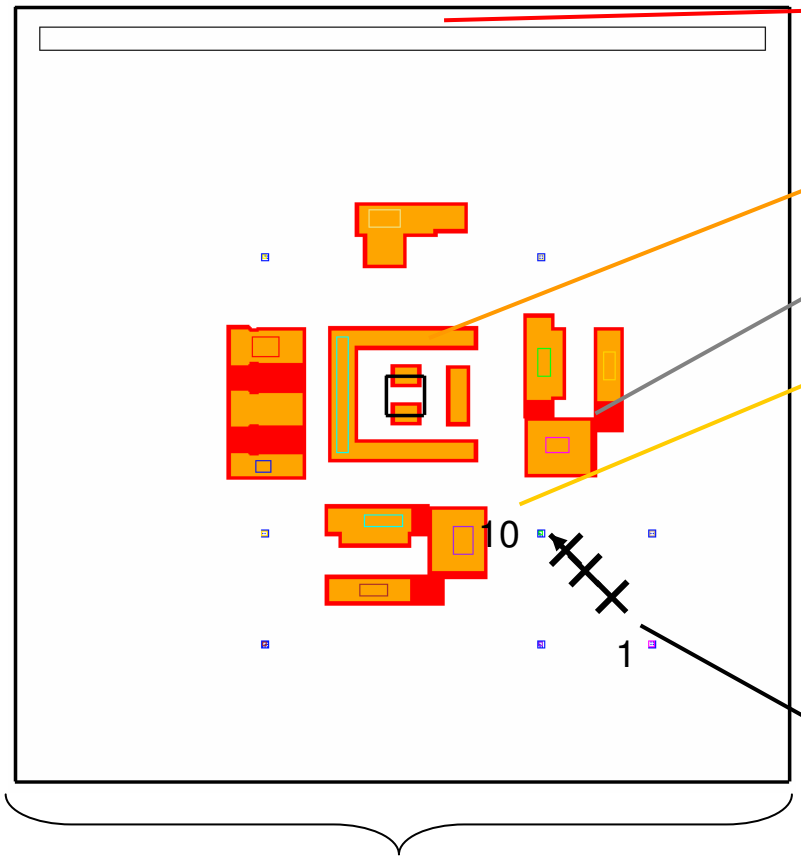
CALICE pixel Deep P-Well results



P-well contact ground

Nwells

P-well 3µm guard ring

Diodes [3.6,1.8,0.9] x[3.6,1.8,0.9]µm^2

Bias:
- NWell 1.8/1V
- Diodes: 1.5V

Hit points : from BR corner (1) to BR diode (10)

50 µm x 50 µm pixel size

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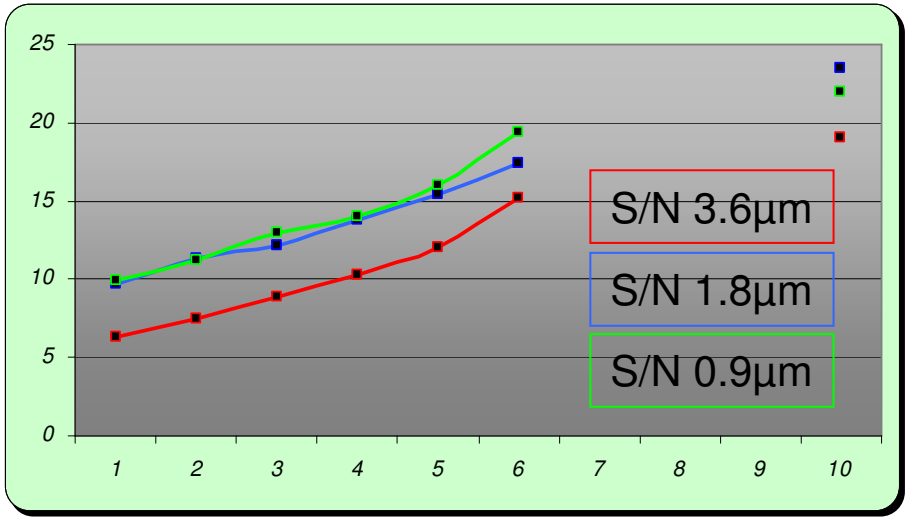
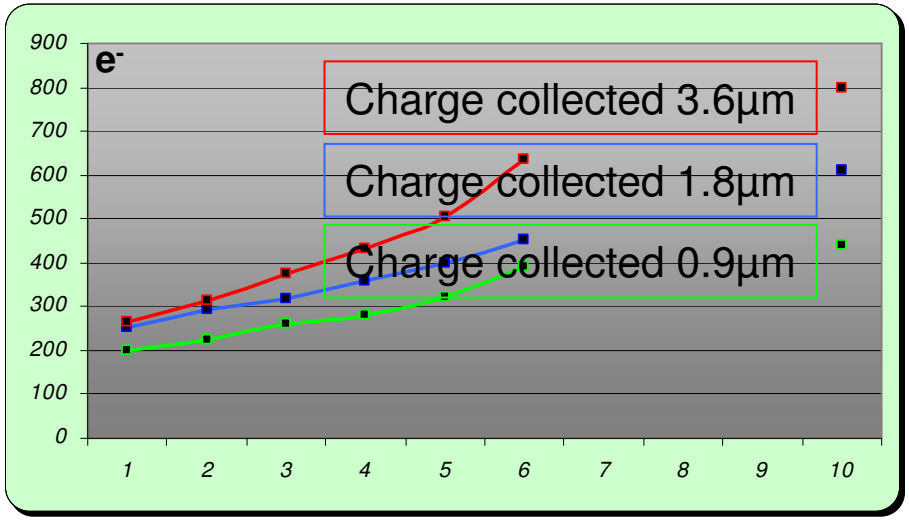
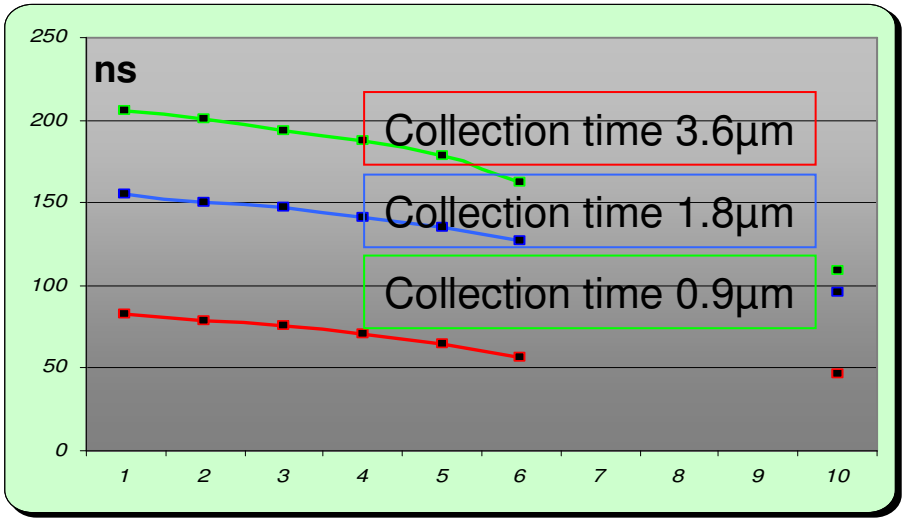




*N.B. S/N 0.9µm assuming N = 20 e^-

*N.B. S/N 1.8µm assuming N = 26 e^-

*N.B. S/N 3.6µm assuming N = 42 e^-



Conclusions

- The 0.9 um expectedly gives less charge collection: the S/N is probably lower than in the 1.8µm case (to be verified)
- Collection time exceeds 200ns for the 0.9µm
- No guard ring implemented