

My Proposals

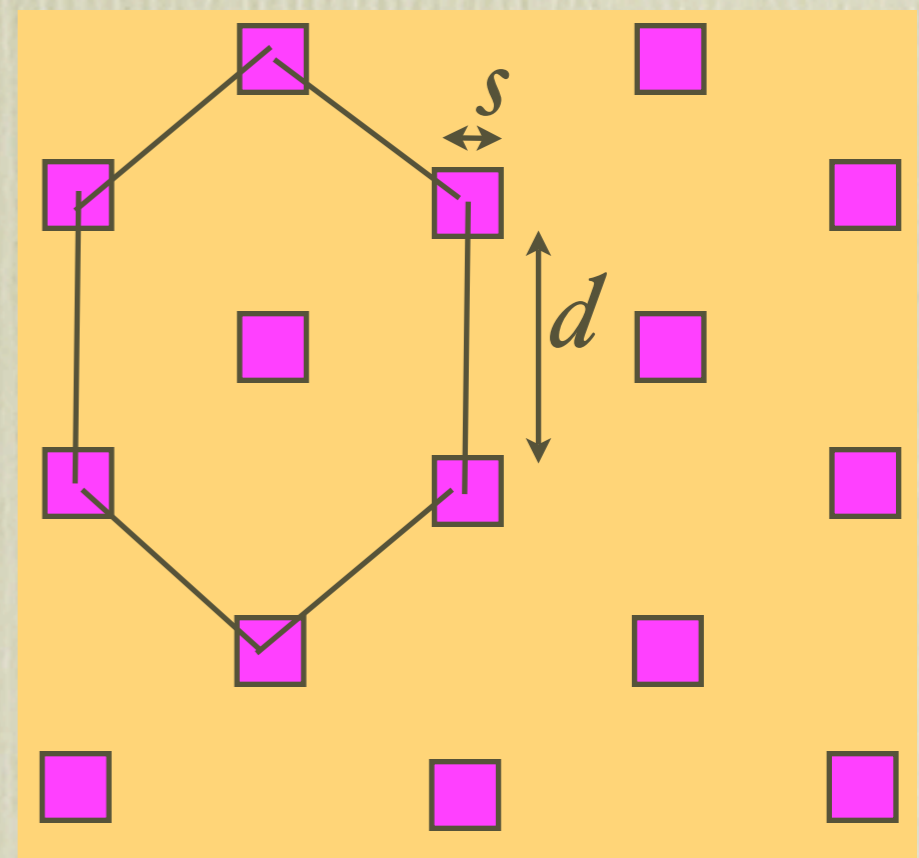
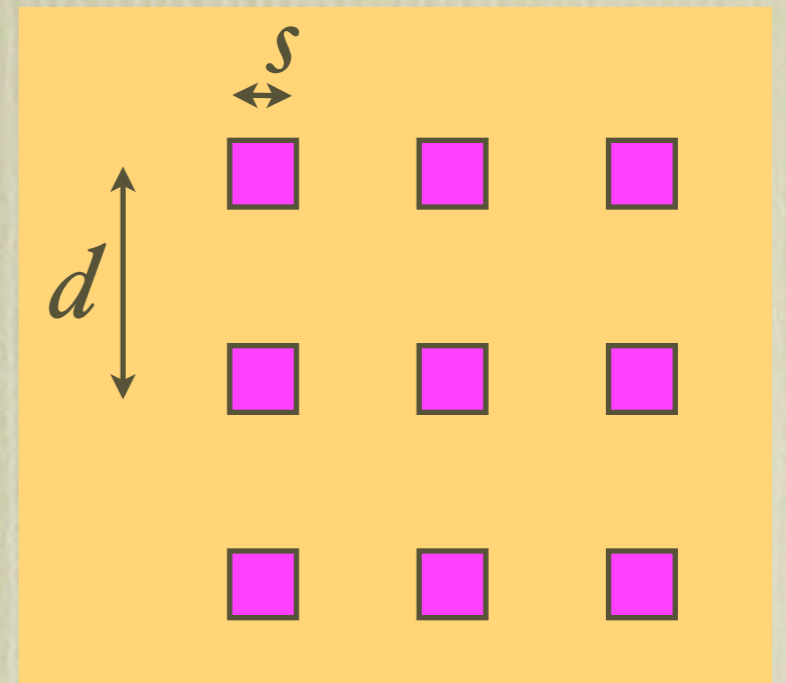
4 July 2005 Toru Tsuboyama (KEK)

Proposals

- Our project was accepted
 - Give a good name and Abbreviation
 - Silicon Tracker
- Sokuteikikaihatsushitsu
 - Give a good name and Abbreviation
 - maybe it is too late.

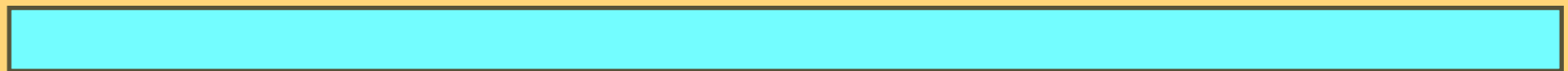
Charge collection efficiency

- If, s , the size of implantation can not be freely determined, we need to know the charge collection efficiency and charge sharing as function of dot spacing, d . This study depends on the design rule of Oki.
- The Medipix project proposed a “hexagonal” pixel arrangement so the charge sharing between pixels becomes more natural. Similar s / d study may be necessary.



Comparison of trench and multi-dot train

- Trench structure is attractive to make guard rings and strips. I am still biased with strip sensor.
- Better if a multi-dots train structure can be used instead of strips.
- Test with several patterns.



Continuous readout circuit?

- We have discussed mainly on digital-camera mode (fixed integration time + data transfer + reset) assuming simple readout circuit.
- For a “*true pixel*” (Unno san’s definition), a shaping amplifier and a comparator will be necessarily be used.
- Shaping amplifier --- should be easy on SoI CMOS (according to Arai san, only one type transistor can be used on MAPS type pixel).
- Comparators generate noise.
 - It works on hybrid pixel.
 - Can such circuit work in monolithic pixel?