Status report - Thursday, April 30th

Noise Occupancy Scans and Fake Hit rate

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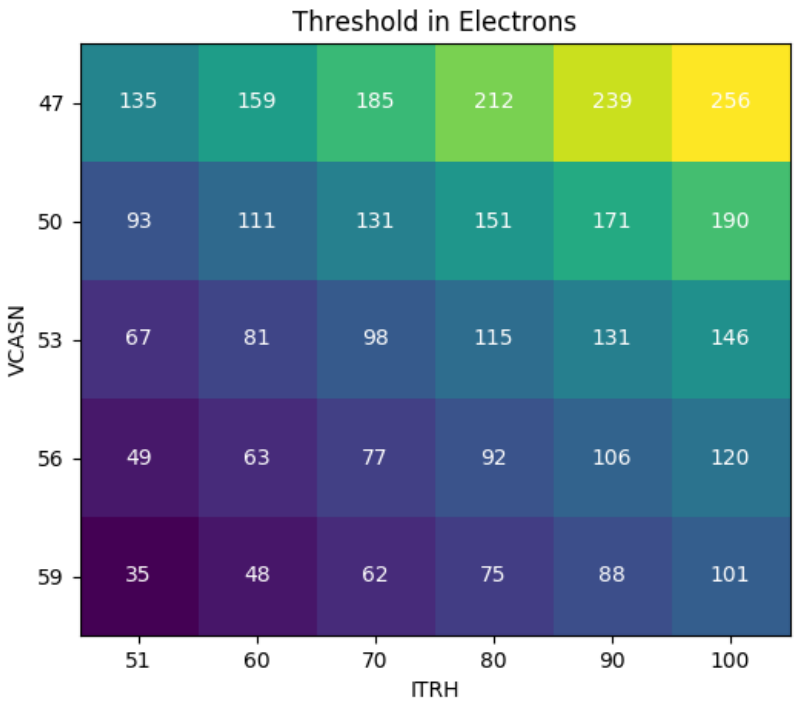
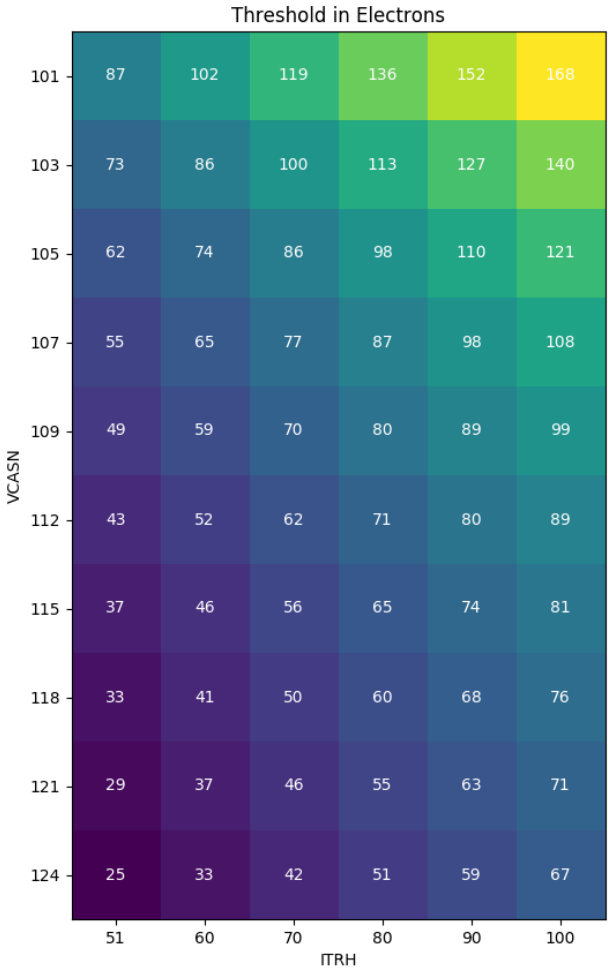
30. April 2020

Note to last Presentation

0 V Back Bias



3 V Back Bias



Note: This is a corrected Version of the presentation. The Errors in data have been identified and fixed. The missing config file has been restored, and faulty values have been masked entirely. This is an accurate reference to all values.

Processing NoiseOcc Scan Data

Goals

Automize the process of calculating Fake Hit Rate for any set of measurements

Problems

Pixel firings are completely random for the (well-working) pixels.
-> no hit, no .dat file

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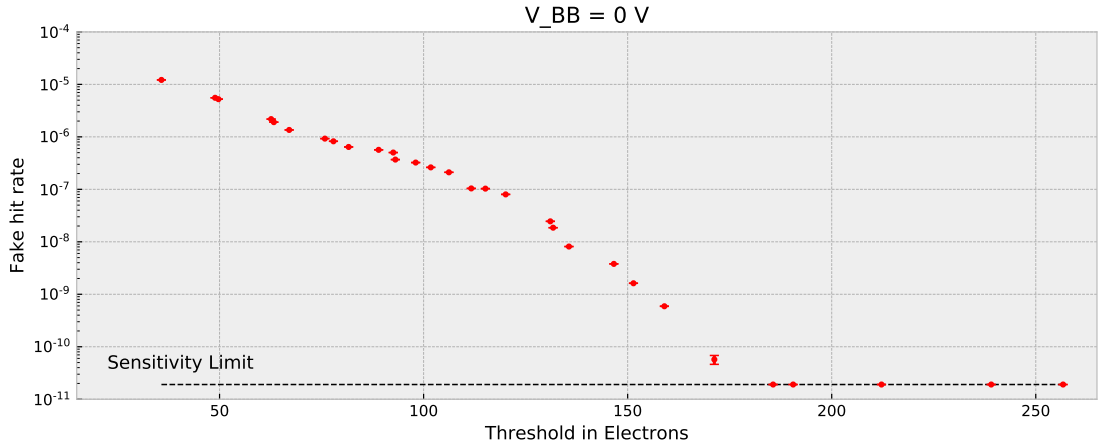
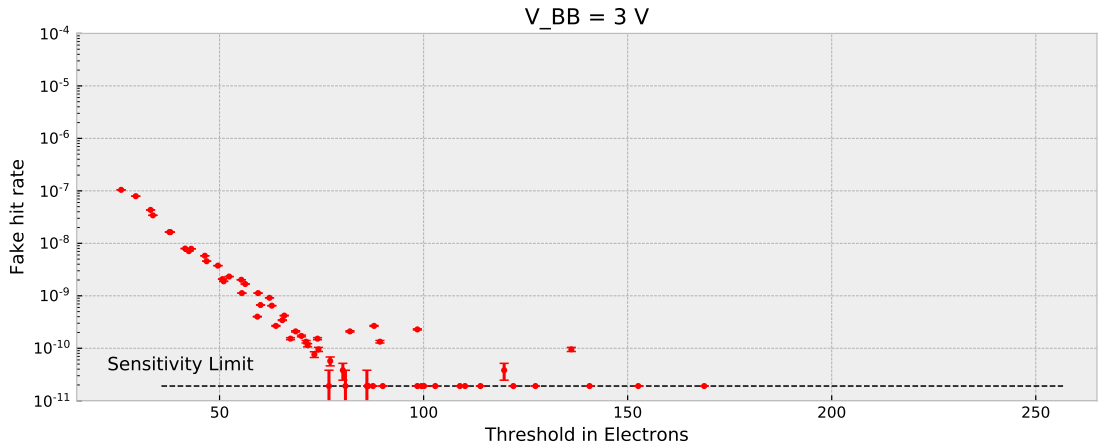
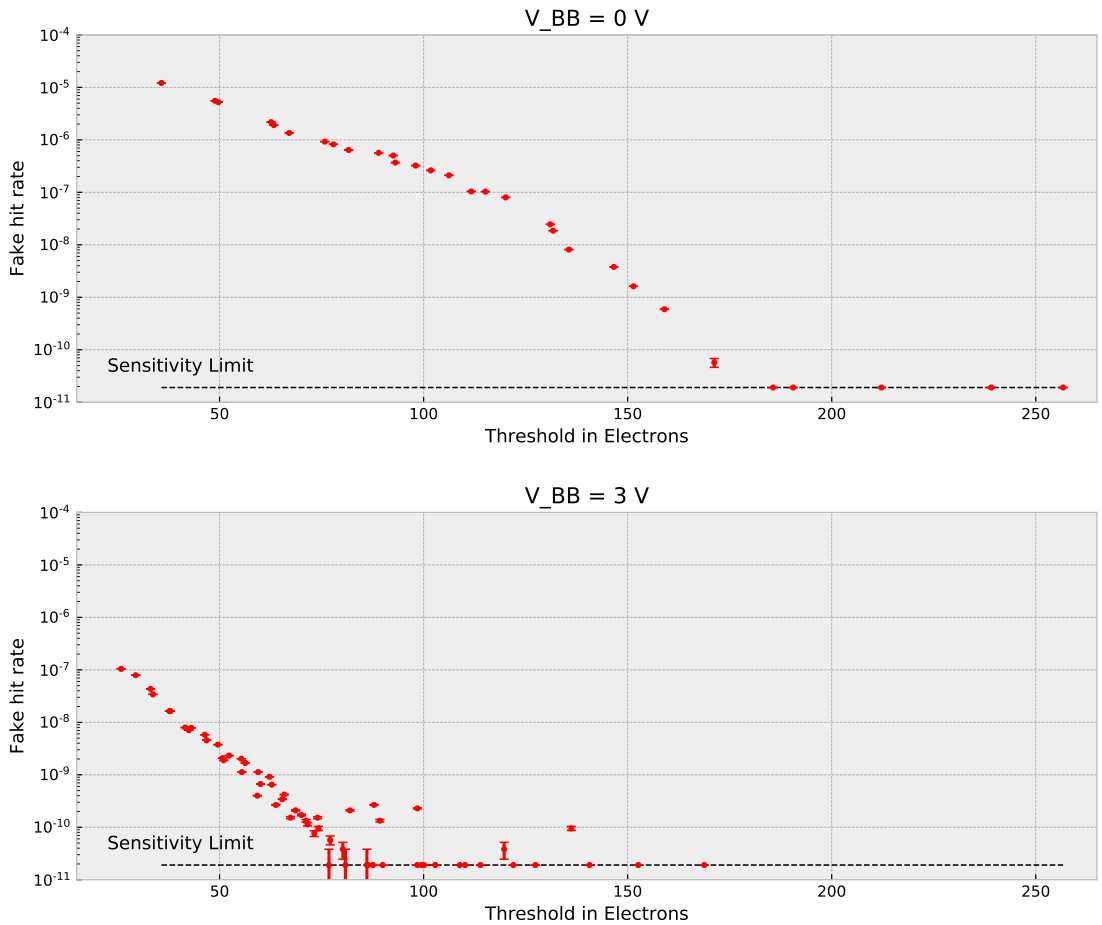
```
MISSING=$(ls $PATHTOFILES | grep "NoiseOccupancy_$TIMESTAMP.dat")
if [[ "$MISSING" == "" ]]; then
    printf '%s\n' "$TIMESTAMP" "$VCASN" "$ITHR" "$SENLIM" "0" | paste -sd ',' >> output.csv
    echo "No hits registered, continuing"
else
    printf "Starting evaluation for run $TIMESTAMP with ITHR=$ITHR and VCASN=$VCASN \n"
    FHR=$(./FakeHit.py $DAT $NTRIGGERS | head -n 1)
    DFHR=$(./FakeHit.py $DAT $NTRIGGERS | tail -n 1)
$
```

Fake Hit rate





Fake Hit rate



NoiseOccupancy_200323_185942.dat

```
119 640 2
464 581 1
464 583 1
464 584 1
464 585 1
464 586 1
464 587 1
464 588 1
465 580 1
465 581 1
465 582 1
465 584 1
465 585 1
465 586 1
465 587 1
```

- Cluster, induced by particle event during measurement
- random firing of column

New Stuff: Cosmics

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- Take data over long periods of time automatically (so far there are too many errors)

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- Analysis on Cosmics data