

Cut Optimization

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Cuts

- Cherenkov Sum

$$R.cer.asum_c > \#$$

- Layer 1 of lead glass

$$(R.ps.e/p0) > \#$$

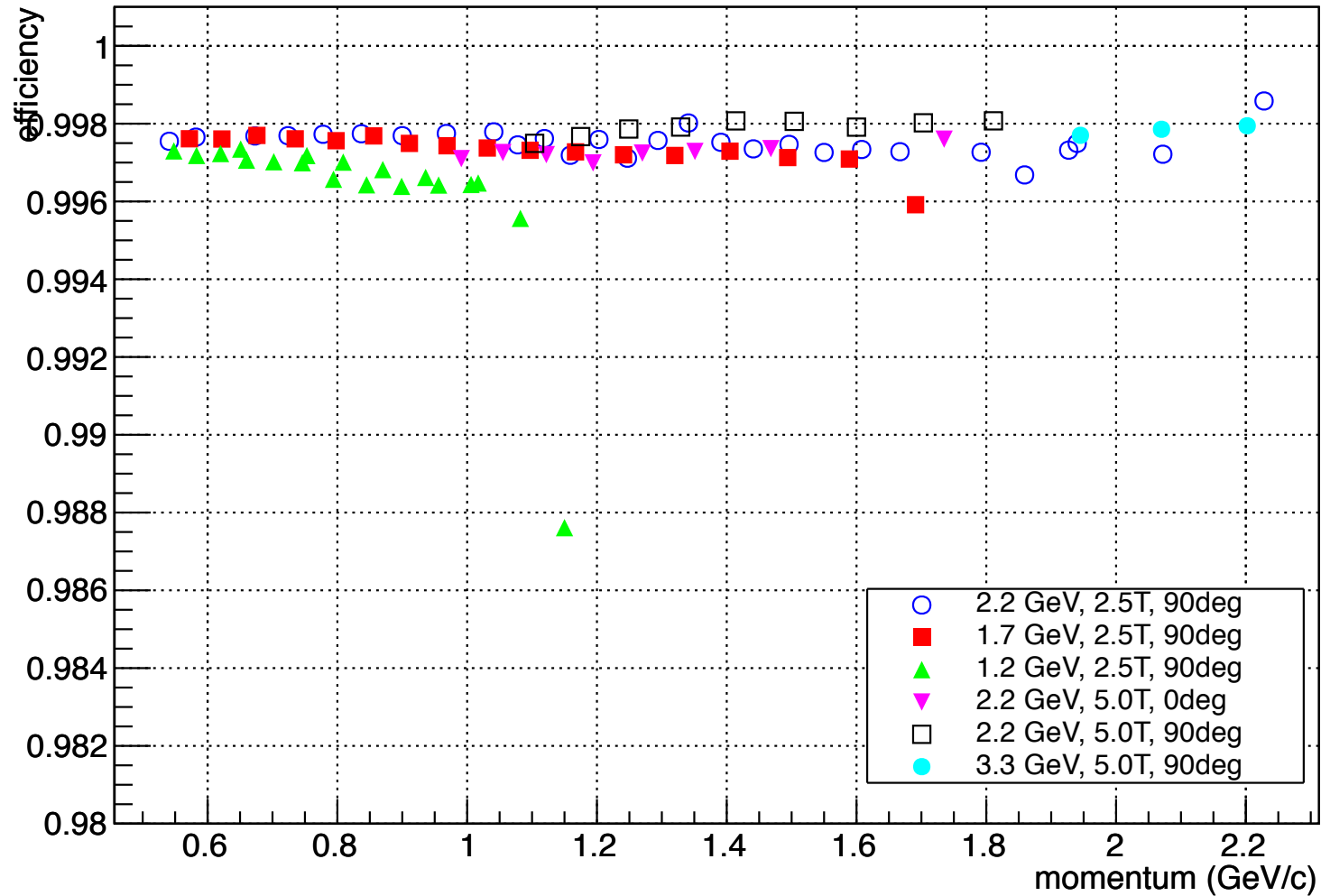
- E/p

$$(R.ps.e+R.sh.e)/p0 > \#$$

Cut Efficiencies (RHRS)

Electron
Efficiency

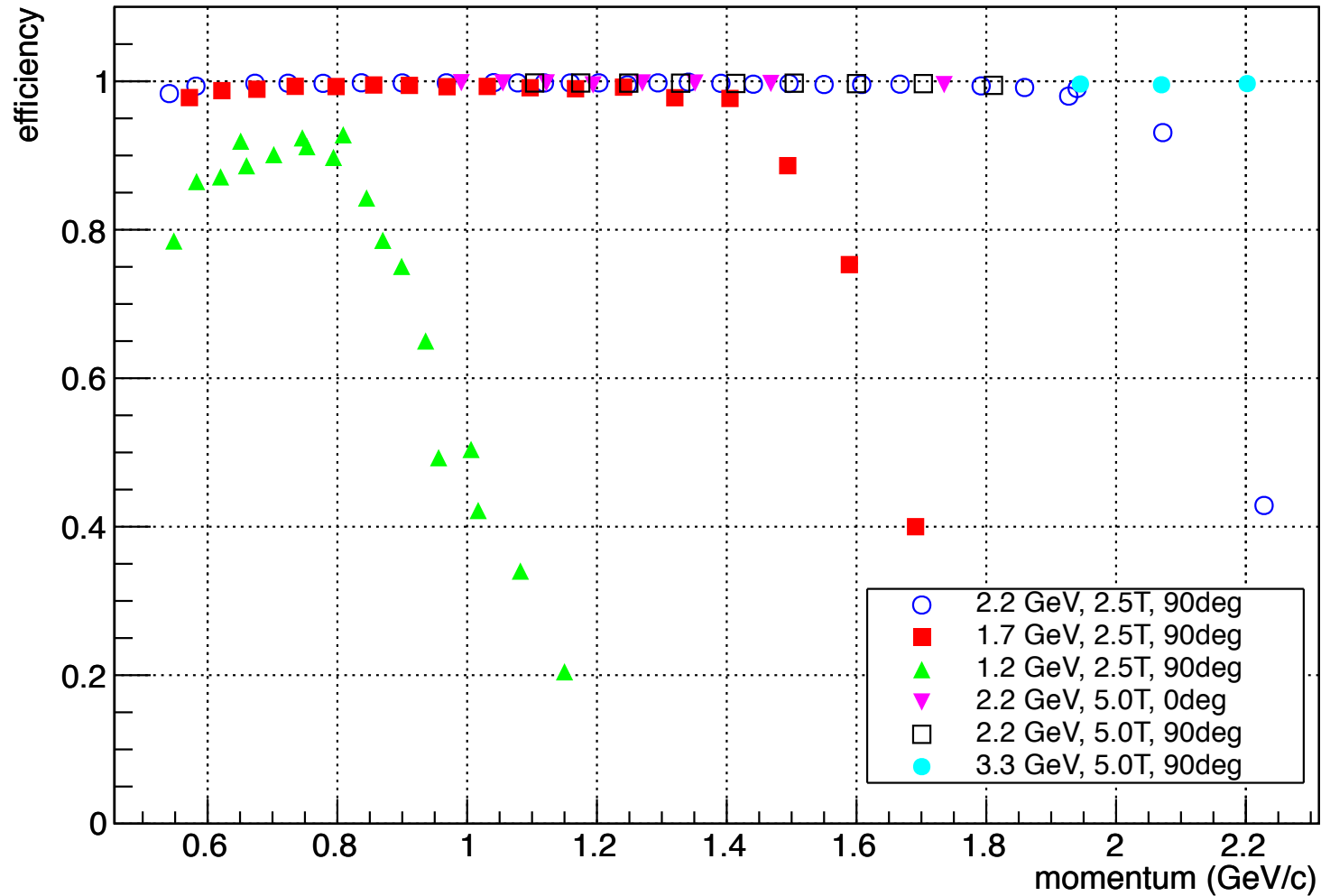
RHRS Cherenkov Cut Efficiency, R.cer.asum_c>150



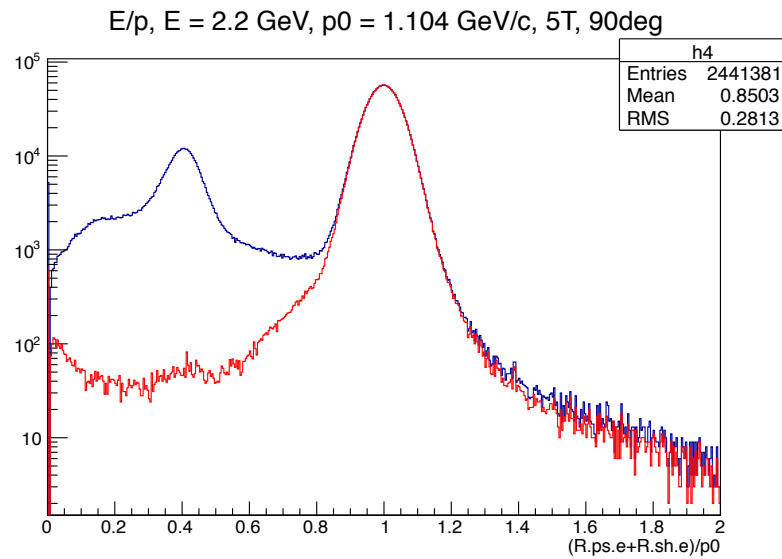
Cut Efficiencies (RHRS)

Pion Rejection
Efficiency

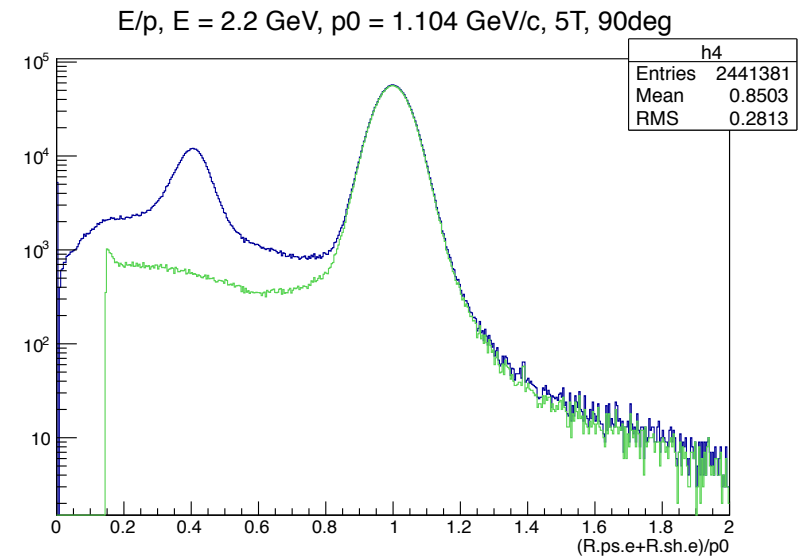
RHRS Cherenkov Cut Efficiency, $R.cer.asum_c > 150$



Pion Contamination (RHRS)

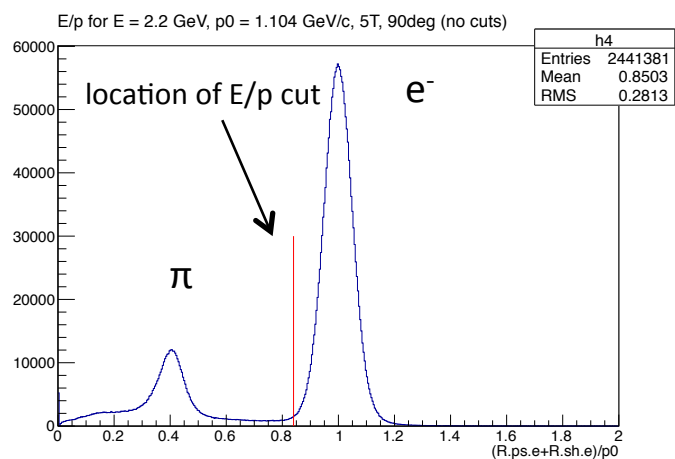
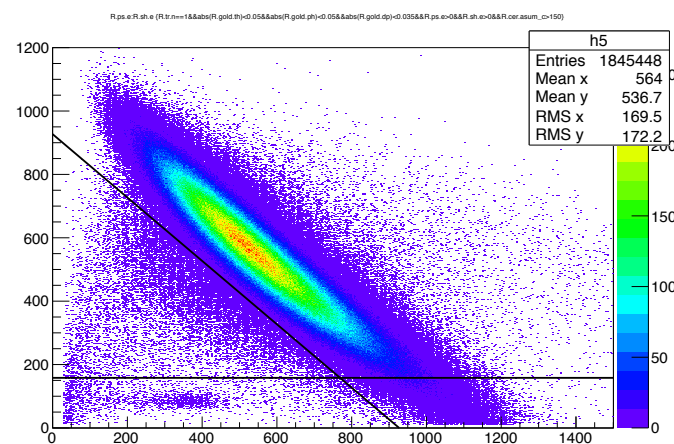
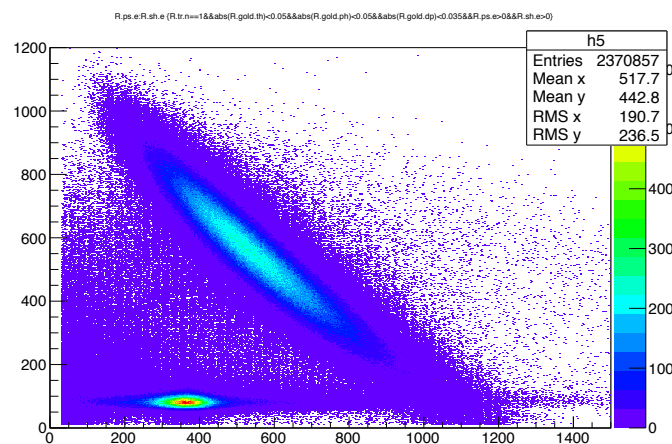


R.cer.asum_c > 150



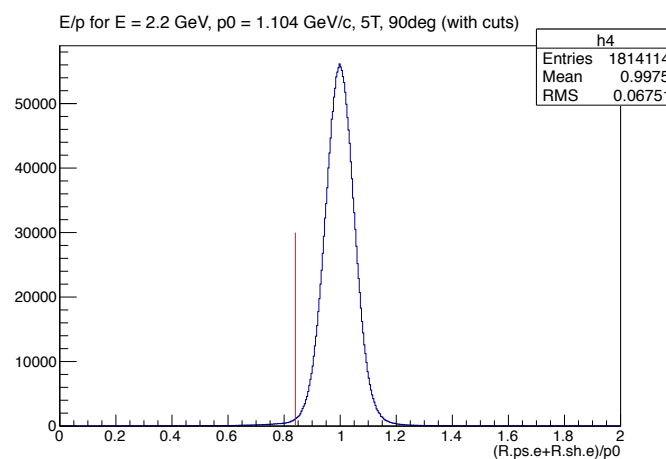
R.ps.e/p0 > 0.147

Pion Contamination (RHRS)



No cuts:

$$\pi/e = 0.4187$$

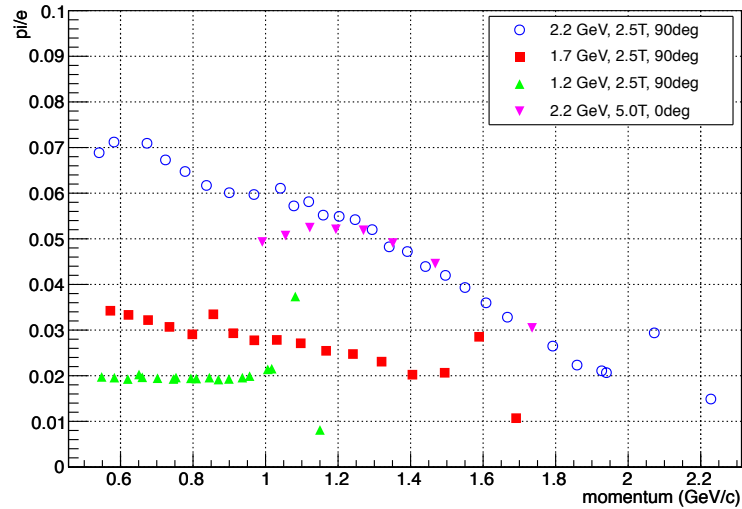


With Cherenkov and pre-shower cuts:

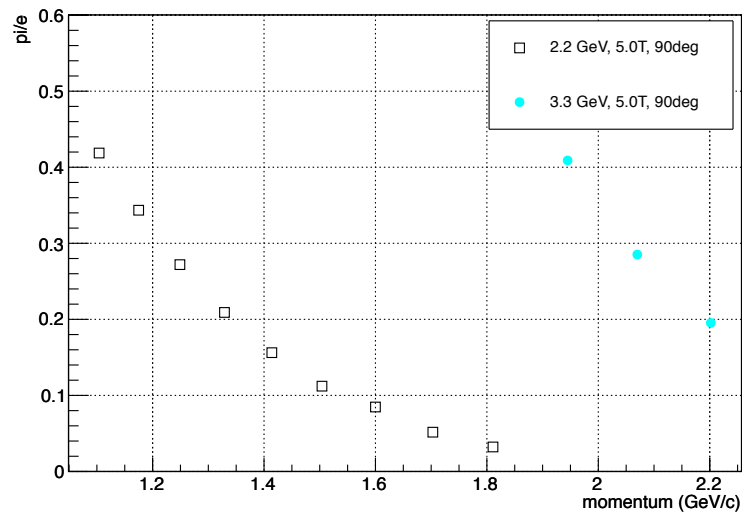
$$\pi/e = 0.0083$$

Pion Contamination (RHRS)

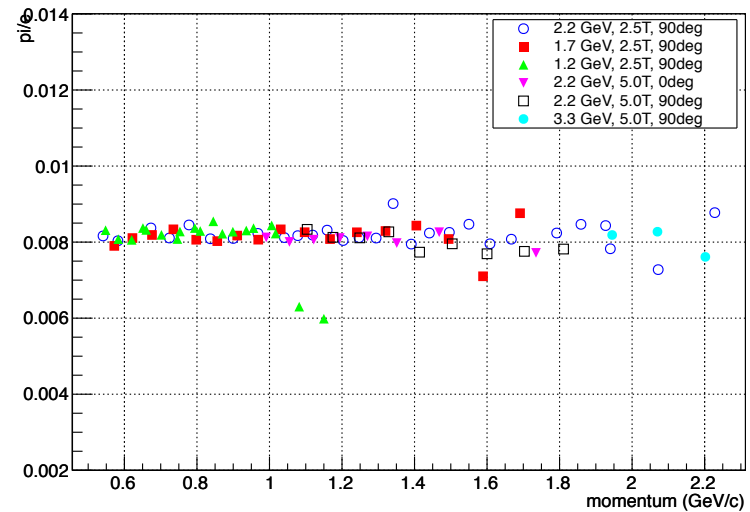
RHRS pi/e ratio (no cuts)



RHRS pi/e ratio (no cuts)



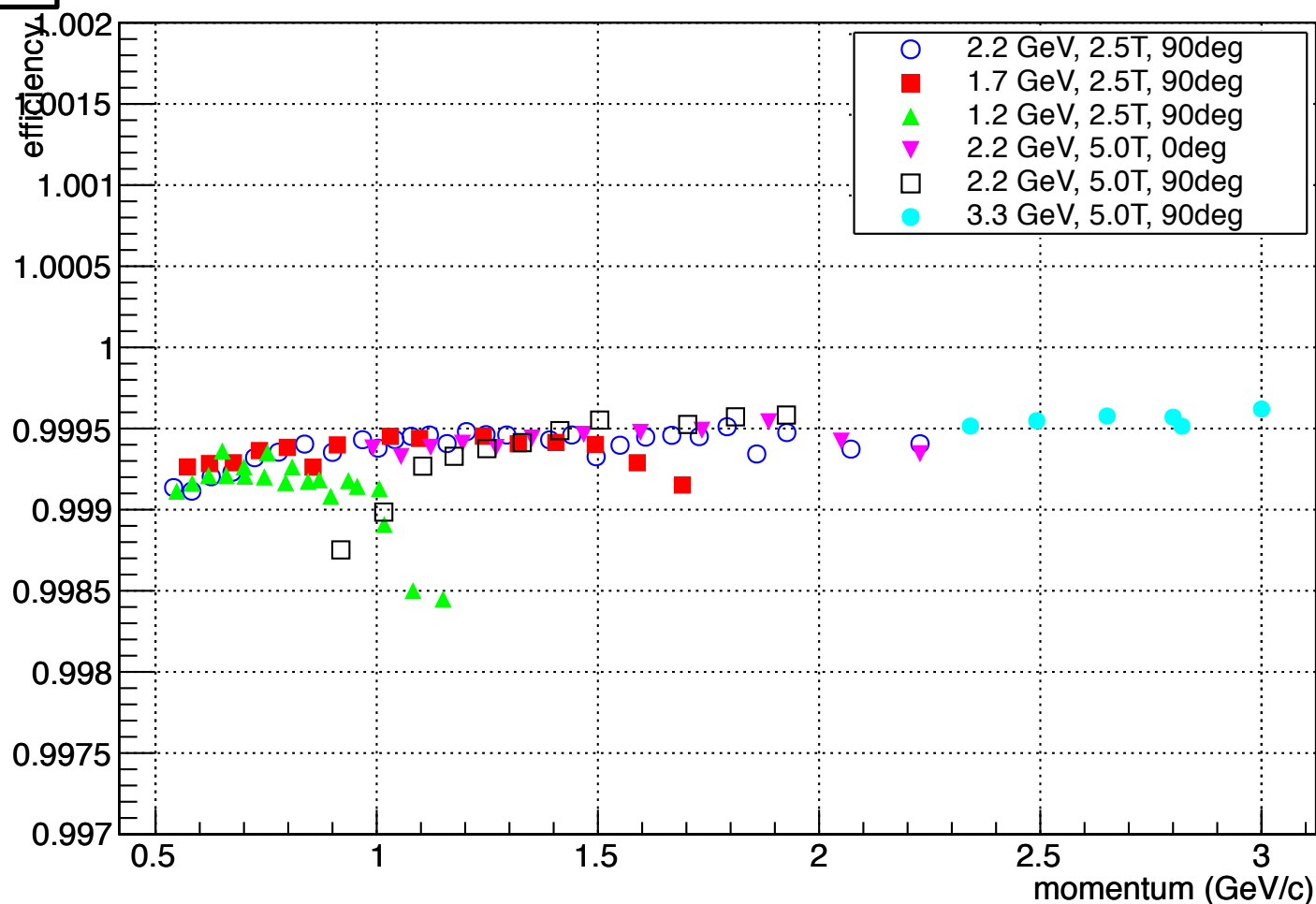
RHRS pi/e ratio



Cut Efficiencies (LHRS)

LHRS Gas Cherenkov Cut Efficiency

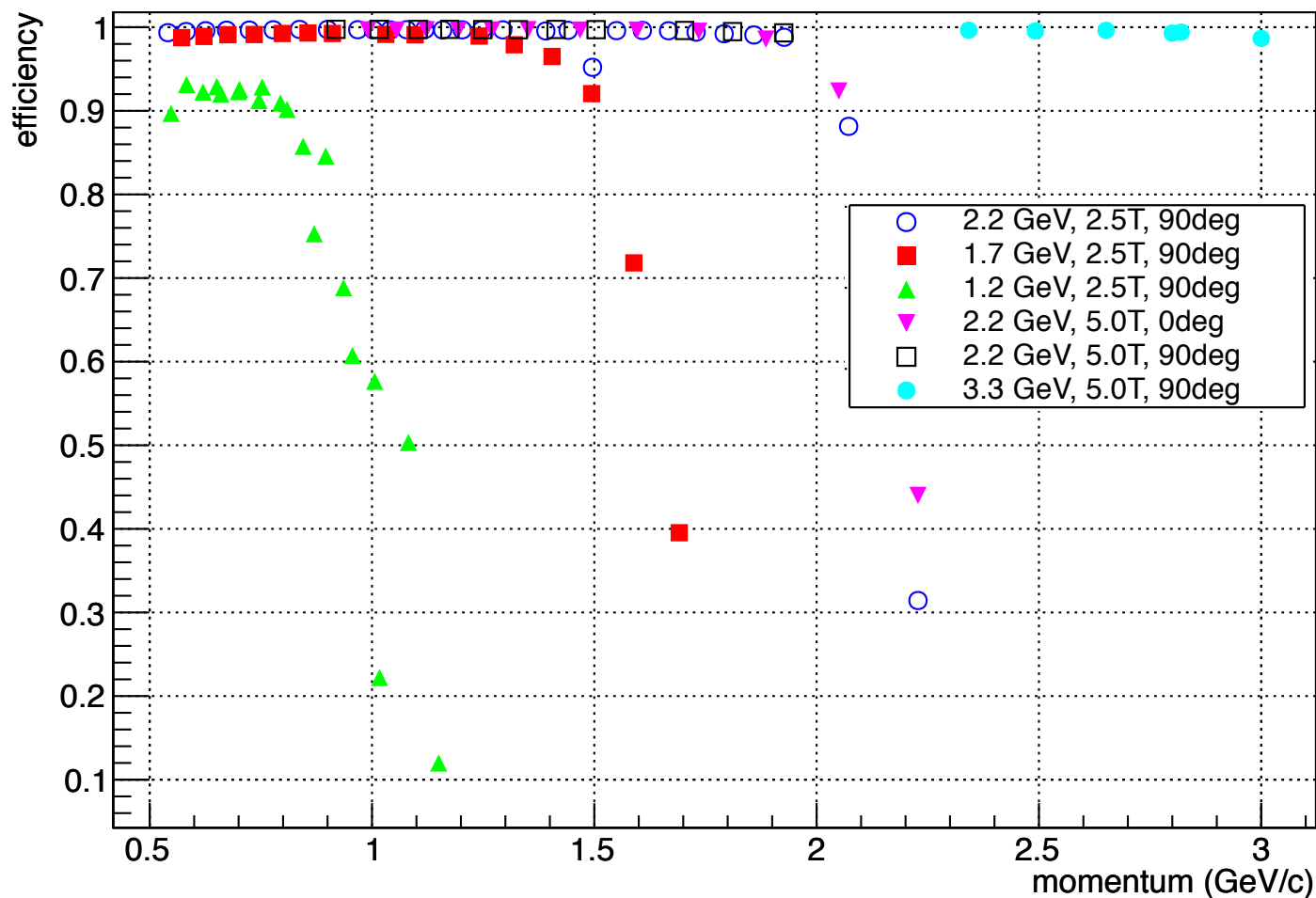
Electron
Efficiency



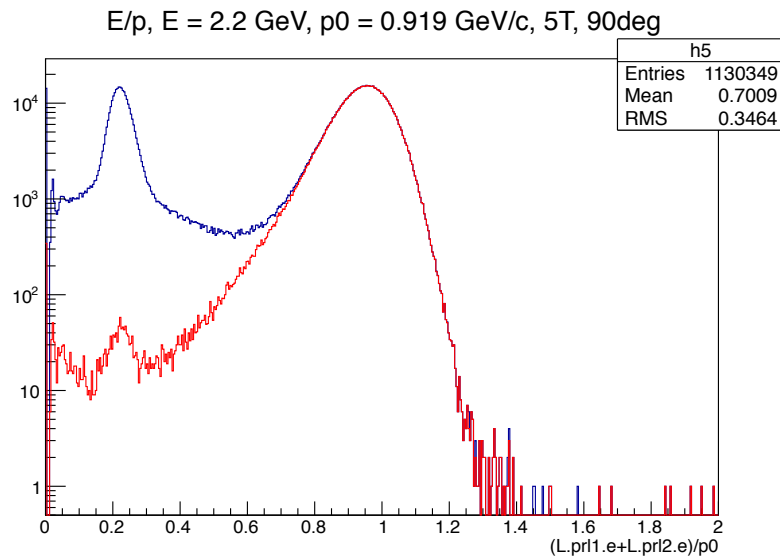
Cut Efficiencies (LHRS)

Pion Rejection
Efficiency

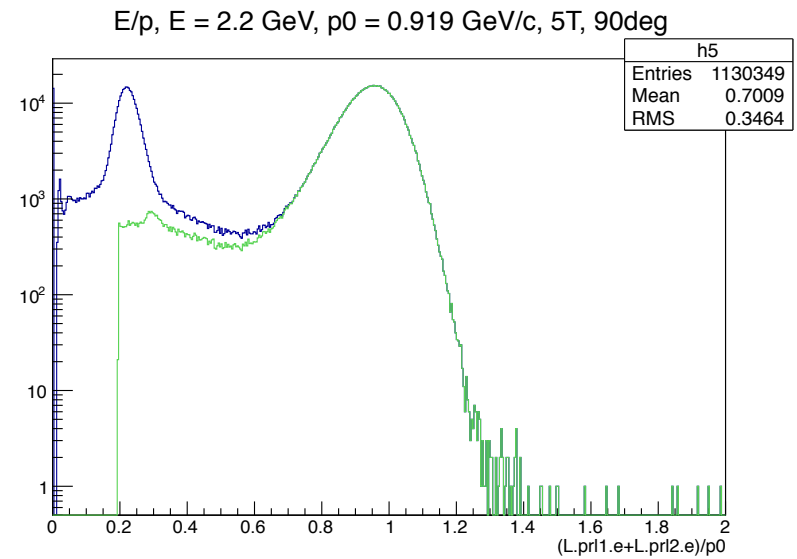
LHRS Gas Cherenkov Cut Efficiency



Pion Contamination (LHRS)

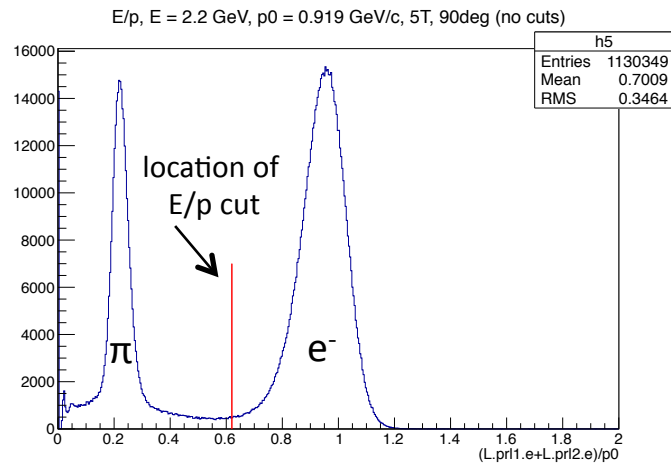
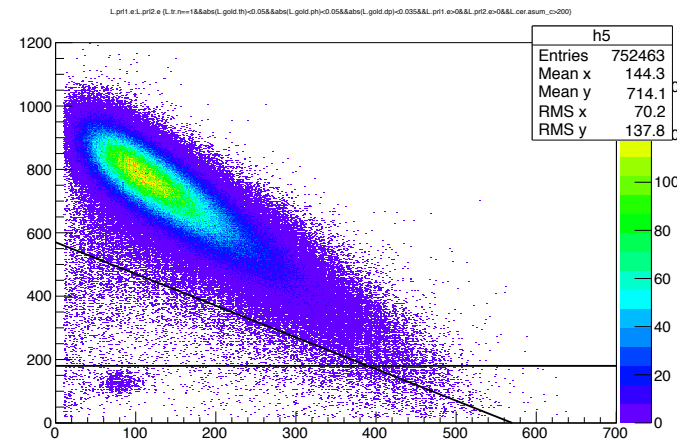
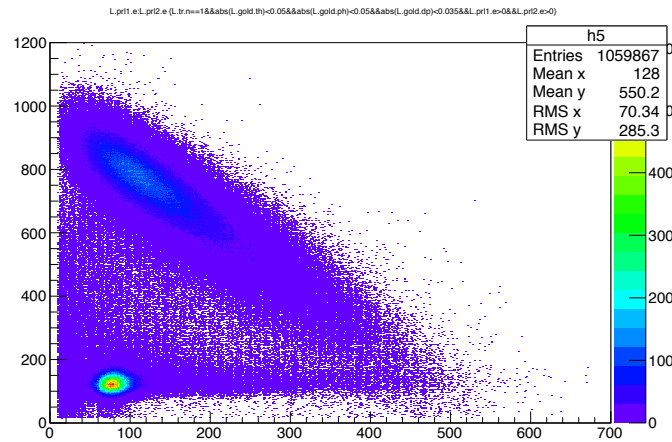


L.cer.asum_c > 200



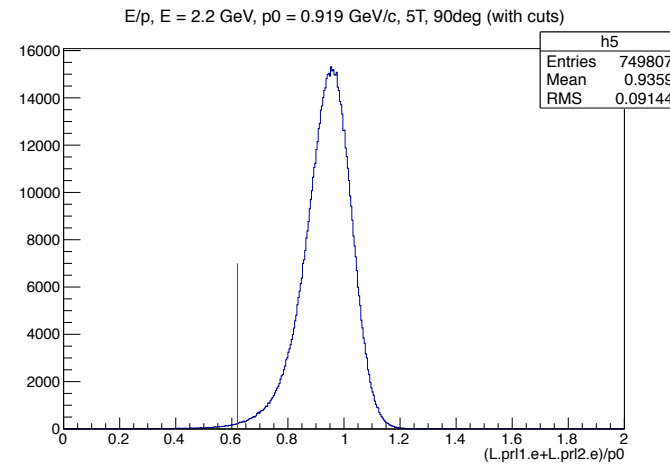
L.prl1.e/p0 > 0.196

Pion Contamination (LHRS)



No cuts:

$$\pi/e = 0.681$$

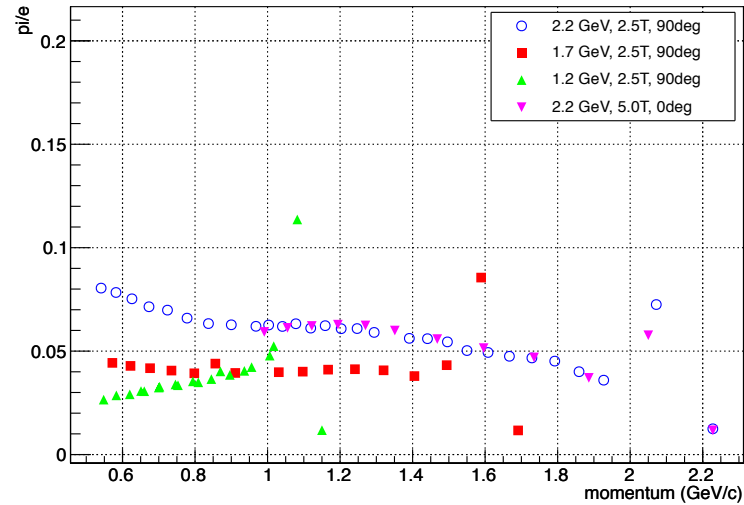


With Cherenkov and pre-shower cuts:

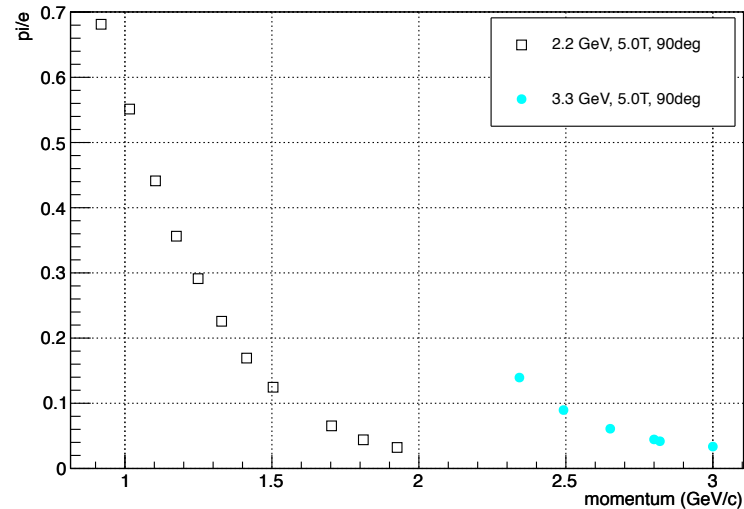
$$\pi/e = 0.0071$$

Pion Contamination (LHRS)

LHRS pi/e ratio (no cuts)



LHRS pi/e ratio (no cuts)



LHRS pi/e ratio

