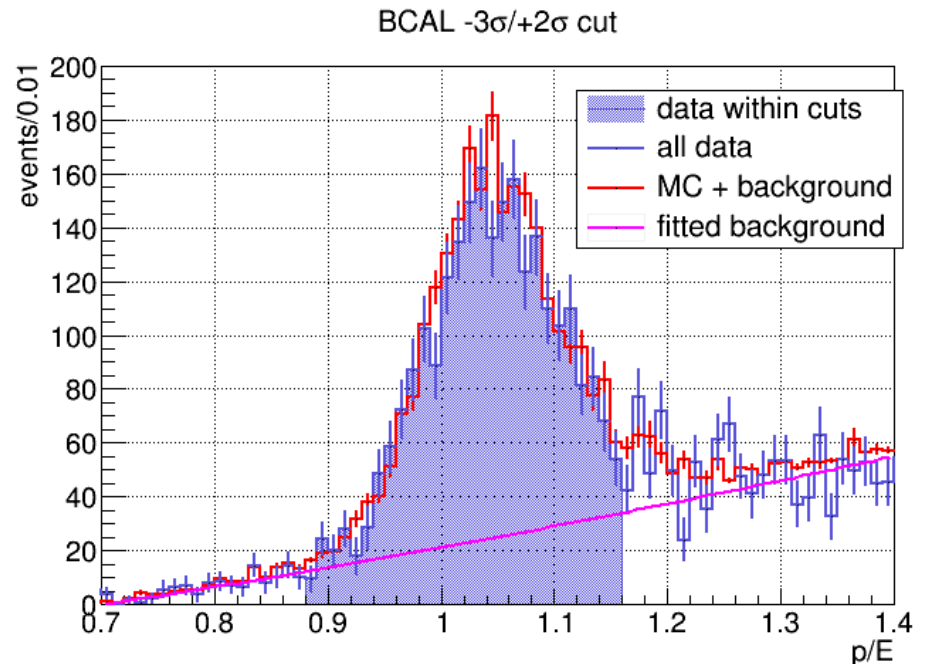
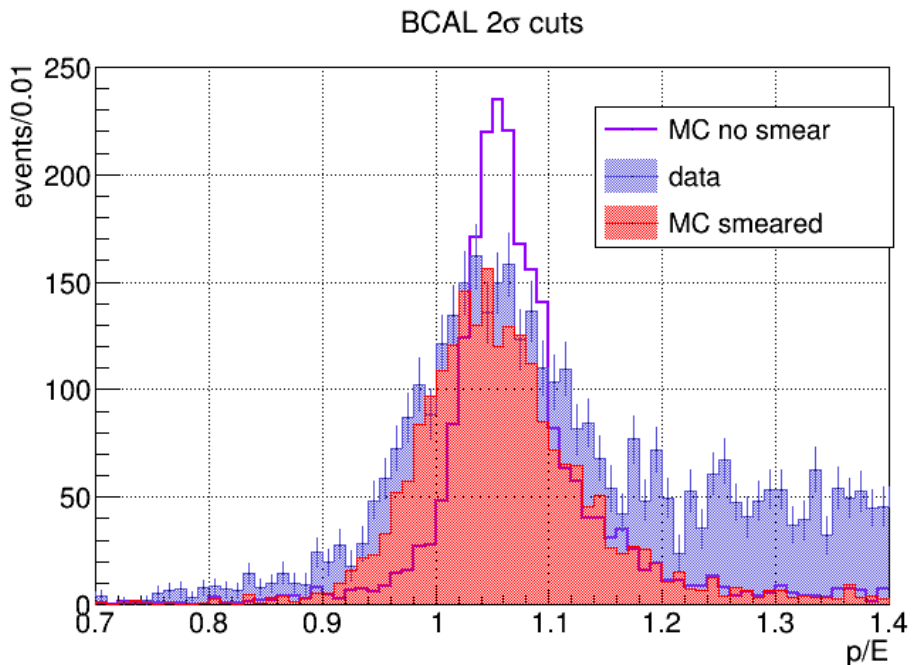


p/E cuts - BCAL

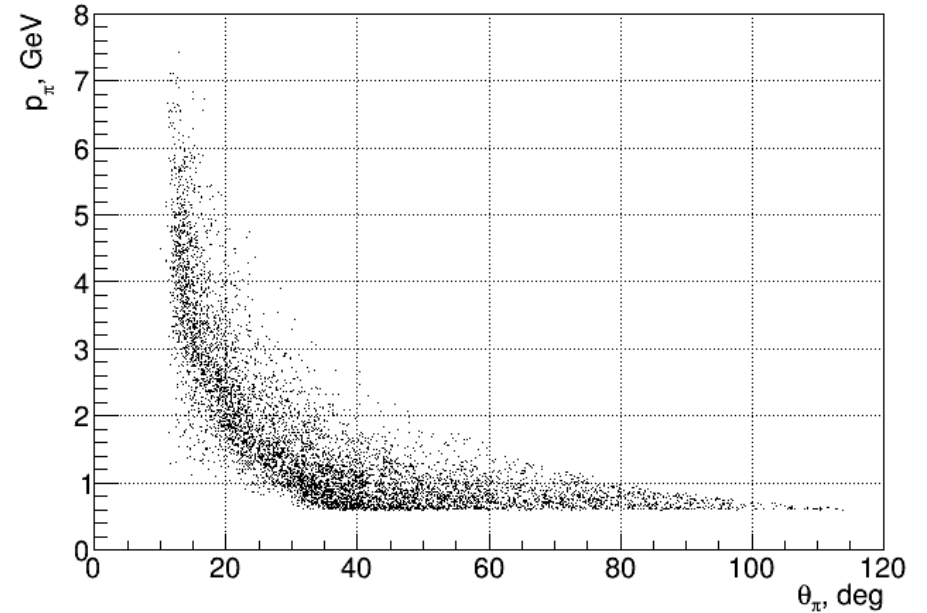
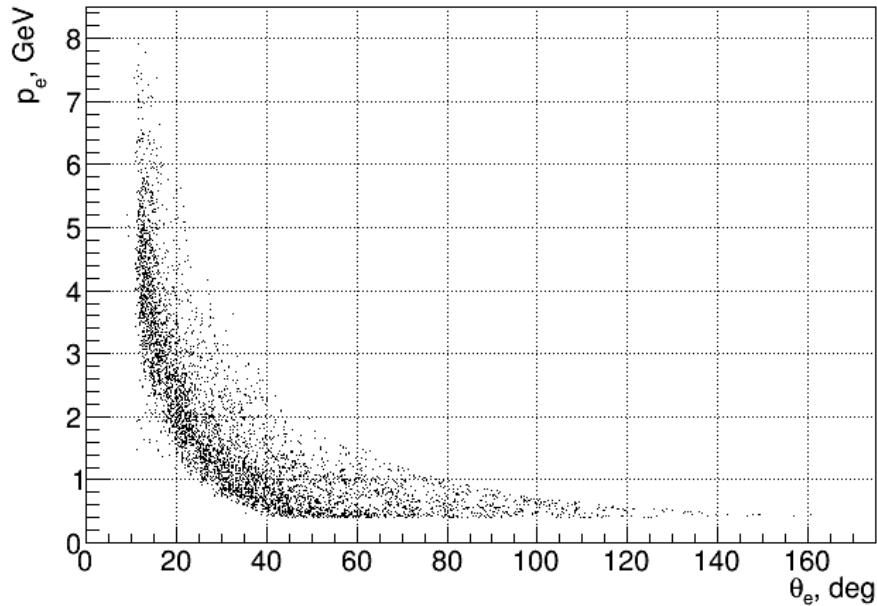
- Data vs BH MC simulations ($M(e^+e^-) > 1.5$ GeV)
- Additional smearing (from 4.3 to 5.8%) applied to MC to match data width and mean
- All other cuts applied (discussed later)
- Background fitted with polynomial (quadratic)
- Estimated background contribution for $-3\sigma/+2\sigma$ cut: 26%



p/E cuts – pion sample for background subtraction

- Electrons ($p > 400 \text{ MeV}$)

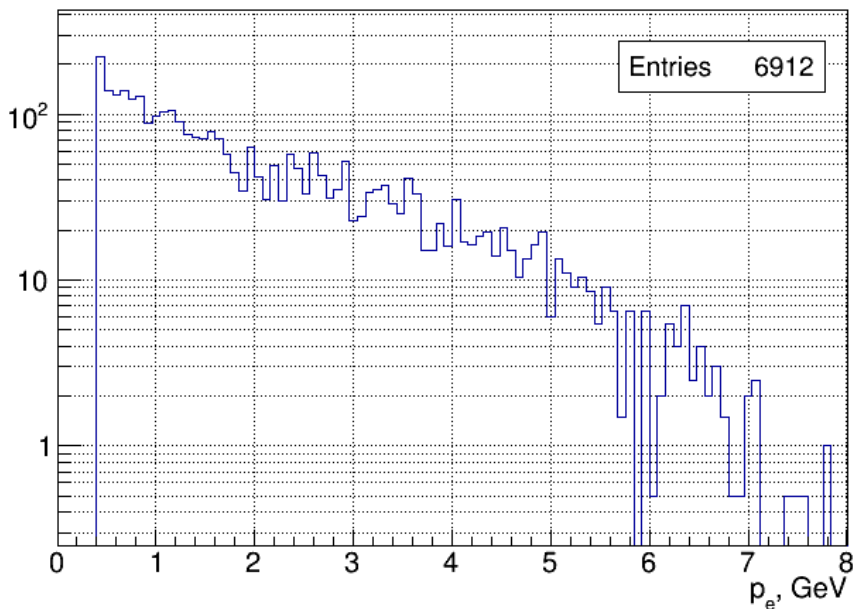
Pions (6σ anti-electron cut, $p > 600 \text{ MeV}$)



p/E cuts – pion sample for background subtraction

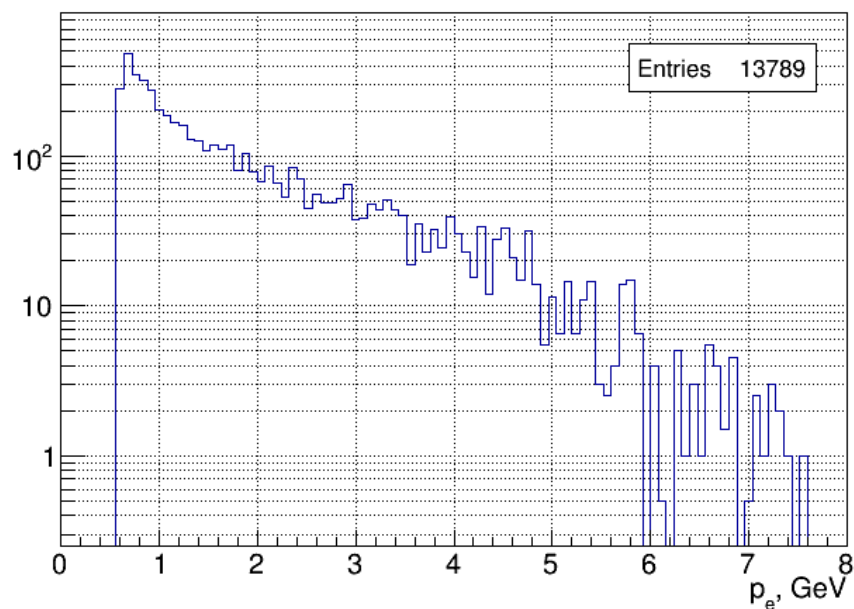
- Electrons ($p > 400 \text{ MeV}$)

electrons in BCAL



- Pions (6σ anti-electron cut, $p > 600 \text{ MeV}$)

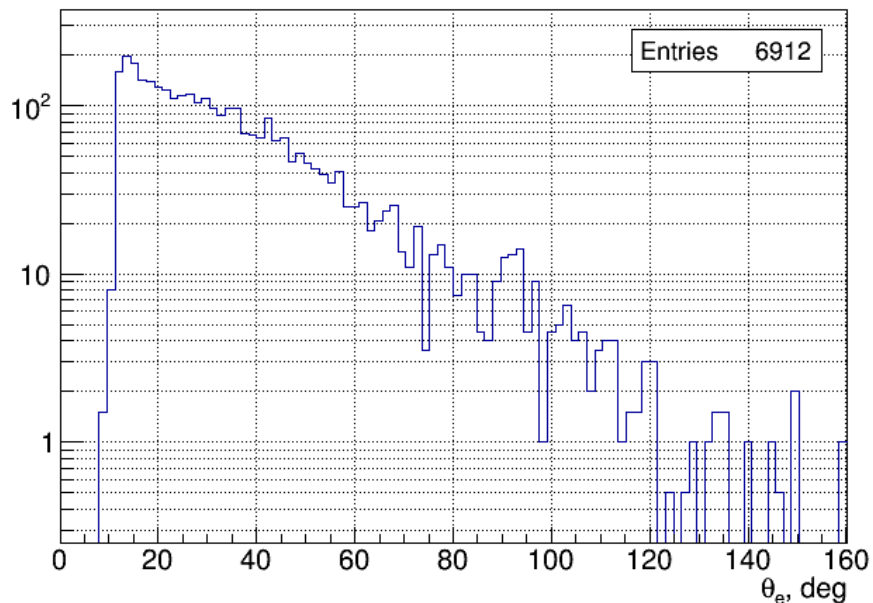
pions in BCAL



p/E cuts – pion sample for background subtraction

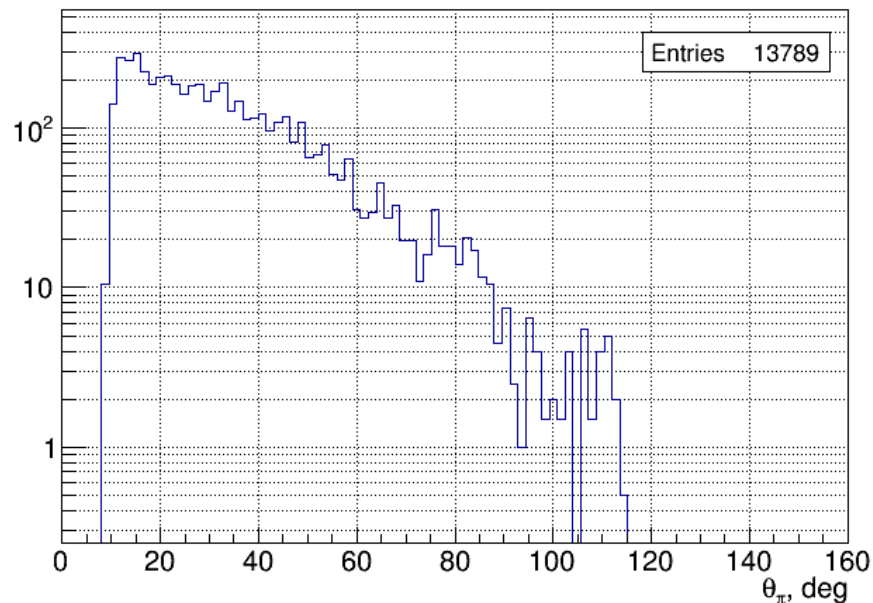
- Electrons ($p > 400 \text{ MeV}$)

electrons in BCAL



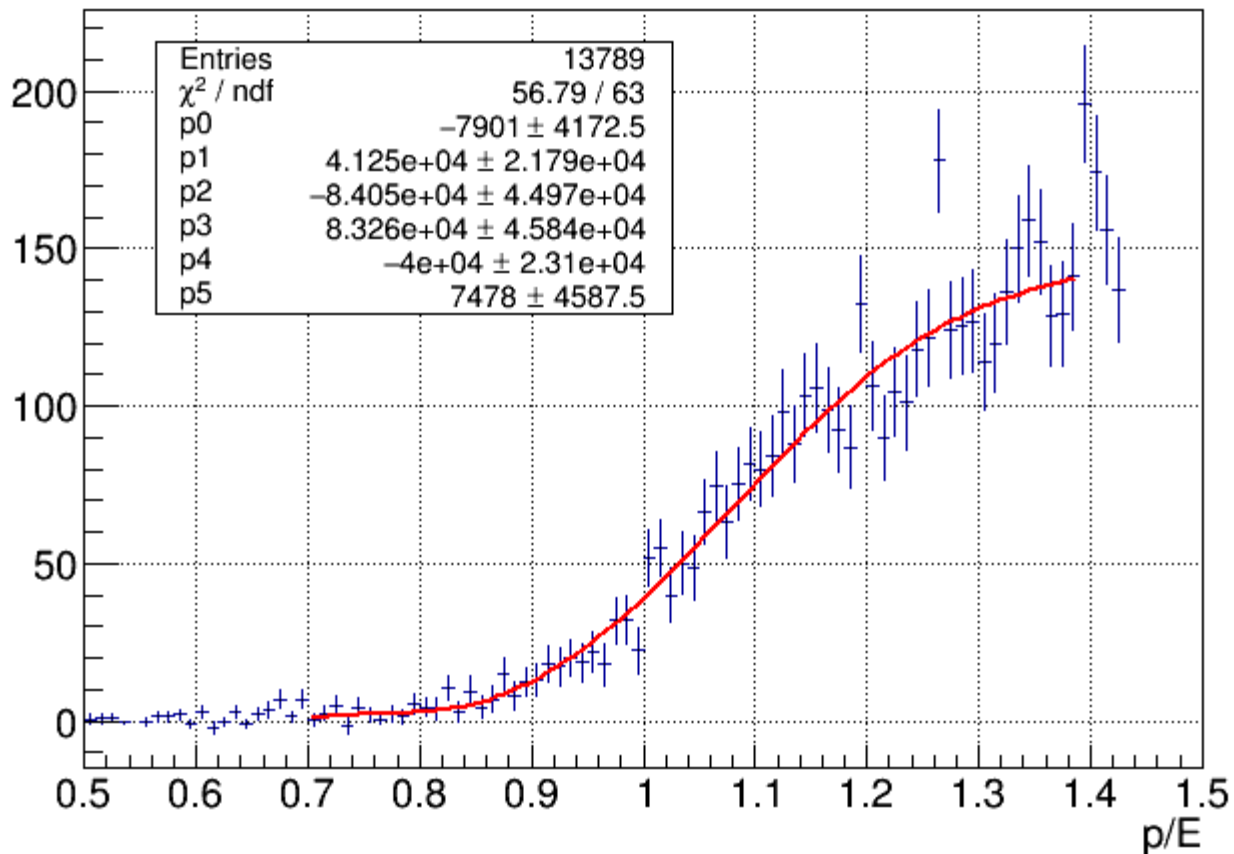
- Pions (6σ anti-electron cut, $p > 600 \text{ MeV}$)

pions in BCAL



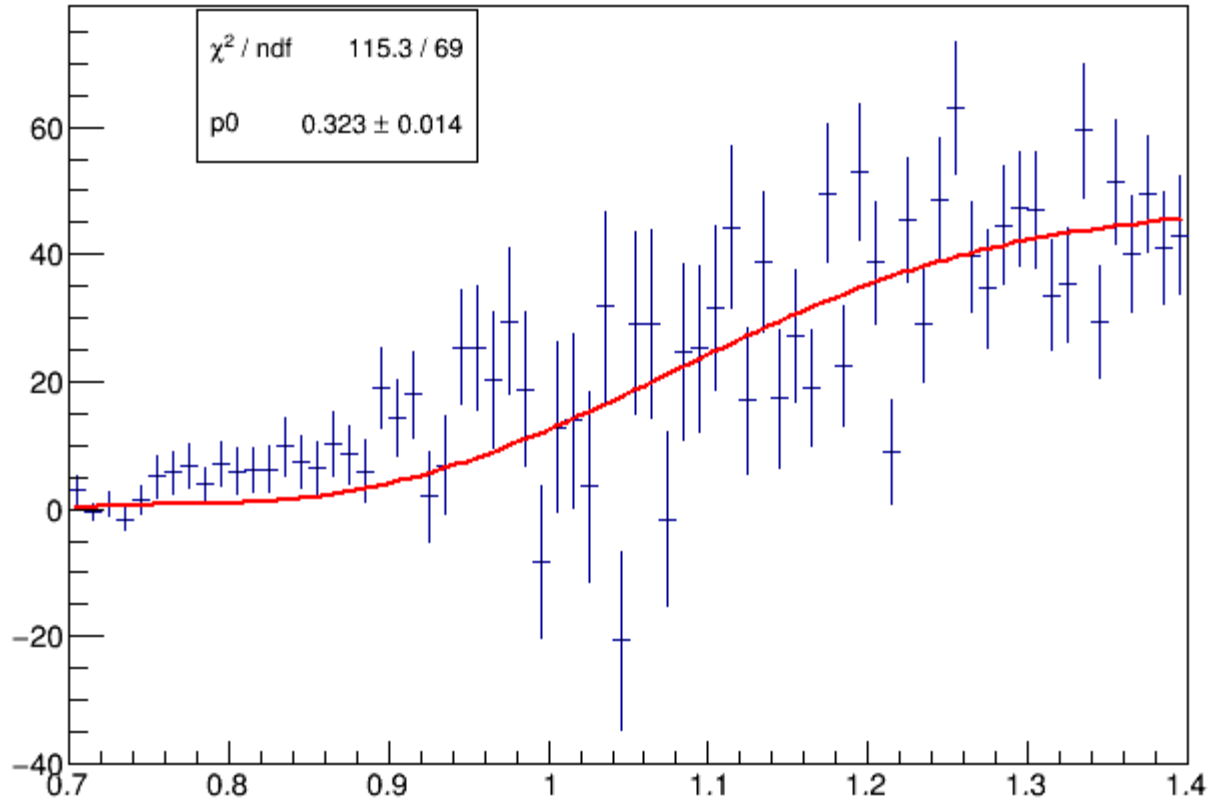
p/E cuts – pion sample for background subtraction

pions in BCAL



p/E cuts – pion sample for background subtraction

- Data – MC fitting

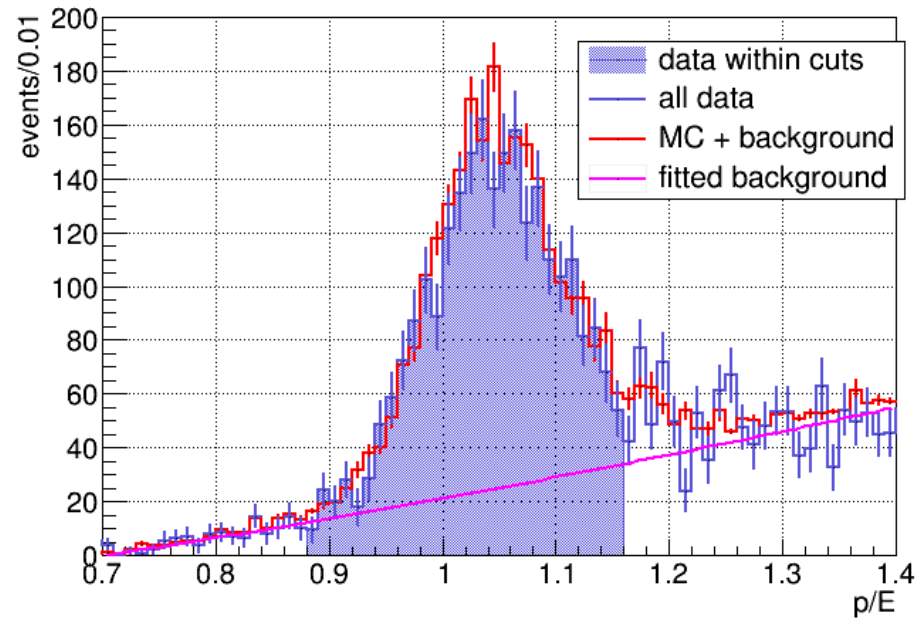


p/E cuts – pion sample for background subtraction

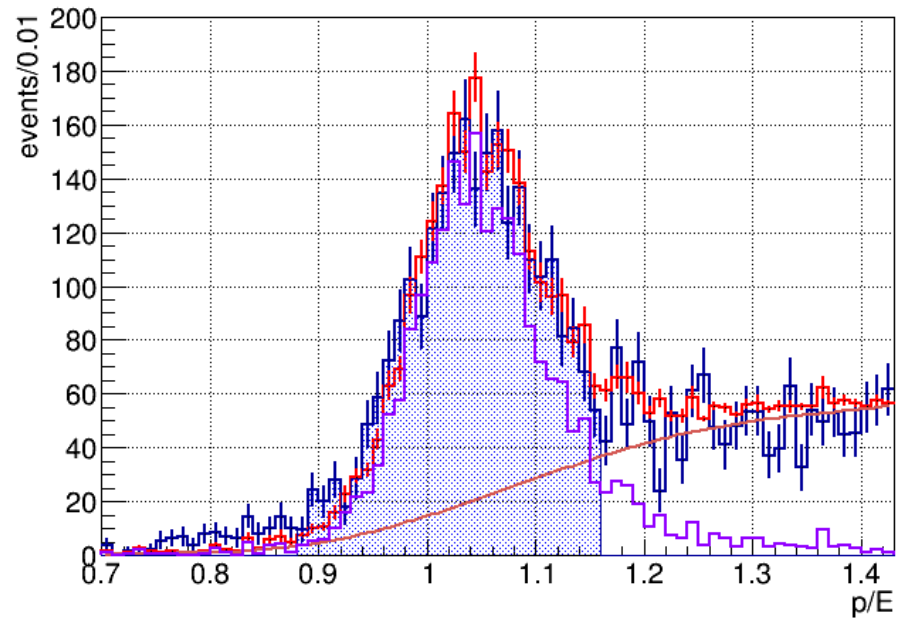
- Background from data fit (26%)

Background from pions (21%)

BCAL $-3\sigma/+2\sigma$ cut



BCAL 2σ , 21% contamination



p/E cuts – pion sample for background subtraction

- Background from pions

BCAL 2σ , 21% contamination

