This is a bdaq53 noise_occupancy_scan for chip 0x0001.
Run 20211112_104717_noise_occupancy_scan was started 2021-11-12 10:47:1

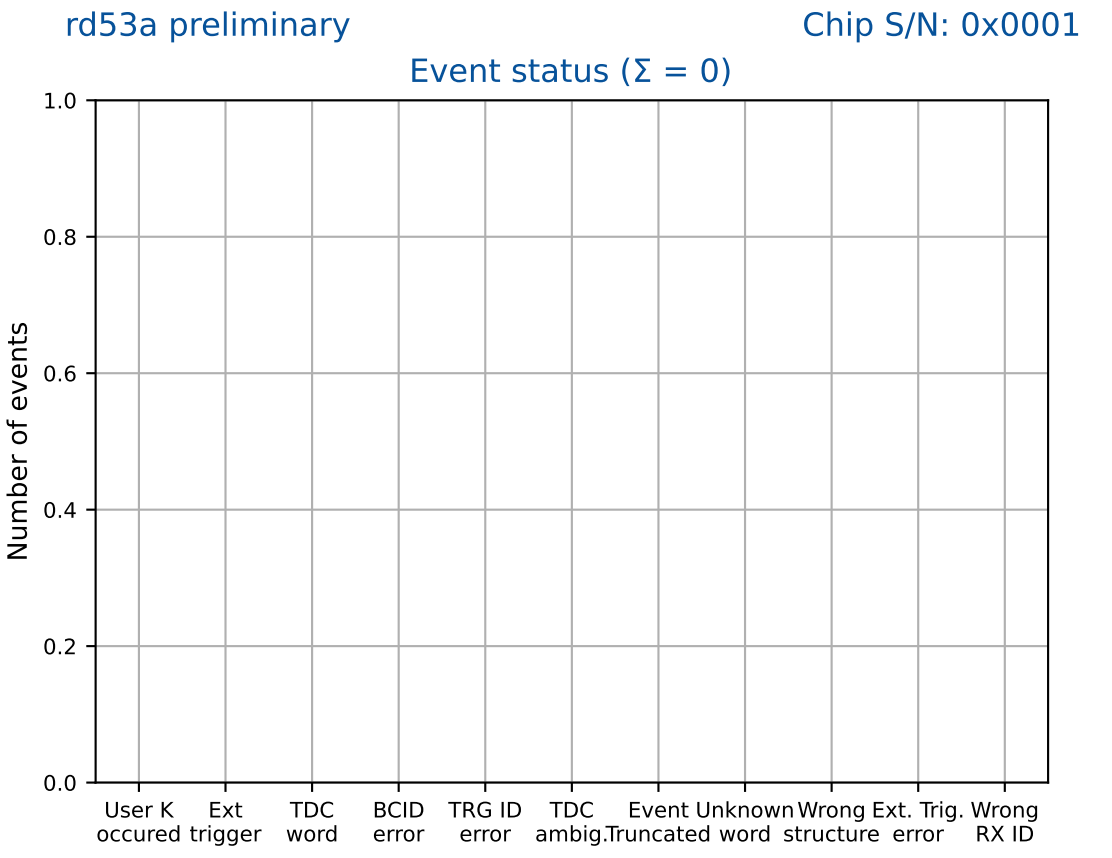
Scan config	Value
min_occupancy	1000
n_triggers	10000000.0
start_column	128
start_row	0
stop_column	264
stop_row	192
trigger_pattern	0xffffffff
wait_cycles	400

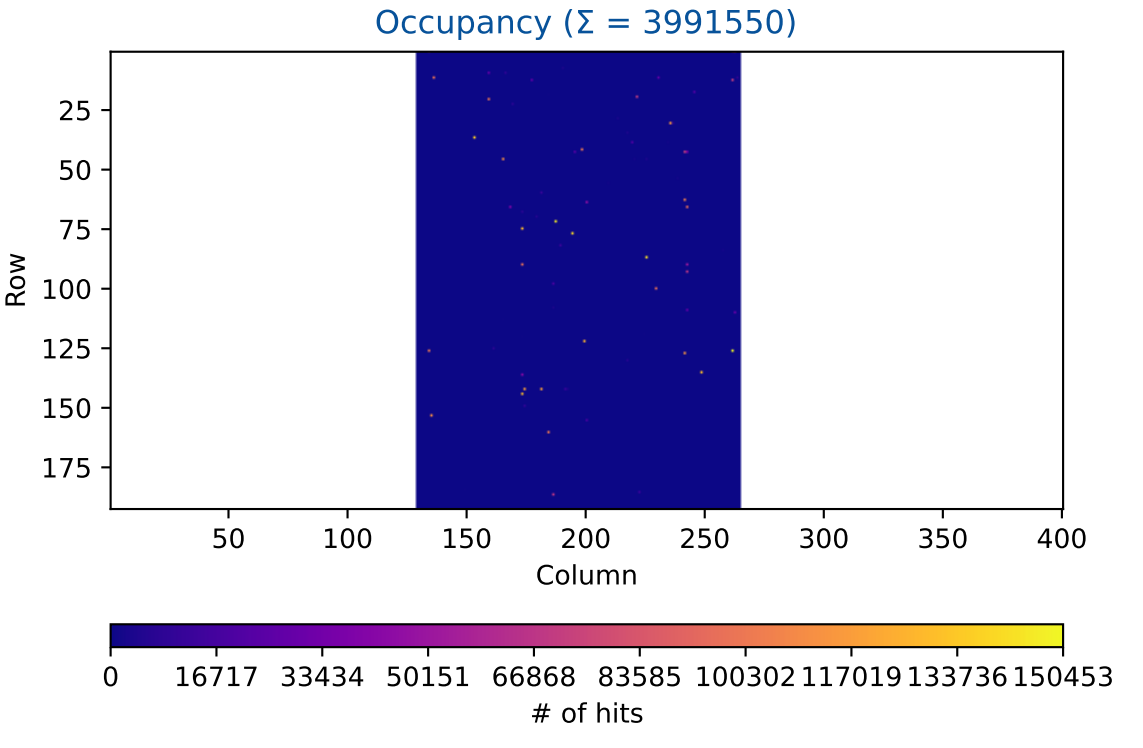
SYNC config	Value
IBIASP1_SYNC	90
IBIASP2_SYNC	140
IBIAS_SF_SYNC	80
IBIAS_KRUM_SYNC	55
IBIAS_DISC_SYNC	300
ICTRL_SYNCT_SYNC	100
VBL_SYNC	380
VTH_SYNC	390
VREF_KRUM_SYNC	450

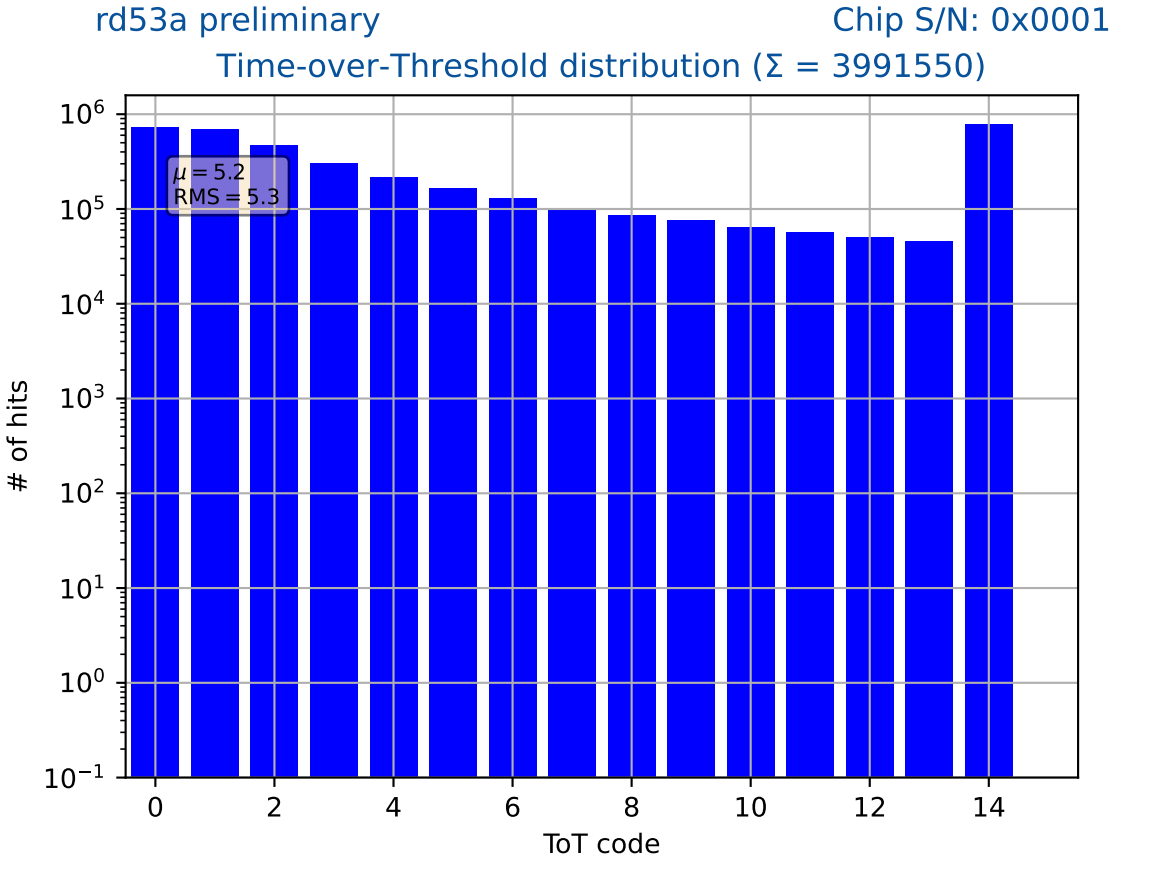
LIN config	Value
PA_IN_BIAS_LIN	410
FC_BIAS_LIN	20
KRUM_CURR_LIN	29
LDAC_LIN	185
COMP_LIN	110
REF_KRUM_LIN	300
Vthreshold_LIN	343

DIFF config	Value
PRMP_DIFF	511
FOL_DIFF	542
PRECOMP_DIFF	512
COMP_DIFF	1023
VFF_DIFF	40
VTH1_DIFF	600
VTH2_DIFF	50
LCC_DIFF	20
CONF_FE_DIFF	0

Software version: master@bb1d500
Changed files: bdaq53/scans/meta_tune_threshold.py, bdaq53/scans/meta_tune_tot_and_threshold.py, bdaq53/scans/scan_analog.py, bdaq53/scans/scan_digital.py, bdaq53/scans/scan_eudaq.py, bdaq53/scans/scan_noise_occupancy.py, bdaq53/scans/scan_stuck_pixel.py, bdaq53/scans/scan

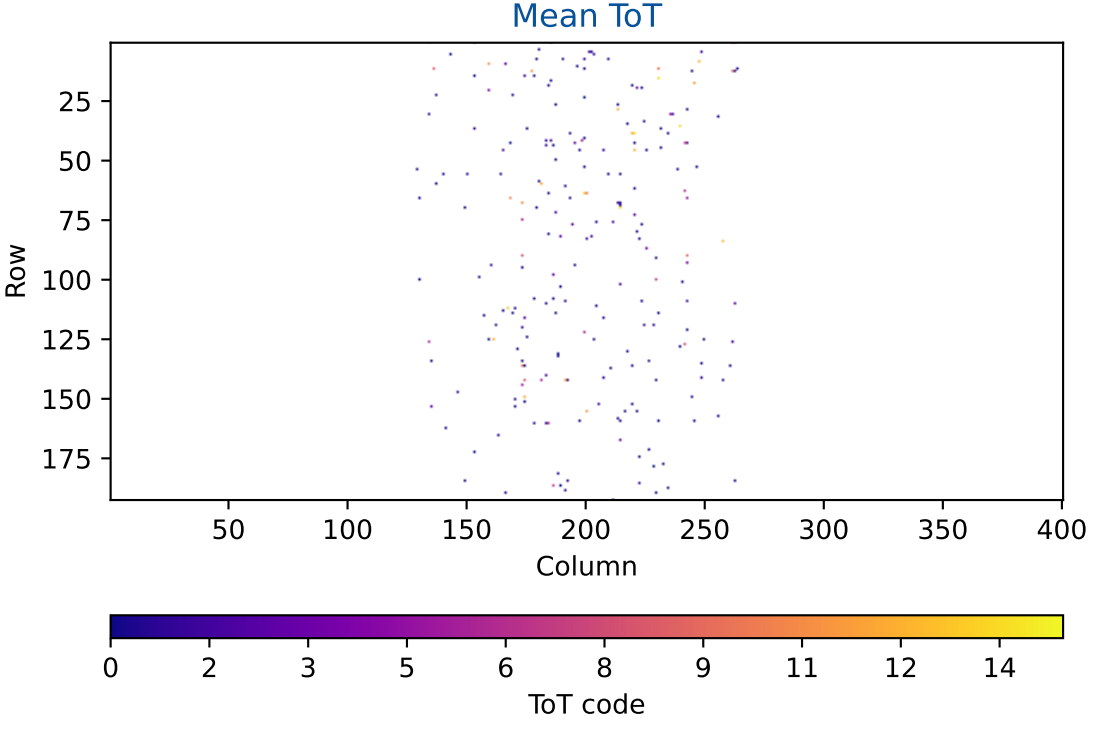

rd53a preliminary
Chip S/N: 0x0001
Event status (Σ = 0)
Number of events
1.0
0.8
0.6
0.4
0.2
0.0
User K occured
Ext trigger
TDC word
BCID error
TRG ID error
TDC ambig.
Event Truncated
Unknown word
Wrong structure
Ext. Trig. error
Wrong RX ID

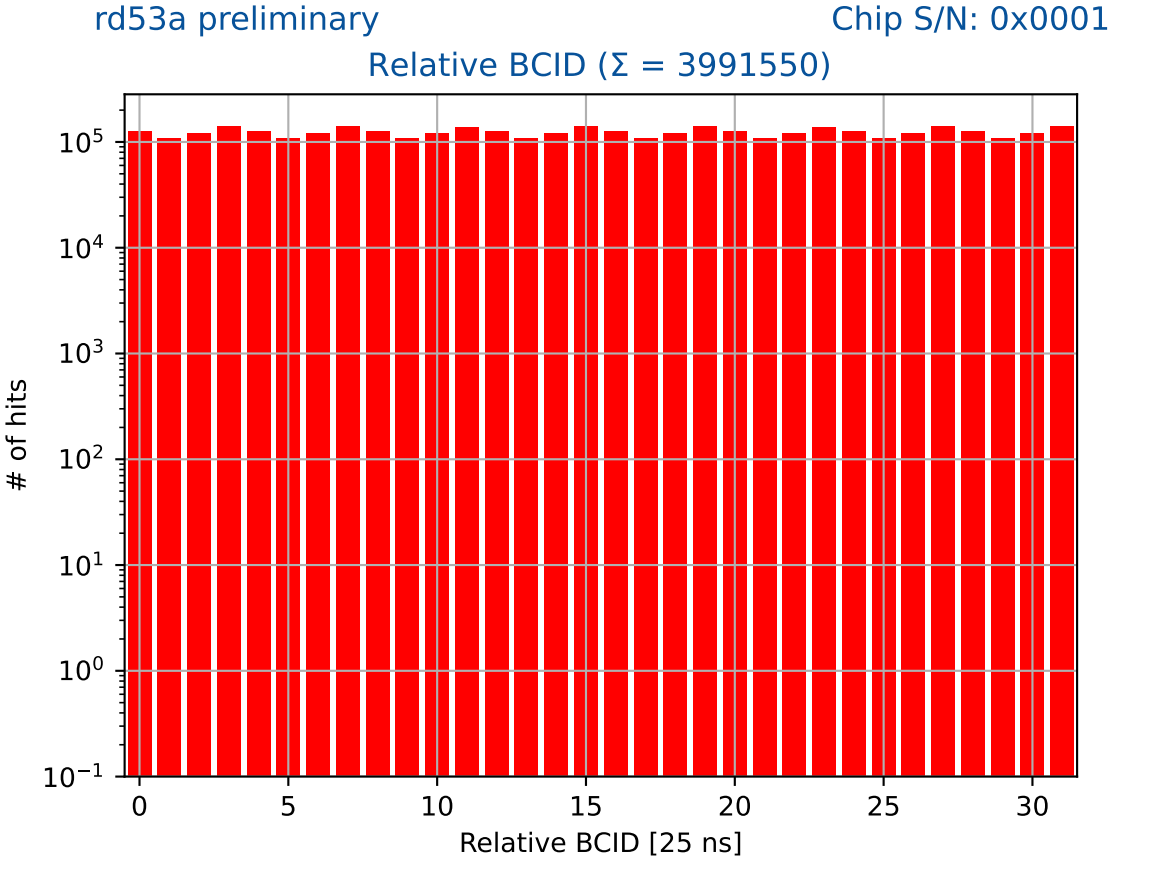

Occupancy (Σ = 3991550)
Row
25
50
75
100
125
150
175
50
100
150
200
250
300
350
400
Column
0
16717
33434
50151
66868
83585
100302
117019
133736
150453
# of hits

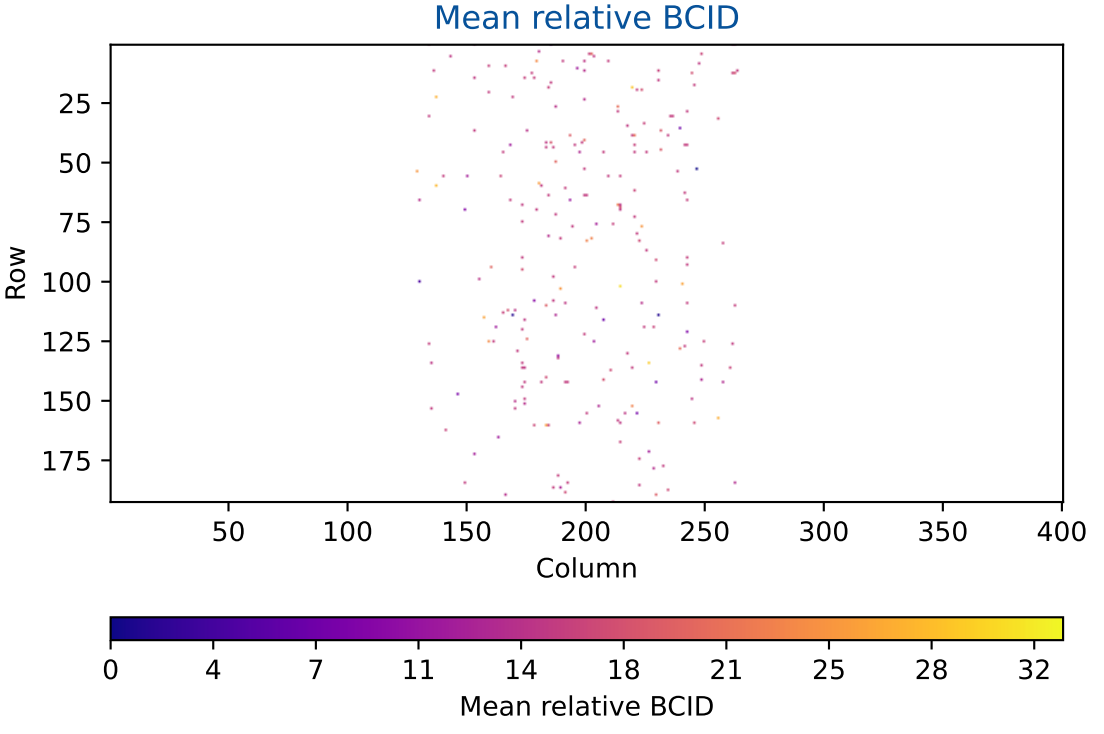

rd53a preliminary
Chip S/N: 0x0001
Time-over-Threshold distribution (Σ = 3991550)
μ = 5.2
RMS = 5.3
# of hits
ToT code
10^6
10^5
10^4
10^3
10^2
10^1
10^0
10^−1
0
2
4
6
8
10
12
14

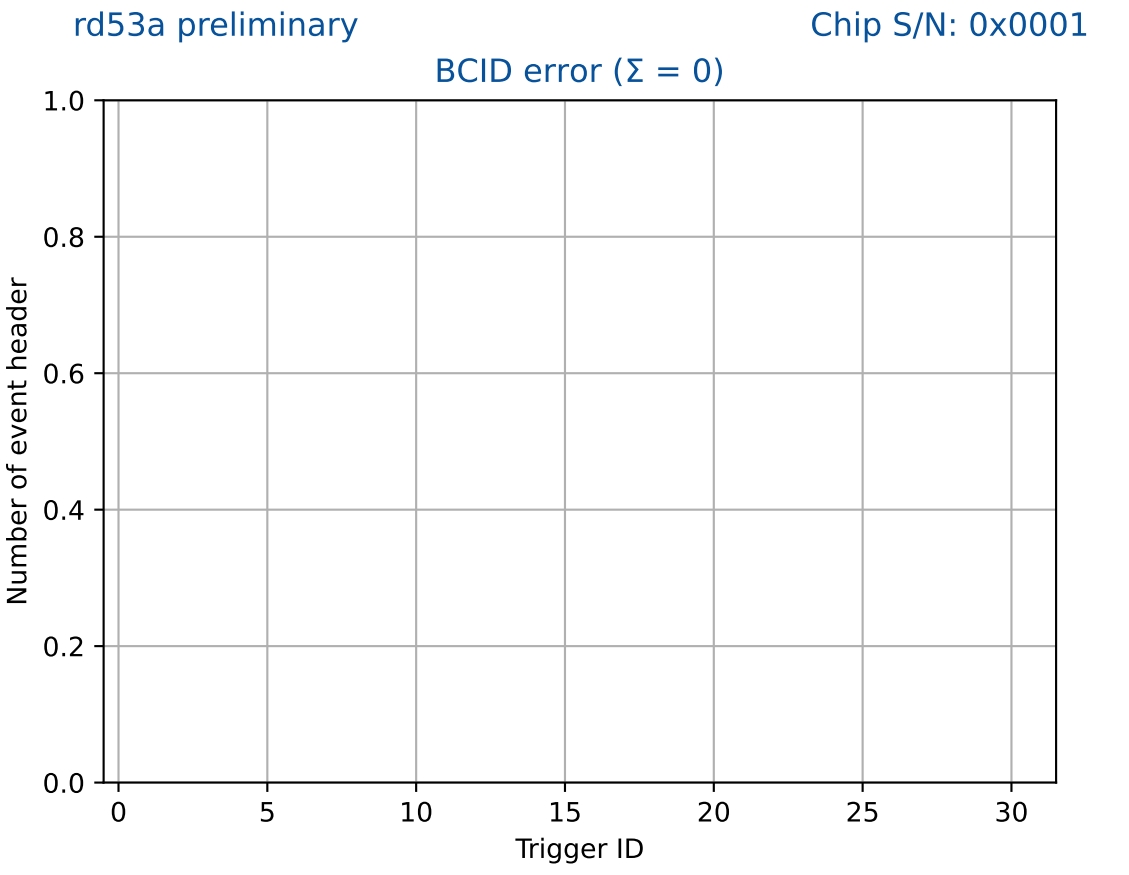
rd53a preliminary

Chip S/N: 0x0001



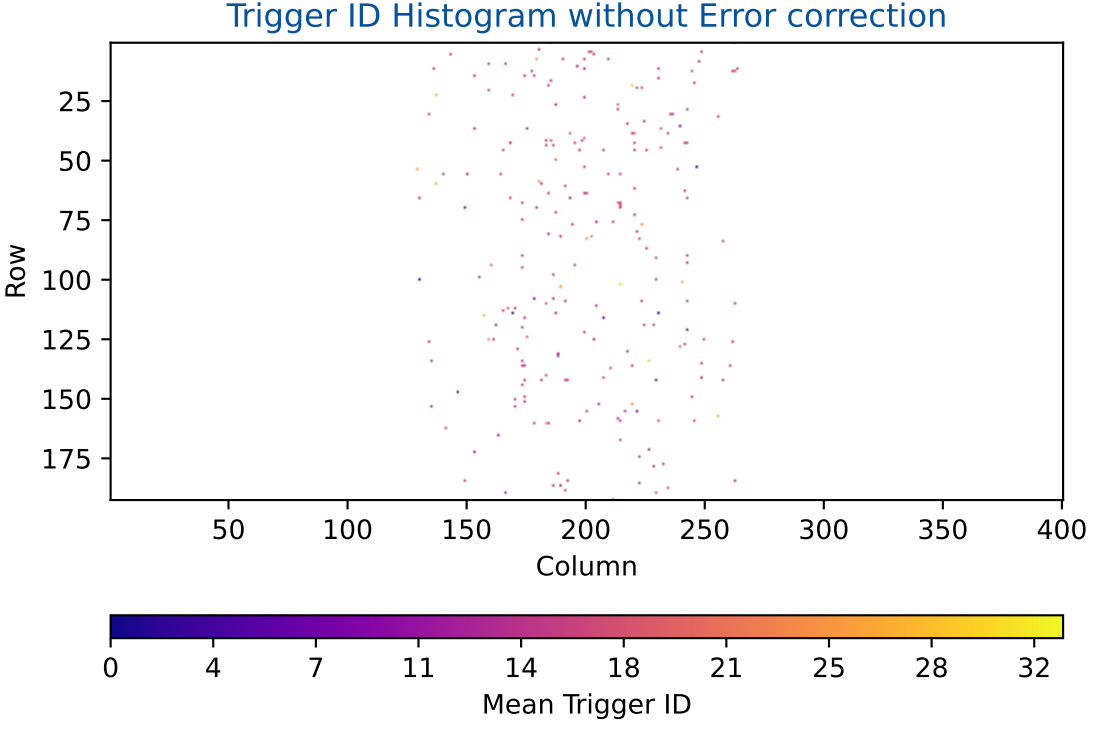

rd53a preliminary
Chip S/N: 0x0001
Relative BCID (Σ = 3991550)
# of hits
10^{5}
10^{4}
10^{3}
10^{2}
10^{1}
10^{0}
10^{-1}
0
5
10
15
20
25
30
Relative BCID [25 ns]

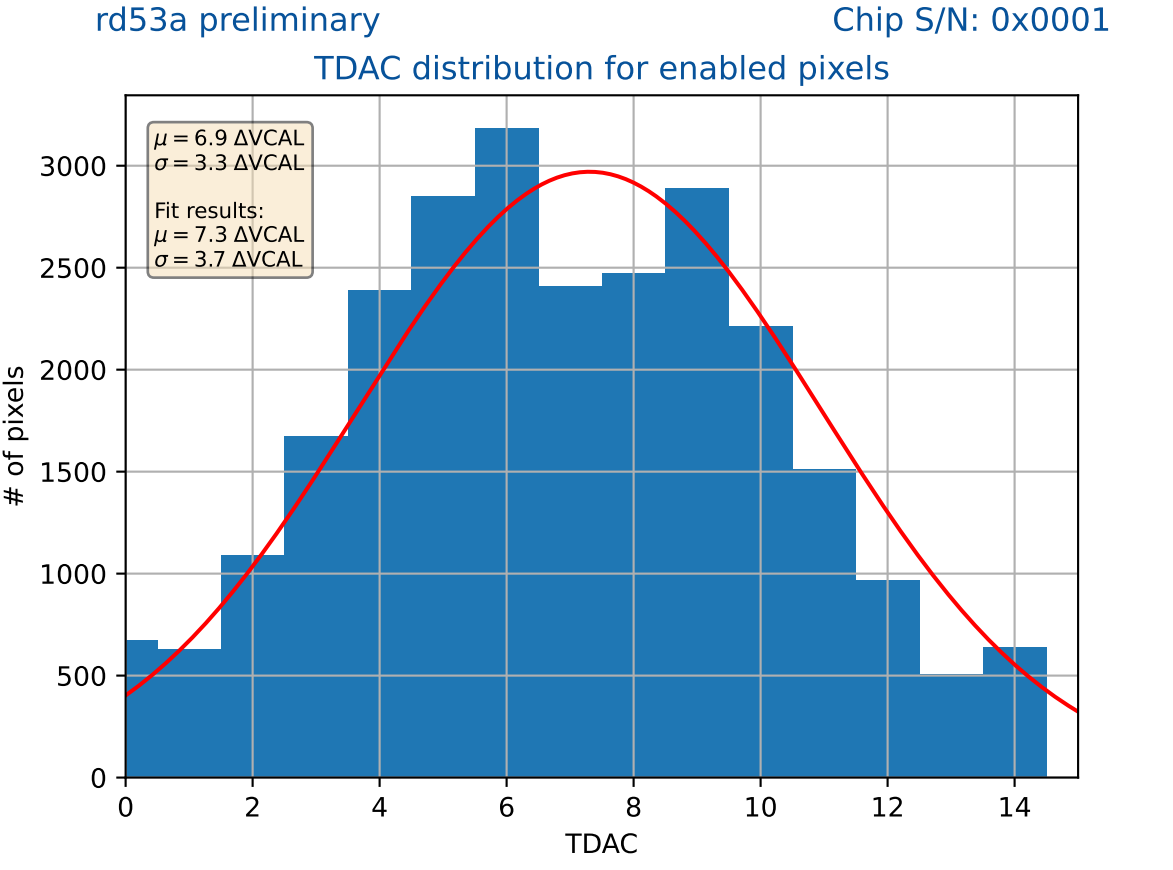

Mean relative BCID
Row
25
50
75
100
125
150
175
50
100
150
200
250
300
350
400
Column
0
4
7
11
14
18
21
25
28
32
Mean relative BCID

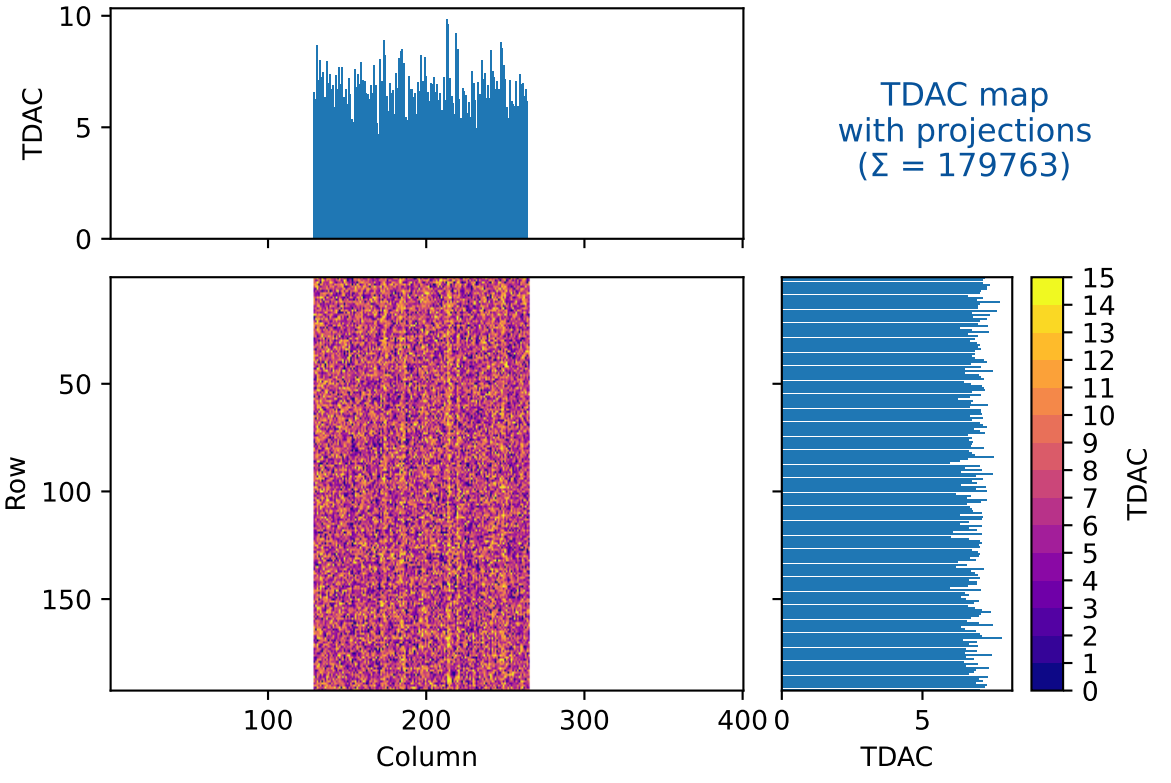

rd53a preliminary
Chip S/N: 0x0001
BCID error (Σ = 0)
Number of event header
Trigger ID
0.0
0.2
0.4
0.6
0.8
1.0
0
5
10
15
20
25
30

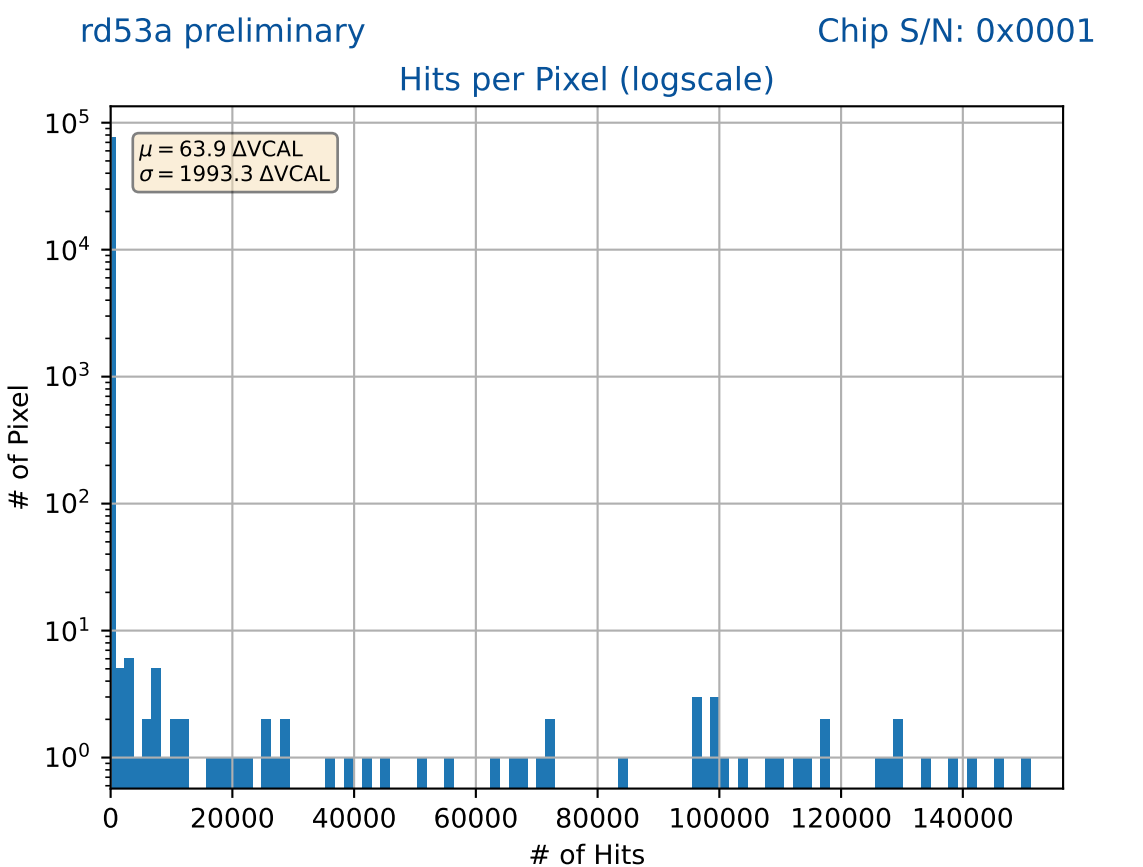
rd53a preliminary

Chip S/N: 0x0001




rd53a preliminary
Chip S/N: 0x0001
TDAC distribution for enabled pixels
μ = 6.9 ΔVCAL
σ = 3.3 ΔVCAL
Fit results:
μ = 7.3 ΔVCAL
σ = 3.7 ΔVCAL
# of pixels
TDAC
0
500
1000
1500
2000
2500
3000
0
2
4
6
8
10
12
14


rd53a preliminary
Chip S/N: 0x0001
TDAC map
with projections
(Σ = 179763)
TDAC
Row
Column
TDAC
TDAC
0
5
10
50
100
150
100
200
300
400
0
5
10
15


rd53a preliminary
Chip S/N: 0x0001
Hits per Pixel (logscale)
$\mu = 63.9$ ΔVCAL
$\sigma = 1993.3$ ΔVCAL
# of Pixel
# of Hits
10^0
10^1
10^2
10^3
10^4
10^5
0
20000
40000
60000
80000
100000
120000
140000