

Noise distribution of TaichuPix1

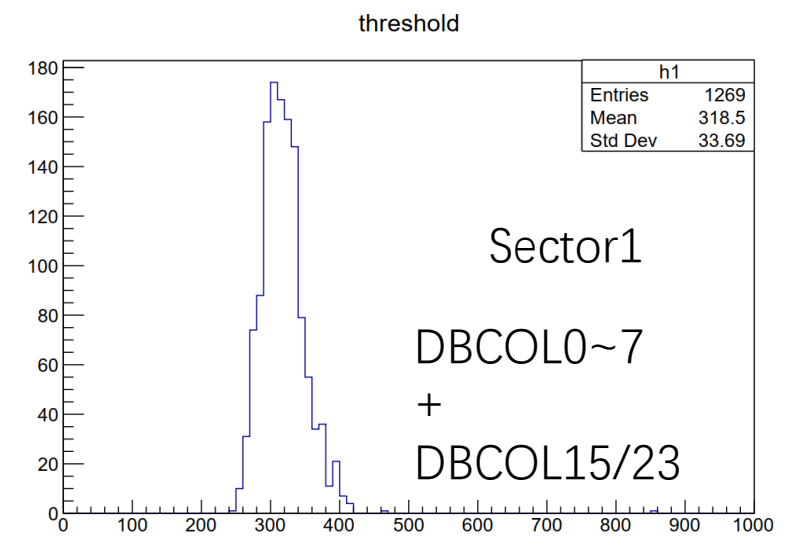
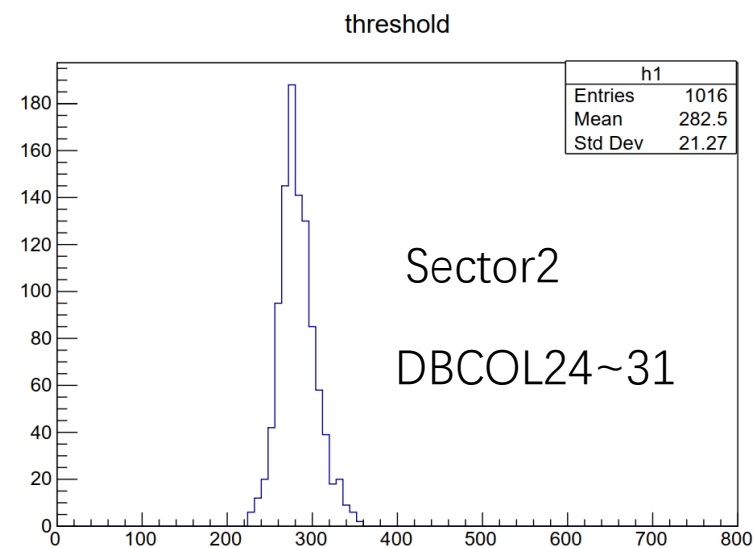
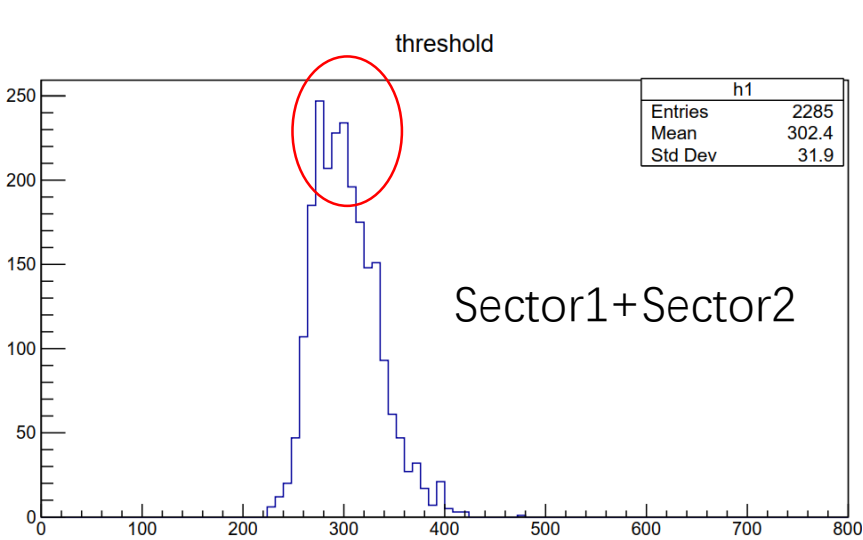
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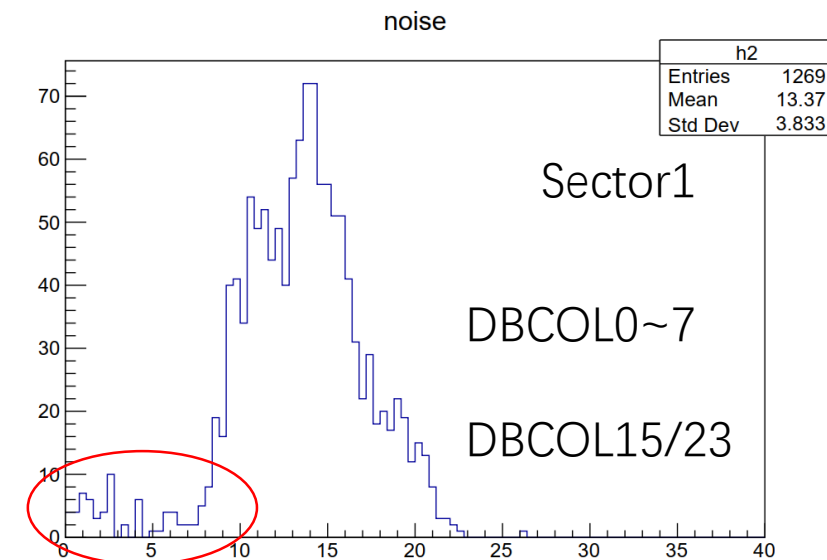
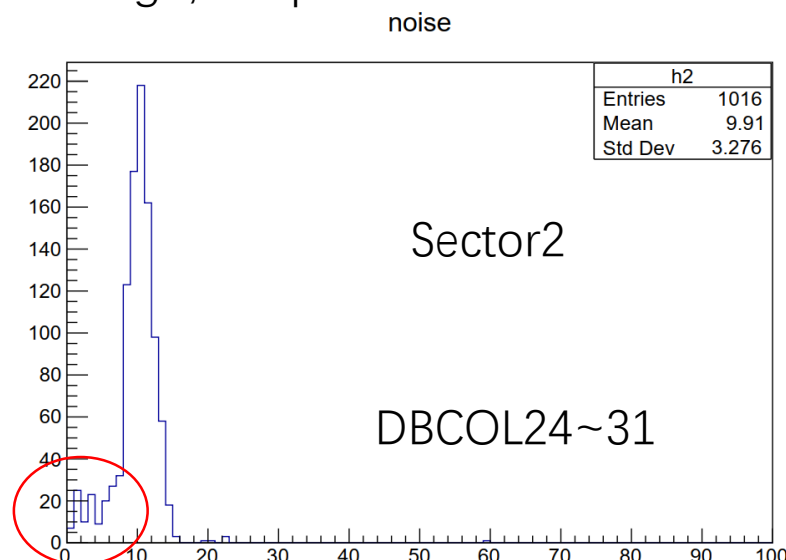
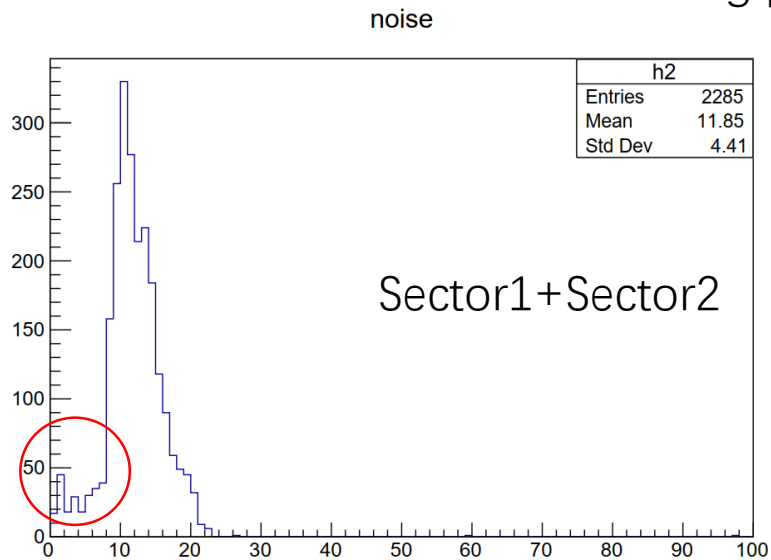
01-02-2021



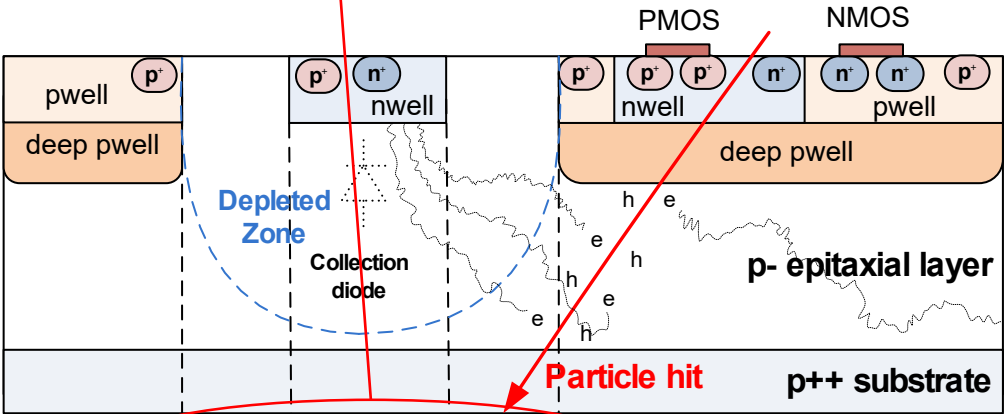
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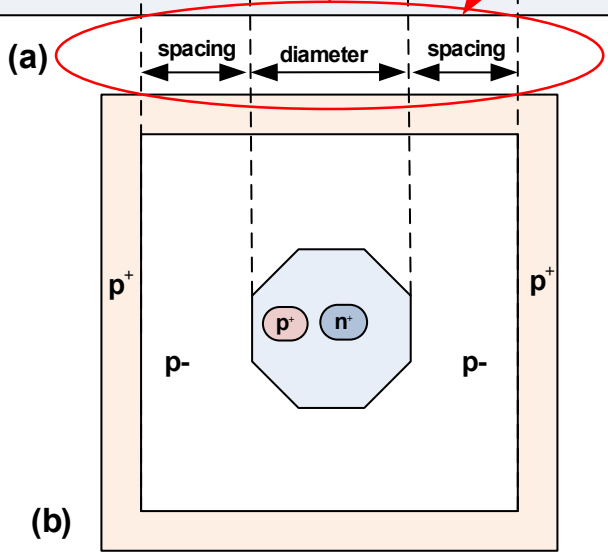
- Measure several columns by hand and analyze the distribution.
- With the same fitting parameters, results looks fine but not so perfect. Some curves will be failed to the fitting function.
- There are 4 different analog pixels design, the performance of Sector2 seems better.



Sector	Sensor geometry	Front-end version	Pixel Digital version	Location
1	d2 + s3	V1	FEI3-like	Double column <0:23>
2	d2 + s2	V1	FEI3-like	Double column <24:47>
3	d2 + s3	V1	ALPIDE-like	Double column <48:71>
4	d2 + s2	V2	ALPIDE-like	Double column <72:95>



Use two kinds of the fitting parameter, the histogram seems better.



- Fig.1 shows the threshold distribution, the FPN for sector1 is ~35e- and ~24.15e- for sector2 .
- Fig.2 depicts the noise distribution, the TN noise for sector1 is 15.96e- and 12e- for sector2.

