

# DQM Report for run number 181

pysimdamicm.dqm.dqm\_manager

June 9, 2022

Data directory:

/data/calidaq\_backup/PhotoNeutron/DataTaking/SbBe/Run\_181

Output directory:

/data/chicago/PhotoNeutronData/WADERS/DataTaking/DQM/SbBe

Reference used:

None

Total images: 13

## List of Figures

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

|    |  |    |
|----|--|----|
| 36 | CCD Image . . . . .                                  | 26 |
| 37 | CCD Image . . . . .                                  | 27 |
| 38 | CCD Image . . . . .                                  | 28 |
| 39 | CCD Image . . . . .                                  | 29 |
| 40 | CCD Image . . . . .                                  | 30 |
| 41 | CCD Image . . . . .                                  | 31 |
| 42 | CCD Image . . . . .                                  | 32 |
| 43 | CCD Image . . . . .                                  | 33 |
| 44 | Overscan. Baseline Shift Status vs Image . . . . .   | 34 |
| 45 | Overscan. Horizontal Clusters vs Image . . . . .     | 34 |
| 46 | Overscan. Miscellaneous Noise Found Status . . . . . | 35 |

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

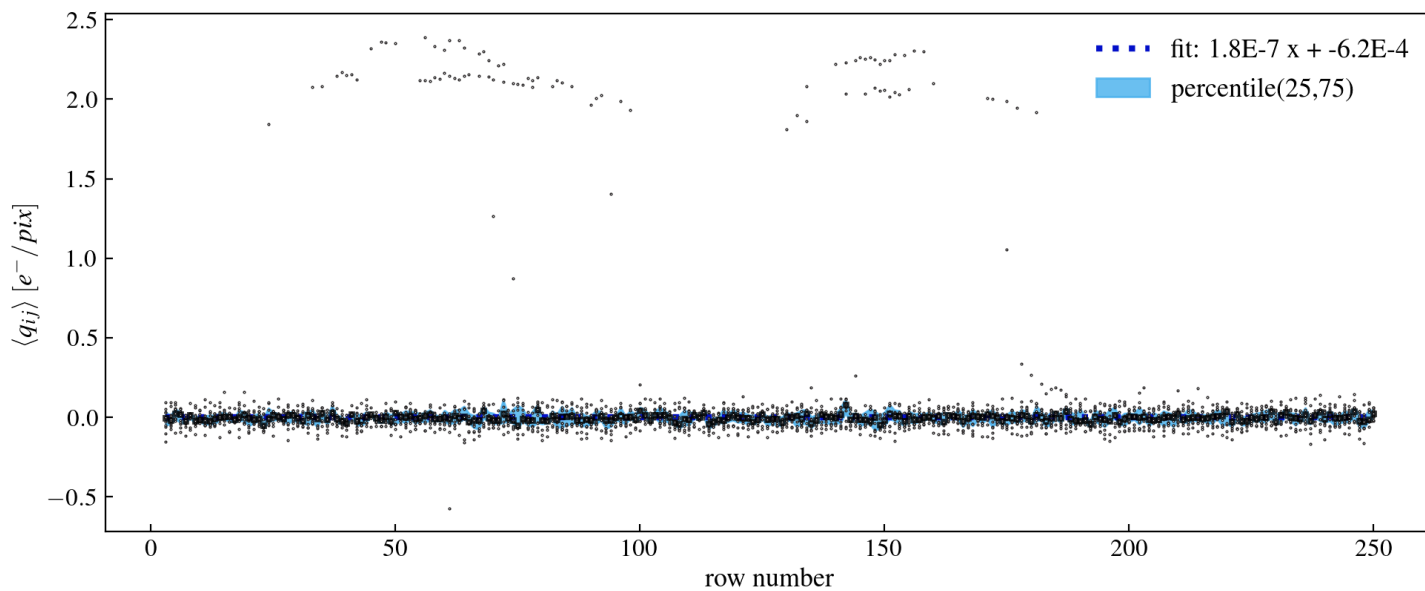


Figure 1: Active Area. Median dark current (only  $q_{i,j} < q_i^{th}$ ) vs row

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

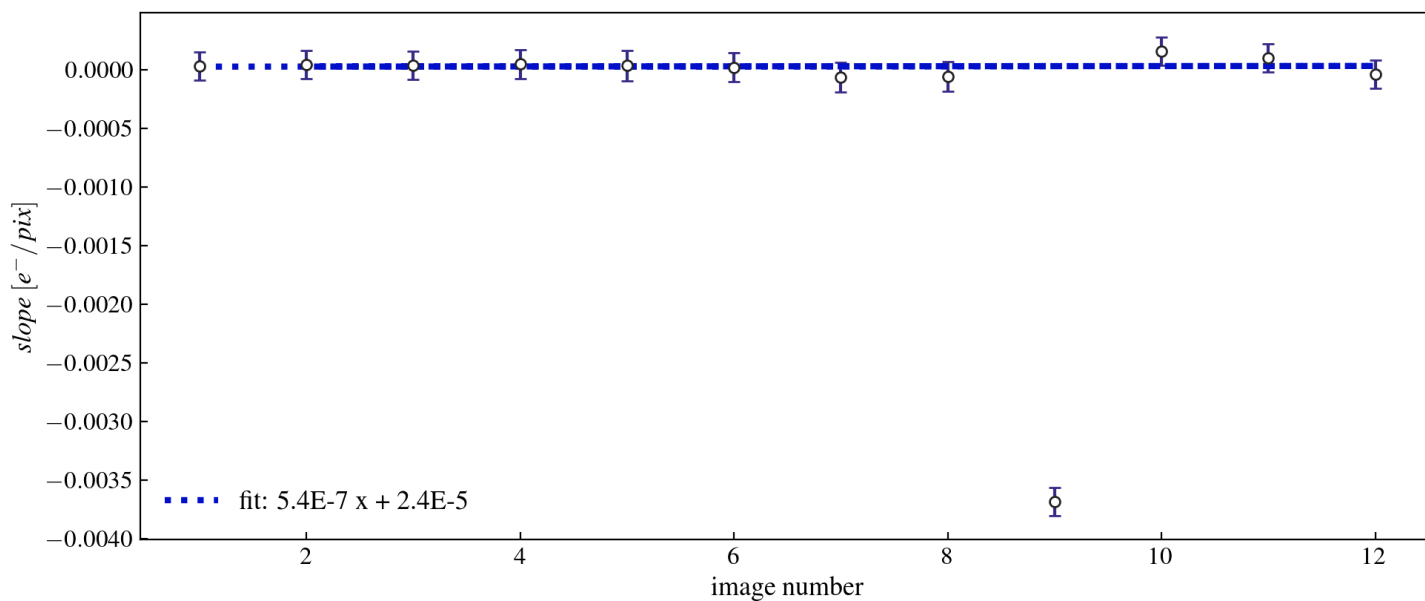


Figure 2: Slope DC fit (from MEMeanDCperRow) vs file

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

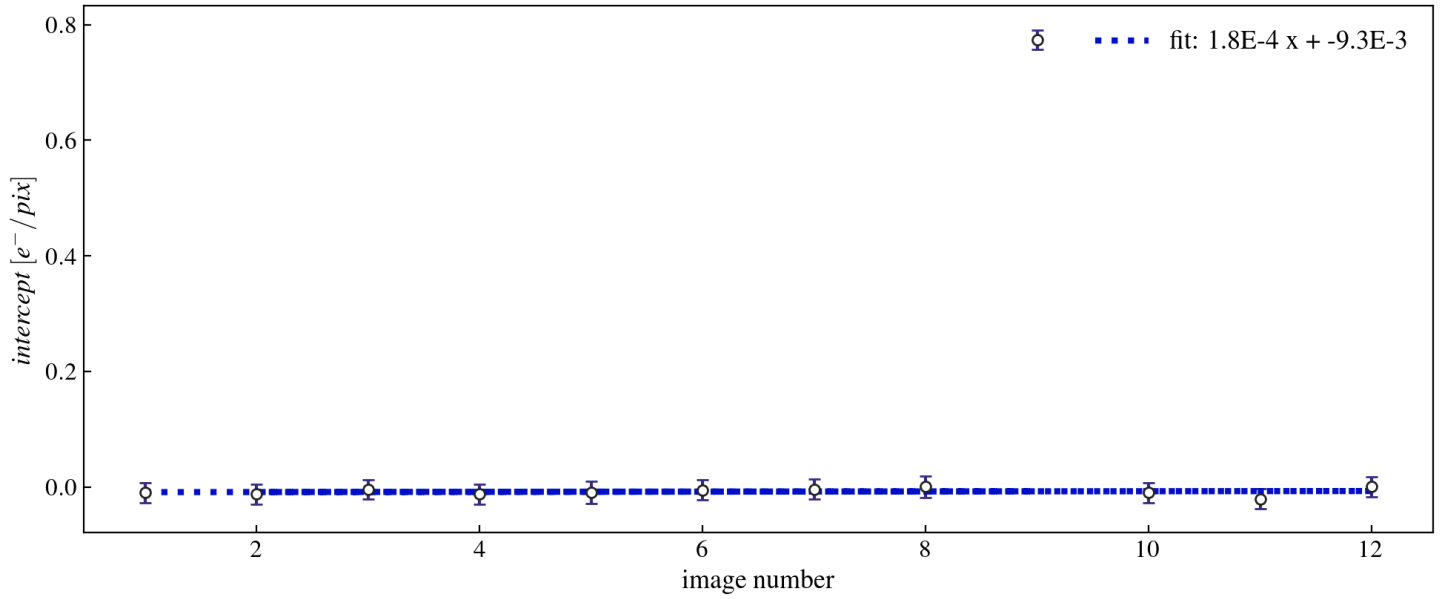


Figure 3: Intercept DC fit (from MEMeanDCperRow) vs file

Active area. Baseline vs row  
[class MESensorMedianperRow]

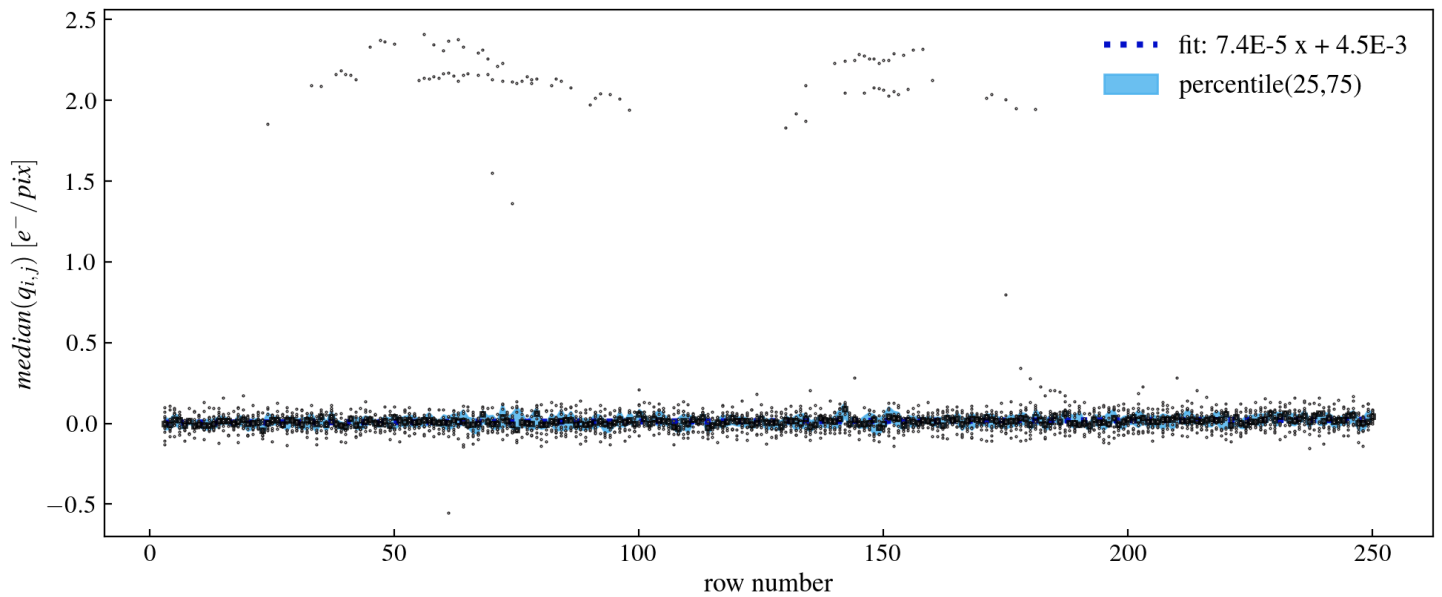


Figure 4: Active area. Baseline vs row

Active area. MAD vs row  
[class MESensorMADperRow]

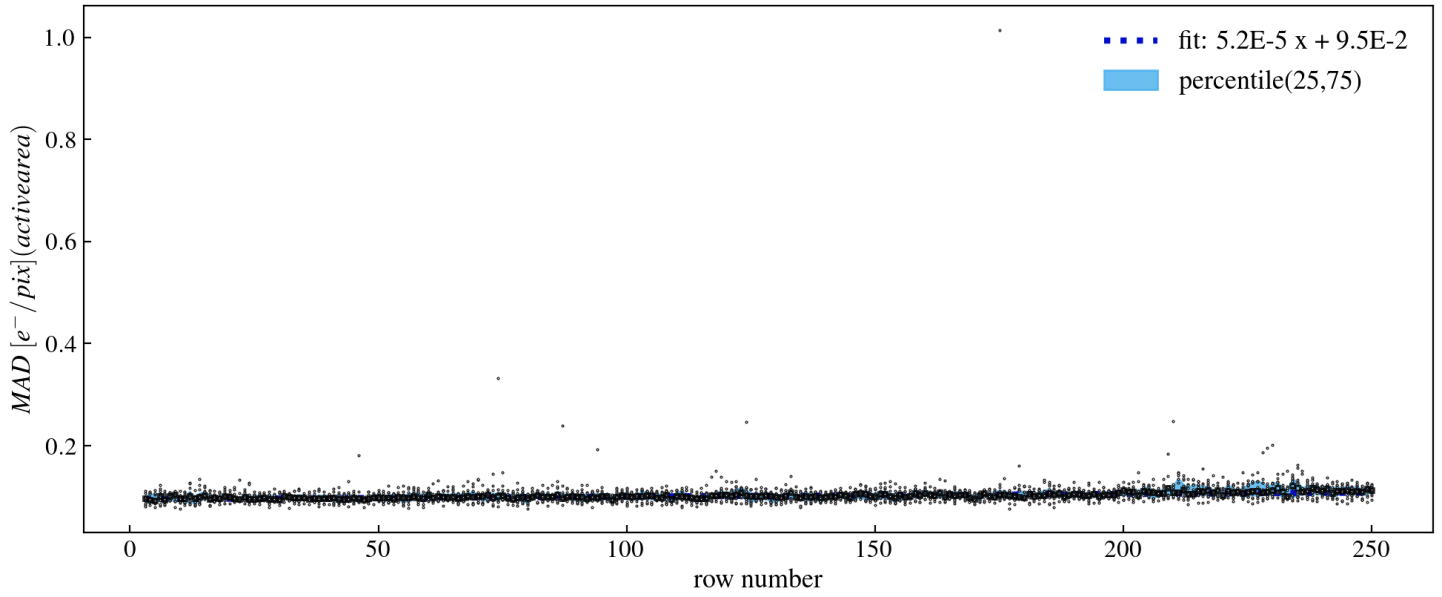


Figure 5: Active area. MAD vs row

Full Image. Baseline vs column  
[class MEImageMedianperCol]

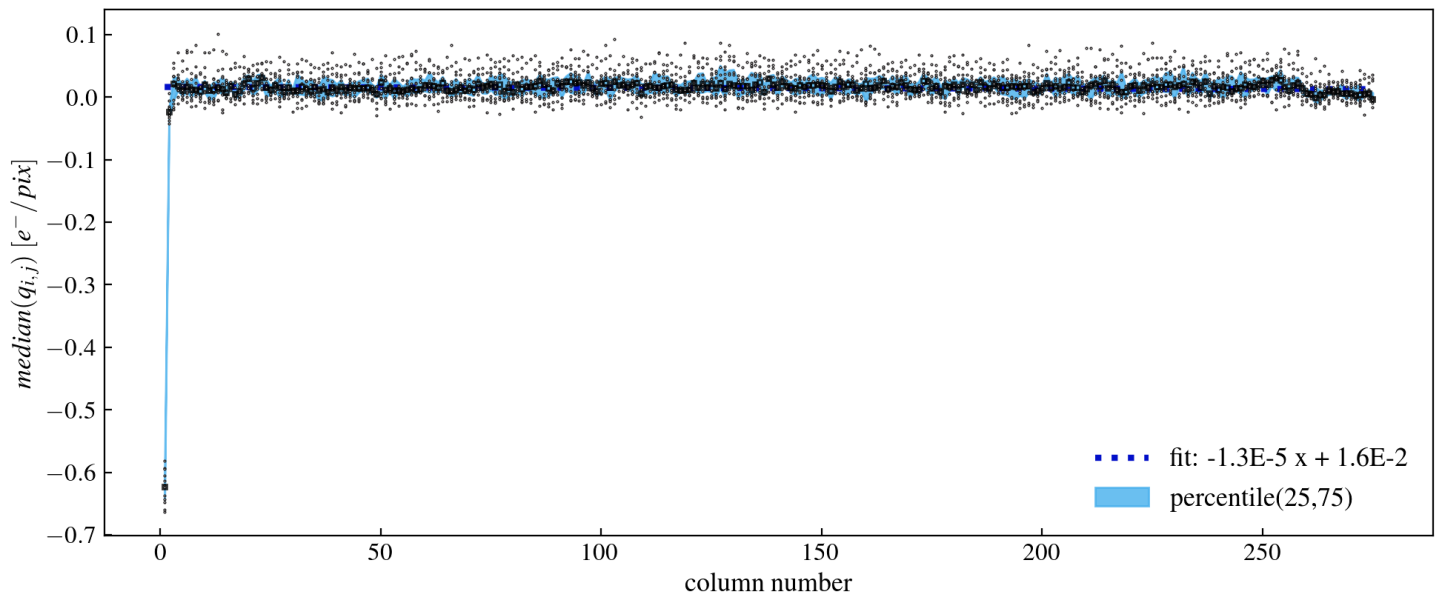


Figure 6: Full Image. Baseline vs column

Full Image. MAD vs column  
[class MEImageMADperCol]

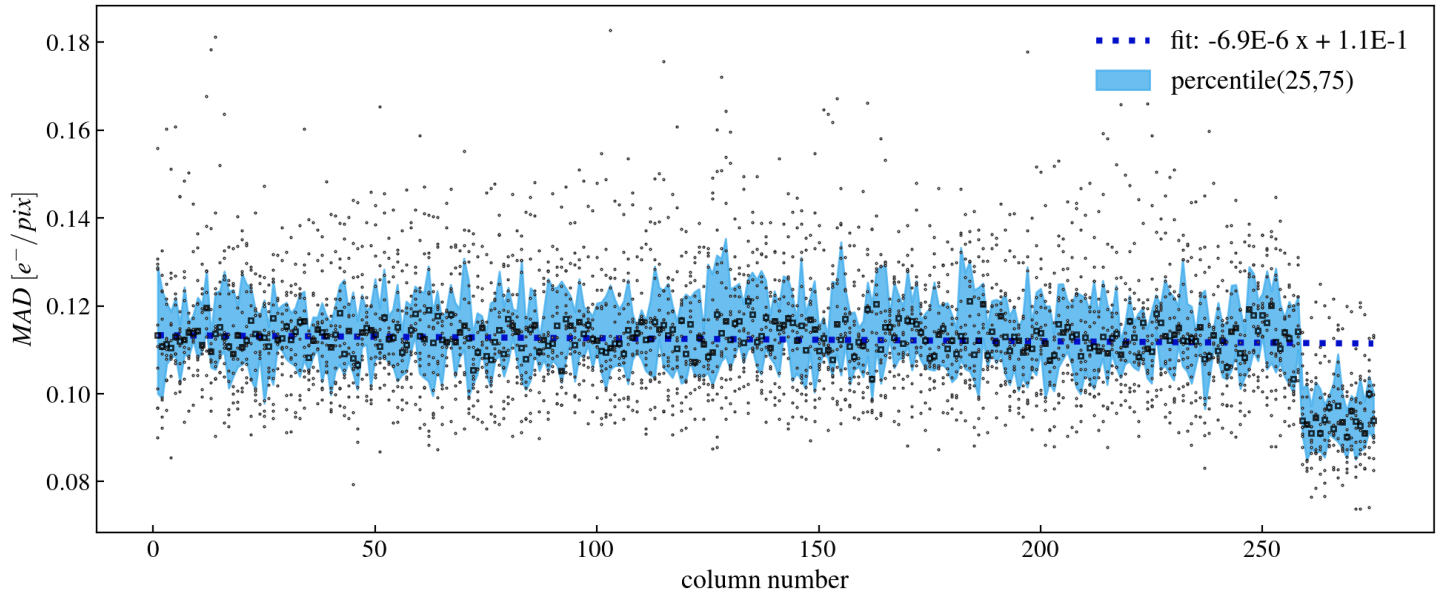


Figure 7: Full Image. MAD vs column

Overscan. Baseline vs row  
[class MEOverscanMedianperRow]

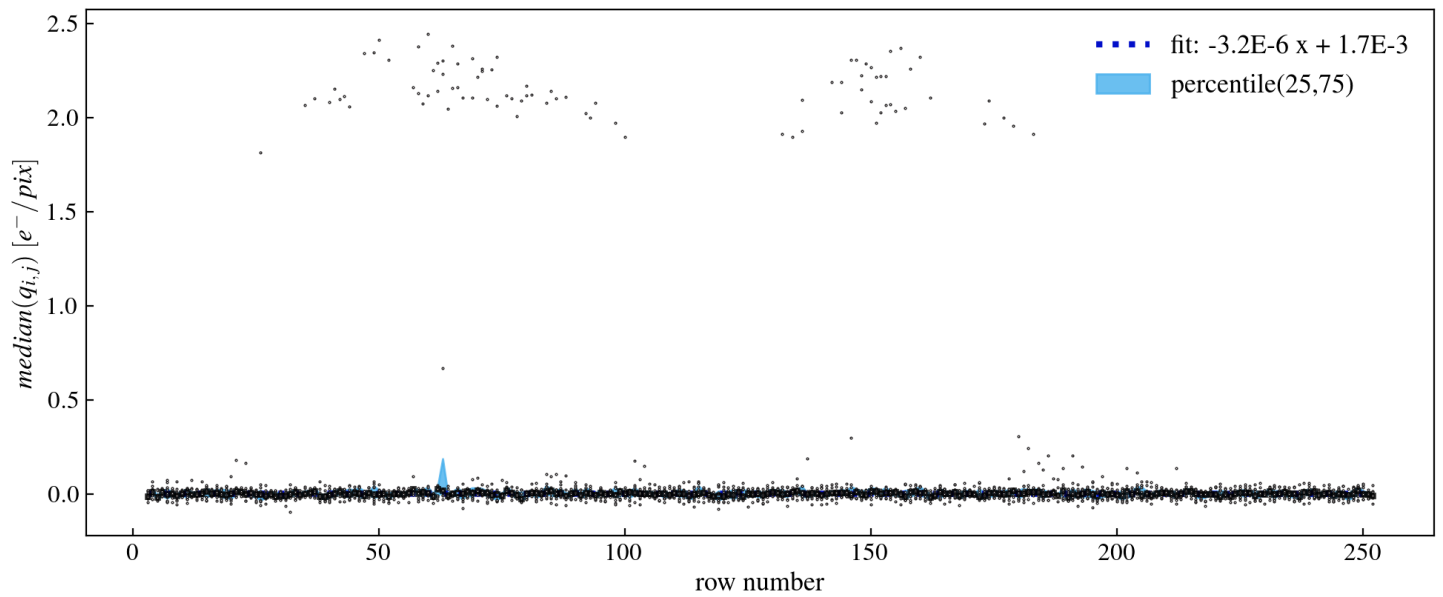


Figure 8: Overscan. Baseline vs row

Overscan. MAD vs row  
[class MEOverScanMADperRow]

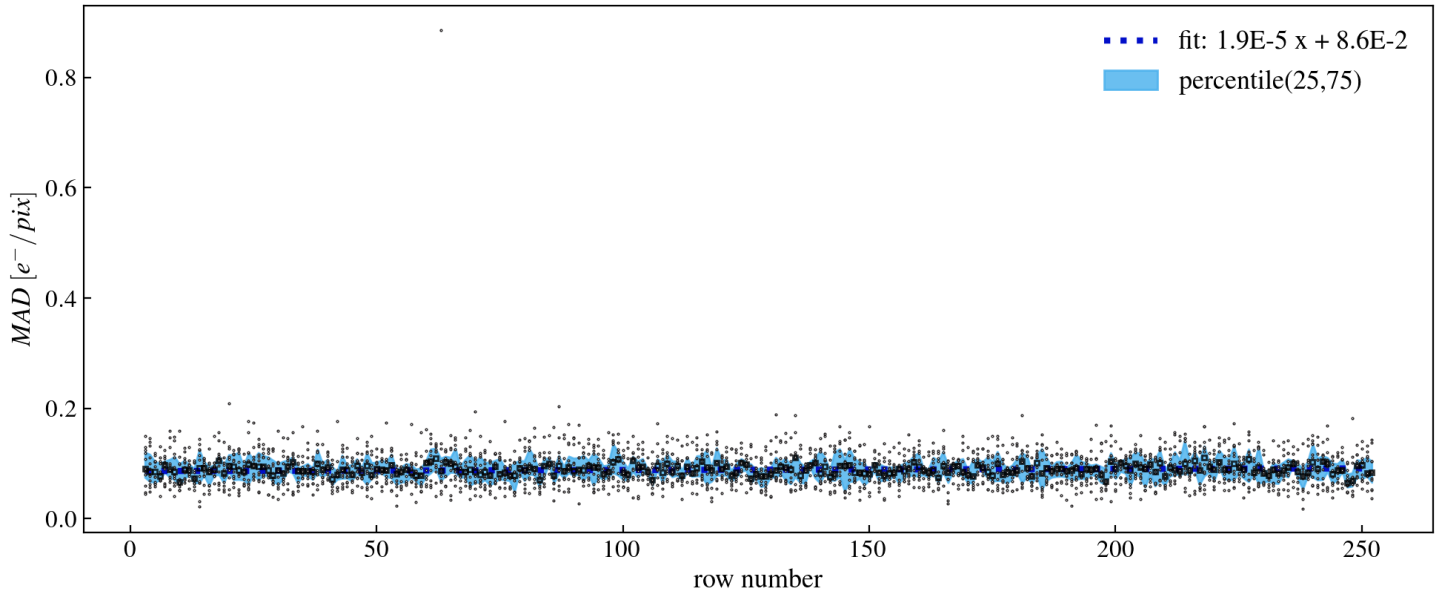


Figure 9: Overscan. MAD vs row

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

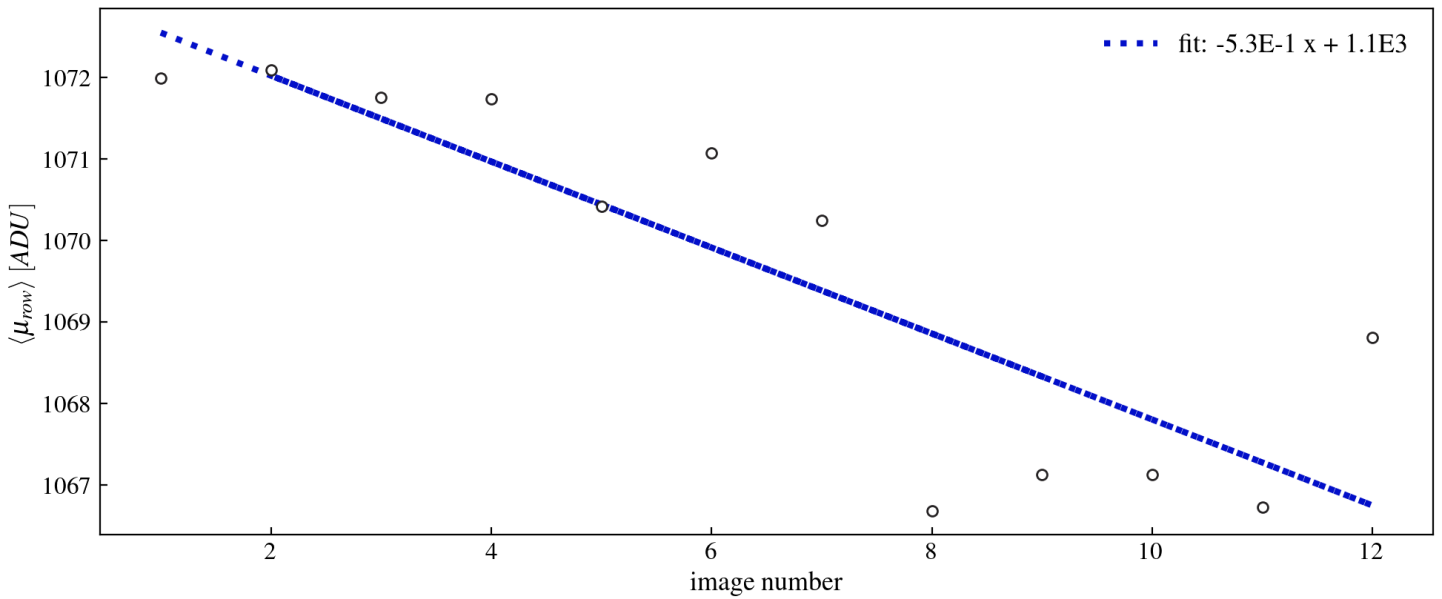


Figure 10: PedestalSubtractionProcess: mean pedestal vs file (gauss fit)

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

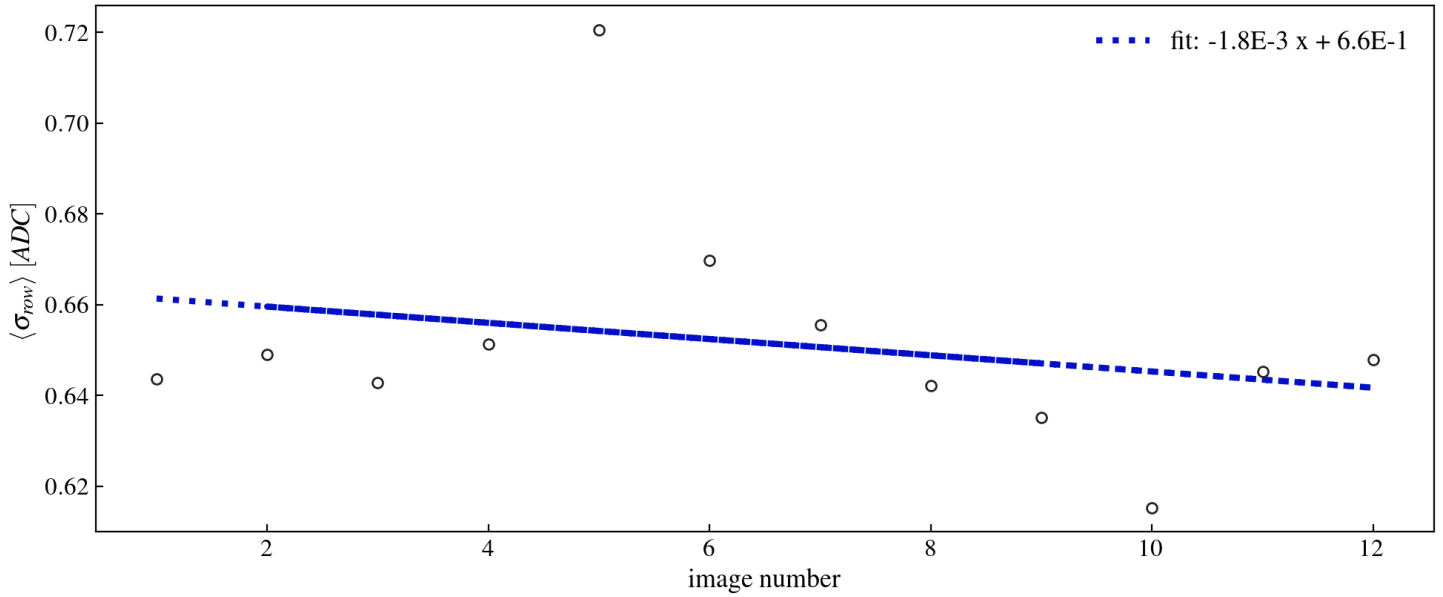


Figure 11: PedestalSubtractionProcess: mean sigma vs file (gauss fit)

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

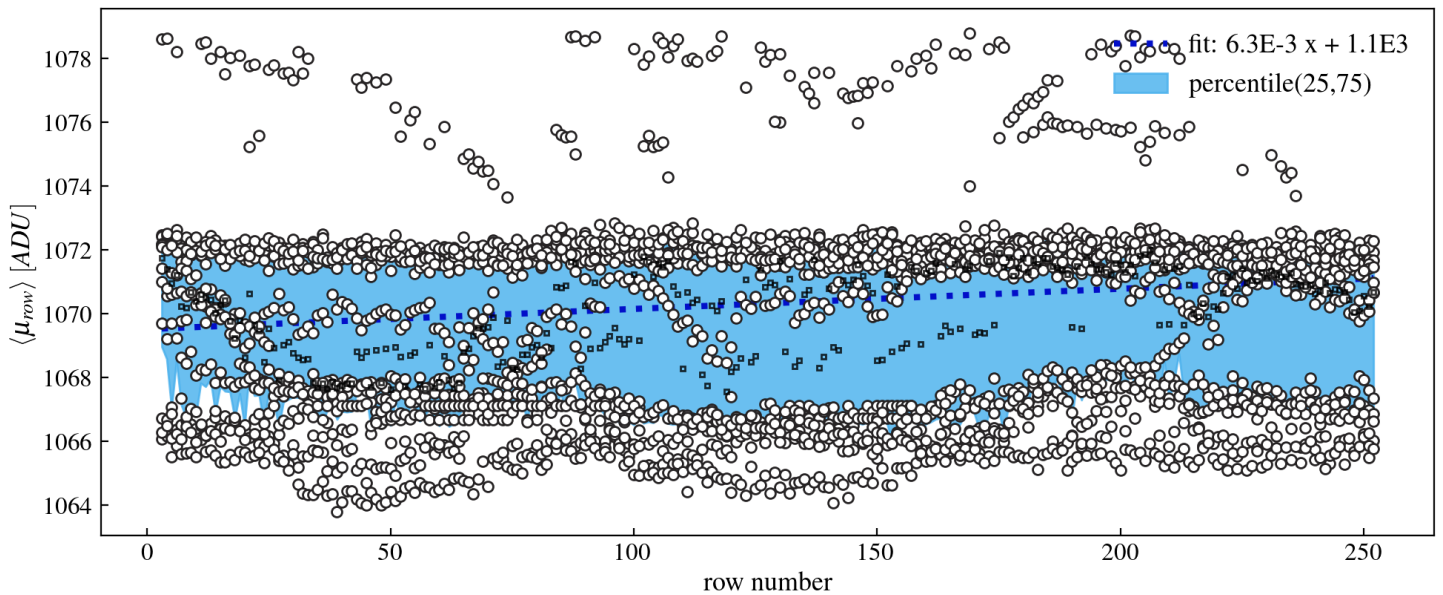


Figure 12: PedestalSubtractionProcess: mean pedestal vs file (gauss fit)



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

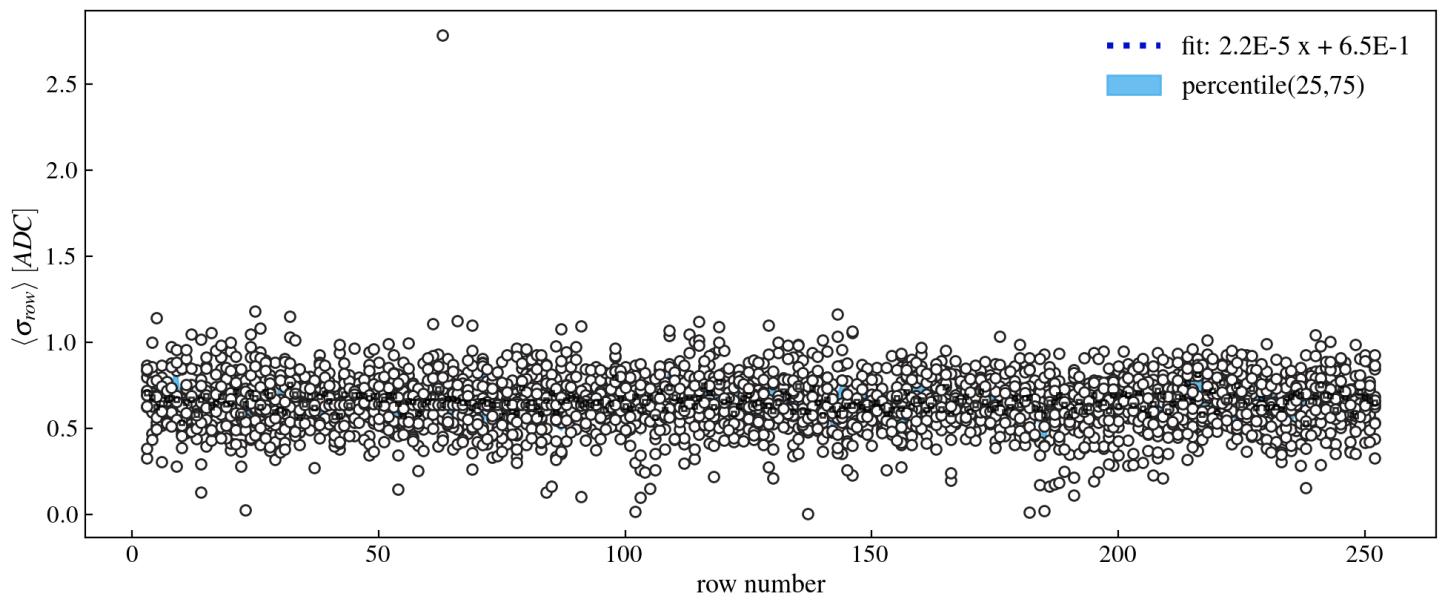


Figure 13: PedestalSubtractionProcess: mean sigma vs file (gauss fit)

Masked pixels [run 181]: frequency  
[class MEMaskedPixels]

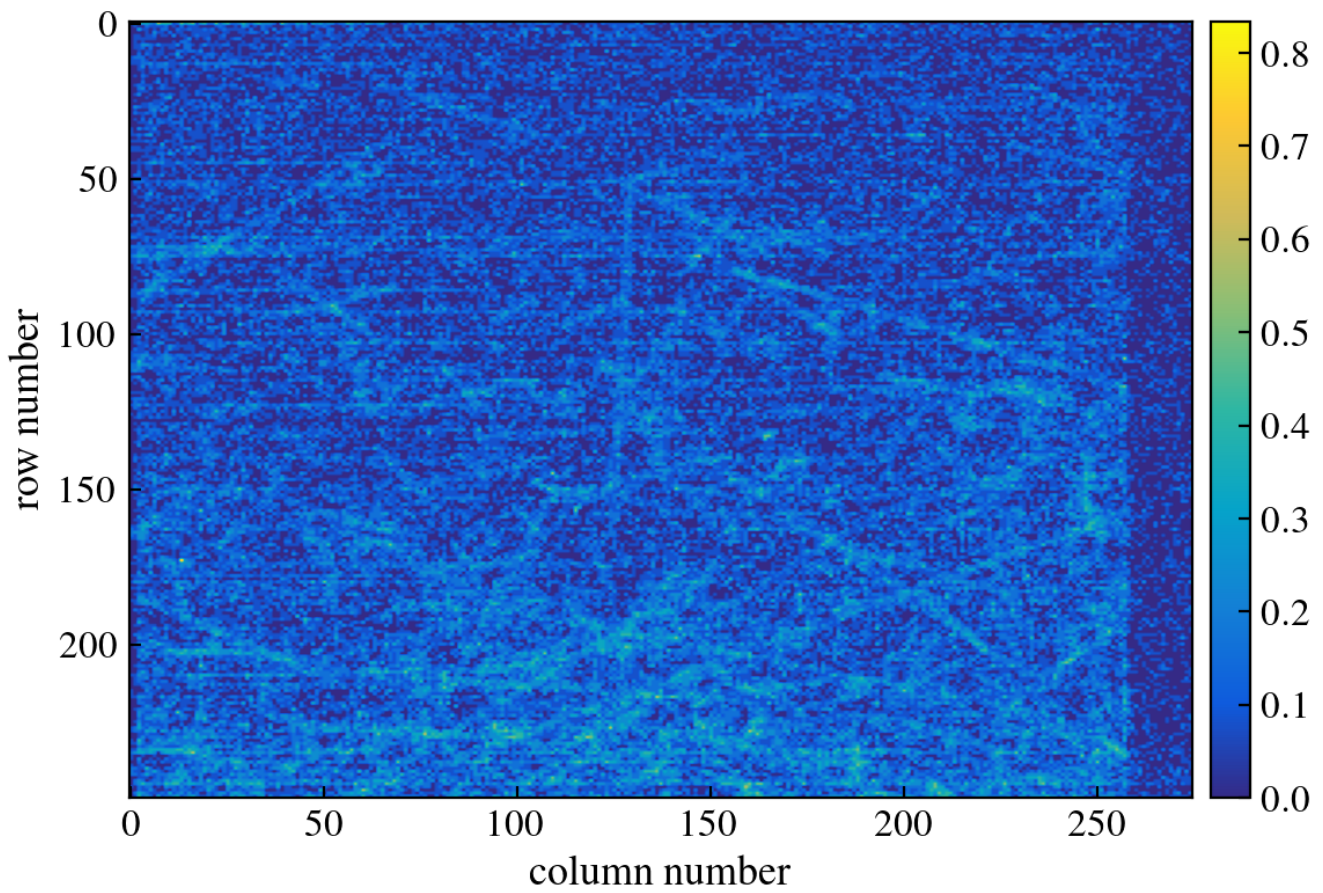


Figure 14: Masked pixels

Masked pixels [run 181]: mask  
[14] masked pixels  
[class MEMaskedPixels]

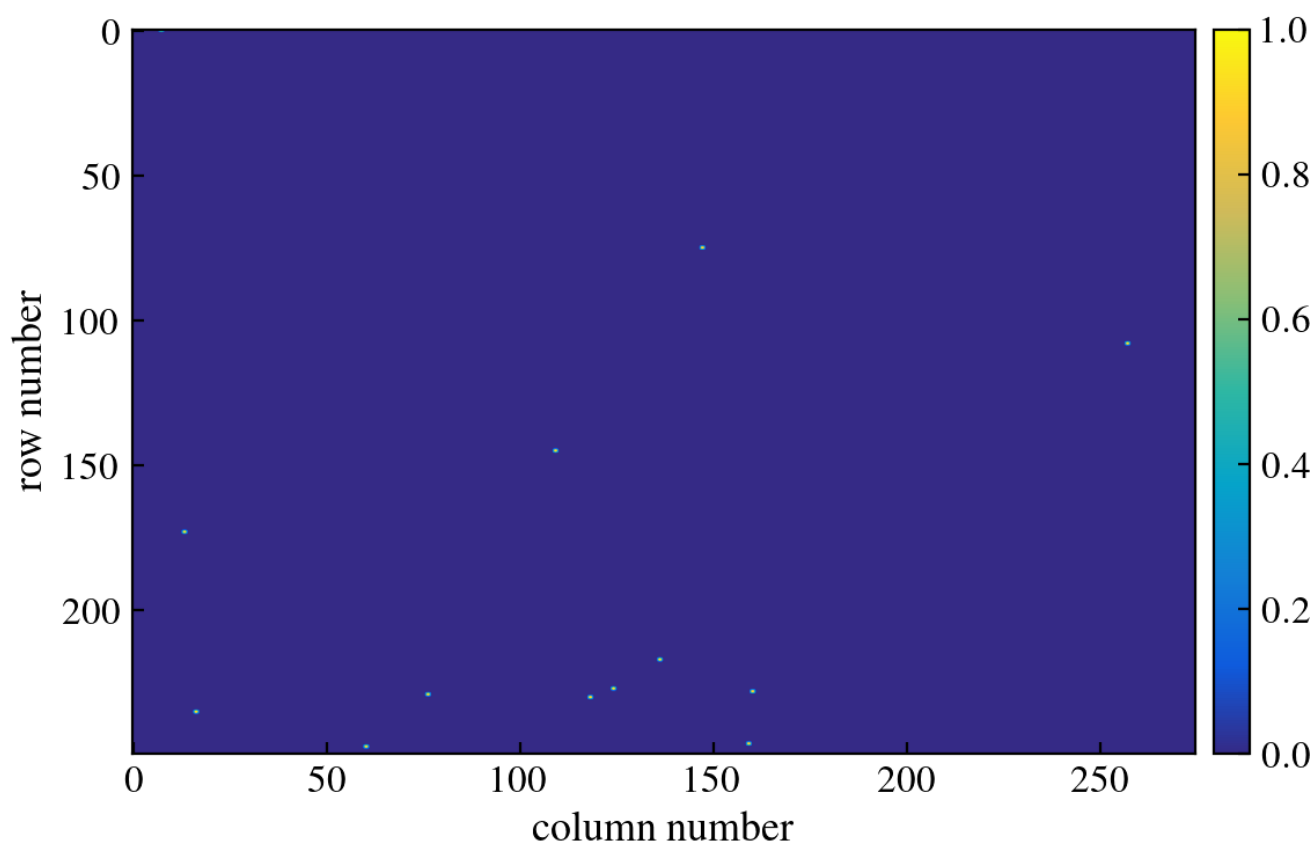


Figure 15: Masked pixels

Single Pixel Energy Distribution [w/ 5.18 ADC/e- and 3.74eV/e-]  
[class MESinglePED]

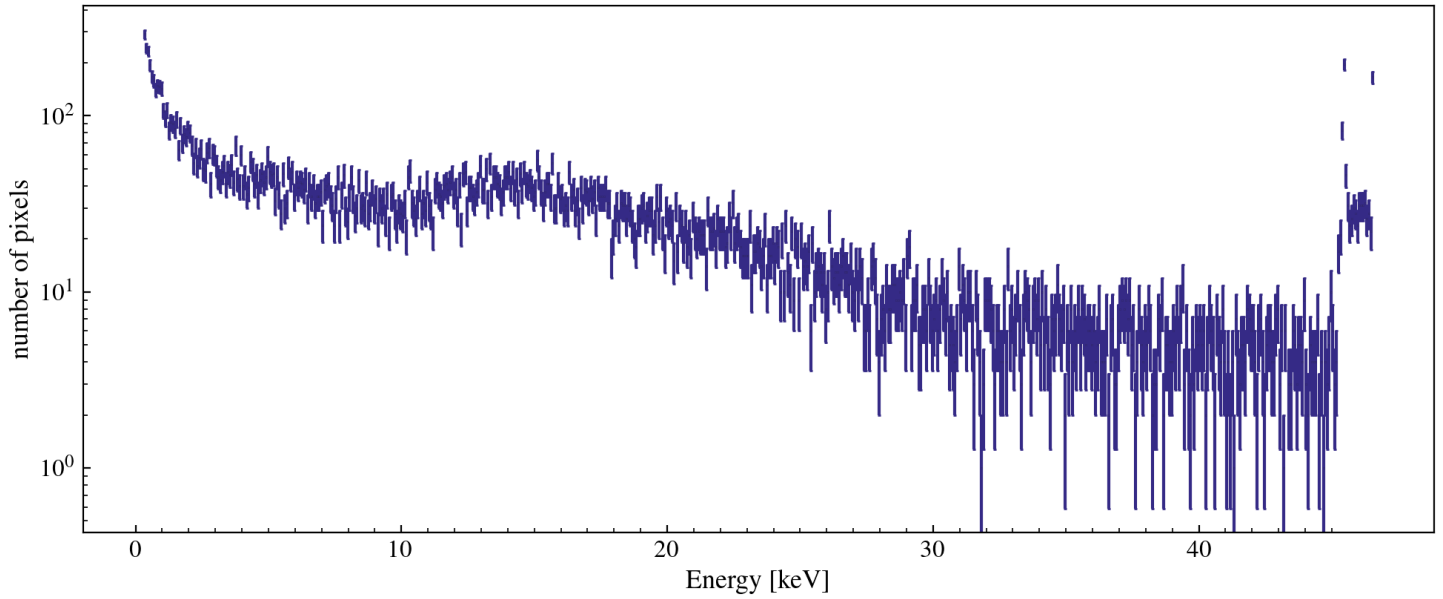


Figure 16: Number of pixels with  $E > 300.0$  eV vs file

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

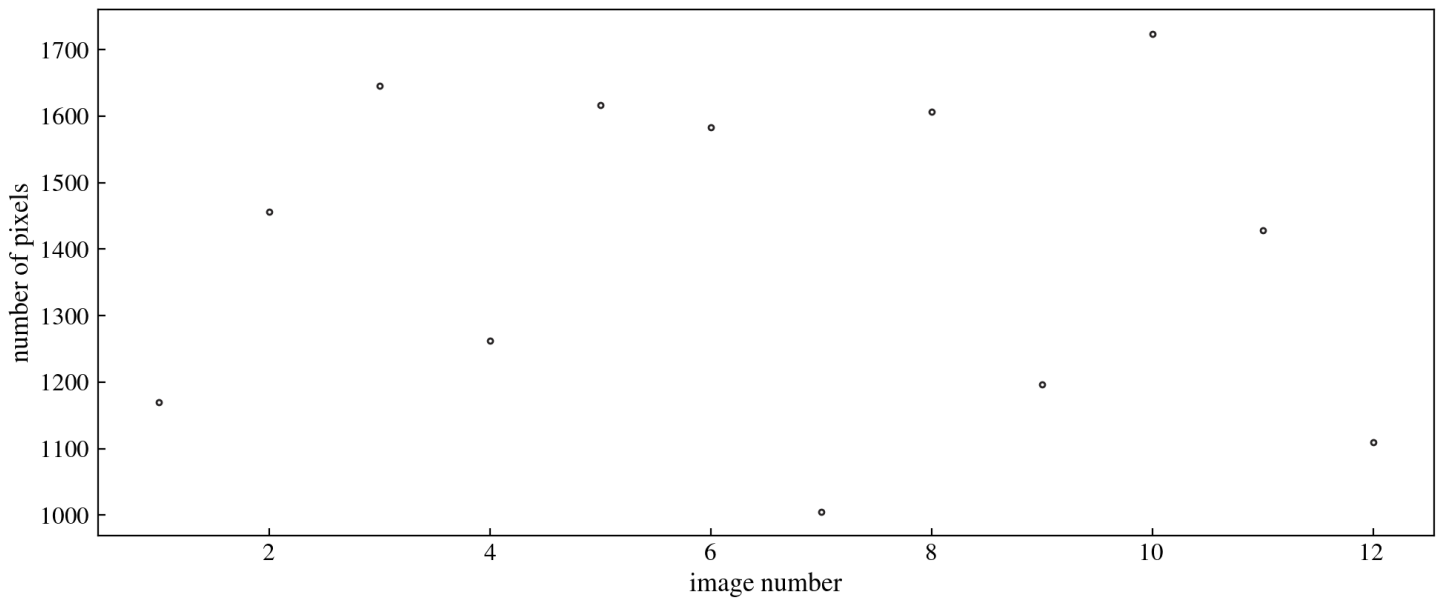


Figure 17: Number of pixels with  $E > 300.0$  eV vs file

## Pixel Charge Distribution

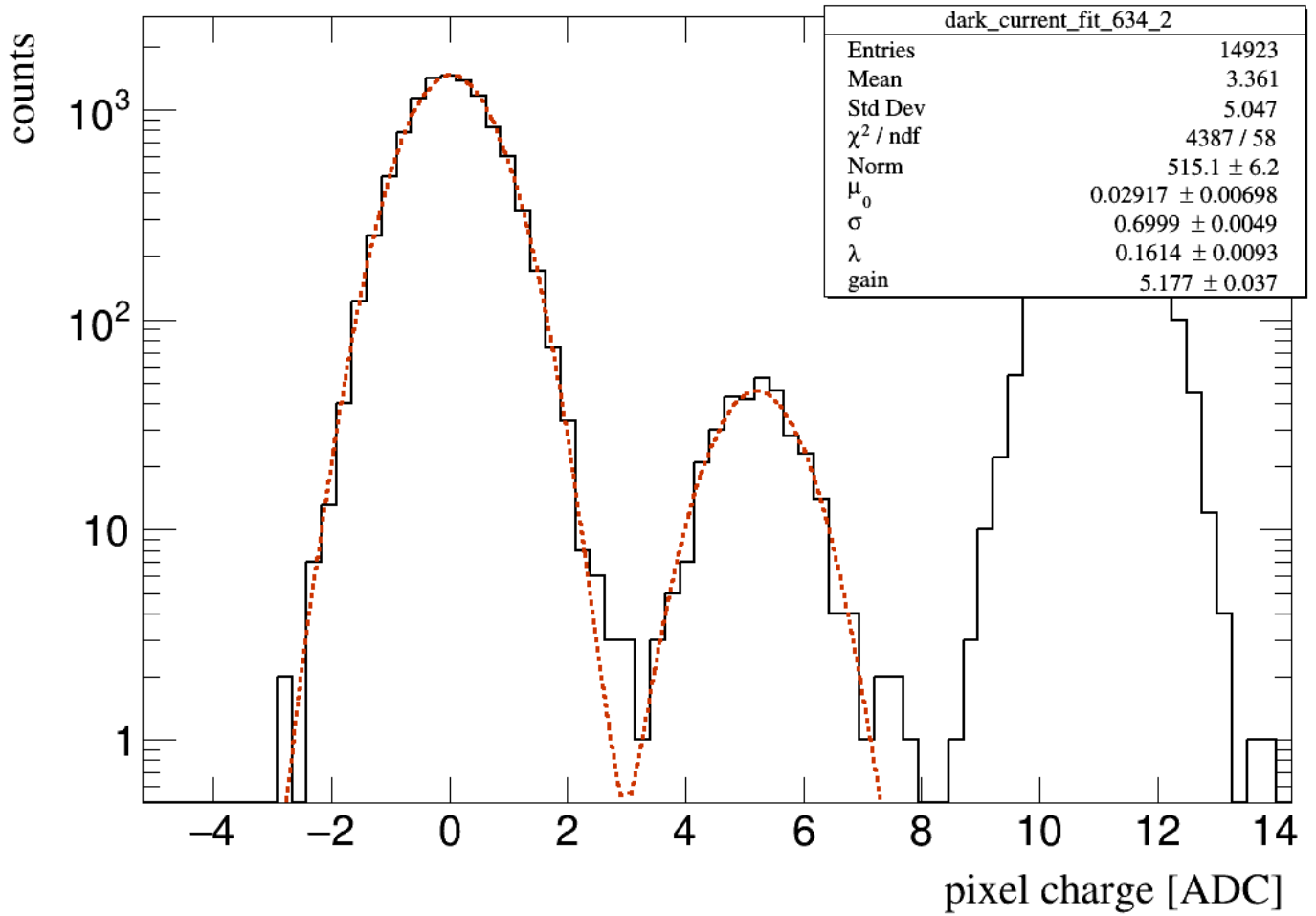


Figure 18: Pixel Charge Distribution

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

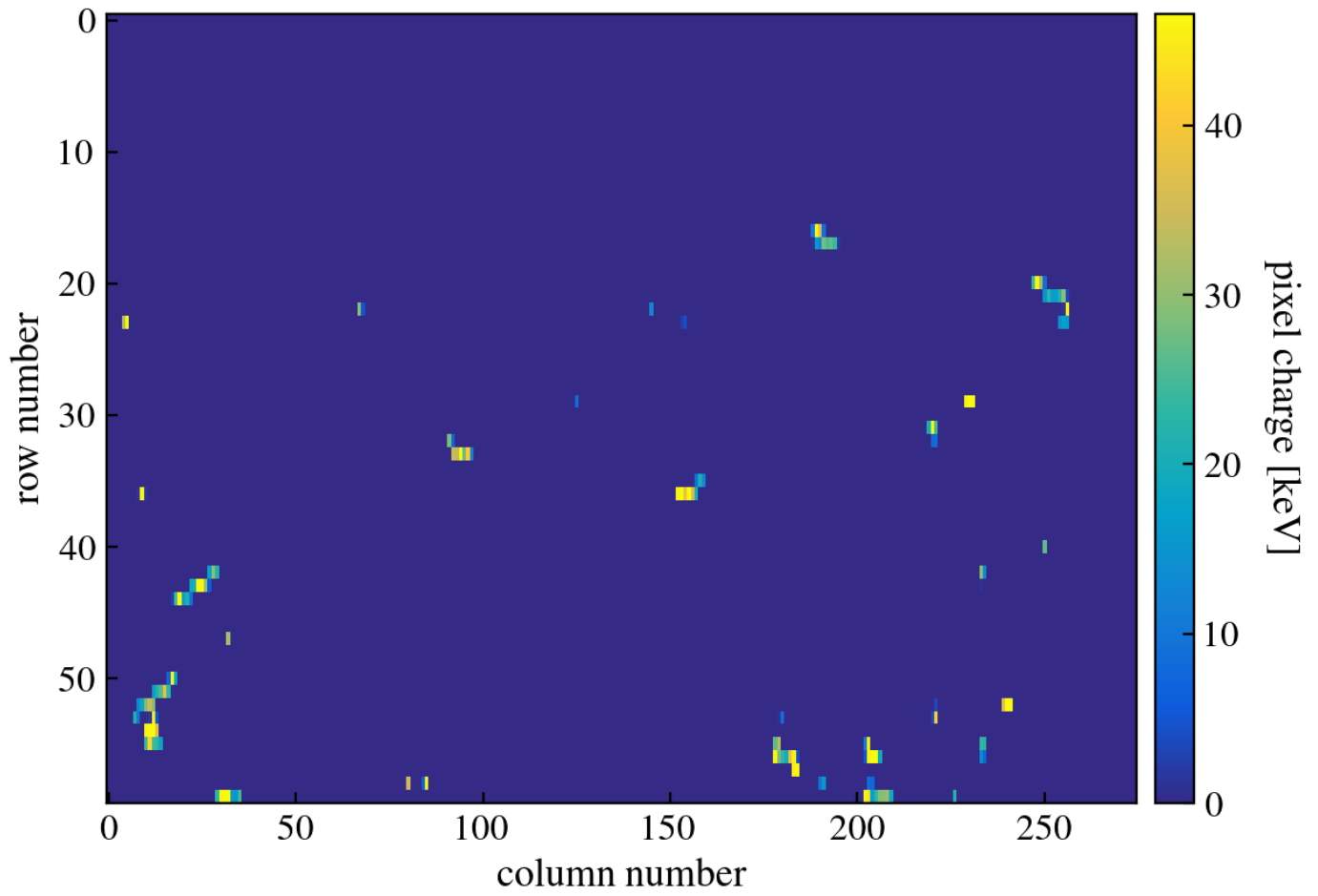


Figure 19: Pixel Charge Distribution

## Pixel Charge Distribution

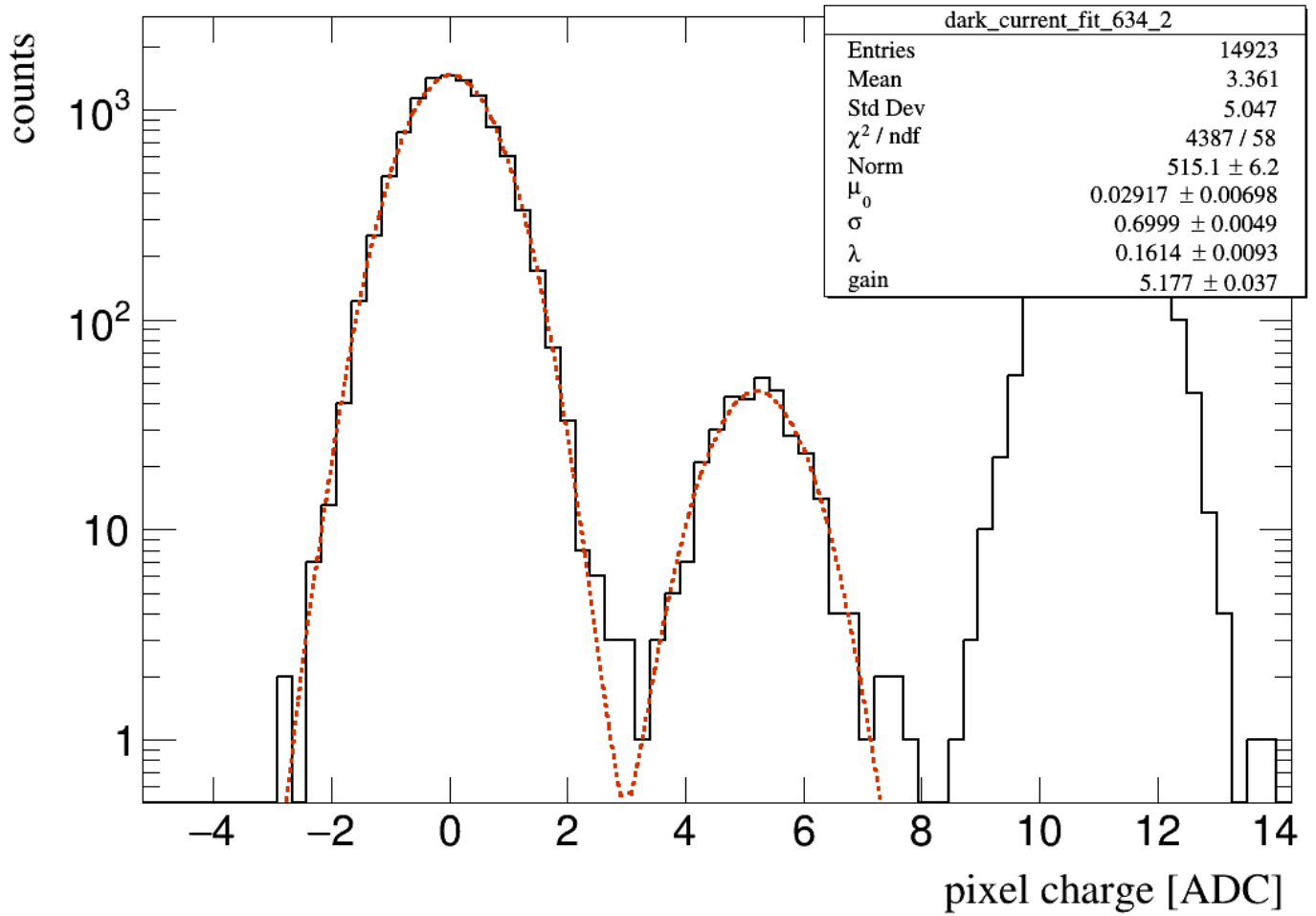


Figure 20: Pixel Charge Distribution

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

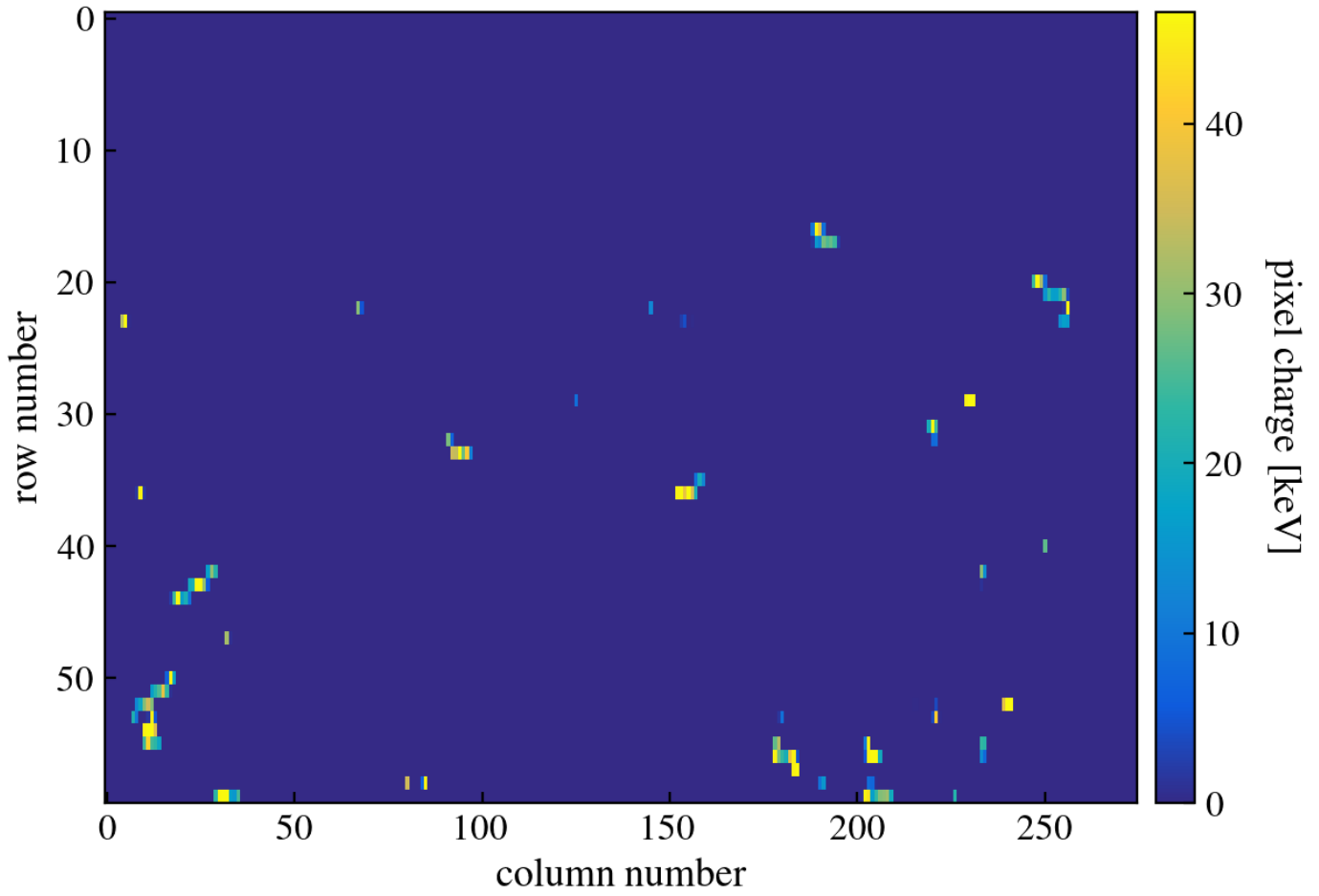


Figure 21: Pixel Charge Distribution



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

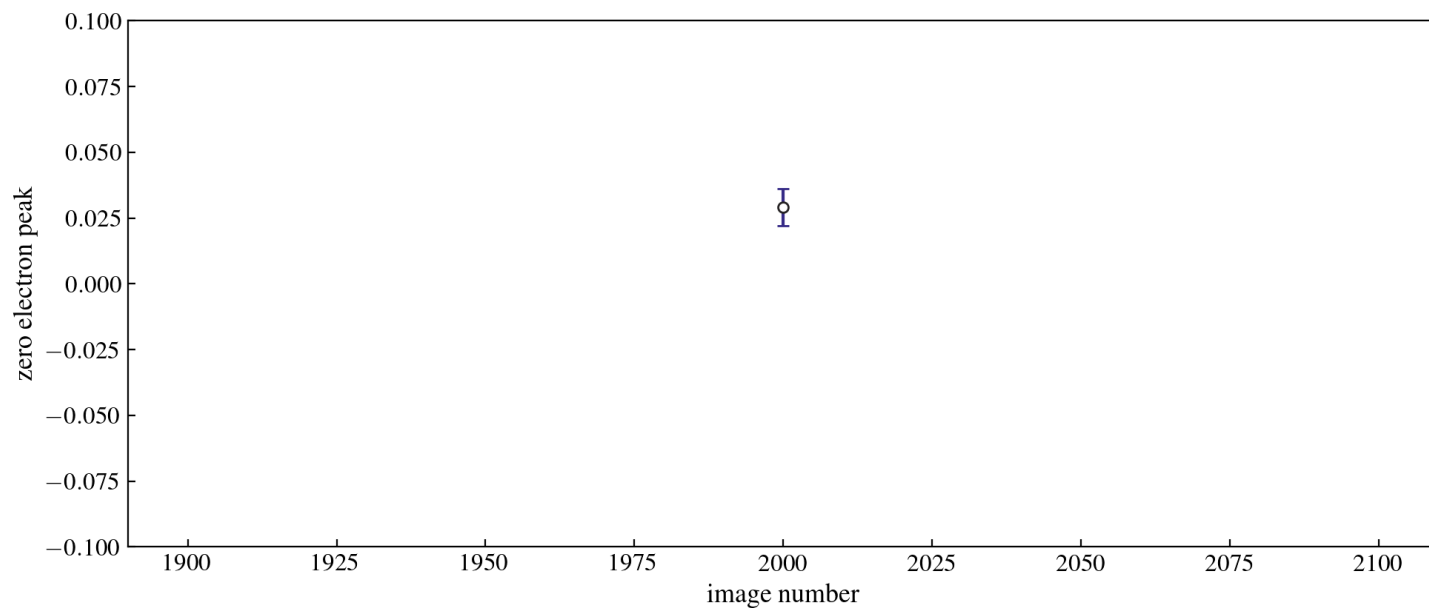


Figure 22: Zero electron peak (from MEFitDC) vs Image

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

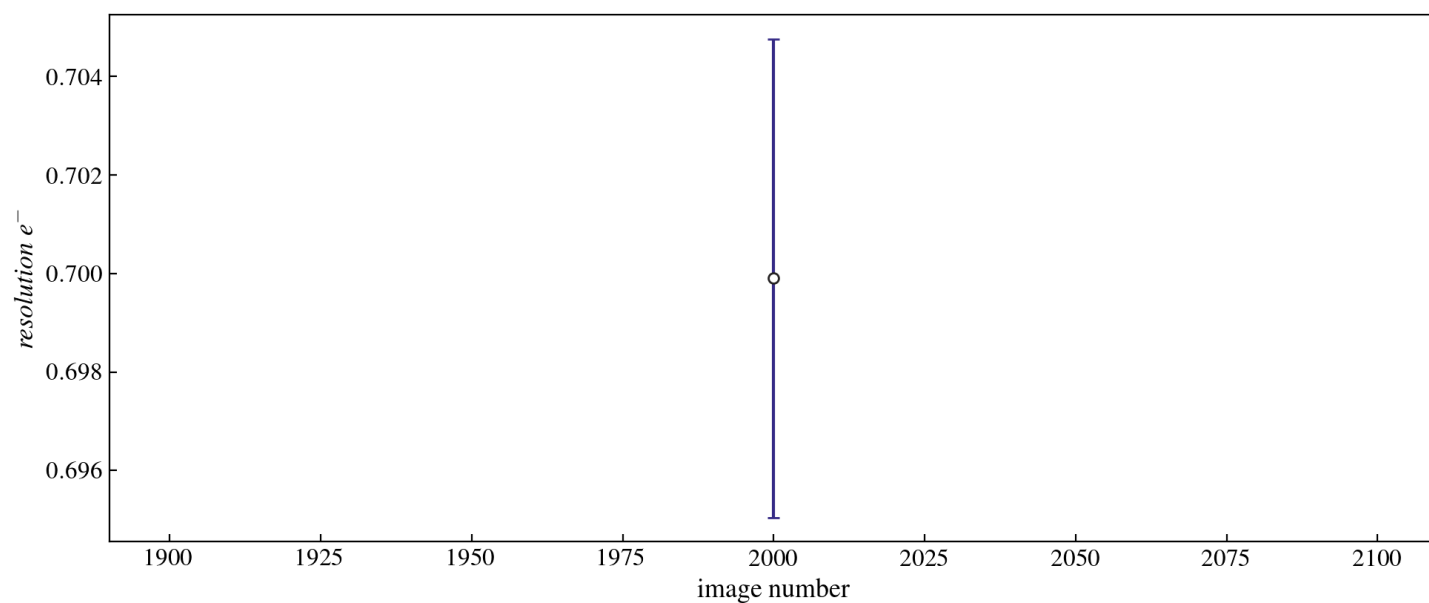


Figure 23: Electron Single Resolution (from MEFitDC) vs Image

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

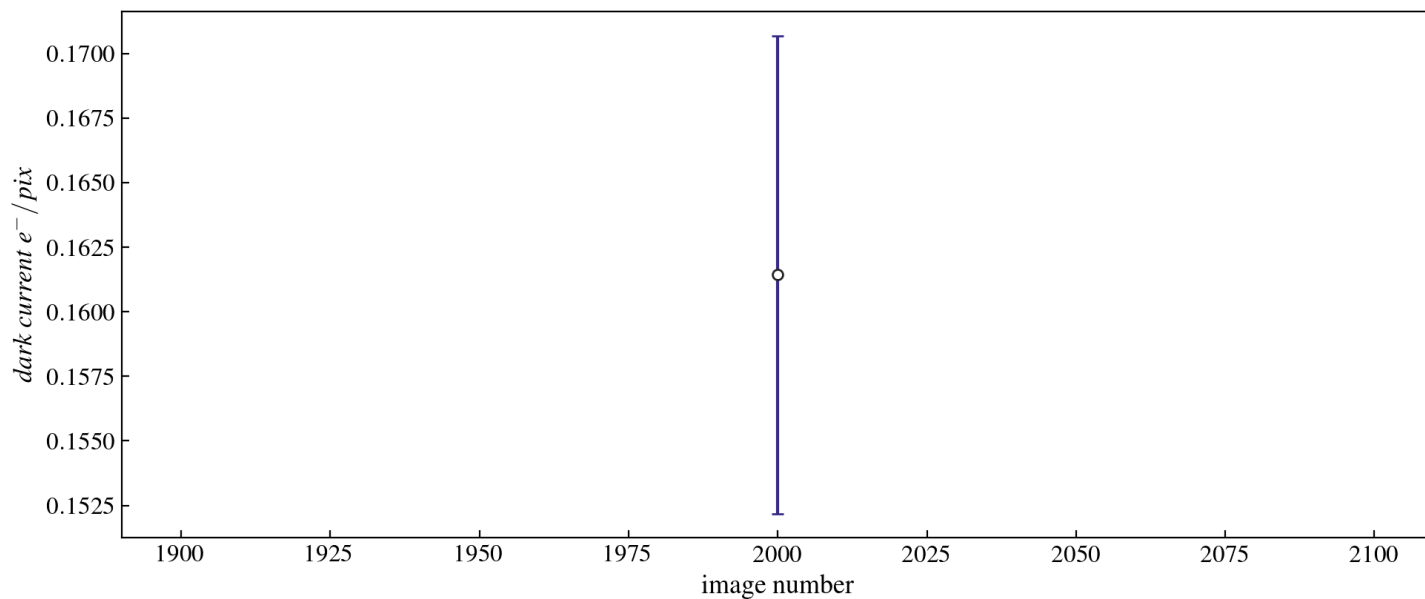


Figure 24: Dark current (from MEFitDC per Row) vs Image

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

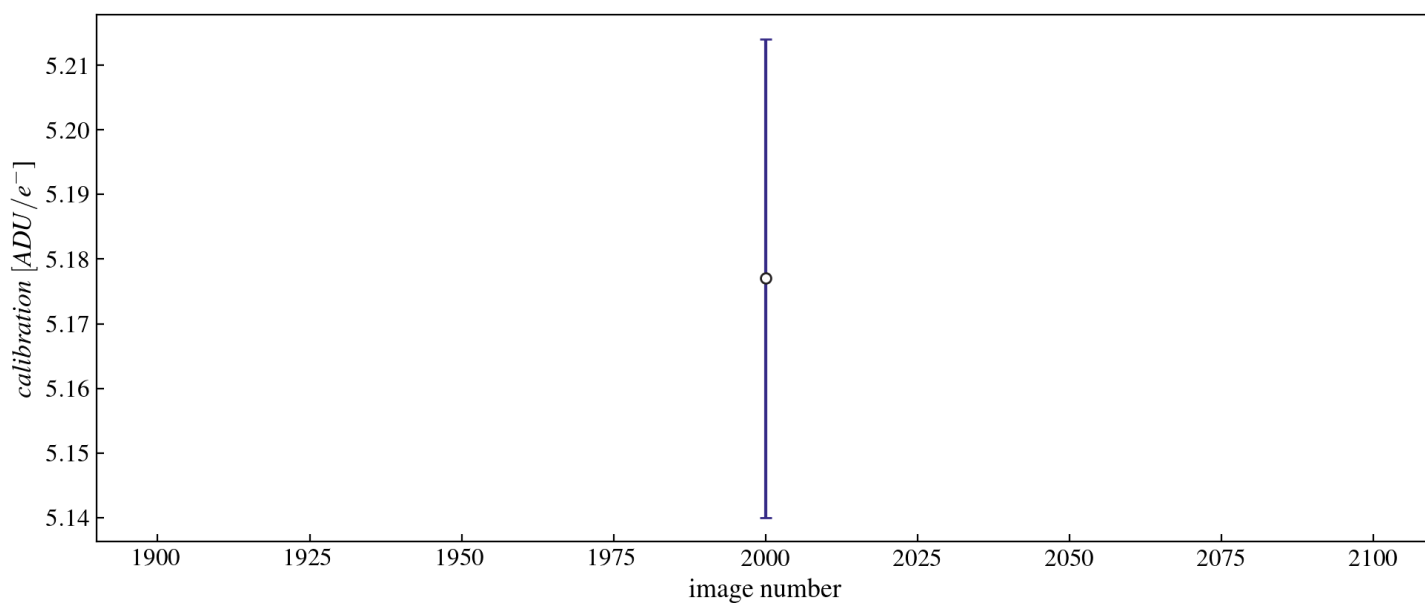


Figure 25: Calibration constant (from MEFitDC) vs Image

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

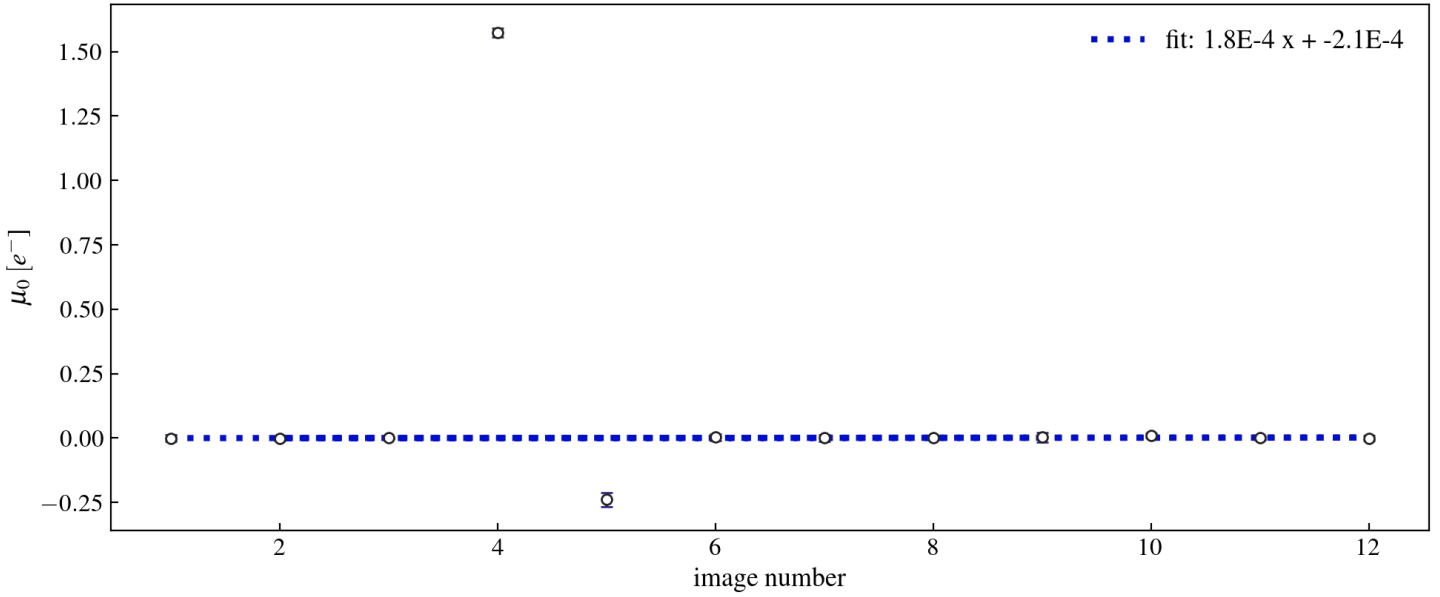


Figure 26: *Overscan. PCD Gaussian fit:  $\mu_0$*

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

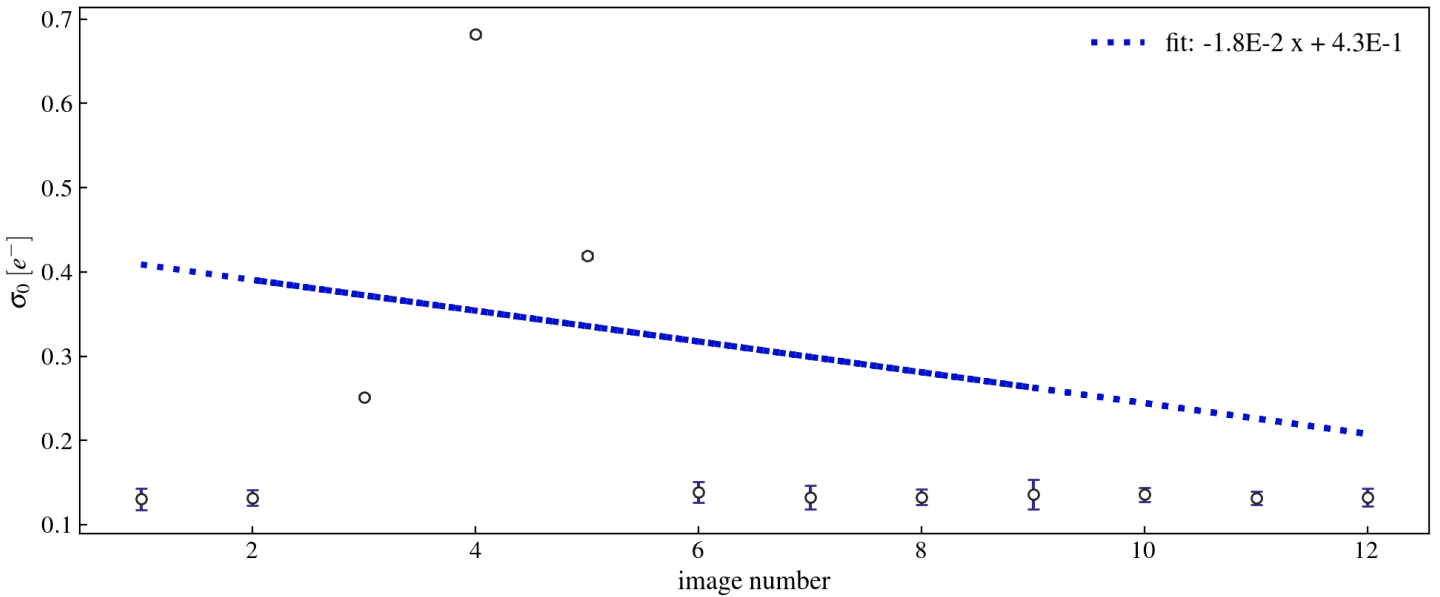


Figure 27: *Overscan. PCD Gaussian fit:  $\sigma_0$*

Electronic column transient showing an exponential behaviour  
[class MEColTransient]

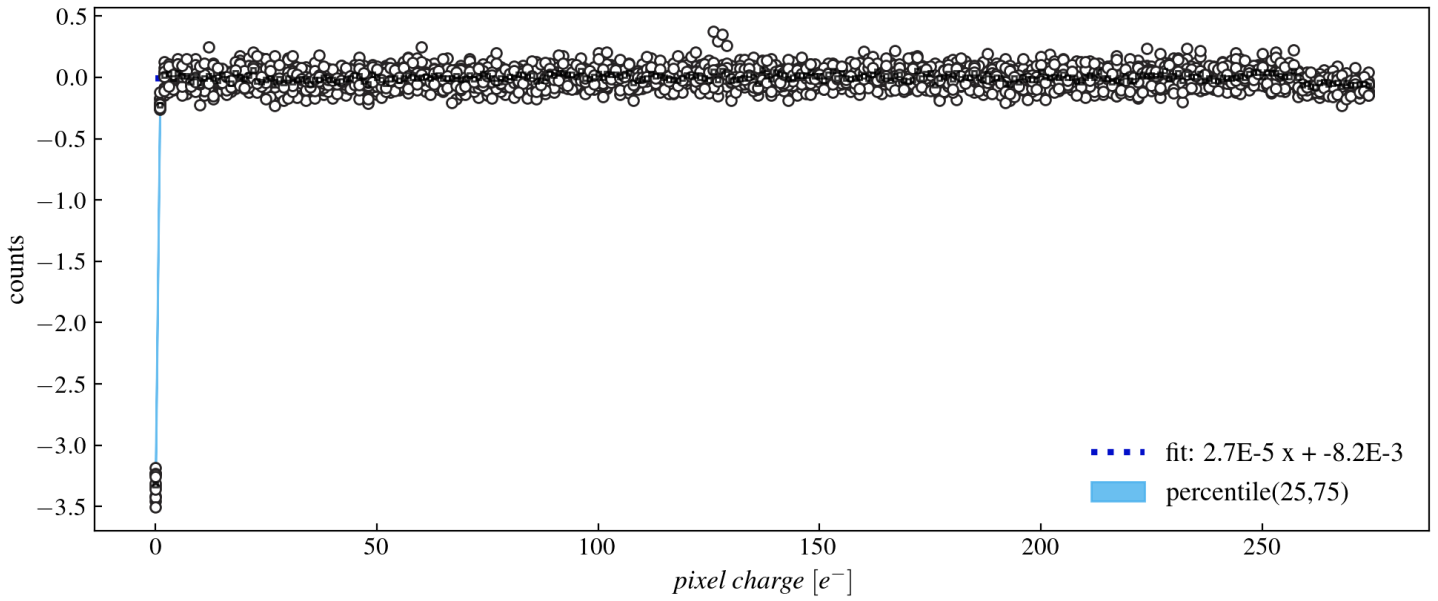


Figure 28: Electronic column transient showing an exponential behaviour

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

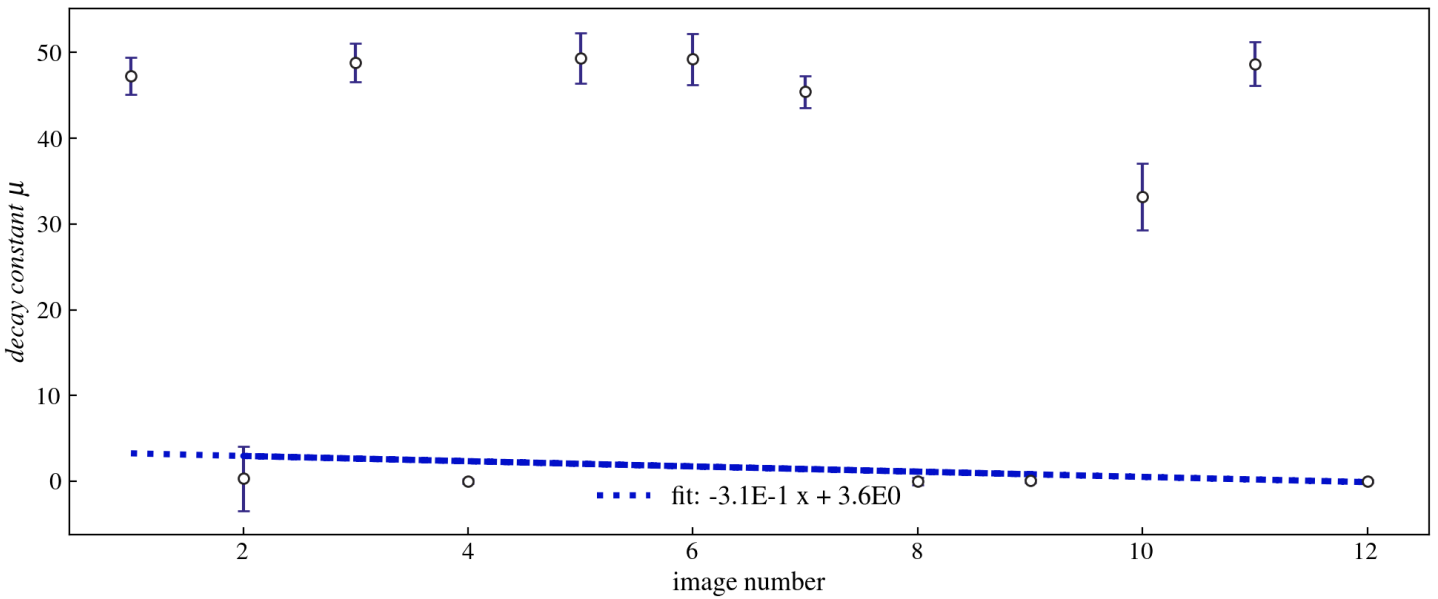


Figure 29: Column transient decay constant (from MEColTransient) vs Image

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

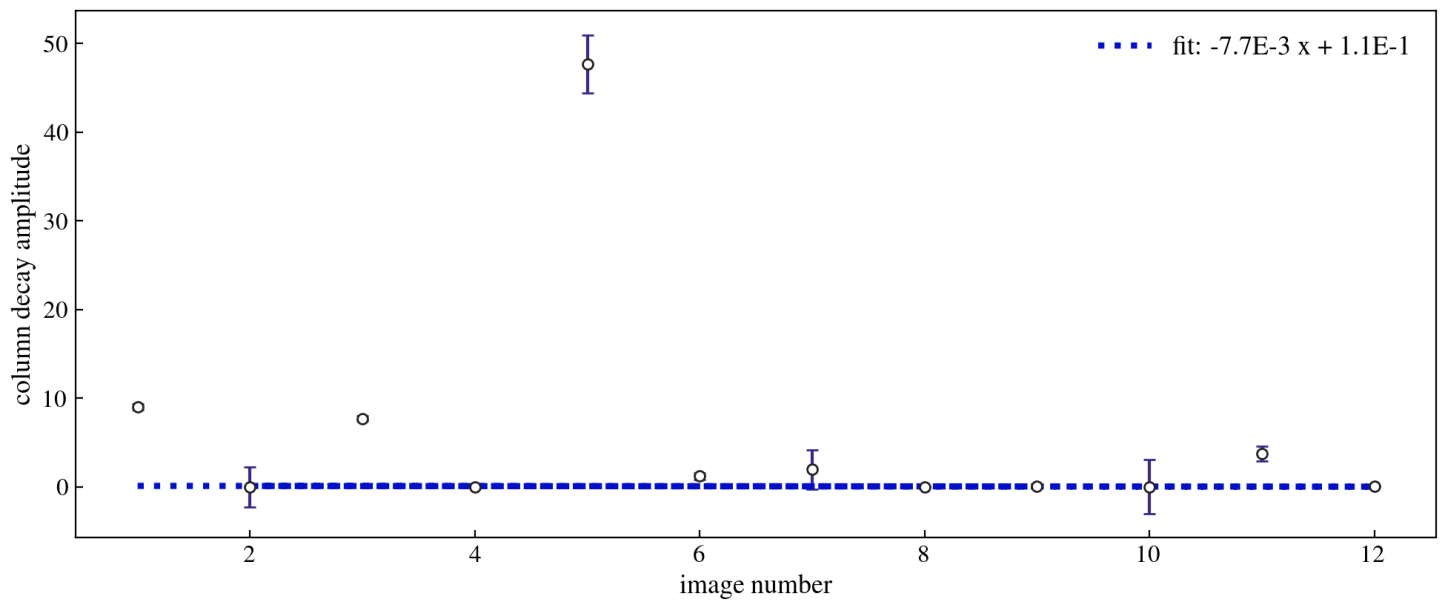


Figure 30: Column transient amplitude (from MEColTransient) vs Image

CCD Image: run 181, image 2000  
[class MECCDImage]

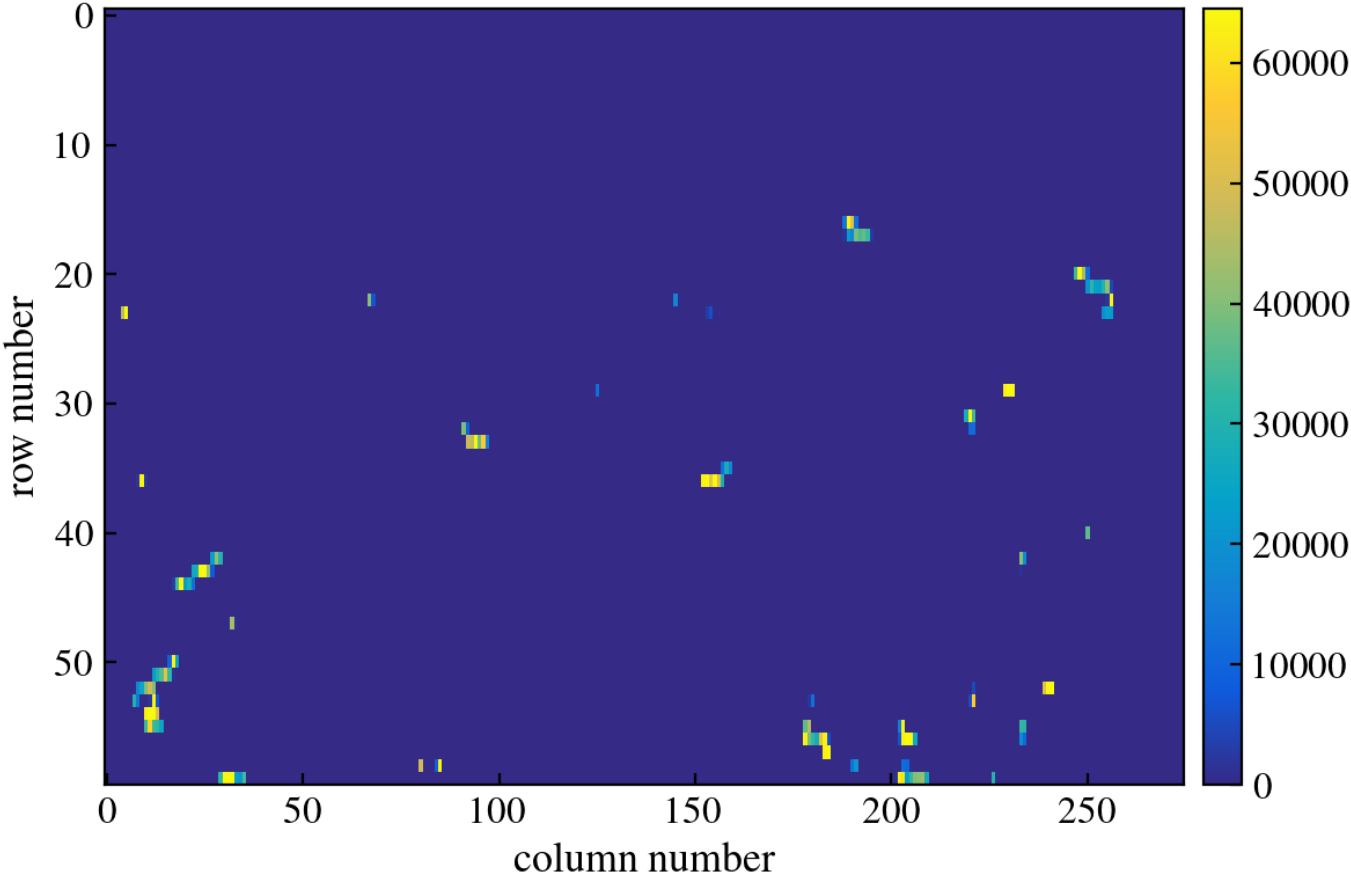


Figure 31: CCD Image

CCD Image: run 181, image 1  
[class MECCDImage]

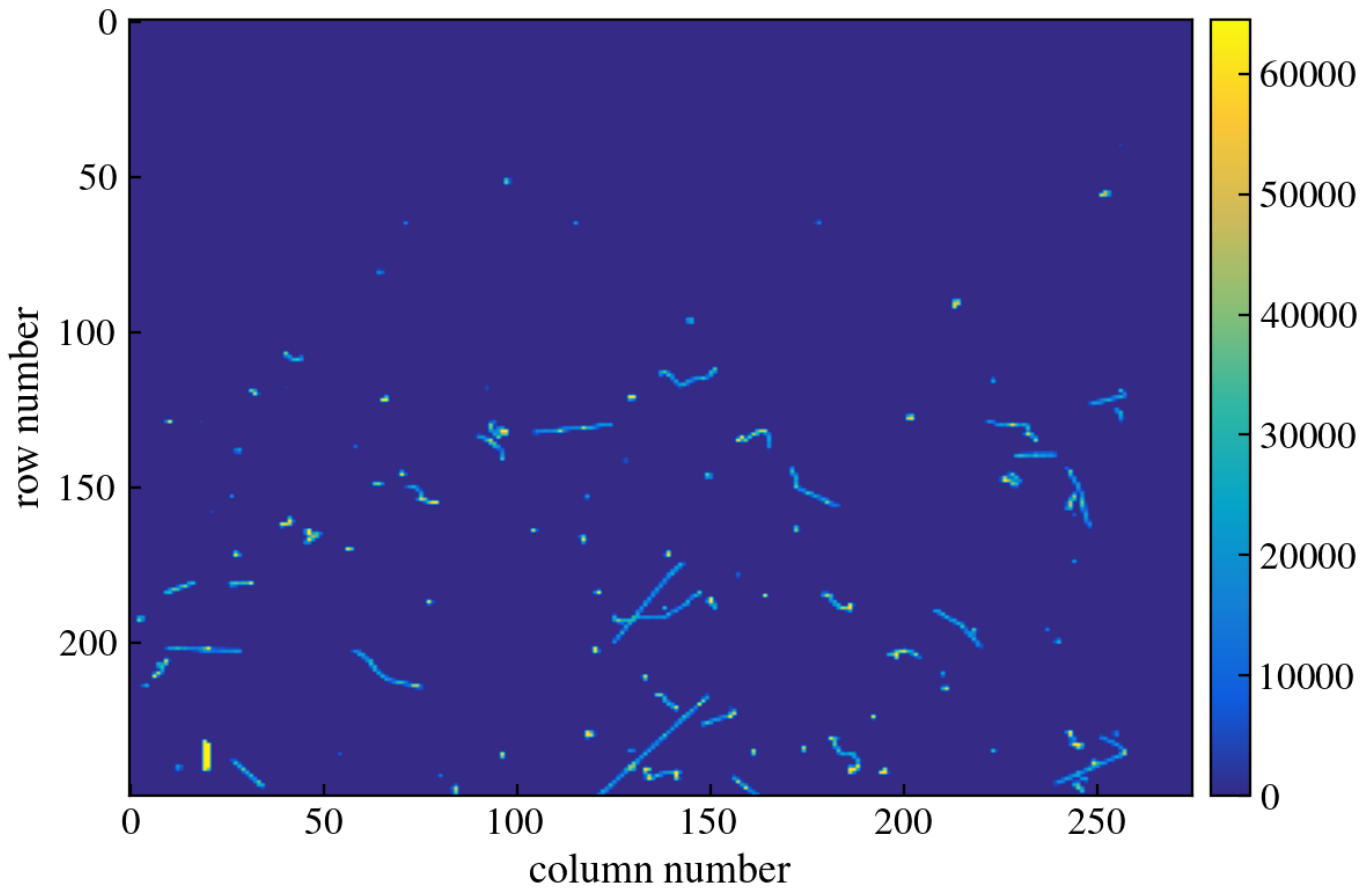


Figure 32: CCD Image

CCD Image: run 181, image 10  
[class MECCDImage]

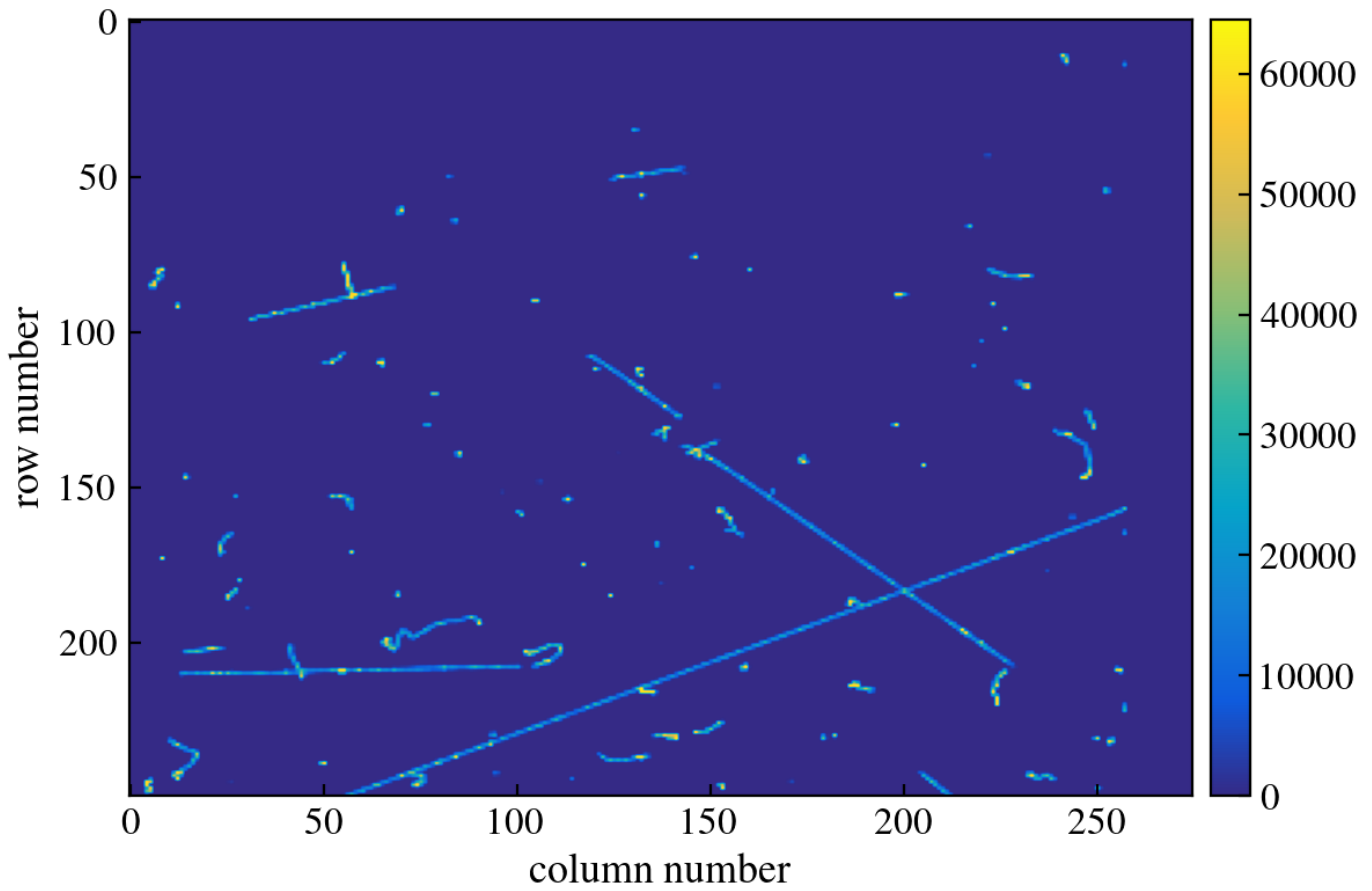


Figure 33: CCD Image



CCD Image: run 181, image 11  
[class MECCDImage]

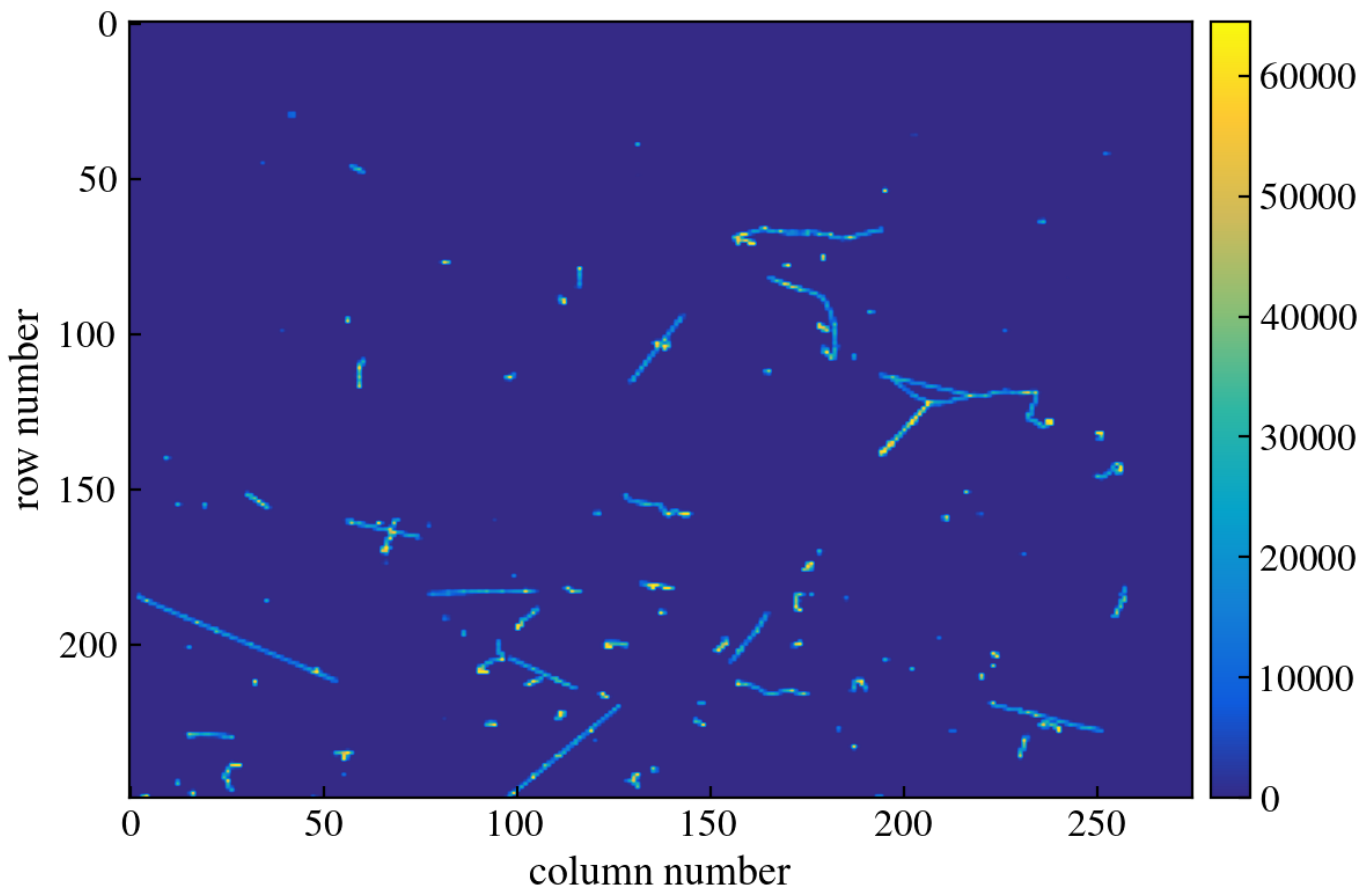


Figure 34: CCD Image

CCD Image: run 181, image 12  
[class MECCDImage]

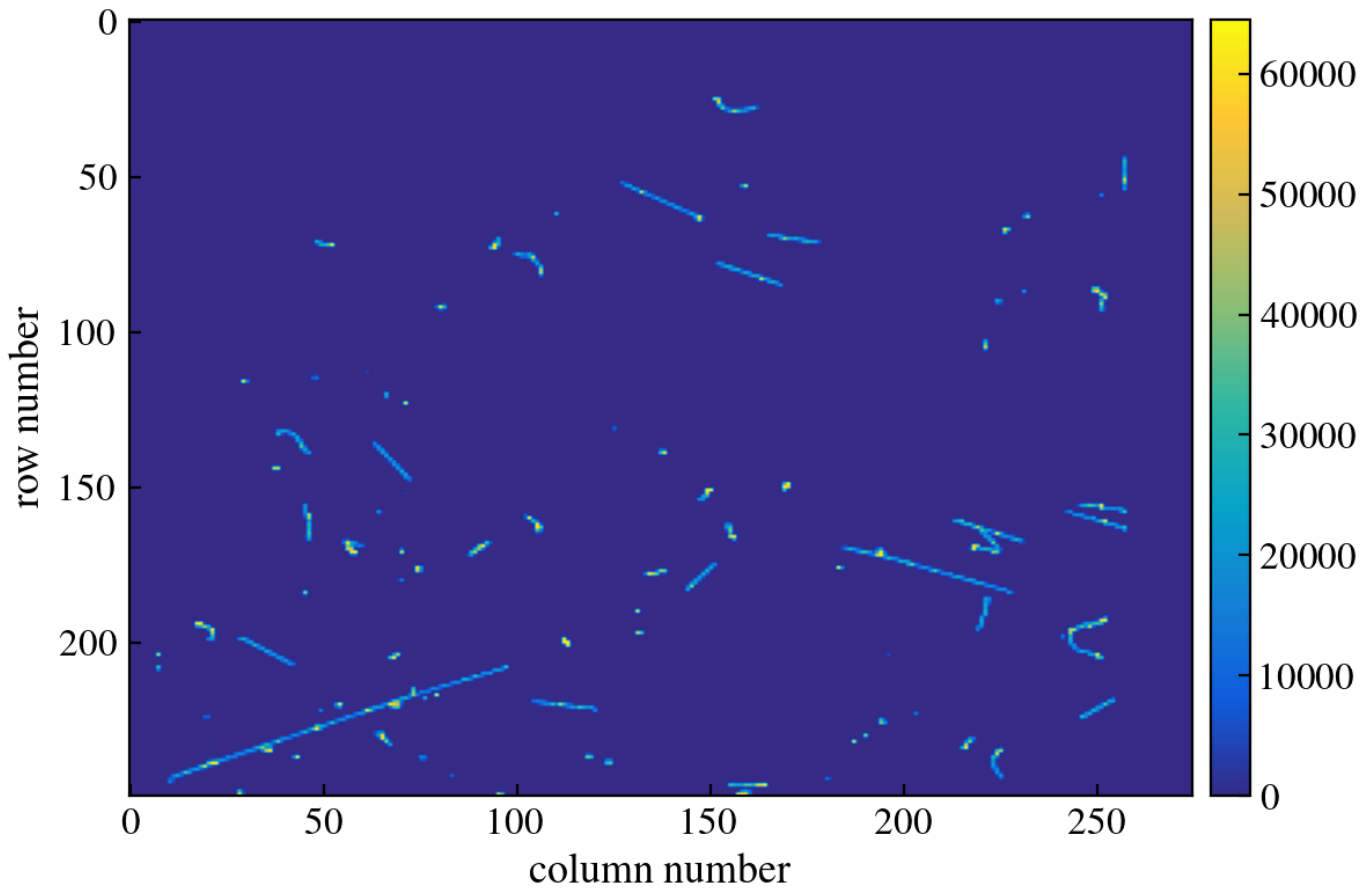


Figure 35: CCD Image

CCD Image: run 181, image 2  
[class MECCDImage]

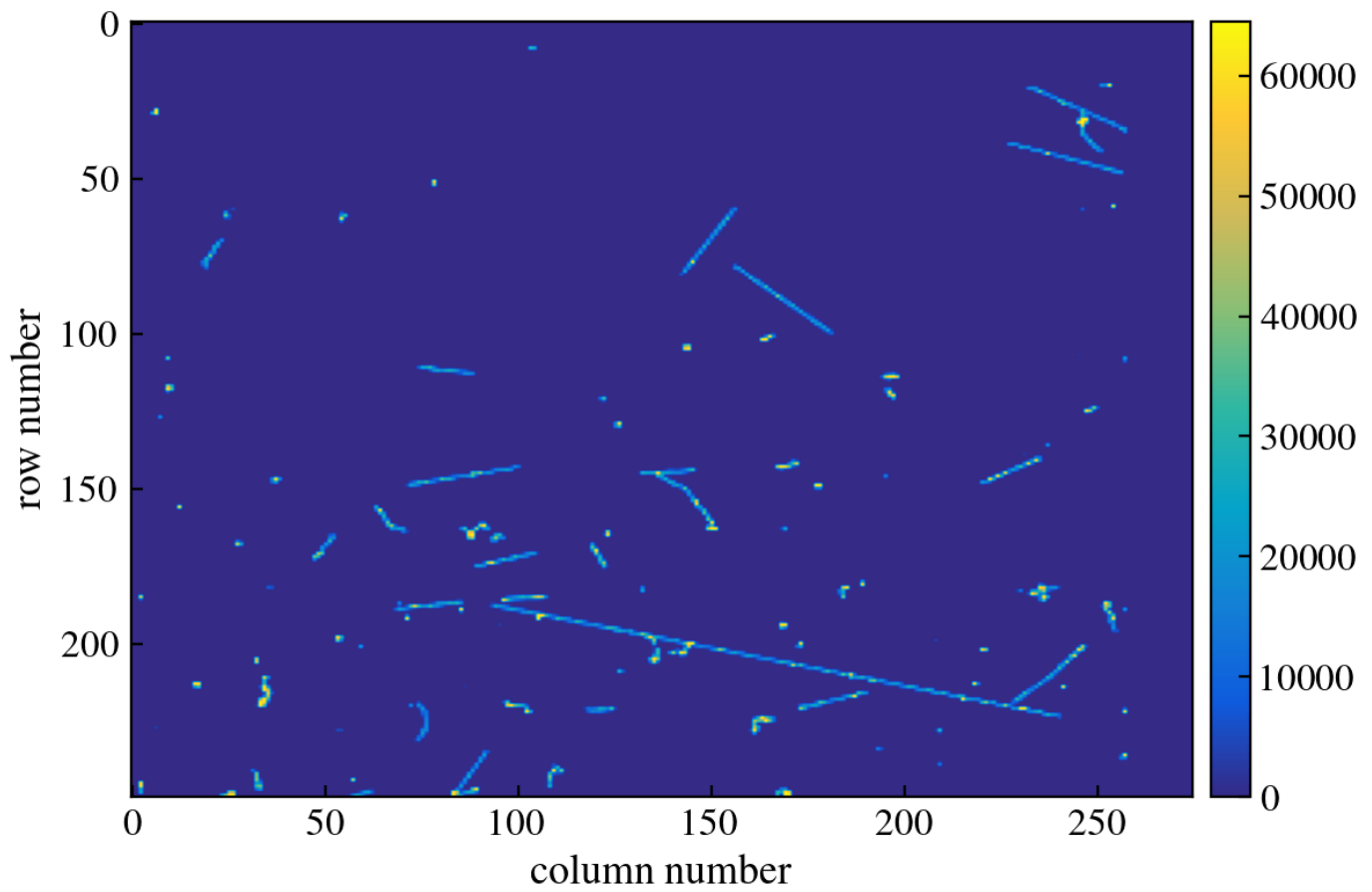


Figure 36: CCD Image

CCD Image: run 181, image 3  
[class MECCDImage]

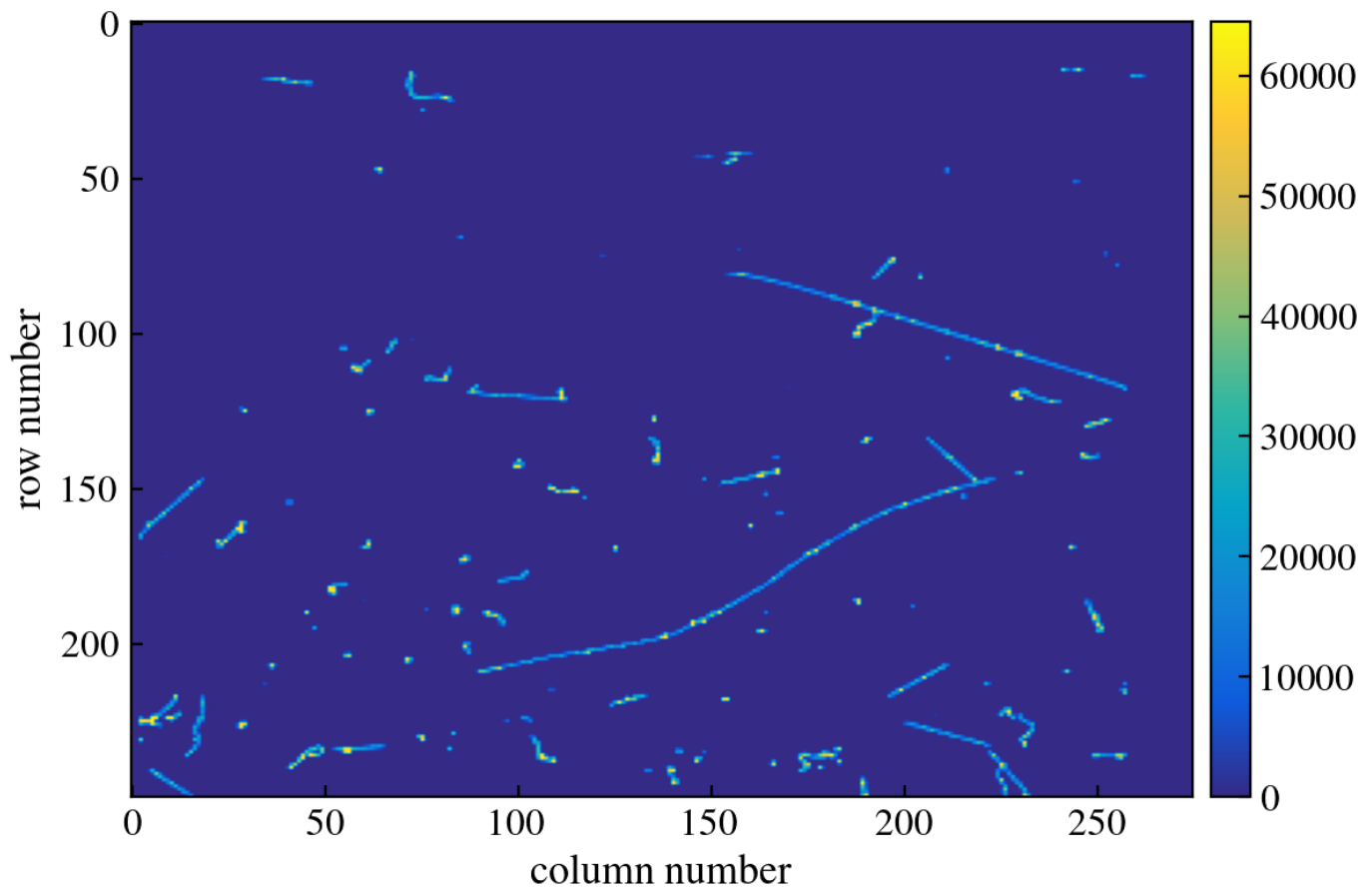


Figure 37: CCD Image

CCD Image: run 181, image 4  
[class MECCDImage]

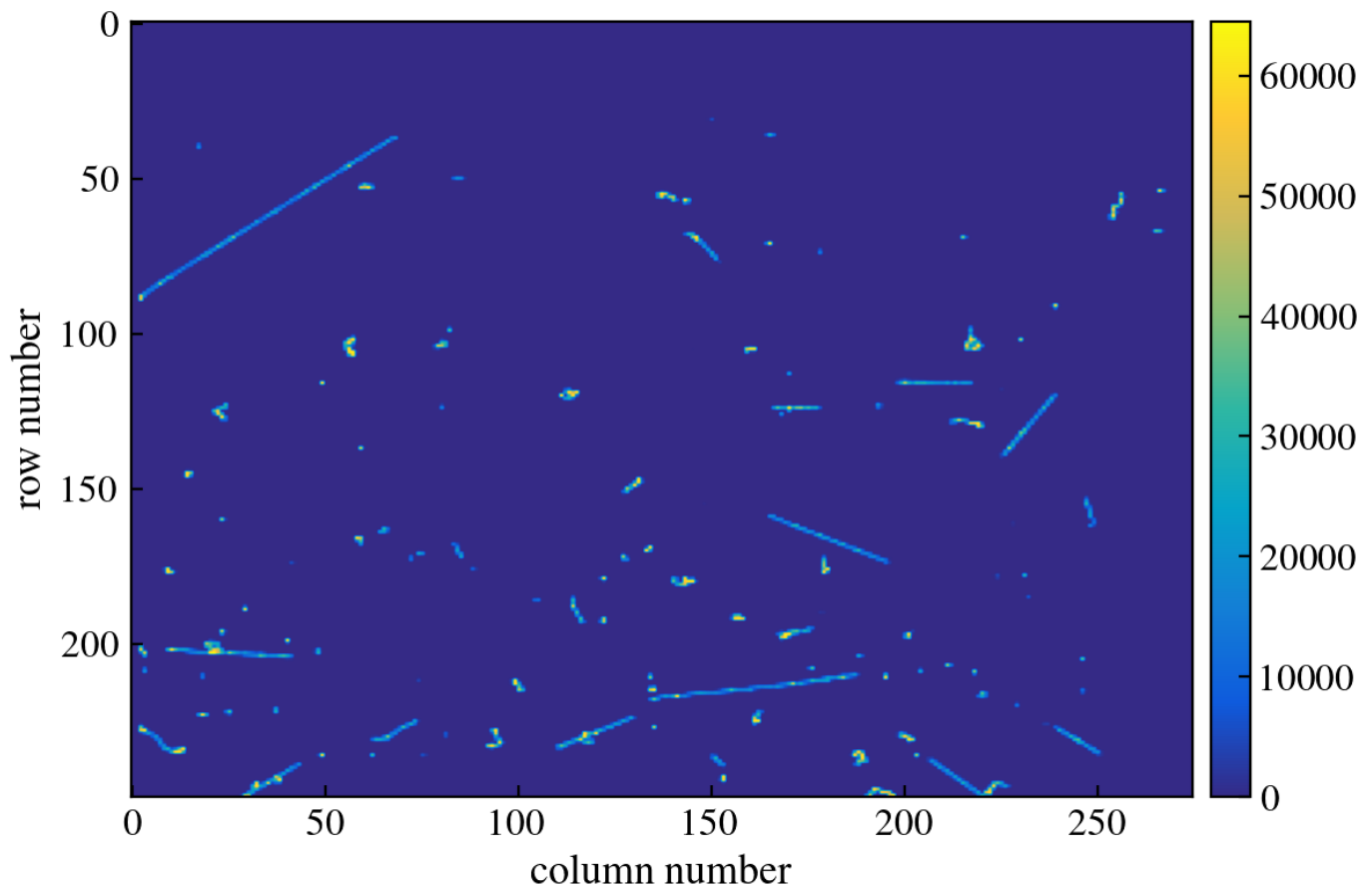


Figure 38: CCD Image

CCD Image: run 181, image 5  
[class MECCDImage]

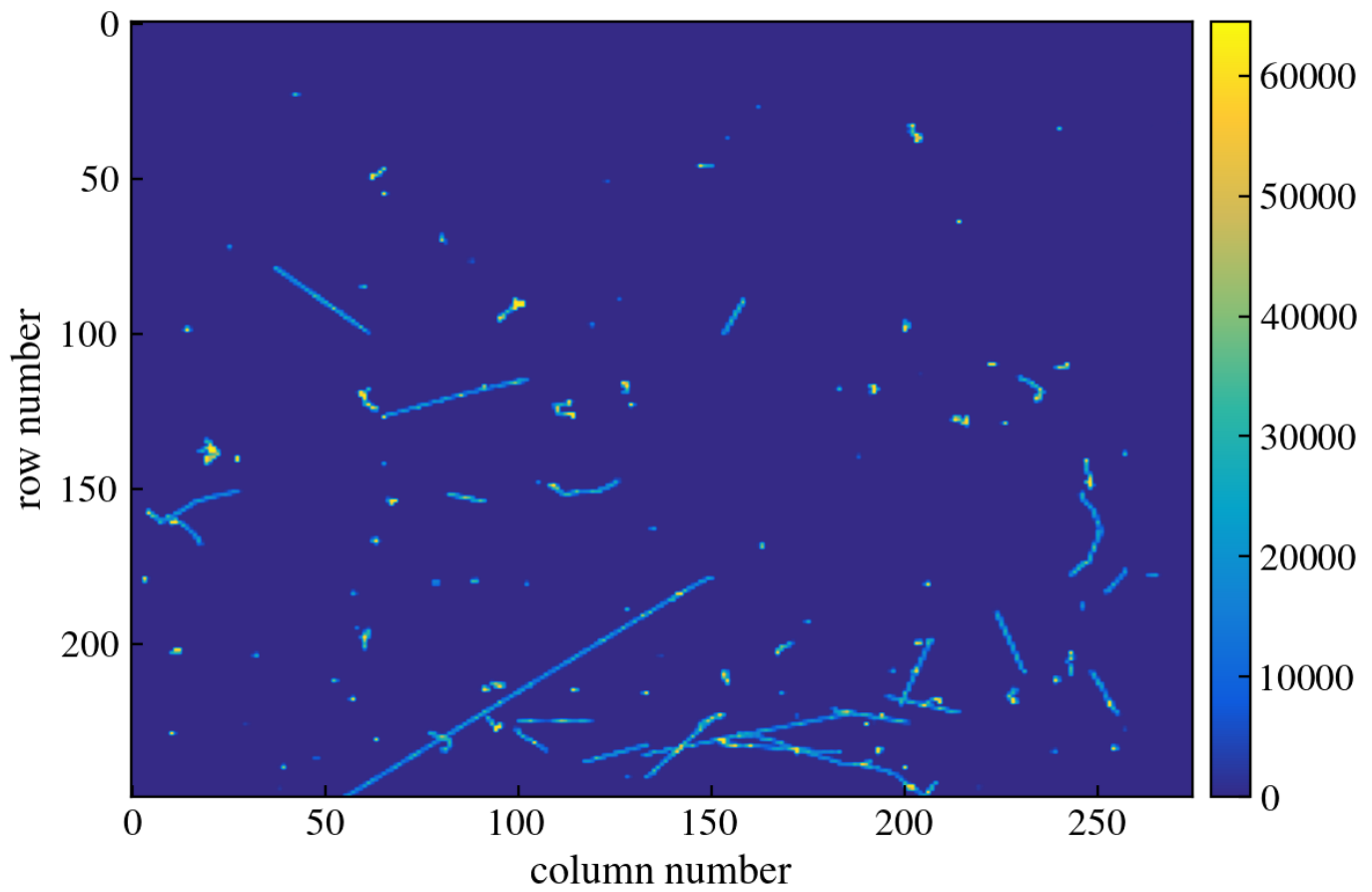


Figure 39: CCD Image

CCD Image: run 181, image 6  
[class MECCDImage]

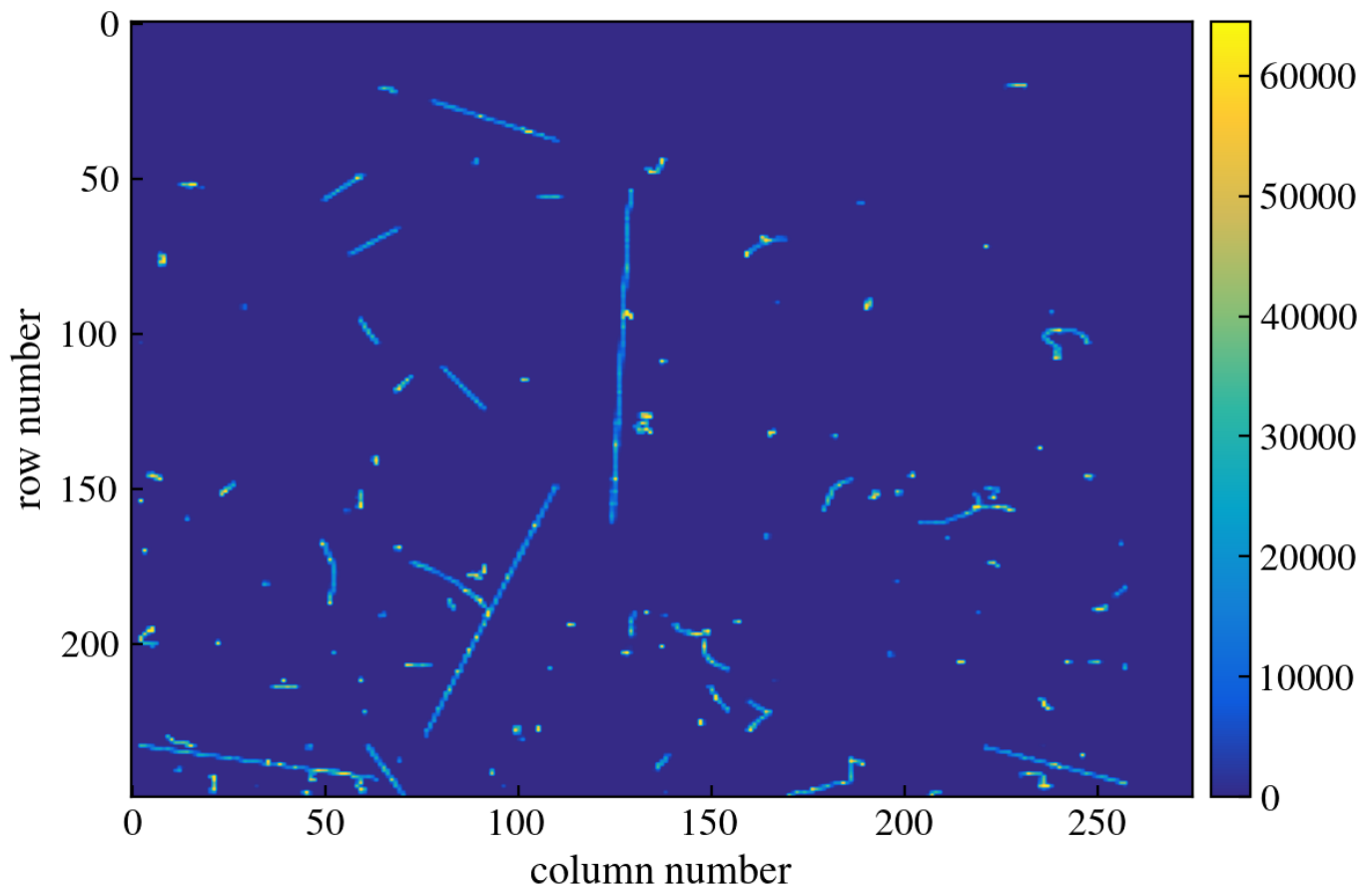


Figure 40: CCD Image

CCD Image: run 181, image 7  
[class MECCDImage]

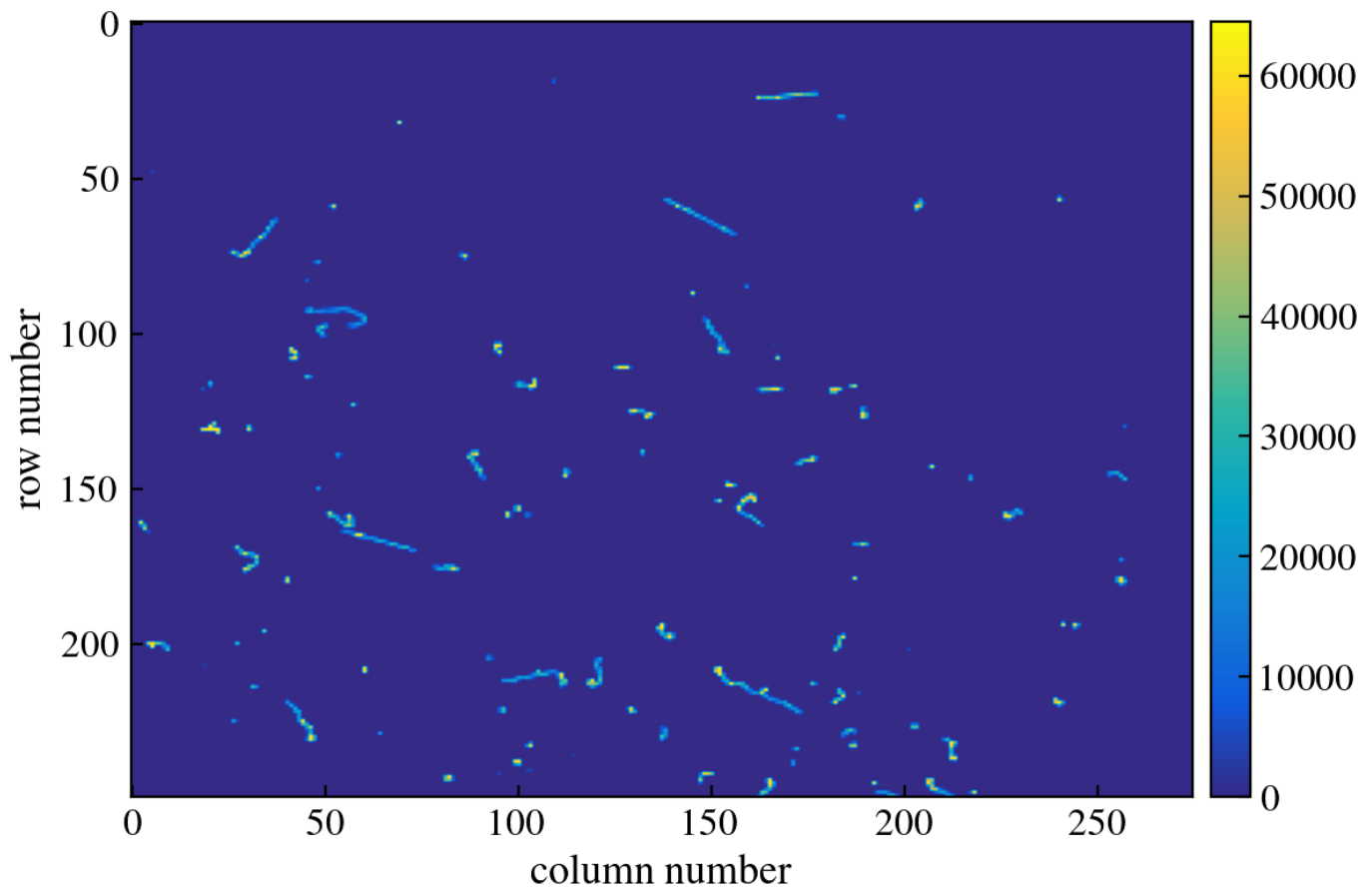


Figure 41: CCD Image



CCD Image: run 181, image 8  
[class MECCDImage]

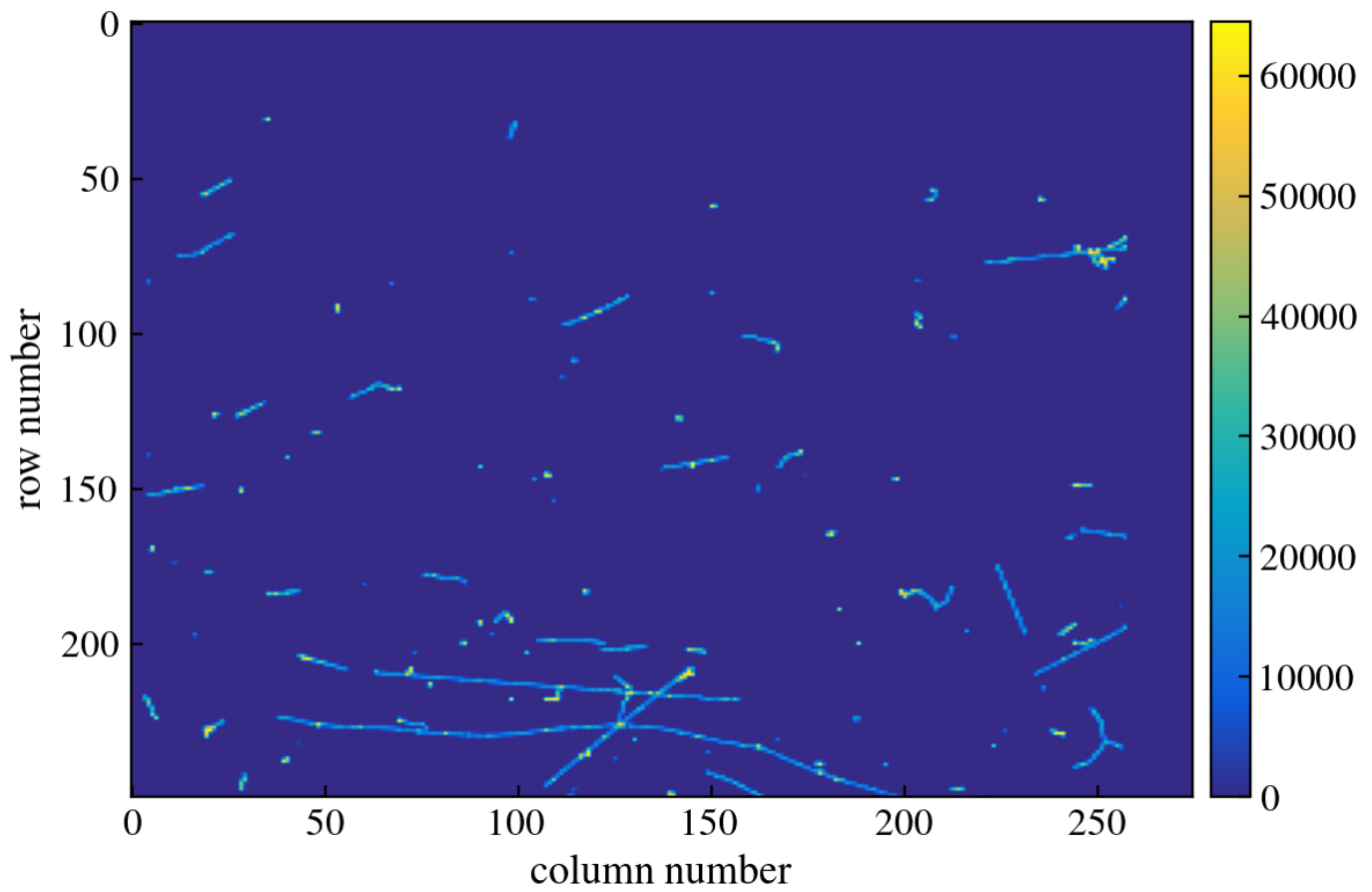


Figure 42: CCD Image

CCD Image: run 181, image 9  
[class MECCDImage]

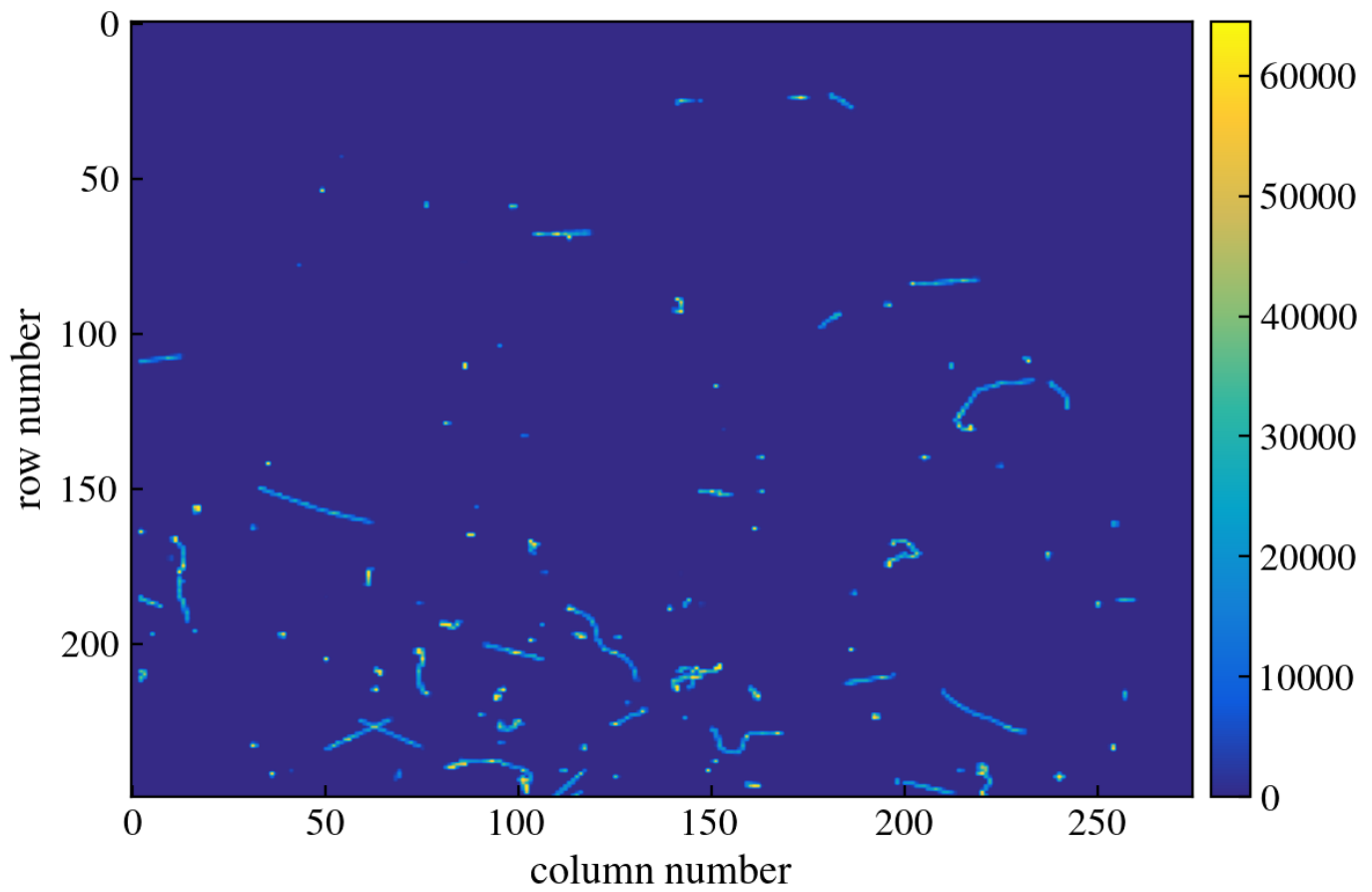


Figure 43: CCD Image

Overscan. Baseline Shift Status vs Image  
[class MEBaselineShift]

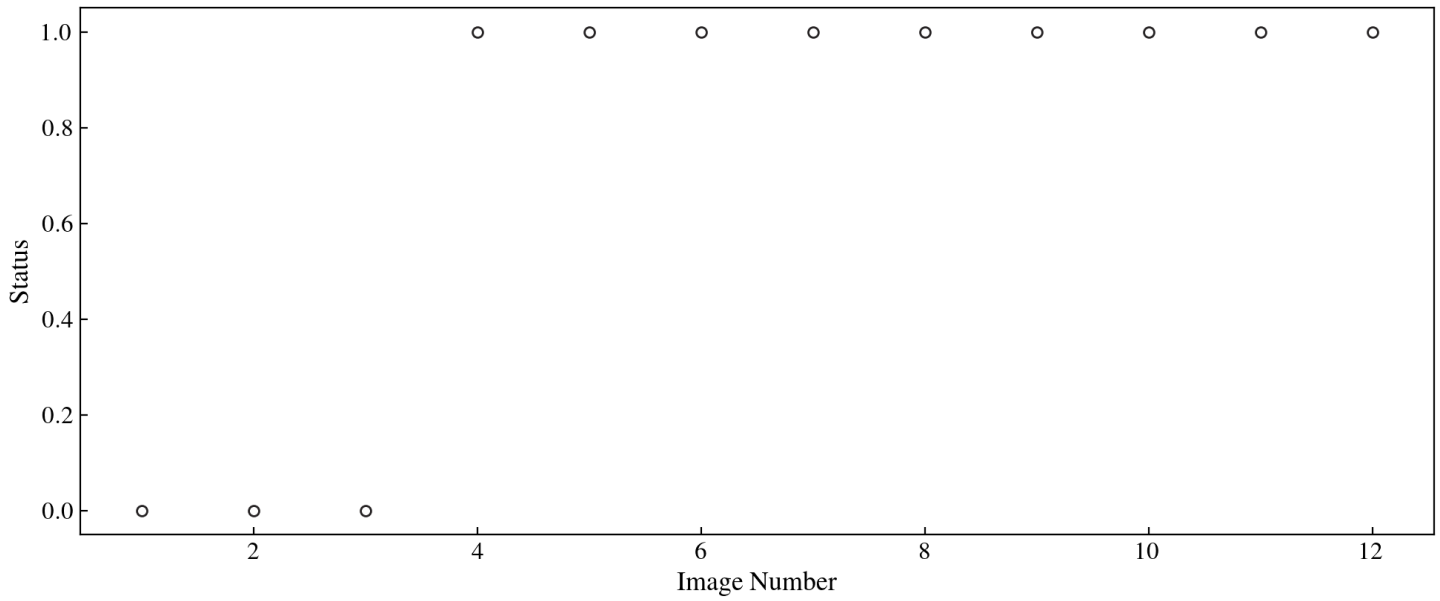


Figure 44: Overscan. Baseline Shift Status vs Image

Overscan. Horizontal Clusters vs Image  
[class MEHorizontalClusters]

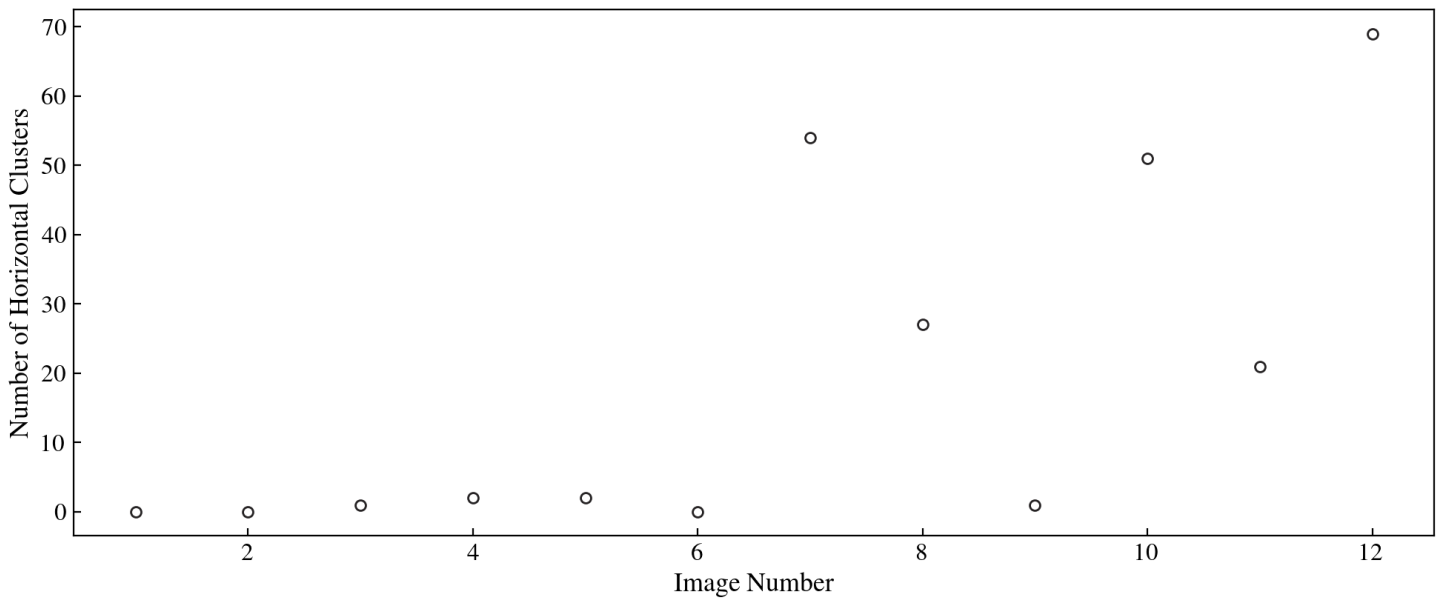


Figure 45: Overscan. Horizontal Clusters vs Image

Overscan. Miscellaneous Noise Found Status  
[class MESigmaCutoffNoise]



Figure 46: Overscan. Miscellaneous Noise Found Status