



Hawc Meeting September 12th

Brendan Boyd

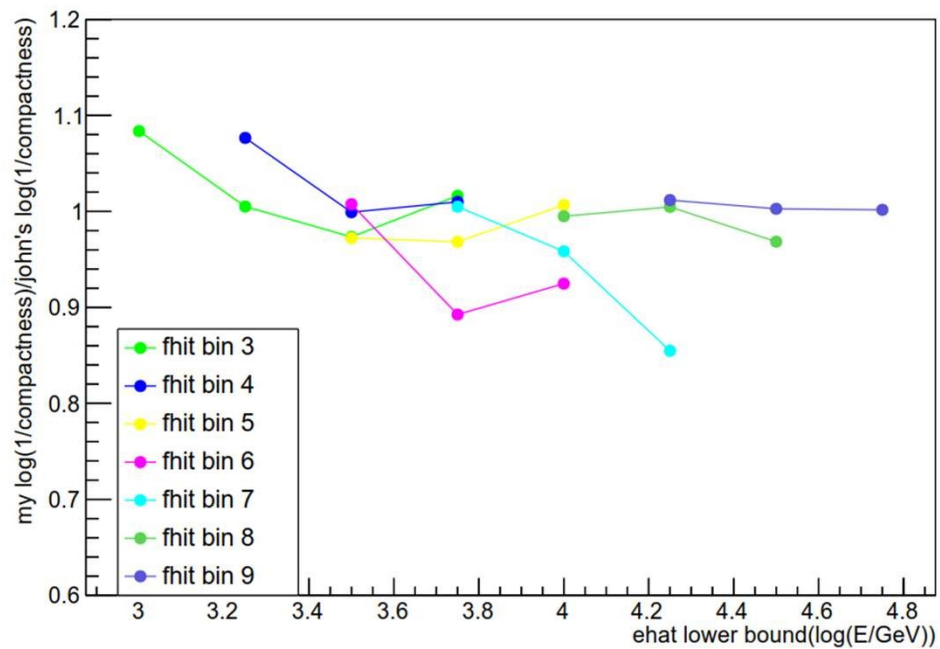
Cuts added to analysis

- ▶ After Sam, Tolga, Tomas and I talked about what data we were using and what cuts we were using, added to new ones
 - ▶ `rec.nChAvail >= 700`
 - ▶ `rec.angleFitStatus == 0`



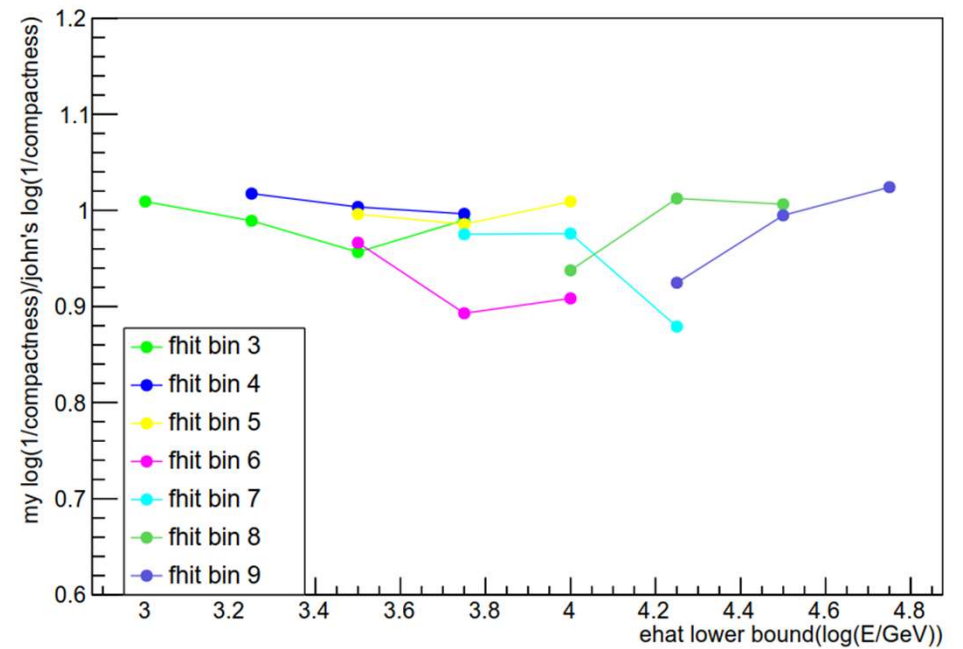
With new cuts

ratio of log(1/compactness)



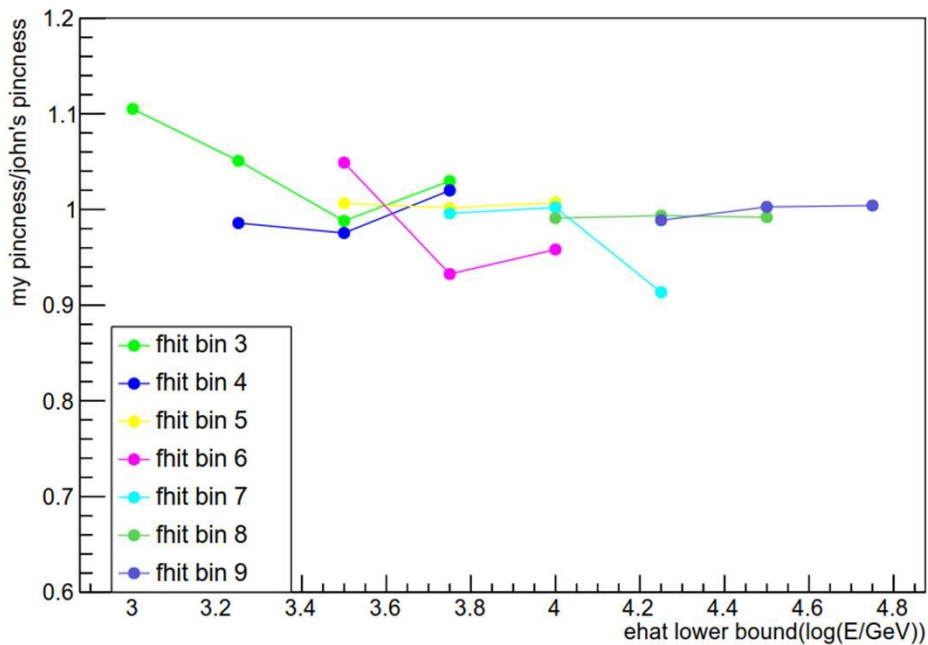
Previous best

ratio of log(1/compactness)



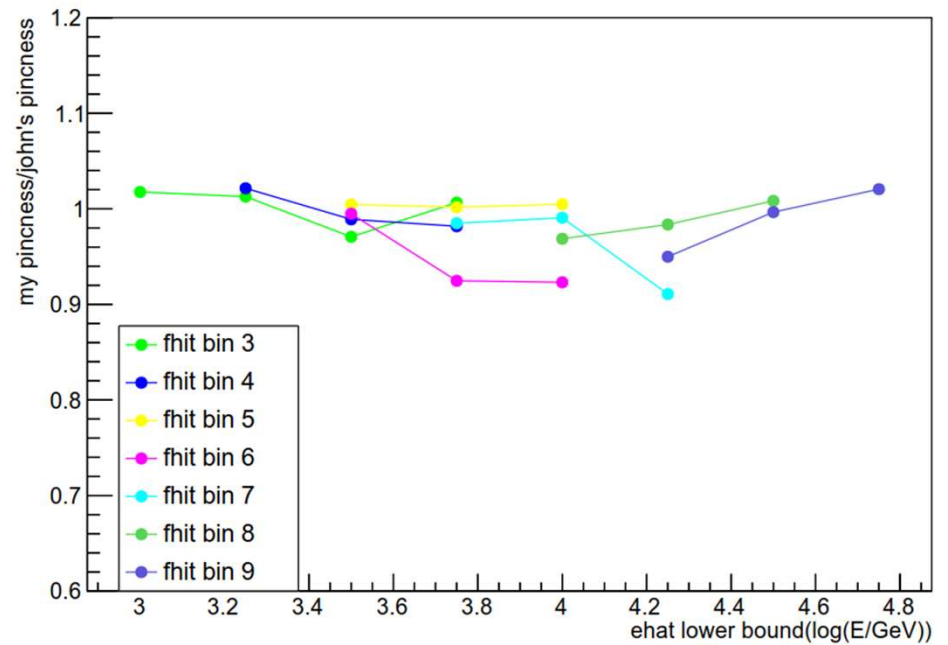
With new Cuts

ratio of pincess



Previous best

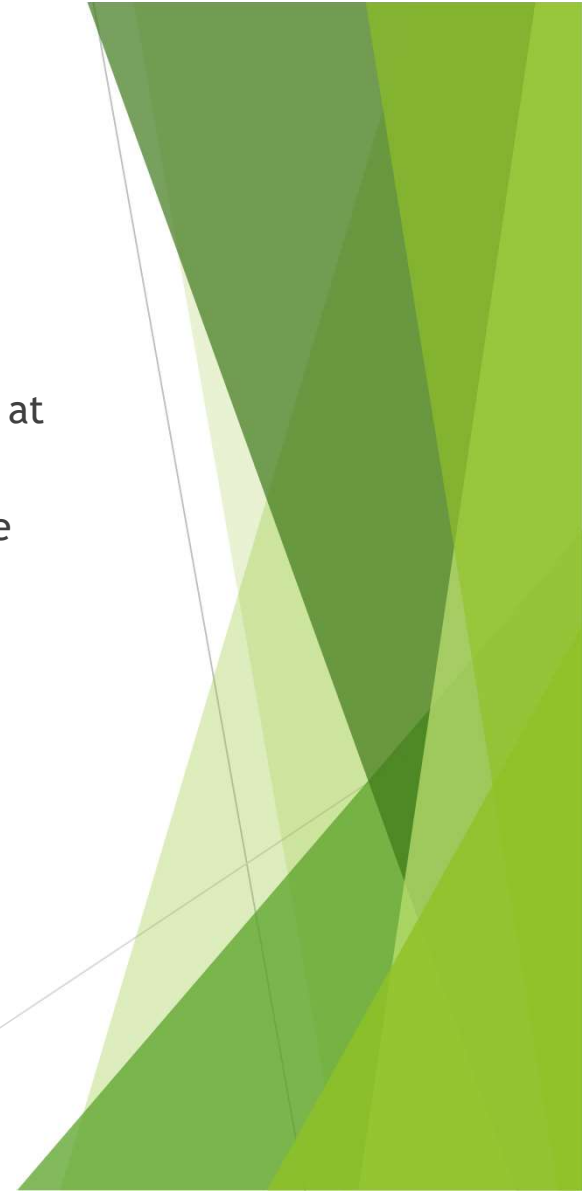
ratio of pincess



In higher bins the cuts bring me closer to johns. In the lower bins it takes me away

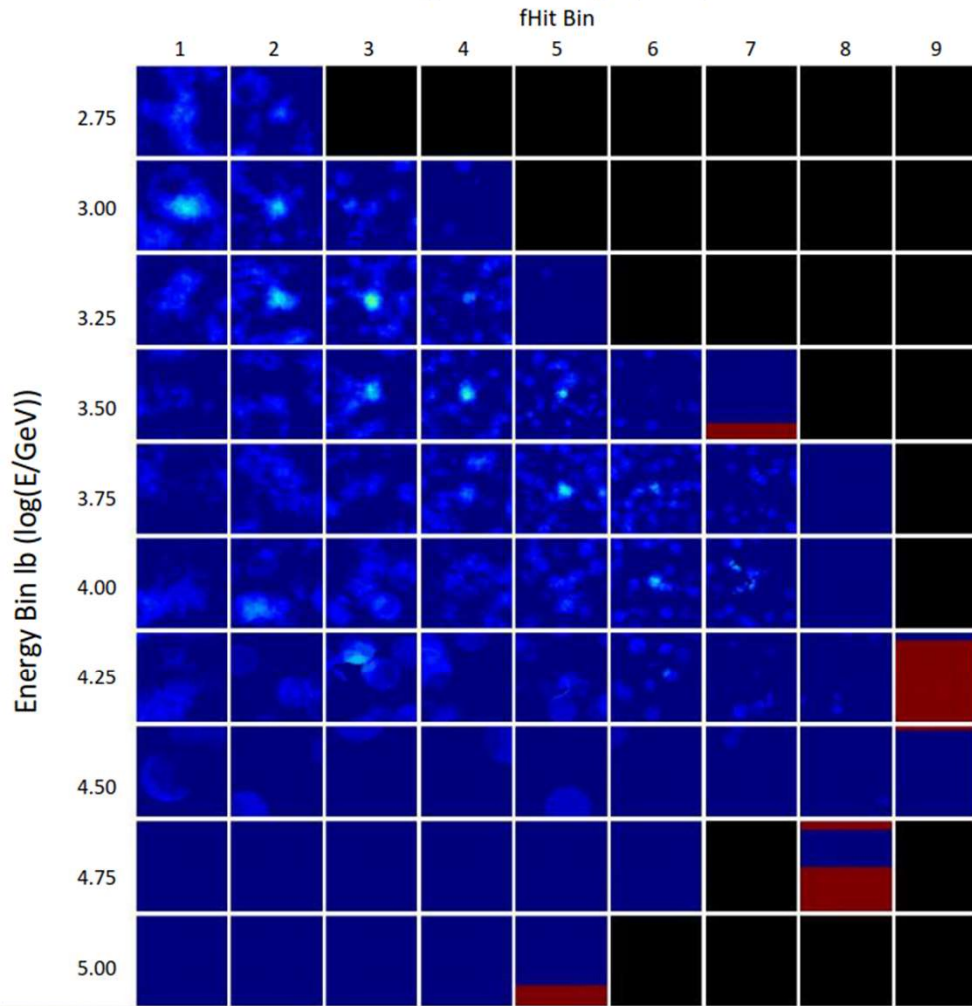
Significance Plots

- ▶ Previously appeared to have a problem with significance plots, particularly at high energy bins
- ▶ Tried to make Significance plots with john's cuts to see what his values give
- ▶ Definitely looks like I am doing something wrong while making these maps



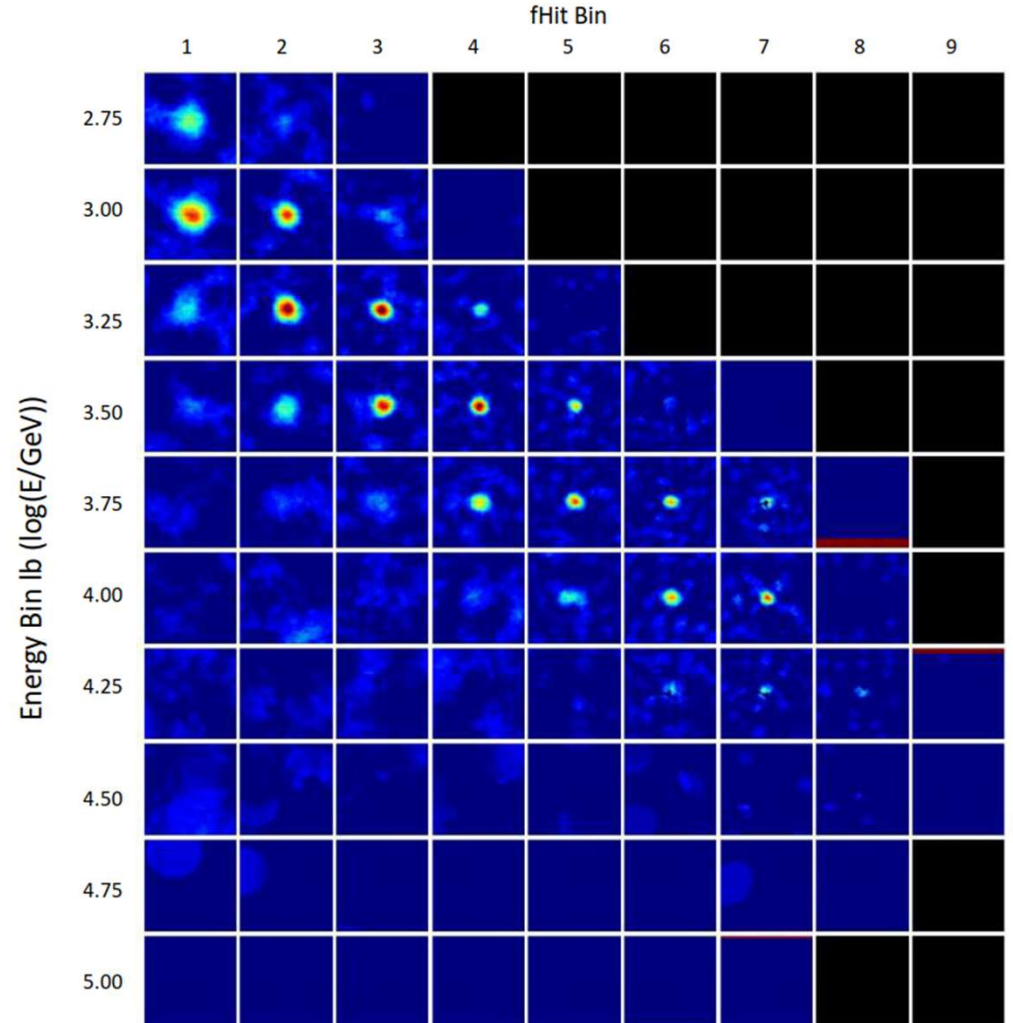
John's cuts

Crab Significance Maps (0-15)



My cuts

Crab Significance Maps (0-15)

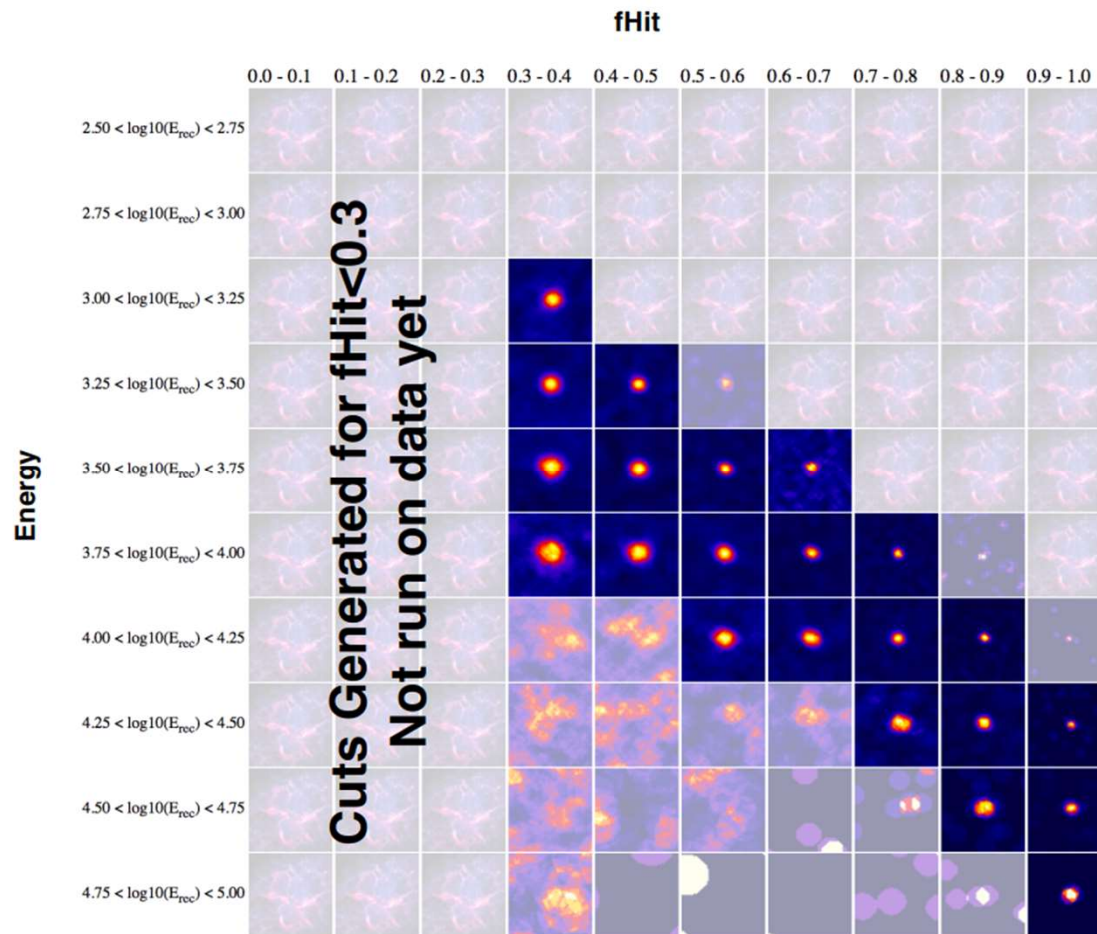


Problems

- ▶ John's cuts are much worse when the two sets of cuts don't seem to be too far off
- ▶ Can't see crab above $10^{4.25}$ - $10^{4.50}$ when we should. John and Sam have done a similar things and can see crab at higher energys.



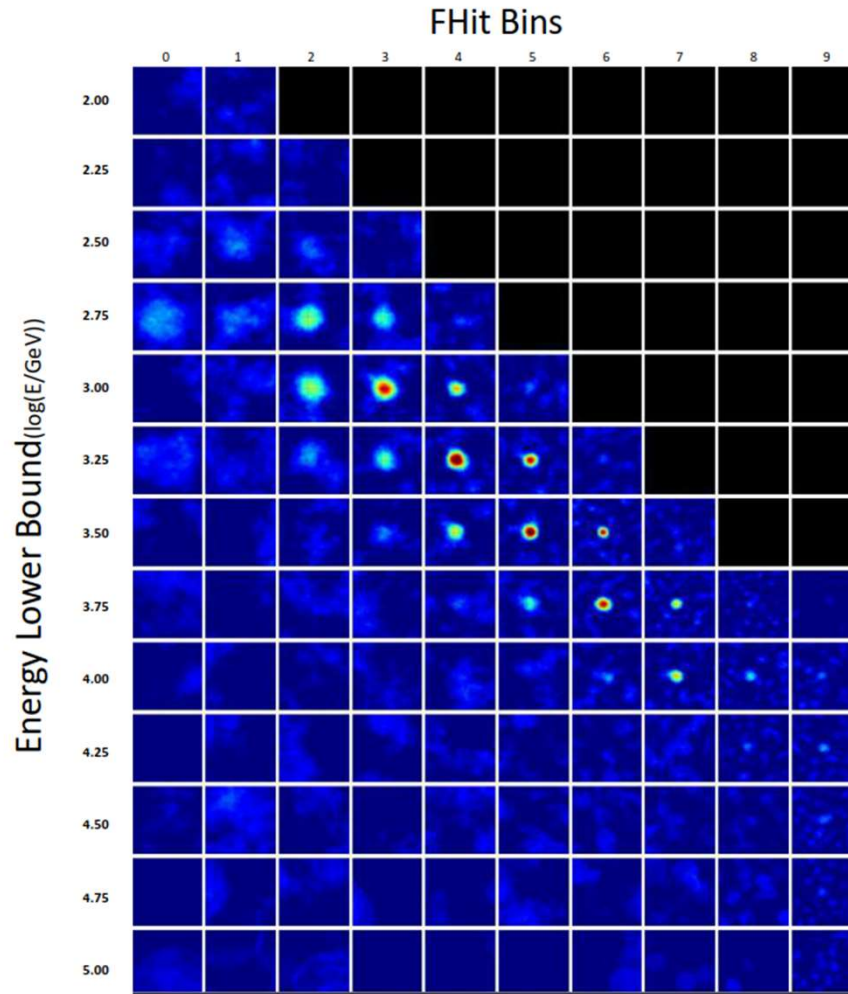
Significance Plots (made by John)



Unlike my plots, you can see crab at 4.25, 4.50, 4.75

Significance Plot (made by Sam)

These were made using earlier cuts and with different fHit binning.



Can also see crab at 4.25, 4.50, 4.75