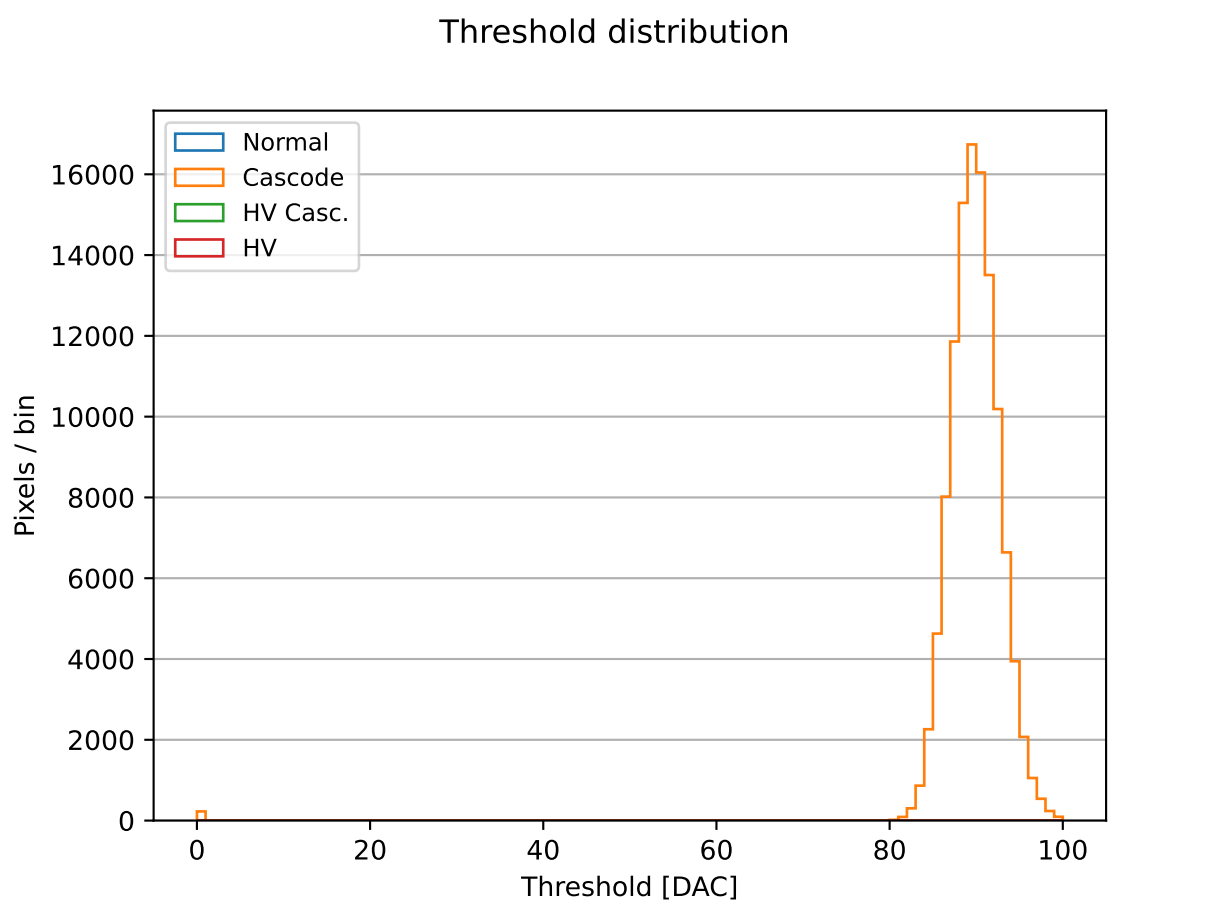
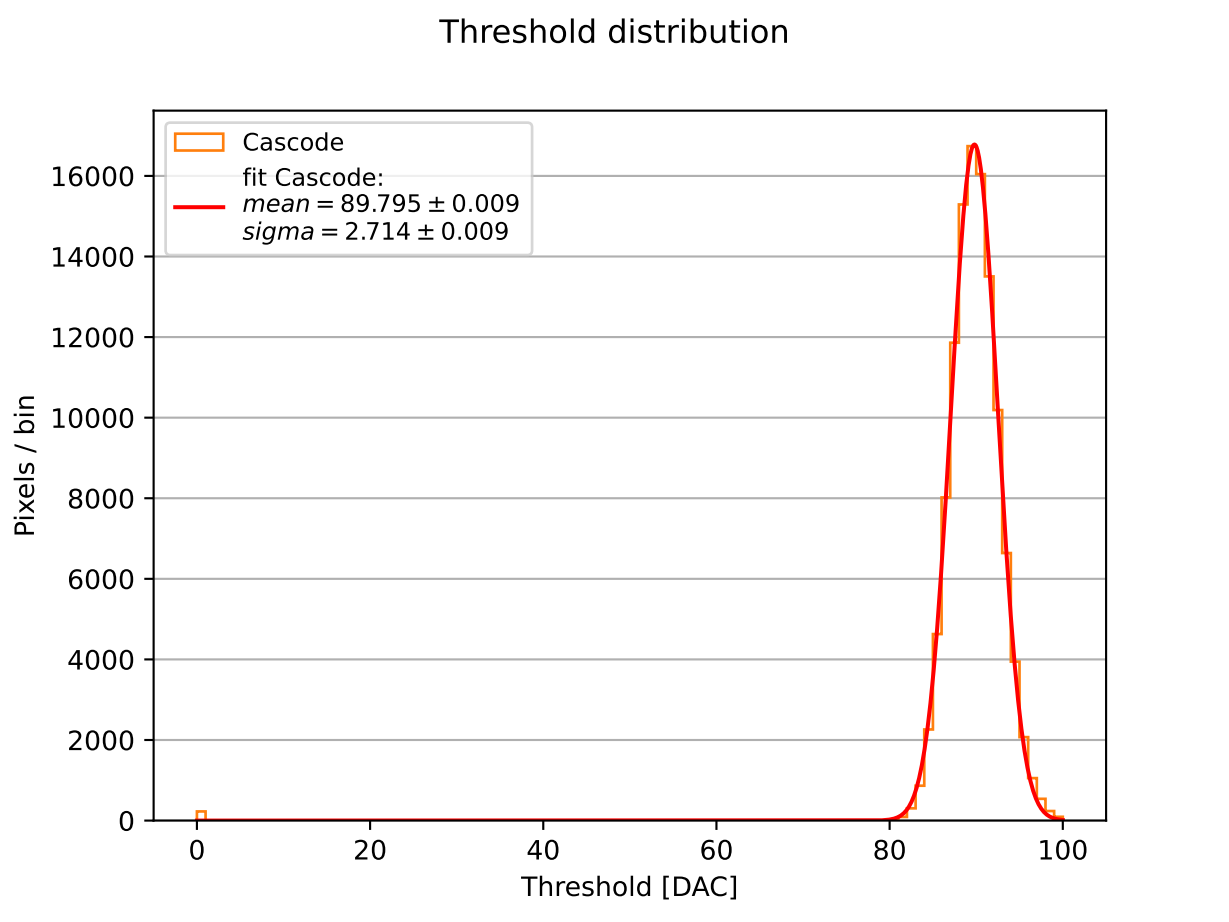
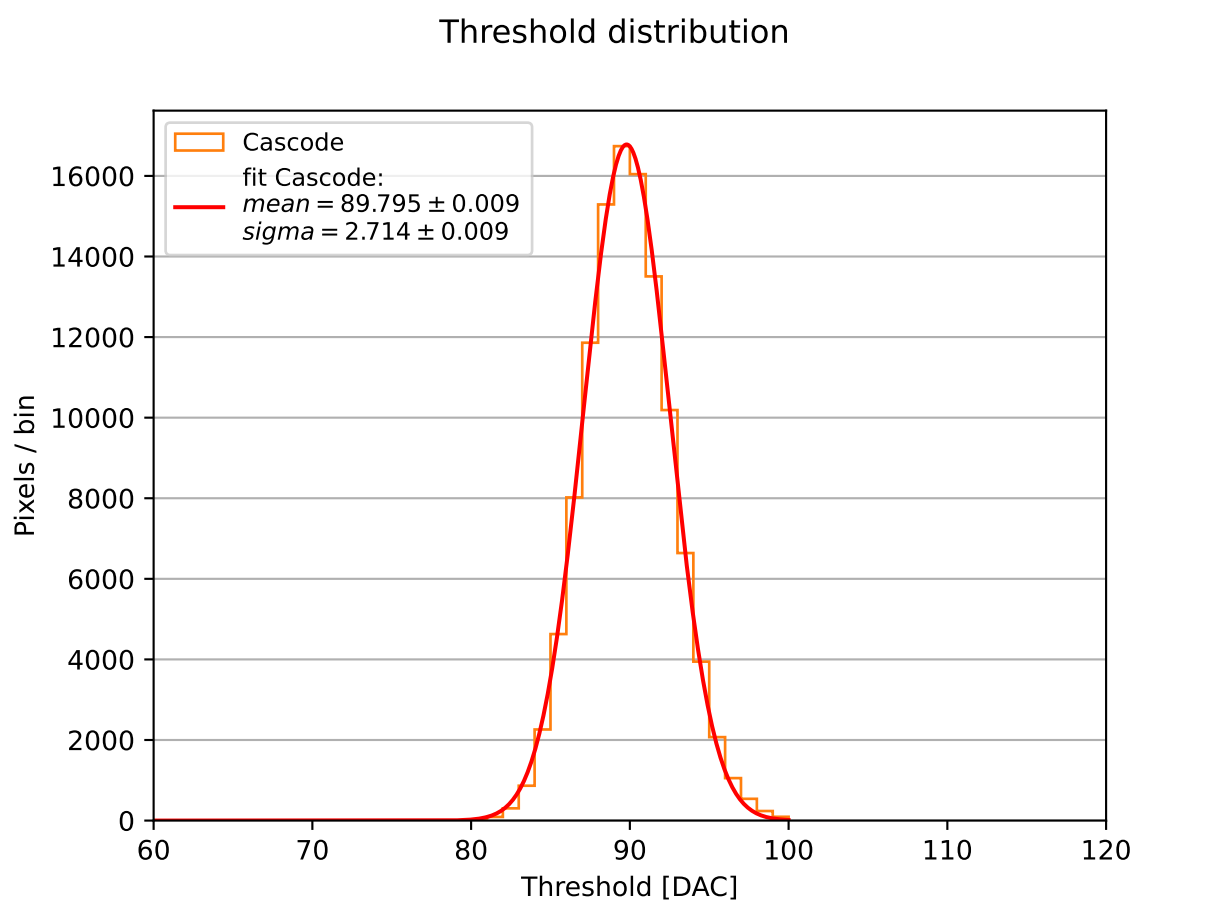
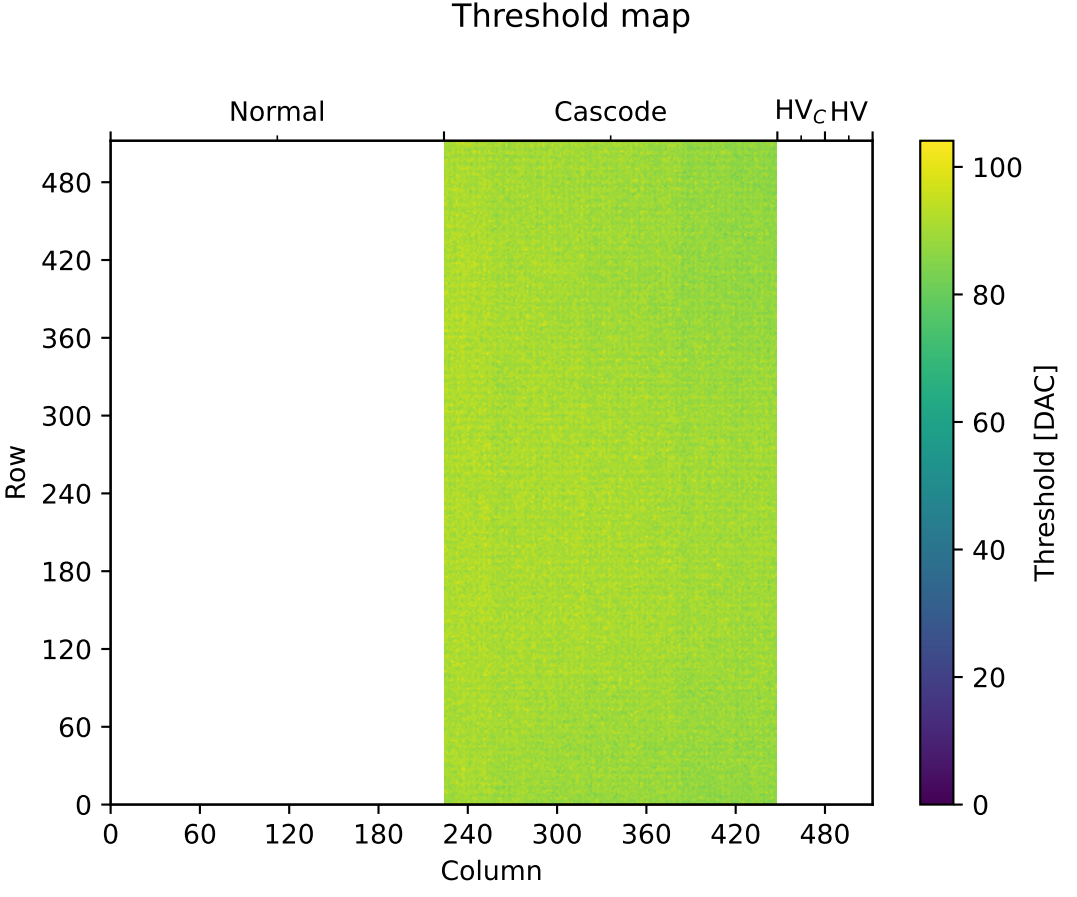
This file was generated by joining the following

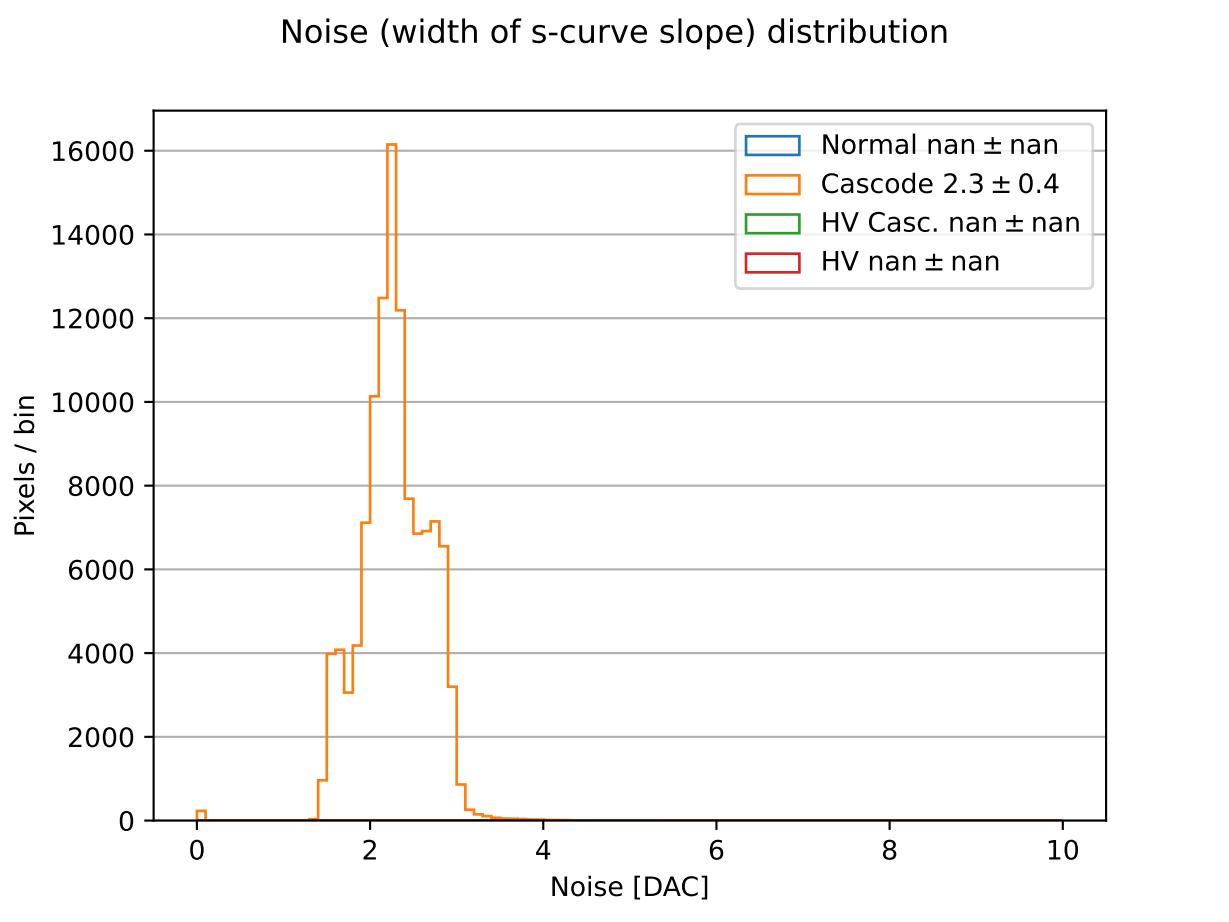
20221010_171000_threshold_scan_interpreted_scurve.npz
20221010_174034_threshold_scan_interpreted_scurve.npz
20221010_181121_threshold_scan_interpreted_scurve.npz
20221010_184143_threshold_scan_interpreted_scurve.npz
20221010_191138_threshold_scan_interpreted_scurve.npz
20221010_194233_threshold_scan_interpreted_scurve.npz
20221011_092509_threshold_scan_interpreted_scurve.npz
20221011_095548_threshold_scan_interpreted_scurve.npz

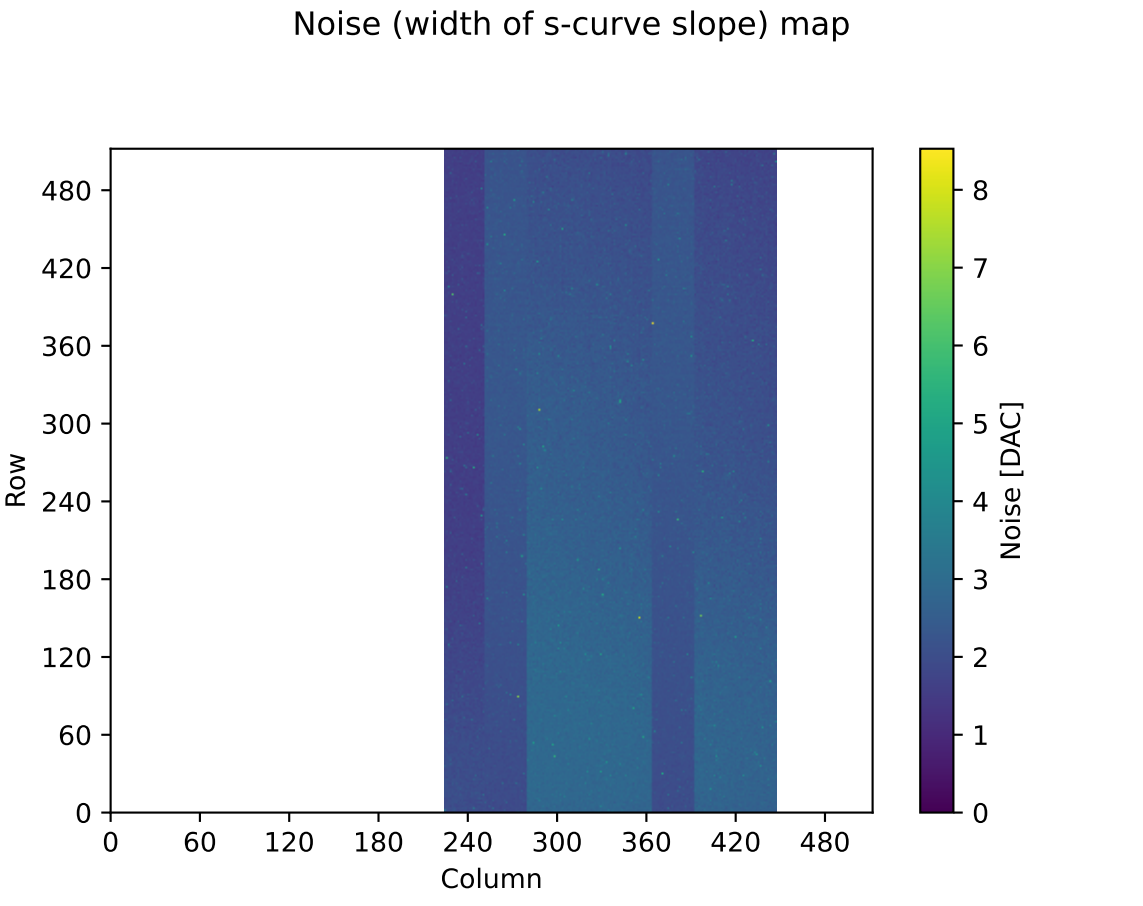

Threshold distribution
Normal
Cascode
HV Casc.
HV
Pixels / bin
0
2000
4000
6000
8000
10000
12000
14000
16000
0
20
40
60
80
100
Threshold [DAC]

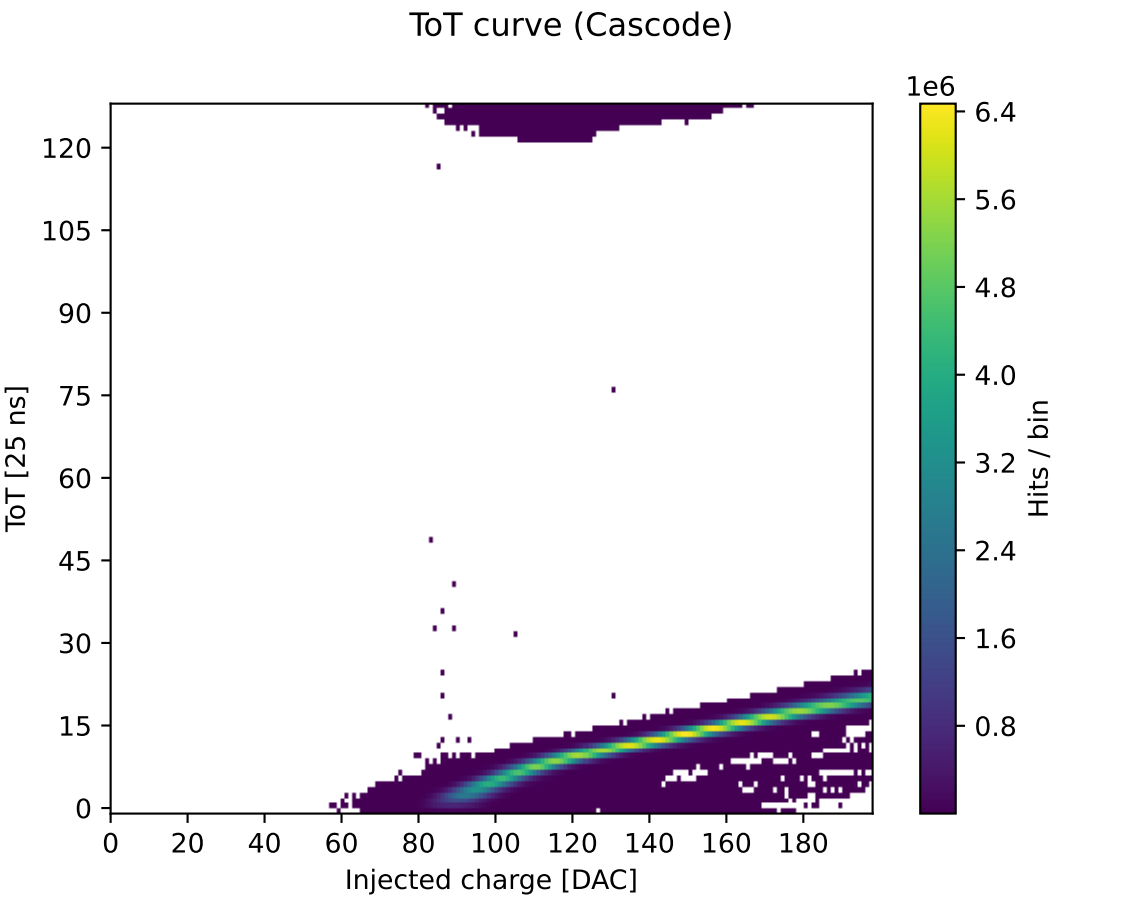

Threshold distribution
Cascode
fit Cascode:
mean = 89.795 ± 0.009
sigma = 2.714 ± 0.009
Pixels / bin
Threshold [DAC]
0
2000
4000
6000
8000
10000
12000
14000
16000
0
20
40
60
80
100

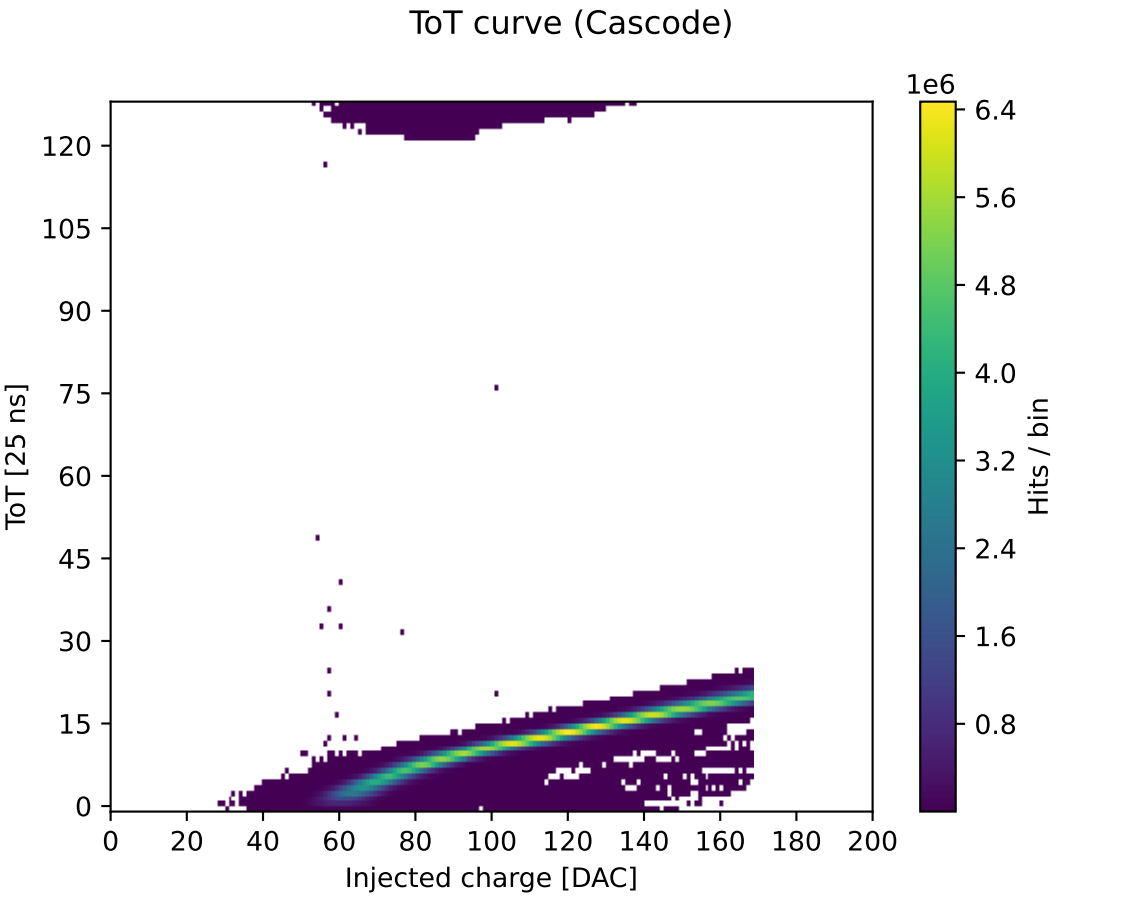

Threshold distribution
Cascode
fit Cascode:
mean = 89.795 ± 0.009
sigma = 2.714 ± 0.009
Pixels / bin
0
2000
4000
6000
8000
10000
12000
14000
16000
60
70
80
90
100
110
120
Threshold [DAC]

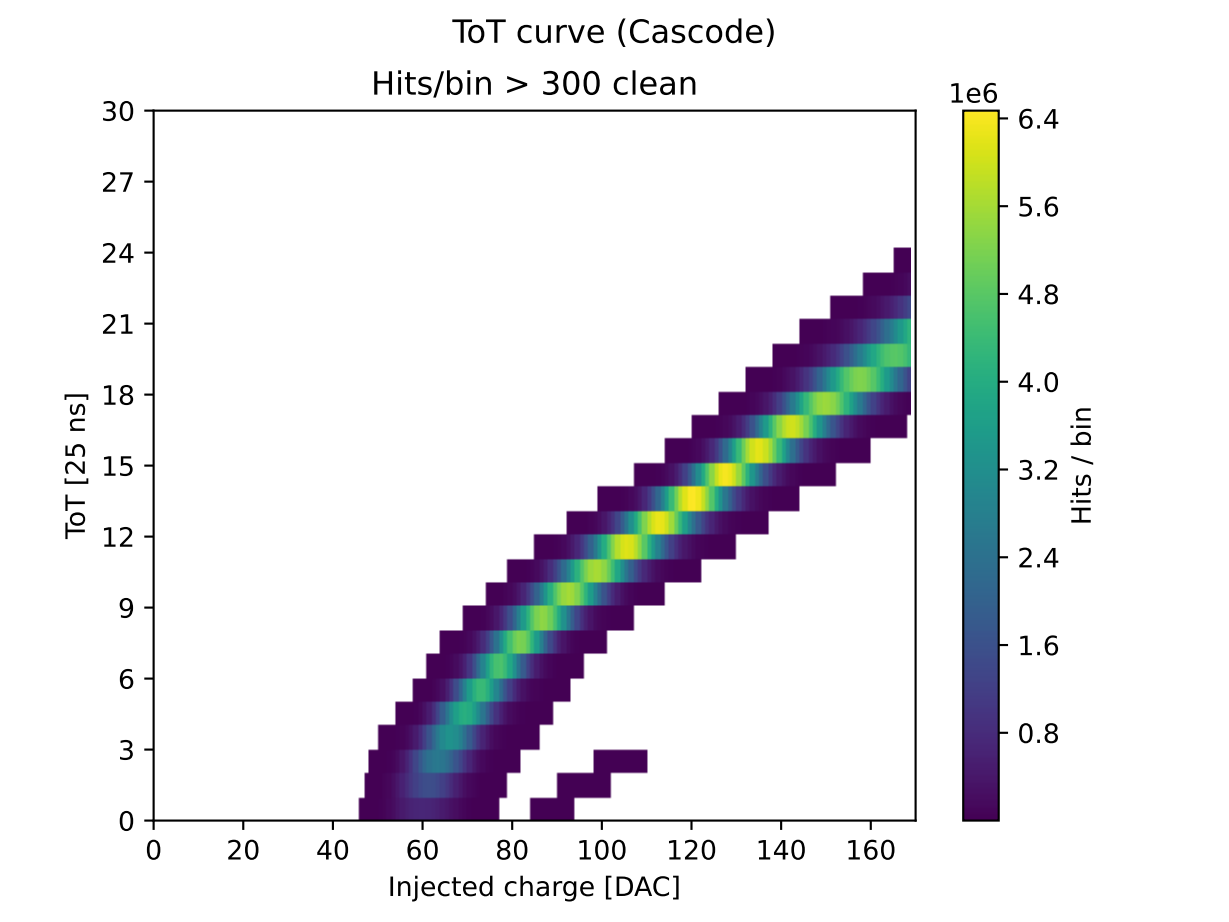

Threshold map
Normal
Cascode
HV
HV$_C$
Row
Column
Threshold [DAC]
0
60
120
180
240
300
360
420
480
0
20
40
60
80
100

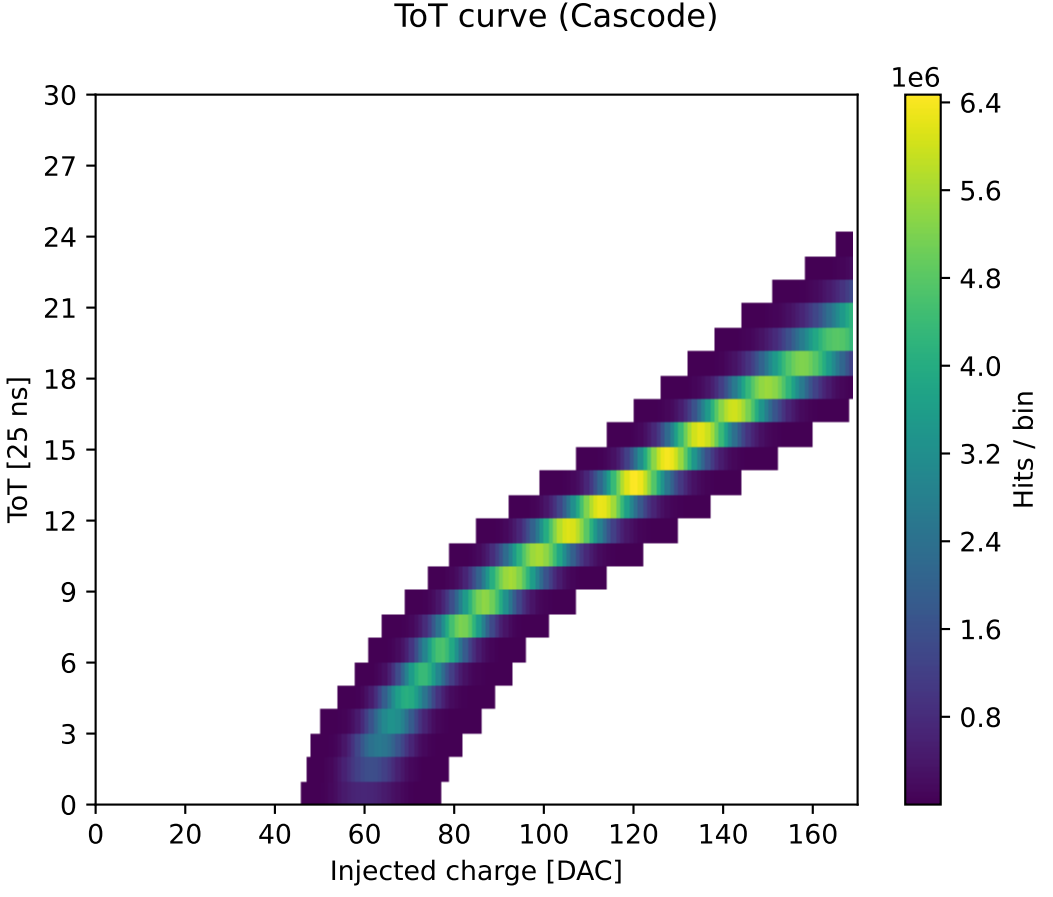

Noise (width of s-curve slope) distribution
Normal nan ± nan
Cascode 2.3 ± 0.4
HV Casc. nan ± nan
HV nan ± nan
Pixels / bin
Noise [DAC]
0
2000
4000
6000
8000
10000
12000
14000
16000
0
2
4
6
8
10

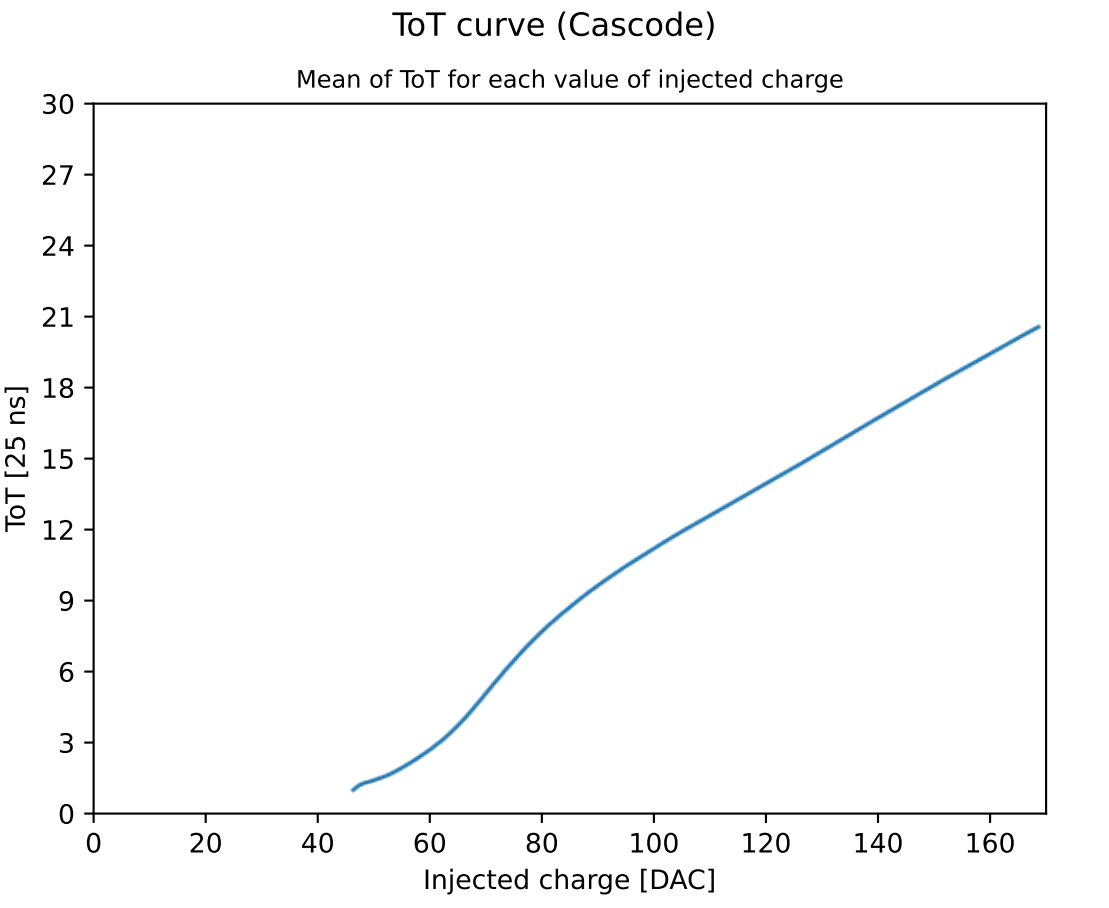

Noise (width of s-curve slope) map
Row
Column
Noise [DAC]
0
60
120
180
240
300
360
420
480
0
1
2
3
4
5
6
7
8

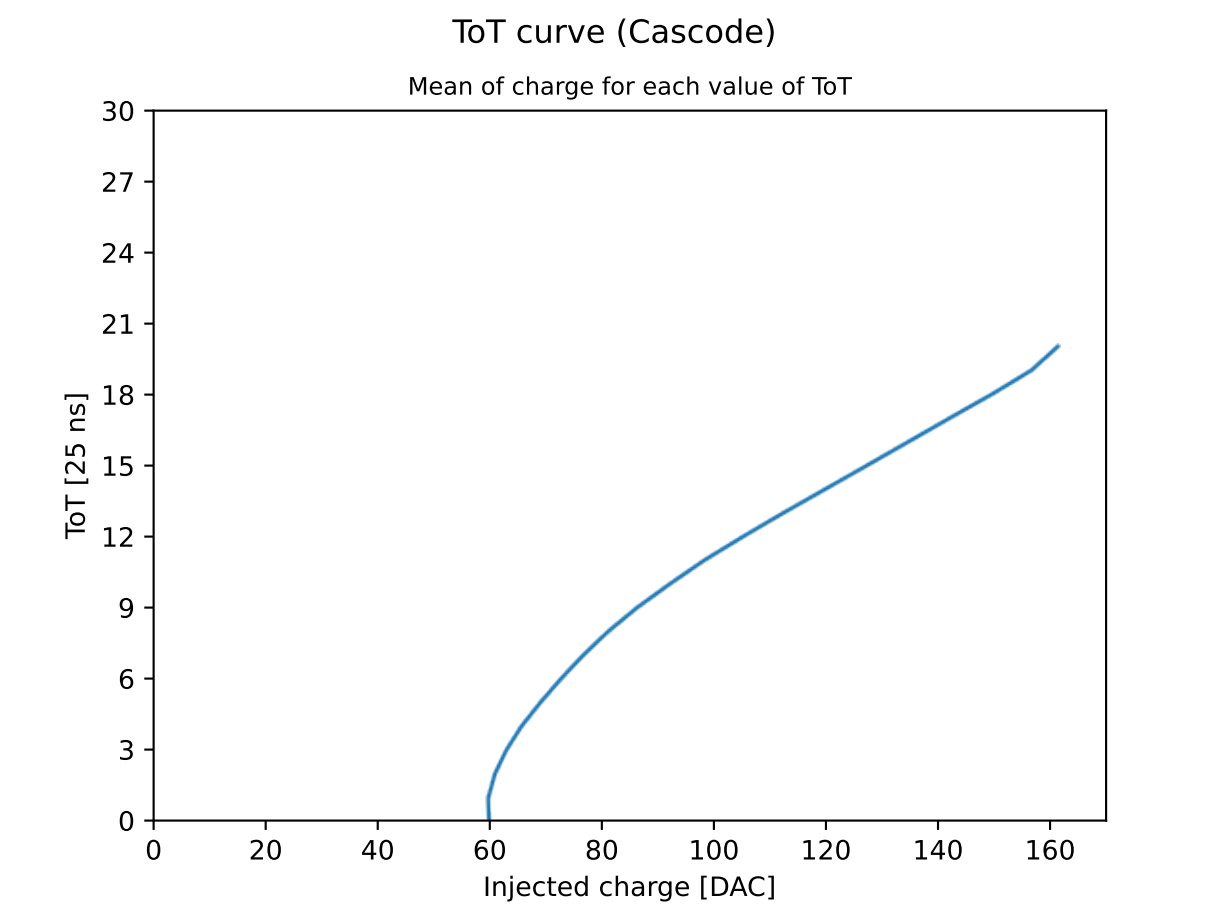

ToT curve (Cascode)
ToT [25 ns]
Injected charge [DAC]
Hits / bin
1e6
0
15
30
45
60
75
90
105
120
0
20
40
60
80
100
120
140
160
180
0.8
1.6
2.4
3.2
4.0
4.8
5.6
6.4

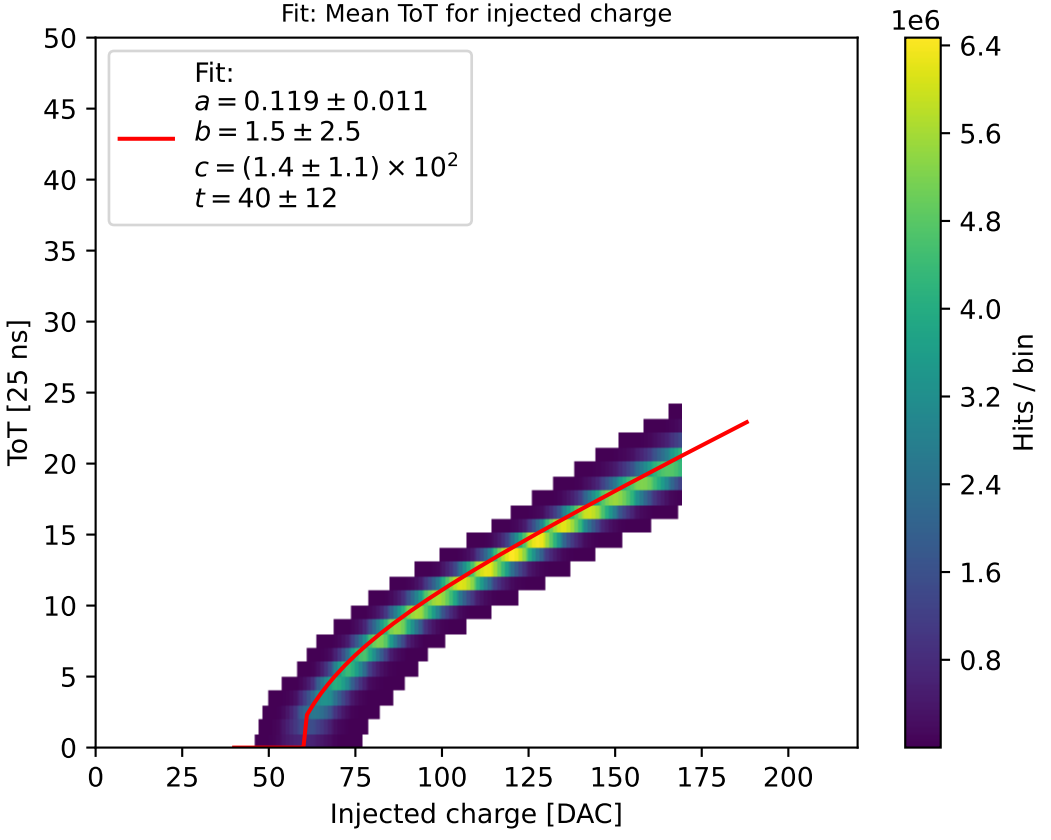

ToT curve (Cascode)
ToT [25 ns]
Injected charge [DAC]
Hits / bin
1e6
0
15
30
45
60
75
90
105
120
0
20
40
60
80
100
120
140
160
180
200
0.8
1.6
2.4
3.2
4.0
4.8
5.6
6.4

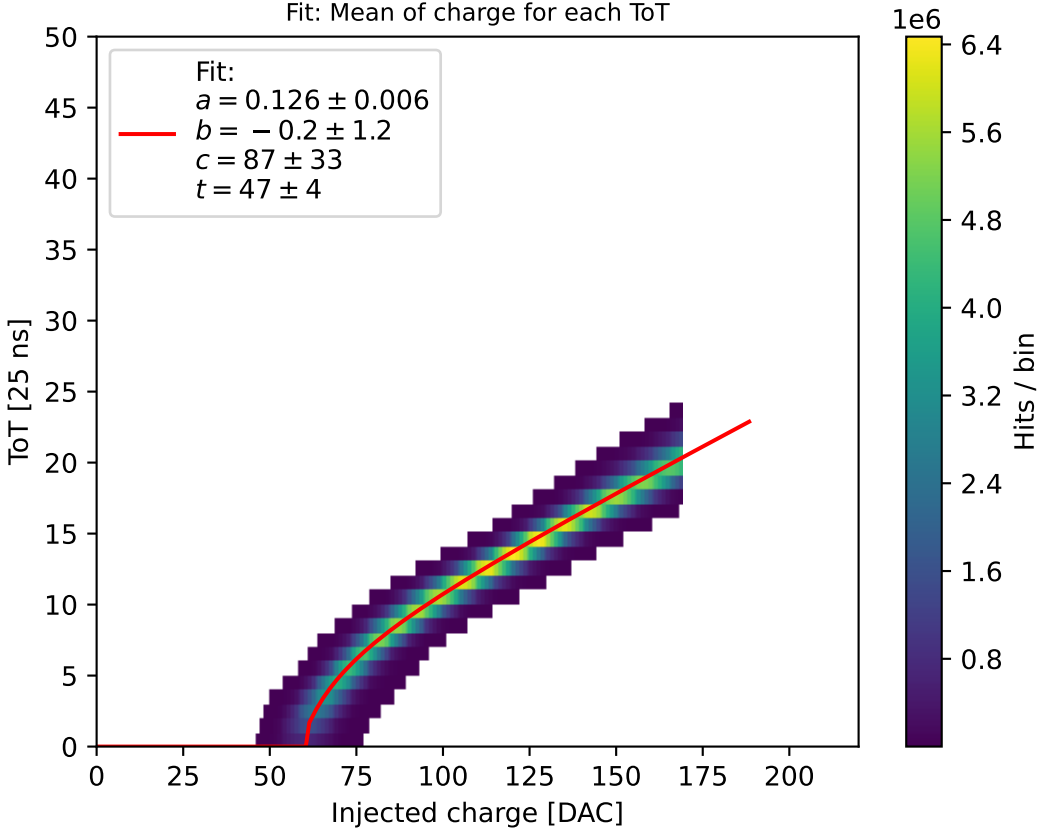

ToT curve (Cascode)
Hits/bin > 300 clean
ToT [25 ns]
Injected charge [DAC]
1e6
Hits / bin
0
3
6
9
12
15
18
21
24
27
30
0
20
40
60
80
100
120
140
160
0.8
1.6
2.4
3.2
4.0
4.8
5.6
6.4

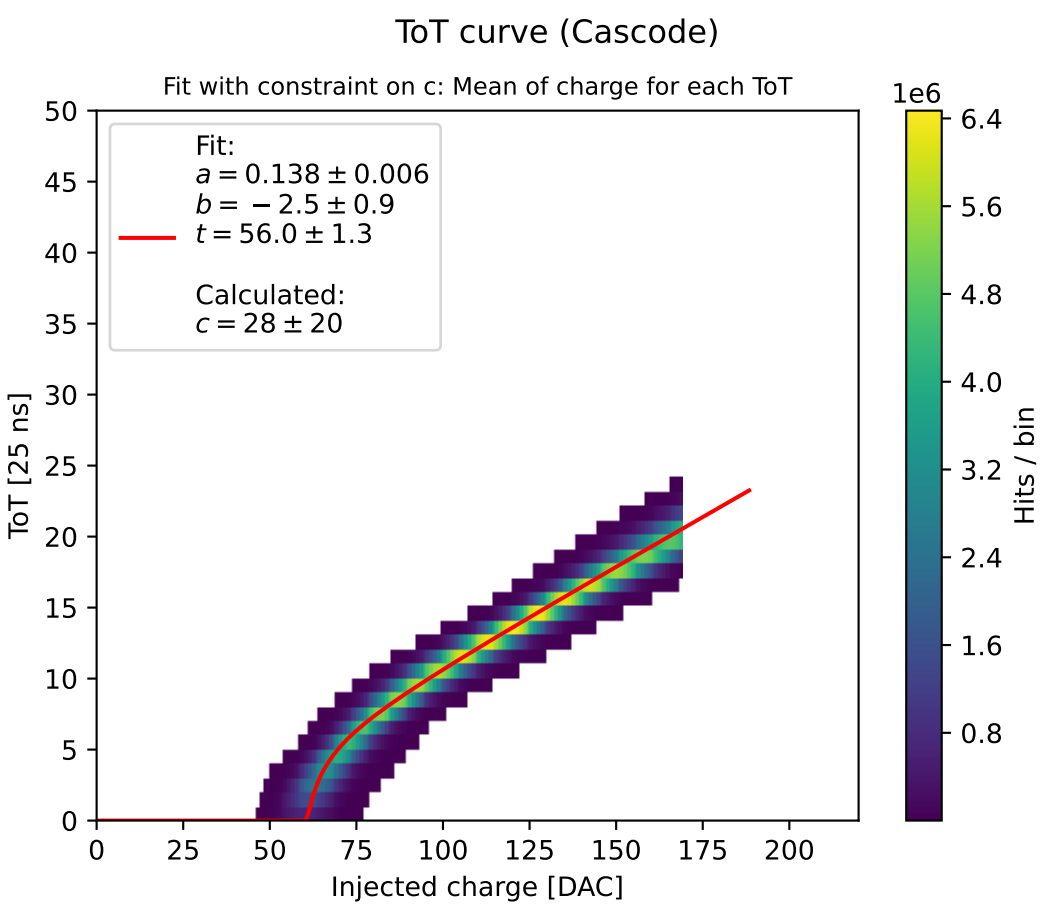

ToT curve (Cascode)
ToT [25 ns]
Injected charge [DAC]
Hits / bin
1e6
0
3
6
9
12
15
18
21
24
27
30
0
20
40
60
80
100
120
140
160
0.8
1.6
2.4
3.2
4.0
4.8
5.6
6.4

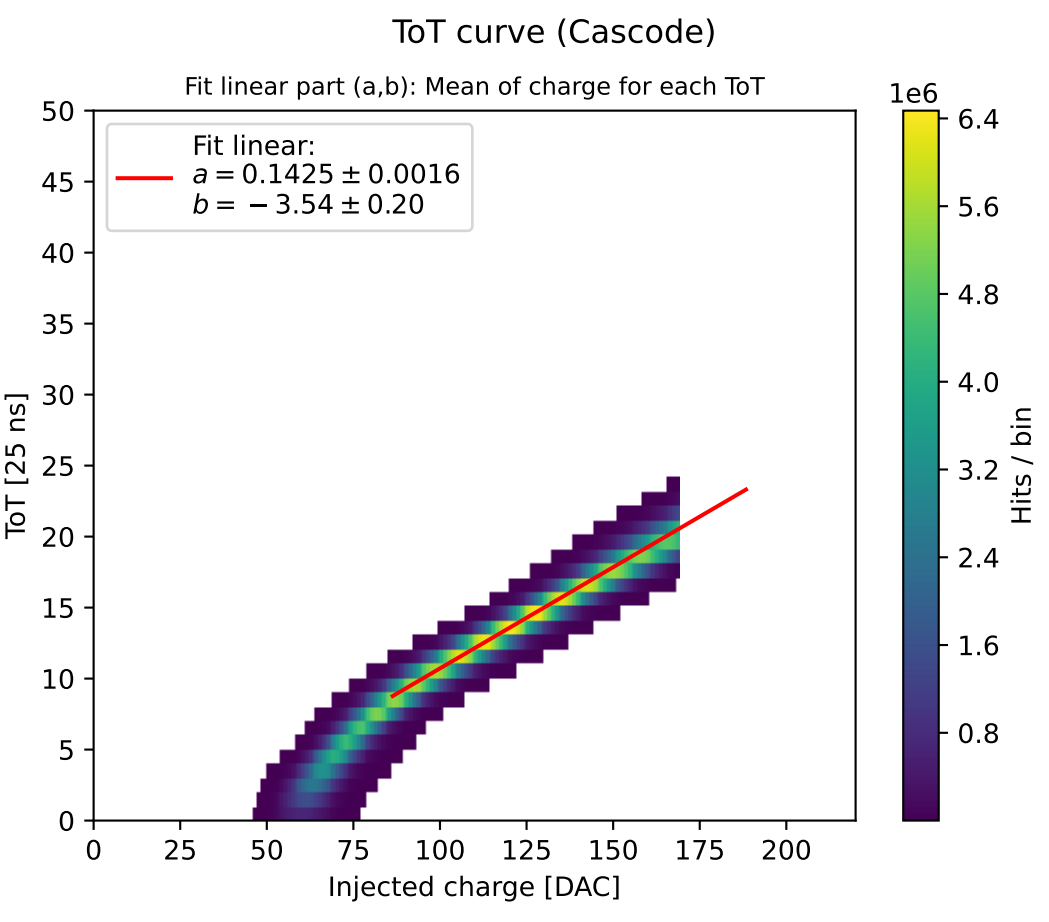

ToT curve (Cascode)
Mean of ToT for each value of injected charge
ToT [25 ns]
Injected charge [DAC]
0
3
6
9
12
15
18
21
24
27
30
0
20
40
60
80
100
120
140
160

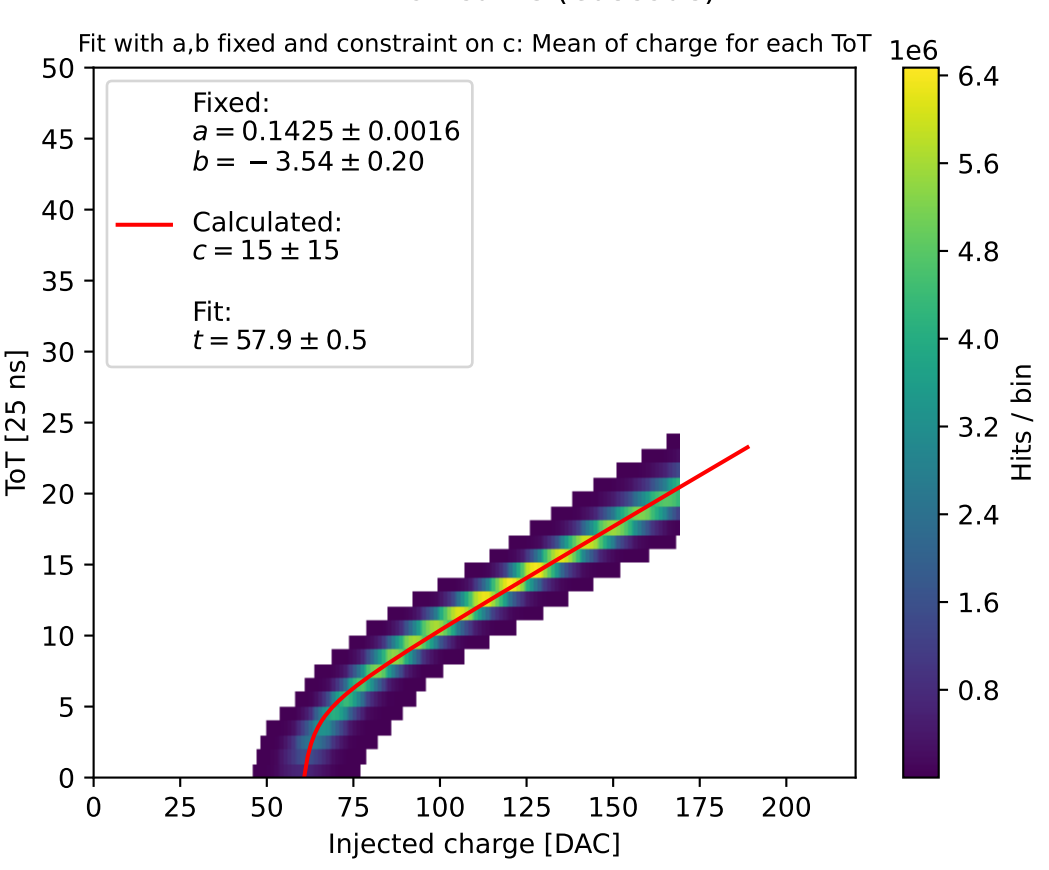

ToT curve (Cascode)
Mean of charge for each value of ToT
ToT [25 ns]
Injected charge [DAC]
0
3
6
9
12
15
18
21
24
27
30
0
20
40
60
80
100
120
140
160

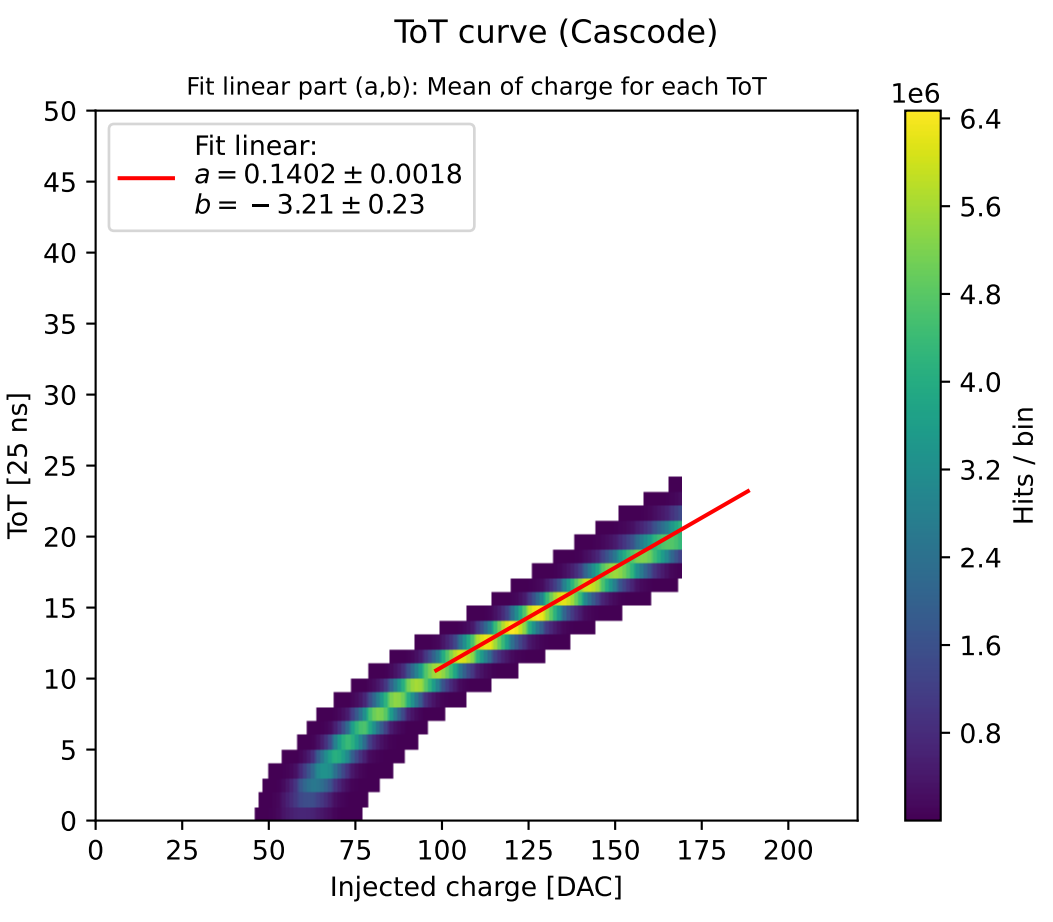

ToT curve (Cascode)
Fit: Mean ToT for injected charge
Fit:
$a = 0.119 \pm 0.011$
$b = 1.5 \pm 2.5$
$c = (1.4 \pm 1.1) \times 10^2$
$t = 40 \pm 12$
ToT [25 ns]
Injected charge [DAC]
1e6
Hits / bin

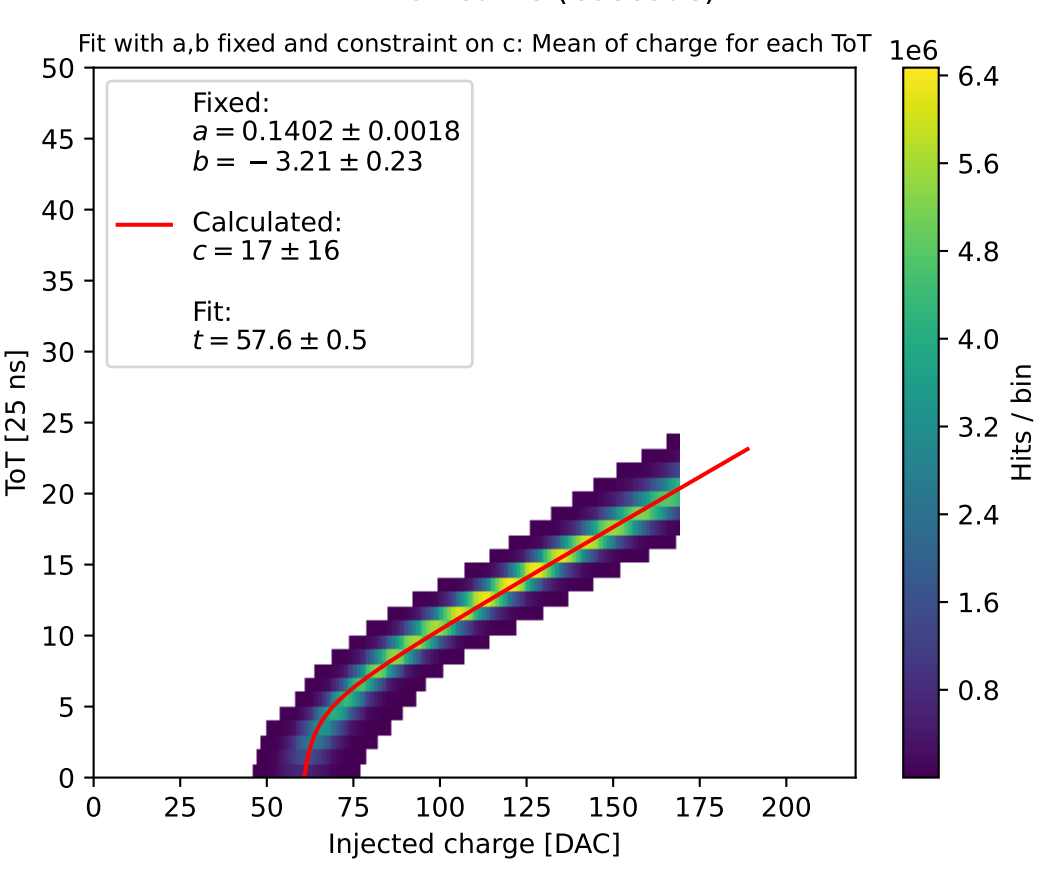

ToT curve (Cascode)
Fit: Mean of charge for each ToT
Fit:
$a = 0.126 \pm 0.006$
$b = -0.2 \pm 1.2$
$c = 87 \pm 33$
$t = 47 \pm 4$
ToT [25 ns]
Injected charge [DAC]
1e6
Hits / bin


ToT curve (Cascode)
Fit with constraint on c: Mean of charge for each ToT
Fit:
$a = 0.138 \pm 0.006$
$b = -2.5 \pm 0.9$
$t = 56.0 \pm 1.3$
Calculated:
$c = 28 \pm 20$
ToT [25 ns]
Injected charge [DAC]
1e6
Hits / bin


ToT curve (Cascode)
Fit linear part (a,b): Mean of charge for each ToT
Fit linear:
$a = 0.1425 \pm 0.0016$
$b = -3.54 \pm 0.20$
ToT [25 ns]
Injected charge [DAC]
1e6
Hits / bin
0
5
10
15
20
25
30
35
40
45
50
0
25
50
75
100
125
150
175
200
0.8
1.6
2.4
3.2
4.0
4.8
5.6
6.4


ToT curve (Cascode)
Fit with a,b fixed and constraint on c: Mean of charge for each ToT
Fixed:
$a = 0.1425 \pm 0.0016$
$b = -3.54 \pm 0.20$
Calculated:
$c = 15 \pm 15$
Fit:
$t = 57.9 \pm 0.5$
ToT [25 ns]
Injected charge [DAC]
1e6
Hits / bin


ToT curve (Cascode)
Fit linear part (a,b): Mean of charge for each ToT
Fit linear:
$a = 0.1402 \pm 0.0018$
$b = -3.21 \pm 0.23$
ToT [25 ns]
Injected charge [DAC]
1e6
Hits / bin
0
5
10
15
20
25
30
35
40
45
50
0
25
50
75
100
125
150
175
200
0.8
1.6
2.4
3.2
4.0
4.8
5.6
6.4


ToT curve (Cascode)
Fit with a,b fixed and constraint on c: Mean of charge for each ToT
Fixed:
$a = 0.1402 \pm 0.0018$
$b = -3.21 \pm 0.23$
Calculated:
$c = 17 \pm 16$
Fit:
$t = 57.6 \pm 0.5$
ToT [25 ns]
Injected charge [DAC]
1e6
Hits / bin