Electron and Pion Identification

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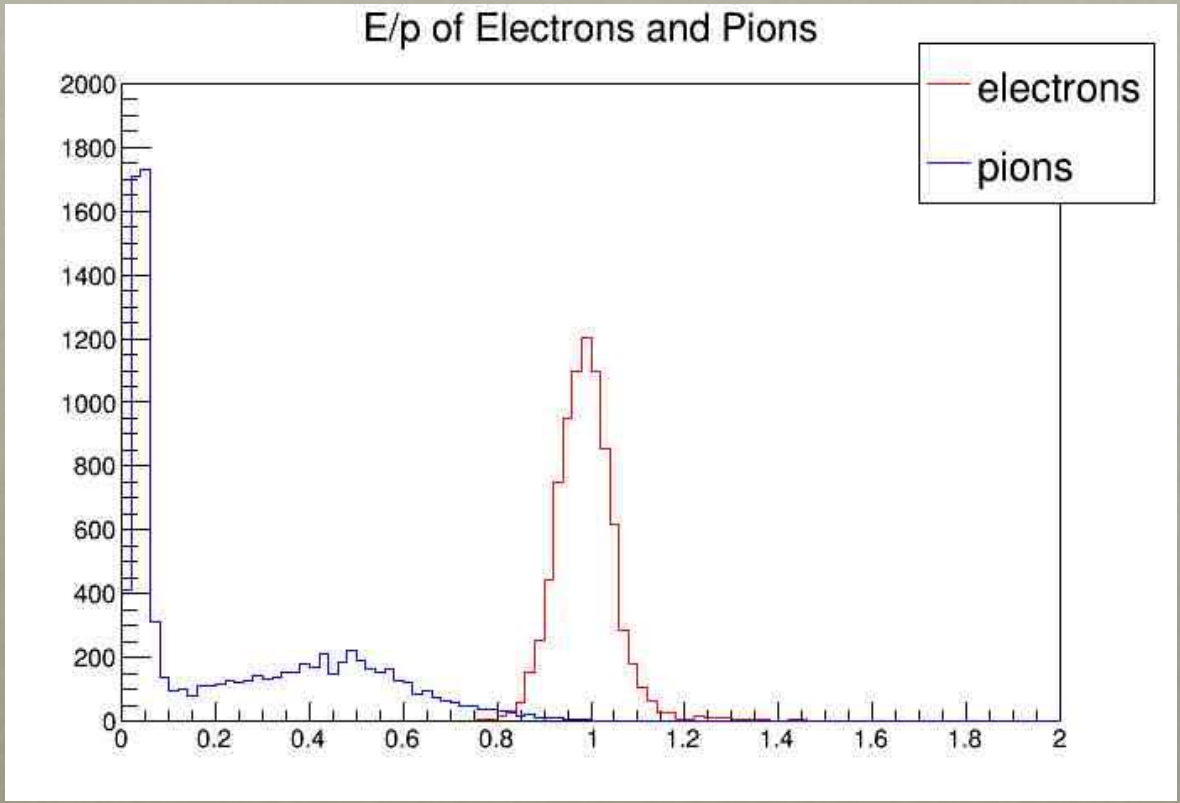
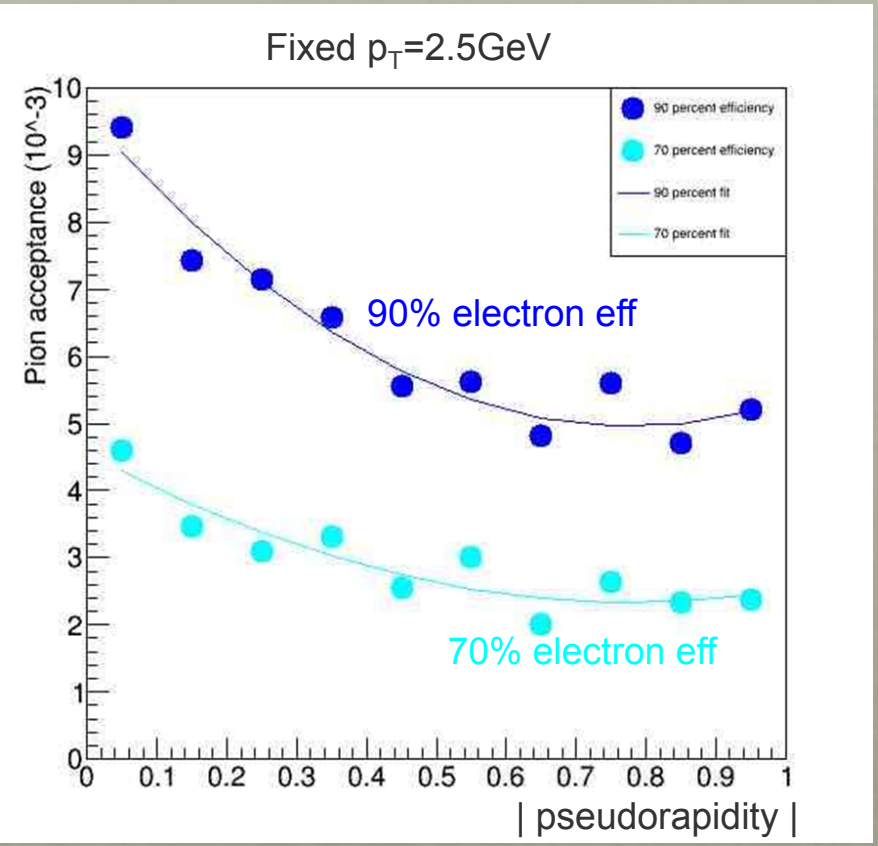
Electron and Pion Simulations

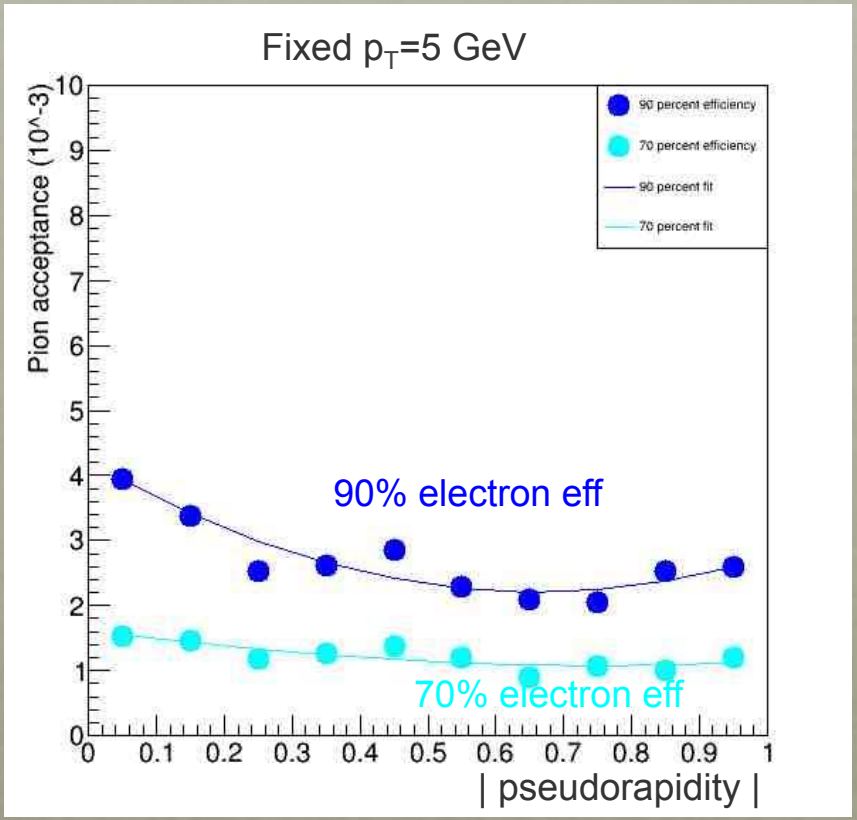
- Single particle electron/pion events
- 10,000 events for electrons, 1 million events for pions
- p_T was fixed at 2.5, 3.5, 5, 7.5, 10GeV
- Phi was random between 0 to 2pi
- Eta was random between -1 and 1

E/p

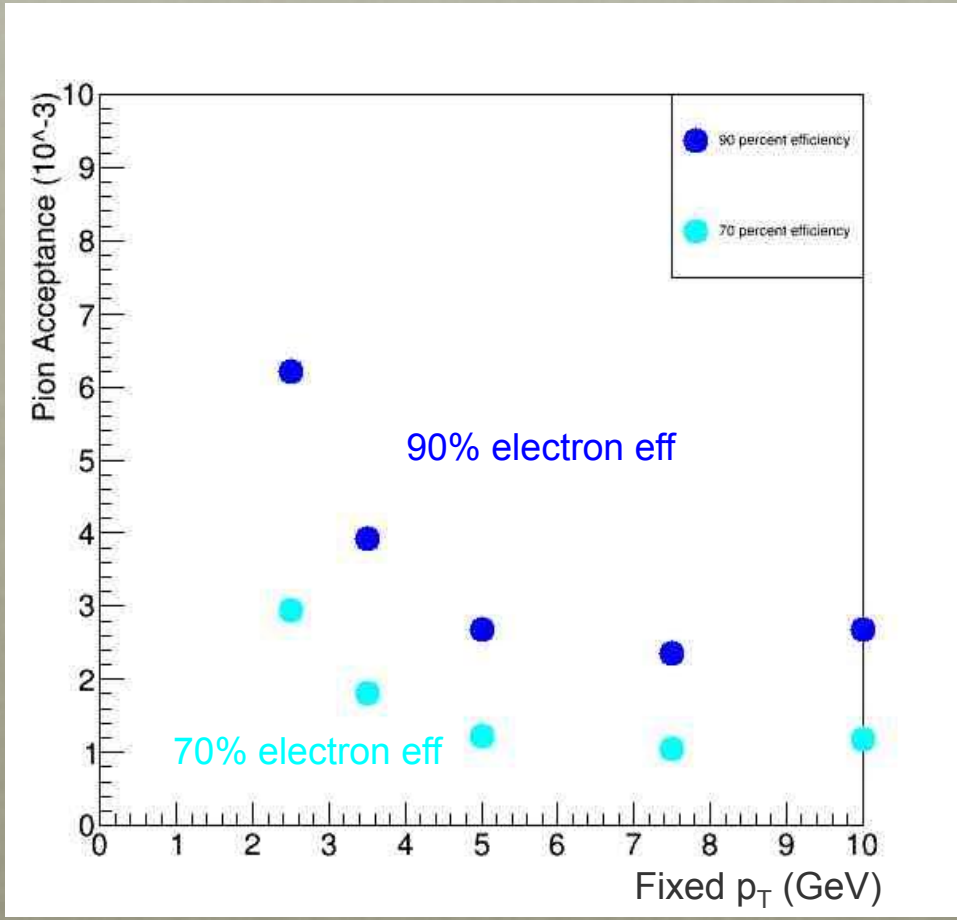

E/p of Electrons and Pions
electrons
pions
2000
1800
1600
1400
1200
1000
800
600
400
200
0
0
0.2
0.4
0.6
0.8
1
1.2
1.4
1.6
1.8
2

With EMCAL and E/p cut

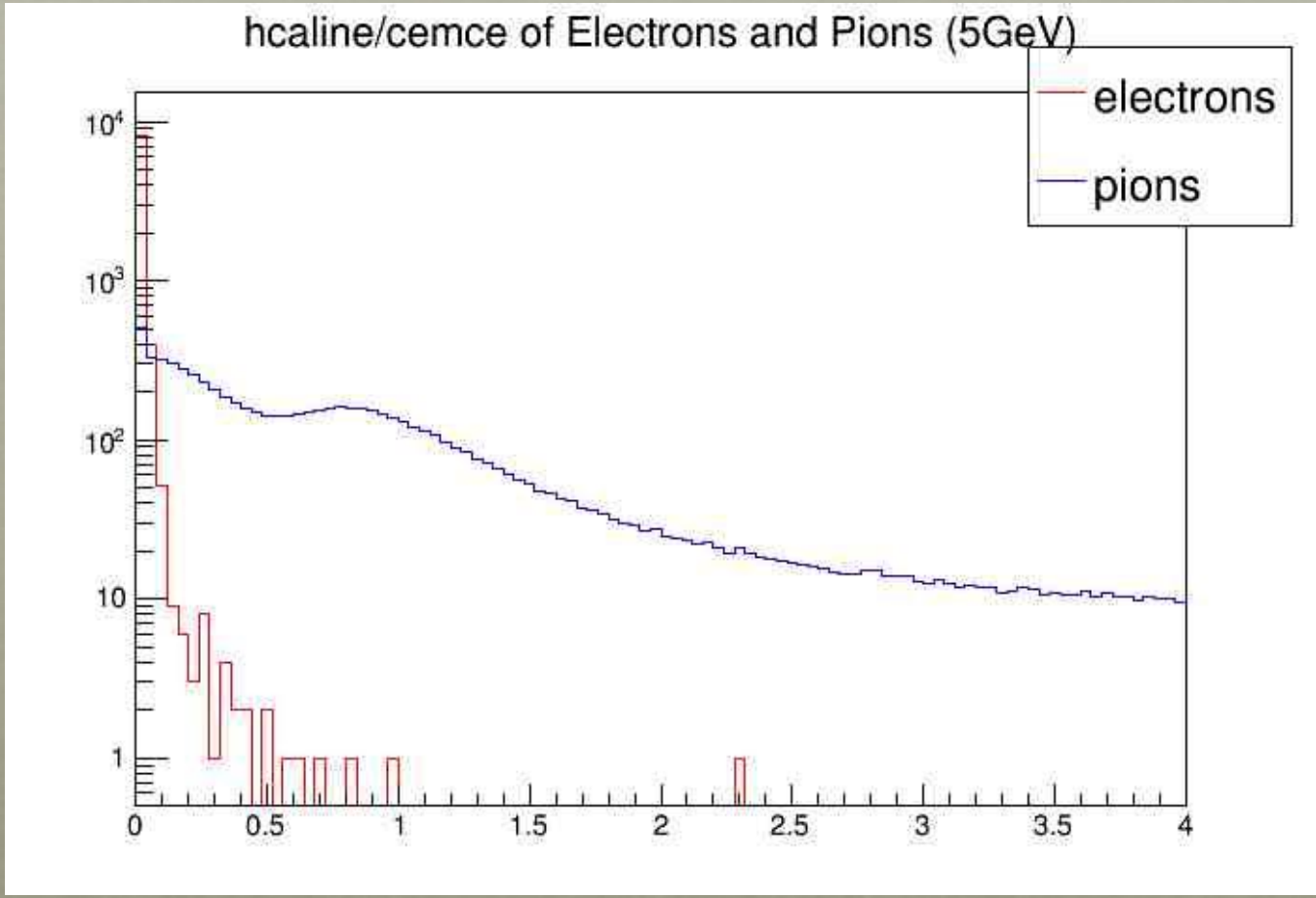




With EMCAL and E/p cut

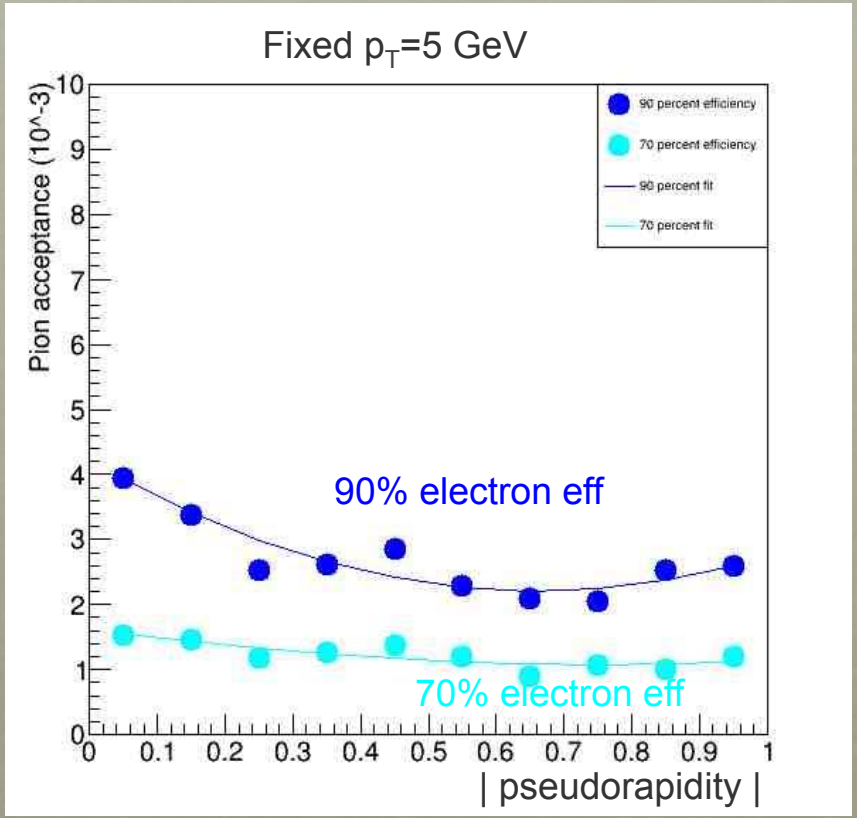


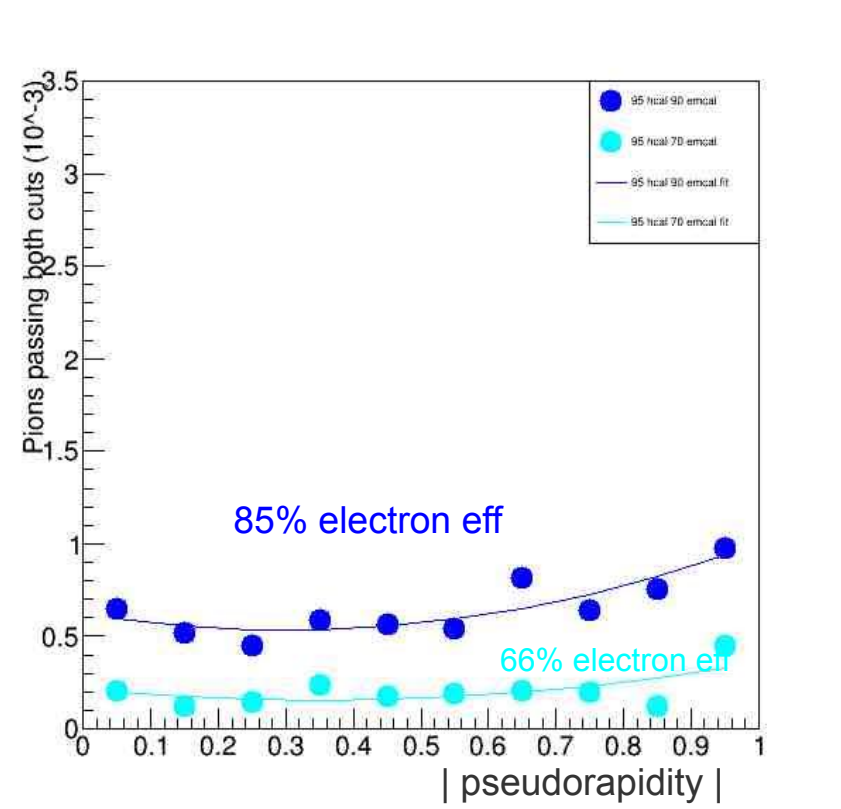
Inner HCAL E/ EMCAL E



Combining emcal +hcal

Electrons: 90 or 70%eff in emcal and 95% eff in hcal

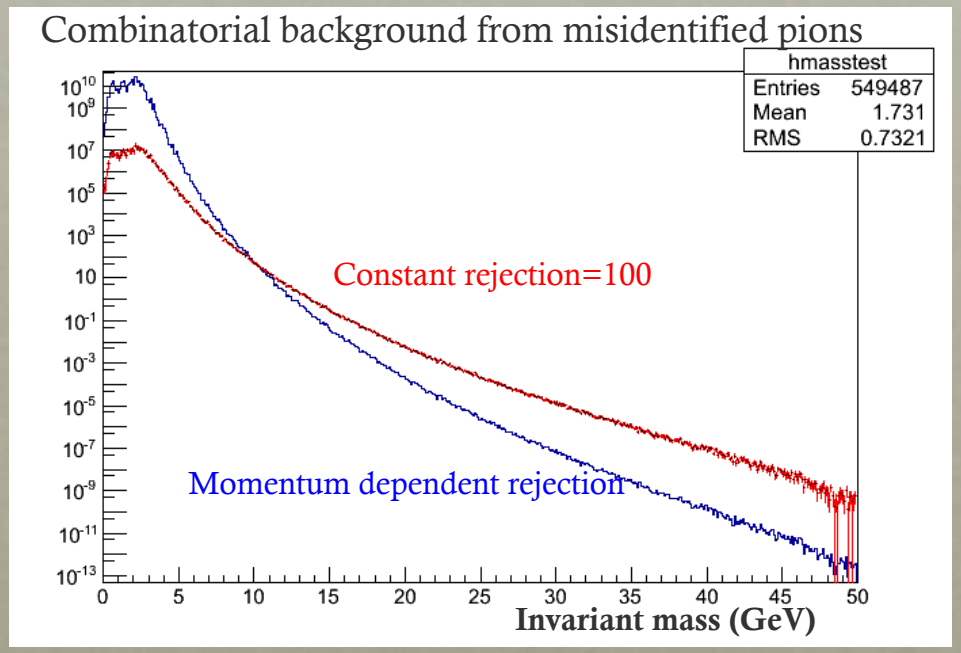


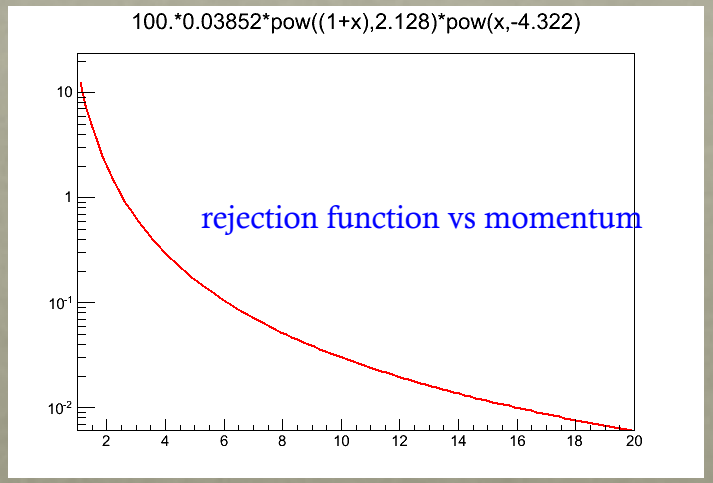


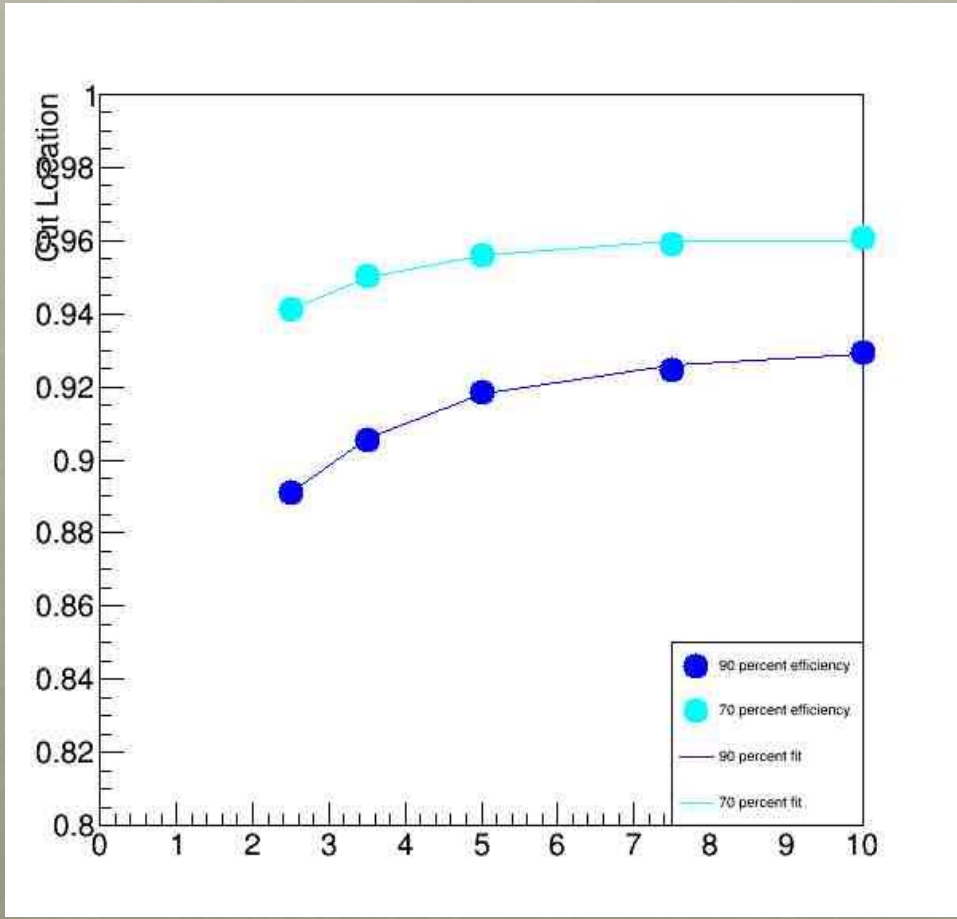
To do

- Repeat simulations with flat P (to verify eta dependence properly)
- Embed in hijing events to extract performane in 0-10% most central hijing events
- Use results to produce new upsilon background (see next slide)

Mass with P dependent pion rejection





BACKUP

E/P cut value vs p_T