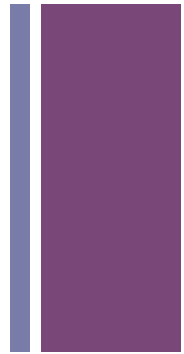


Pixel holes and photon conversions

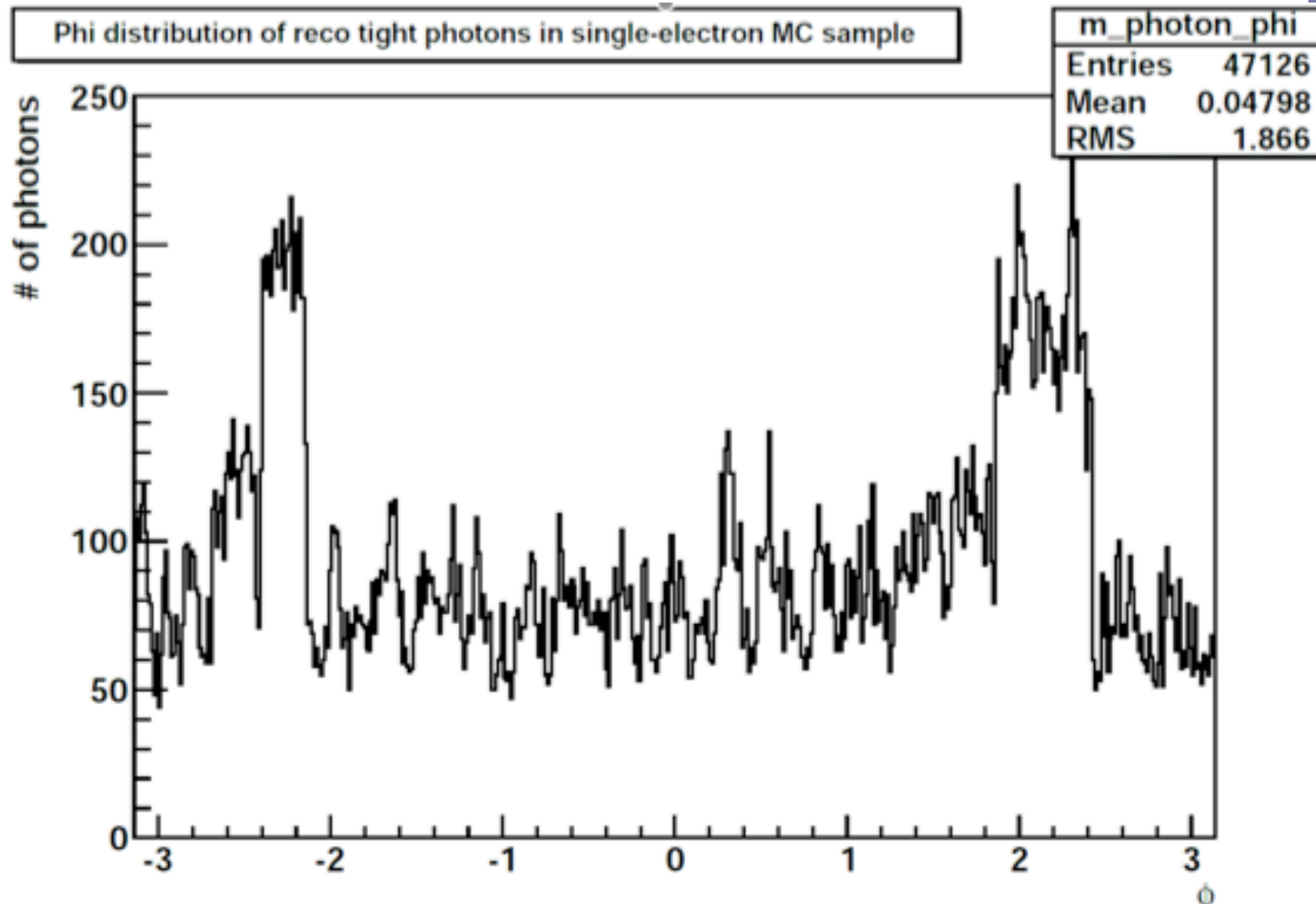
Helen Hayward

+ Introduction

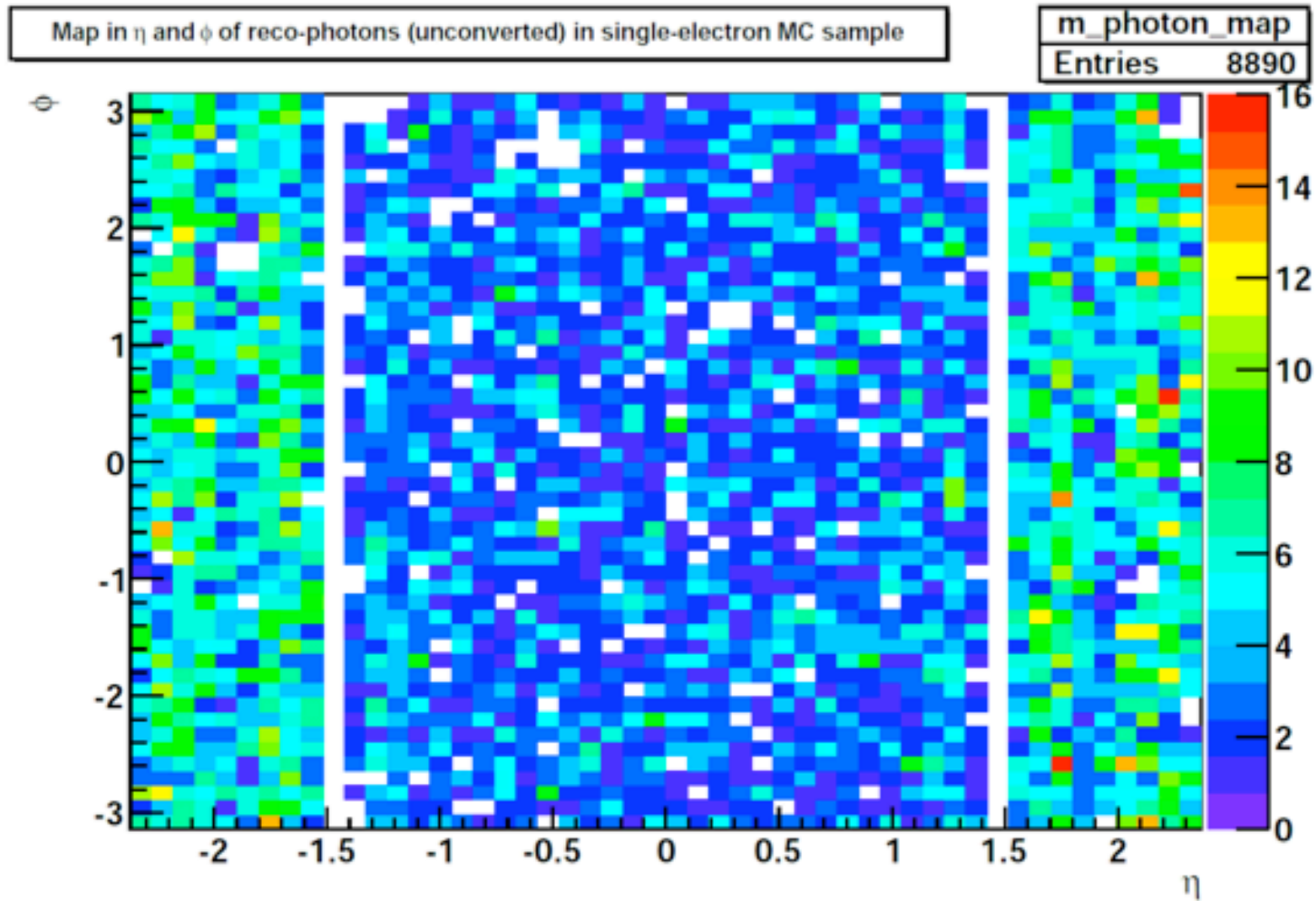
- 20 GeV single electron sample
- Look at reconstructed photons
 - Non-conversion photon
 - Single track Conversion
 - Two- track conversion



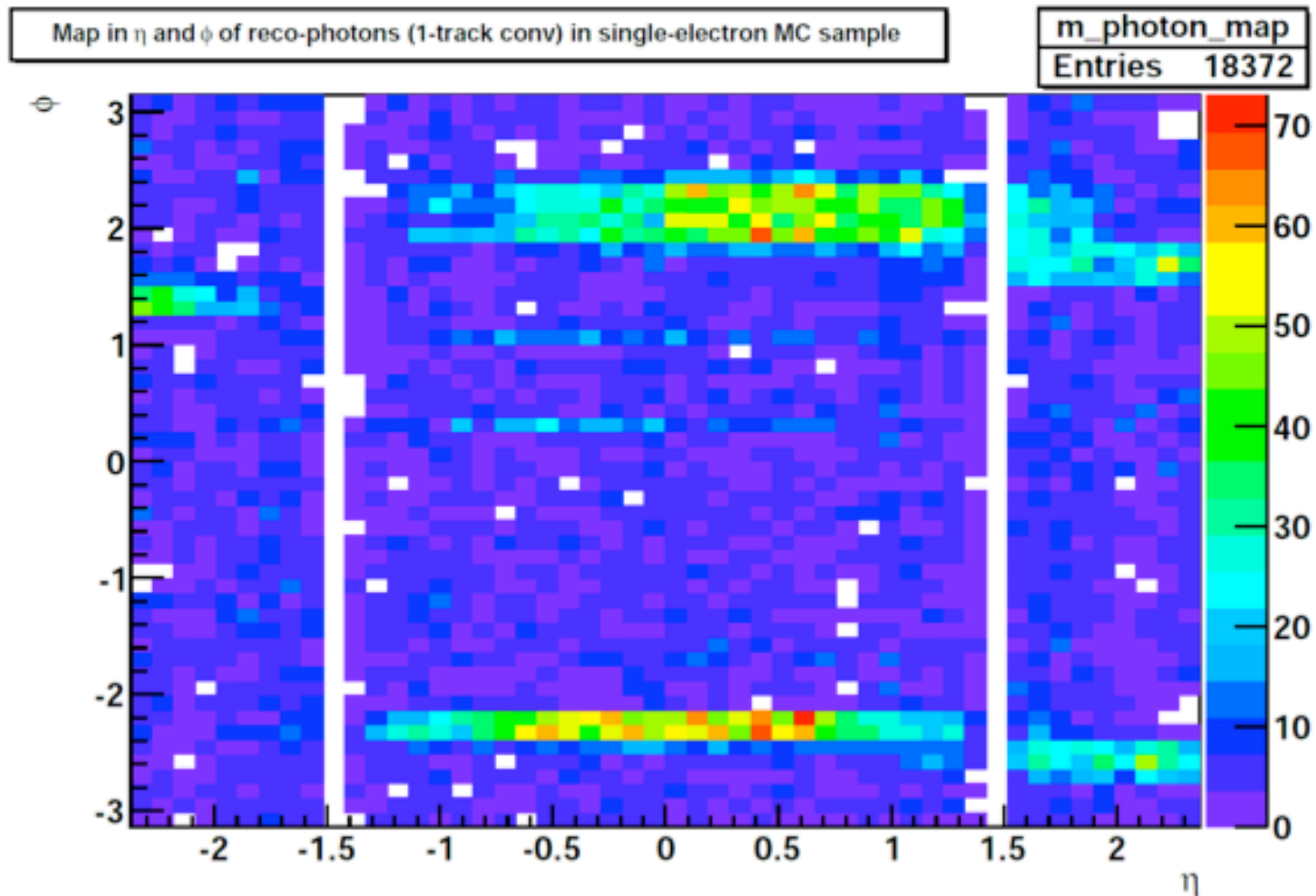
- + Looking at electrons faking photons:
2 large peaks observed



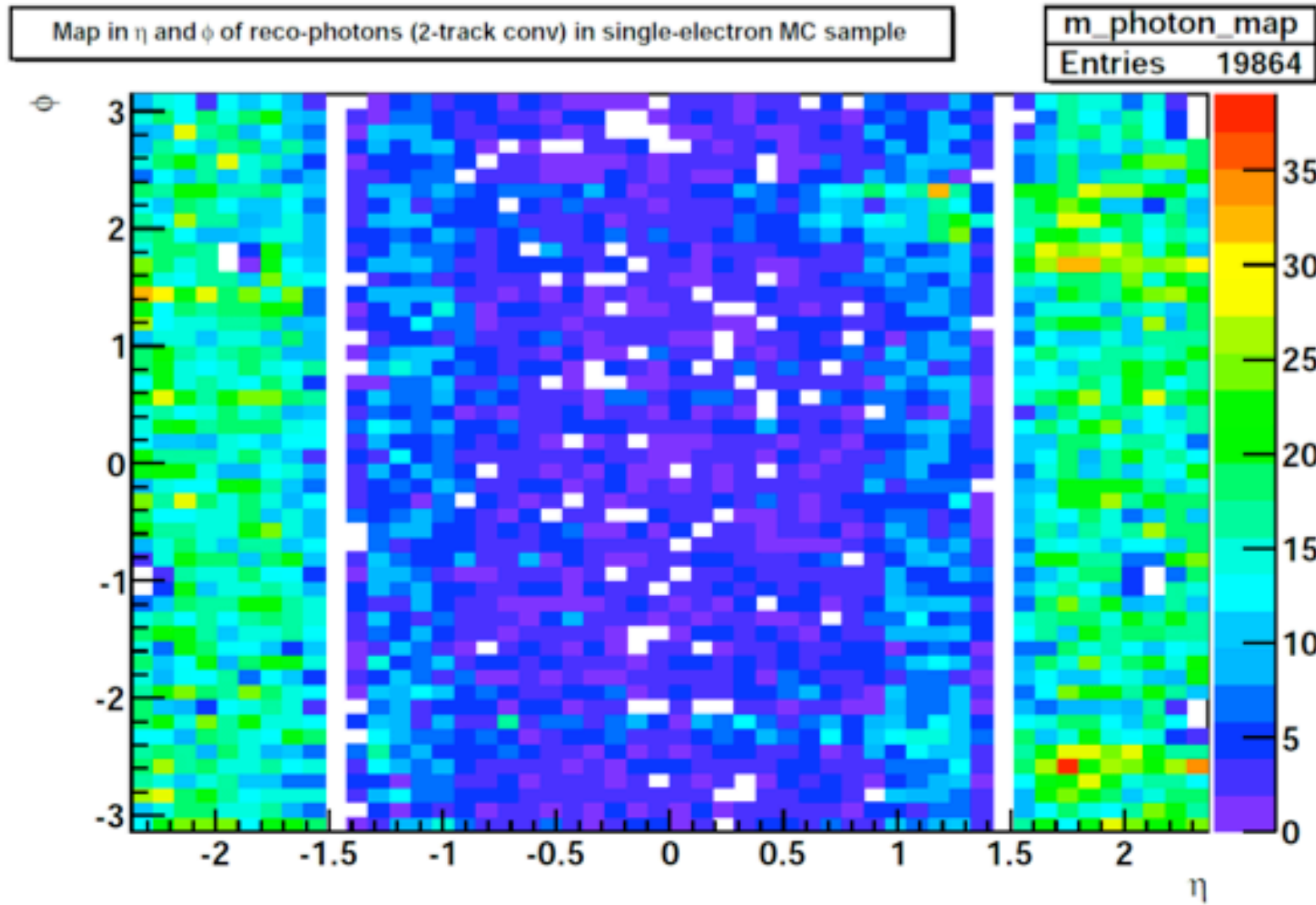
+ Unconverted photon fakes



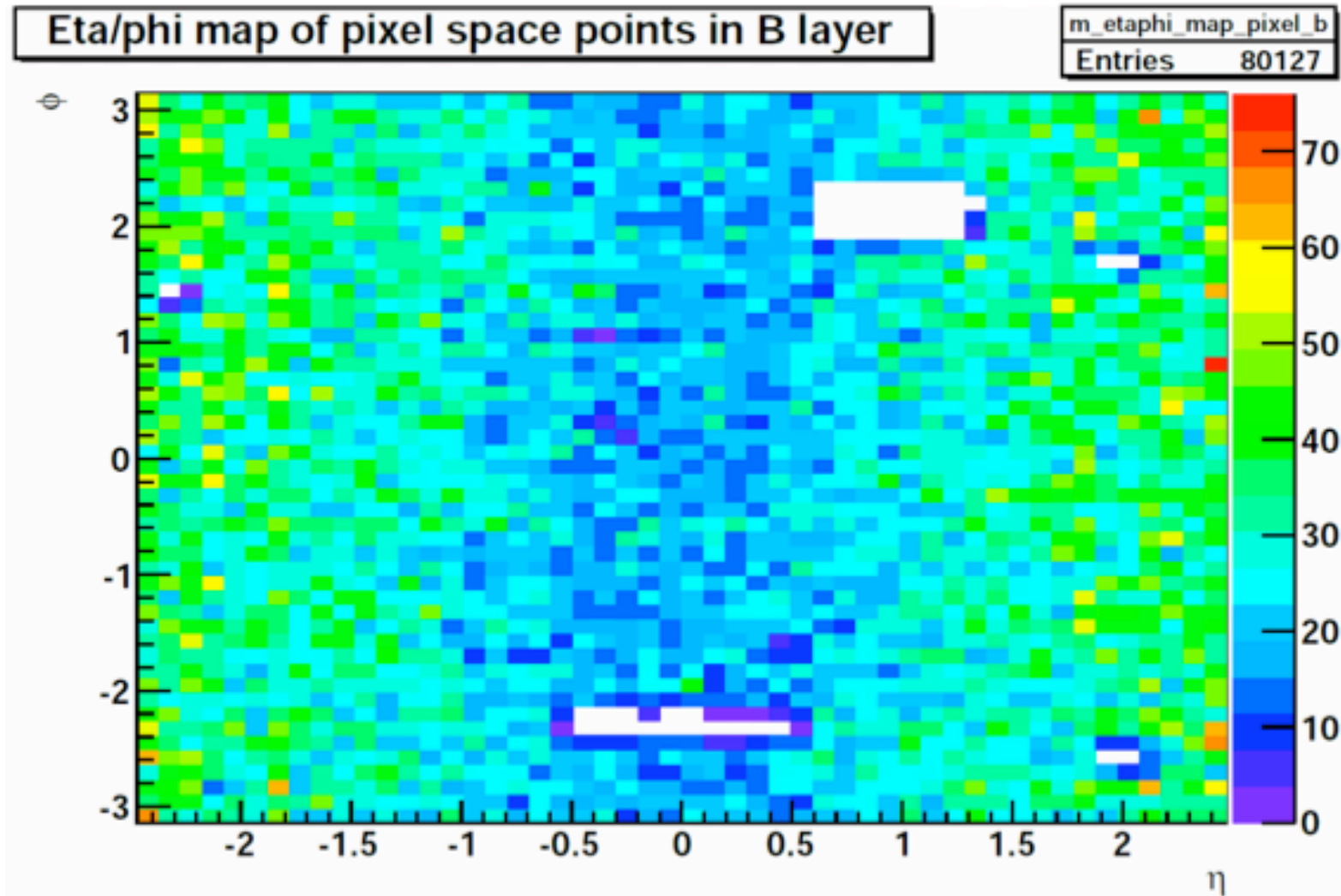
+ 1 track conversion



+ 2 track conversion



+ B-layer space points





conversions



- Phi asymmetry in fake single-track conversion
- Asymmetry is seen in the phi distribution of single-track fake (objects are truth electrons) photon's in MC
- Appears to be from the B-layer hit being missed due to holes in the B-layer
- The effect is smeared in eta some for the photons because of the large spread in the primary vertex in z
- There is a tool in athena for dealing with missing B-layer
 - Need to rerun ambiguity resolver,
 - needs testing to see if it removes these
 - Am currently trying to implement this in OSSelectPhotons