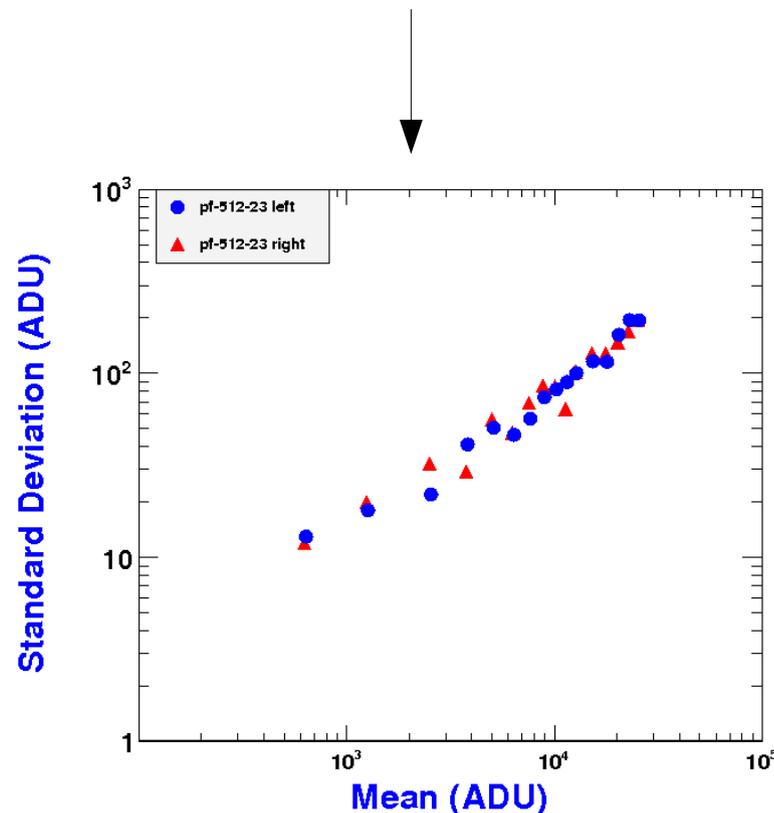
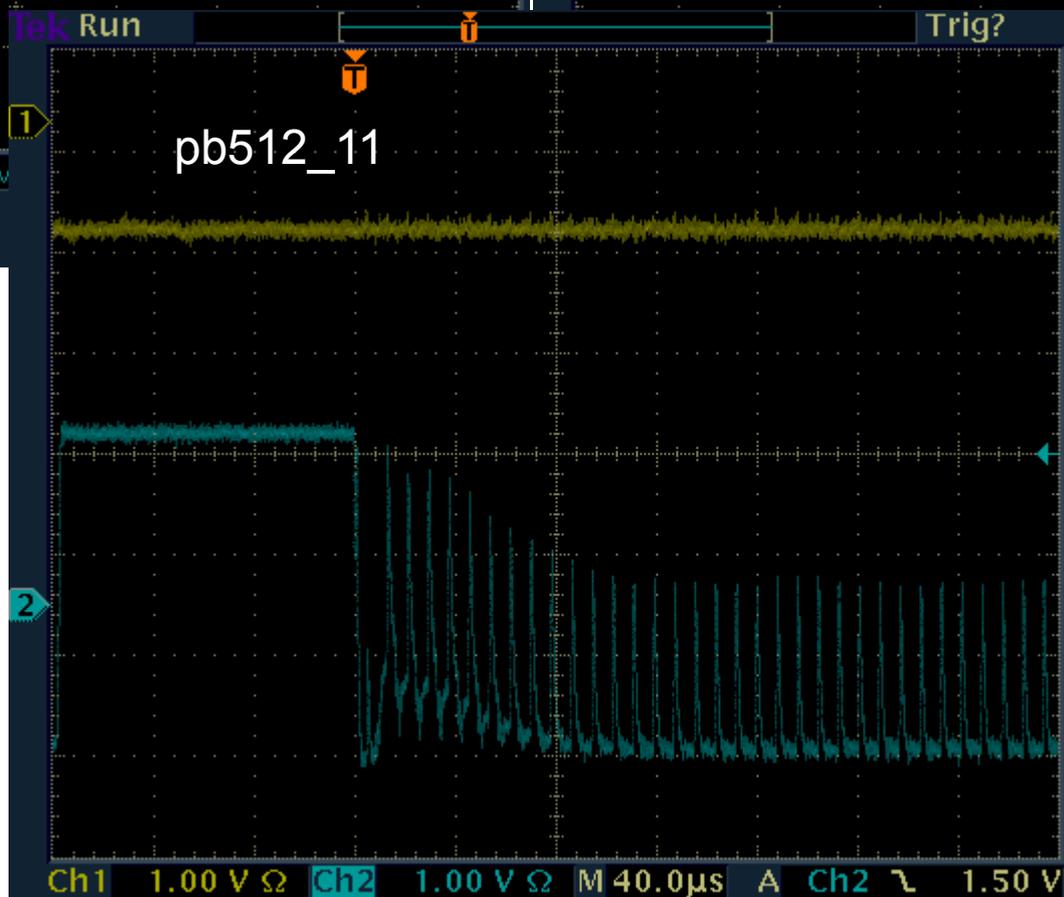
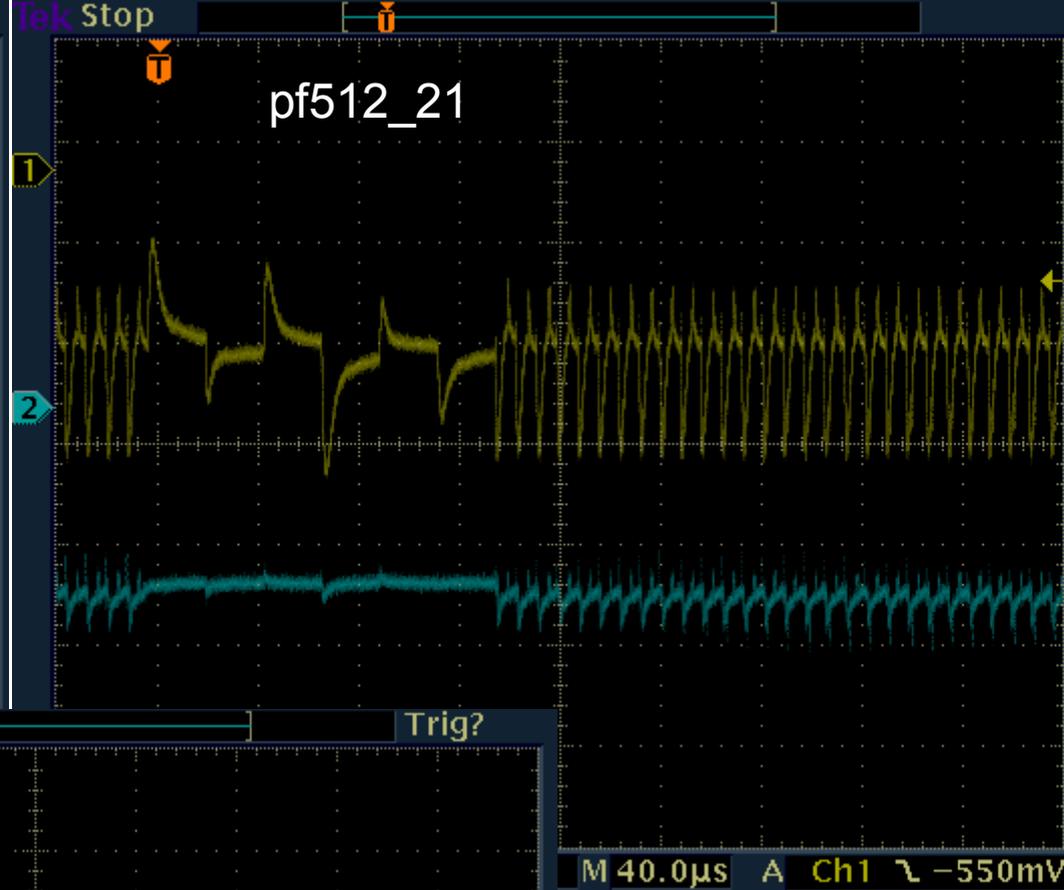
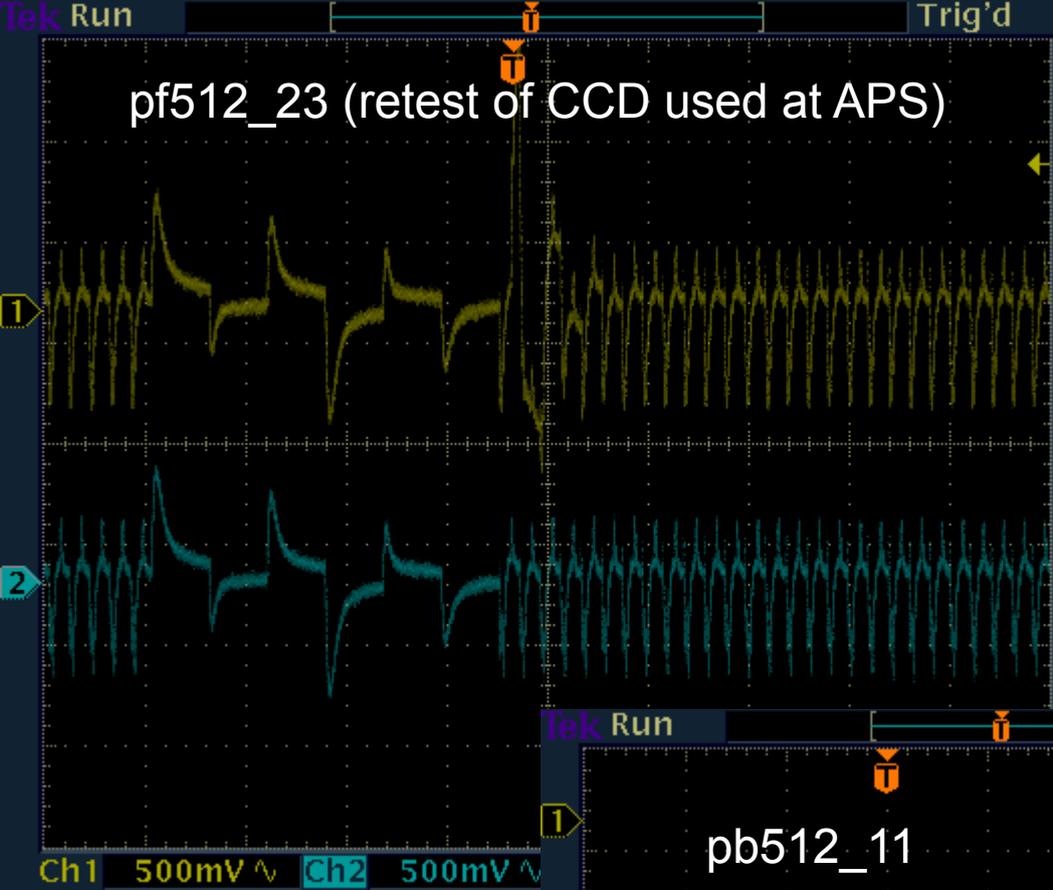


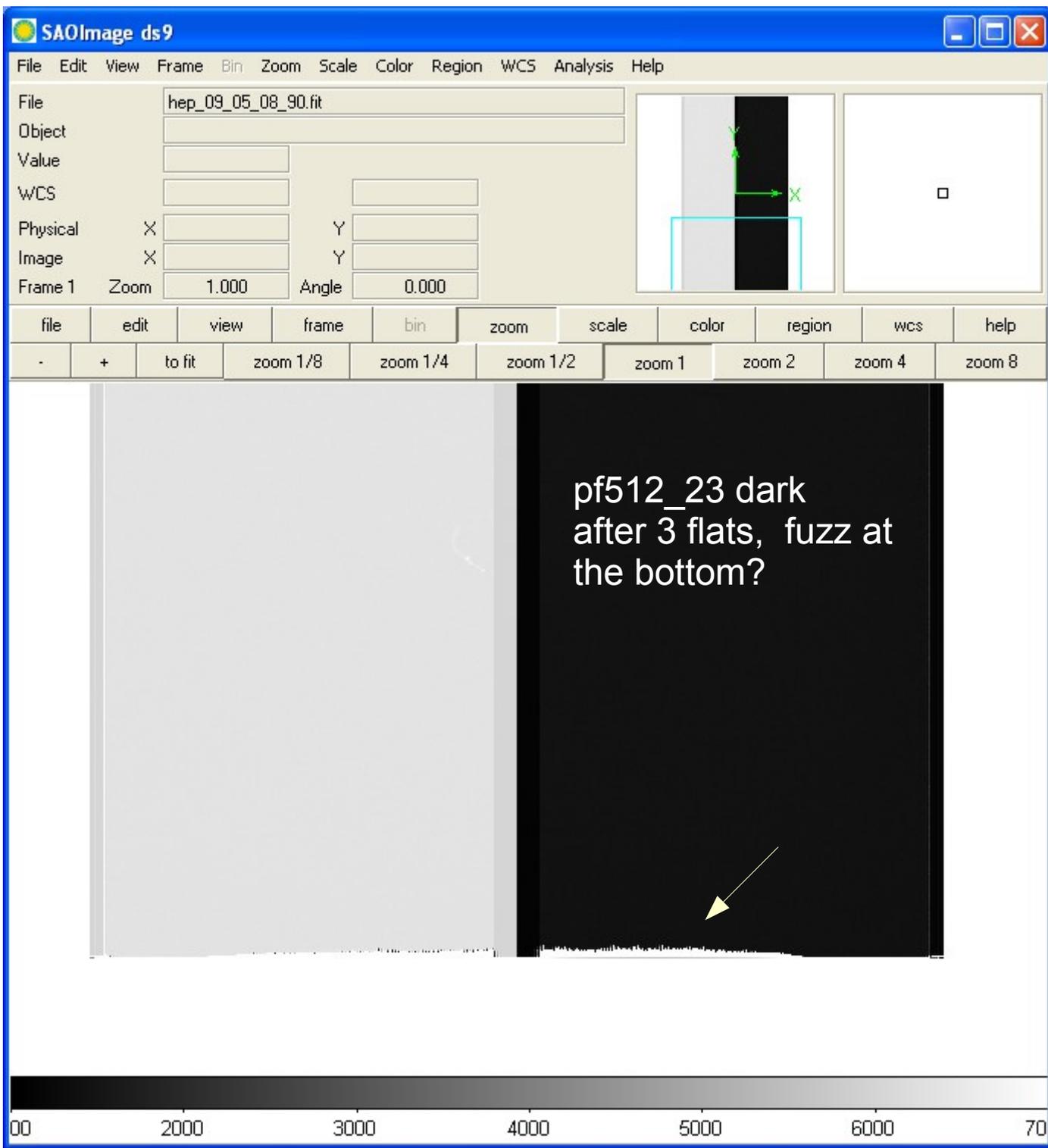
## ANL tests of 3 non-science devices

- pf512\_21 working left side, right side dead
- pb512\_11 left side dead, right side strange
- In order to check ANL teststand, rechecked pf512\_23 which was tested with x-rays previously. Both sides still working well.



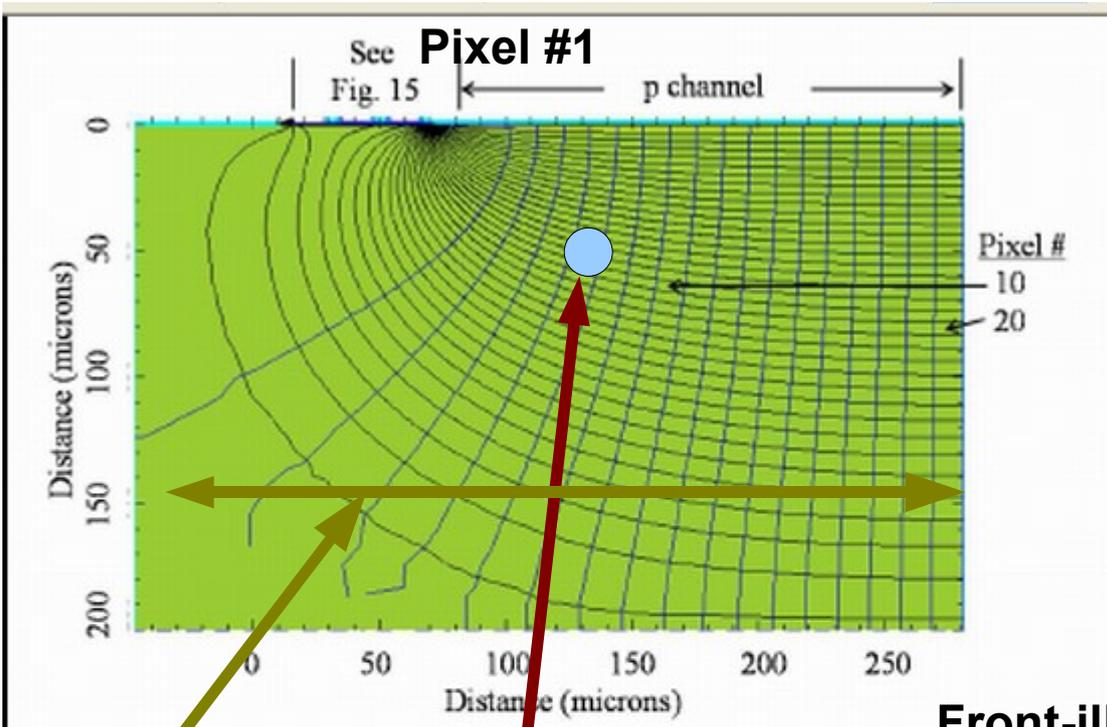


Left (yellow) and right (blue) video output during idle, showing vertical and horizontal clock feedthru.



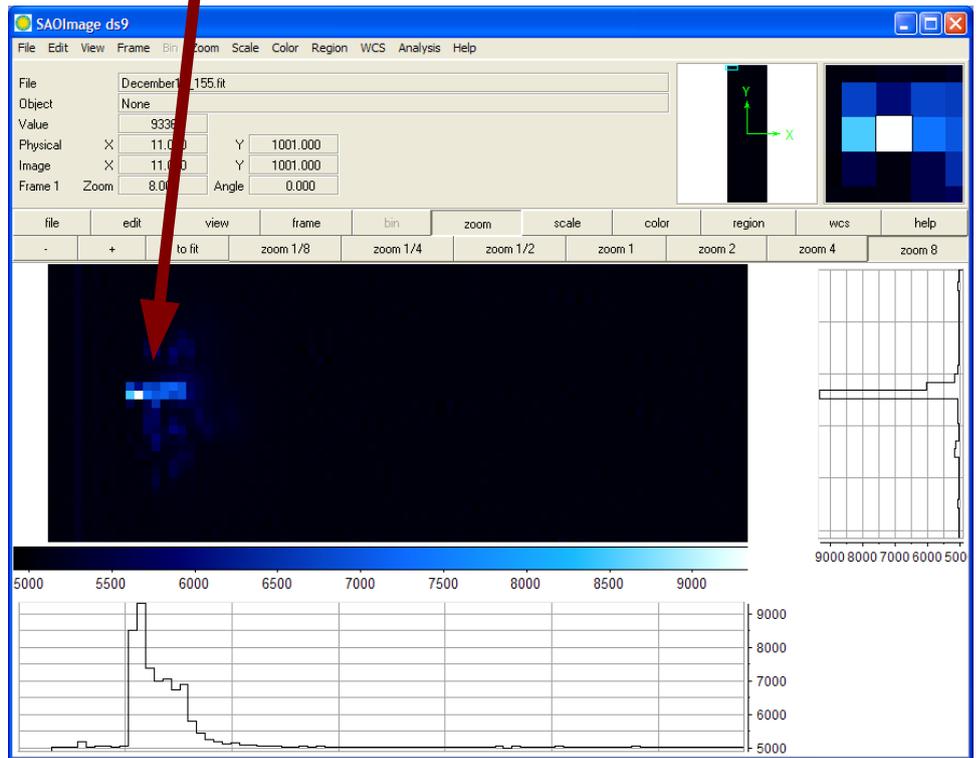
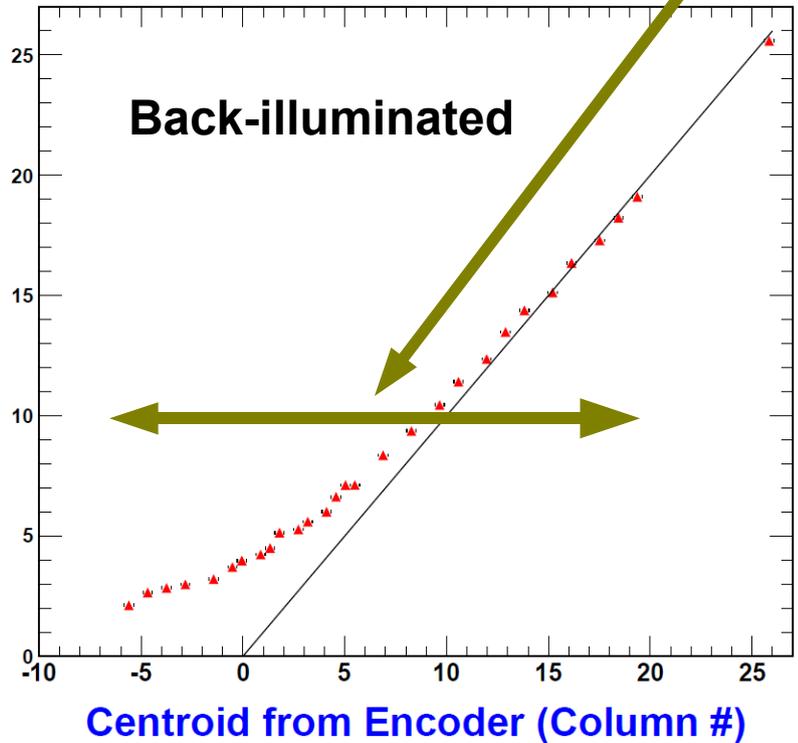
**EField model (SNAP) sent by Steve Holland:**

- Back-illuminated effective pixel position agrees well. (but won't there be a pixel shift in science region for blue photons?)
- Also see charge up to 150 microns beyond first pixel, appears in pixel 3.
- No reason for perpendicular diffusion in front-illuminated.



**Front-illuminated**

Centroid from Pixels (Column #)

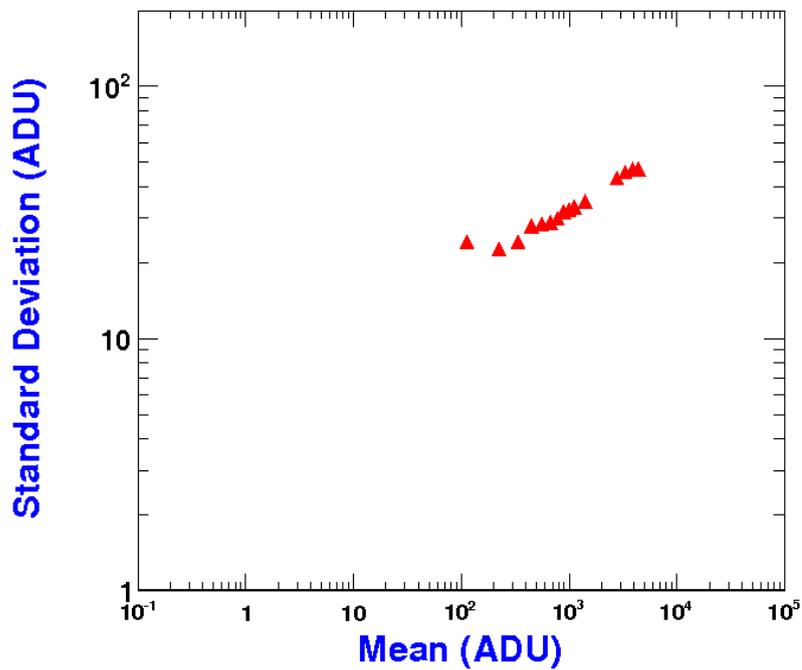


Backup slides...

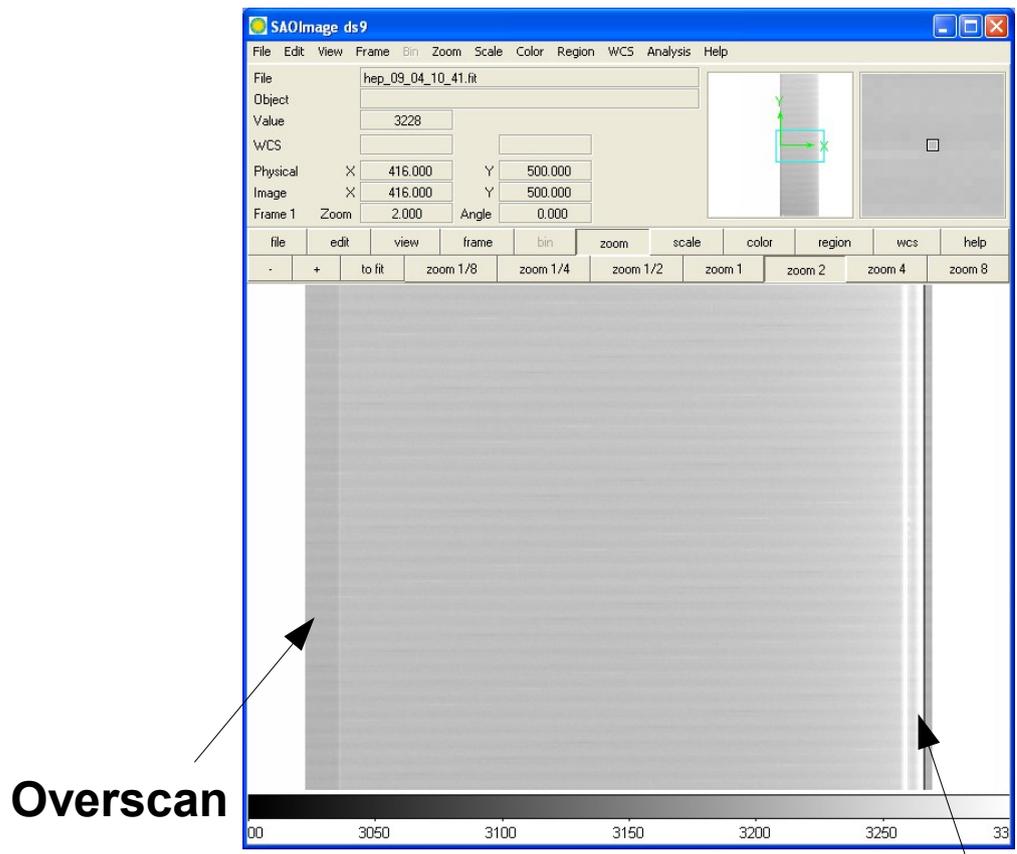
# PF-512-21

(changed H clocks back to PF-512-03 scheme to get to work)

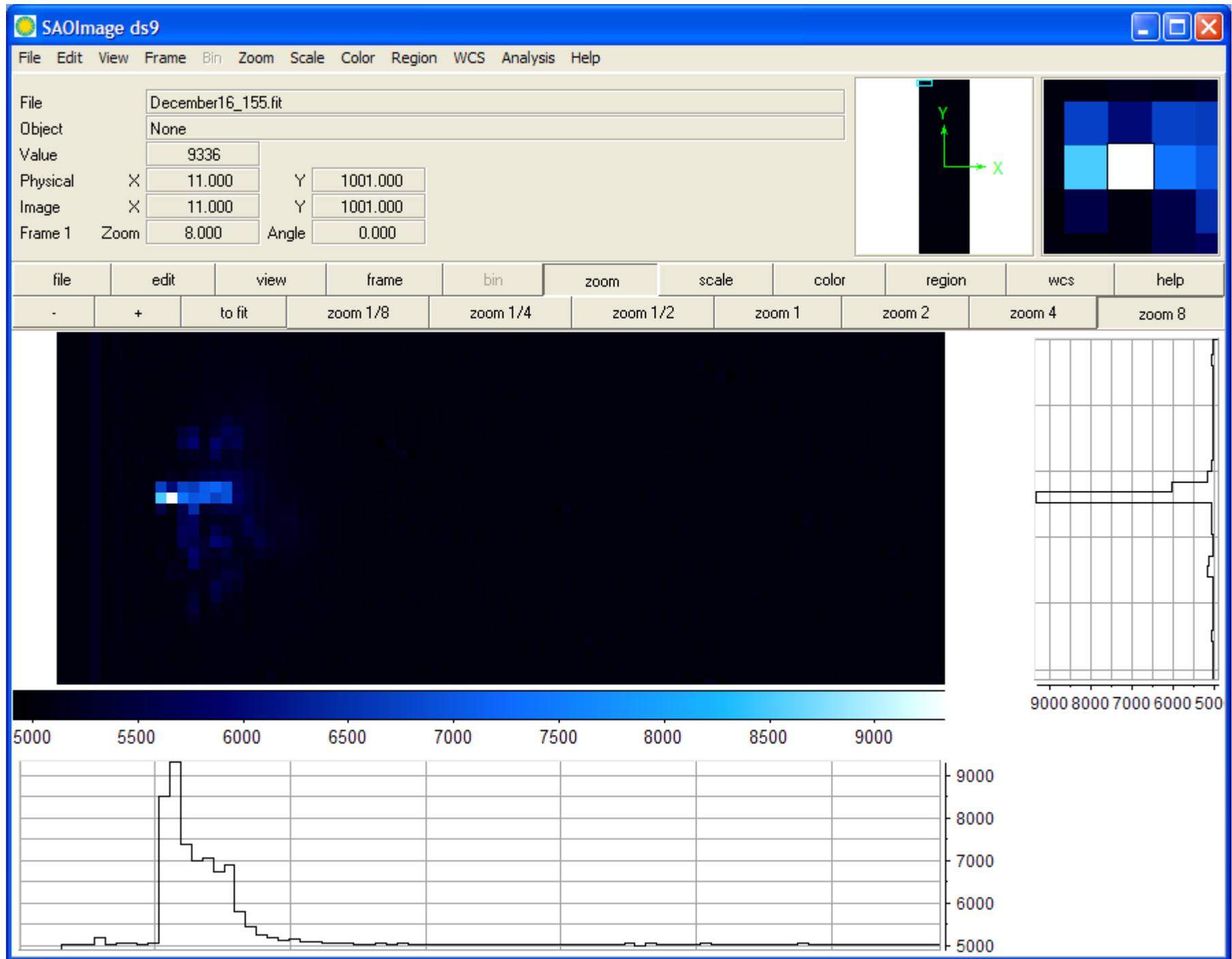
Photon transfer on left side looks reasonable

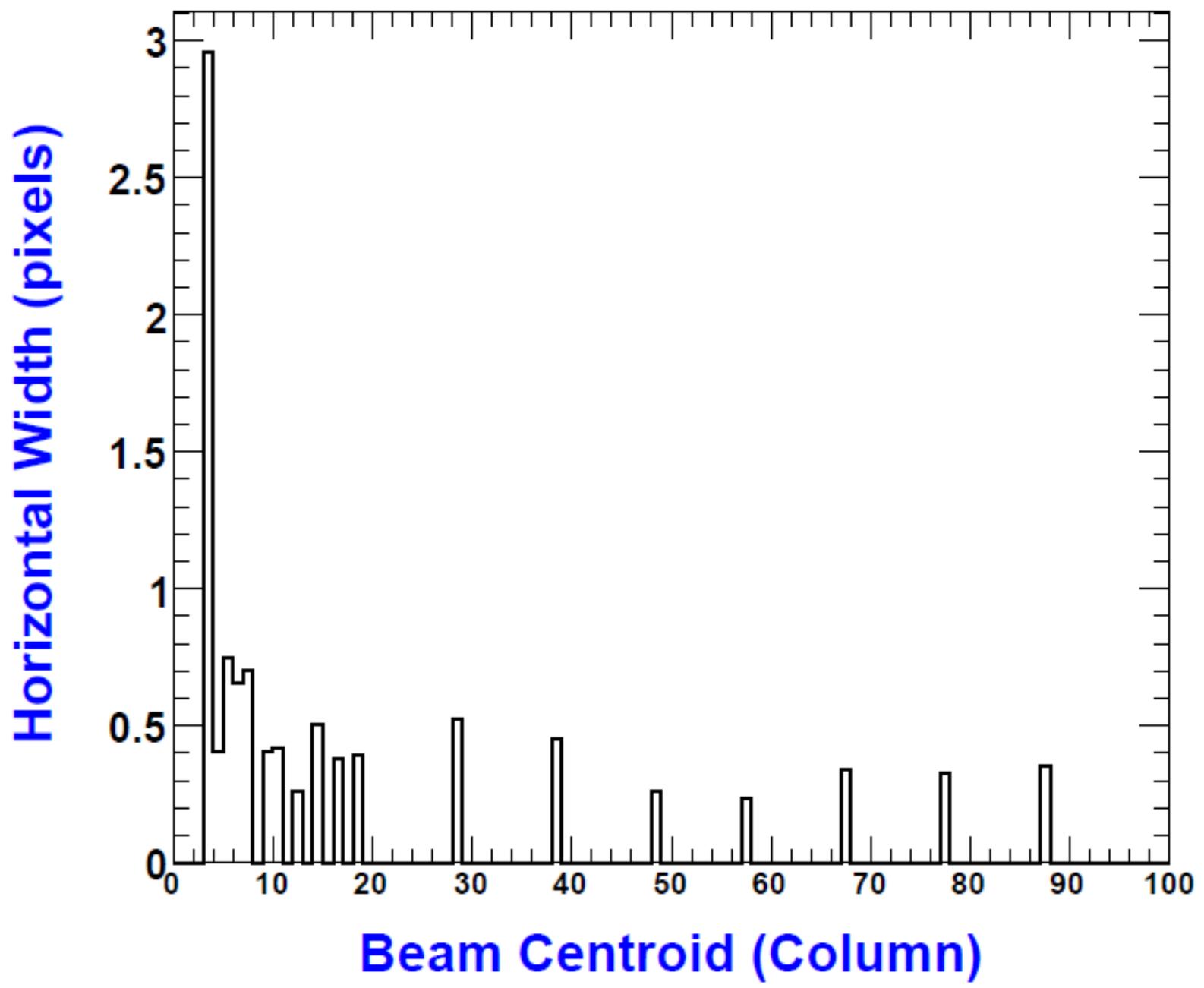


Right side very weak? Image of right side when left side is 10000 ADU above overscan.



Pencil beam in glowing left edge region, peak in column 2 (pixel  $x=11 - 9$  prescan), lots of spreading



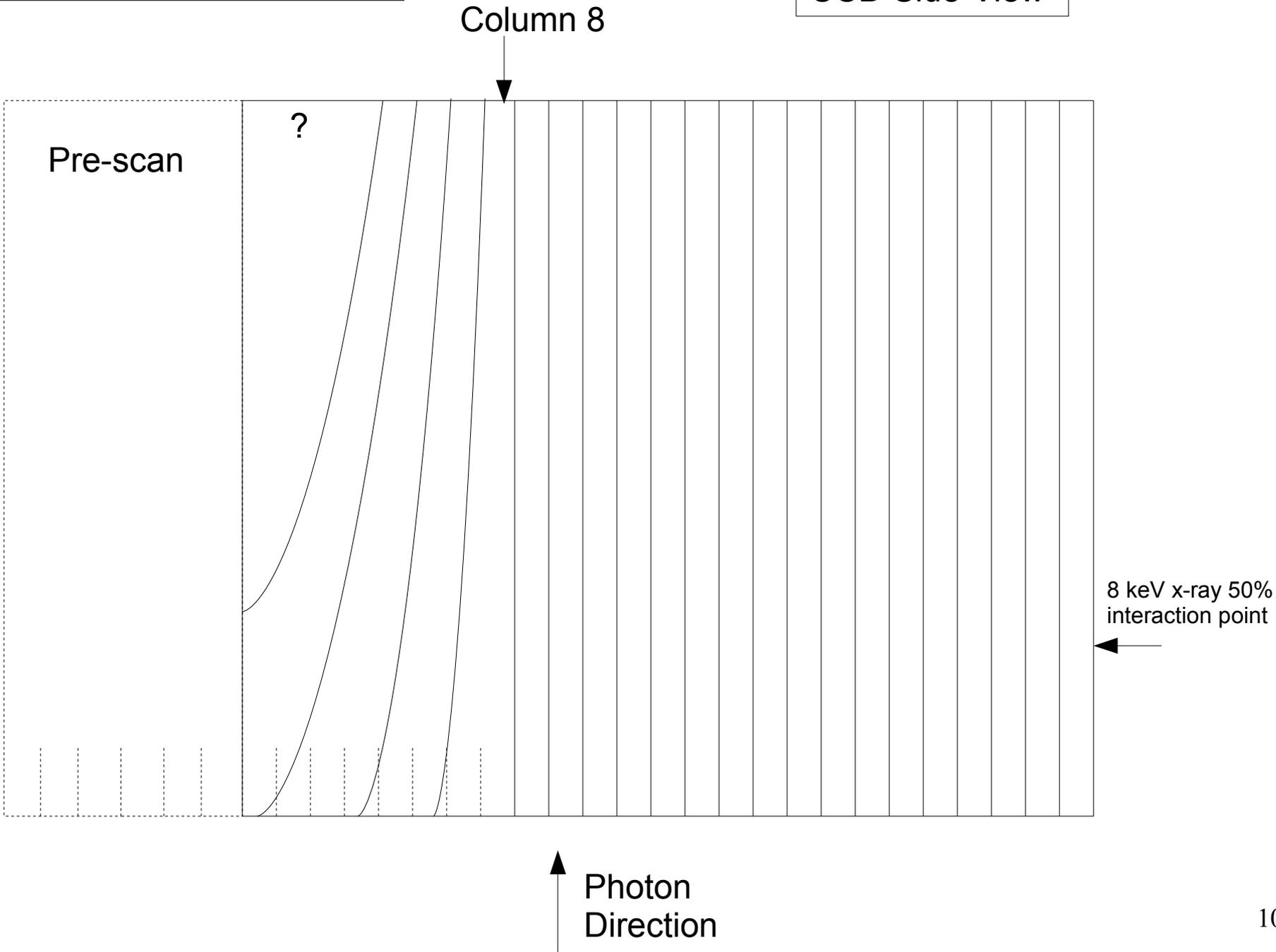


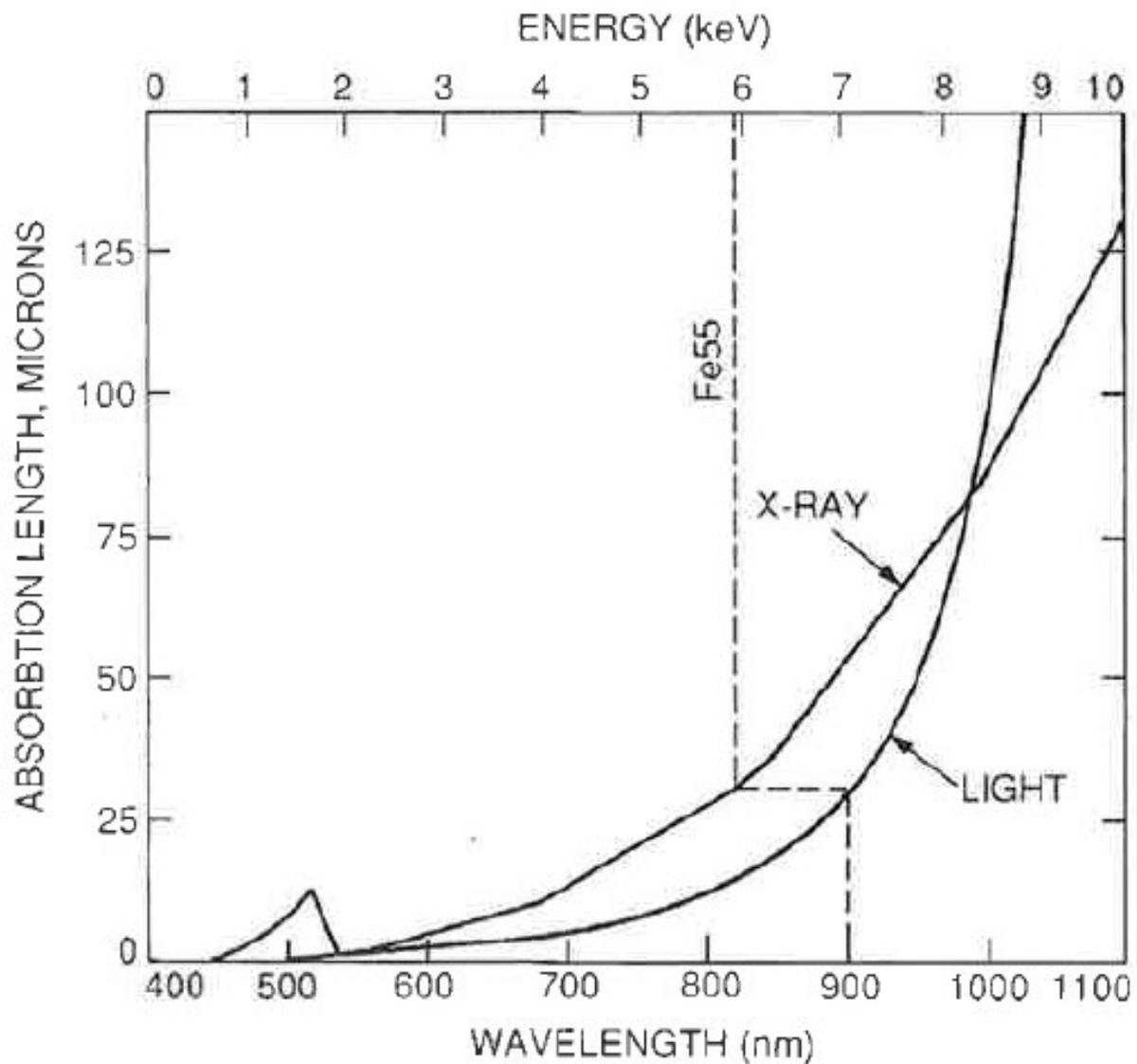
## Early X-ray Tests of Back-illuminated PB-22-17

Beam Location (physical column #)	Effective pixel size	Apparent Column # (peak pixel)
9,10,11,...	1	9,10,11... (correct)
7 or 8	2	8
5 or 6	2	7
3 or 4	2	6
1 or 2	2	5
-2, -1, or 0 (prescan)	3	4
<-2 (prescan)	>=5	3

E-field model can explain  
columns  $>4$  ok, but not  $\leq 4$

CCD Side-View





**Figure 2.19** X-ray absorption length compared to visible and near-IR photons.