

# DQM Report for run number 44

pysimdamicm.dqm.dqm\_manager

June 1, 2022

Data directory:

/data/calidaq\_backup/PhotoNeutron/DataTaking/SbA1/Run\_44

Output directory:

/data/chicago/PhotoNeutronData/WADERS/DataTaking/DQM/SbA1

Reference used:

None

Total images: 13

## List of Figures

1	Active Area. Median dark current (only $q_{i,j} < q_i^{th}$ ) vs row . . . . .	3
2	Slope DC fit (from MEMeanDCperRow) vs file . . . . .	3
3	Intercept DC fit (from MEMeanDCperRow) vs file . . . . .	4
4	Active area. Baseline vs row . . . . .	4
5	Active area. MAD vs row . . . . .	5
6	Full Image. Baseline vs column . . . . .	5
7	Full Image. MAD vs column . . . . .	6
8	Overscan. Baseline vs row . . . . .	6
9	Overscan. MAD vs row . . . . .	7
10	PedestalSubtractionProcess: mean pedestal vs file (gauss fit) . . . . .	7
11	PedestalSubtractionProcess: mean sigma vs file (gauss fit) . . . . .	8
12	PedestalSubtractionProcess: mean pedestal vs file (gauss fit) . . . . .	8
13	PedestalSubtractionProcess: mean sigma vs file (gauss fit) . . . . .	9
14	Masked pixels . . . . .	10
15	Masked pixels . . . . .	11
16	Number of pixels with $E > 300.0$ eV vs file . . . . .	12
17	Number of pixels with $E > 300.0$ eV vs file . . . . .	12
18	Pixel Charge Distribution . . . . .	13
19	Pixel Charge Distribution . . . . .	14
20	Pixel Charge Distribution . . . . .	15
21	Pixel Charge Distribution . . . . .	16
22	Zero electron peak (from MEFitDC) vs Image . . . . .	17
23	Electron Single Resolution (from MEFitDC) vs Image . . . . .	17
24	Dark current (from MEFitDC per Row) vs Image . . . . .	18
25	Calibration constant (from MEFitDC) vs Image . . . . .	18
26	<i>Overscan. PCD Gaussian fit: <math>\mu_0</math></i> . . . . .	19
27	<i>Overscan. PCD Gaussian fit: <math>\sigma_0</math></i> . . . . .	19
28	Electronic column transient showing an exponential behaviour . . . . .	20
29	Column transient decay constant (from MEColTransient) vs Image . . . . .	20
30	Column transient amplitude (from MEColTransient) vs Image . . . . .	21
31	CCD Image . . . . .	22
32	CCD Image . . . . .	23
33	CCD Image . . . . .	24
34	CCD Image . . . . .	25
35	CCD Image . . . . .	26

36	CCD Image . . . . .	27
37	CCD Image . . . . .	28
38	CCD Image . . . . .	29
39	CCD Image . . . . .	30
40	CCD Image . . . . .	31
41	CCD Image . . . . .	32
42	CCD Image . . . . .	33
43	CCD Image . . . . .	34
44	Overscan. Baseline Shift Status vs Image . . . . .	35
45	Overscan. Horizontal Clusters vs Image . . . . .	35
46	Overscan. Miscellaneous Noise Found Status . . . . .	36

Active Area. Median dark current (only  $q_{i,j} < q_i^{th}$ ) vs row  
 [class MEMeanDCperRow]

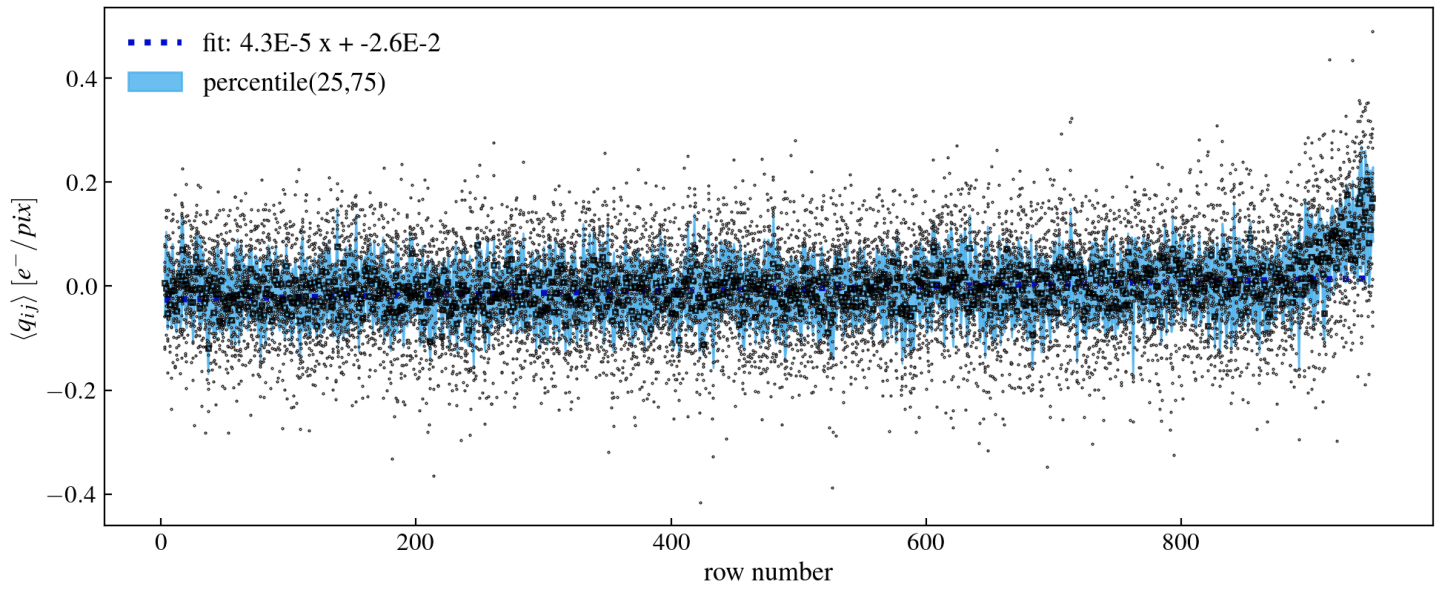


Figure 1: Active Area. Median dark current (only  $q_{i,j} < q_i^{th}$ ) vs row

Slope DC fit (from MEMeanDCperRow) vs file  
 [class MEDCslope]

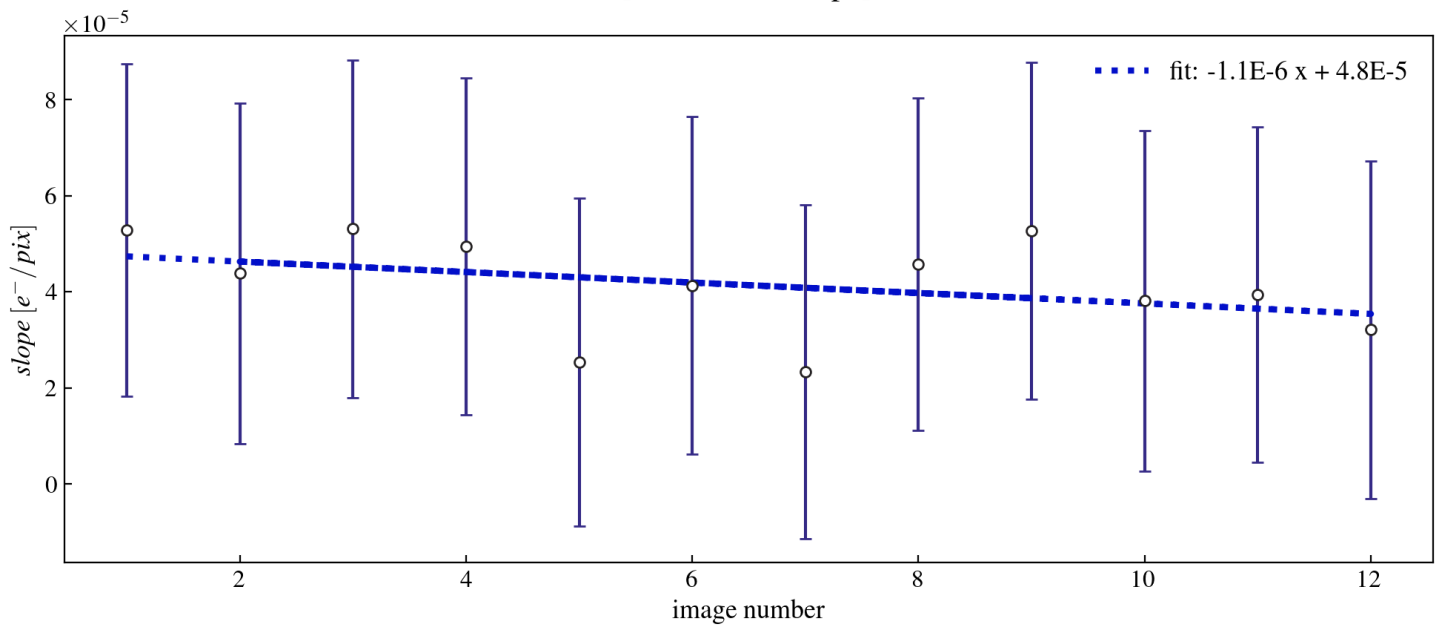


Figure 2: Slope DC fit (from MEMeanDCperRow) vs file

Intercept DC fit (from MEMeanDCperRow) vs file  
[class MEDCintercept]

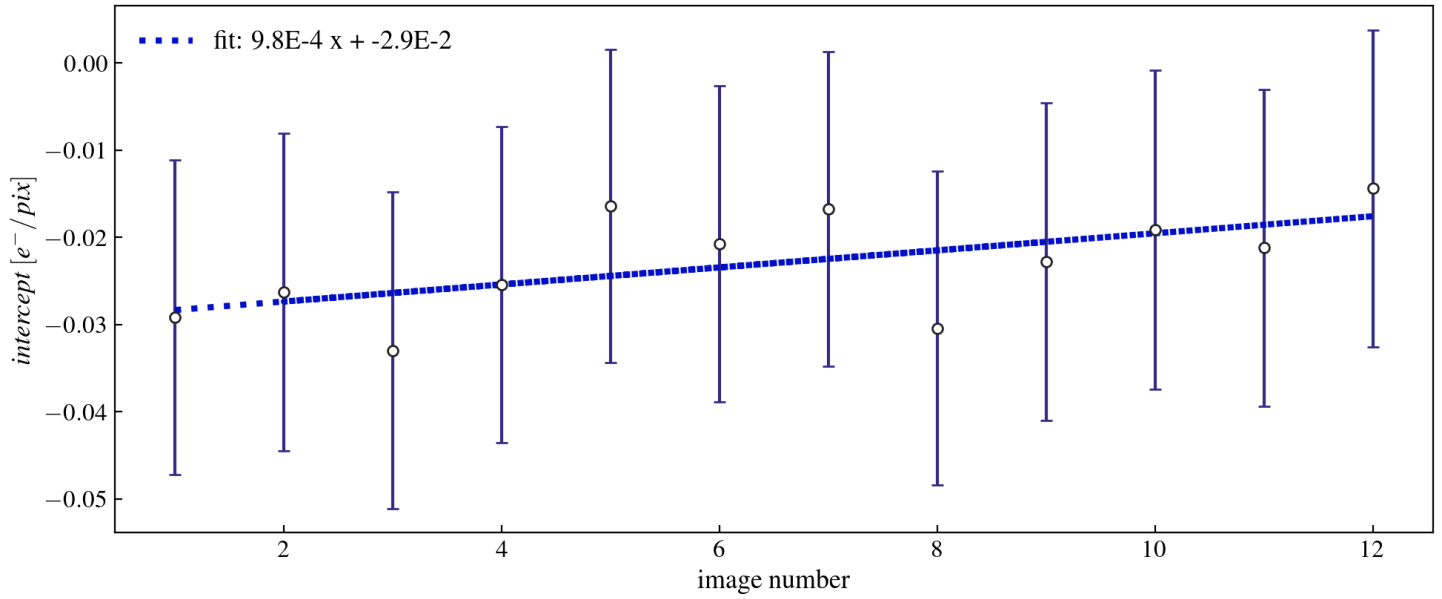


Figure 3: Intercept DC fit (from MEMeanDCperRow) vs file

Active area. Baseline vs row  
[class MESensorMedianperRow]

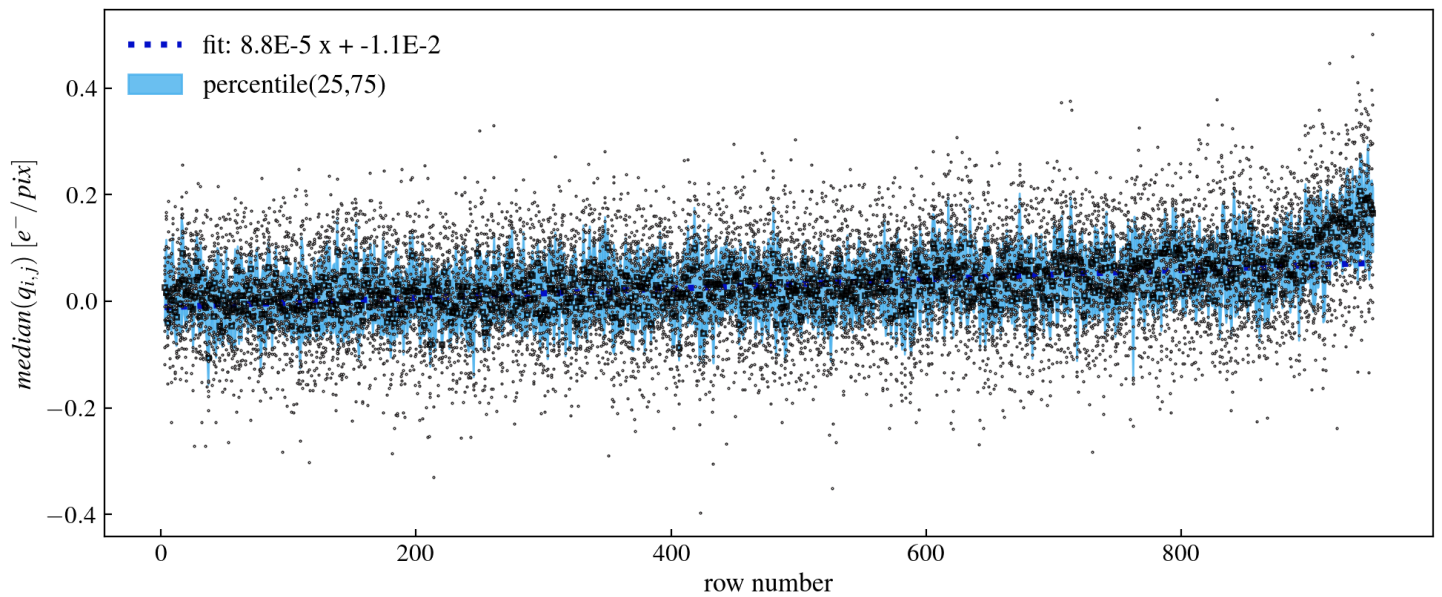


Figure 4: Active area. Baseline vs row

Active area. MAD vs row  
[class MESensorMADperRow]

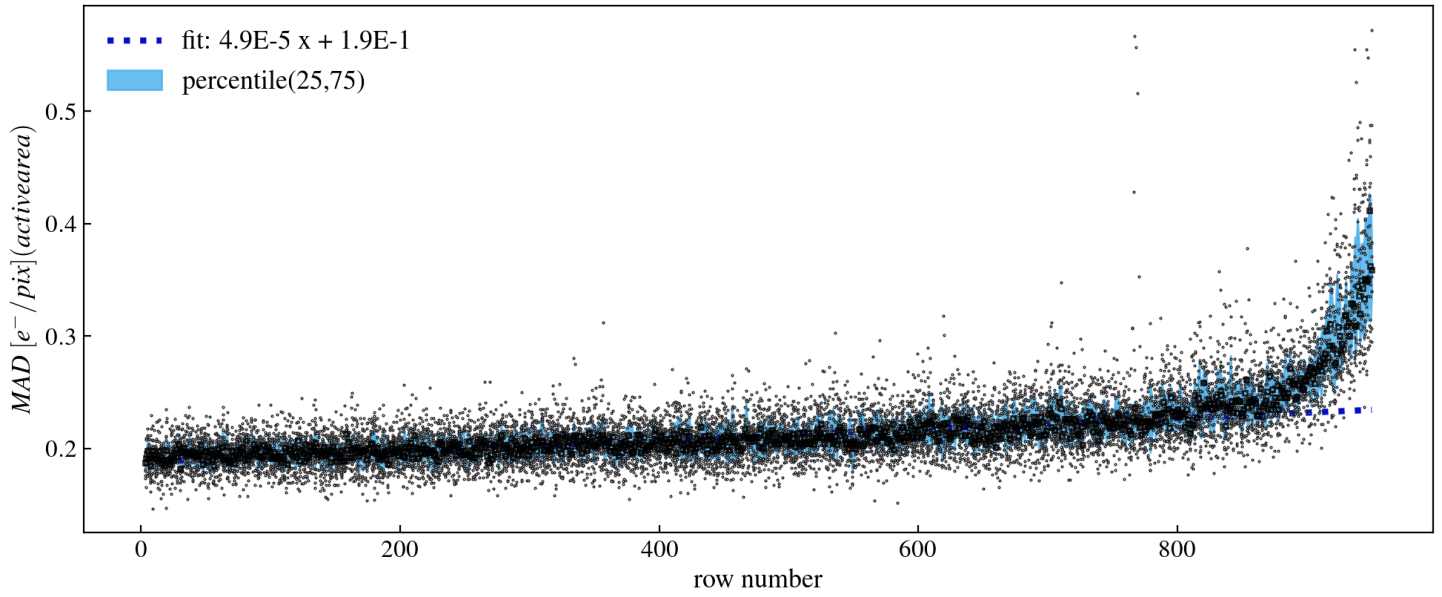


Figure 5: Active area. MAD vs row

Full Image. Baseline vs column  
[class MEImageMedianperCol]

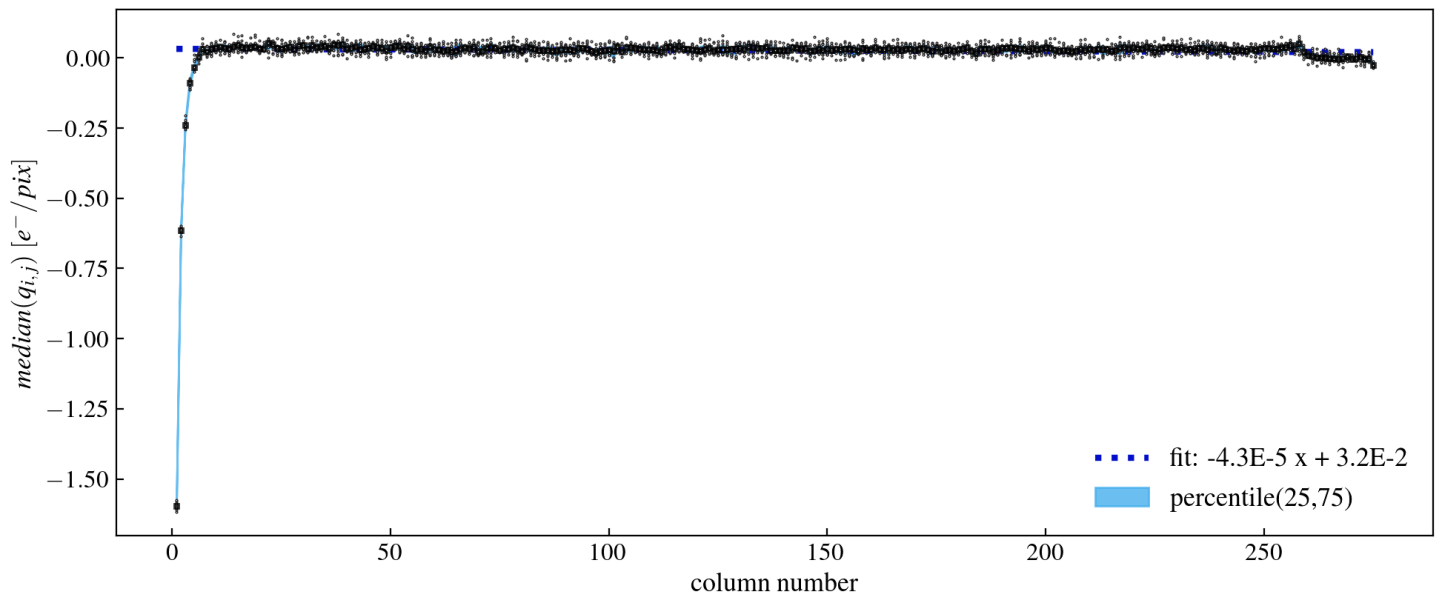


Figure 6: Full Image. Baseline vs column

Full Image. MAD vs column  
[class MEImageMADperCol]

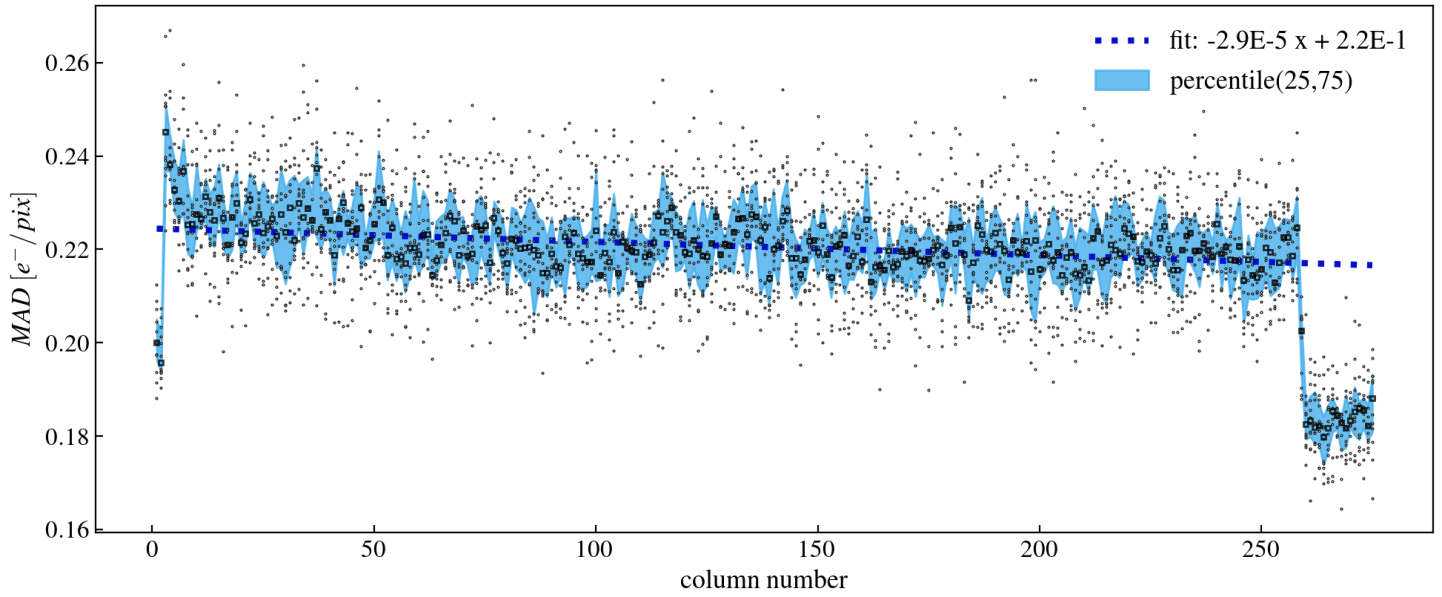


Figure 7: Full Image. MAD vs column

Overscan. Baseline vs row  
[class MEOverscanMedianperRow]

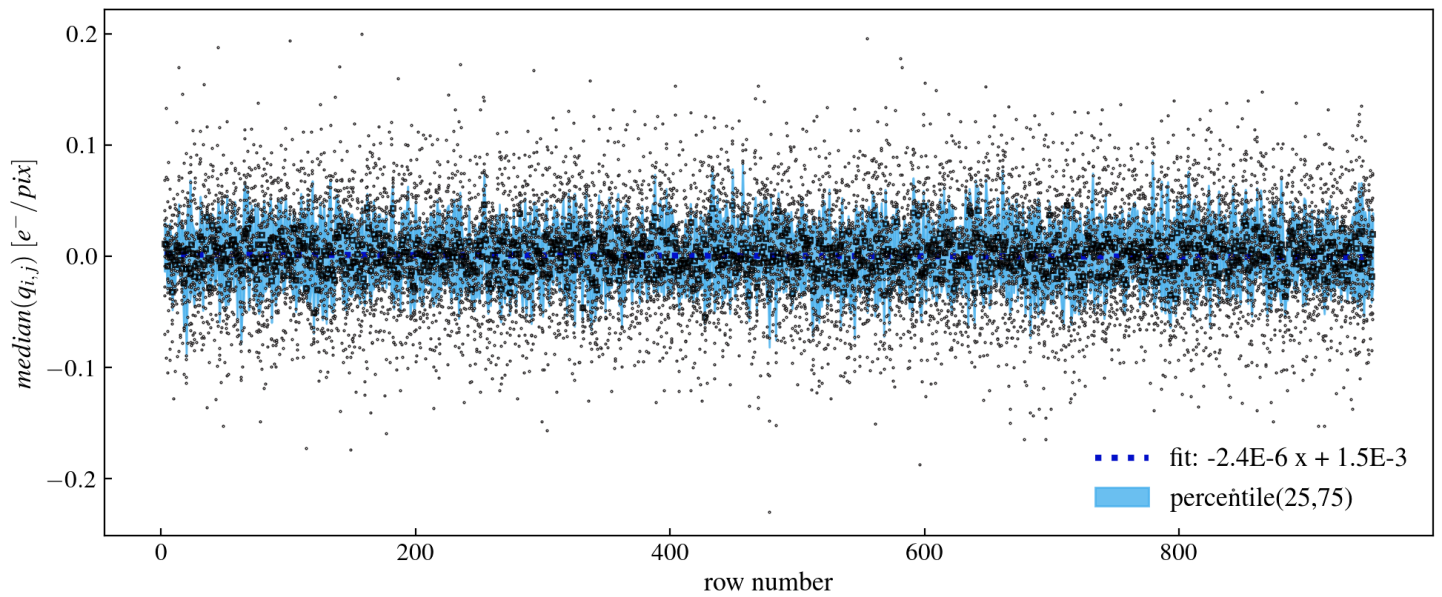


Figure 8: Overscan. Baseline vs row

Overscan. MAD vs row  
[class MEOverscanMADperRow]

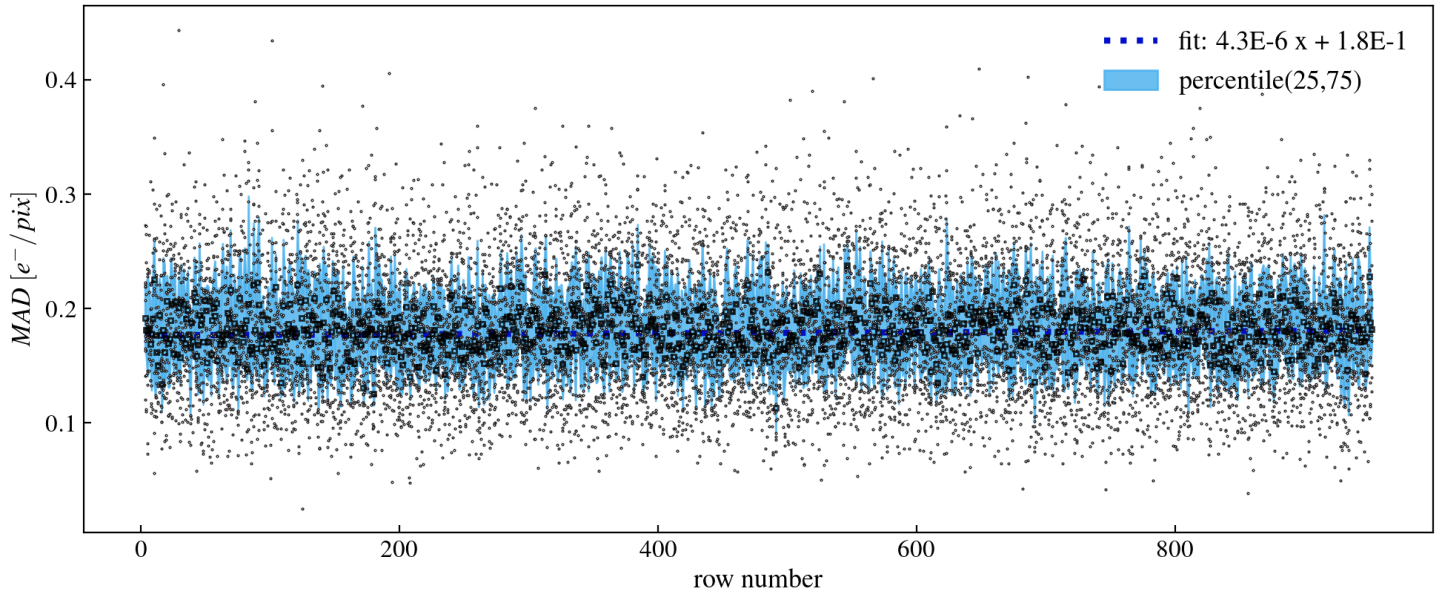


Figure 9: Overscan. MAD vs row

PedestalSubtractionProcess: mean pedestal vs file (gauss fit)  
[class MEMeanPedestalMu]

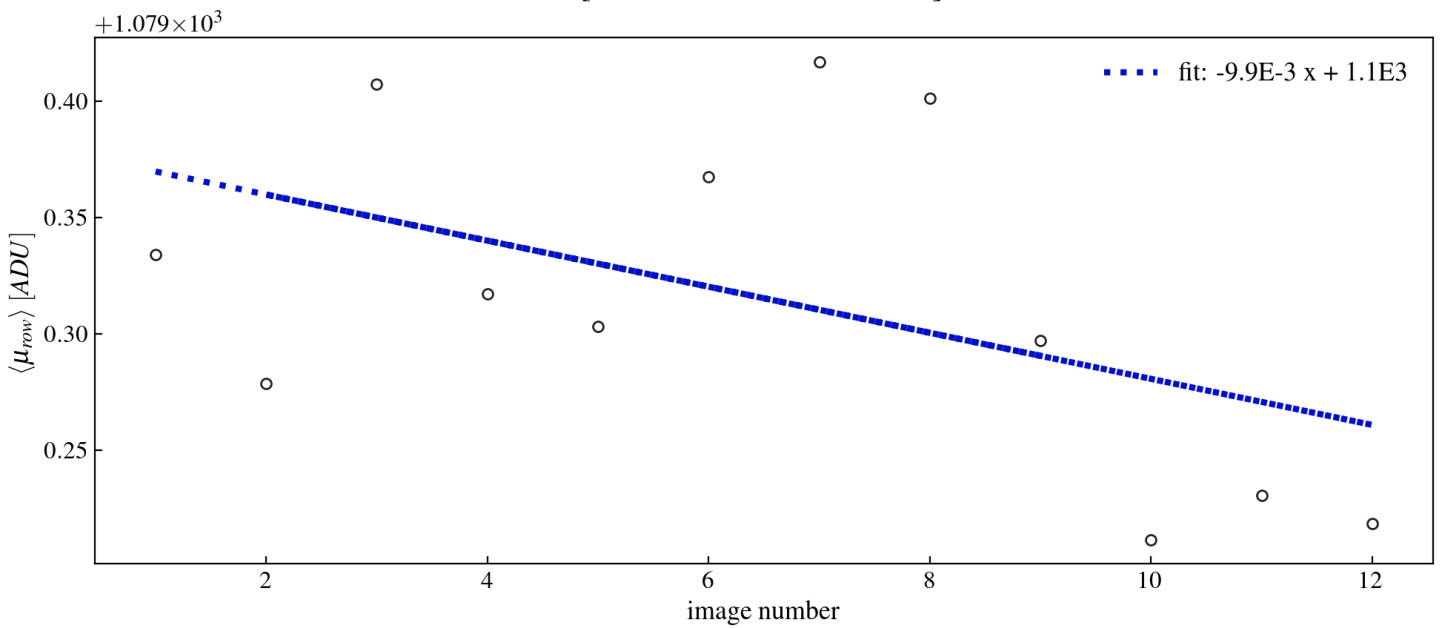


Figure 10: PedestalSubtractionProcess: mean pedestal vs file (gauss fit)

PedestalSubtractionProcess: mean sigma vs file (gauss fit)  
[class MEMeanPedestalSigma]

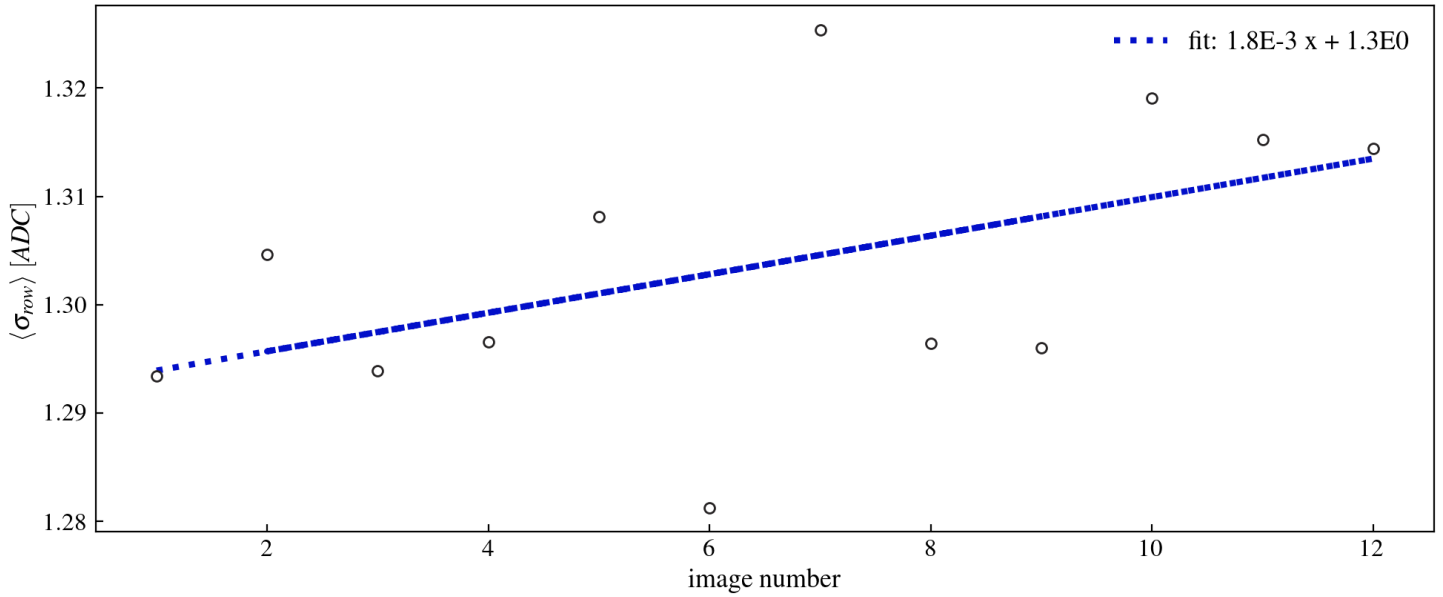


Figure 11: PedestalSubtractionProcess: mean sigma vs file (gauss fit)

PedestalSubtractionProcess: mean pedestal vs file (gauss fit)  
[class MEPedestalMuPerRow]

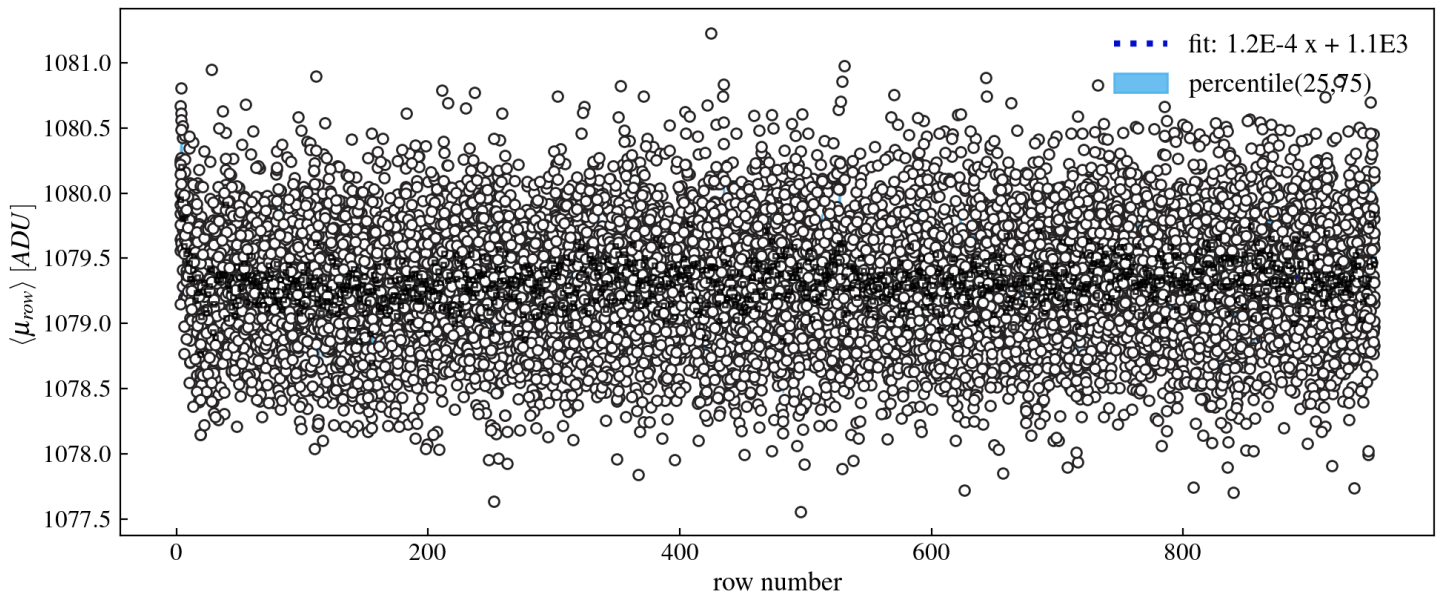


Figure 12: PedestalSubtractionProcess: mean pedestal vs file (gauss fit)



PedestalSubtractionProcess: mean sigma vs file (gauss fit)  
[class MEPedestalSigmaPerRow]

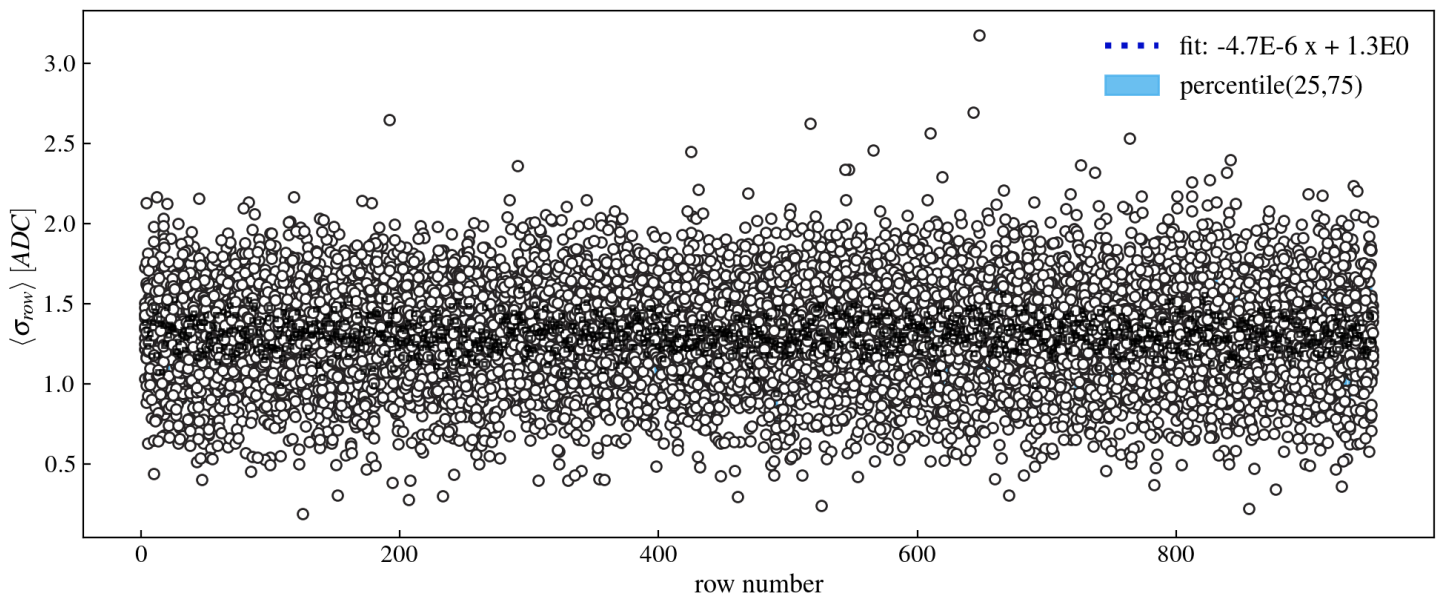


Figure 13: PedestalSubtractionProcess: mean sigma vs file (gauss fit)

Masked pixels [run 44]: frequency  
[class MEMaskedPixels]

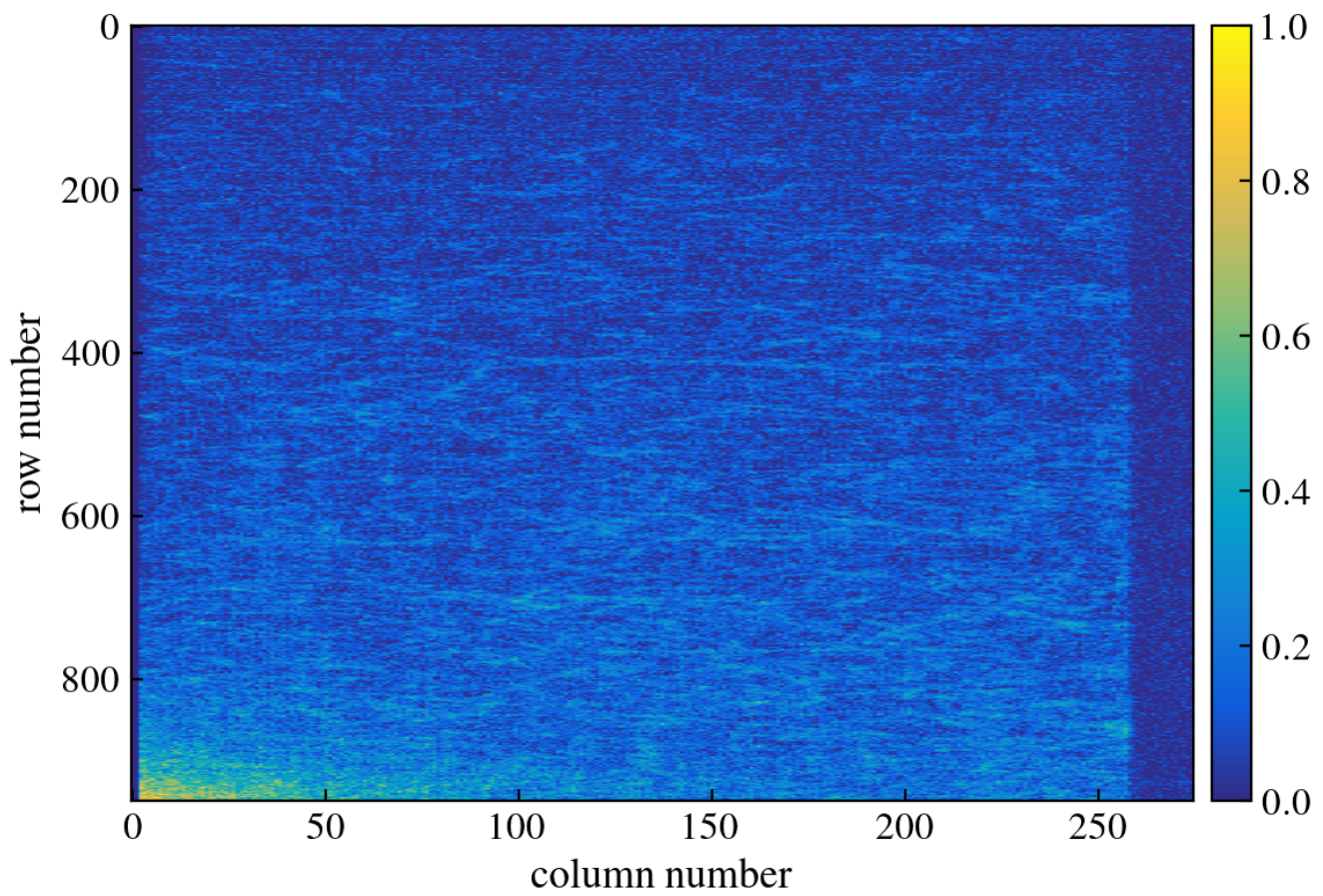


Figure 14: Masked pixels

Masked pixels [run 44]: mask  
[1188] masked pixels  
[class MEMaskedPixels]

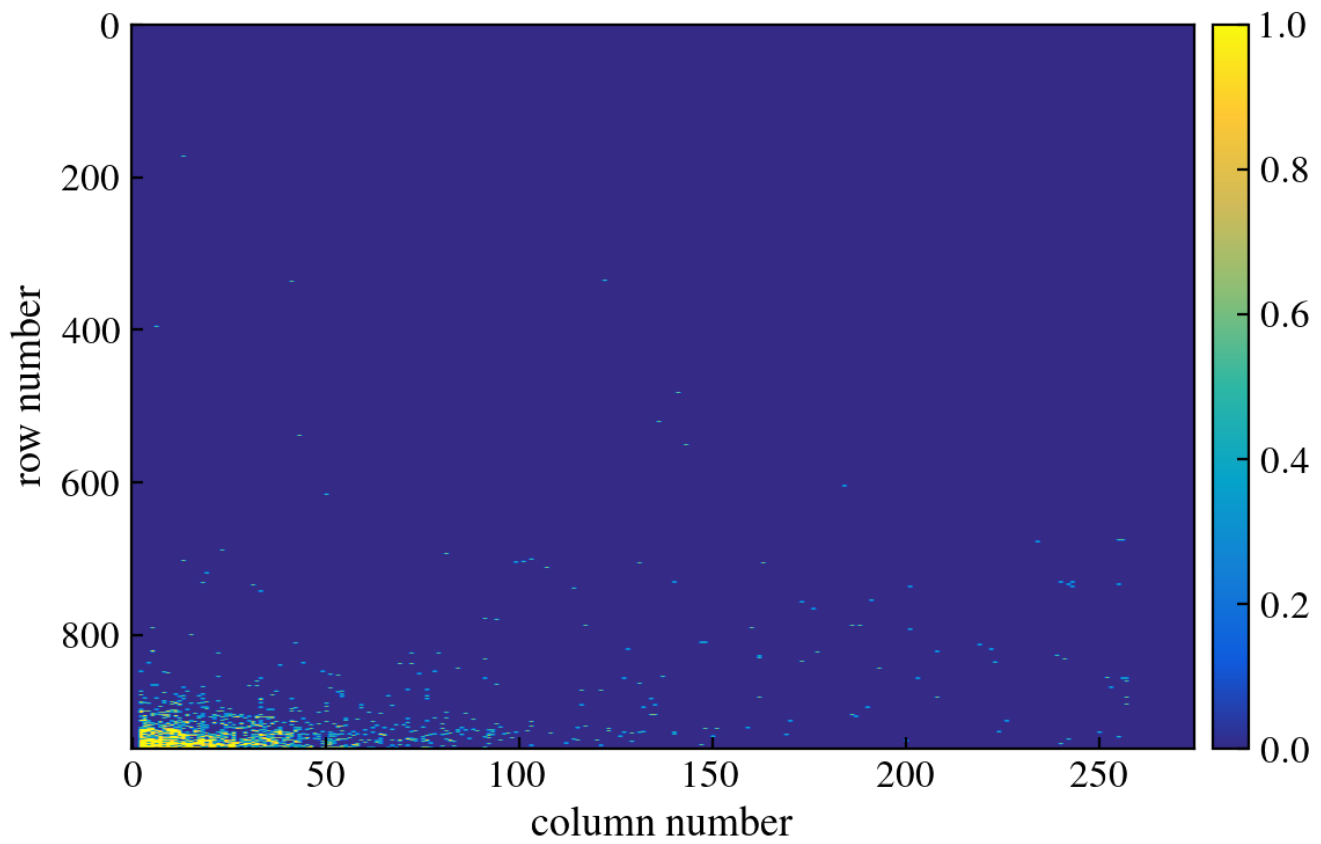


Figure 15: Masked pixels

Single Pixel Energy Distribution [w/ 5.06 ADC/e- and 3.74eV/e-]  
[class MESinglePED]

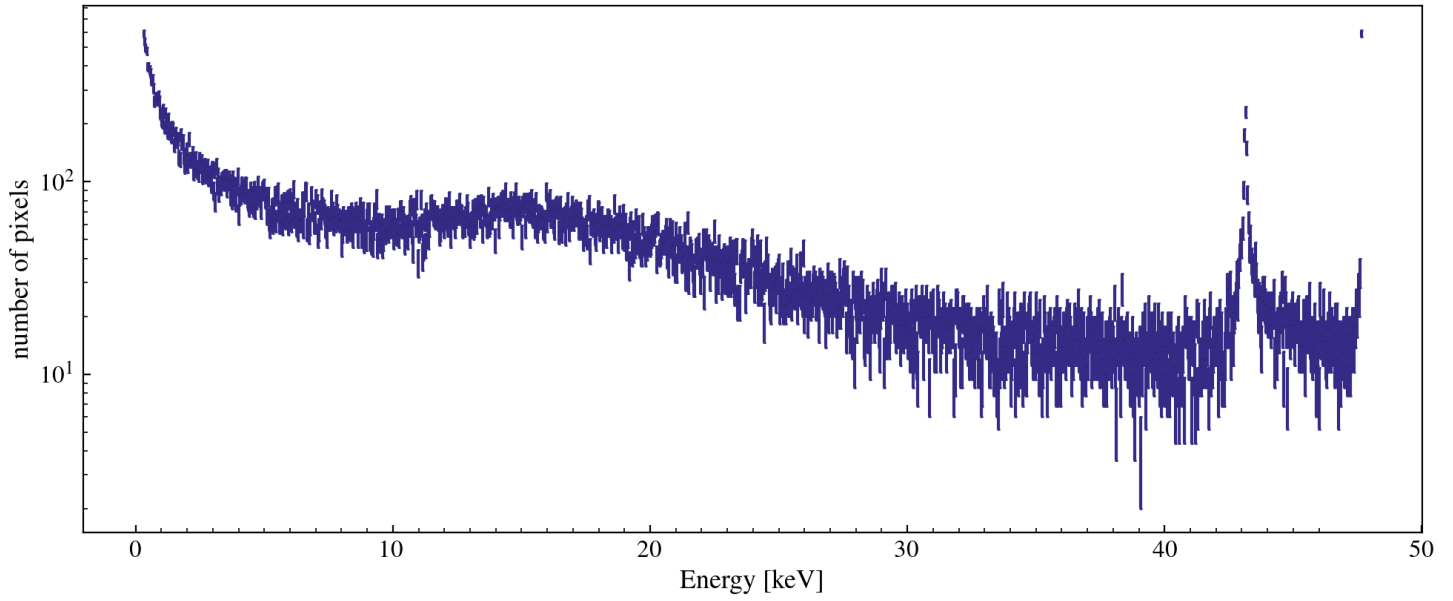


Figure 16: Number of pixels with  $E > 300.0$  eV vs file

Number of pixels with  $E > 300.0$  eV vs file  
[class MESinglePED]

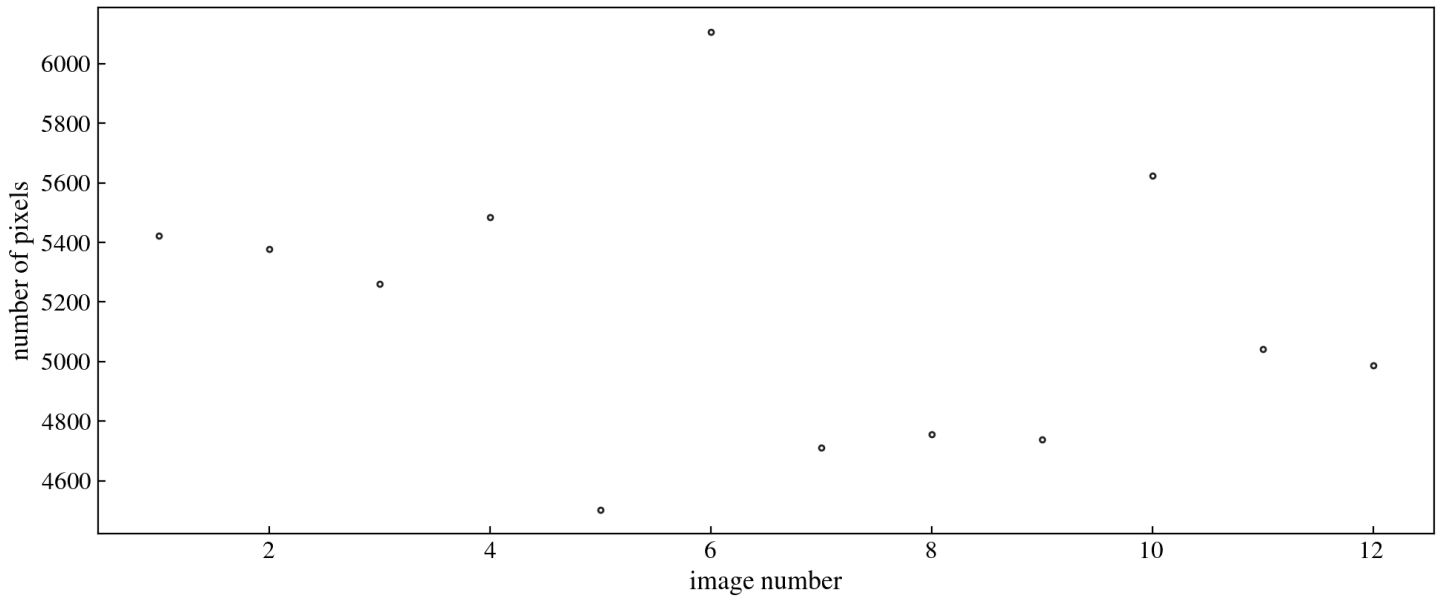


Figure 17: Number of pixels with  $E > 300.0$  eV vs file

# Pixel Charge Distribution

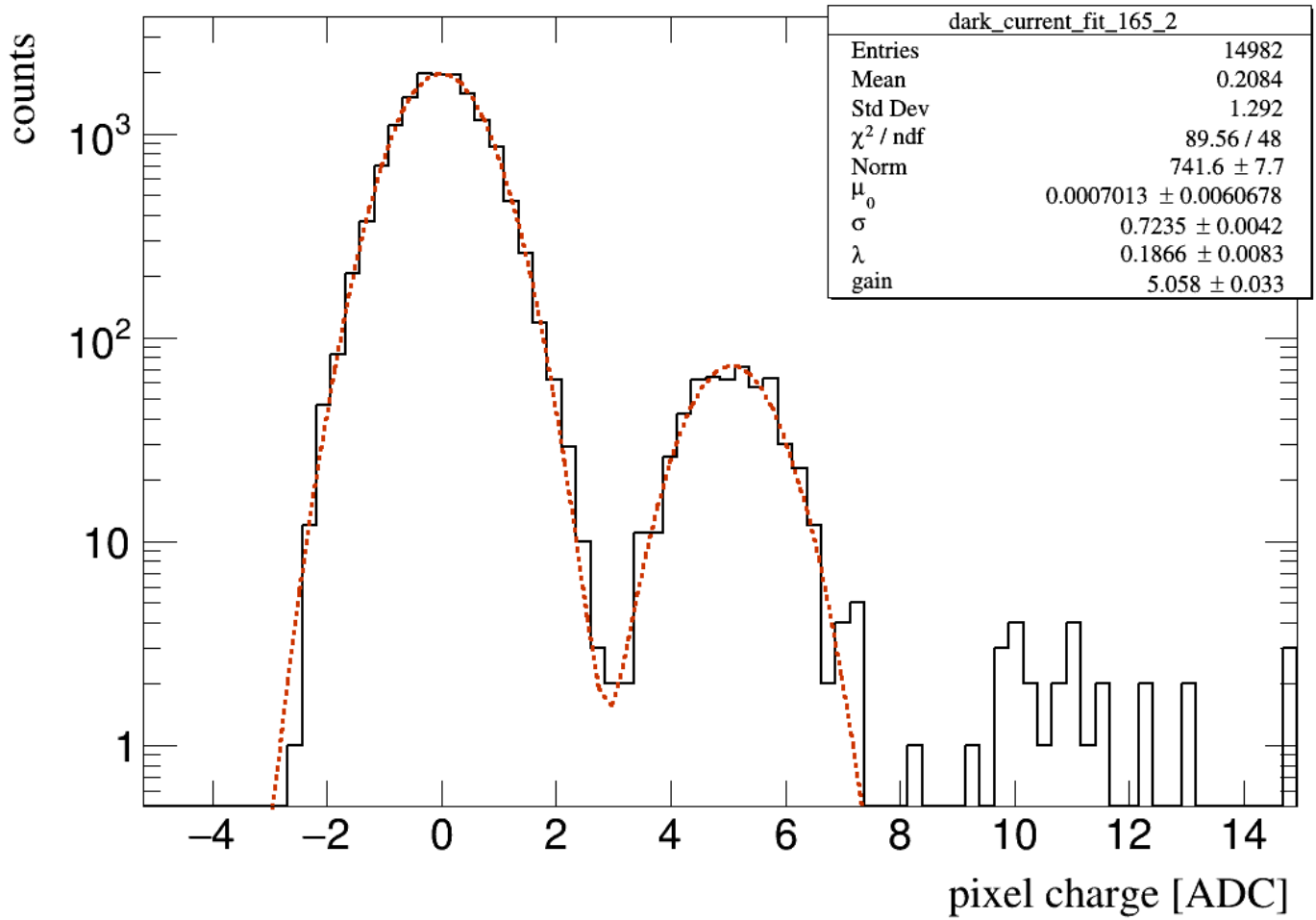


Figure 18: Pixel Charge Distribution

### Image used to Fit DC (HR image)

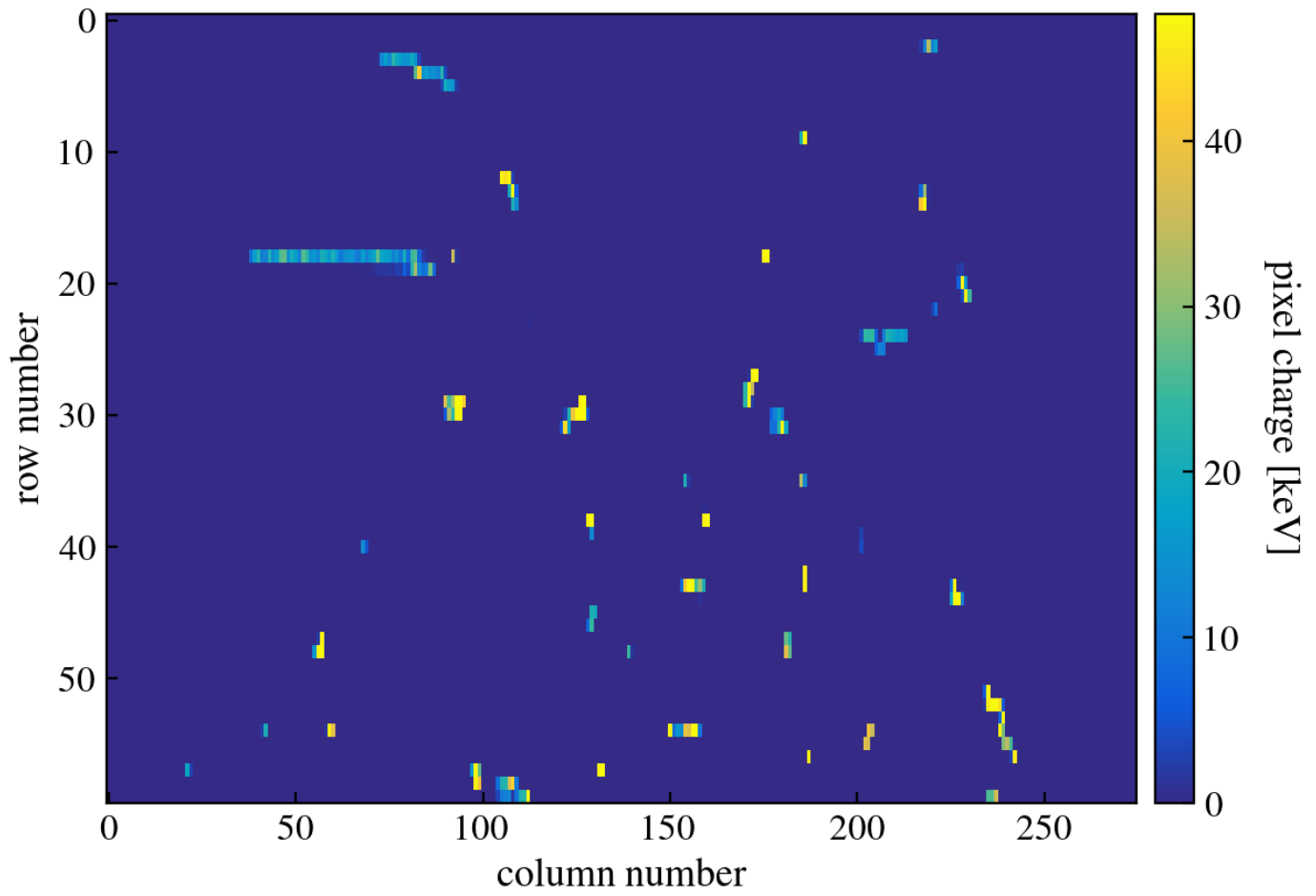


Figure 19: Pixel Charge Distribution

# Pixel Charge Distribution

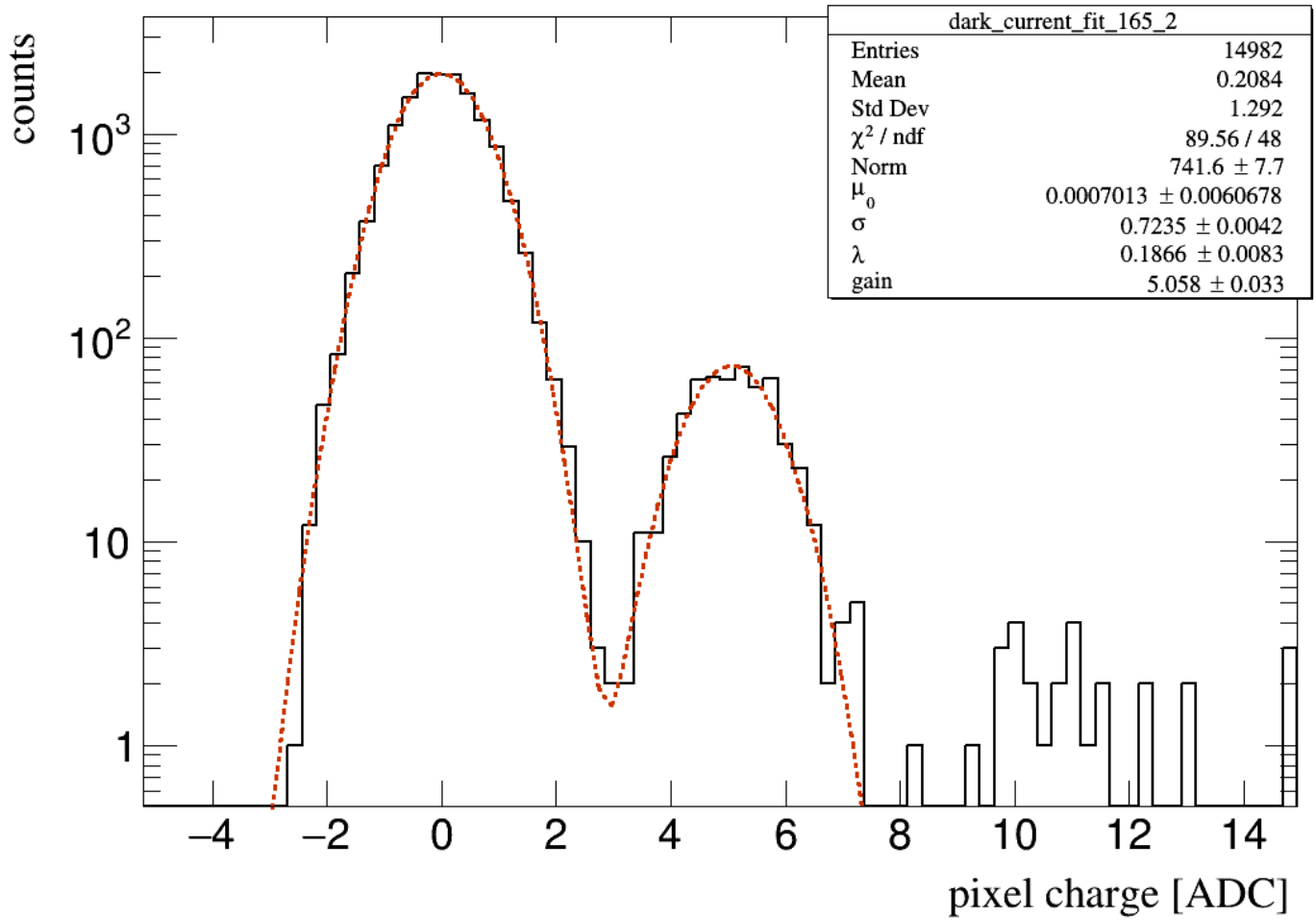


Figure 20: Pixel Charge Distribution

## Image used to Fit DC (HR image)

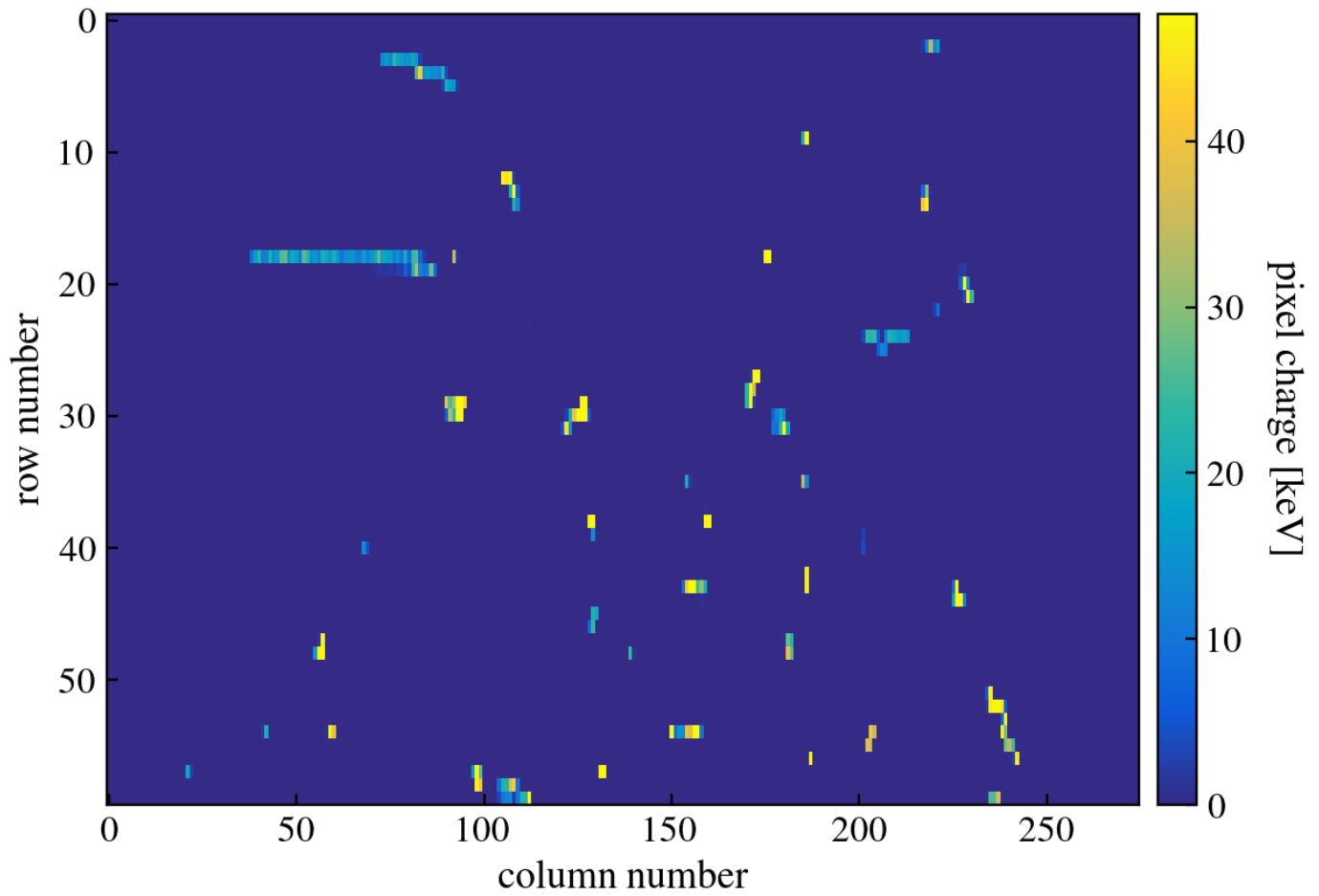


Figure 21: Pixel Charge Distribution



Zero electron peak (from MEFitDC) vs Image  
[class MEFitDCMu0]

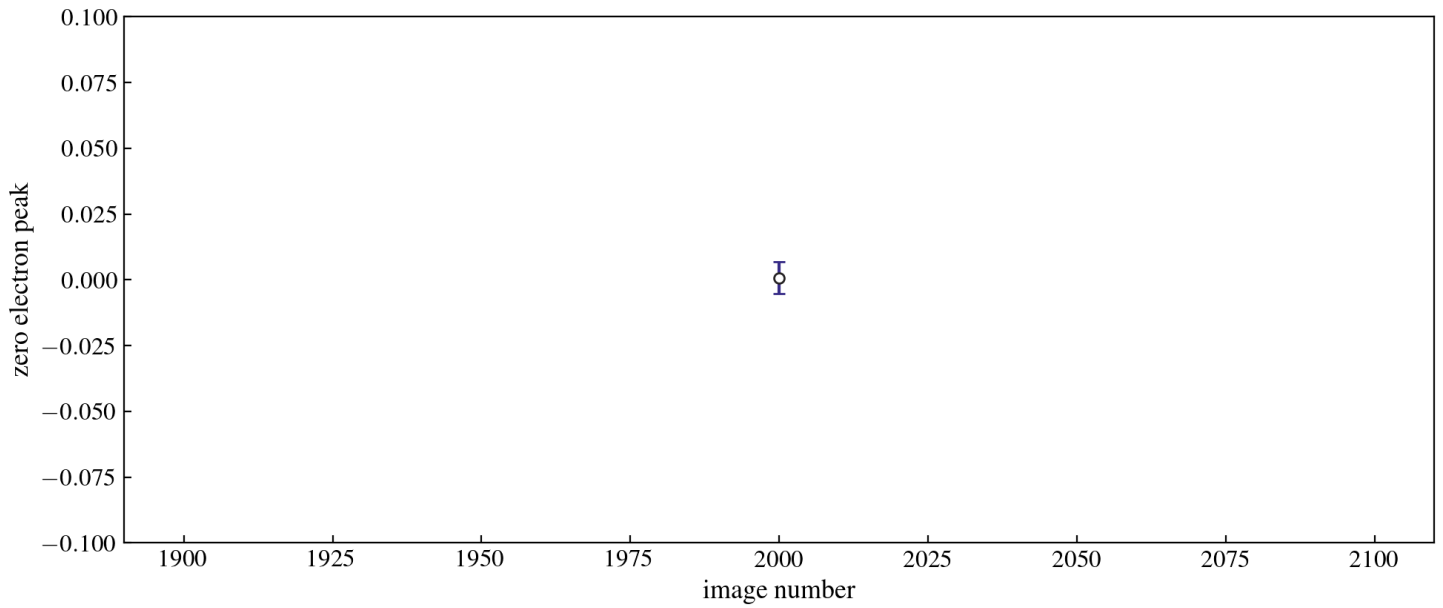


Figure 22: Zero electron peak (from MEFitDC) vs Image

Electron Single Resolution (from MEFitDC) vs Image  
[class MEFitDCSigma]

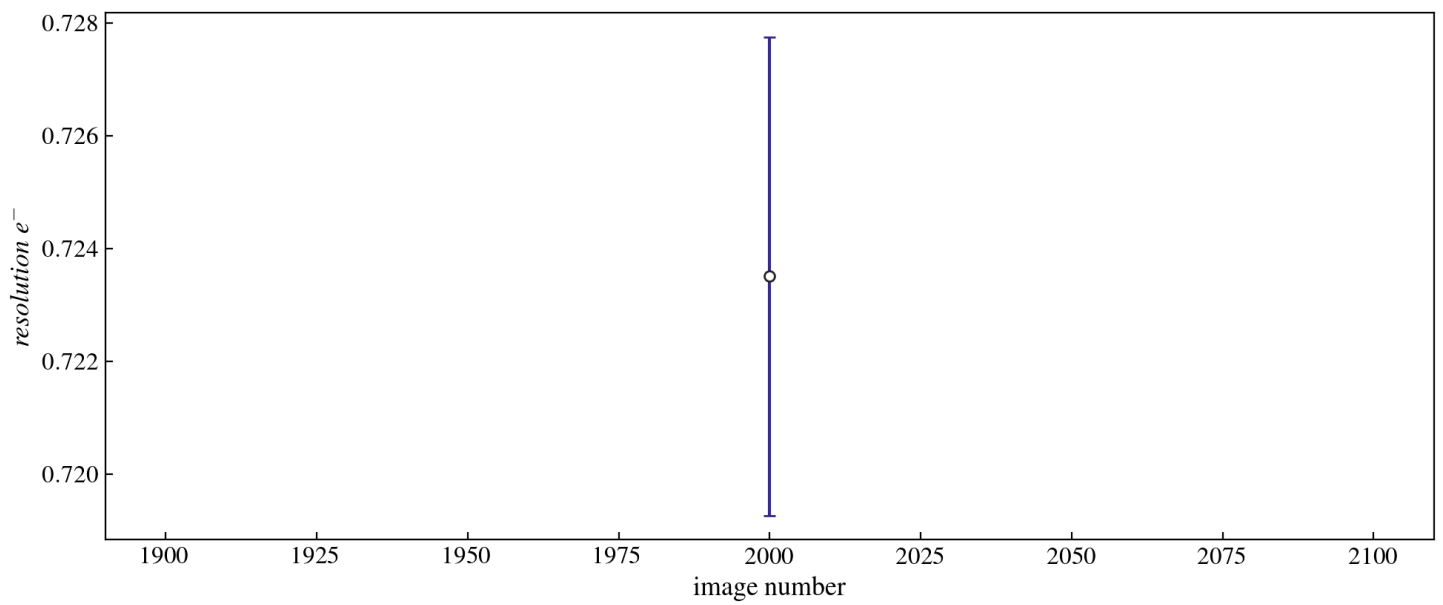


Figure 23: Electron Single Resolution (from MEFitDC) vs Image

Dark current (from MEFitDC per Row) vs Image  
[class MEFitDCLambda]

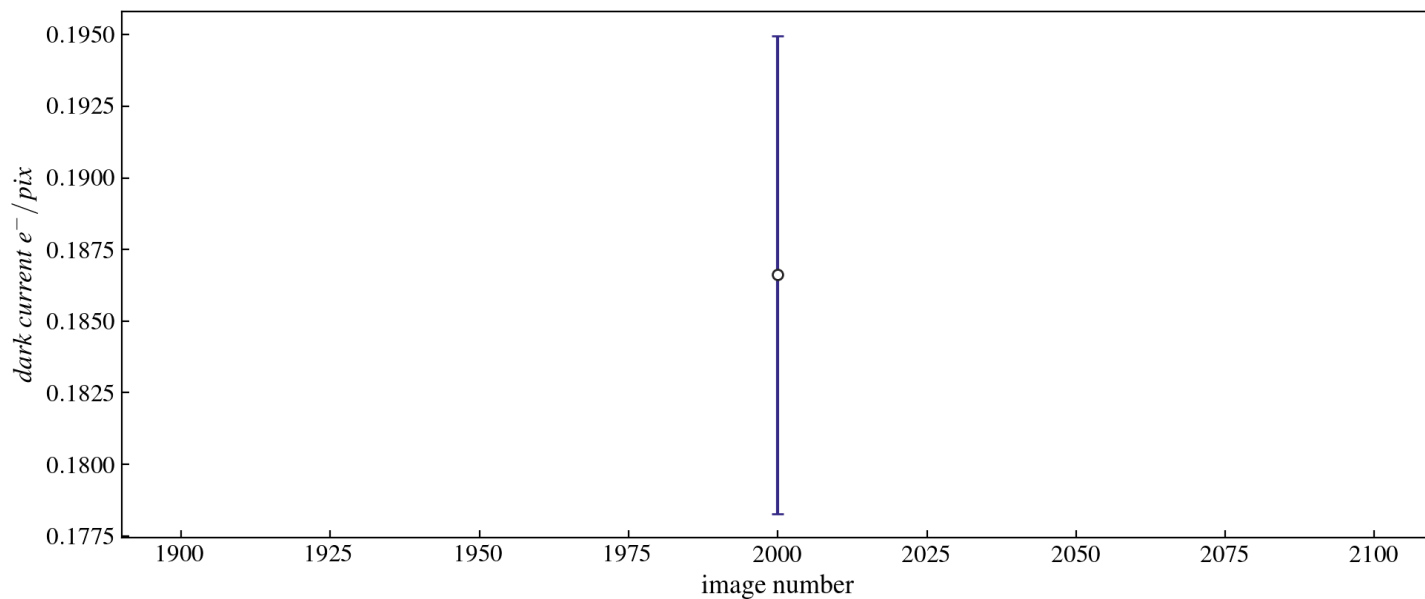


Figure 24: Dark current (from MEFitDC per Row) vs Image

Calibration constant (from MEFitDC) vs Image  
[class MEFitDCCalibration]

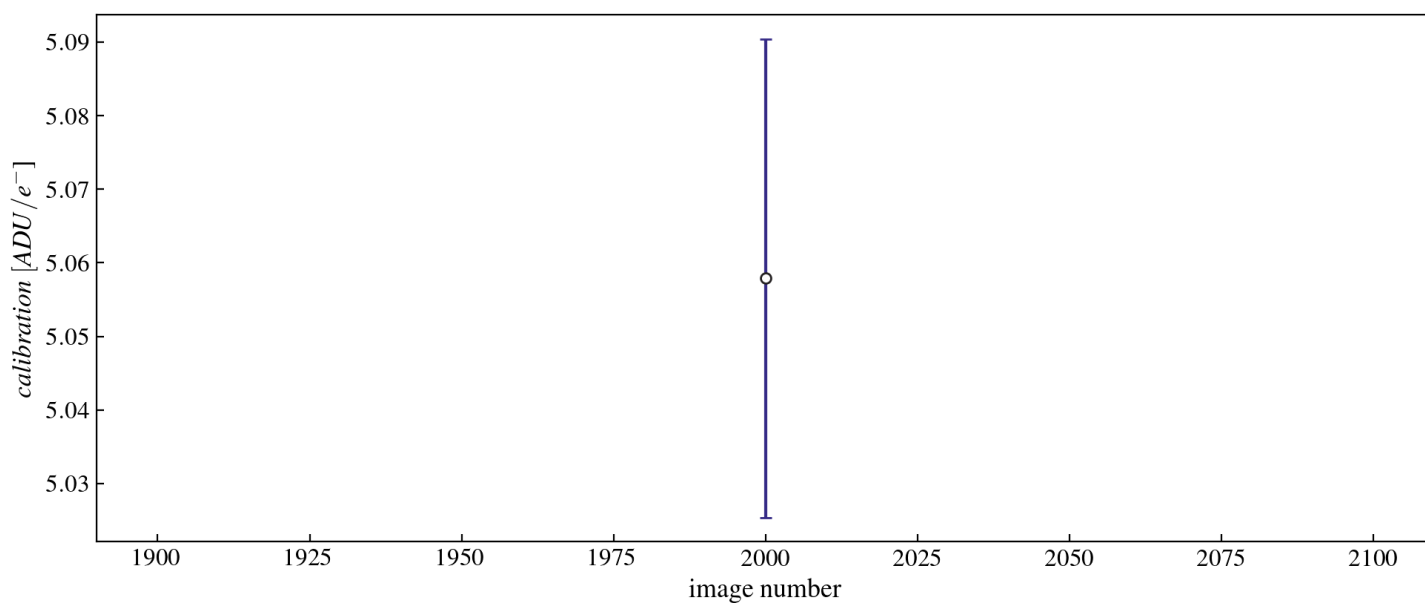


Figure 25: Calibration constant (from MEFitDC) vs Image

Overscan. PCD Gaussian fit:  $\mu_0$   
[class MEOverscanPCDMu]

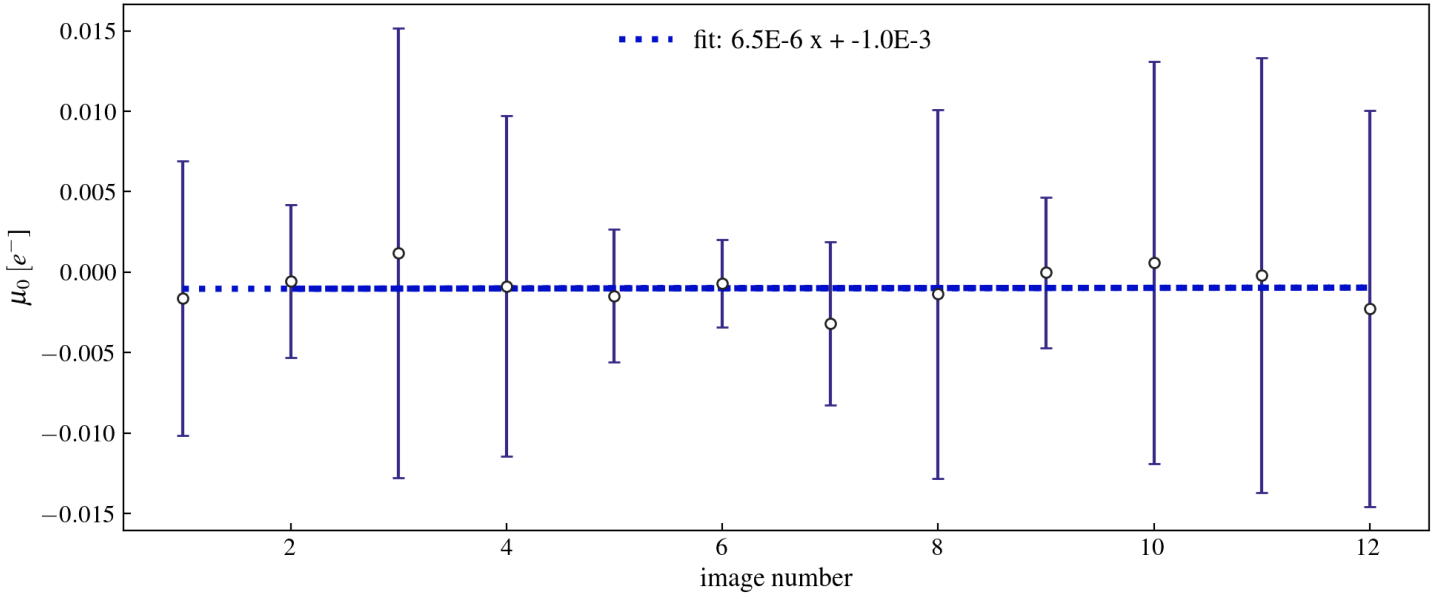


Figure 26: *Overscan. PCD Gaussian fit:  $\mu_0$*

Overscan. PCD Gaussian fit:  $\sigma_0$   
[class MEOverscanPCDSigma]

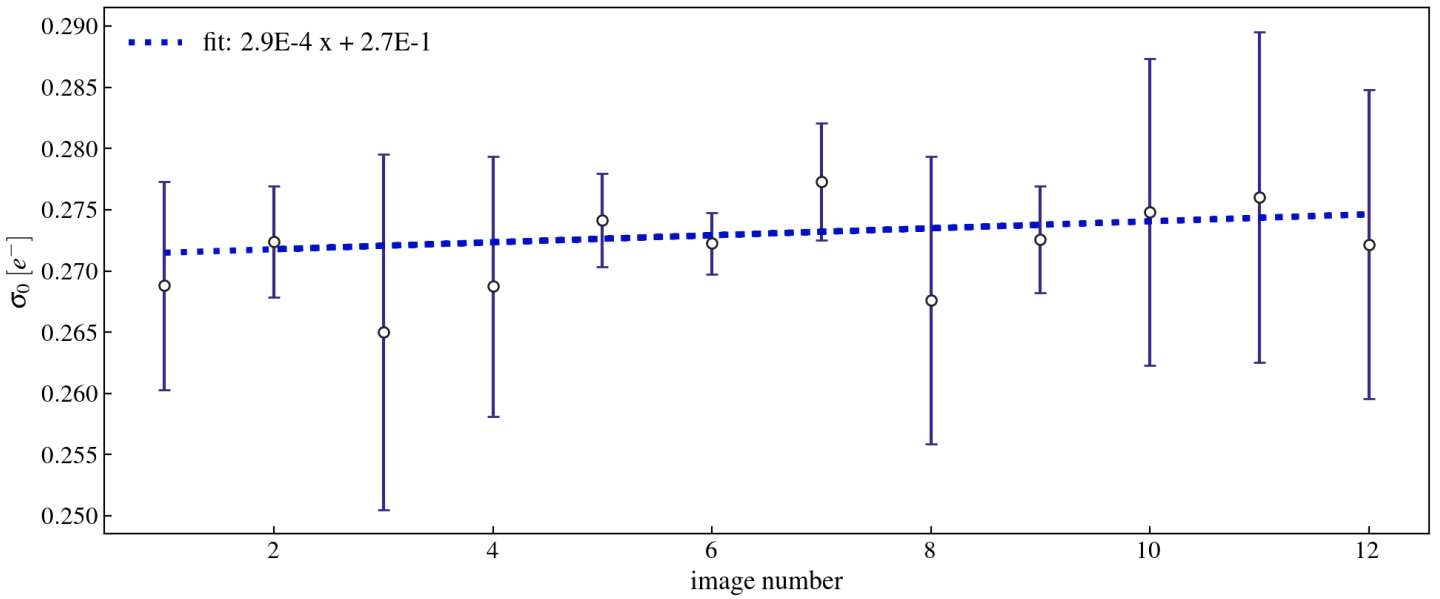


Figure 27: *Overscan. PCD Gaussian fit:  $\sigma_0$*

Electronic column transient showing an exponential behaviour  
[class MEColTransient]

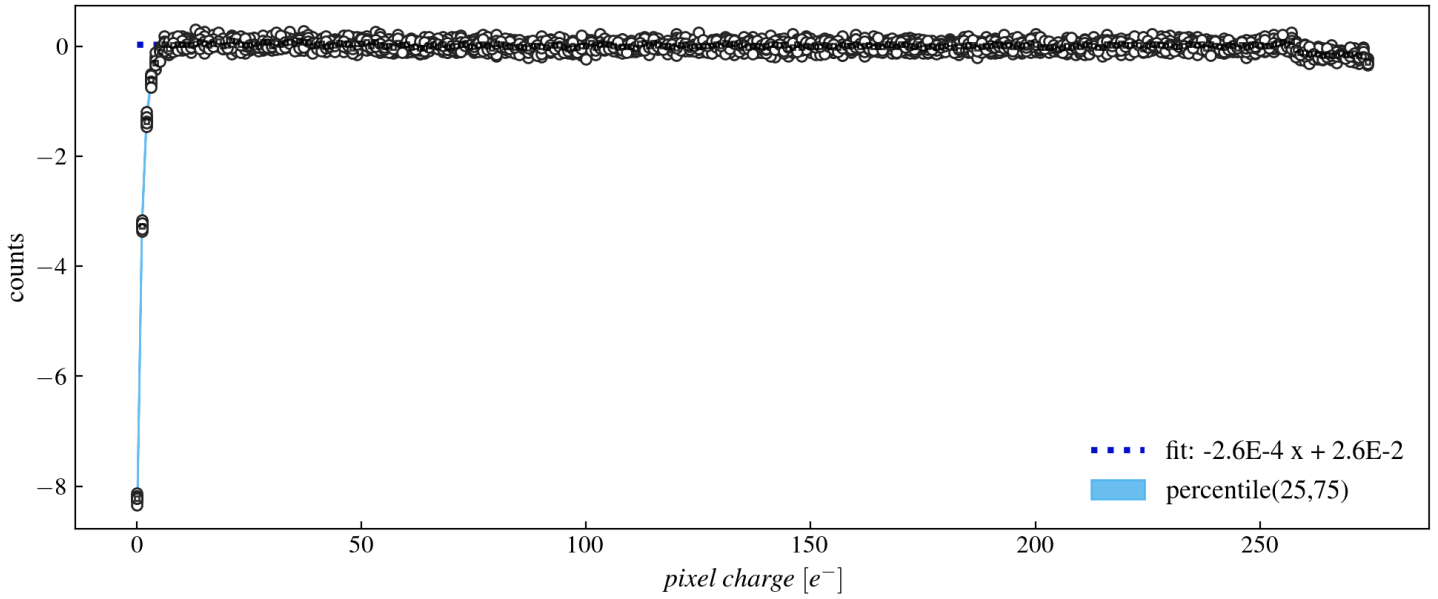


Figure 28: Electronic column transient showing an exponential behaviour

Column transient decay constant (from MEColTransient) vs Image  
[class MEColTransientMu]

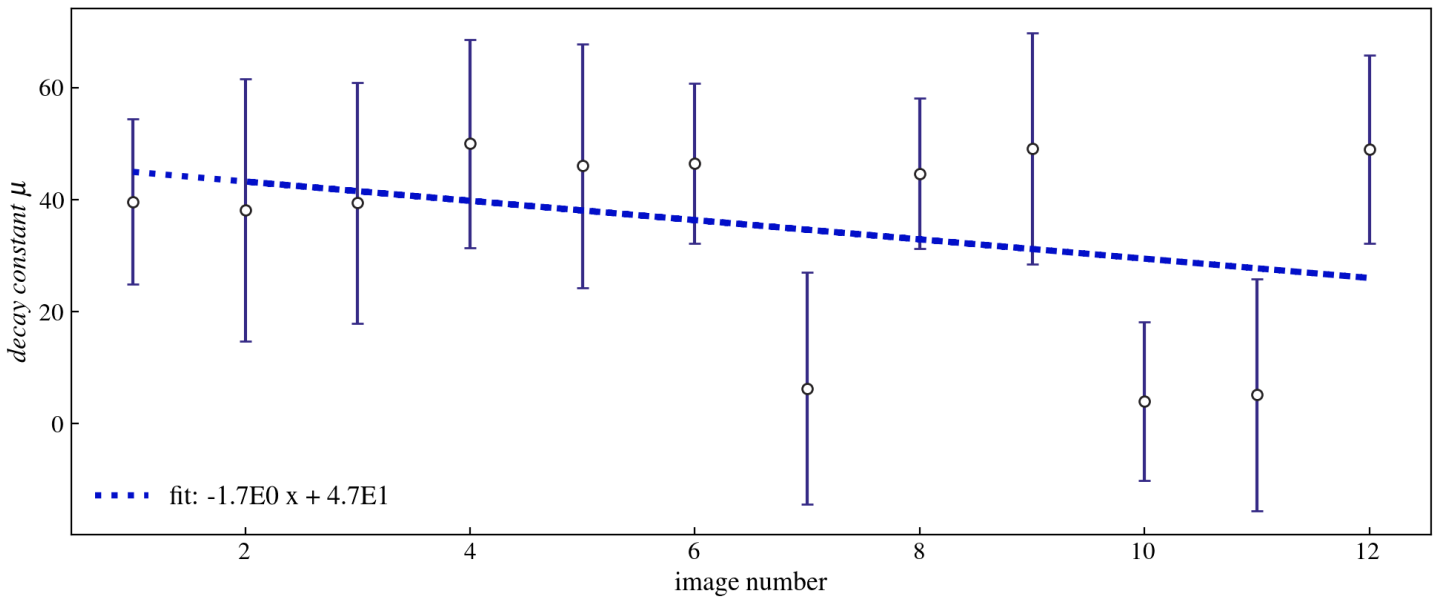


Figure 29: Column transient decay constant (from MEColTransient) vs Image

Column transient amplitude (from MEColTransient) vs Image  
[class MEColTransientAmplitude]

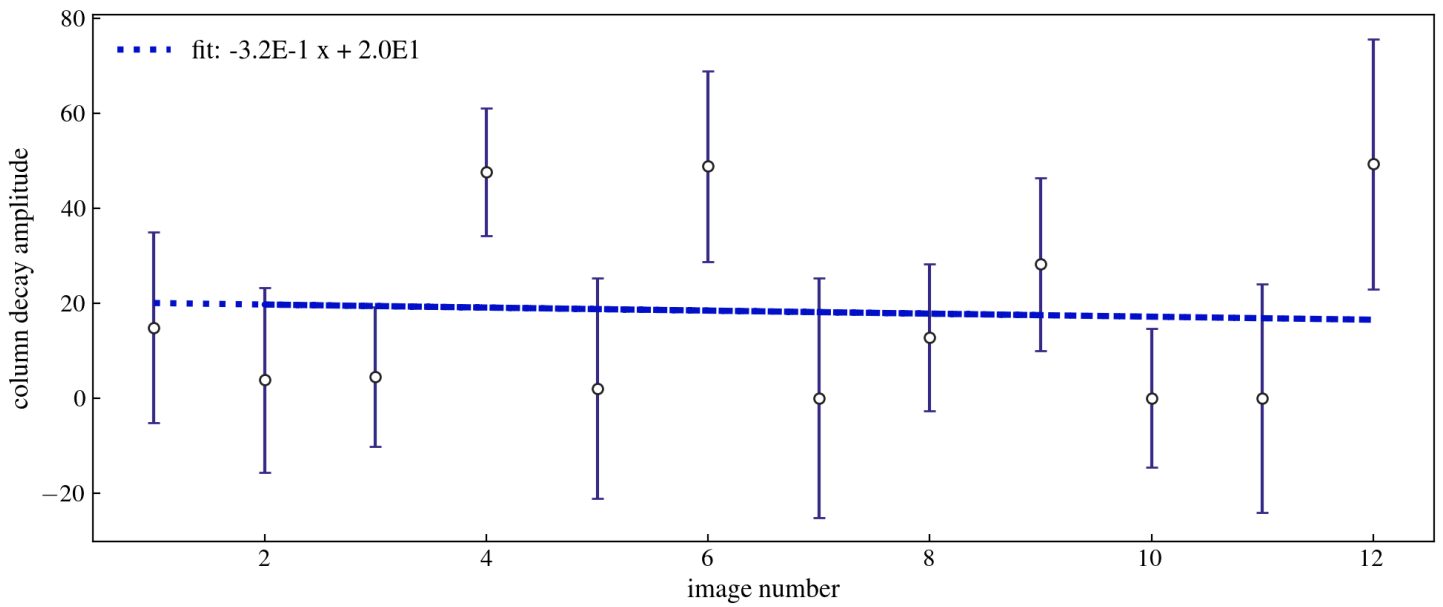


Figure 30: Column transient amplitude (from MEColTransient) vs Image

CCD Image: run 44, image 2000  
[class MECCDImage]

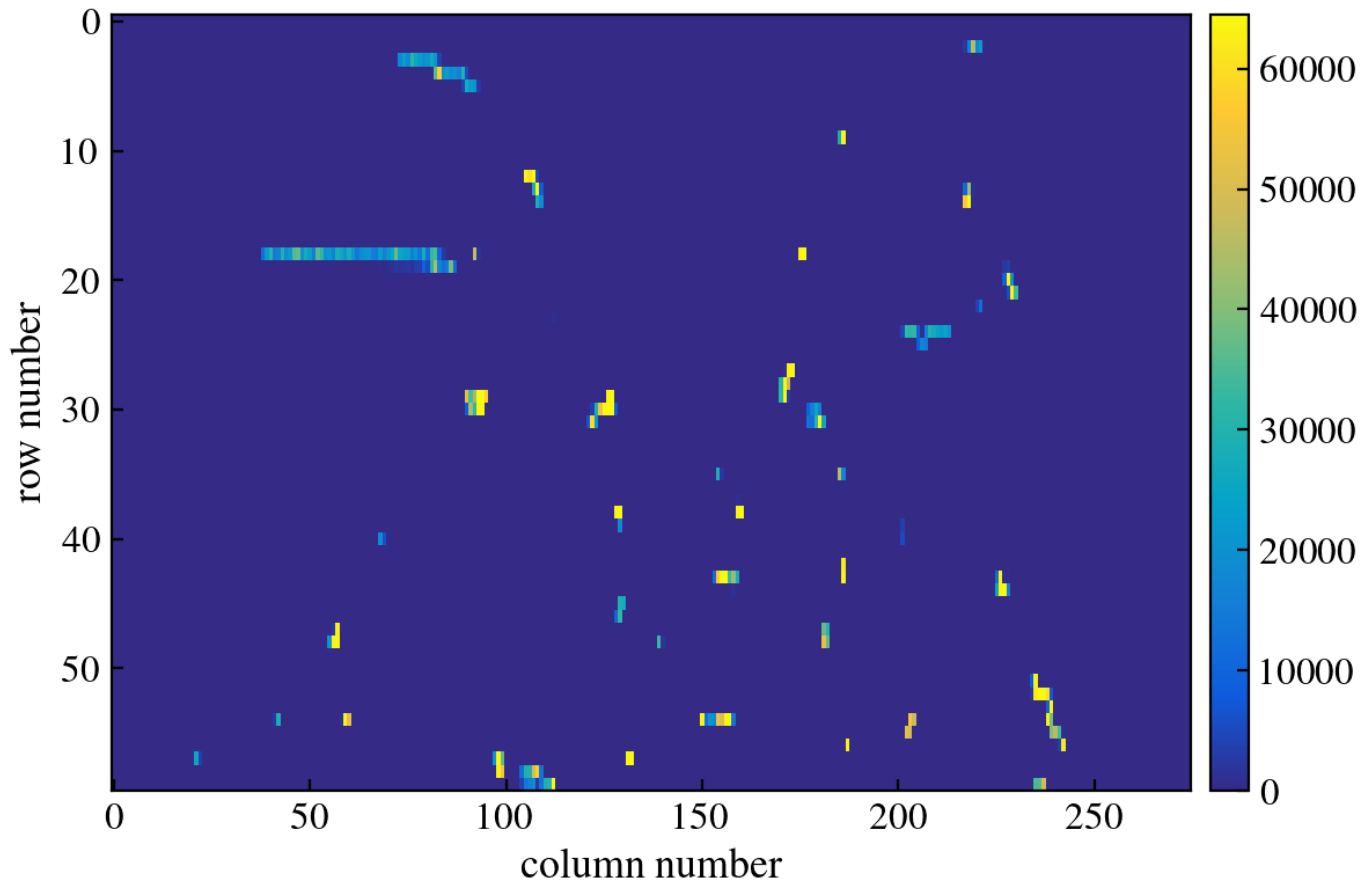


Figure 31: CCD Image

CCD Image: run 44, image 1  
[class MECCDImage]

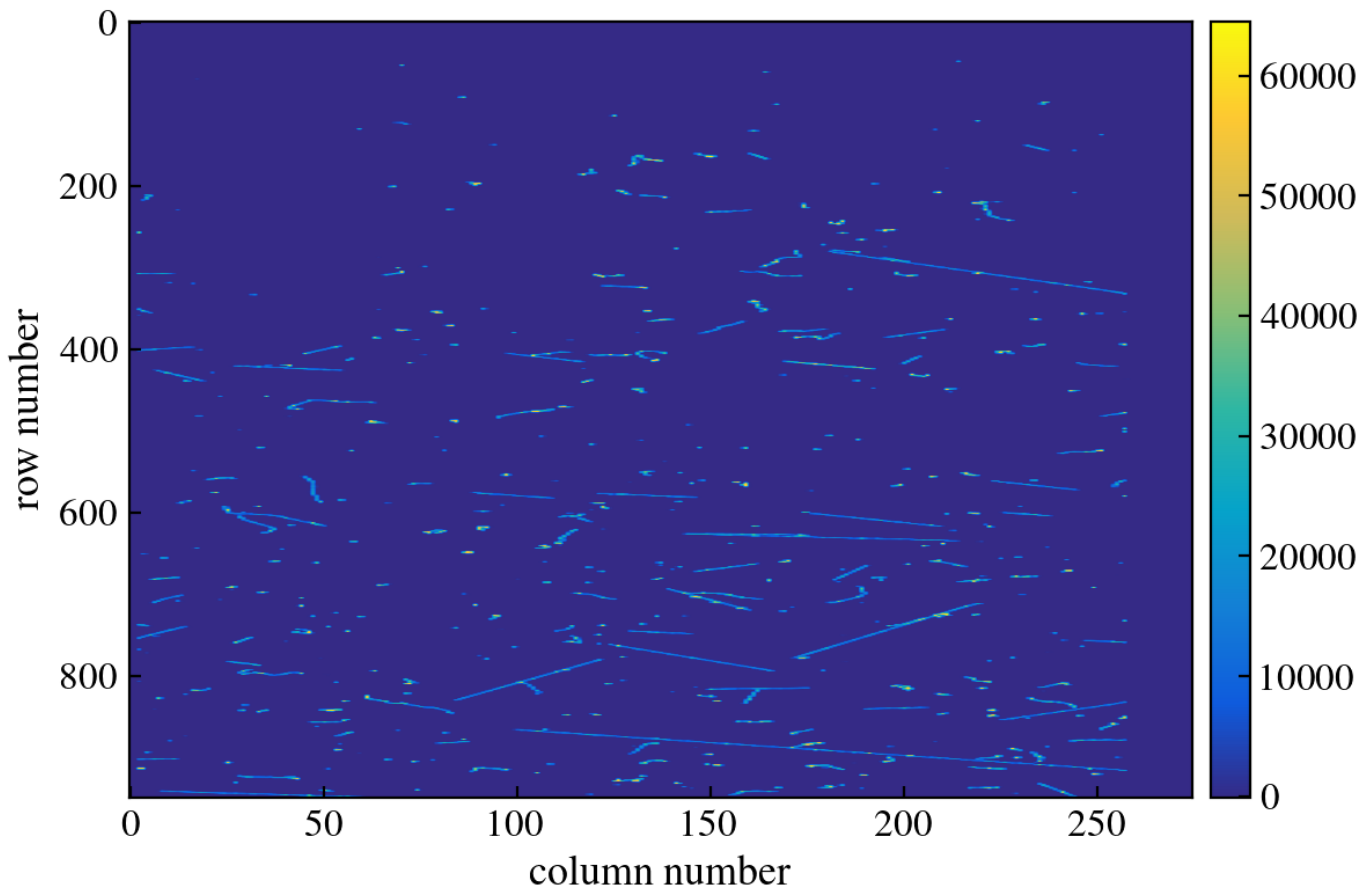


Figure 32: CCD Image

CCD Image: run 44, image 10  
[class MECCDImage]

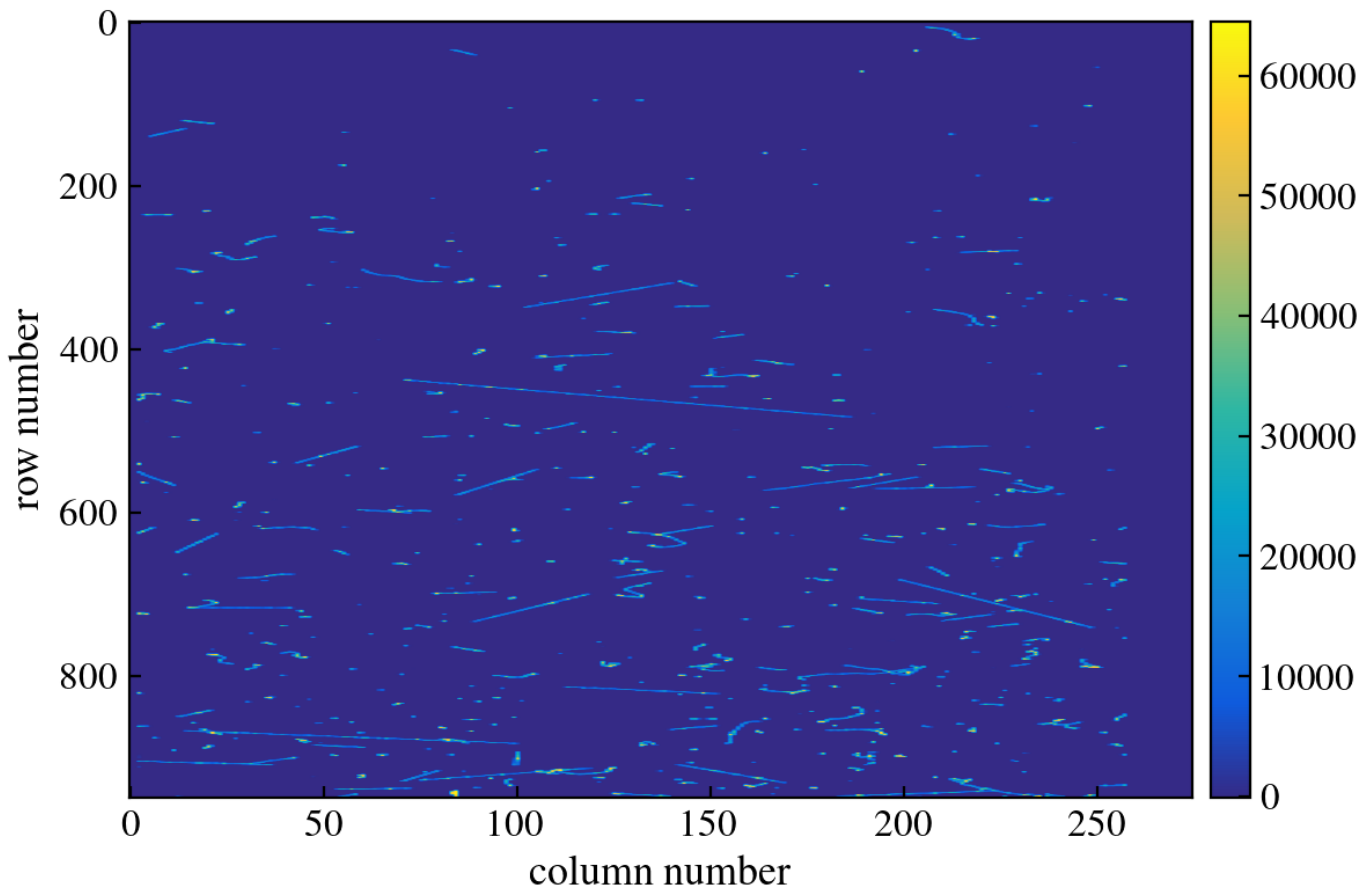


Figure 33: CCD Image



CCD Image: run 44, image 11  
[class MECCDImage]

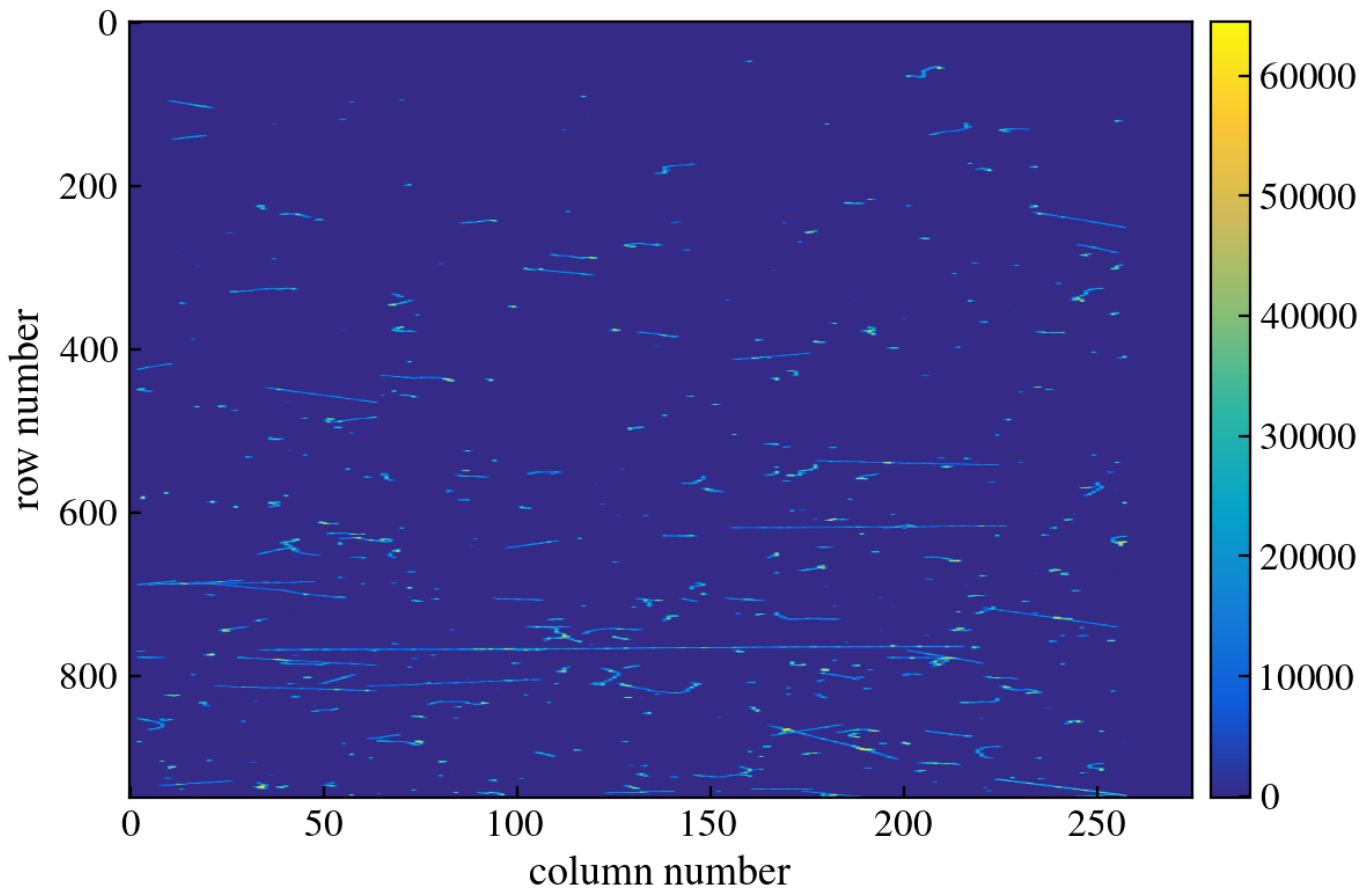


Figure 34: CCD Image

CCD Image: run 44, image 12  
[class MECCDImage]

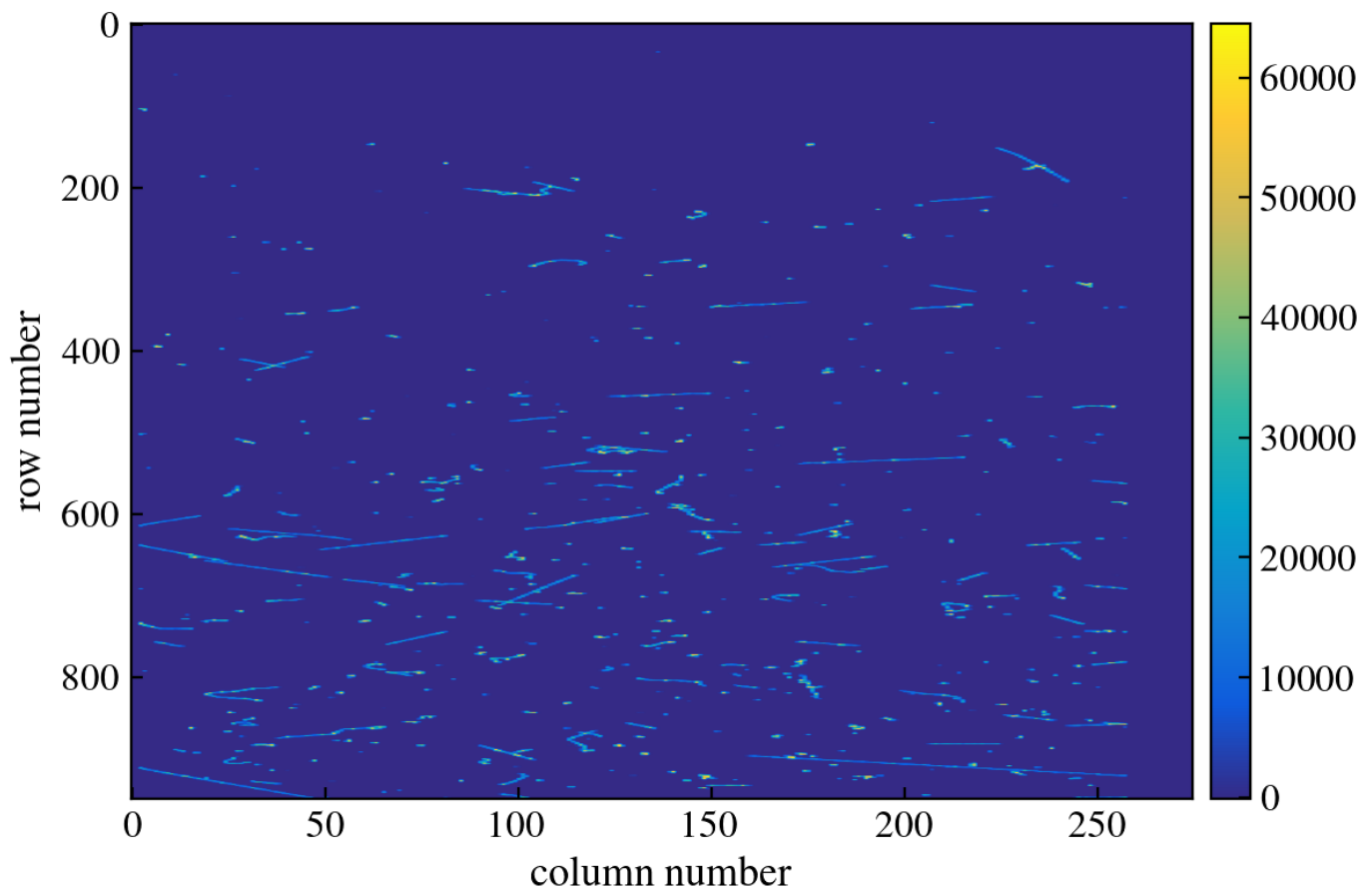


Figure 35: CCD Image

CCD Image: run 44, image 2  
[class MECCDImage]

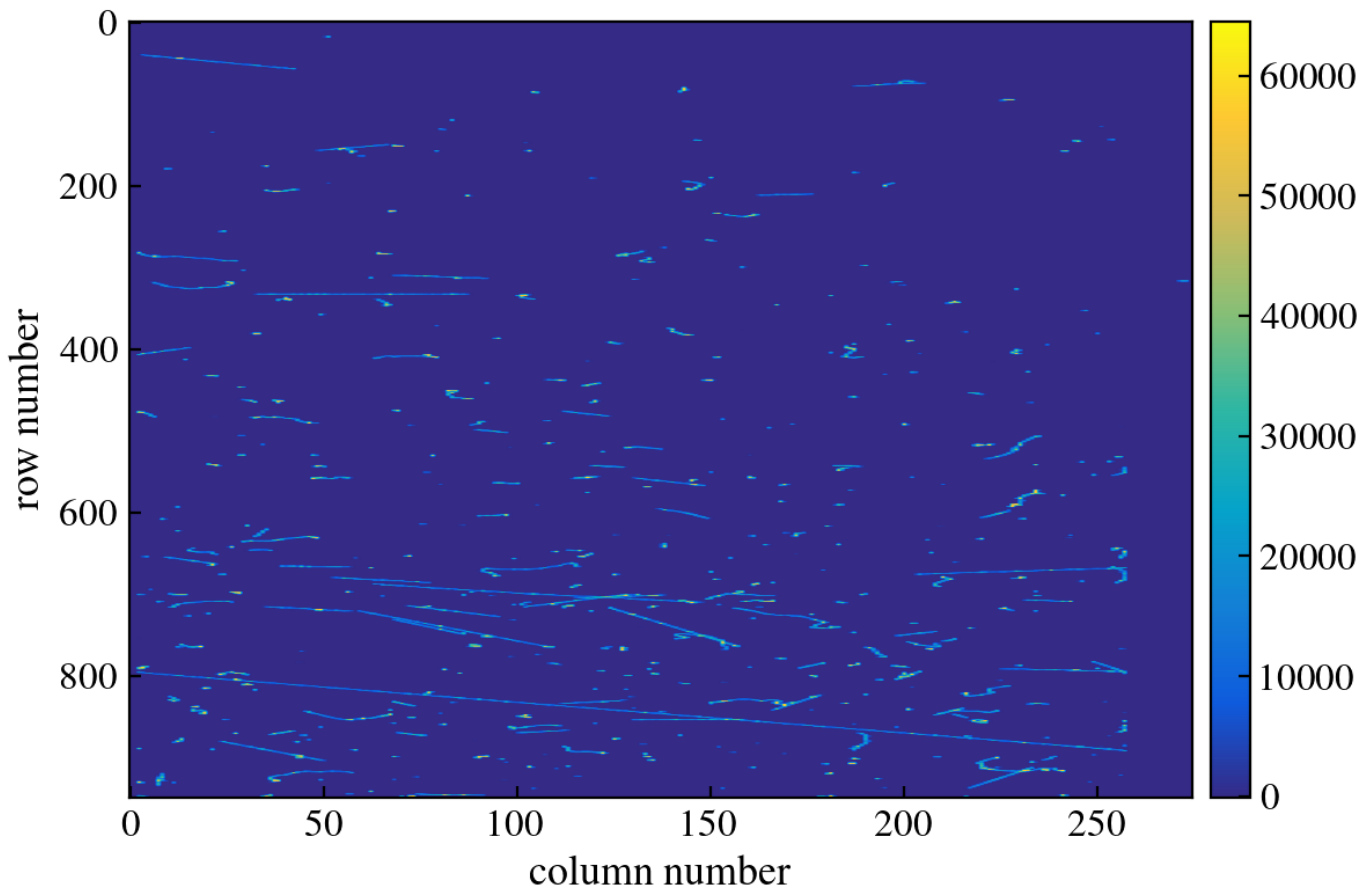


Figure 36: CCD Image

CCD Image: run 44, image 3  
[class MECCDImage]

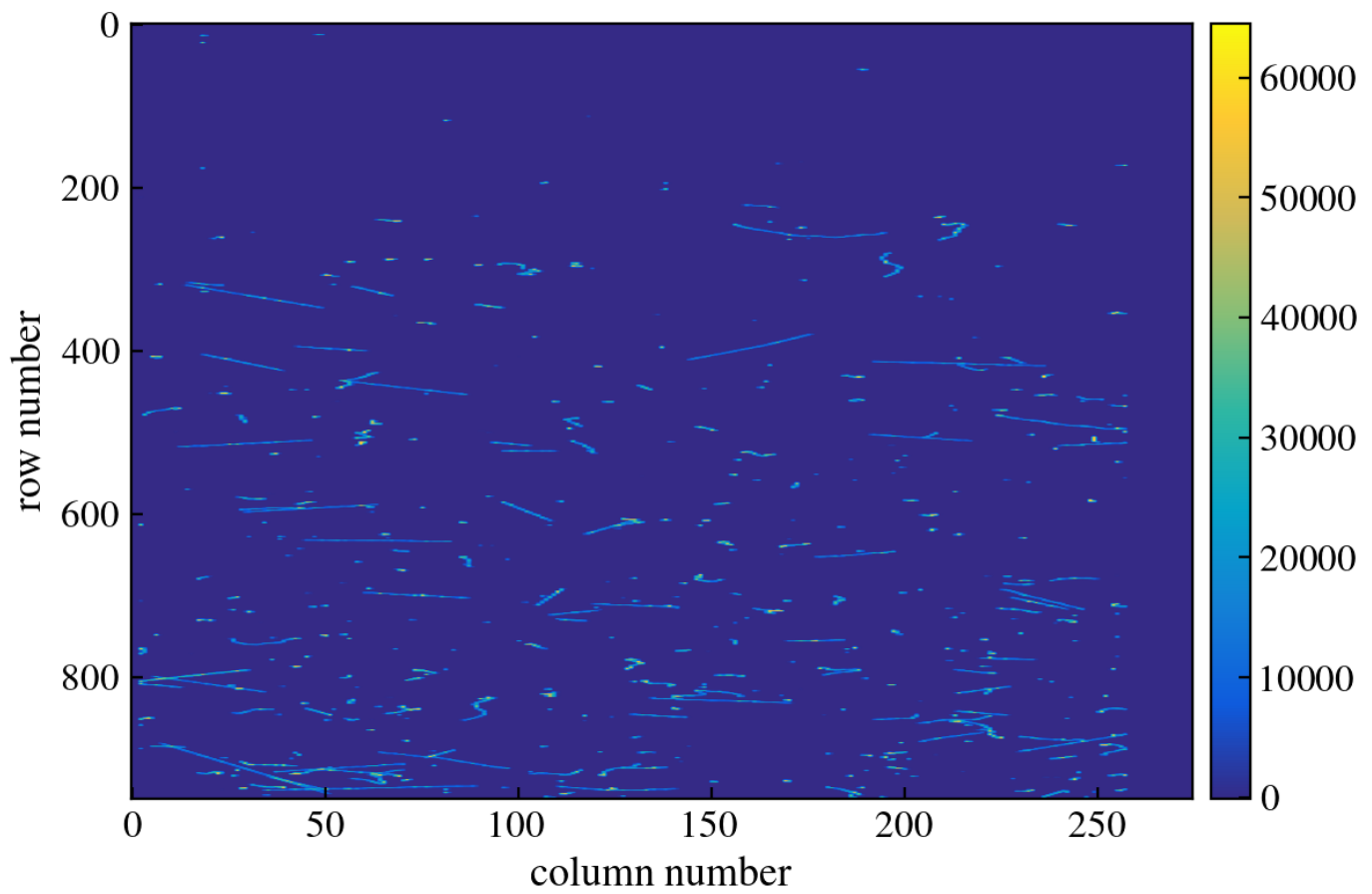


Figure 37: CCD Image

CCD Image: run 44, image 4  
[class MECCDImage]

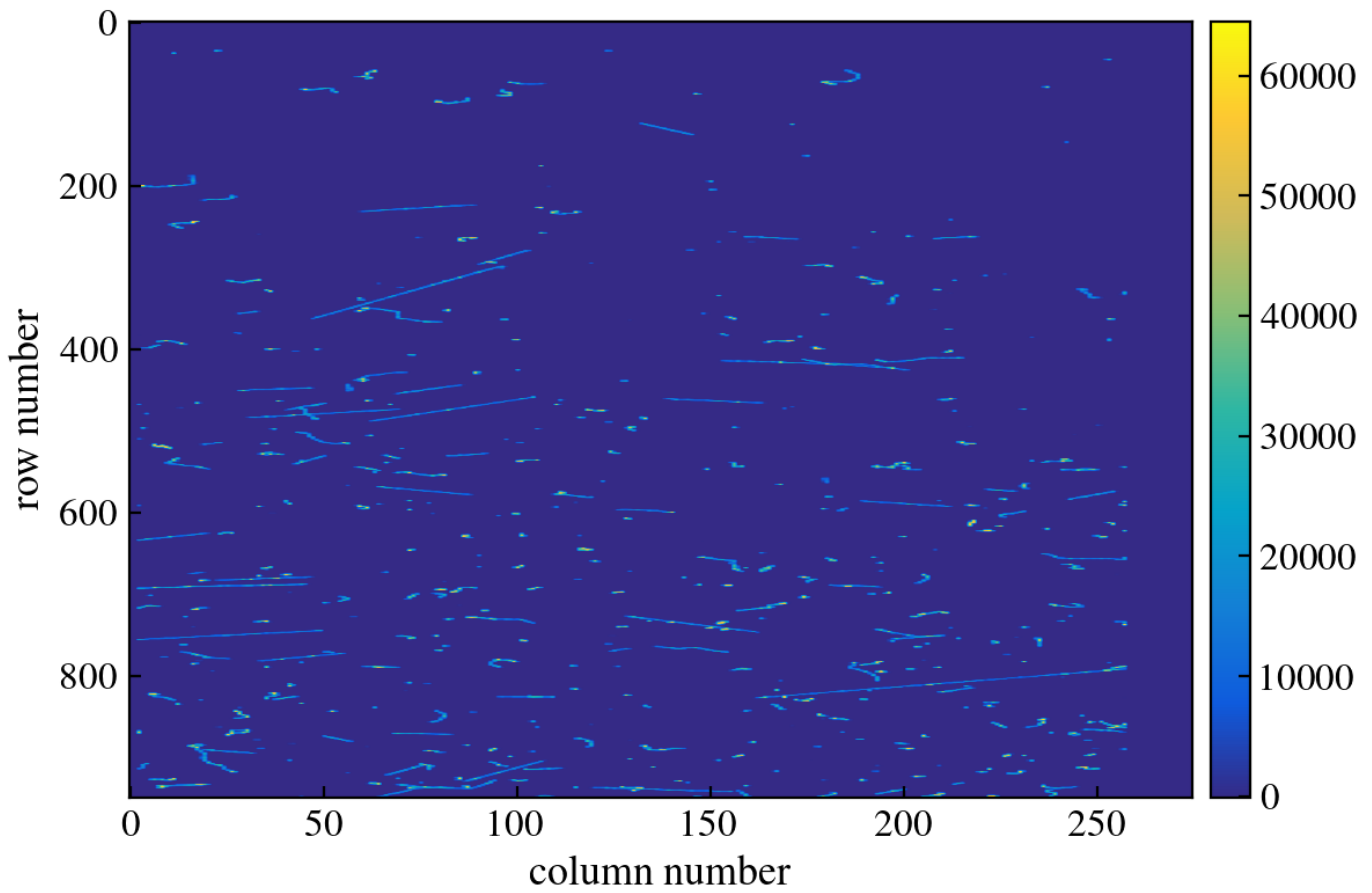


Figure 38: CCD Image

CCD Image: run 44, image 5  
[class MECCDImage]

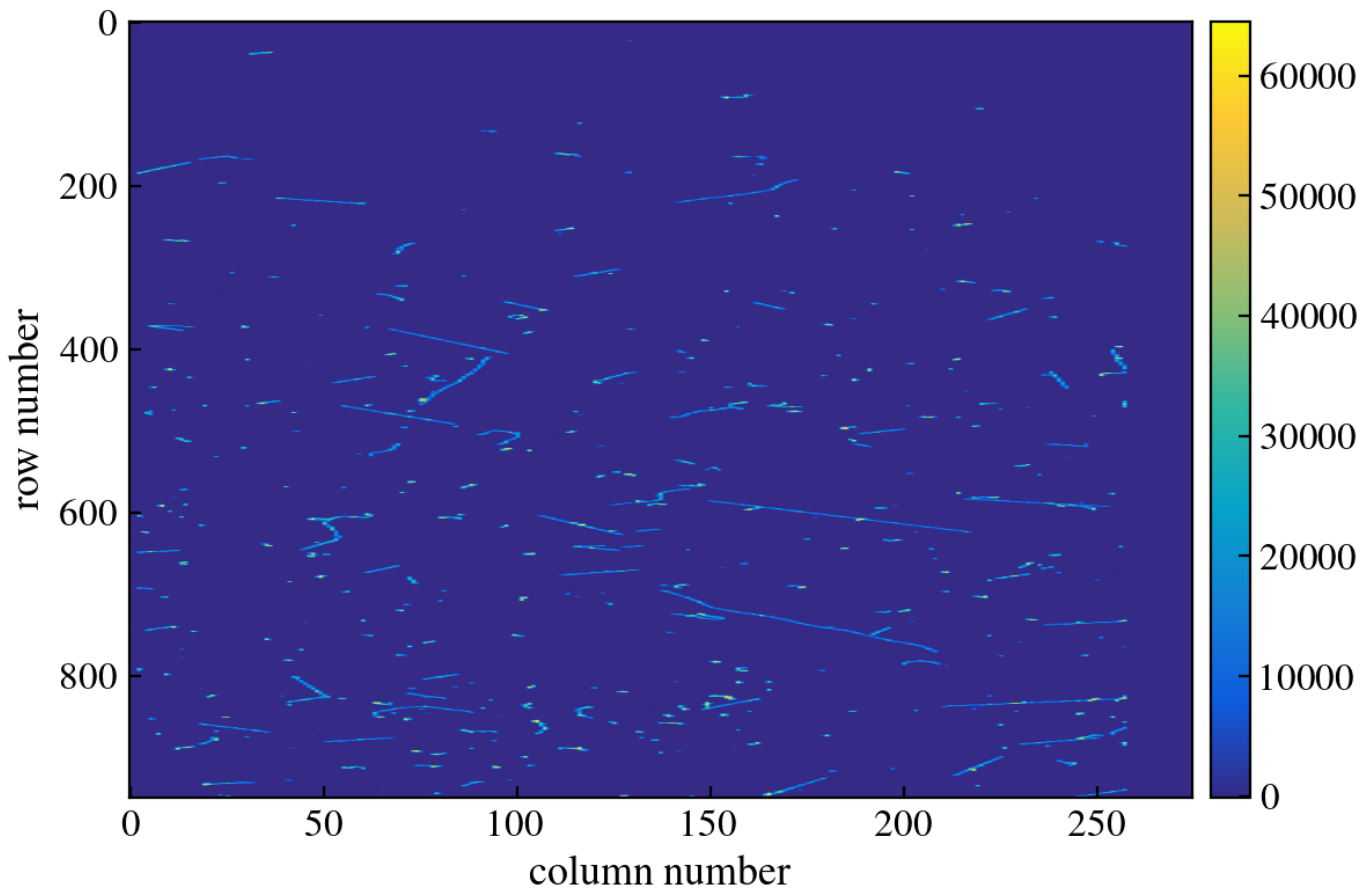


Figure 39: CCD Image

CCD Image: run 44, image 6  
[class MECCDImage]

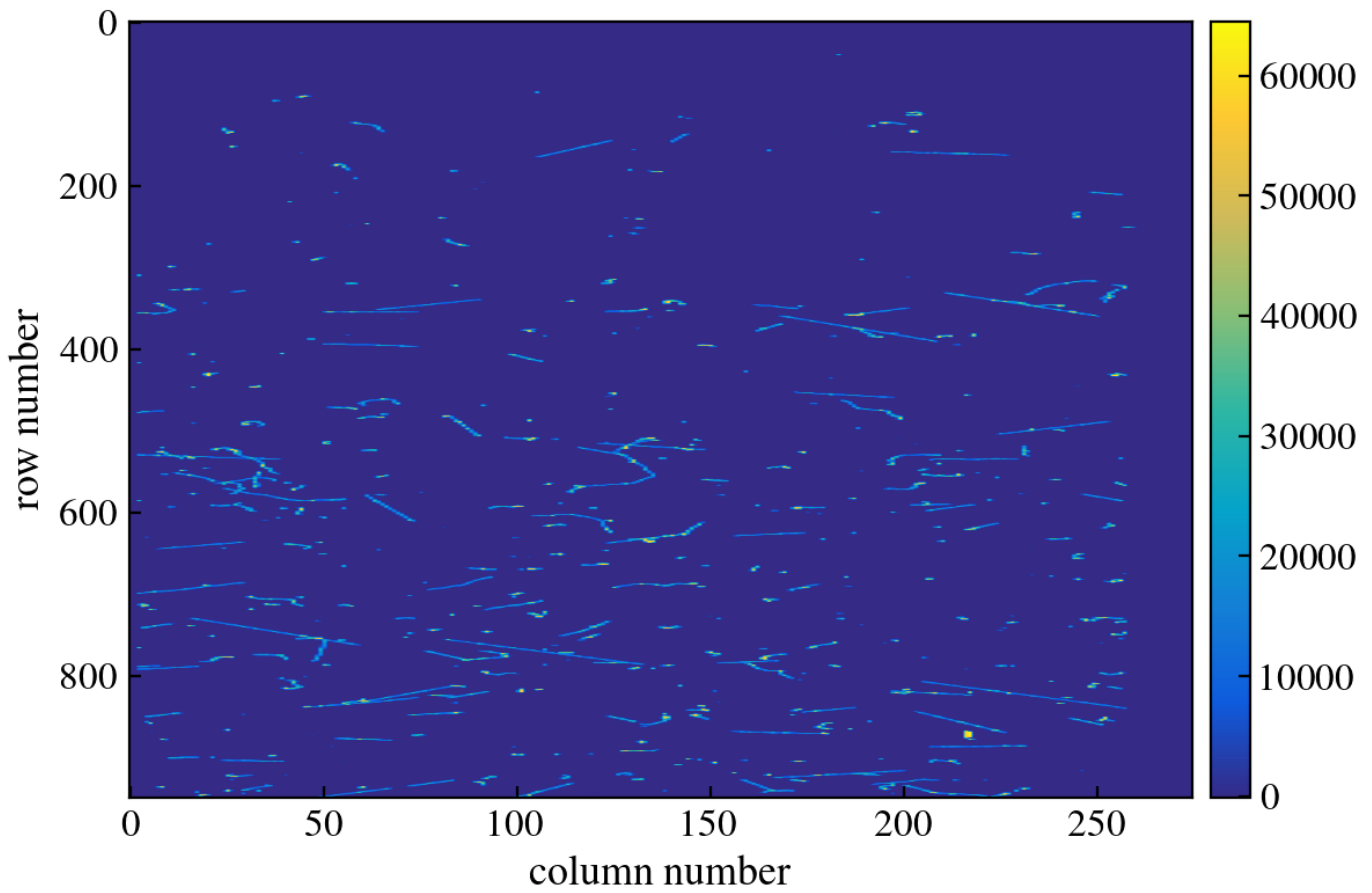


Figure 40: CCD Image

CCD Image: run 44, image 7  
[class MECCDImage]

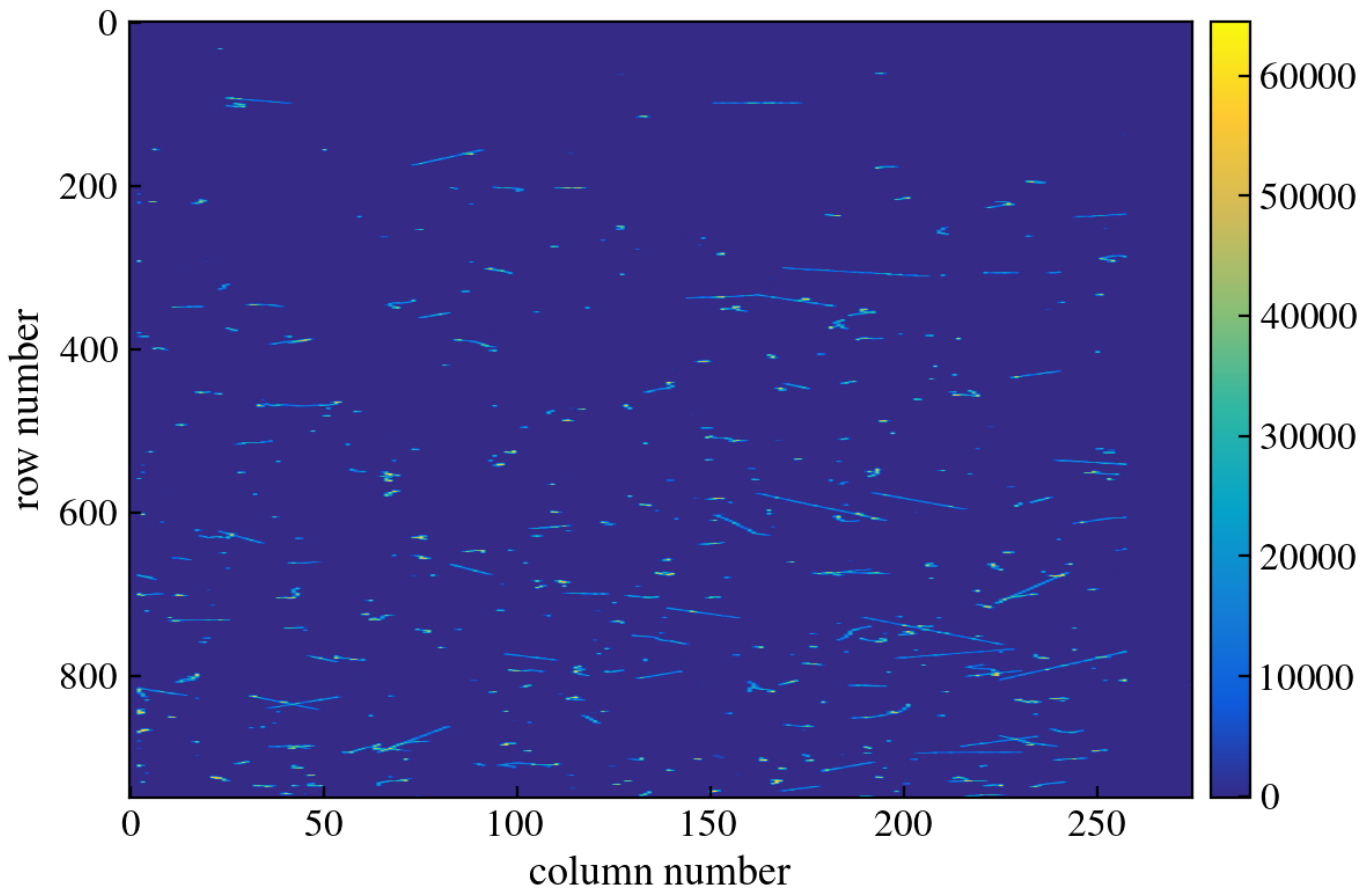


Figure 41: CCD Image



CCD Image: run 44, image 8  
[class MECCDImage]

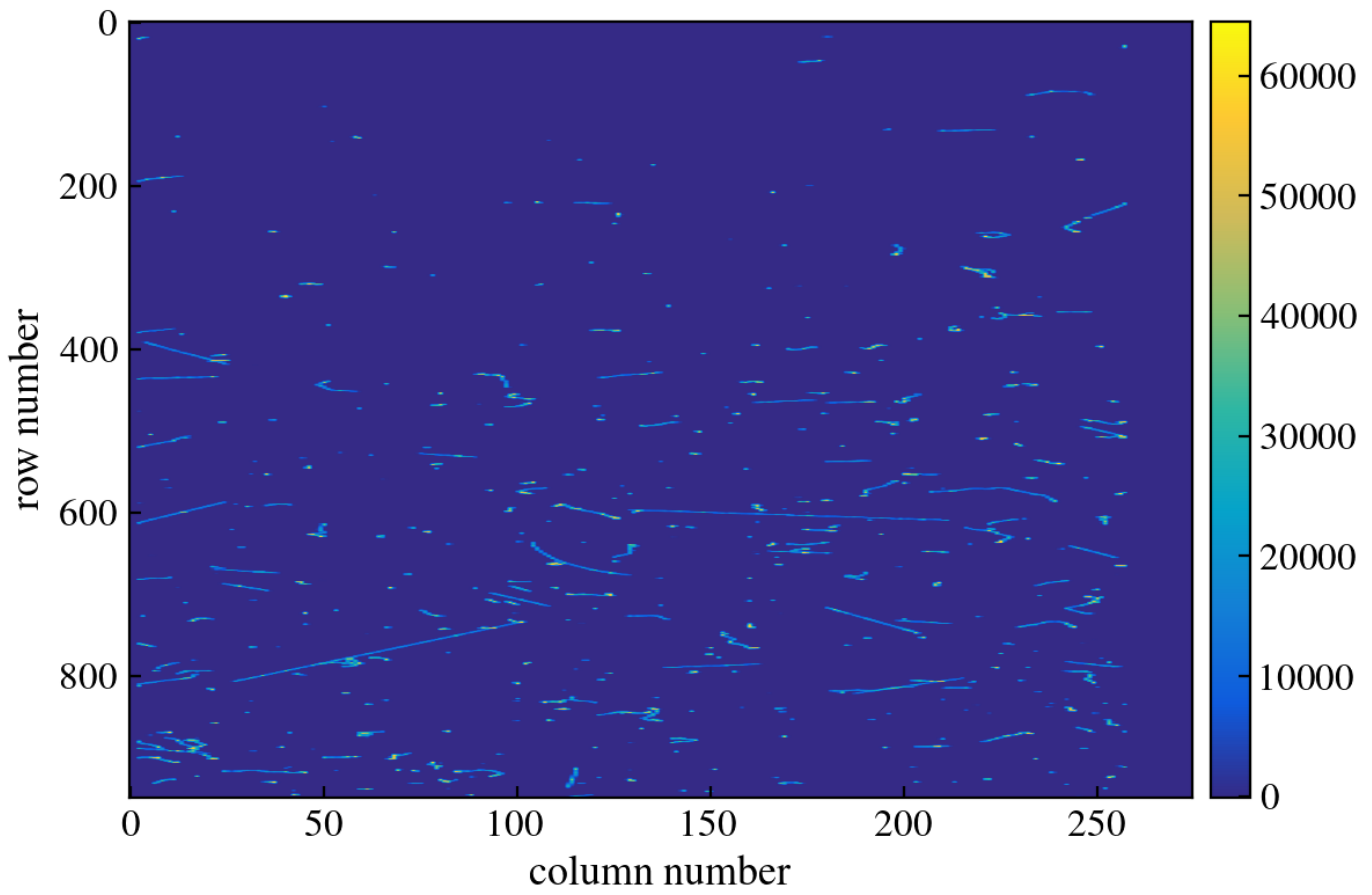


Figure 42: CCD Image

CCD Image: run 44, image 9  
[class MECCDImage]

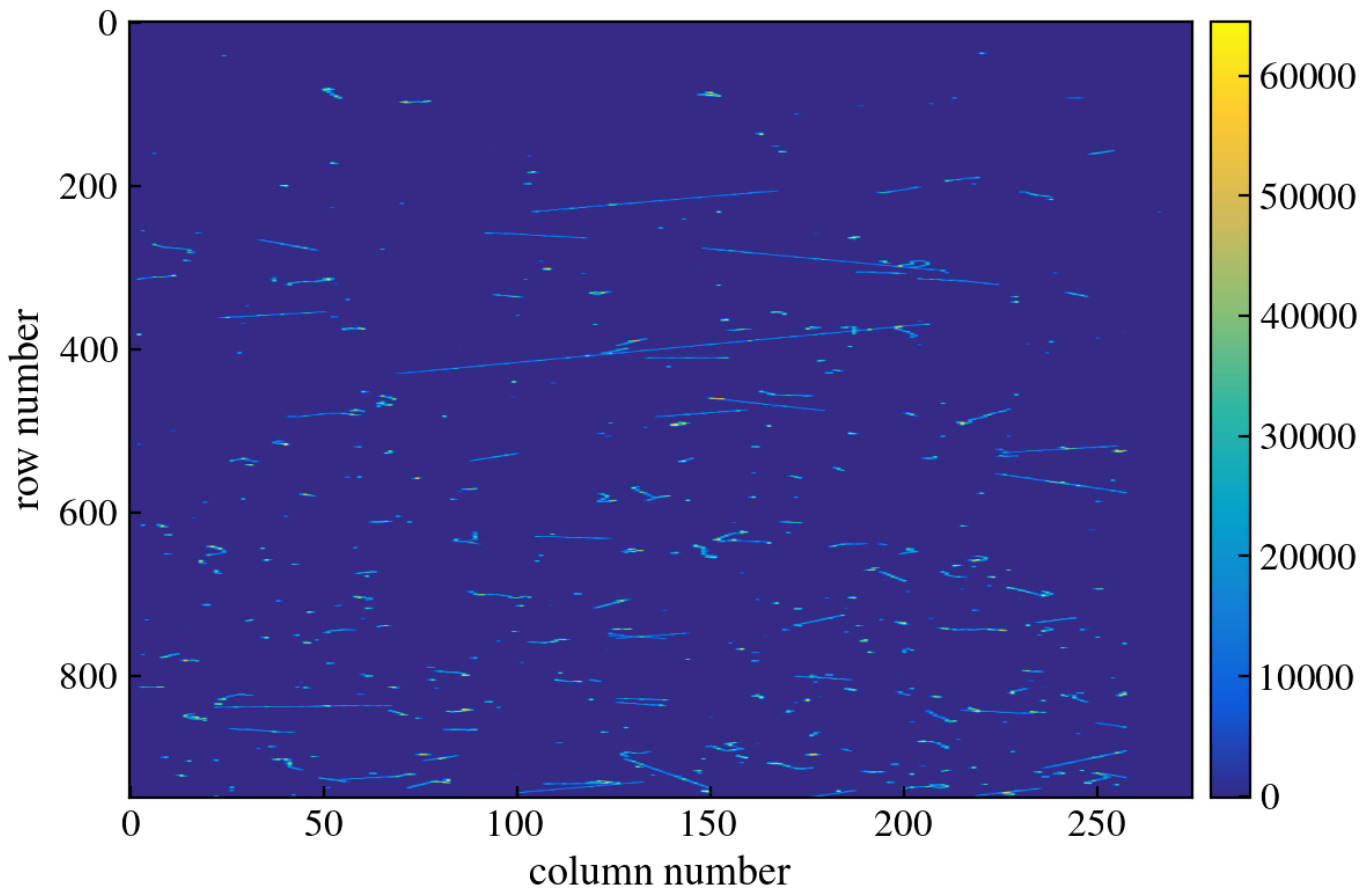


Figure 43: CCD Image

Overscan. Baseline Shift Status vs Image  
[class MEBaselineShift]



Figure 44: Overscan. Baseline Shift Status vs Image

Overscan. Horizontal Clusters vs Image  
[class MEHorizontalClusters]

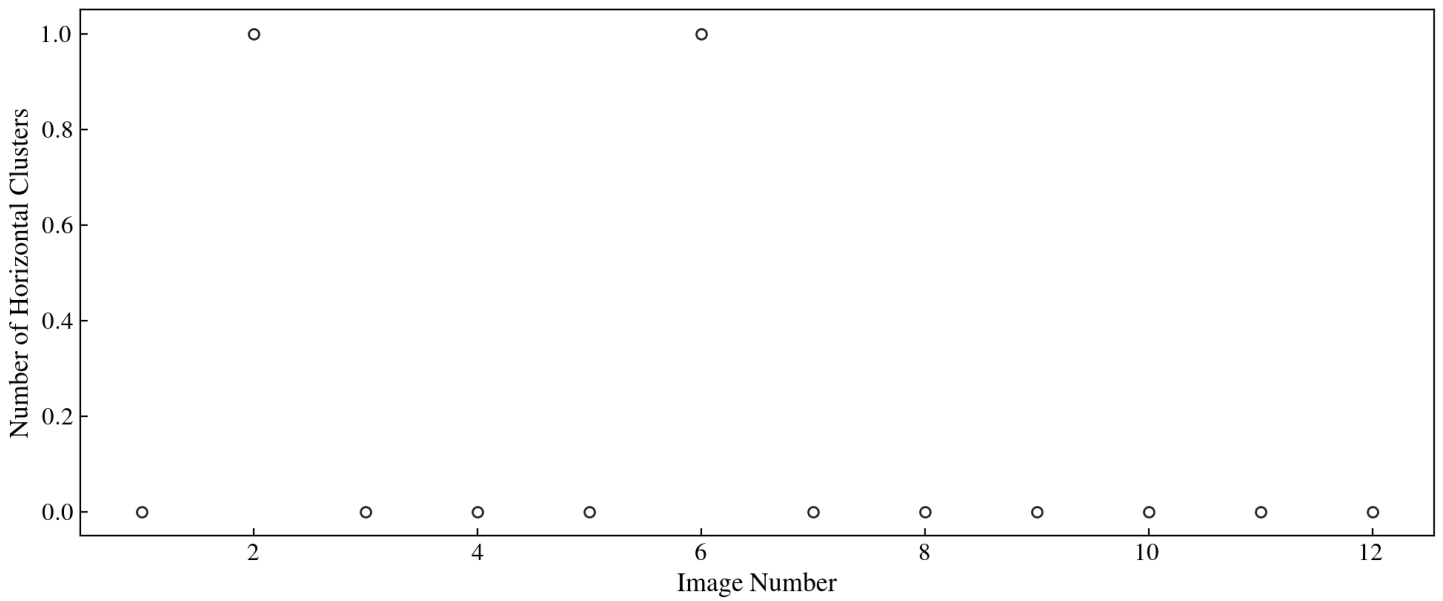


Figure 45: Overscan. Horizontal Clusters vs Image

Overscan. Miscellaneous Noise Found Status  
[class MESigmaCutoffNoise]



Figure 46: Overscan. Miscellaneous Noise Found Status