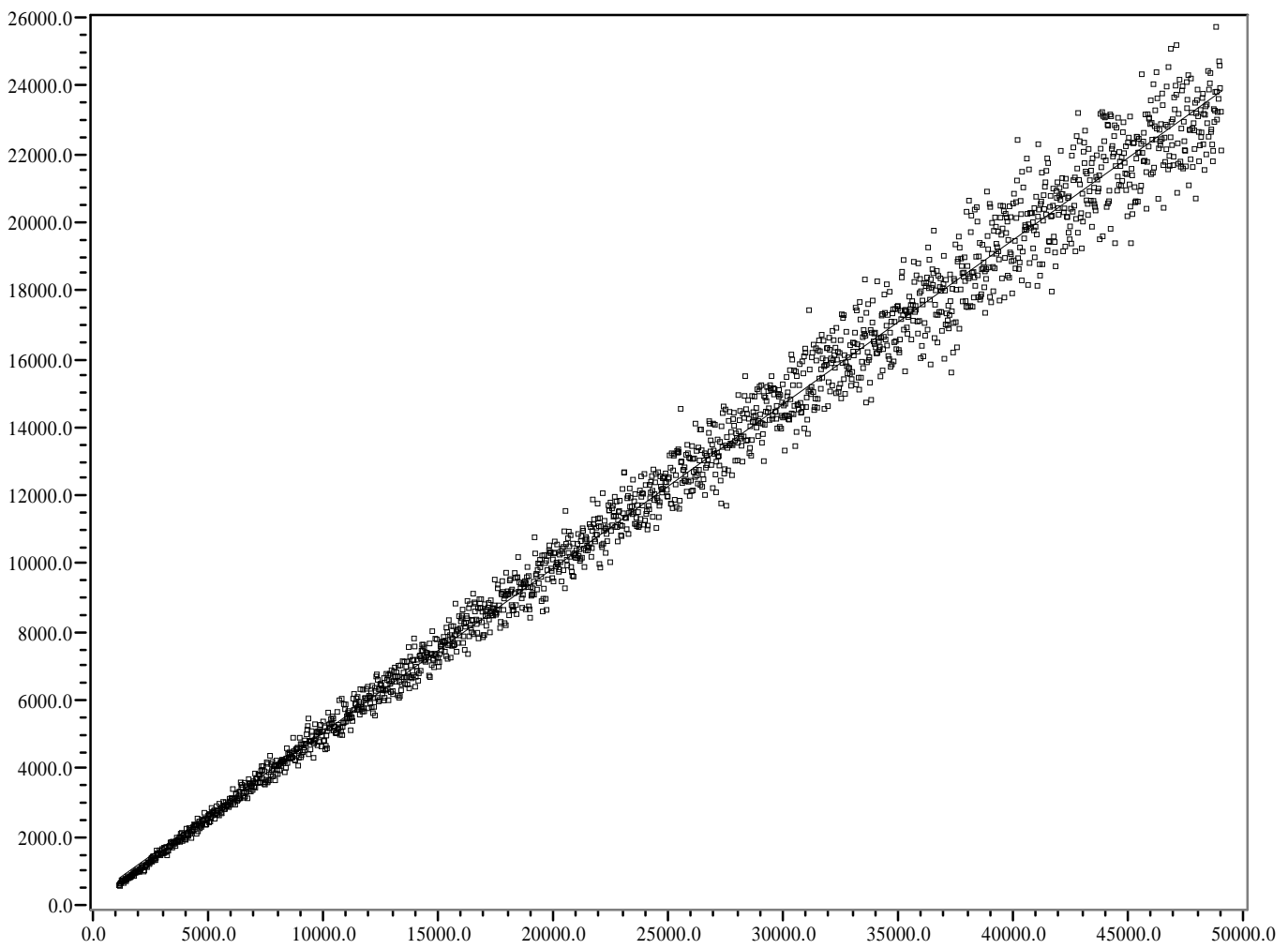
Test Info

QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: C
 Date: Wed, Jan 10, 2018
 Time: 12:01:28 PM
 Readout Mode 1
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 5.9846

Binning: 1x1

Gain from Full Well Test (e-/ADU): 5.9846
 Full Well (e-): 274847





QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: C
 Date: Wed, Jan 10, 2018
 Time: 12:04:35 PM
 Readout Mode 2
 DSI Time: 88
 Attenuation: 2
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.0794
 Read Noise: 5.688
 Binning: 1x1

File Name

1100-189_RM 2_C_1x1_MV_9627-.test

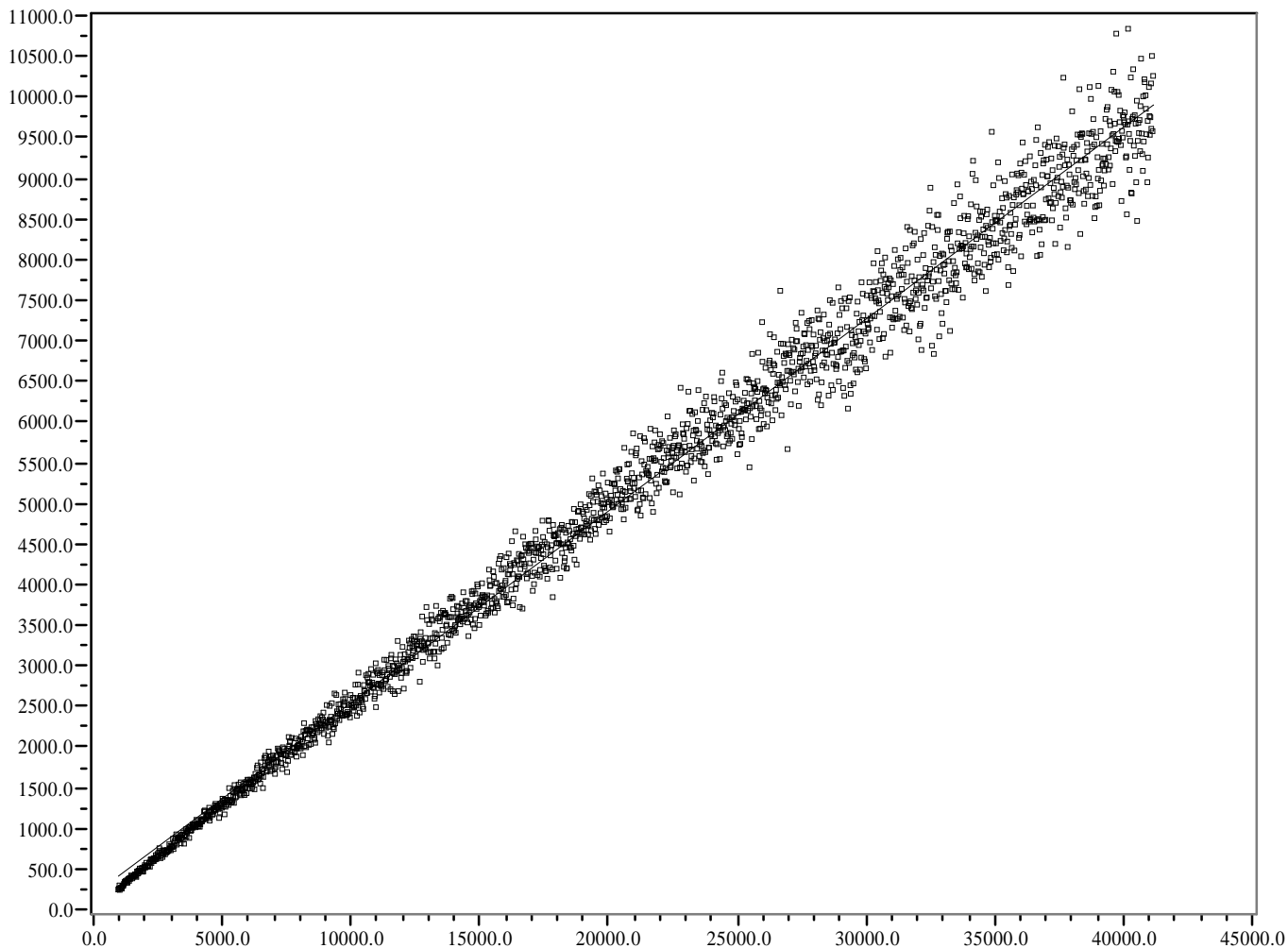
Gain (e-/ADU)

2.08

Read Noise

5.69

Comment:



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: C
 Date: Wed, Jan 10, 2018
 Time: 12:08:45 PM
 Readout Mode 3
 DSI Time: 88
 Attenuation: 3
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 4.2374
 Read Noise: 7.490
 Binning: 1x1

File Name

1100-189_RM 3_C_1x1_MV_9627-.test

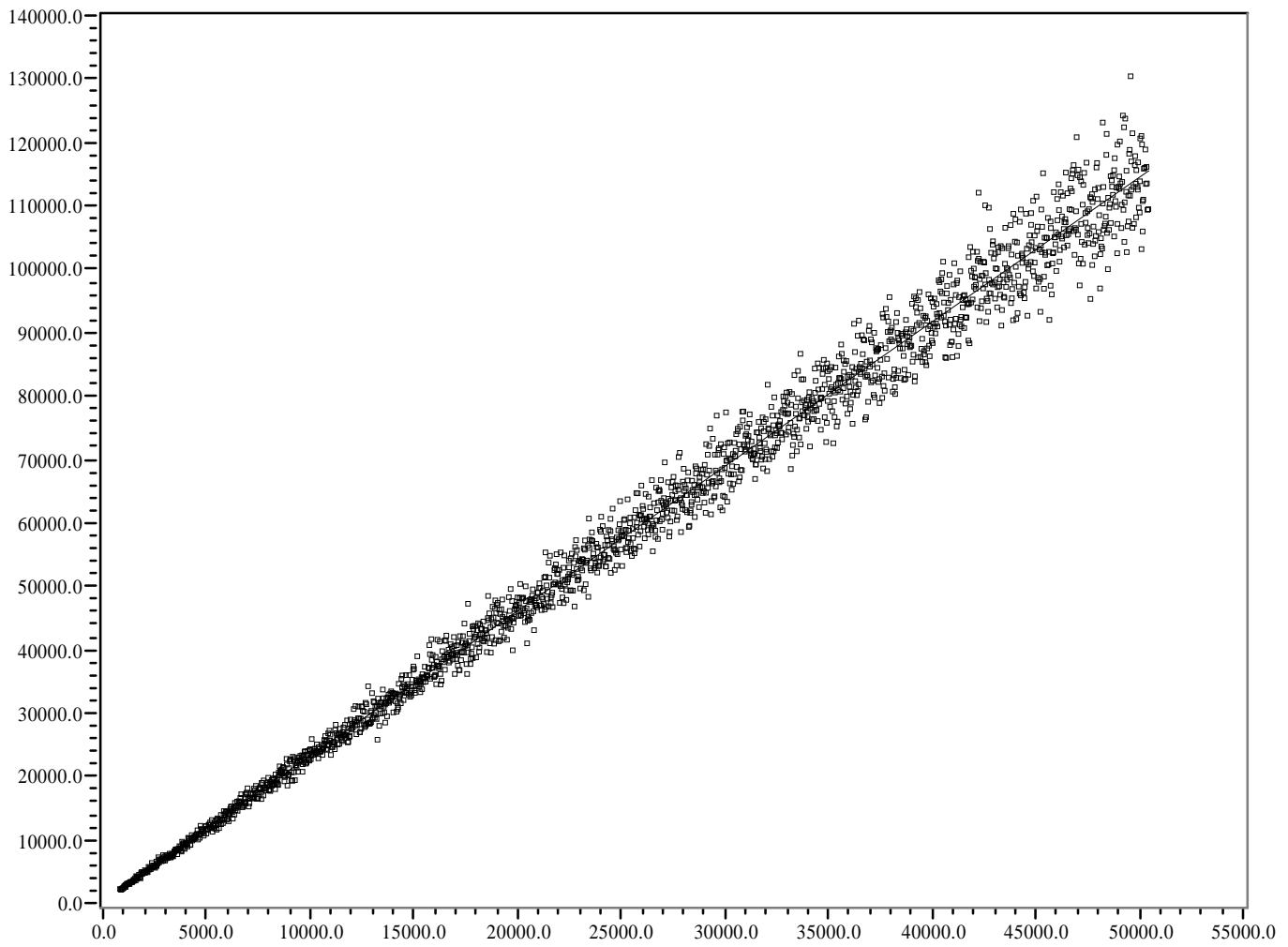
Gain (e-/ADU)

4.24

Read Noise

7.49

Comment:



QuarterArray_STA-4150.tcfg
DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
Camera Type: 1100
Camera SN: 1100-189
CCD Type: CCD STA 4150 BI
CCD SN: 169011-W17-19607
Output Amp: C
Date: Wed, Jan 10, 2018
Time: 12:14:04 PM
Readout Mode 4
DSI Time: 444
Attenuation: 2
CCD Attenuation: 1
Parallel Shift Delay: 100
TDI Delay: 200
CCD Temp: -115.00
Gain (e-/ADU): 0.43863
Read Noise: 4.047
Binning: 1x1

File Name

1100-189_RM 4_C_1x1_MV_9627-.test

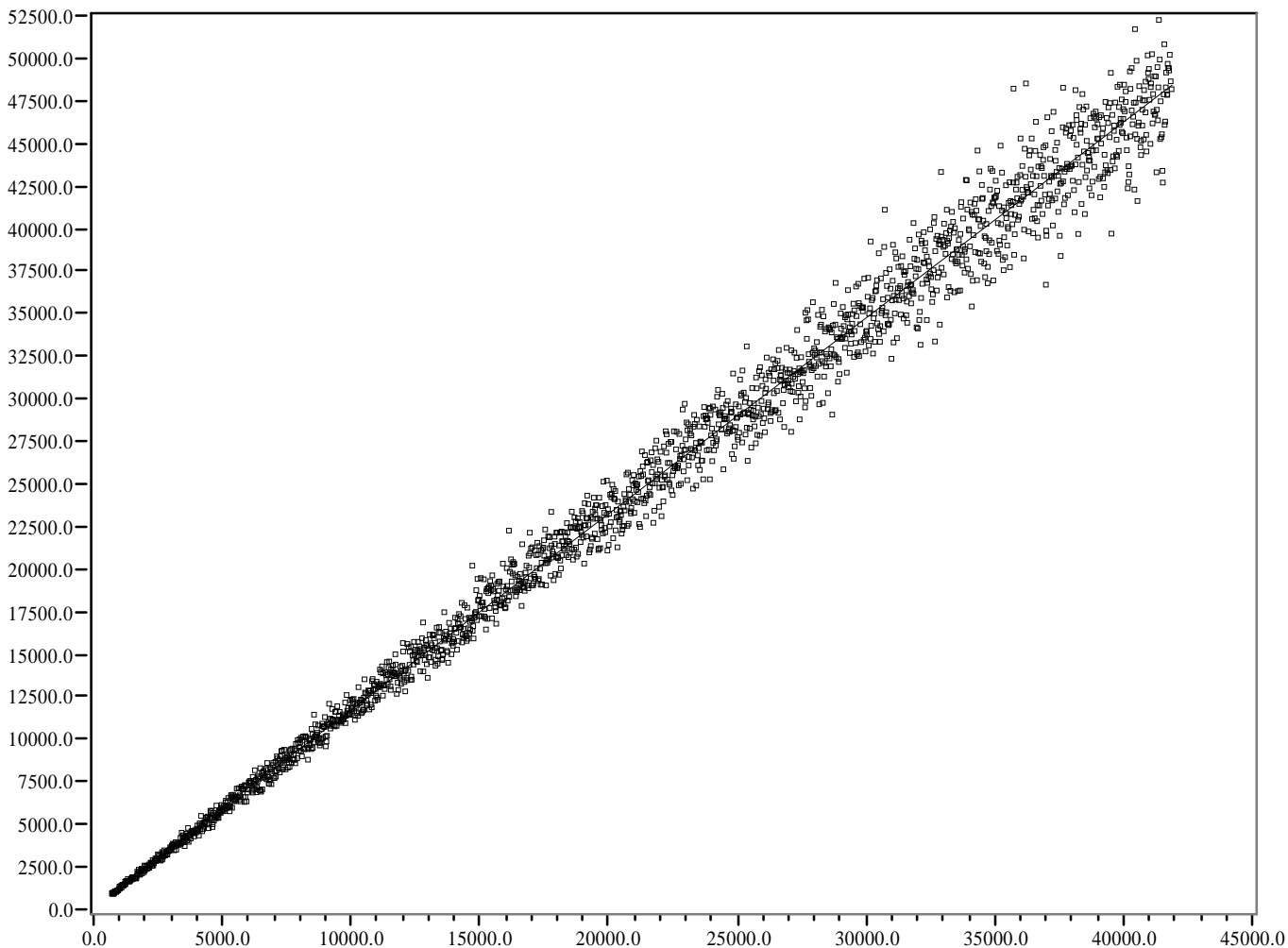
Gain (e-/ADU)

0.44

Read Noise

4.05

Comment:



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: C
 Date: Wed, Jan 10, 2018
 Time: 12:18:19 PM
 Readout Mode 5
 DSI Time: 444
 Attenuation: 3
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 0.86934
 Read Noise: 4.257
 Binning: 1x1

File Name

1100-189_RM 5_C_1x1_MV_9627-.test

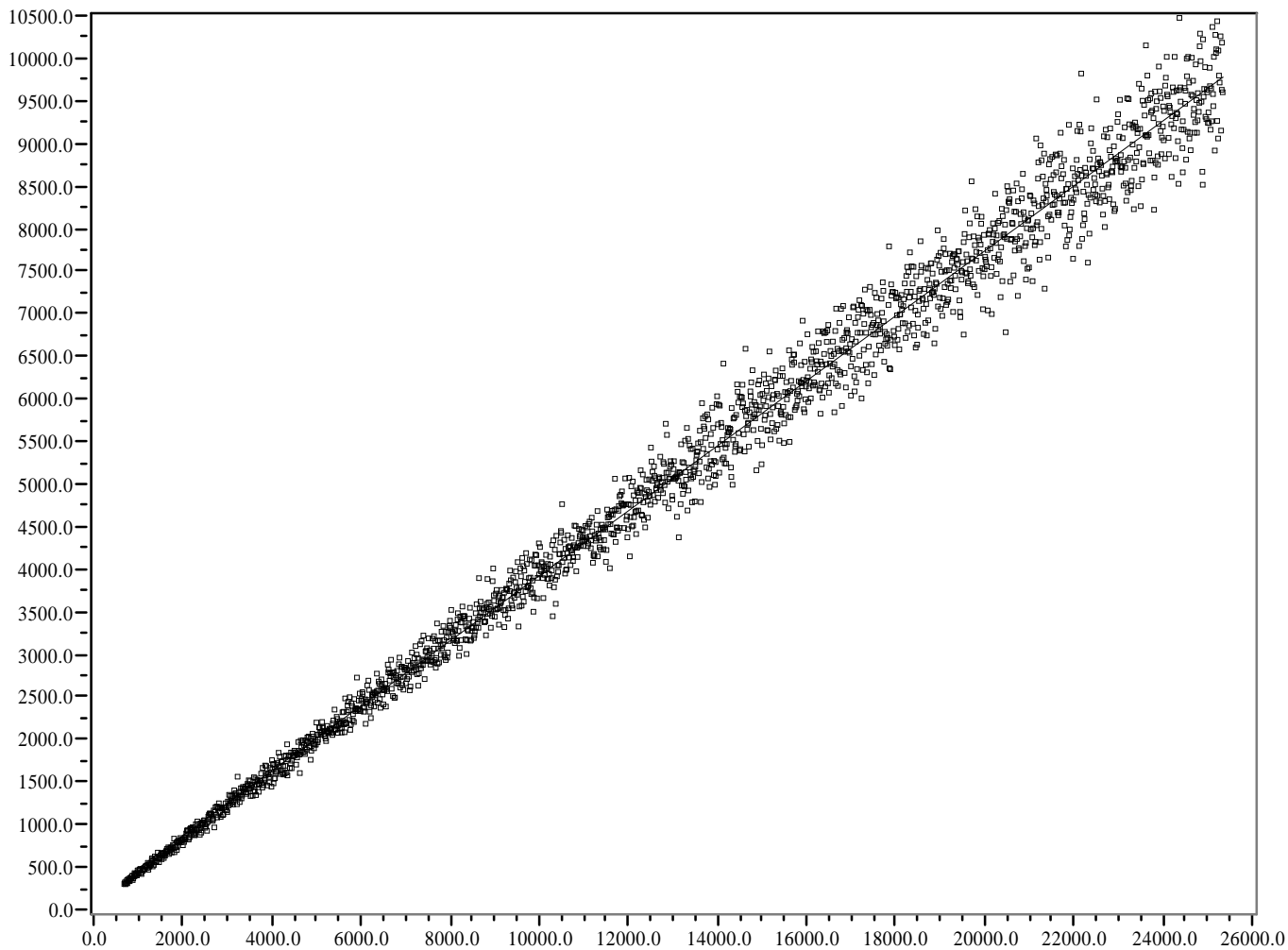
Gain (e-/ADU)

0.87

Read Noise

4.26

Comment:



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: D
 Date: Wed, Jan 10, 2018
 Time: 12:21:09 PM
 Readout Mode 0
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 0
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.6209
 Read Noise: 11.528
 Binning: 1x1

File Name

1100-189_RM 0_D_1x1_MV_9627-.test

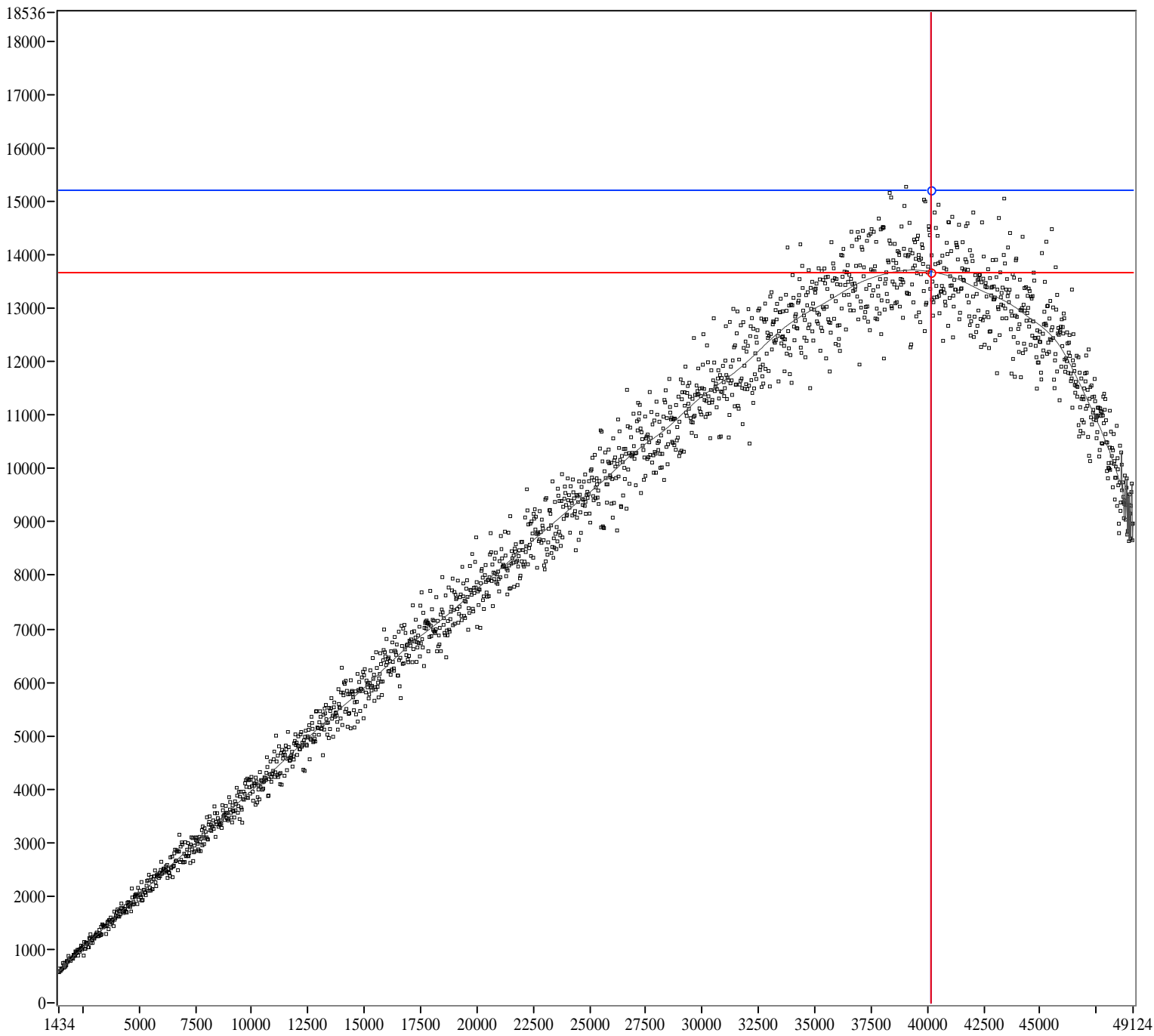
Gain (e-/ADU)

2.62

Read Noise

11.53

Comment:



Pts to Avg.

59

M-V Intercept

242.17

% Limit
90.0

Full Well (e-)

105307

Gain(e-/ADU)

2.62

Test Info

QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: D
 Date: Wed, Jan 10, 2018
 Time: 12:21:57 PM
 Readout Mode 0
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 0
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -114.90
 Gain (e-/ADU): 2.6209

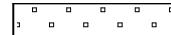
Binning: 1x1

Gain from Full Well Test (e-/ADU): 2.6209
 Full Well (e-): 105307

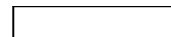
Avg. Data

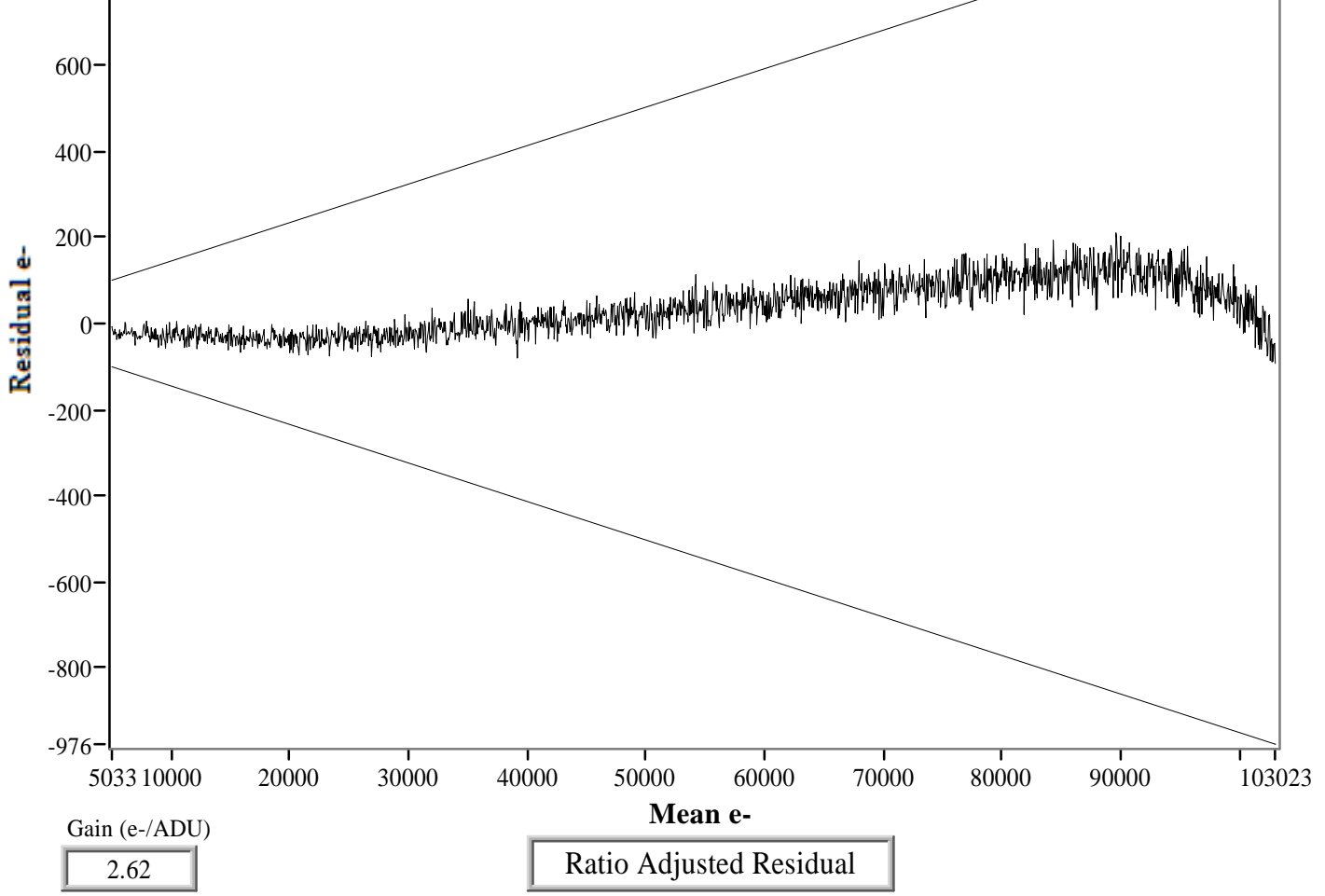


M-V Data



Fit



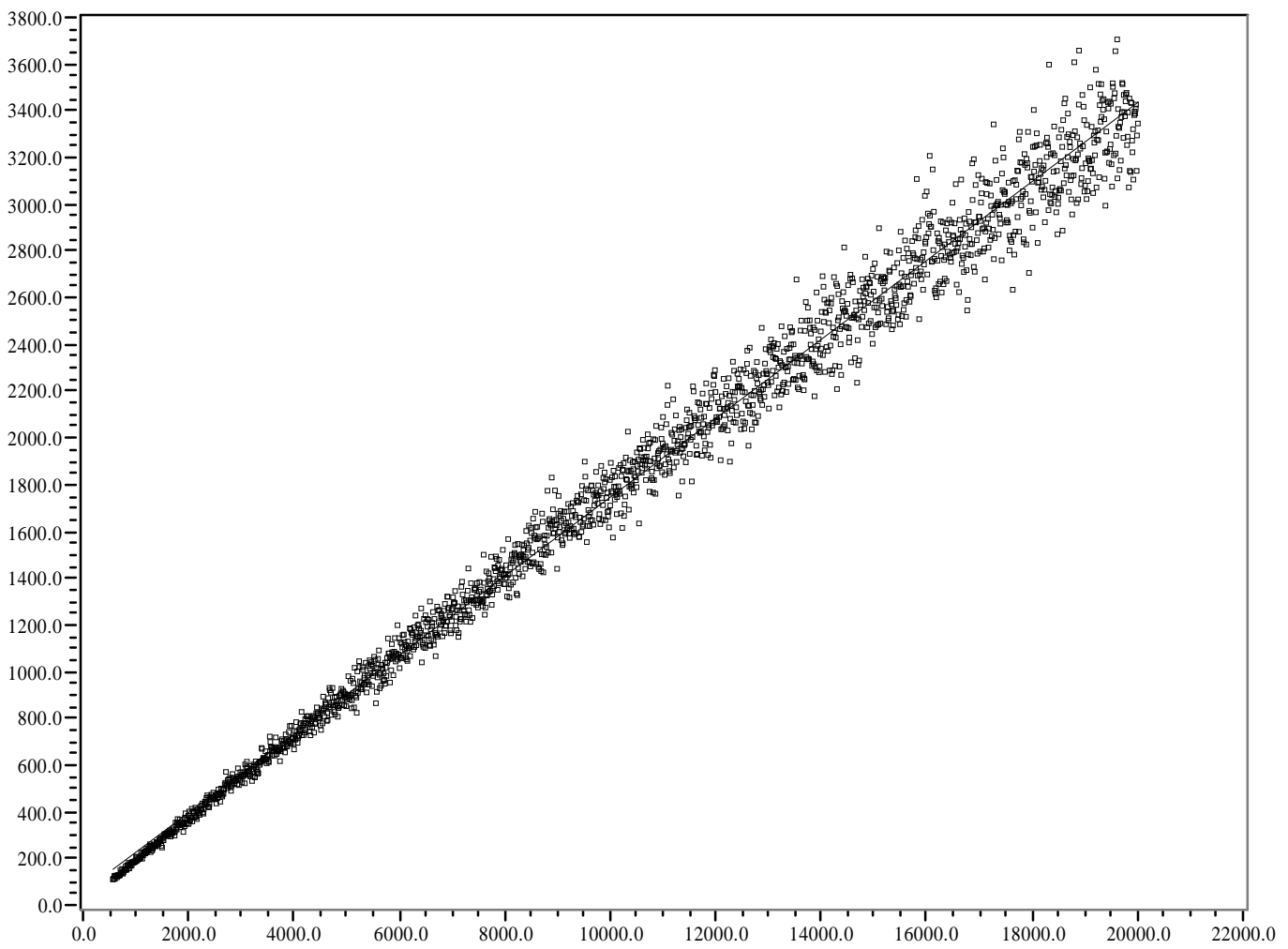


File Name

1100-189_RM 0_D_1x1_TDI Linearity Low Level_9627-.FIT

QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: D
 Date: Wed, Jan 10, 2018
 Time: 12:23:15 PM
 Readout Mode 0
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 0
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.6209

Binning: 1x1



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: D
 Date: Wed, Jan 10, 2018
 Time: 12:28:47 PM
 Readout Mode 1
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 5.9216
 Read Noise: 13.790
 Binning: 1x1

File Name

1100-189_RM 1_D_1x1_MV_9627-.test

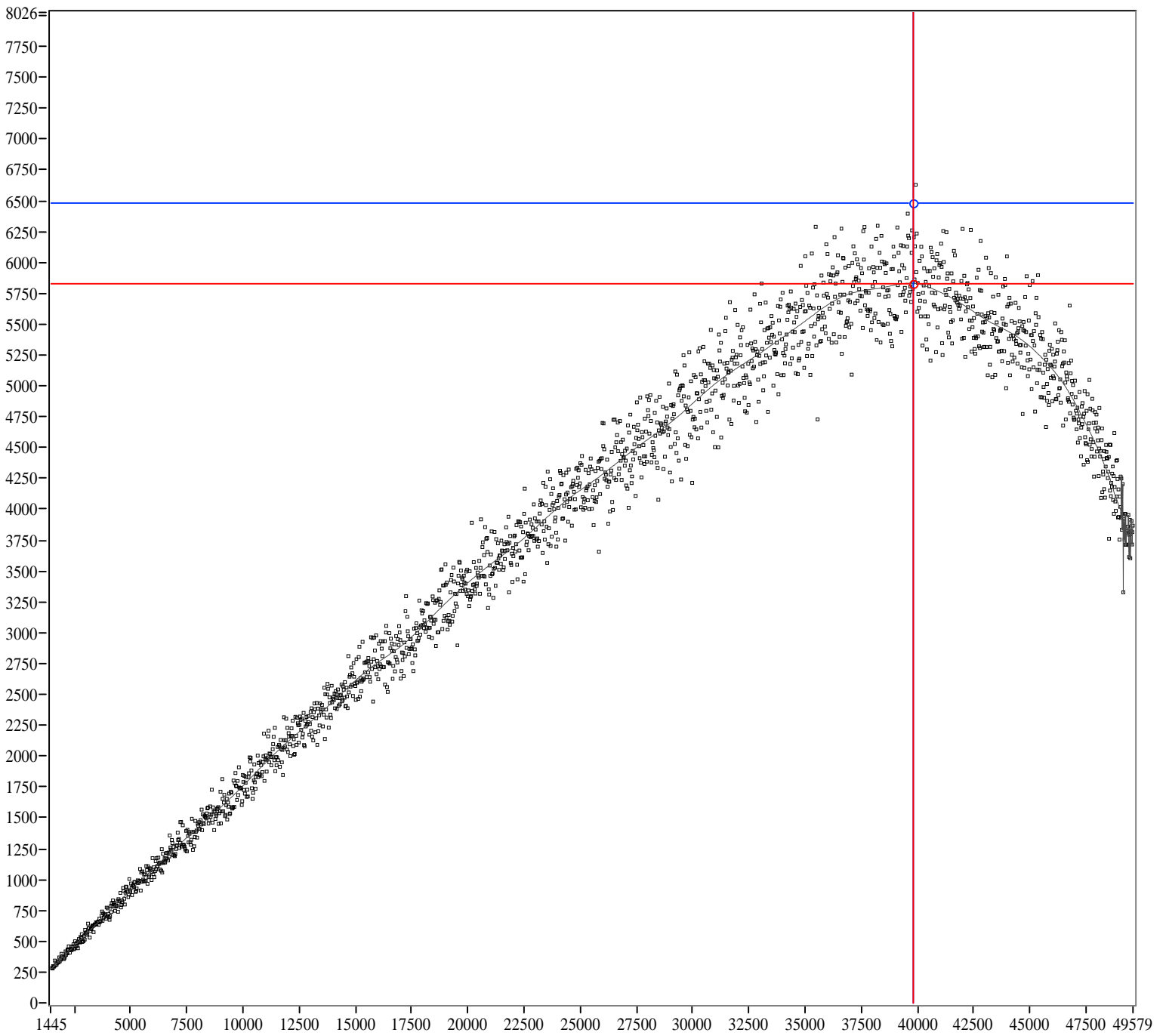
Gain (e-/ADU)

5.92

Read Noise

13.79

Comment:



Pts to Avg.

59

M-V Intercept

174.72

% Limit
90.0

Full Well (e-)

235810

Gain(e-/ADU)

5.92

Test Info

QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: D
 Date: Wed, Jan 10, 2018
 Time: 12:29:35 PM
 Readout Mode 1
 DSI Time: 8
 Attenuation: 0
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 5.9216

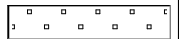
Binning: 1x1

Gain from Full Well Test (e-/ADU): 5.9216
 Full Well (e-): 235809

Avg. Data

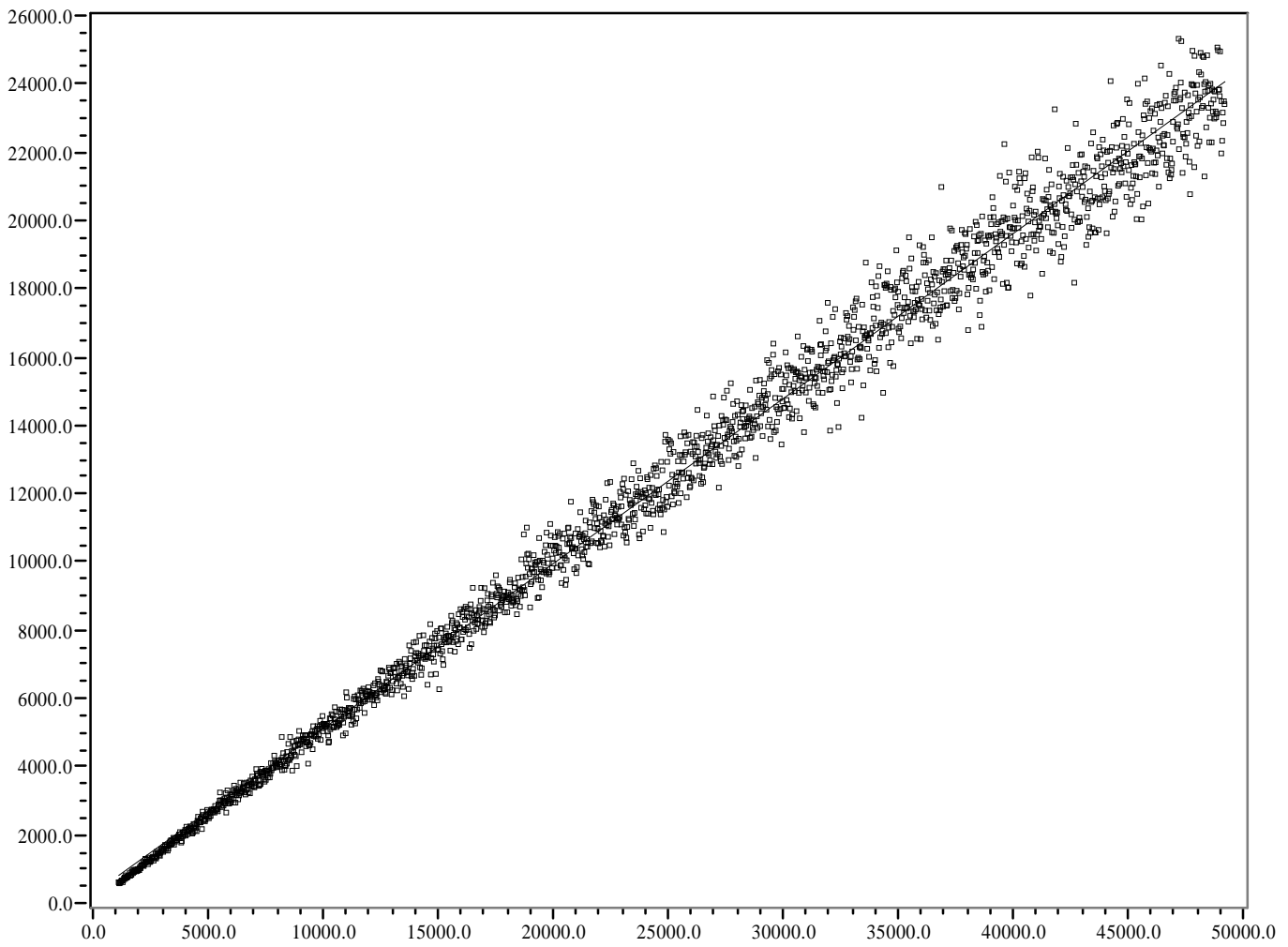


M-V Data



Fit





QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: D
 Date: Wed, Jan 10, 2018
 Time: 12:32:43 PM
 Readout Mode 2
 DSI Time: 88
 Attenuation: 2
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 2.0692
 Read Noise: 5.530
 Binning: 1x1

File Name

1100-189_RM 2_D_1x1_MV_9627-.test

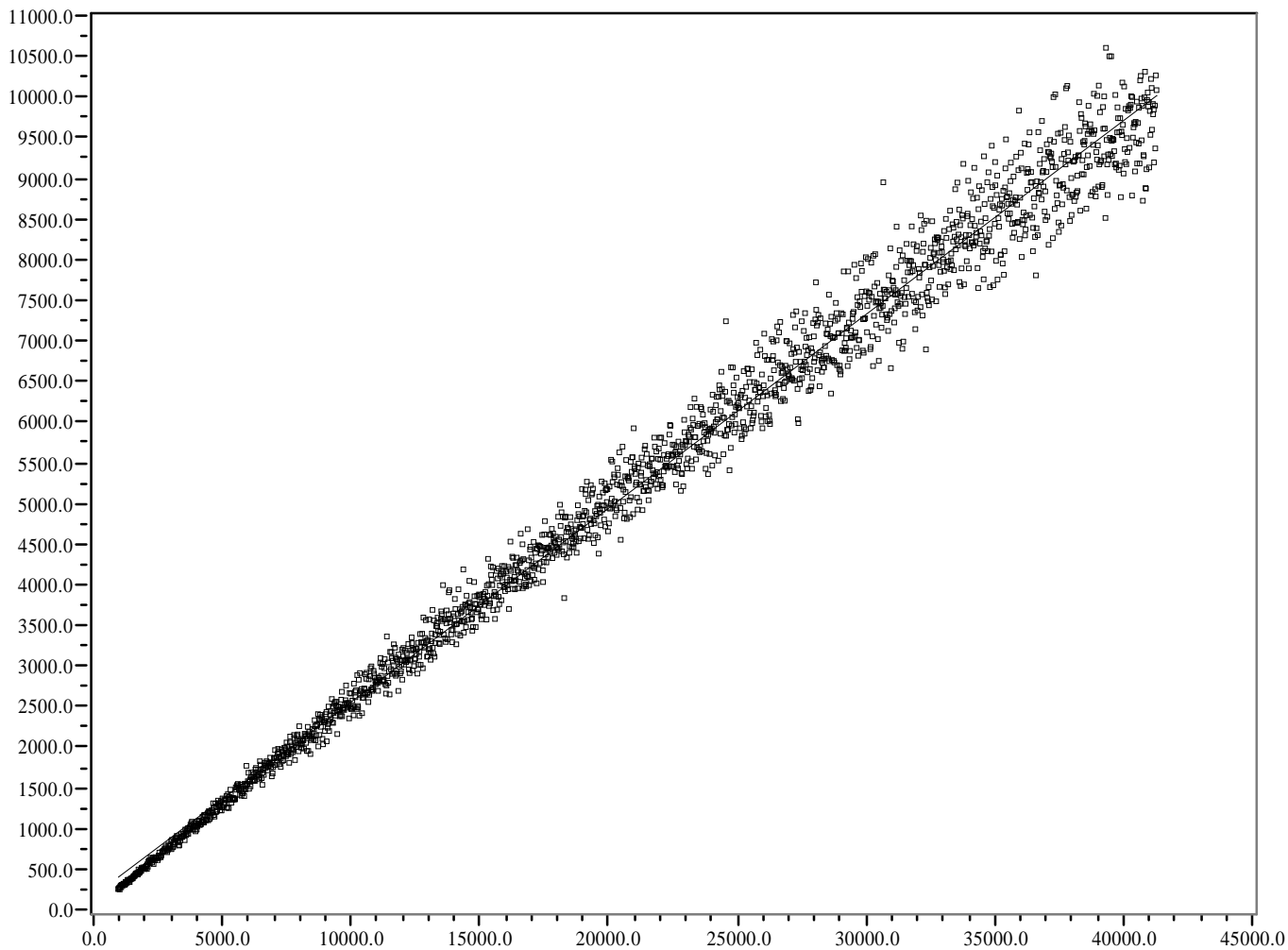
Gain (e-/ADU)

2.07

Read Noise

5.53

Comment:



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: D
 Date: Wed, Jan 10, 2018
 Time: 12:36:54 PM
 Readout Mode 3
 DSI Time: 88
 Attenuation: 3
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 4.1955
 Read Noise: 7.173
 Binning: 1x1

File Name

1100-189_RM 3_D_1x1_MV_9627-.test

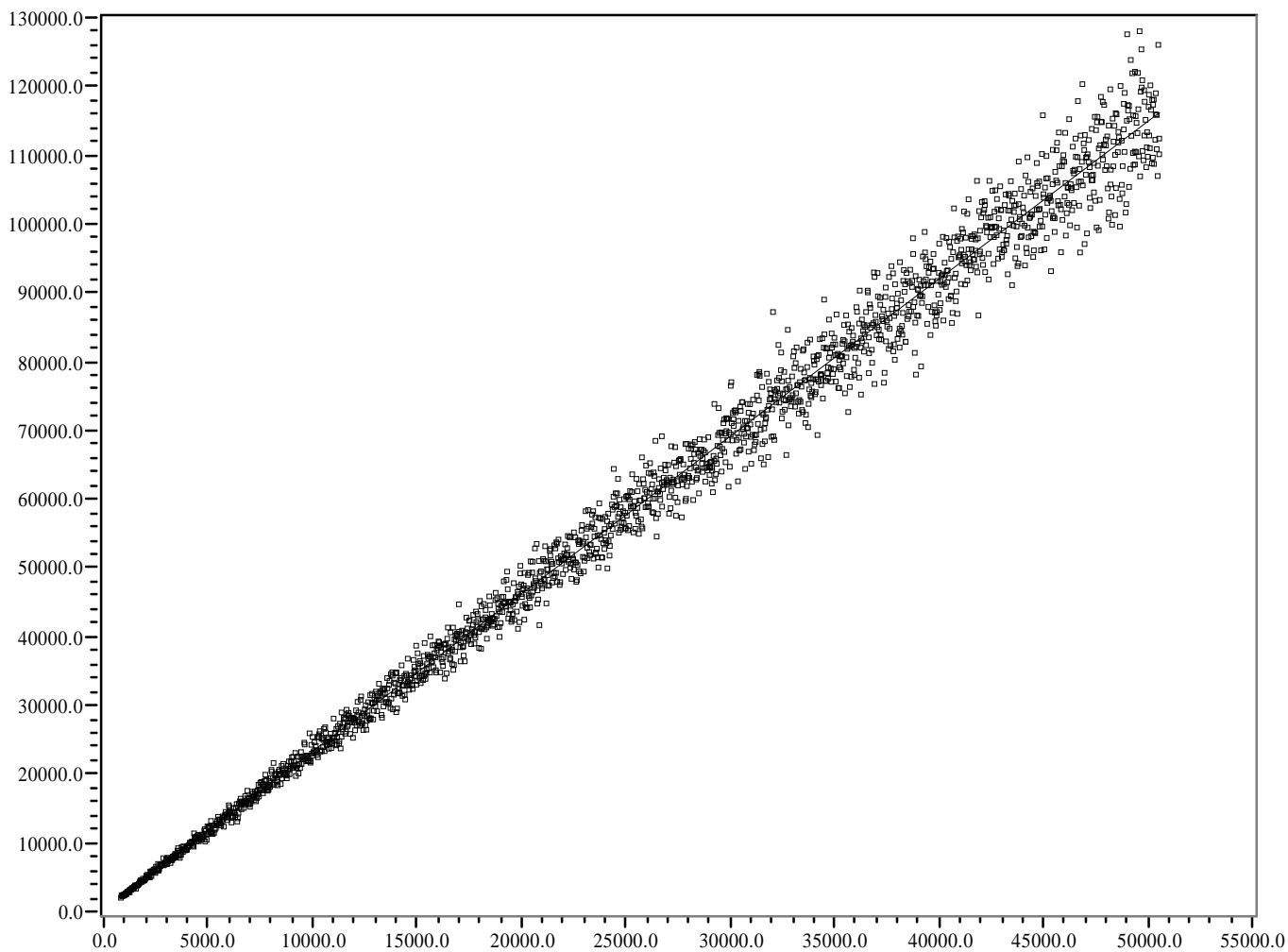
Gain (e-/ADU)

4.20

Read Noise

7.17

Comment:



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: D
 Date: Wed, Jan 10, 2018
 Time: 12:42:13 PM
 Readout Mode 4
 DSI Time: 444
 Attenuation: 2
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 0.43674
 Read Noise: 3.801
 Binning: 1x1

File Name

1100-189_RM 4_D_1x1_MV_9627-.test

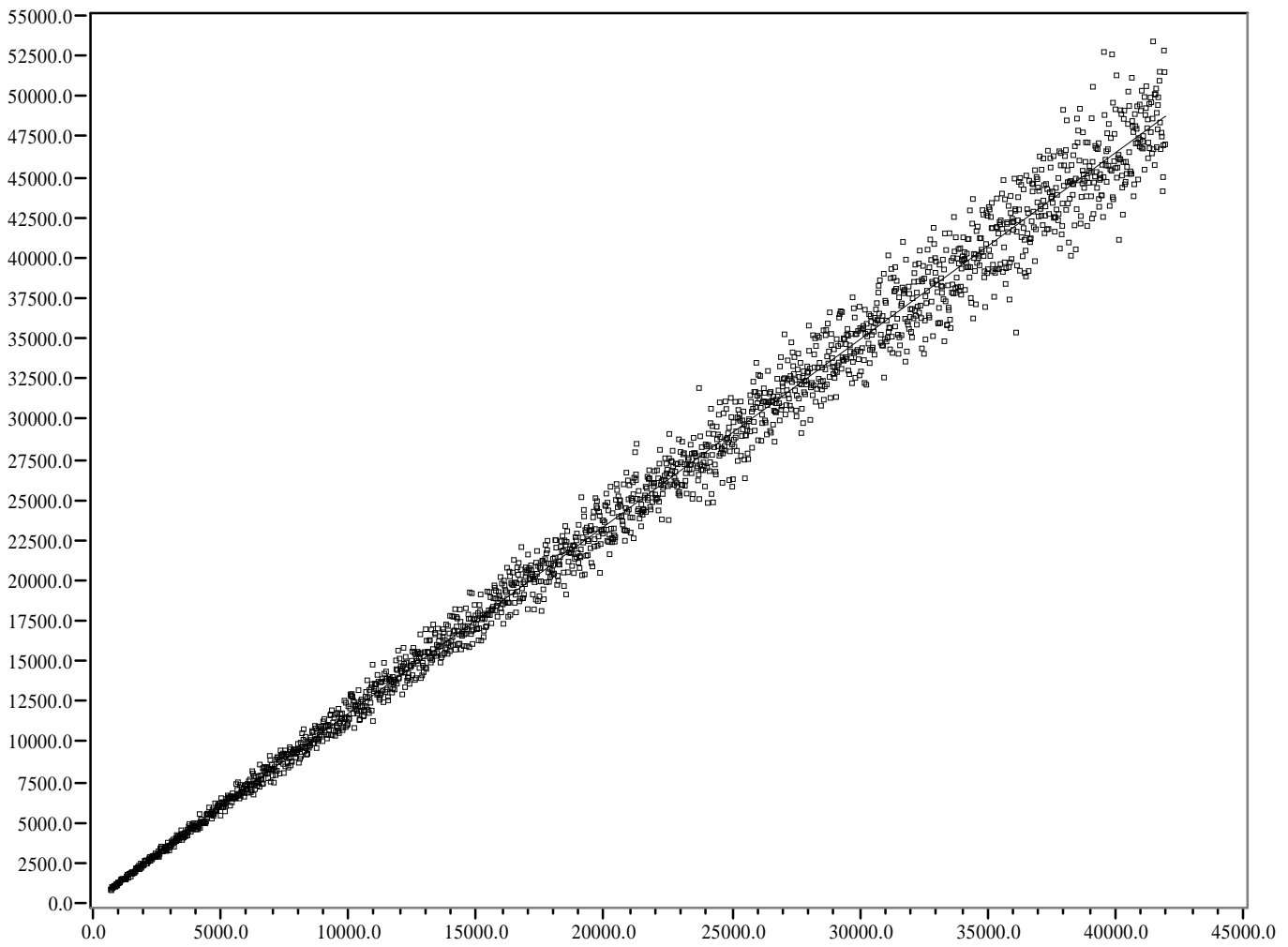
Gain (e-/ADU)

0.44

Read Noise

3.80

Comment:



QuarterArray_STA-4150.tcfg
 DSP Code: 9627-.bin, 15321 bytes, 5-13-2017, 13:6:38
 Camera Type: 1100
 Camera SN: 1100-189
 CCD Type: CCD STA 4150 BI
 CCD SN: 169011-W17-19607
 Output Amp: D
 Date: Wed, Jan 10, 2018
 Time: 12:46:27 PM
 Readout Mode 5
 DSI Time: 444
 Attenuation: 3
 CCD Attenuation: 1
 Parallel Shift Delay: 100
 TDI Delay: 200
 CCD Temp: -115.00
 Gain (e-/ADU): 0.86442
 Read Noise: 3.980
 Binning: 1x1

File Name

1100-189_RM 5_D_1x1_MV_9627-.test

Gain (e-/ADU)

0.86

Read Noise

3.98

Comment: