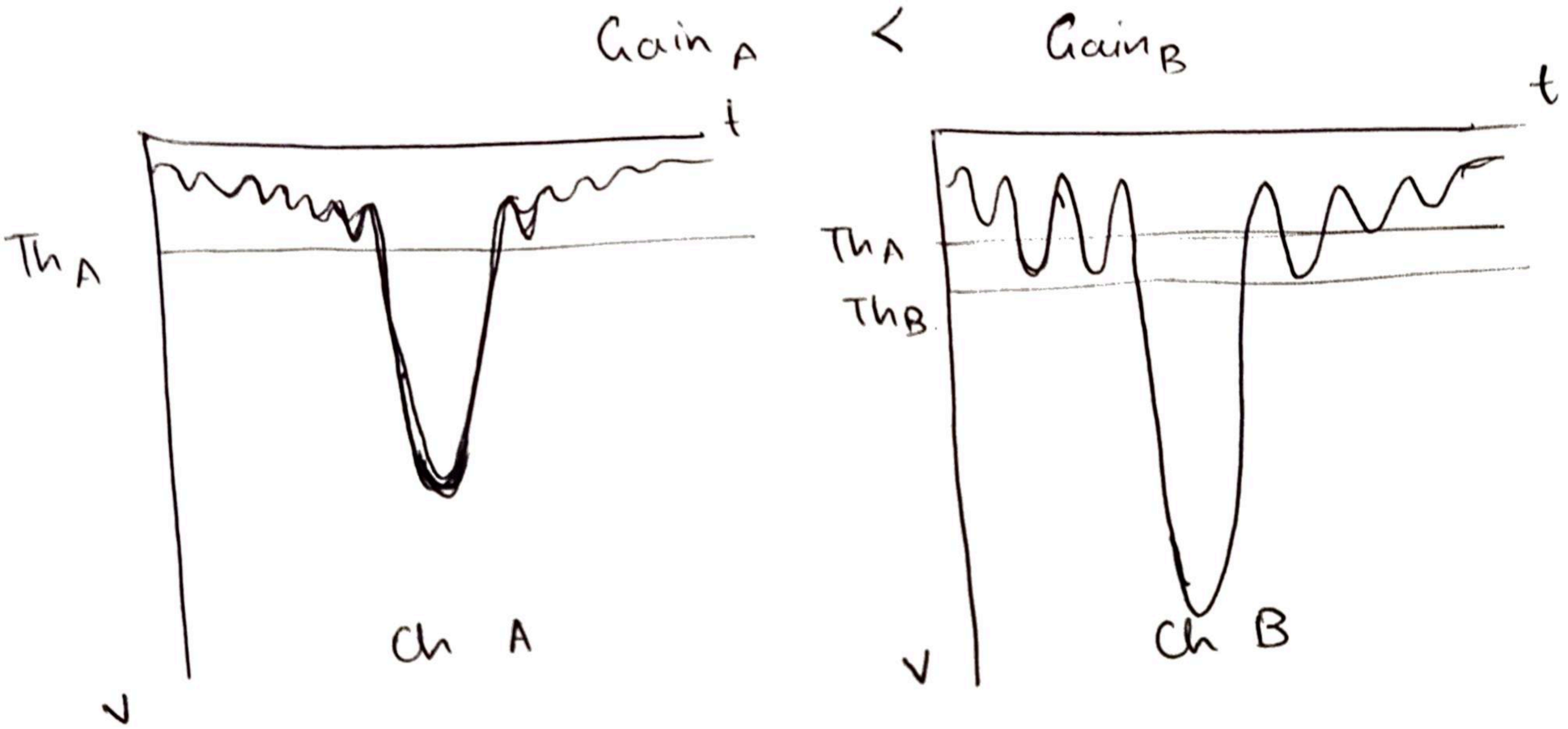
EICROC0 A2 Characterization

Threshold Scan & Charge Scan

Souvik Paul

5th March 2024

Motivation



Every channel has a unique gain → Unique threshold for every channel

Understanding Datafile

Data Format: {TDC, ADC, HB} x 8

Th=70 DAC

Event #	T	A	H	T	A	H	T	A	H	T	A	H	T	A	H	T	A	H	T	A	H	T	A	H
43125864692	525	88	1	469	88	1	526	88	1	0	88	0	516	88	1	0	88	0	0	88	1	1024	88	0

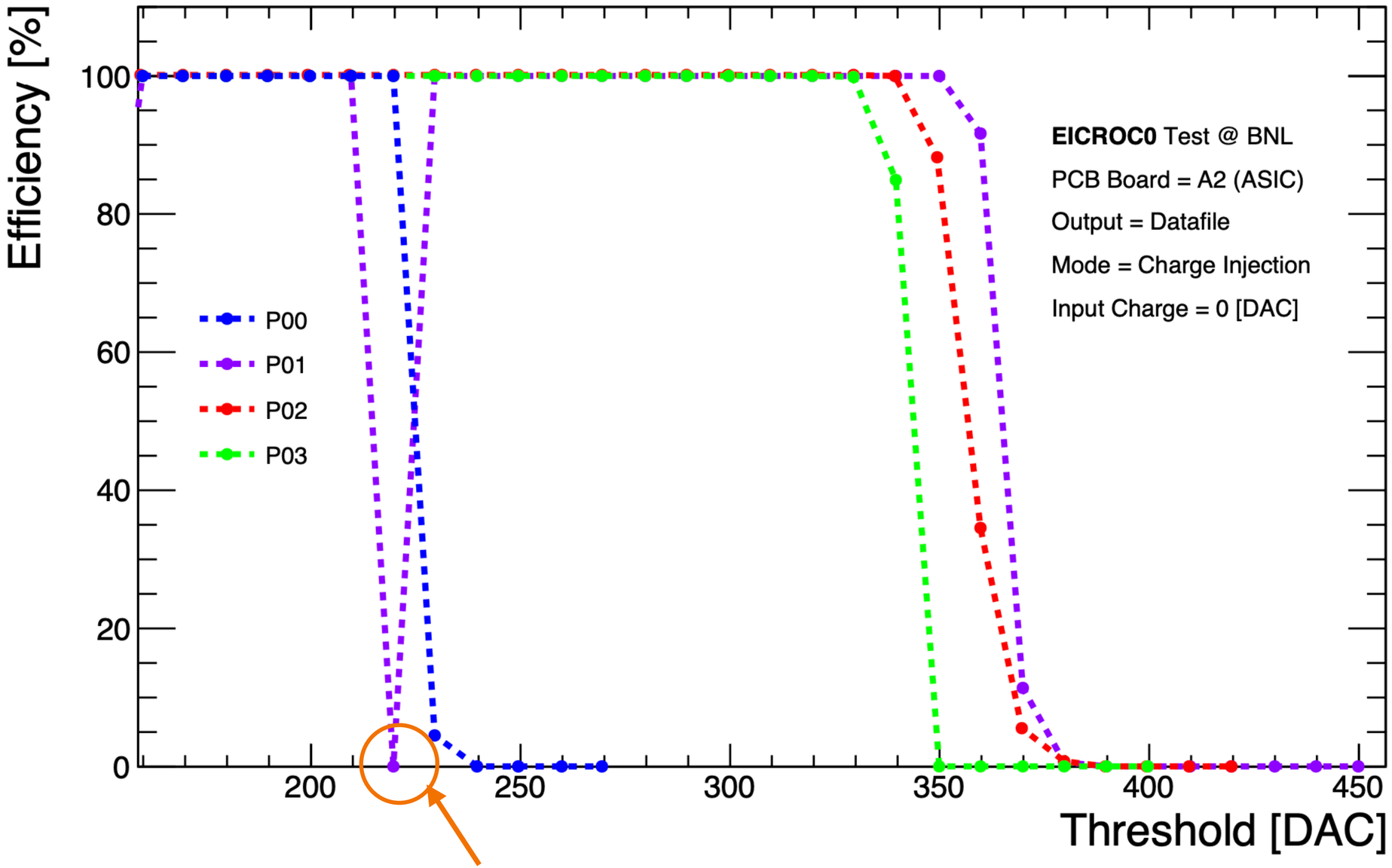
Th=160 DAC

Event #	T	A	H	T	A	H	T	A	H	T	A	H	T	A	H	T	A	H	T	A	H	T	A	H
52838449618	0	88	0	0	88	0	0	88	0	157	88	0	0	88	0	0	88	1	0	88	0	0	88	0

Th=220 DAC

Event #	T	A	H	T	A	H	T	A	H	T	A	H	T	A	H	T	A	H	T	A	H	T	A	H
62320292269	0	88	0	0	88	0	0	88	0	0	88	0	0	88	0	0	88	0	0	88	0	0	88	0

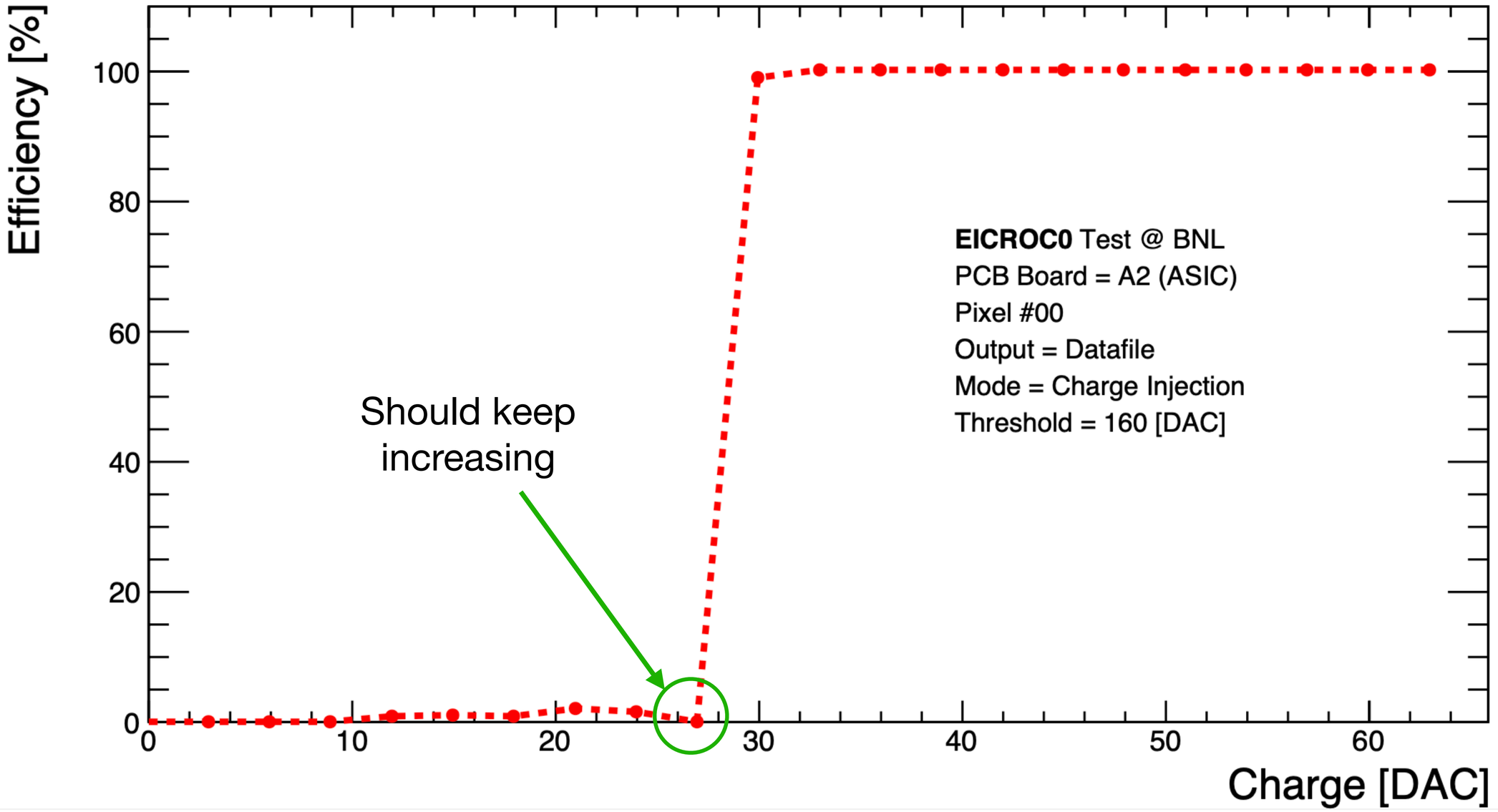
Efficiency Curve: Threshold Scan



Weird dip at 220 (DAC) for P01

S-curve for **P00** falls much faster than the other pixels in Column-0

Efficiency Curve: Charge Scan



Future Work

- Radioactive tests with A1 (ASIC+Sensor)
- Finding the threshold of each pixel by keeping a fixed global threshold and varying Vth_corr