

TaichuPix1 Measurement

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EXCELENCIA
SEVERO
OCHOA

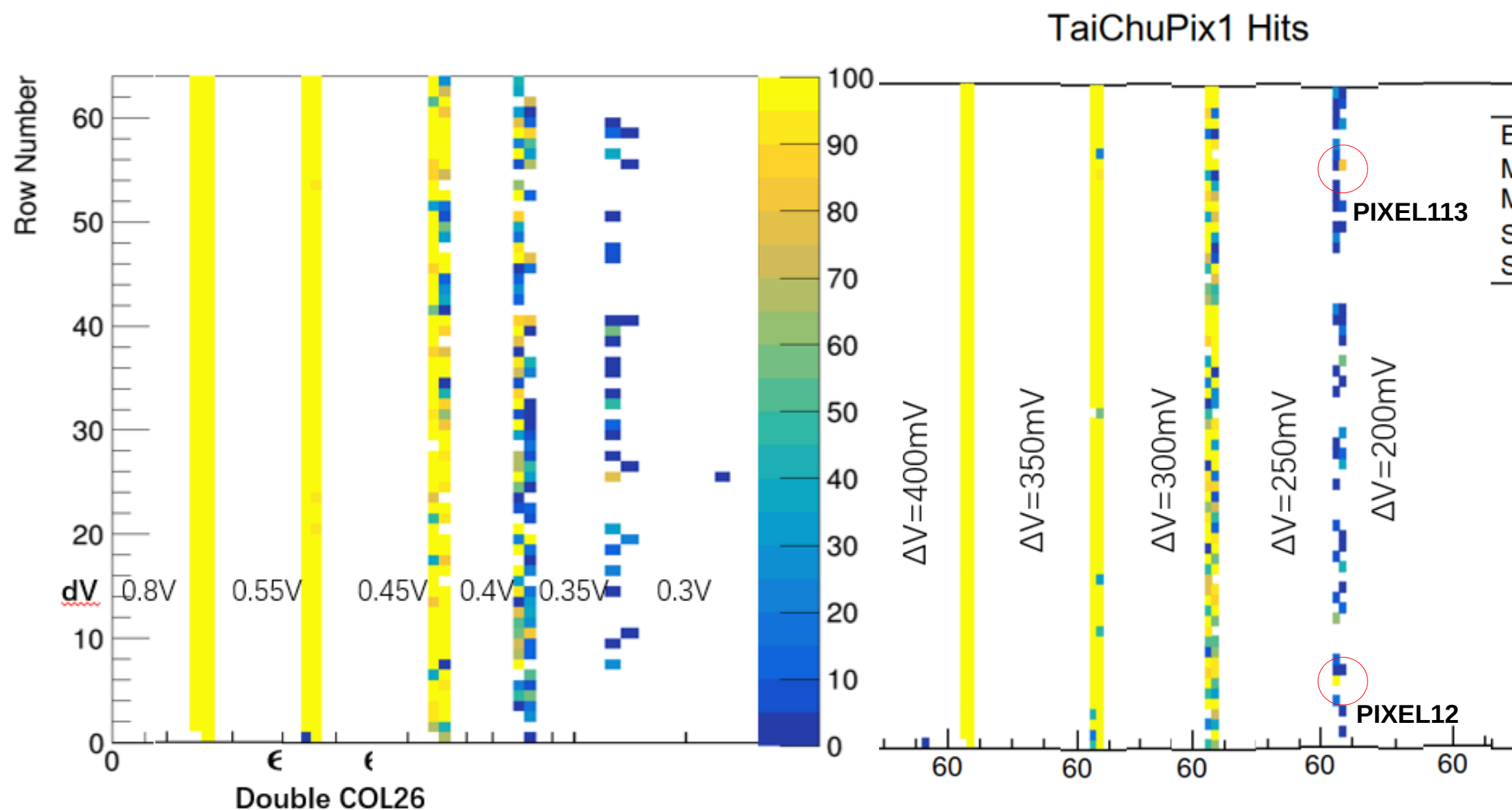


Barcelona Institute of
Science and Technology



華中師範大學
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The improvement of S curve



Parameter1

VRESET=1.7V

ITHR=DAC (0x2B)

VCASN=DAC(0x100)

VCASP=DAC(0x184)

Parameter2

VRESET=1.6V

ITHR=DAC(0x11)

VCASN=DAC(0x0A0)

VCASP=DAC(0x184)

The analog signal from the probe

OUTA with different injected charges

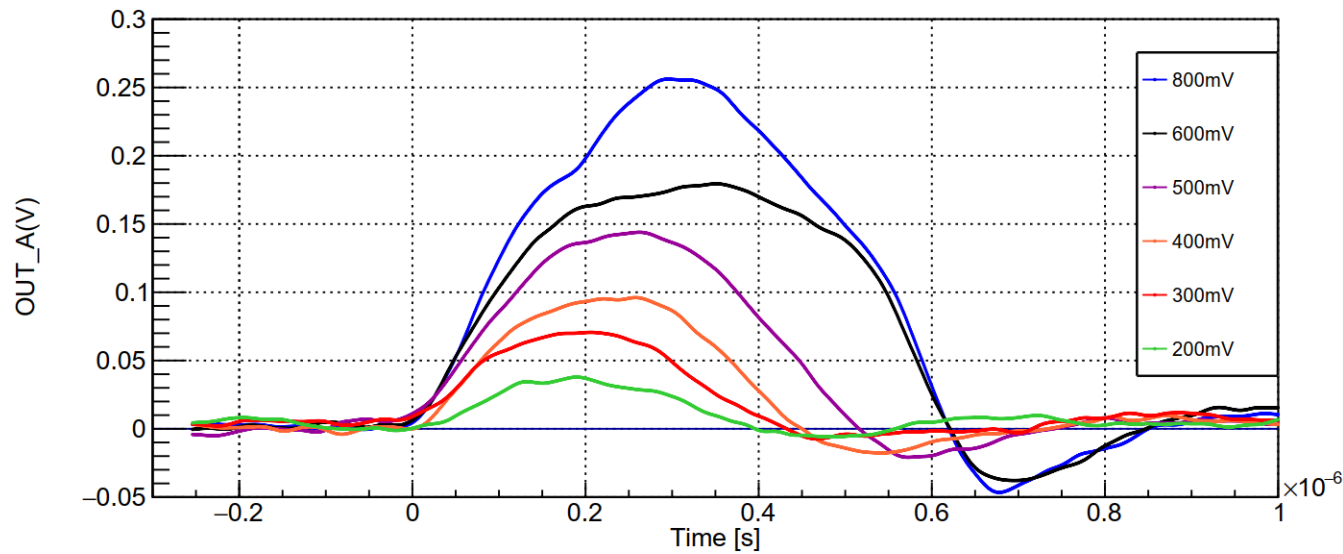


Fig1 Apulse injection under parameter1

OUTA with different injected charges

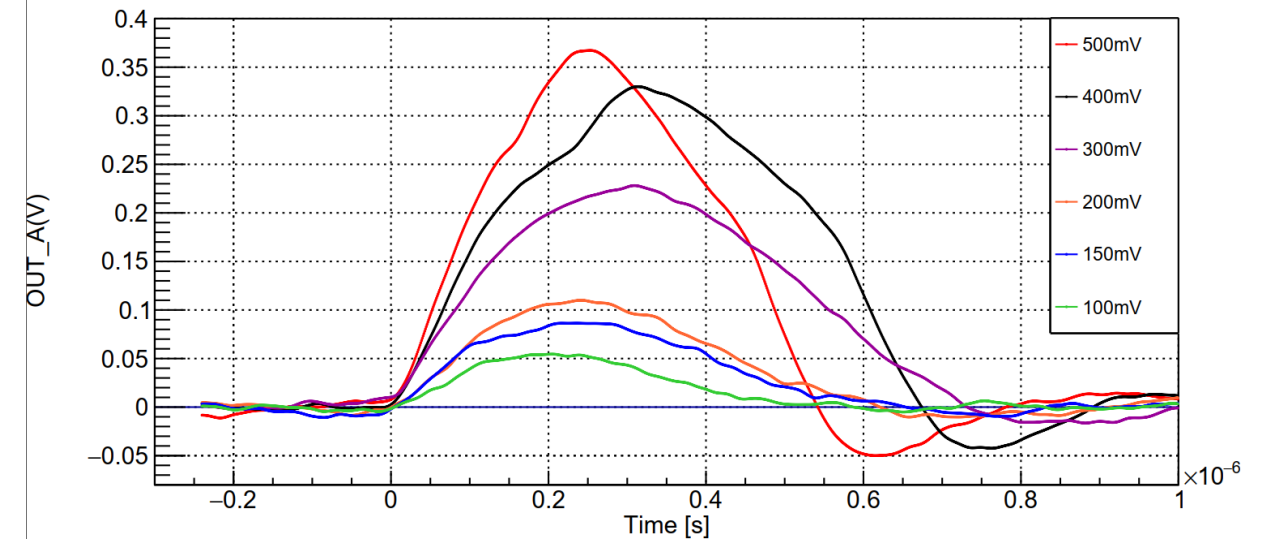


Fig2 Apulse injection under parameter2

OUTA under Sr-90 injected charges

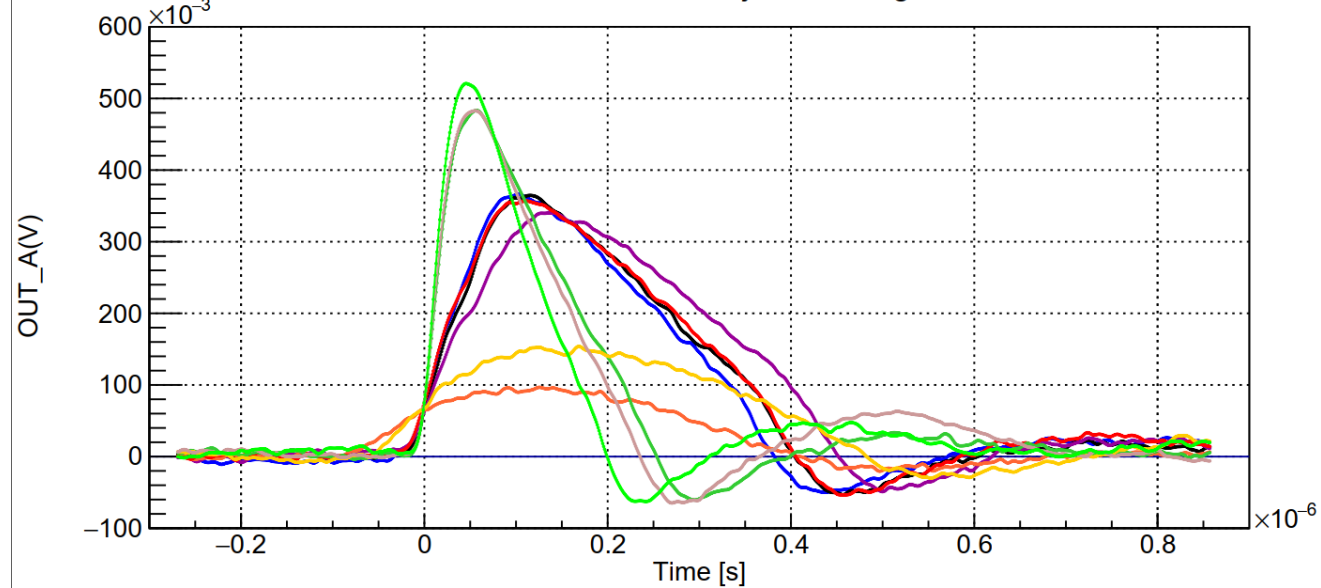


Fig3 Sr-90 injection under parameter1

OUTA under Sr-90 injected charges

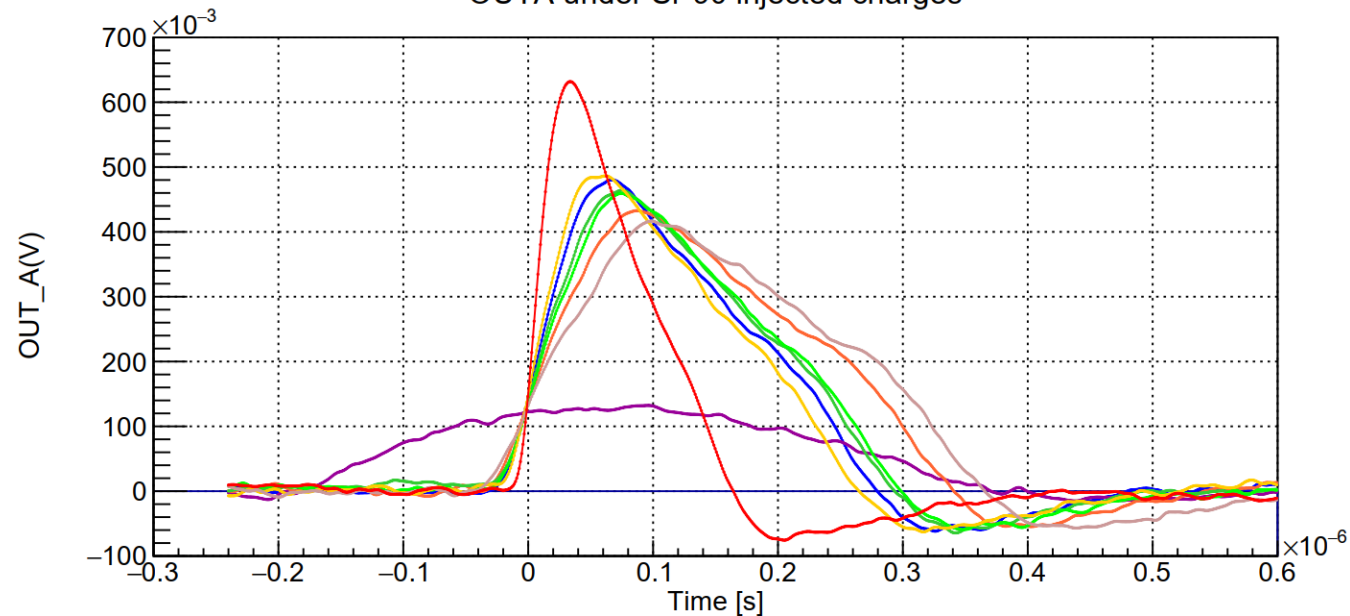
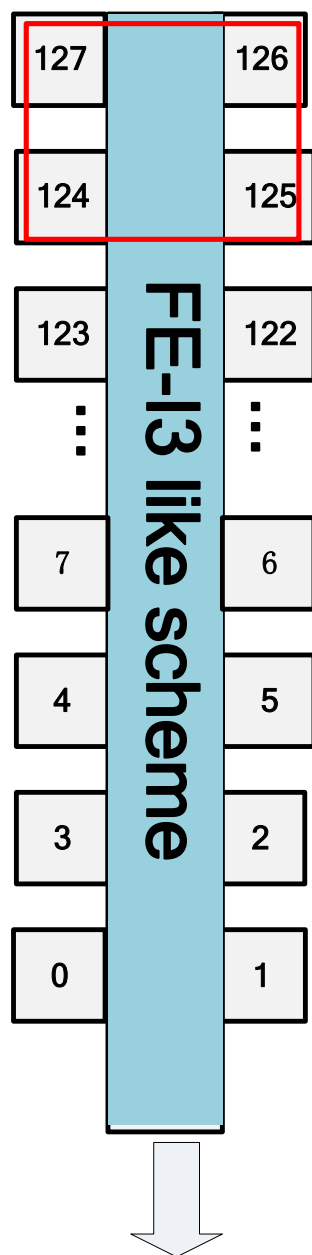


Fig4 Sr-90 injection under parameter2

- Fig1&Fig3 is the results of higher VRESET and higher ITHR than Fig2&Fig4
- Obviously with lower VRESET and ITHR, the amplitude of the signal is bigger.

S Curve fit of TCX1



ADDRESS
Fig1. Double Column31

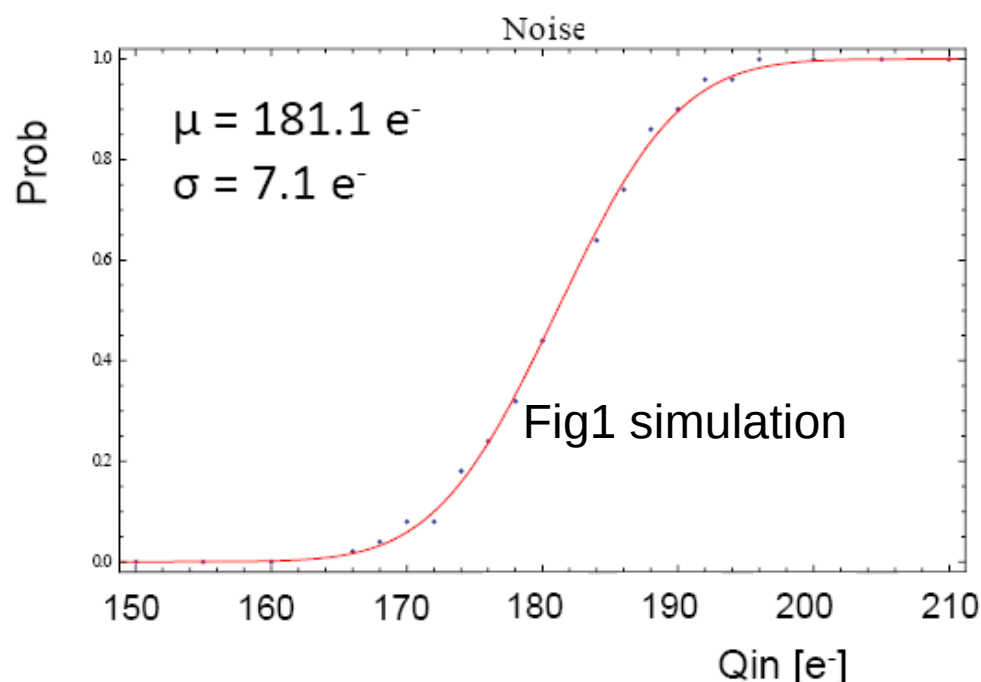


Fig3 fit pixel 127

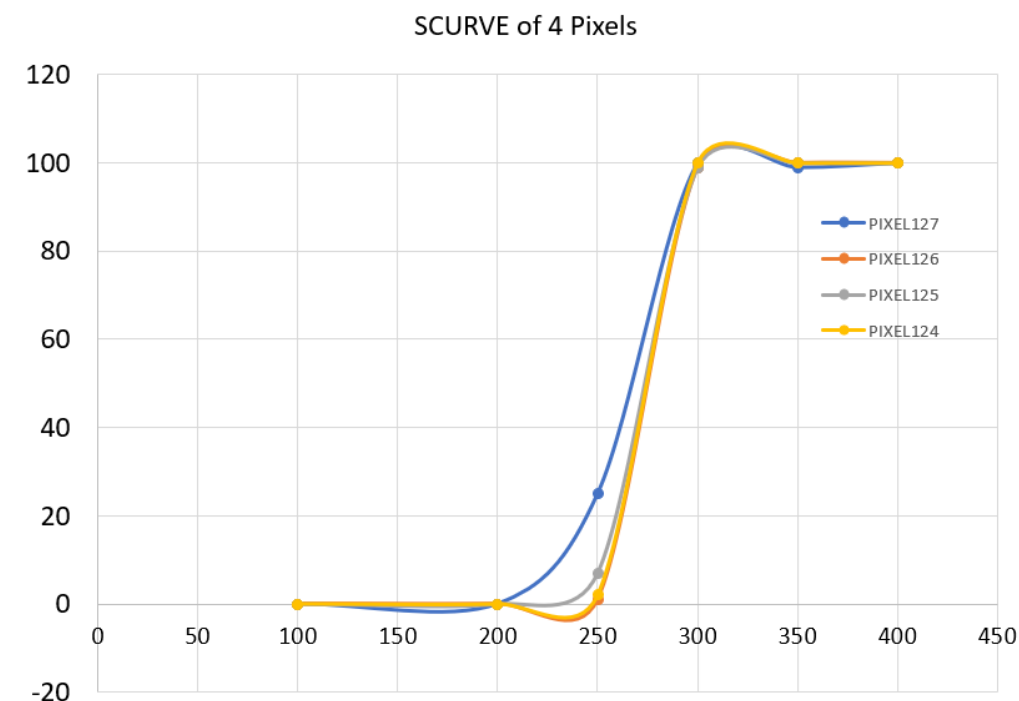


Fig2 S curve of 4 pixels

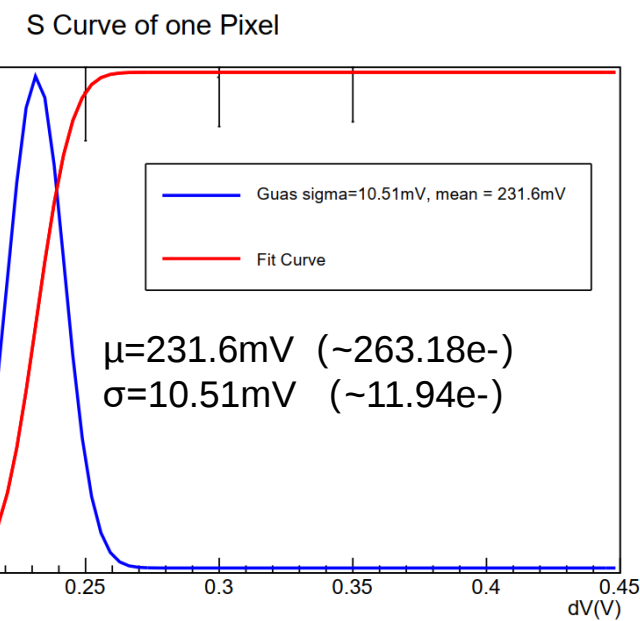
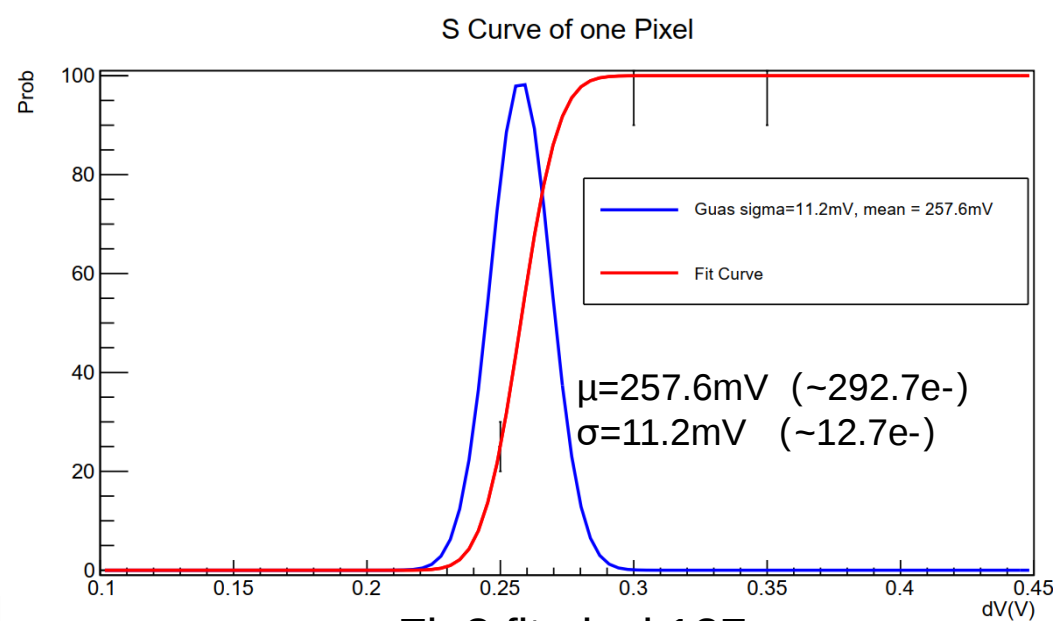
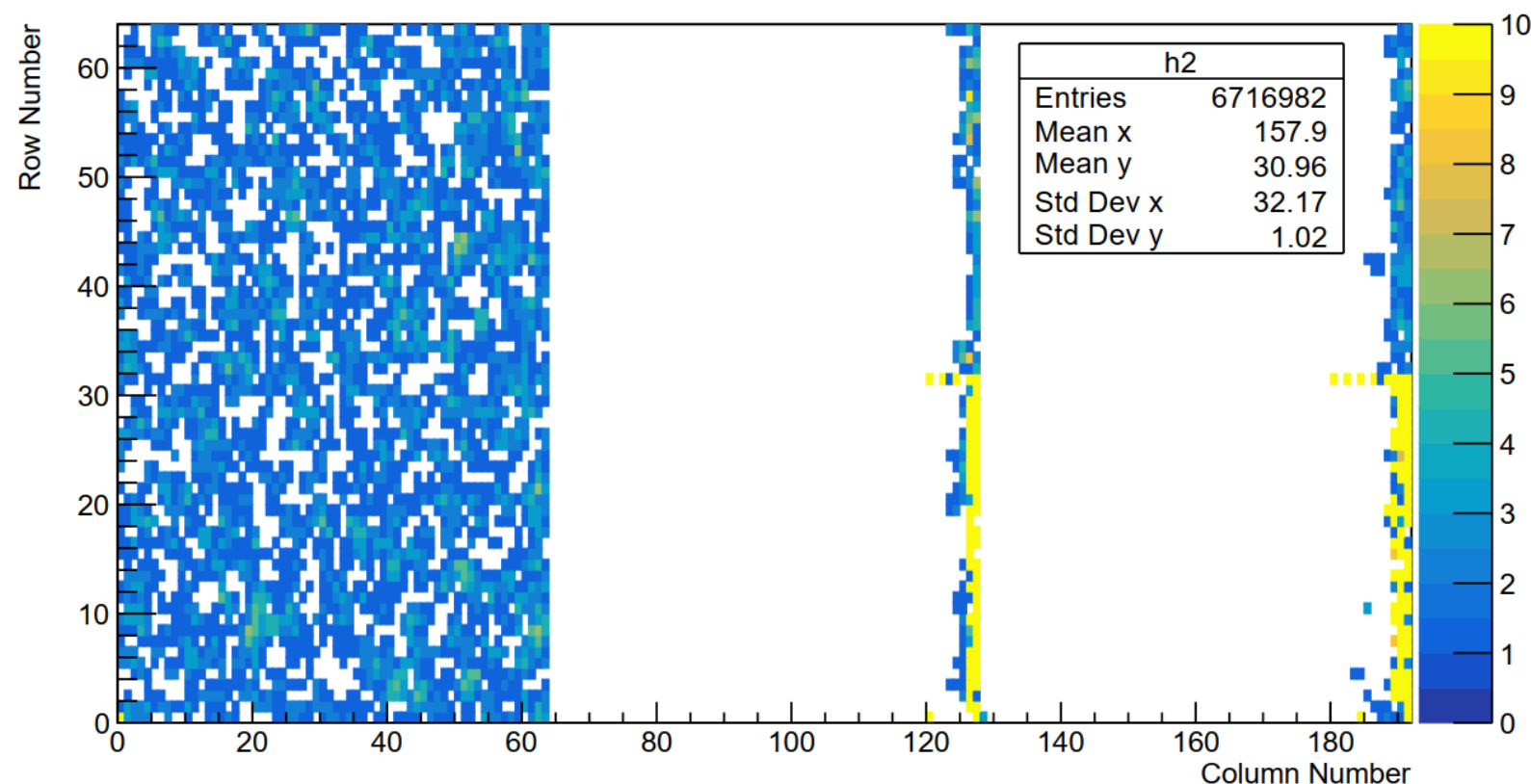


Fig4 fit pixel 12

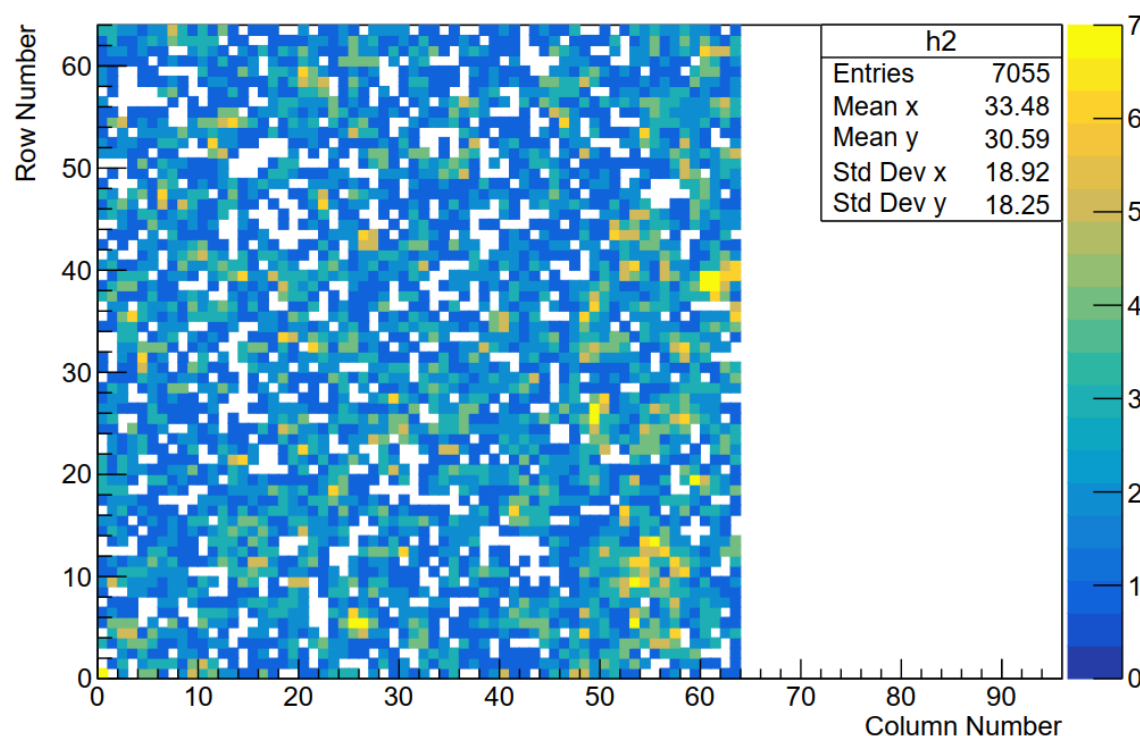
- For this DAC setup, the lowest threshold is around 263e- and ENC is around 12e-

SPI readout for Sr-90 imaging

TaiChuPix1 Hits



TaiChuPix1 Hits



- This is the imaging results of Sr-90 by SPI in DEBUG mode
- Every data is 100% synchronized and correct.
- If turn on all the matrix, the overview is something like the upper hit map.
- The difference with LVDS readout mode is the readout coverage, in LVDS mode, there will be more pixels in a bigger range could be readout.



Thanks for your attention.