

Looking at HMS 1255:Trigger PID legs Eff.

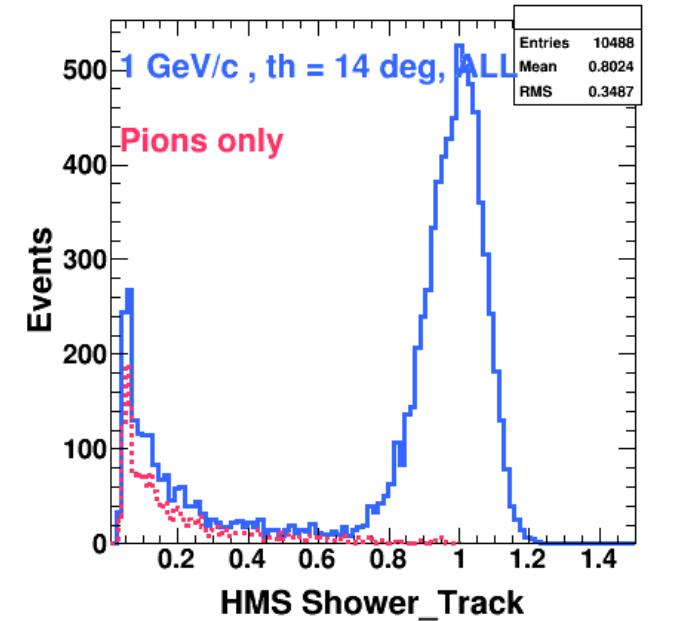
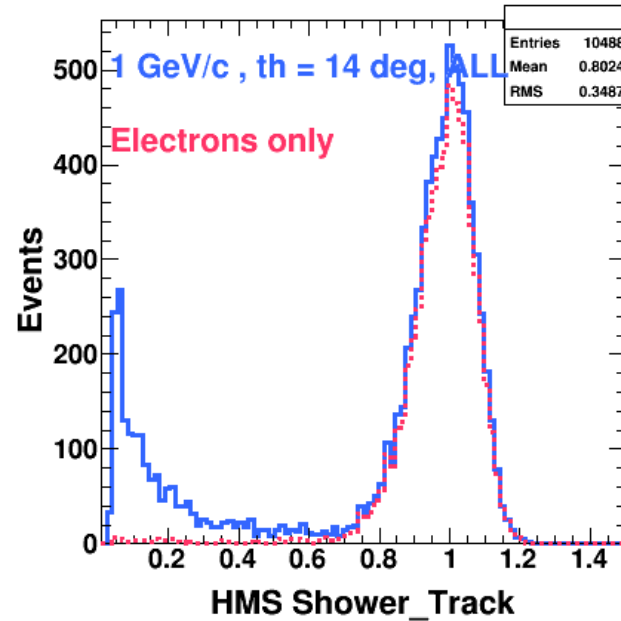
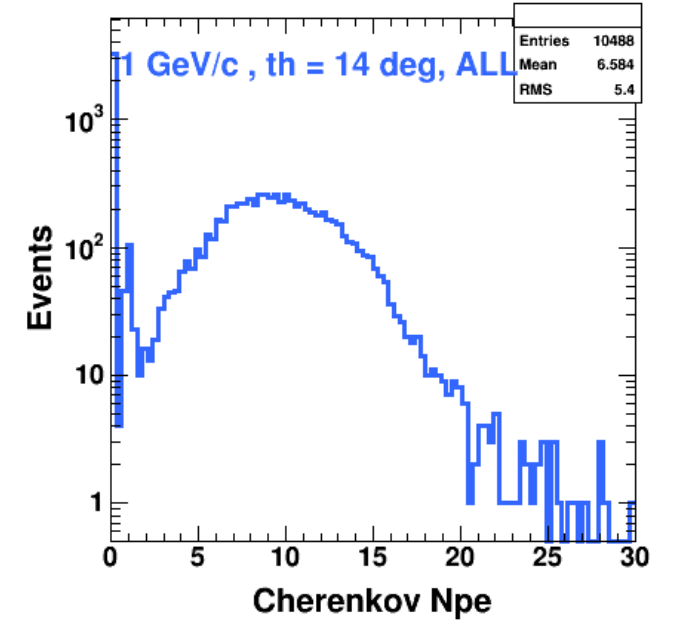
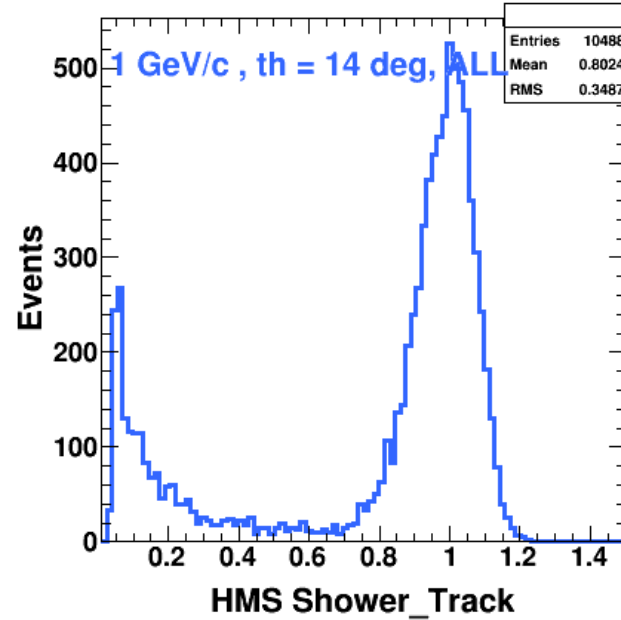
S. Malace

HMS Run 1255: Preshower Legs Only

→ Select a **Clean** Sample of Pions and Electrons with the other PID

Electron only: $N_{peSum} > 5$.

Pions only: $N_{peSum} == 0$.



HMS Run 1255: Preshower Legs Only

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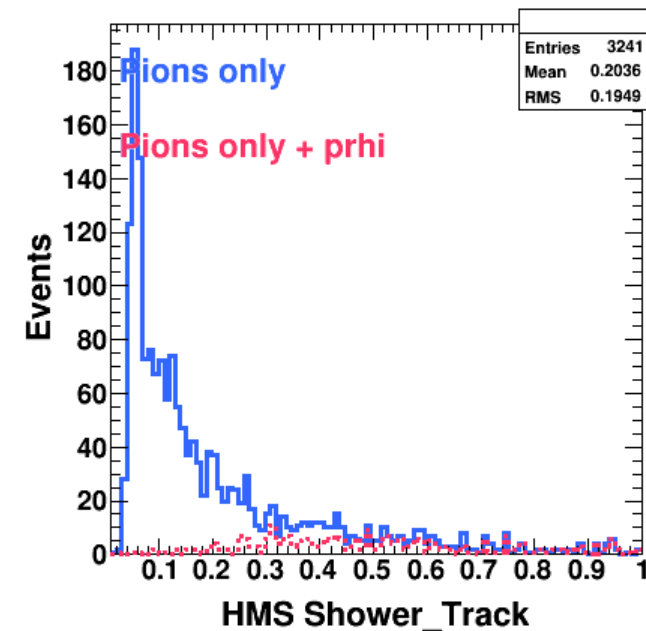
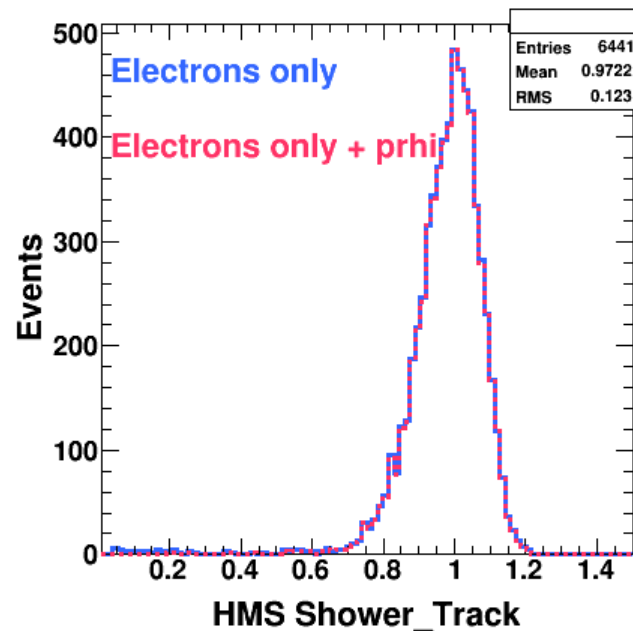
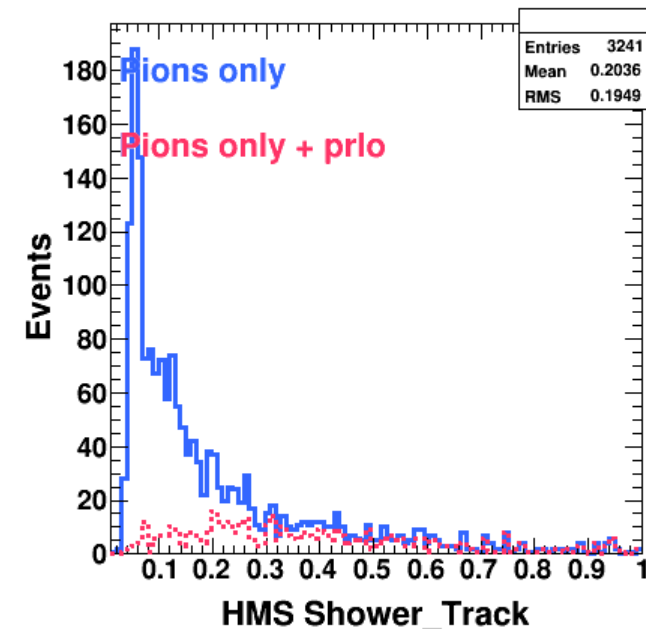
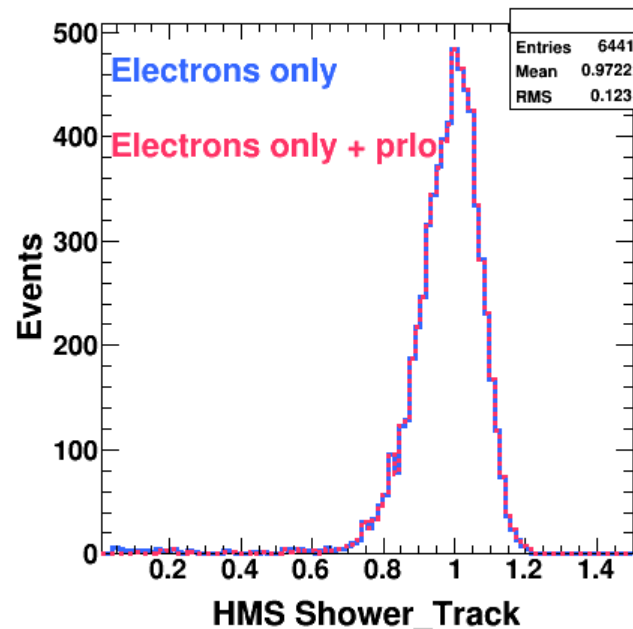
PRLO TH. = 40 mV

PRHI TH. = 60 mV

Both thresholds have little effect on electrons and cut out lots pf pions

| | Electrons only | Pions only |
|---------------|----------------|------------------|
| PRLO | 6354 | 503 |
| No PRLO | 6441 | 3241 |
| Eff. or Ratio | 98.6 | 503/3241 = 0.155 |

| | Electrons only | Pions only |
|---------------|----------------|-----------------|
| PRHI | 6304 | 293 |
| No PRHI | 6441 | 3241 |
| Eff. or Ratio | 97.9 | 293/3241 = 0.09 |



HMS Run 1255: Preshower Legs Only

→ Shown is effect of threshold cuts on what should be the un-normalized energy deposition in the first two blocks in HMS Calorimeter

PRLO TH. = 40 mV

PRHI TH. = 60 mV

For fun:

→ Back in 2004 John Arr. set the following thresholds for HMS trigger PID legs

User name johna

Log entry time 18:39:55 on June 19, 2004

Entry number 85706

This entry is a followup to: 85705

keyword=Readable version of the thresholds table

THRESHOLDS (-mV)

Run # hcer hshlo hprlo hprhi scer sshlo sprlo sprhi

| | | | | | | | | |
|-------|------|------|------|------|------|------|------|------|
| 48816 | 22.5 | 58 | 20 | 32 | 20.4 | 57 | 20.8 | 32.1 |
| 48824 | 27.4 | 90.4 | 32.0 | 48.3 | 27.5 | 78.0 | 30.7 | 38.8 |
| 48825 | 24.1 | 80.8 | 25.8 | 44.8 | 27.5 | 75.0 | 18.7 | 32.1 |

