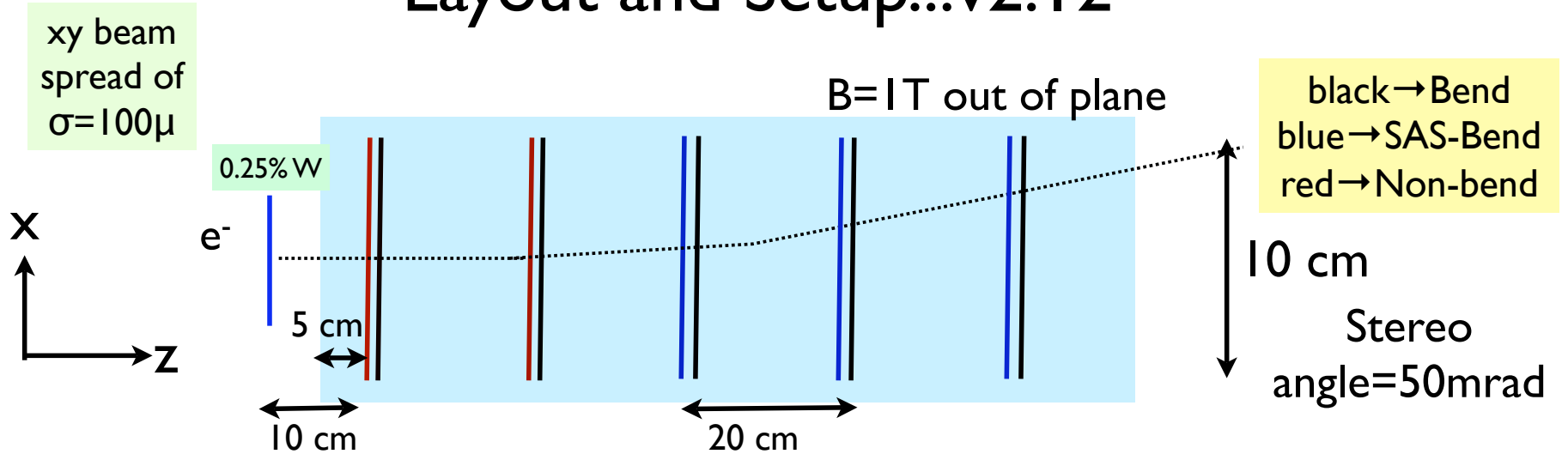


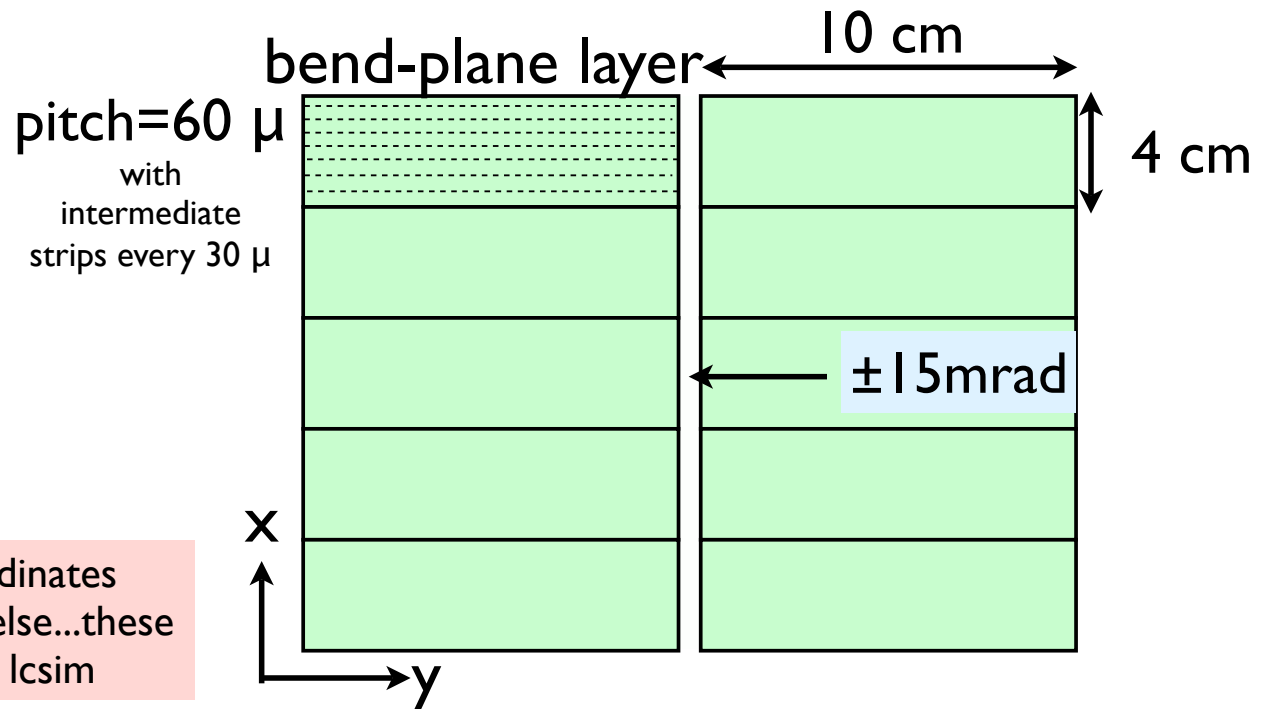
Layout and Setup...v2.12



Silicon is 320μ thick,
"services"=0.2%/Plane;
detector is in
vacuum

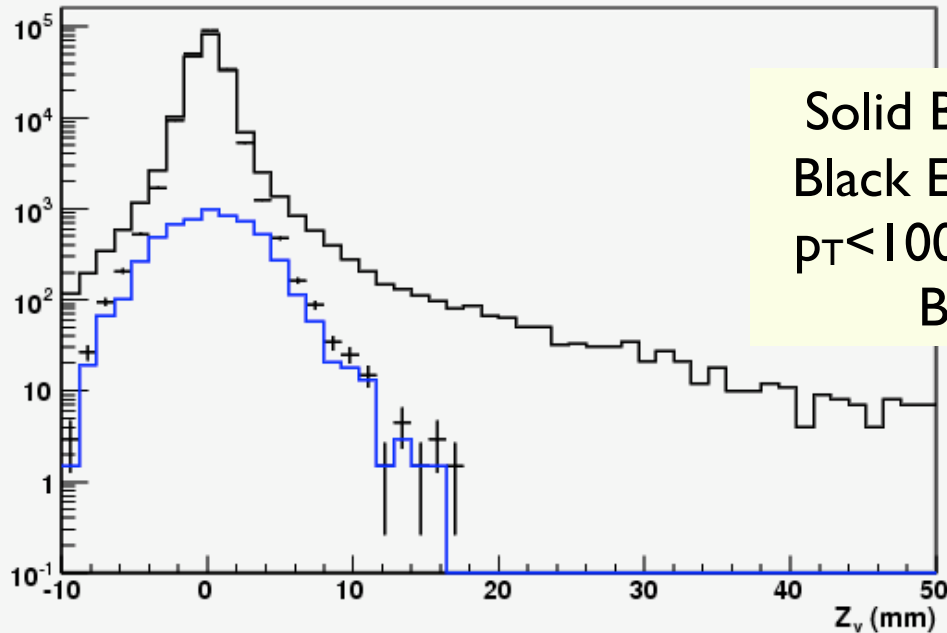
readout chip=APV25
 \rightarrow 7.5 ns integration

I am trying to use coordinates
consistent with everyone else...these
are not what's used in lcsim



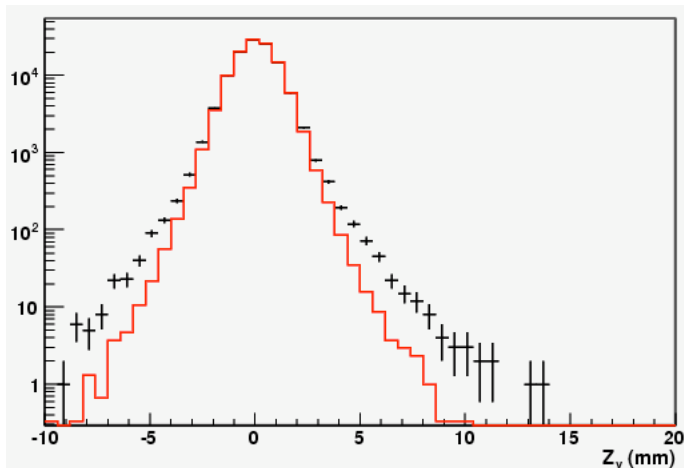
Vertexing with pileup..

200MeV A' decays @
0cm in 400nA



Solid Black: good e^+e^- tracks
Black Errors: $|V_T| < 200\mu$
 $p_T < 100\text{MeV}$ & $\chi^2(\text{vertex}) < 250$
Blue: > 0 mishits

...~500k events with pileup;
can run more!



	RMS(Z_v)	$f(>4\text{mm})$	$f(>1\text{cm})$
No Pileup (red)	1.05	0.005 (0.16)	6×10^{-5} (0.38)
400nA (errors)	1.19	0.011 (0.50)	27×10^{-5} (0.74)

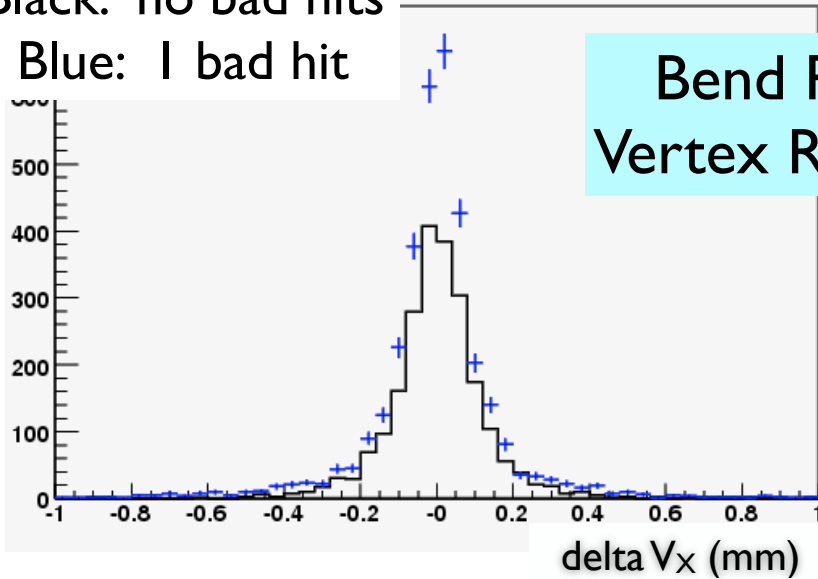
Tails in depth...

200MeV A' decays @
0cm in 400nA

Black: no bad hits

Blue: 1 bad hit

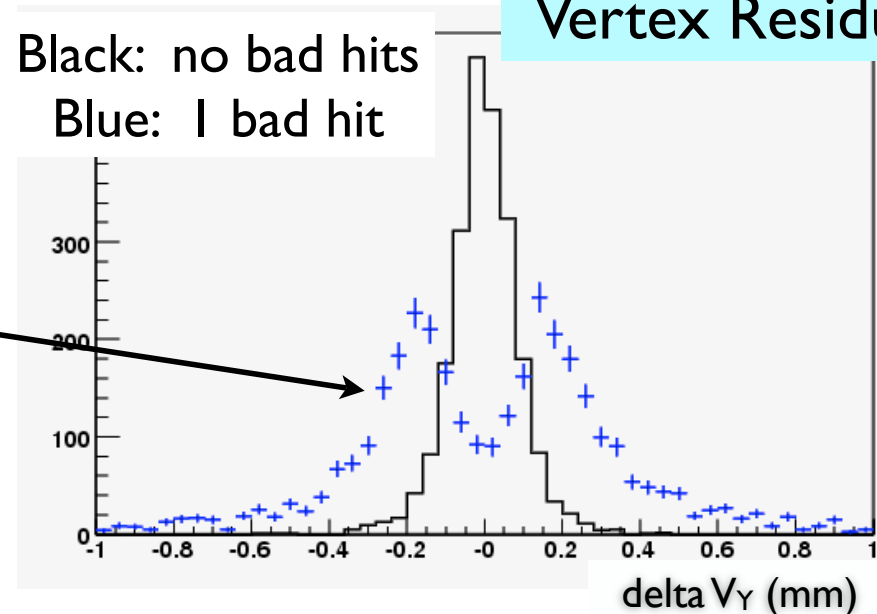
Bend Plane
Vertex Residual



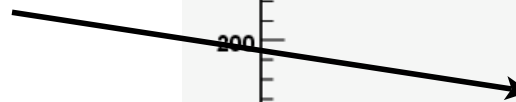
Require: $V_z > 2.5\text{mm}$

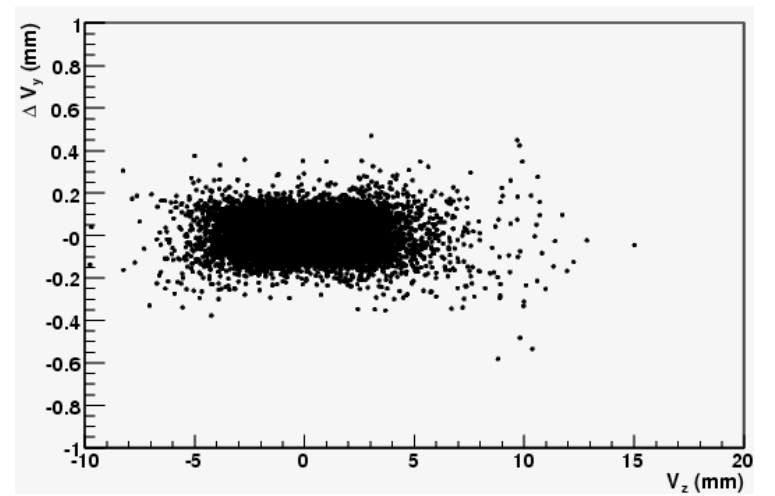
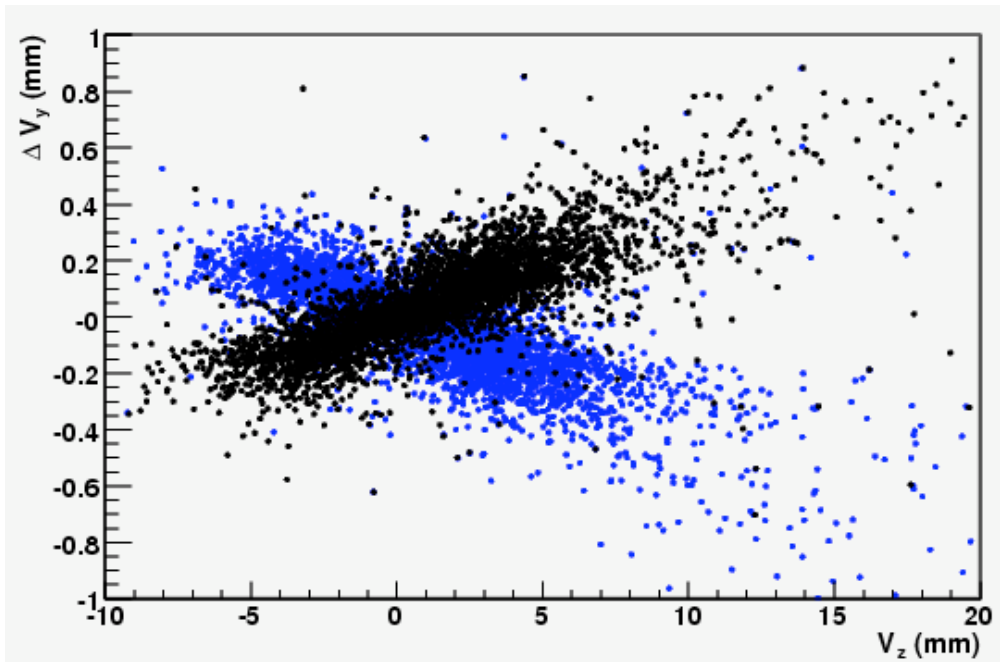
Non-Bend Plane
Vertex Residual

Black: no bad hits
Blue: 1 bad hit

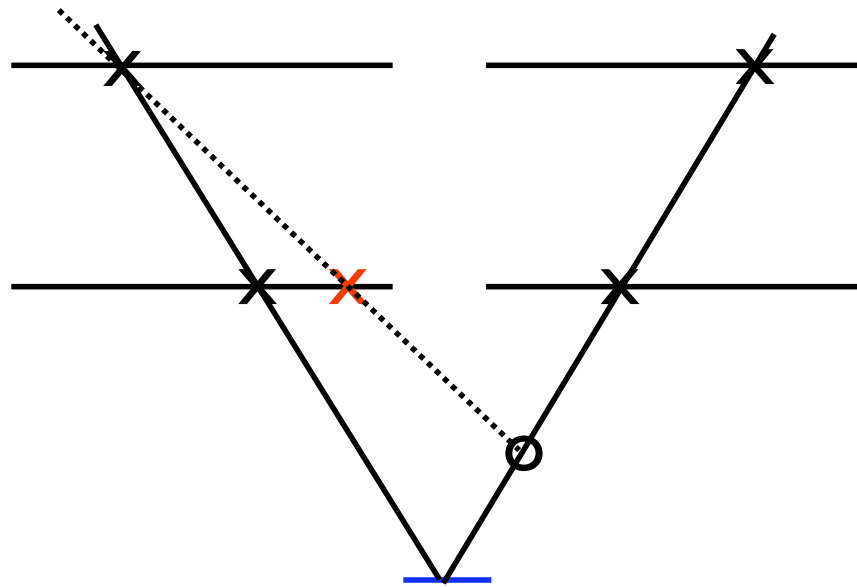


Ha! What is this?





$V_z - V_y$ correlation with mishits



gross
exaggeration

...taking a wrong hit from closer to the beam (where occupancy is high!) will pull vertex to higher Z.

A' Efficiency

