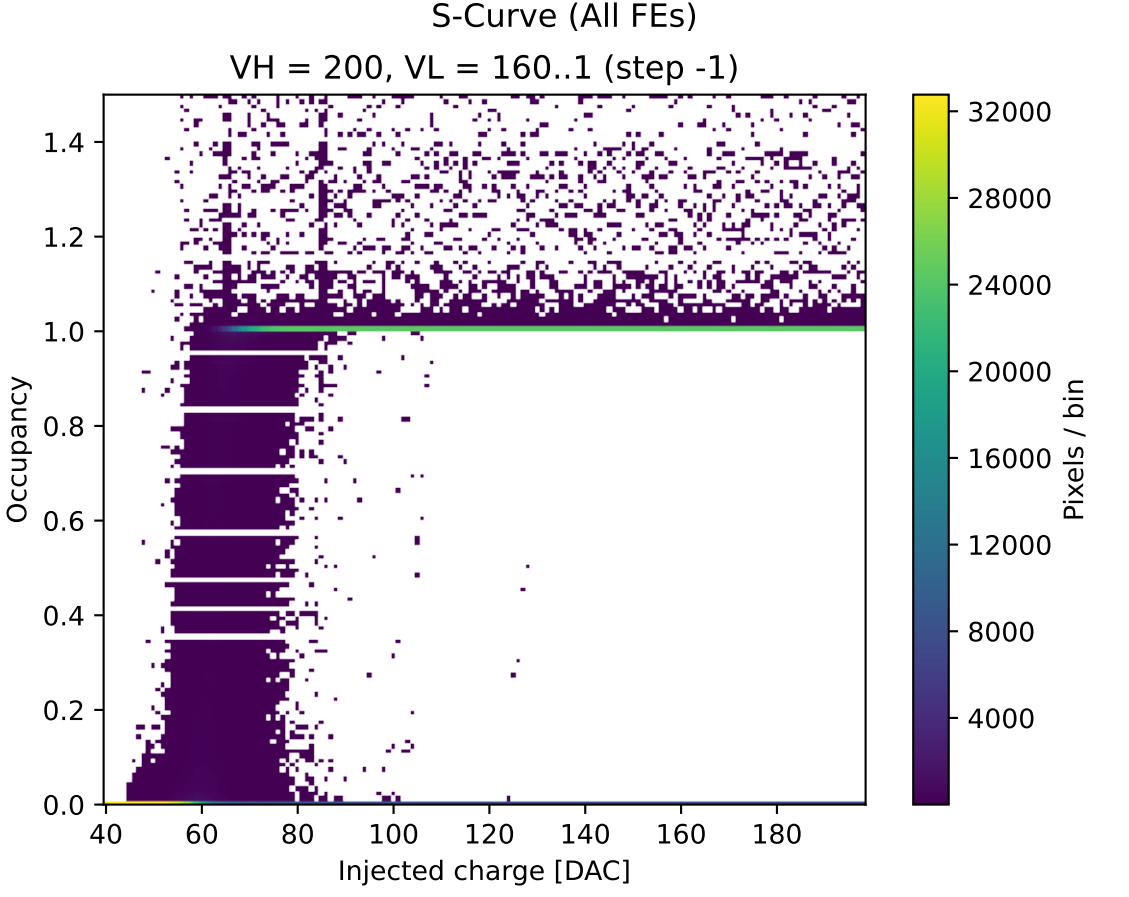
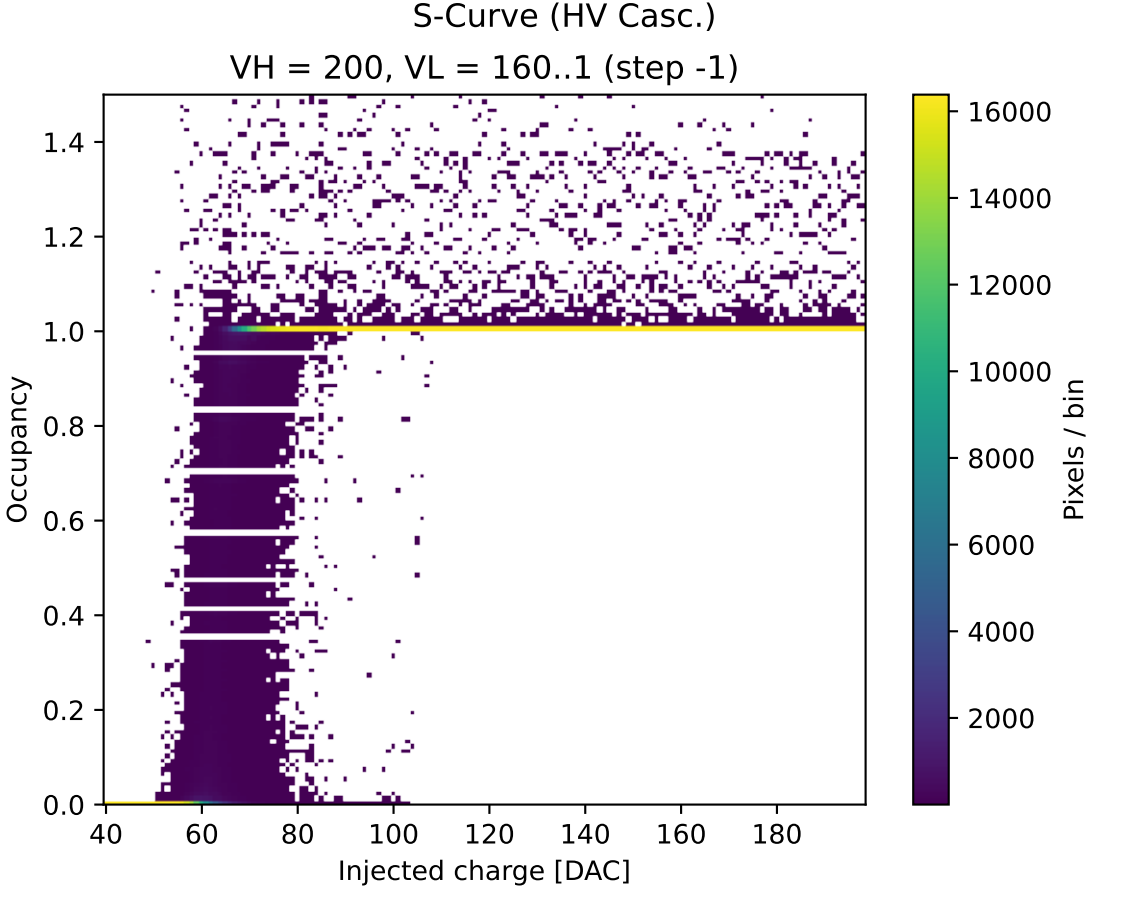
/mnt/c/Users/client/Desktop/tesi/tesi/Analysis/W14R12/threshold_scan/all_HV/200/
20221007_110853_threshold_scan_interpreted.h5
Chip = W14R12
Script version = 915a739

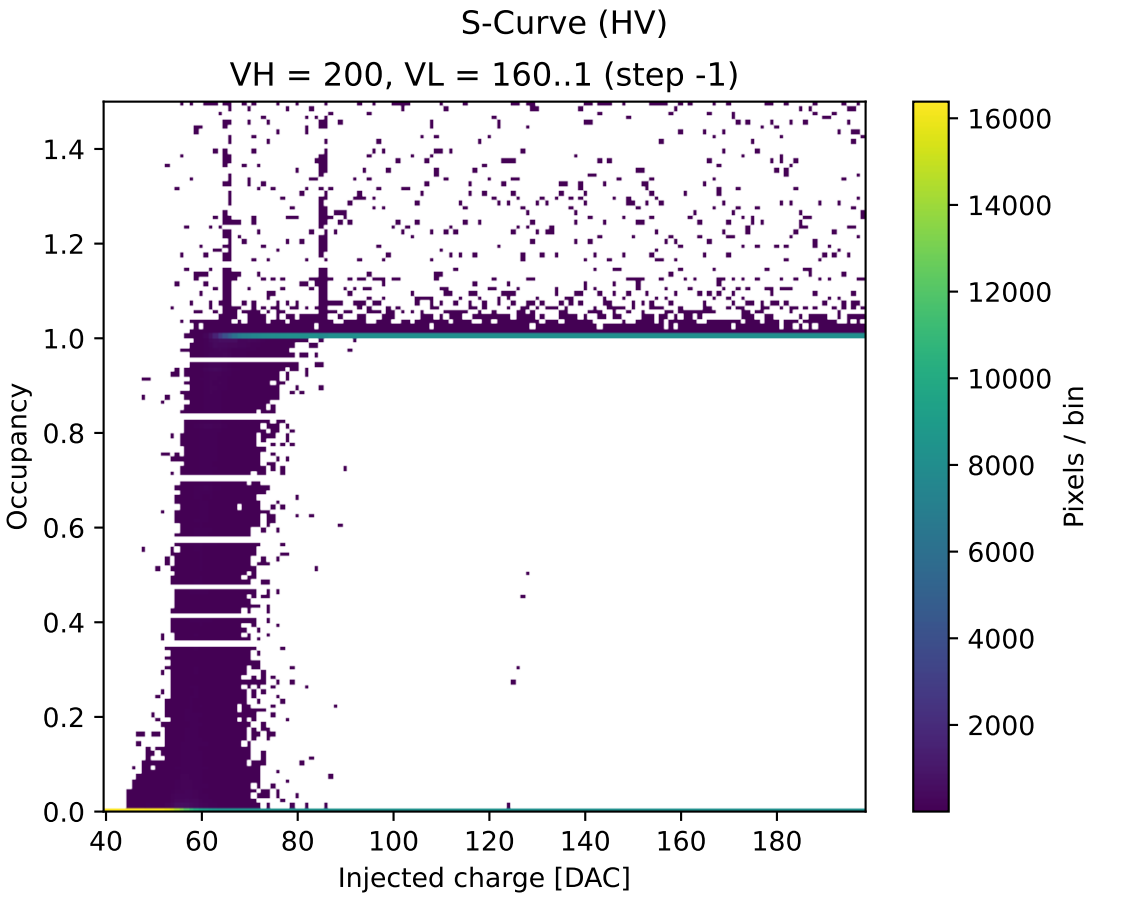
IBIAS = 60, ITHR = 30, ICASN = 8, IDB = 100, ITUNE = 53, VRESET = 100, VCASP =
40, VCASC = 228, VCLIP = 255, VL = 2, VH = 200, ICOMP = 80, IDEL = 88, IRAM = 50

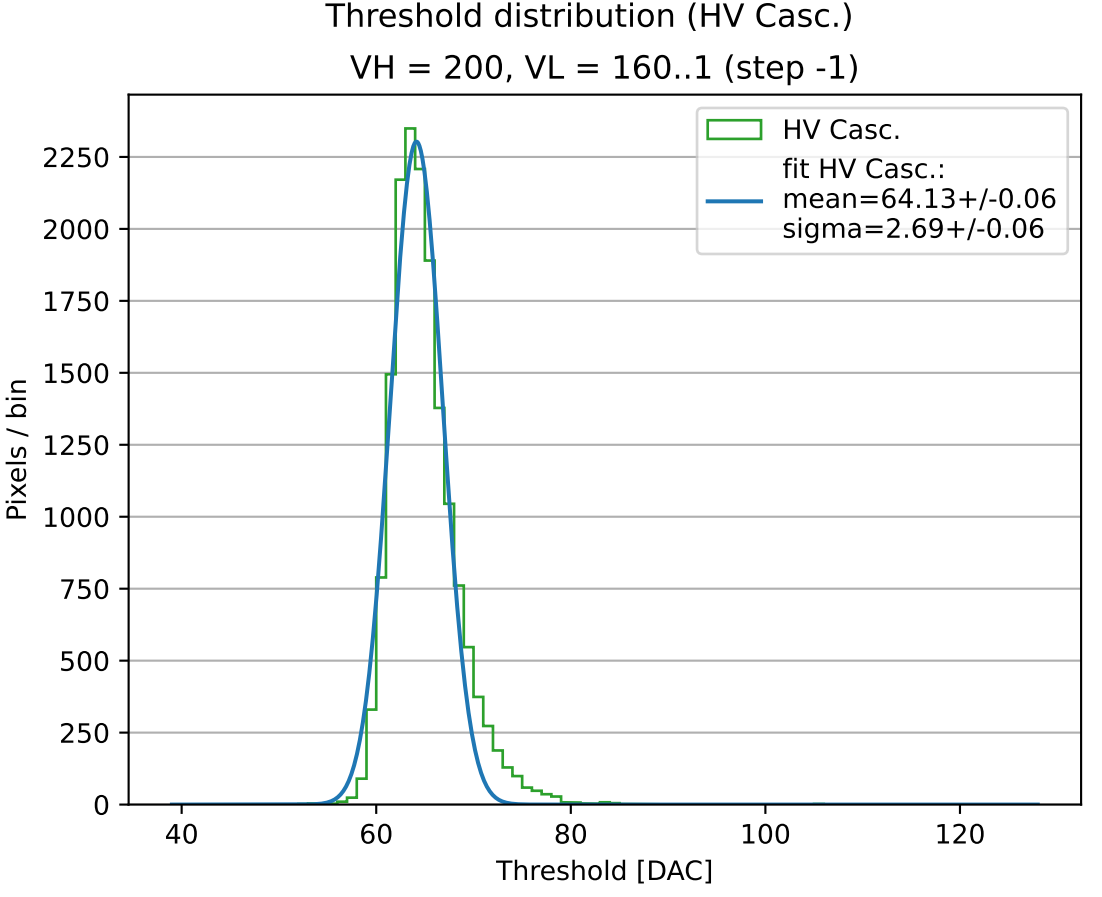
threshold_scan
start_column = 448, stop_column = 512, start_row = 0, stop_row = 512,
n_injections = 100, VCAL_HIGH = 200, VCAL_LOW_start = 160, VCAL_LOW_stop = 1,
VCAL_LOW_step = -1

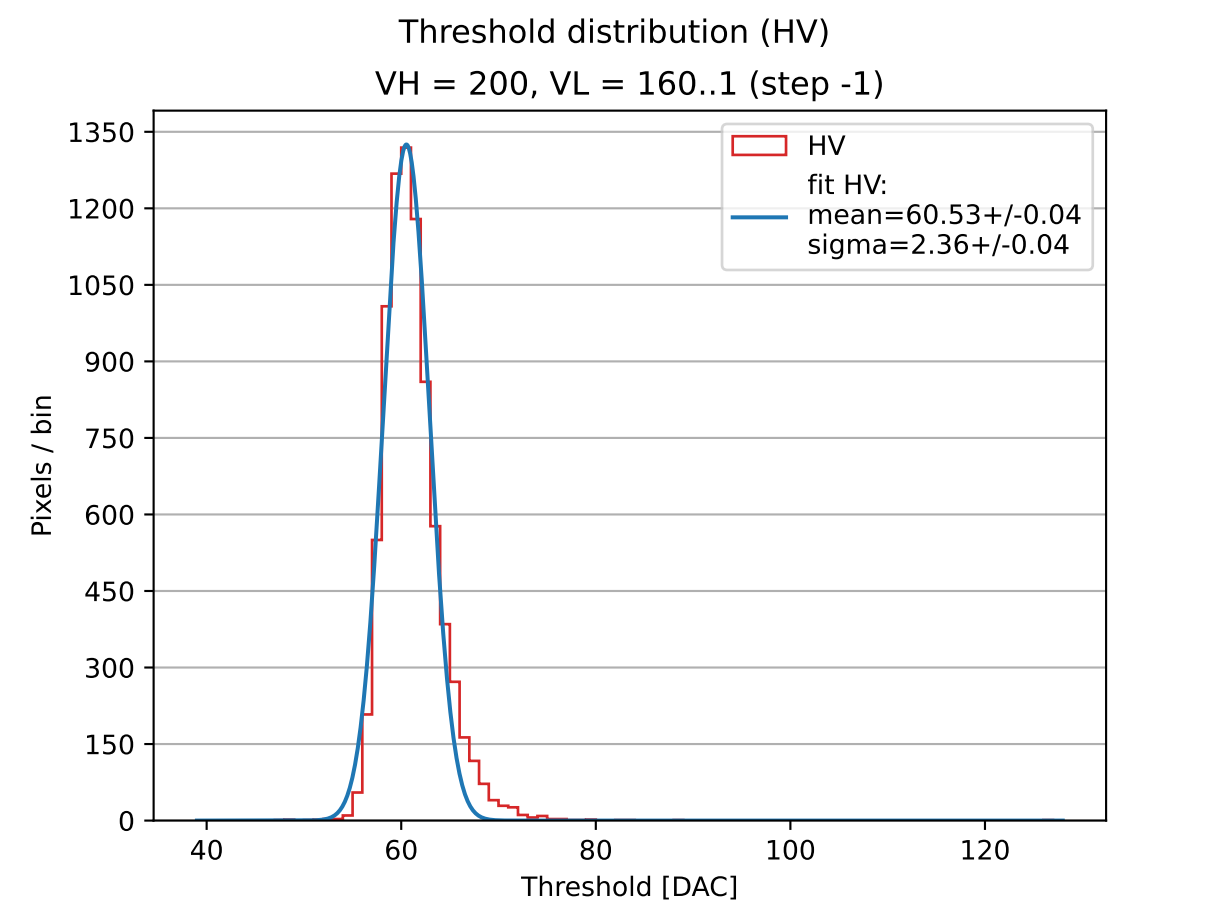
145.8
(476, 24) = 132.6, (494, 442) = 117.5, (483, 340) = 116.5, (479, 183) = 106.8
(483, 2) = 106.2, (474, 53) = 105.2, (461, 126) = 96.3, (476, 211) = 86.1
(467, 155) = 86.0, (465, 302) = 84.5, (494, 482) = 77.8, (452, 248) = 75.7
(467, 91) = 74.8, (481, 257) = 74.7, (469, 372) = 65.5, (468, 101) = 65.3
(459, 79) = 61.3, (484, 461) = 46.5, (449, 474) = 39.7, (465, 223) = 39.2
(493, 332) = 36.2, (448, 351) = 29.8, (456, 363) = 29.5, (464, 61) = 29.4
(487, 16) = 28.6, (471, 54) = 25.9, (492, 63) = 24.7, (455, 96) = 21.8
(487, 452) = 20.1, (495, 466) = 20.1, (473, 17) = 18.0, (491, 240) = 17.0
(493, 327) = 15.4, (451, 373) = 15.4, (480, 83) = 14.6, (471, 370) = 13.5
(487, 395) = 11.8, (495, 318) = 11.4, (495, 93) = 11.4, (481, 394) = 11.0
(489, 510) = 10.9, (481, 118) = 9.4, (485, 491) = 9.2, (483, 402) = 8.4
(453, 85) = 8.3, (483, 480) = 8.0, (448, 13) = 7.6, (493, 117) = 7.2
(477, 378) = 7.0, (493, 106) = 6.3, (451, 76) = 6.1, (491, 342) = 5.8
(487, 292) = 5.5, (493, 105) = 5.5, (483, 160) = 5.5, (477, 175) = 5.3
(494, 183) = 5.3, (481, 98) = 4.9, (487, 78) = 4.8, (483, 223) = 4.8
(495, 279) = 4.4, (473, 448) = 4.1, (483, 82) = 3.9, (491, 414) = 3.9
(491, 450) = 3.8, (453, 461) = 3.8, (483, 330) = 3.7, (489, 302) = 3.5
(485, 221) = 3.5, (480, 307) = 3.4, (493, 402) = 3.4, (453, 145) = 3.3
(493, 470) = 3.1, (495, 340) = 3.1, (489, 396) = 2.9, (494, 14) = 2.9
(481, 200) = 2.9, (475, 501) = 2.8, (492, 171) = 2.7, (491, 120) = 2.6
(471, 456) = 2.6, (494, 467) = 2.6, (489, 308) = 2.5, (491, 328) = 2.5

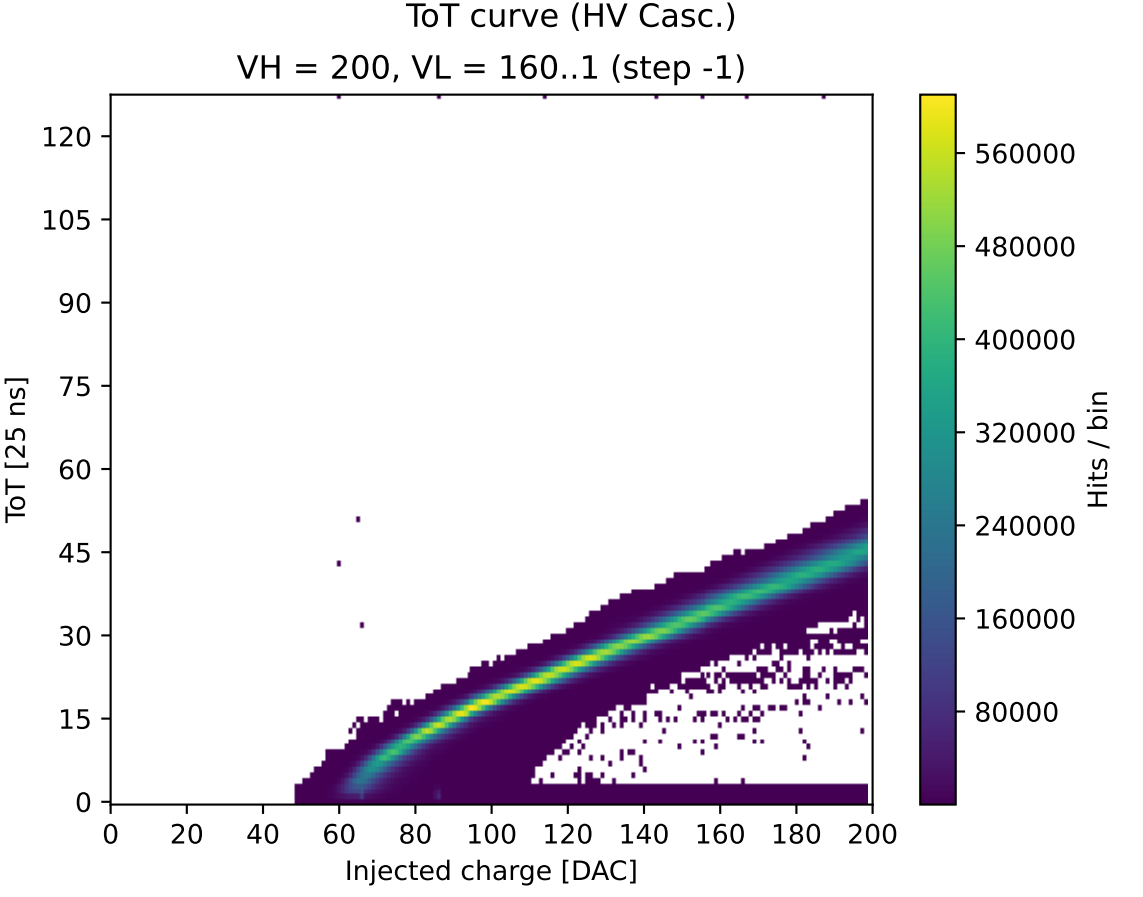

S-Curve (All FEs)
VH = 200, VL = 160..1 (step -1)
Occupancy
Injected charge [DAC]
Pixels / bin
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
40
60
80
100
120
140
160
180
4000
8000
12000
16000
20000
24000
28000
32000

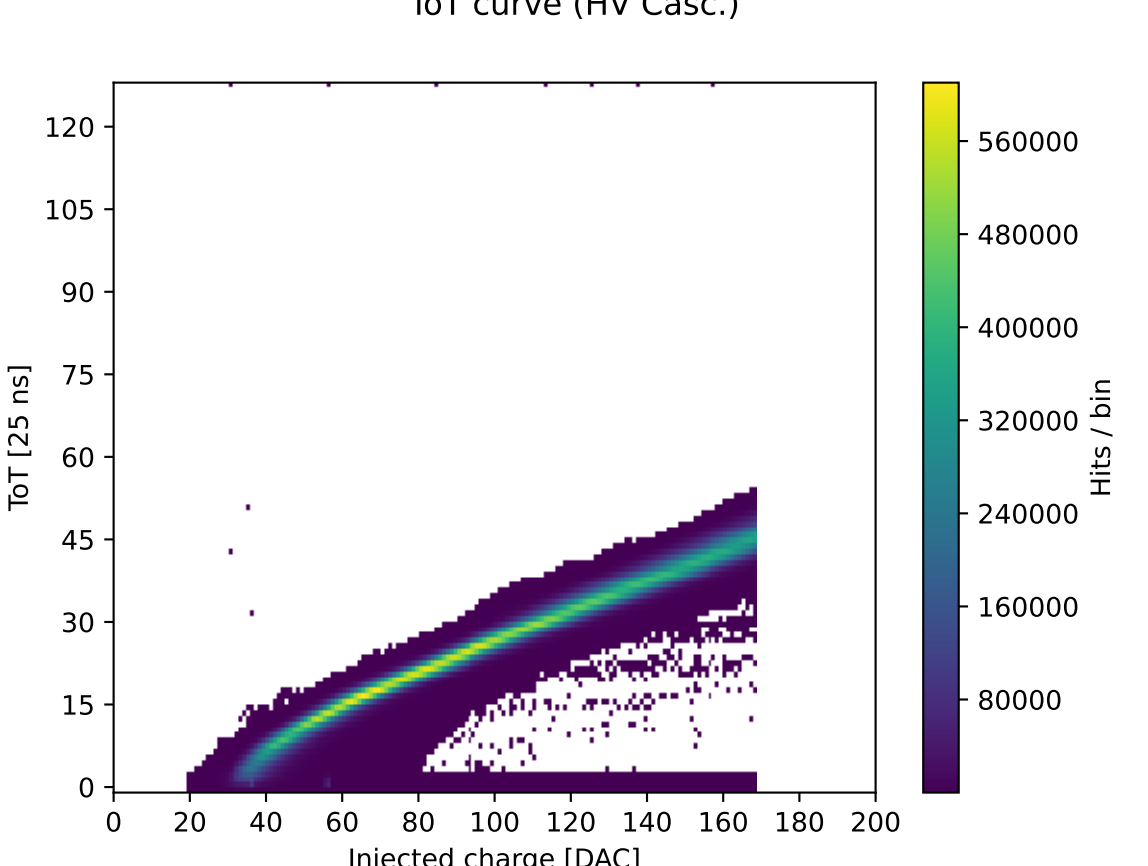

S-Curve (HV Casc.)
VH = 200, VL = 160..1 (step -1)
Occupancy
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
40
60
80
100
120
140
160
180
Injected charge [DAC]
Pixels / bin
2000
4000
6000
8000
10000
12000
14000
16000

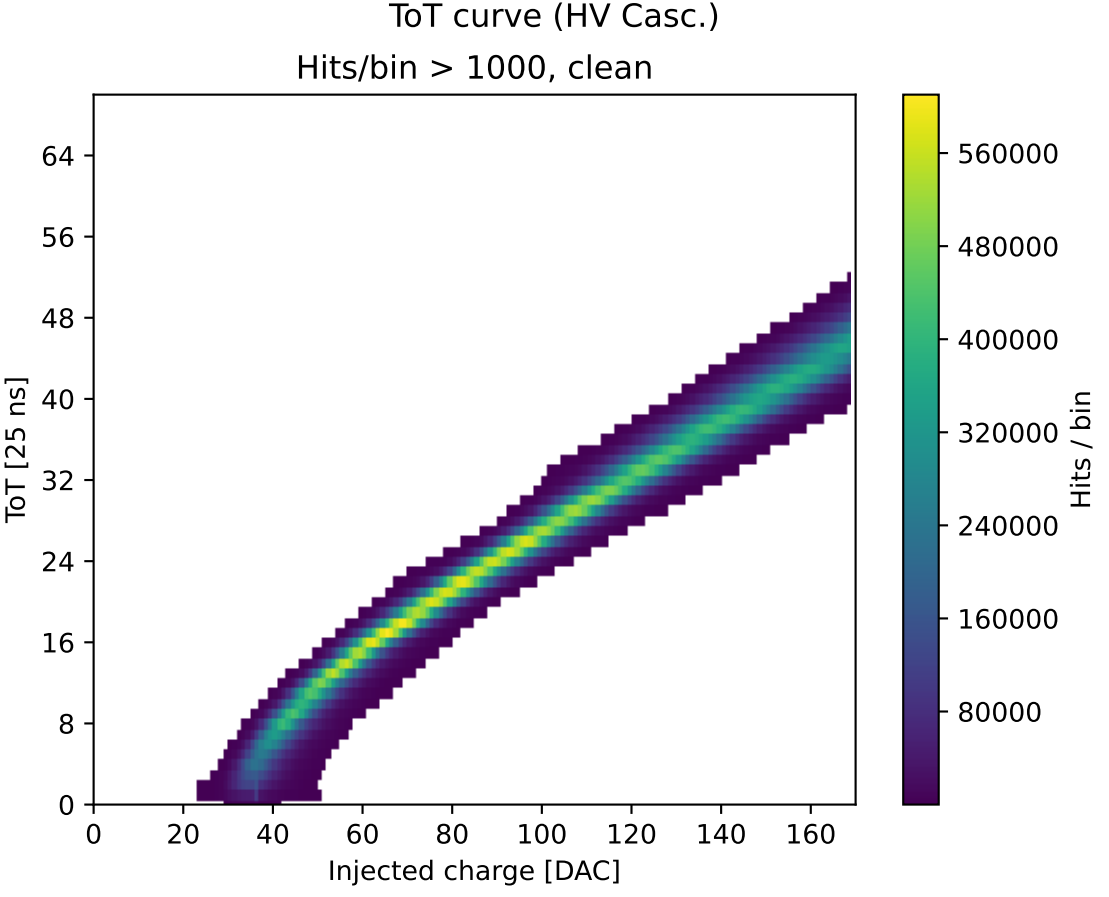

S-Curve (HV)
VH = 200, VL = 160..1 (step -1)
Occupancy
Injected charge [DAC]
Pixels / bin
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
40
60
80
100
120
140
160
180
2000
4000
6000
8000
10000
12000
14000
16000

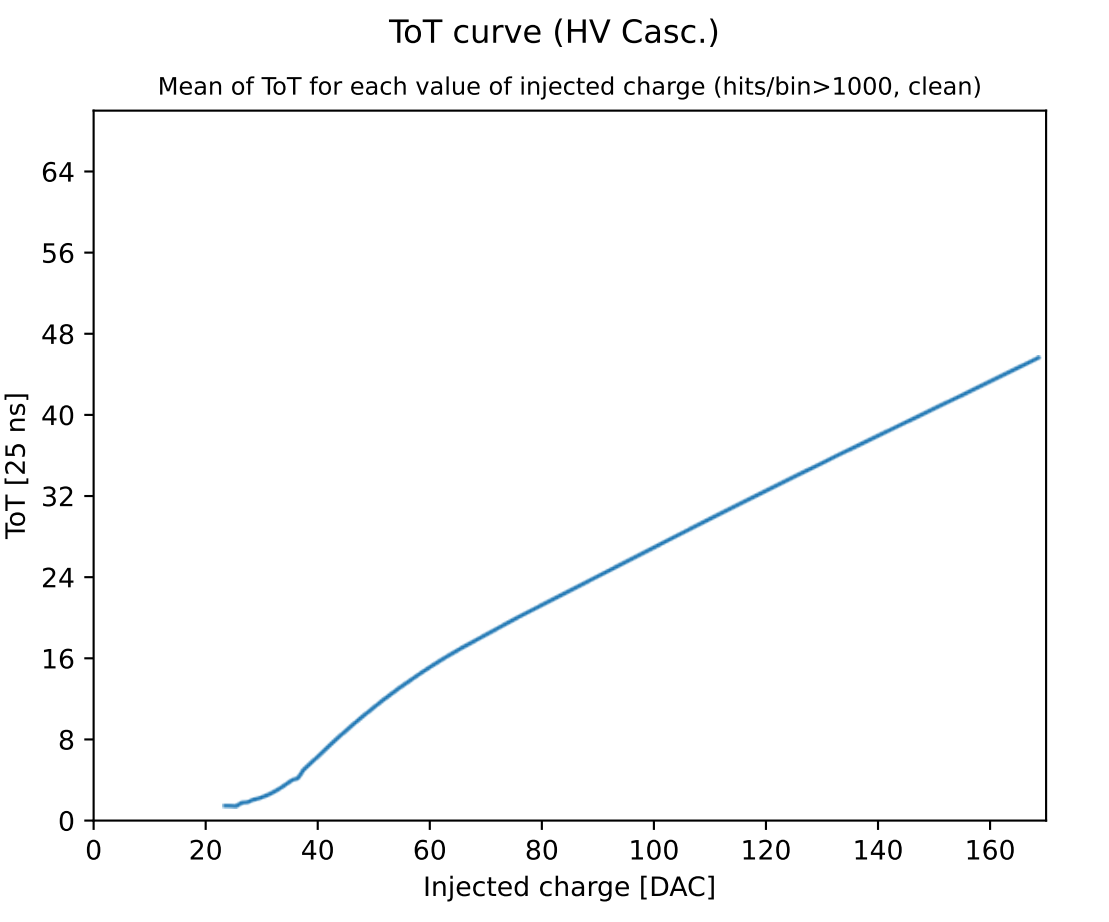

Threshold distribution (HV Casc.)
VH = 200, VL = 160..1 (step -1)
HV Casc.
fit HV Casc.:
mean=64.13+/-0.06
sigma=2.69+/-0.06
Pixels / bin
Threshold [DAC]
0
250
500
750
1000
1250
1500
1750
2000
2250
40
60
80
100
120

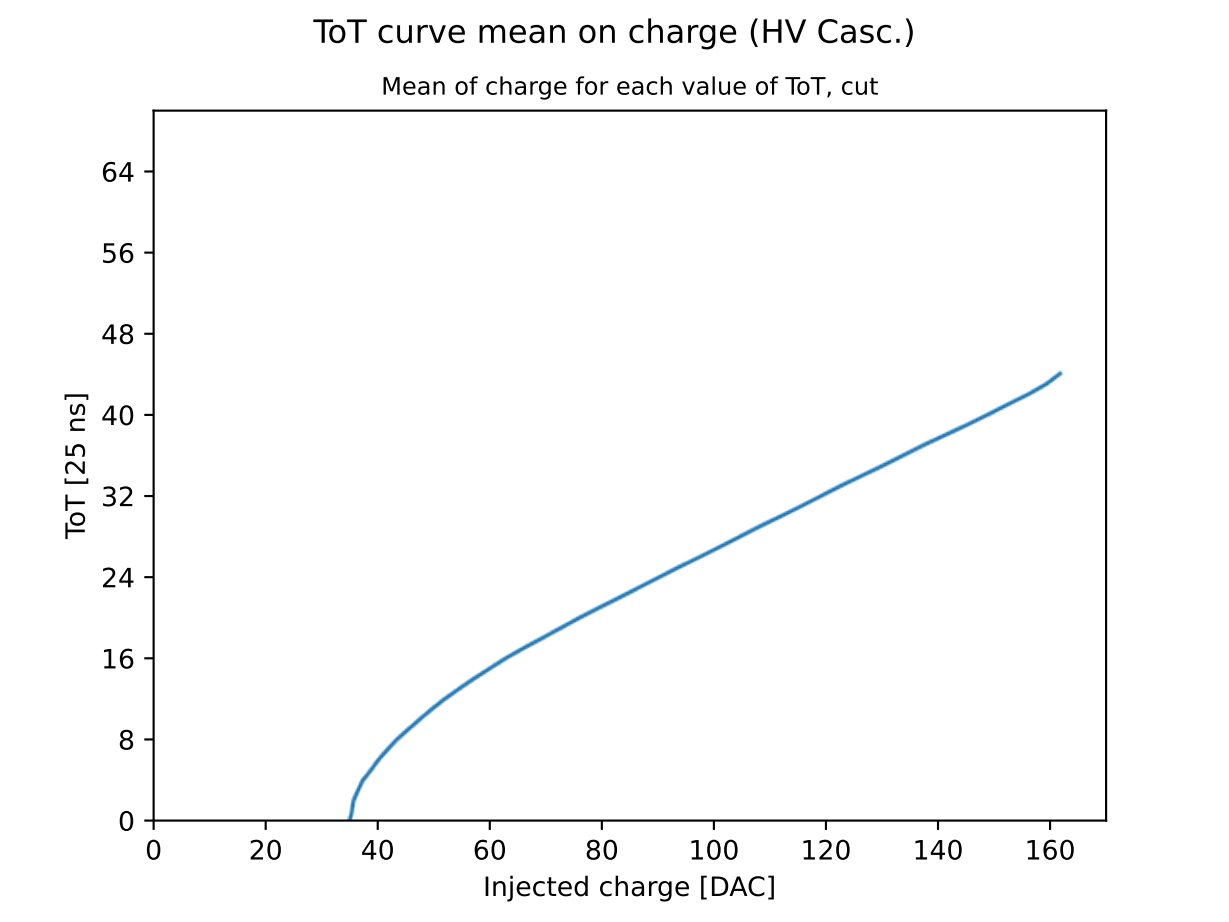

Threshold distribution (HV)
VH = 200, VL = 160..1 (step -1)
HV
fit HV:
mean=60.53+/-0.04
sigma=2.36+/-0.04
Pixels / bin
Threshold [DAC]
0
150
300
450
600
750
900
1050
1200
1350
40
60
80
100
120

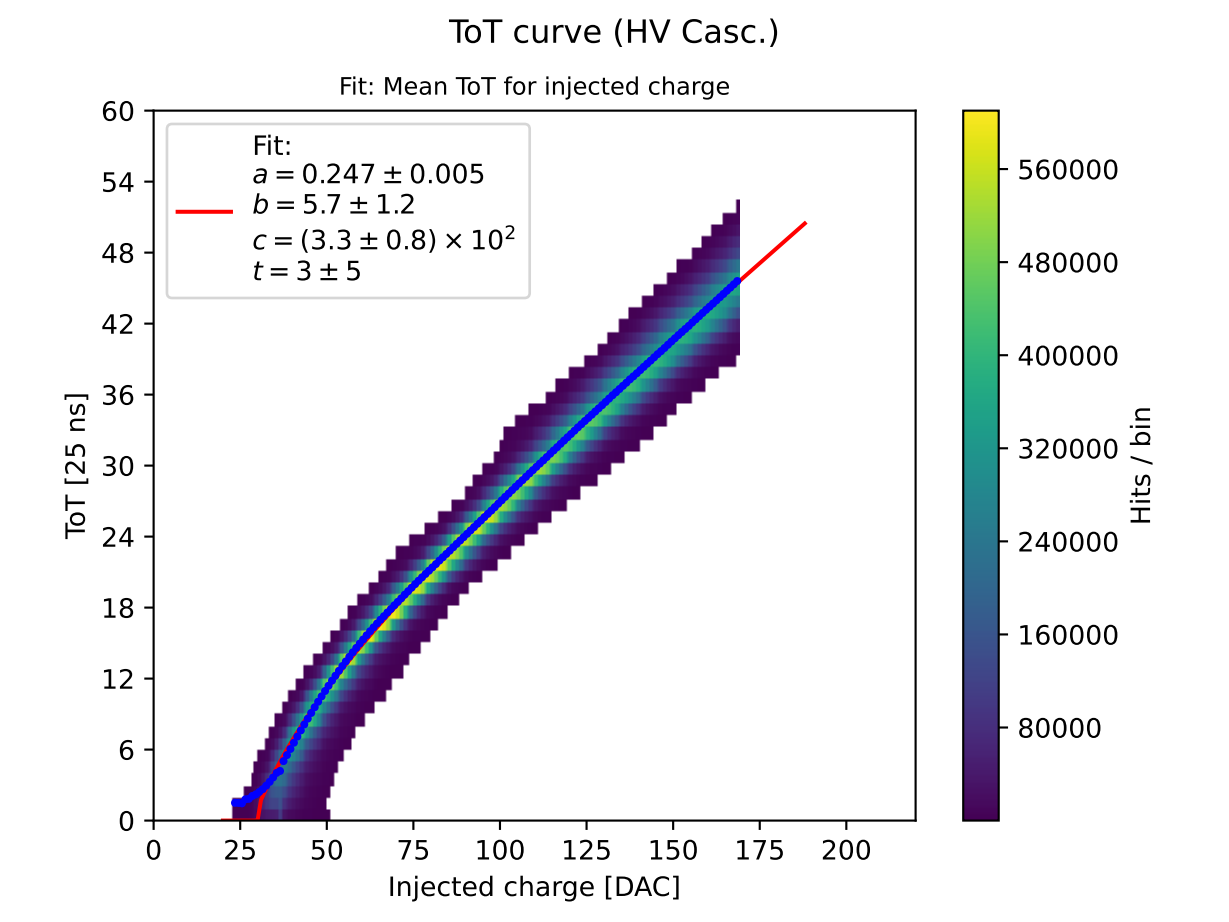

ToT curve (HV Casc.)
VH = 200, VL = 160..1 (step -1)
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
15
30
45
60
75
90
105
120
0
20
40
60
80
100
120
140
160
180
200
80000
160000
240000
320000
400000
480000
560000

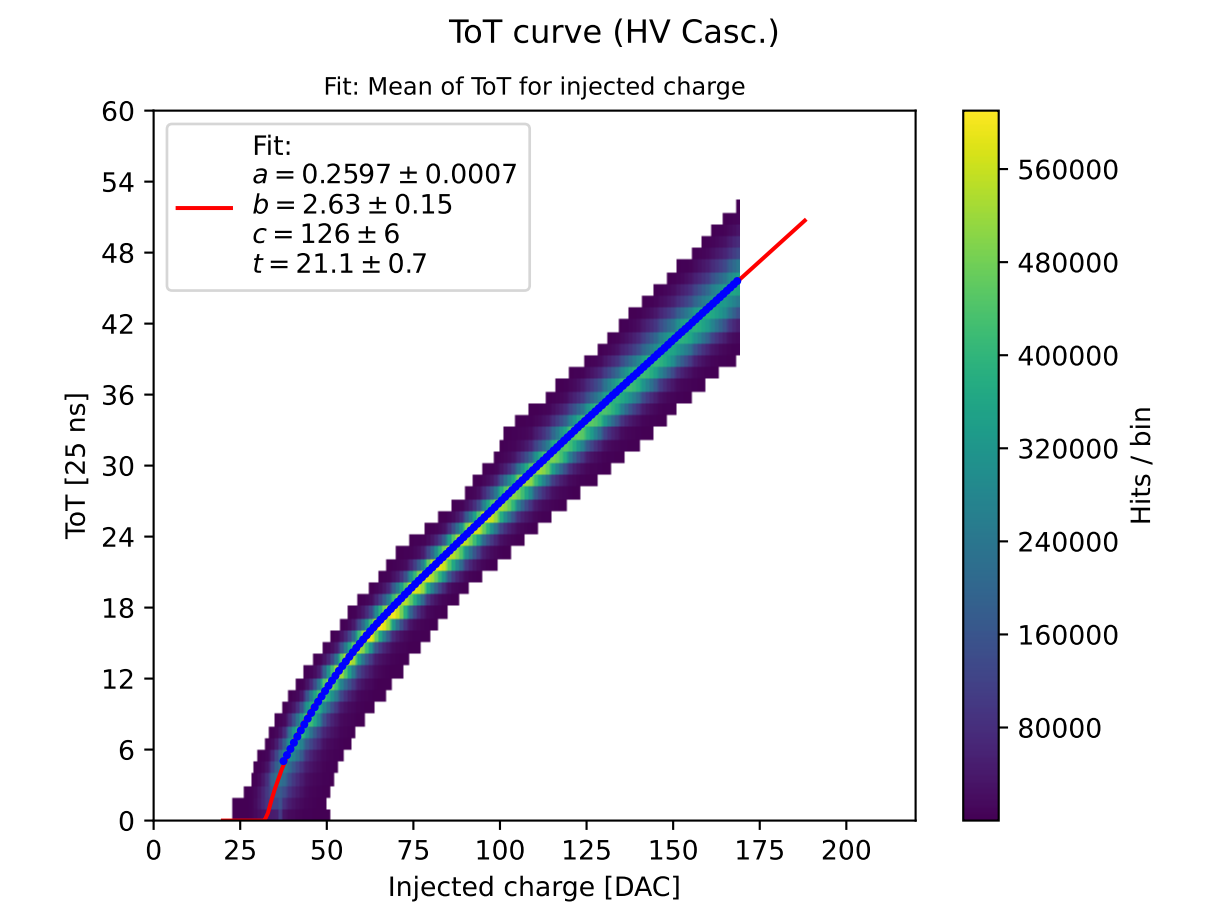

ToT curve (HV Casc.)
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
15
30
45
60
75
90
105
120
0
20
40
60
80
100
120
140
160
180
200
80000
160000
240000
320000
400000
480000
560000

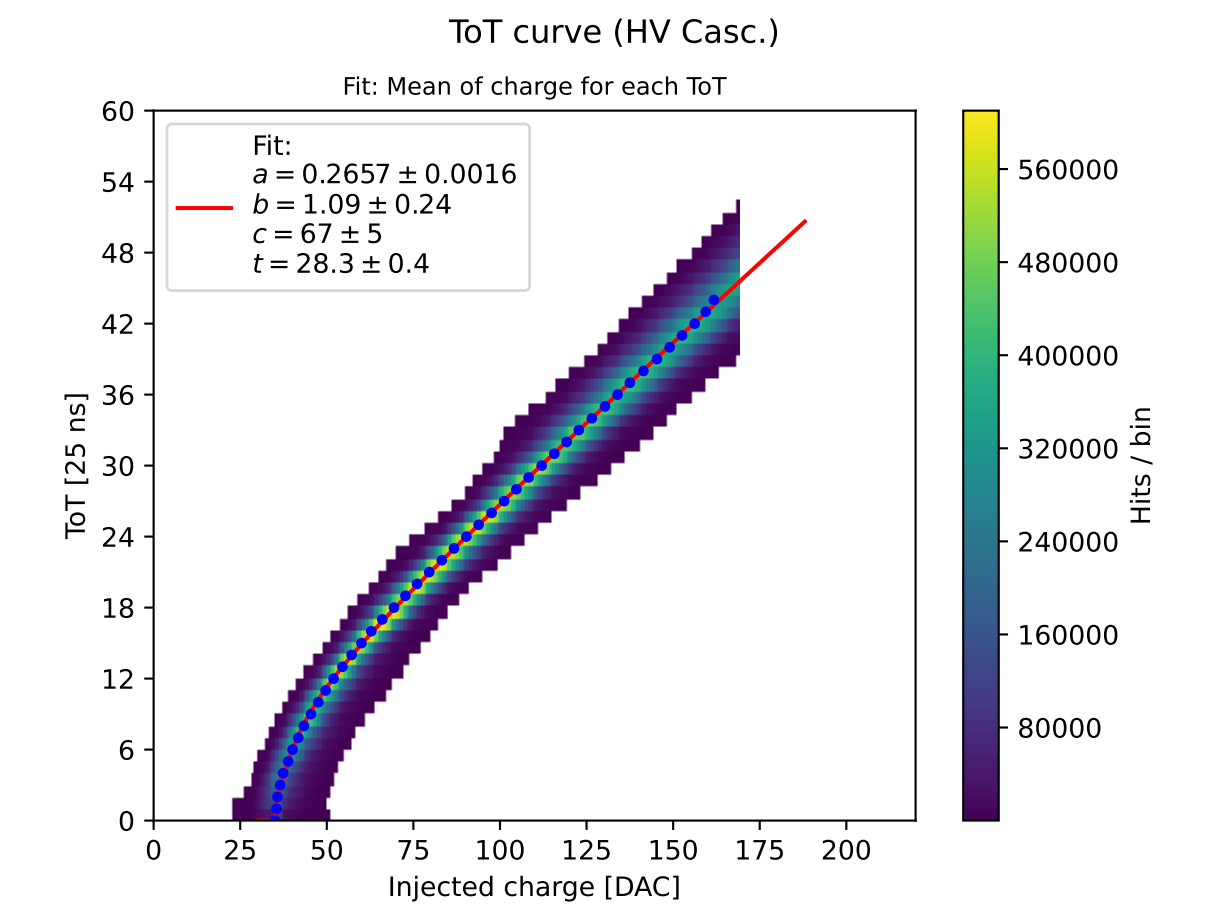

ToT curve (HV Casc.)
Hits/bin > 1000, clean
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
8
16
24
32
40
48
56
64
0
20
40
60
80
100
120
140
160
80000
160000
240000
320000
400000
480000
560000

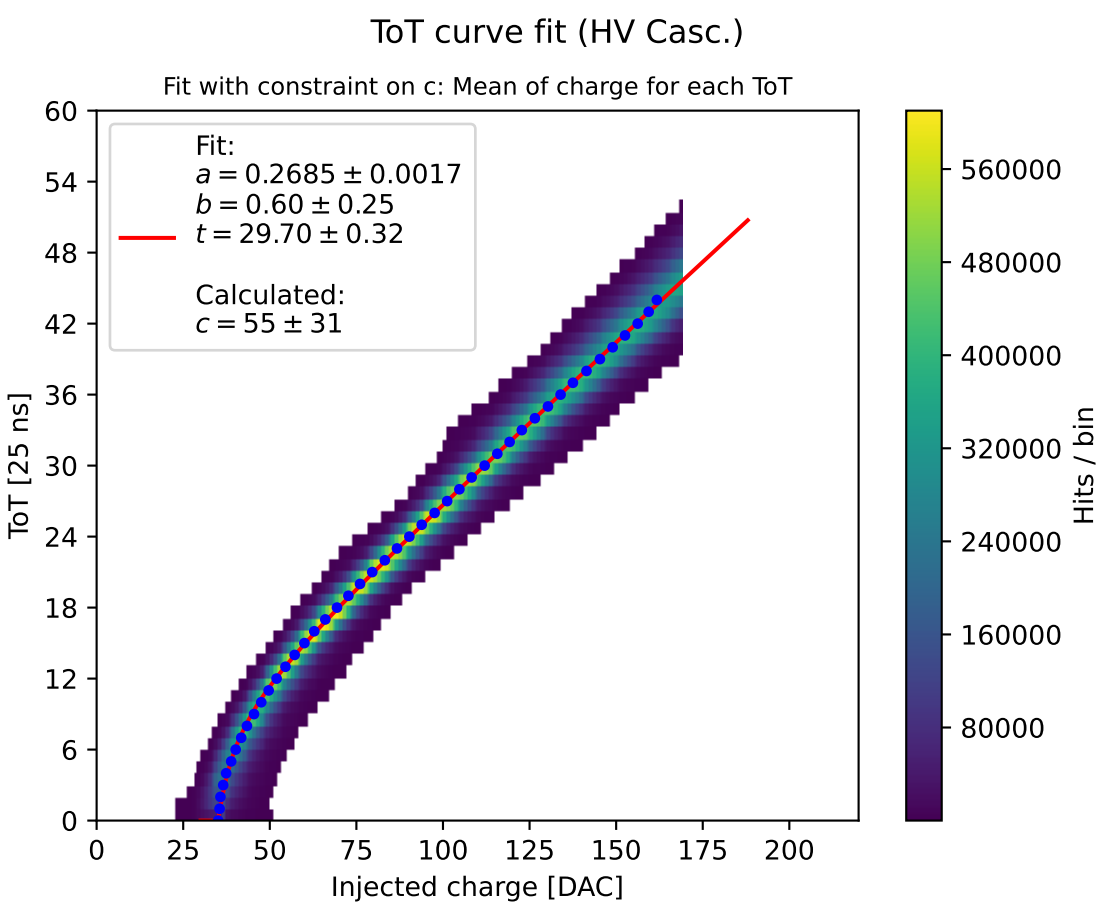

ToT curve (HV Casc.)
Mean of ToT for each value of injected charge (hits/bin>1000, clean)
ToT [25 ns]
0
8
16
24
32
40
48
56
64
0
20
40
60
80
100
120
140
160
Injected charge [DAC]

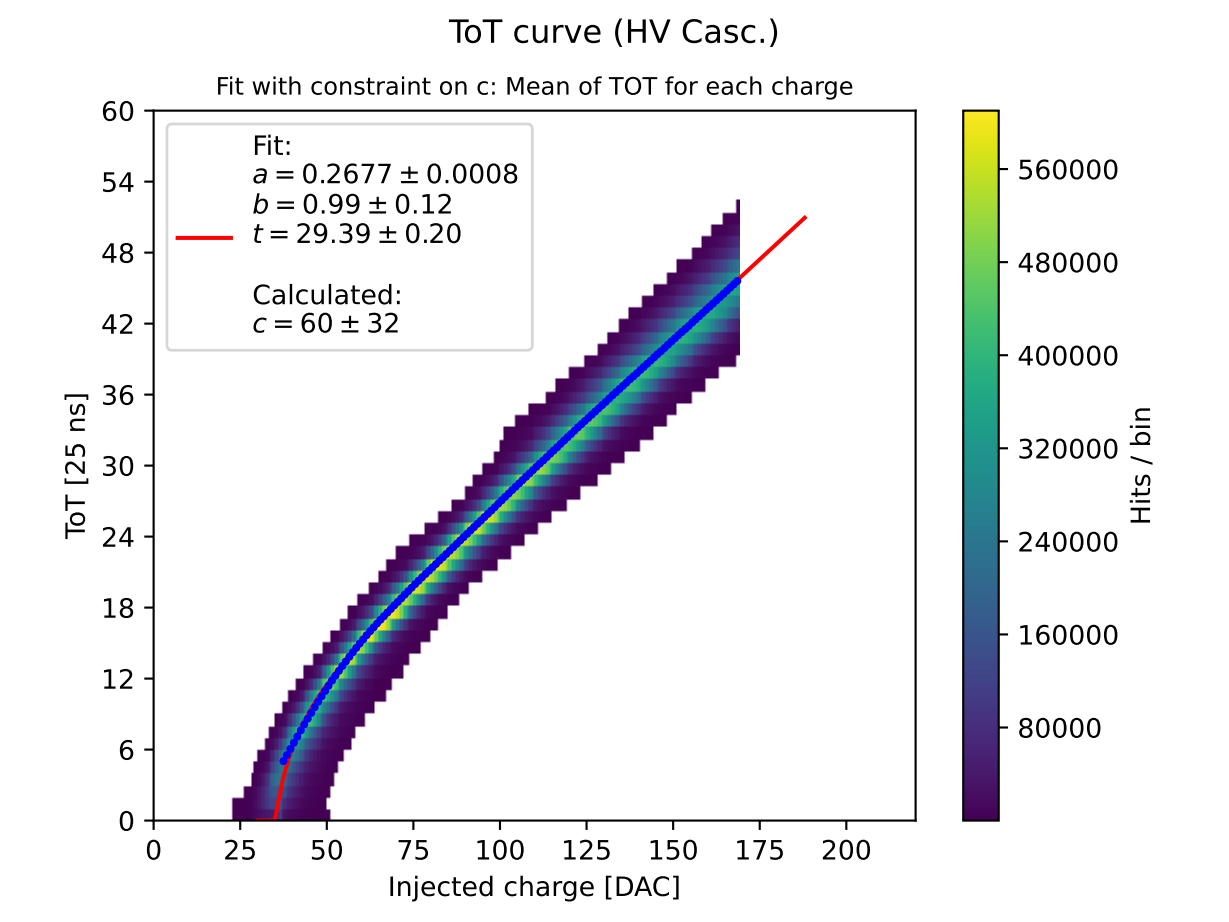

ToT curve mean on charge (HV Casc.)
Mean of charge for each value of ToT, cut
ToT [25 ns]
Injected charge [DAC]
0
8
16
24
32
40
48
56
64
0
20
40
60
80
100
120
140
160

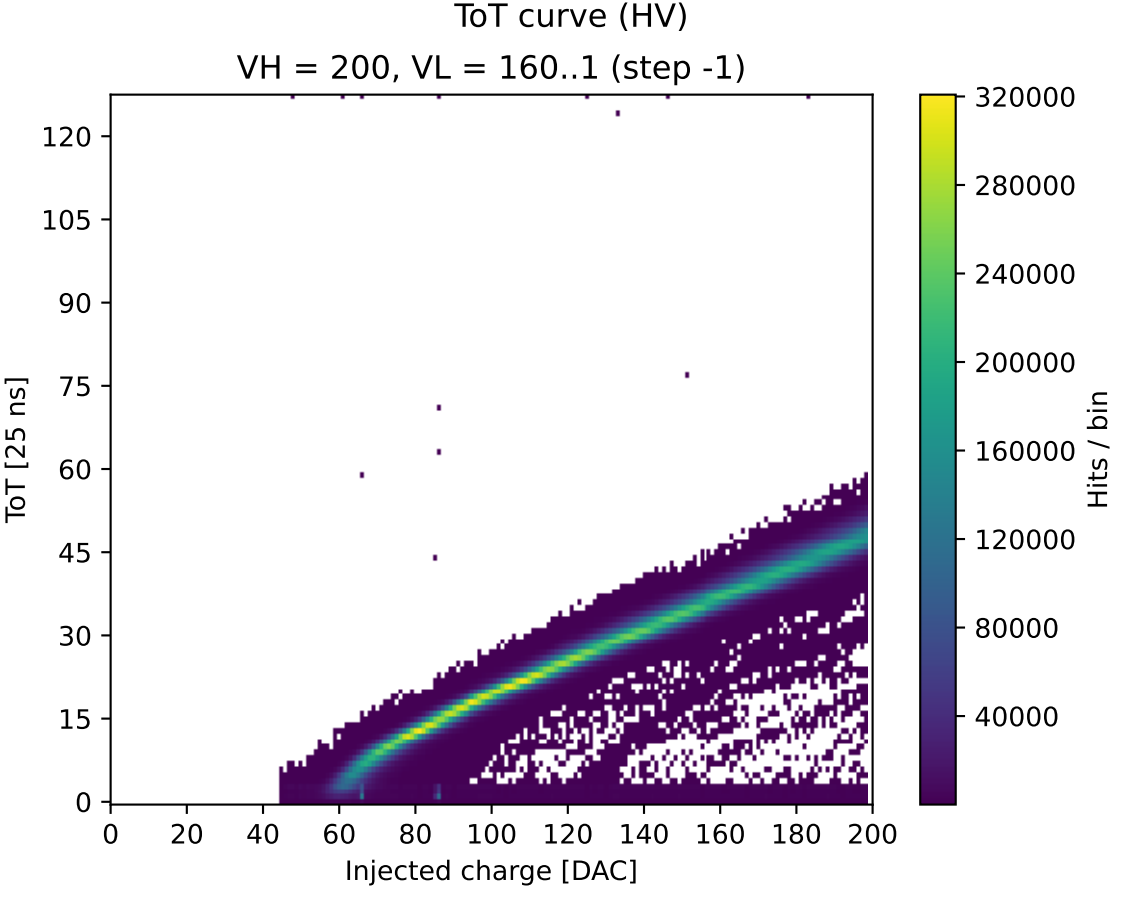

ToT curve (HV Casc.)
Fit: Mean ToT for injected charge
Fit:
$a = 0.247 \pm 0.005$
$b = 5.7 \pm 1.2$
$c = (3.3 \pm 0.8) \times 10^2$
$t = 3 \pm 5$
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
6
12
18
24
30
36
42
48
54
60
25
50
75
100
125
150
175
200
80000
160000
240000
320000
400000
480000
560000

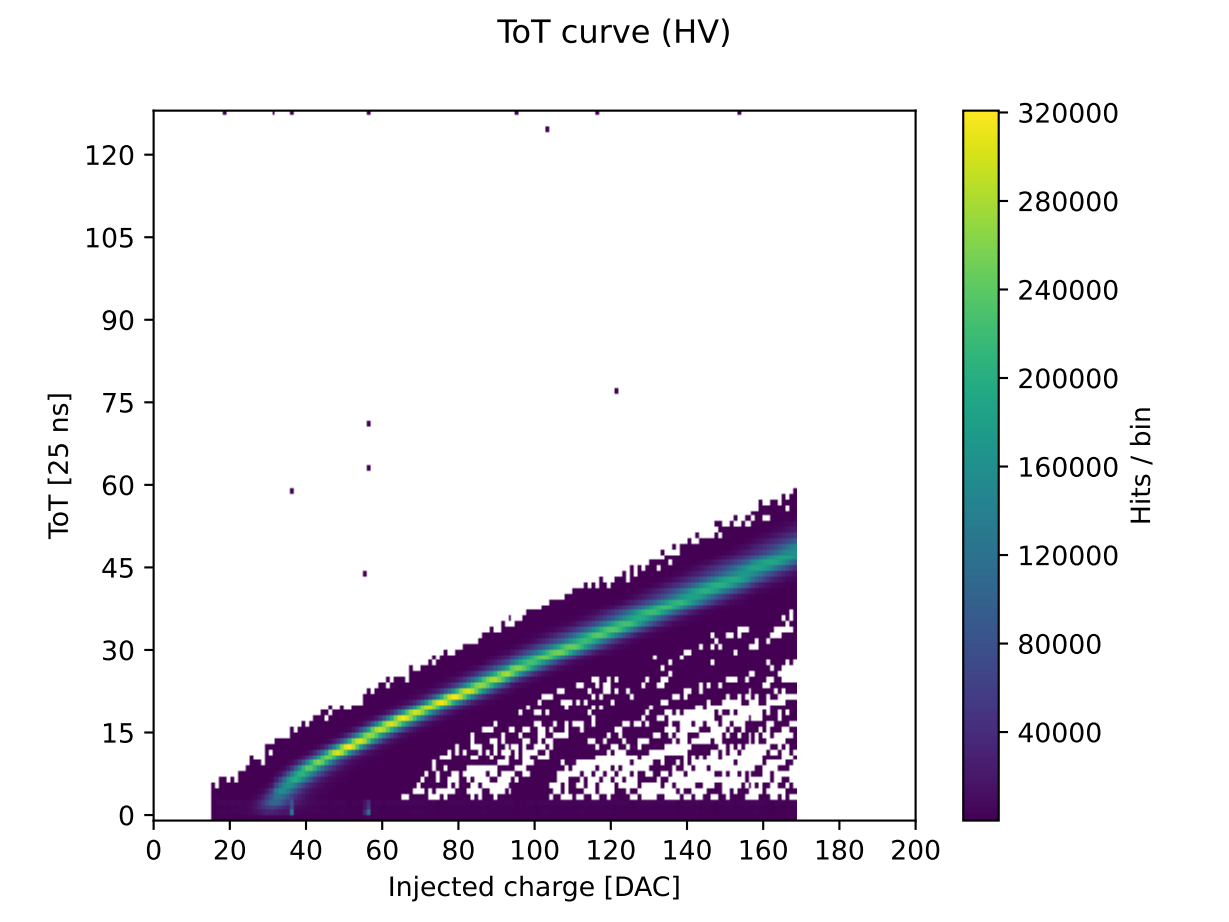

ToT curve (HV Casc.)
Fit: Mean of ToT for injected charge
Fit:
$a = 0.2597 \pm 0.0007$
$b = 2.63 \pm 0.15$
$c = 126 \pm 6$
$t = 21.1 \pm 0.7$
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
6
12
18
24
30
36
42
48
54
60
0
25
50
75
100
125
150
175
200
80000
160000
240000
320000
400000
480000
560000

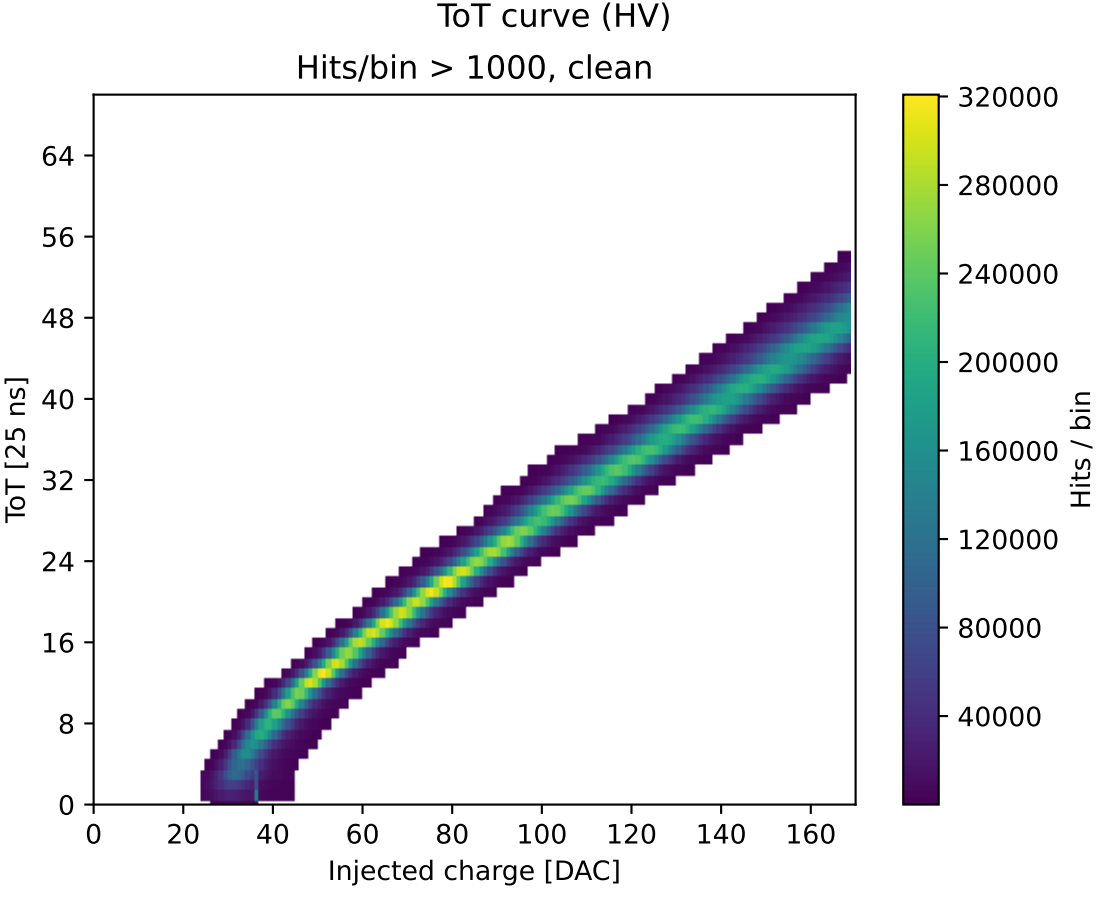

ToT curve (HV Casc.)
Fit: Mean of charge for each ToT
Fit:
$a = 0.2657 \pm 0.0016$
$b = 1.09 \pm 0.24$
$c = 67 \pm 5$
$t = 28.3 \pm 0.4$
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
6
12
18
24
30
36
42
48
54
60
0
25
50
75
100
125
150
175
200
80000
160000
240000
320000
400000
480000
560000

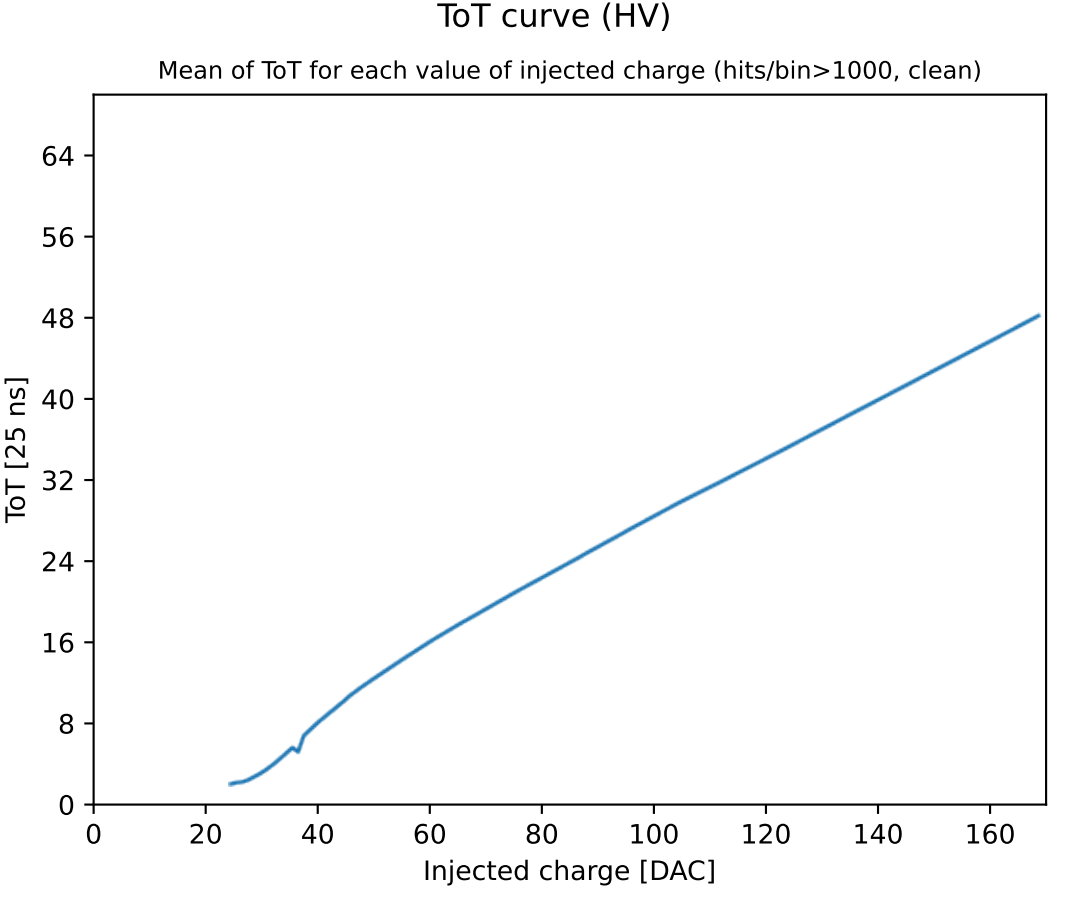

ToT curve fit (HV Casc.)
Fit with constraint on c: Mean of charge for each ToT
Fit:
$a = 0.2685 \pm 0.0017$
$b = 0.60 \pm 0.25$
$t = 29.70 \pm 0.32$
Calculated:
$c = 55 \pm 31$
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
6
12
18
24
30
36
42
48
54
60
0
25
50
75
100
125
150
175
200
80000
160000
240000
320000
400000
480000
560000

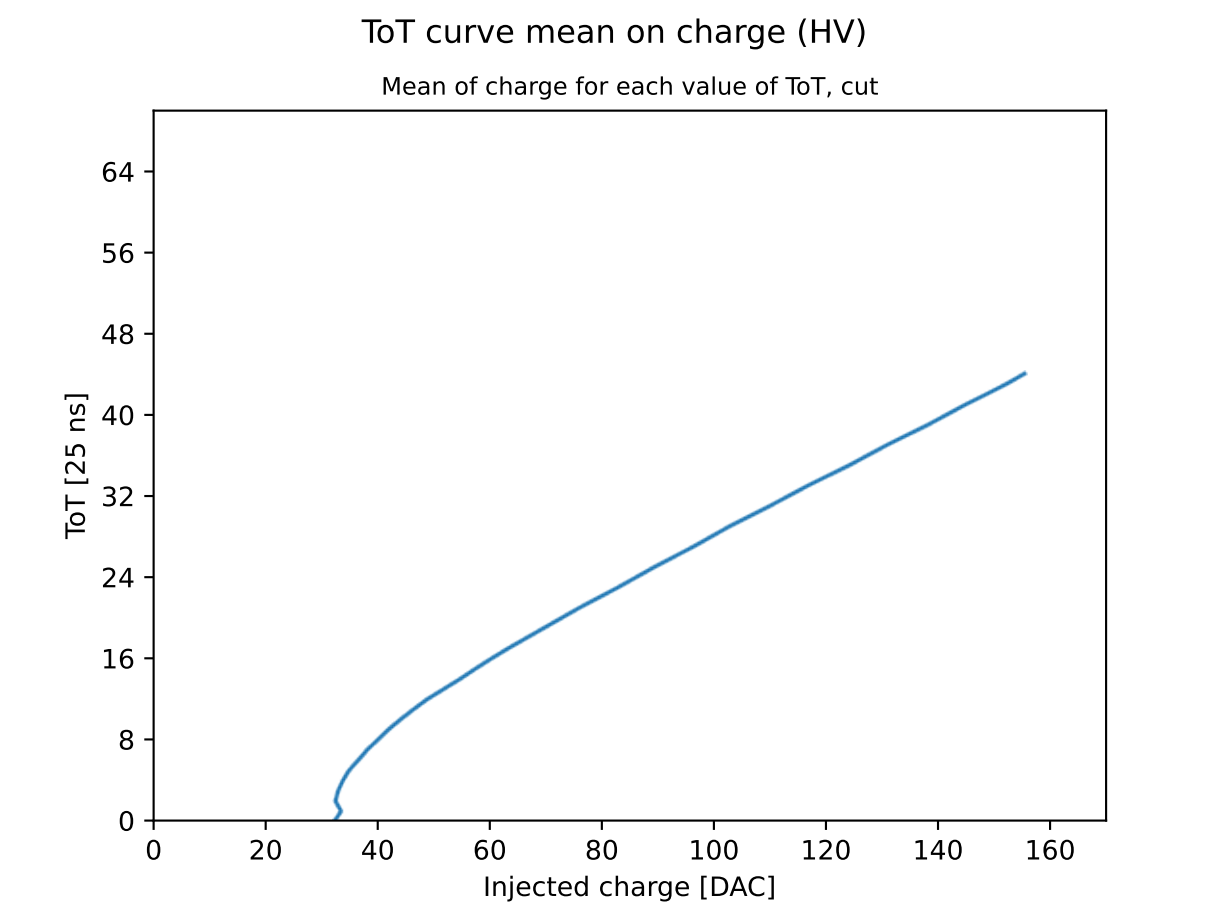

ToT curve (HV Casc.)
Fit with constraint on c: Mean of TOT for each charge
Fit:
$a = 0.2677 \pm 0.0008$
$b = 0.99 \pm 0.12$
$t = 29.39 \pm 0.20$
Calculated:
$c = 60 \pm 32$
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
6
12
18
24
30
36
42
48
54
60
0
25
50
75
100
125
150
175
200
80000
160000
240000
320000
400000
480000
560000

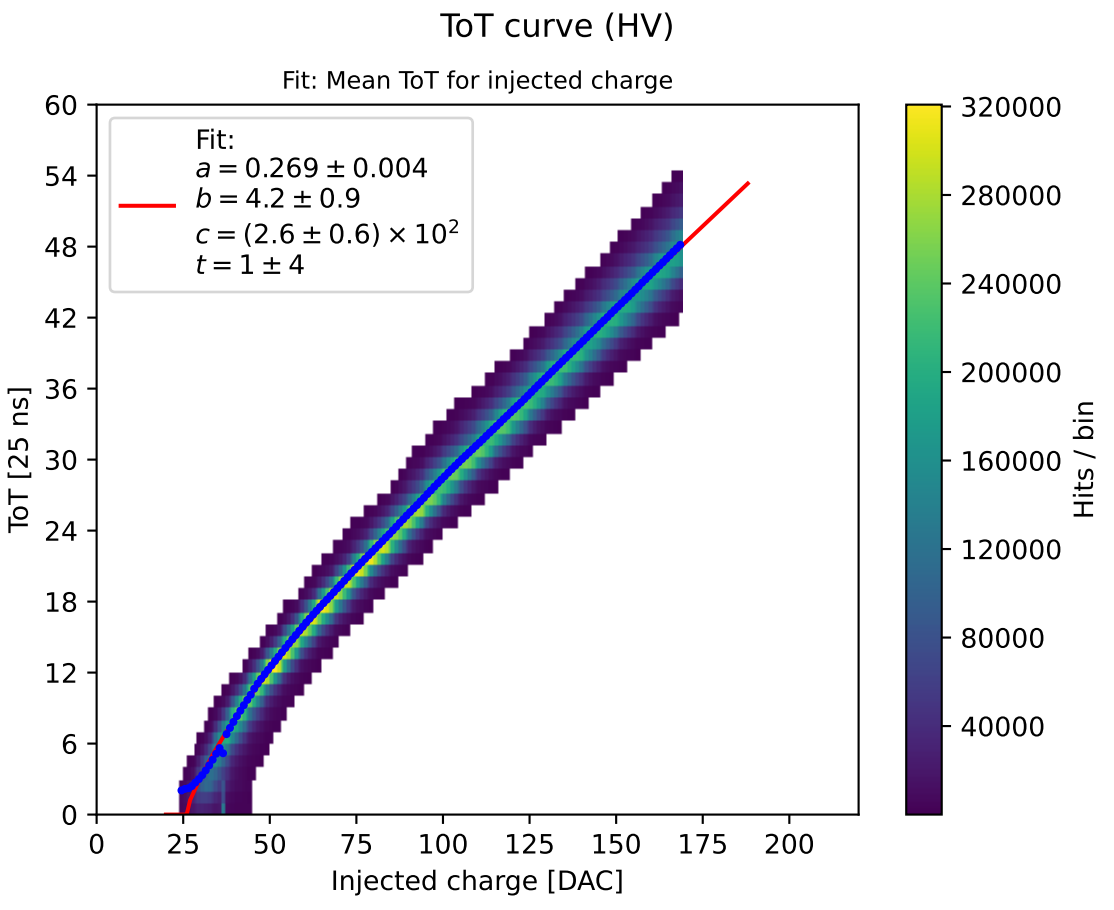

ToT curve (HV)
VH = 200, VL = 160..1 (step -1)
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
15
30
45
60
75
90
105
120
0
20
40
60
80
100
120
140
160
180
200
320000
280000
240000
200000
160000
120000
80000
40000

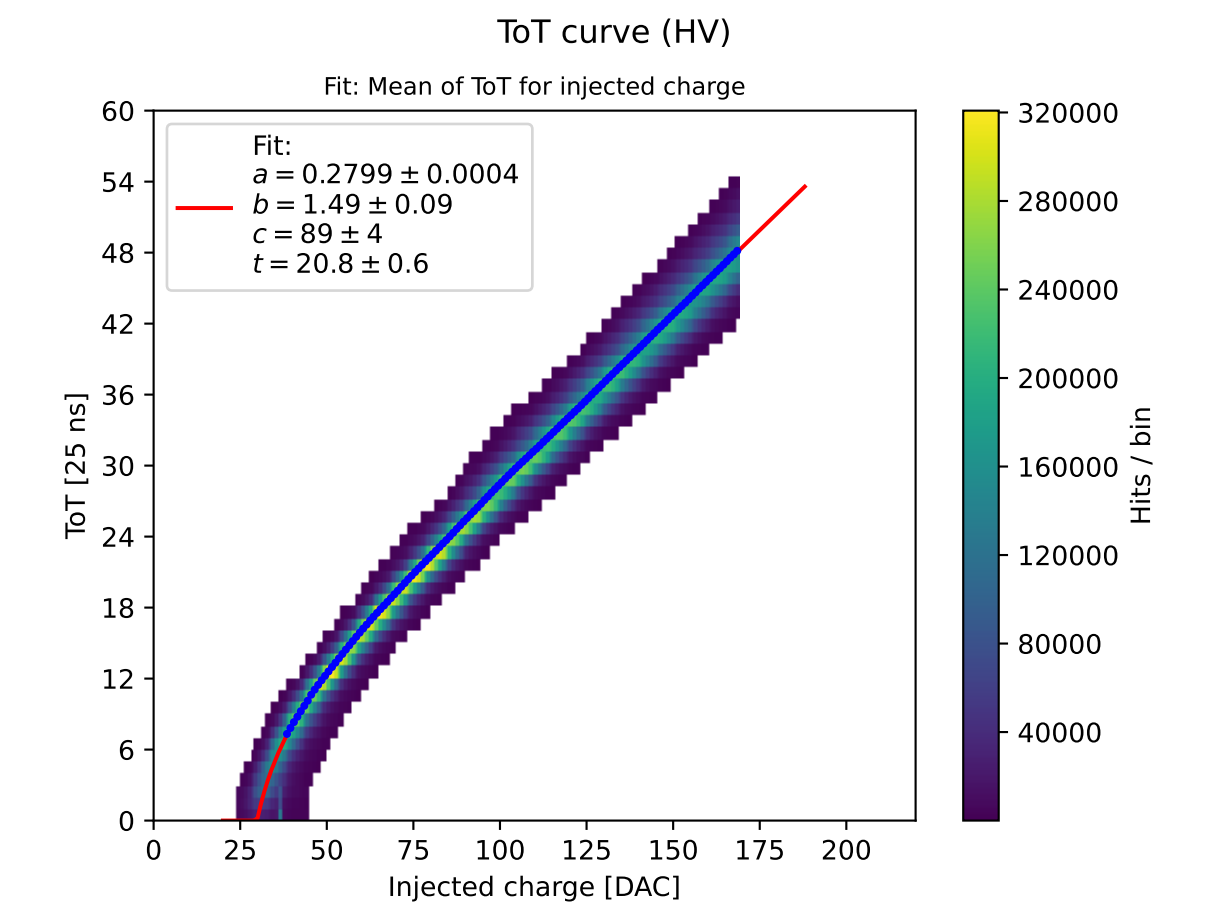

ToT curve (HV)
ToT [25 ns]
0
15
30
45
60
75
90
105
120
0
20
40
60
80
100
120
140
160
180
200
Injected charge [DAC]
Hits / bin
320000
280000
240000
200000
160000
120000
80000
40000

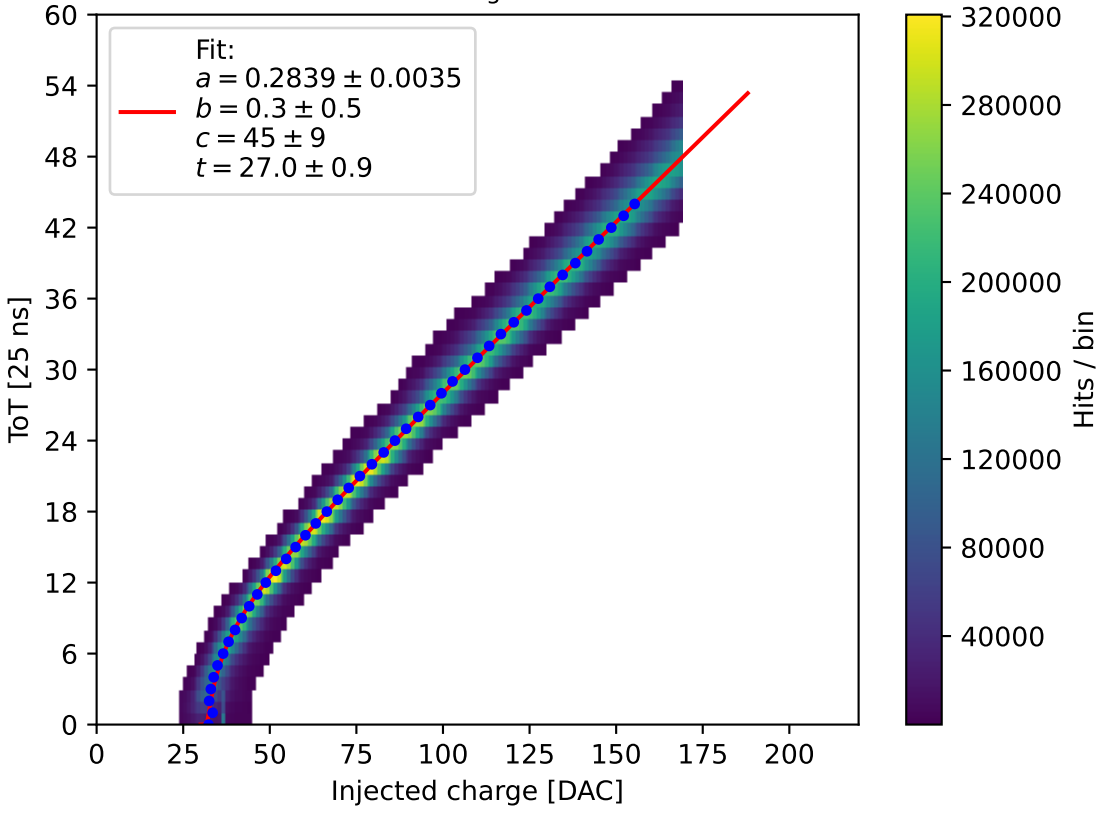

ToT curve (HV)
Hits/bin > 1000, clean
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
8
16
24
32
40
48
56
64
0
20
40
60
80
100
120
140
160
320000
280000
240000
200000
160000
120000
80000
40000

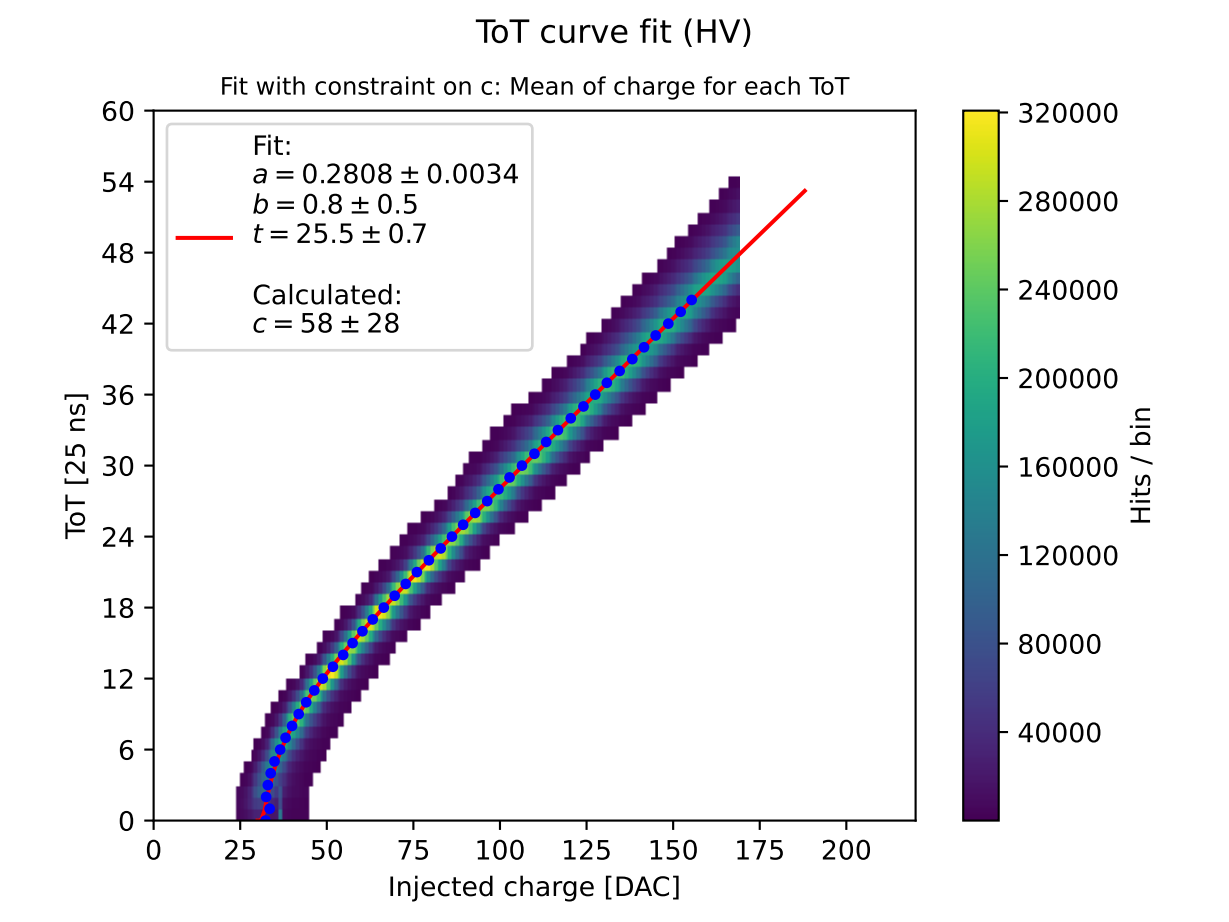

ToT curve (HV)
Mean of ToT for each value of injected charge (hits/bin>1000, clean)
ToT [25 ns]
0
8
16
24
32
40
48
56
64
0
20
40
60
80
100
120
140
160
Injected charge [DAC]

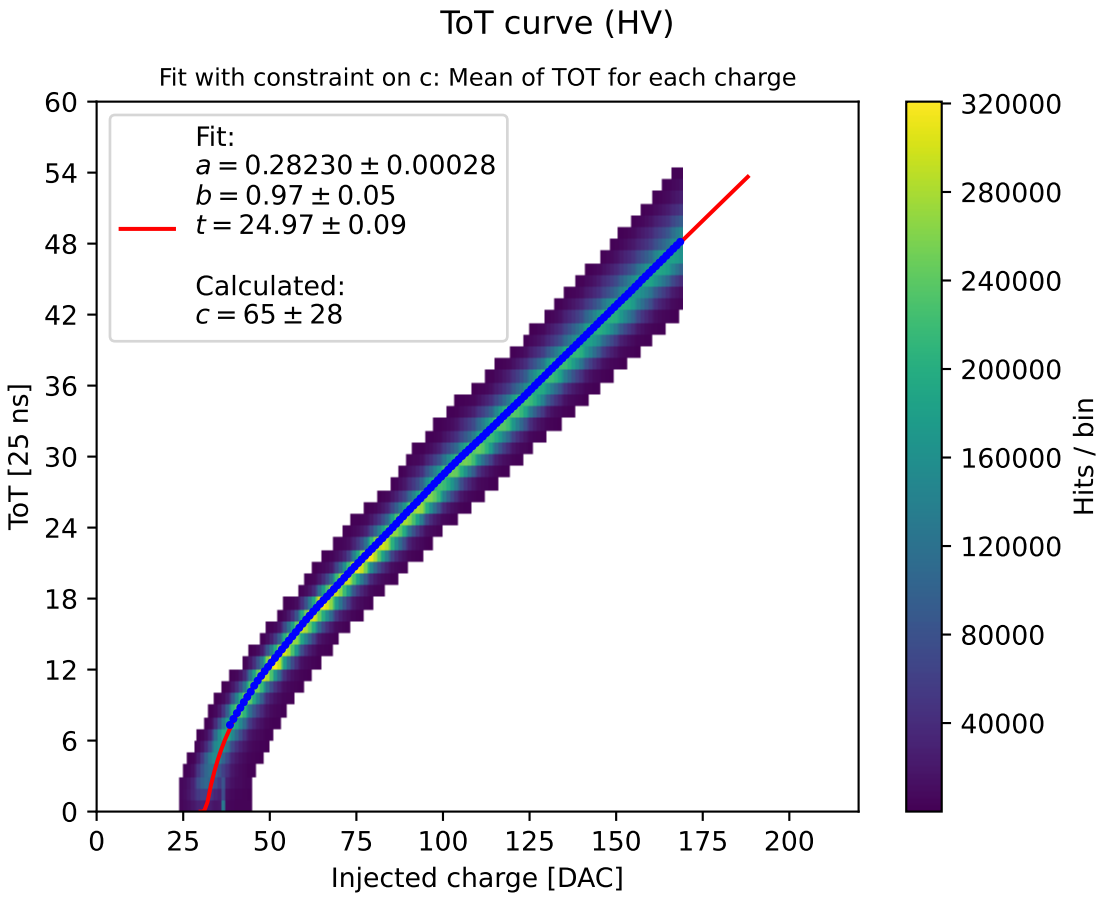

ToT curve mean on charge (HV)
Mean of charge for each value of ToT, cut
ToT [25 ns]
Injected charge [DAC]
0
8
16
24
32
40
48
56
64
0
20
40
60
80
100
120
140
160


ToT curve (HV)
Fit: Mean ToT for injected charge
Fit:
$a = 0.269 \pm 0.004$
$b = 4.2 \pm 0.9$
$c = (2.6 \pm 0.6) \times 10^2$
$t = 1 \pm 4$
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
6
12
18
24
30
36
42
48
54
60
0
25
50
75
100
125
150
175
200
40000
80000
120000
160000
200000
240000
280000
320000


ToT curve (HV)
Fit: Mean of ToT for injected charge
Fit:
$a = 0.2799 \pm 0.0004$
$b = 1.49 \pm 0.09$
$c = 89 \pm 4$
$t = 20.8 \pm 0.6$
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
6
12
18
24
30
36
42
48
54
60
0
25
50
75
100
125
150
175
200
40000
80000
120000
160000
200000
240000
280000
320000


ToT curve (HV)
Fit: Mean of charge for each ToT
Fit:
$a = 0.2839 \pm 0.0035$
$b = 0.3 \pm 0.5$
$c = 45 \pm 9$
$t = 27.0 \pm 0.9$
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
6
12
18
24
30
36
42
48
54
60
0
25
50
75
100
125
150
175
200
40000
80000
120000
160000
200000
240000
280000
320000


ToT curve fit (HV)
Fit with constraint on c: Mean of charge for each ToT
Fit:
$a = 0.2808 \pm 0.0034$
$b = 0.8 \pm 0.5$
$t = 25.5 \pm 0.7$
Calculated:
$c = 58 \pm 28$
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
6
12
18
24
30
36
42
48
54
60
0
25
50
75
100
125
150
175
200
40000
80000
120000
160000
200000
240000
280000
320000


ToT curve (HV)
Fit with constraint on c: Mean of TOT for each charge
Fit:
$a = 0.28230 \pm 0.00028$
$b = 0.97 \pm 0.05$
$t = 24.97 \pm 0.09$
Calculated:
$c = 65 \pm 28$
ToT [25 ns]
Injected charge [DAC]
Hits / bin
0
6
12
18
24
30
36
42
48
54
60
0
25
50
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