

Look at CDC Wire Hits in GCR

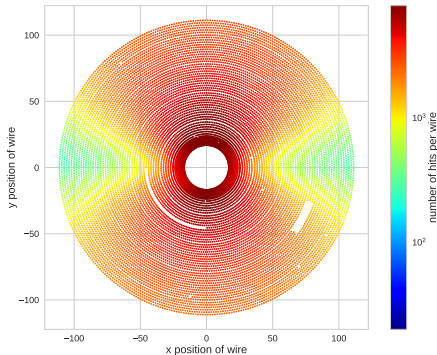
Hit Efficiencies and Bad Regions

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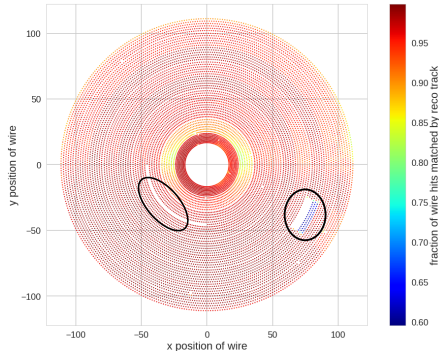
- Looked at CDC wire hits in GCR August 2017 data
- Distribution of number of CDC hits per wire
- Distribution of hit to reco track matching efficiency
 - If a wire is hit, what is the probability that this hit is used in a reconstructed track?
 - Due to missing beam background, expected to be high, similar to hit efficiency of track finding
- Saw dead and noisy regions. Reasons known?

On GCR August simulated MC

Total hits per wire



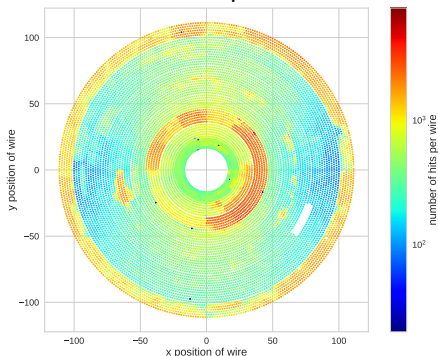
Fraction of hits in a reco track



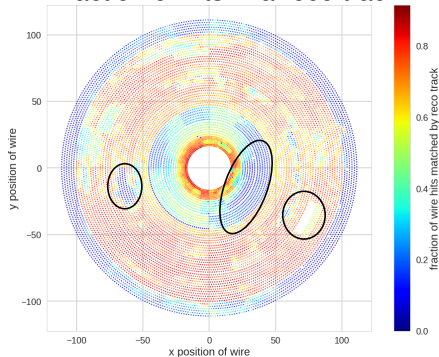
- mostly flat, which is expected
- regions with dead channels already in simulation

On GCR August measured data

Total hits per wire



Fraction of hits in a reco track



- a lot of structure visible
- again dead region in bottom right (superlayer 7)
- Superlayers 2, 3 and all of 9 (outside) noisy, a lot of unmatched hits.

- Regions with dead wires in GCR
 - Are the reasons known?
 - Can that be fixed and are there plans?
- Noisy regions
 - regions with many unmatched hits, e.g. superlayers 2, 3 and 9
 - Is that known? Are there ideas, what the reasons might be? Noisy readout? Background?

Backup

Wire Hit Numbers and Track Matching Efficiencies averaged over Layers

