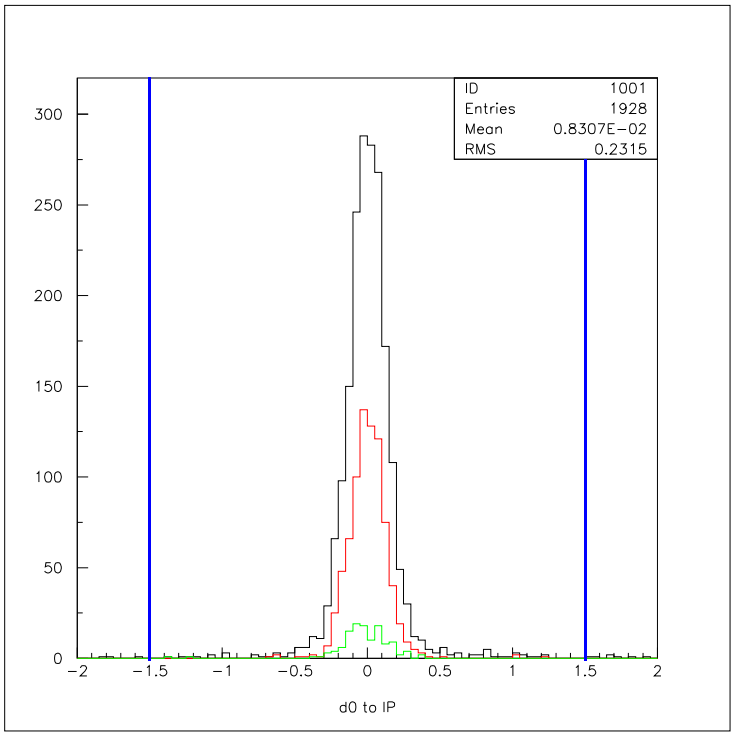
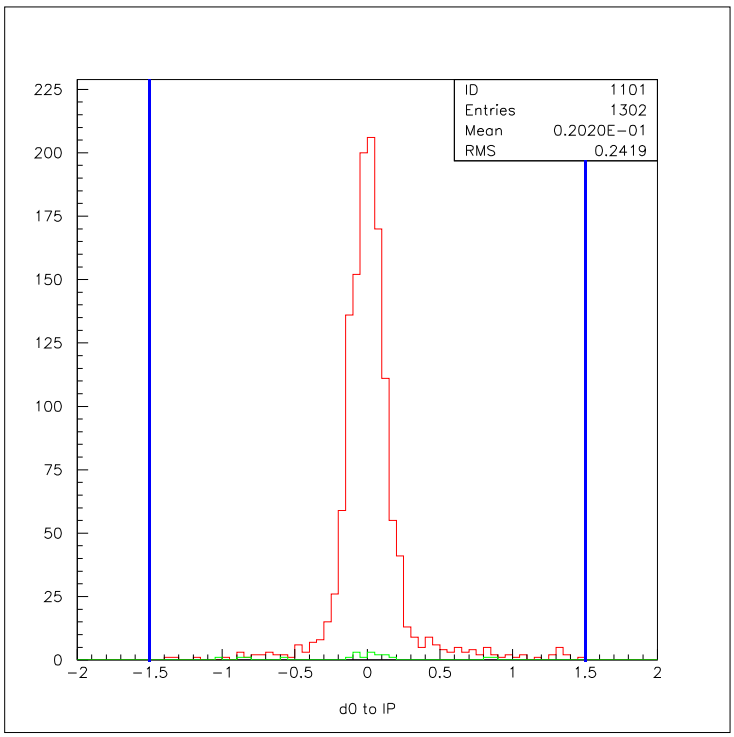
# Radiative Bhabha Selection

- Compare Plots Of Variables For
  - MC (1000 Events)
    - All Events
    - Events Passing L3 Radiative Bhabha Filter (398 Events)
    - Events Passing EmcRBbMain (200 Events) - Of Which 60 fail L3
  - Data (10000 Events)
    - Events Passing L3 Radiative Bhabha Filter (286 Events)
    - Events Passing EmcRBbMain (38 Events) - Of Which 6 fail L3
  - Variables Used Are Taken From Current Filter
  - MC Limits

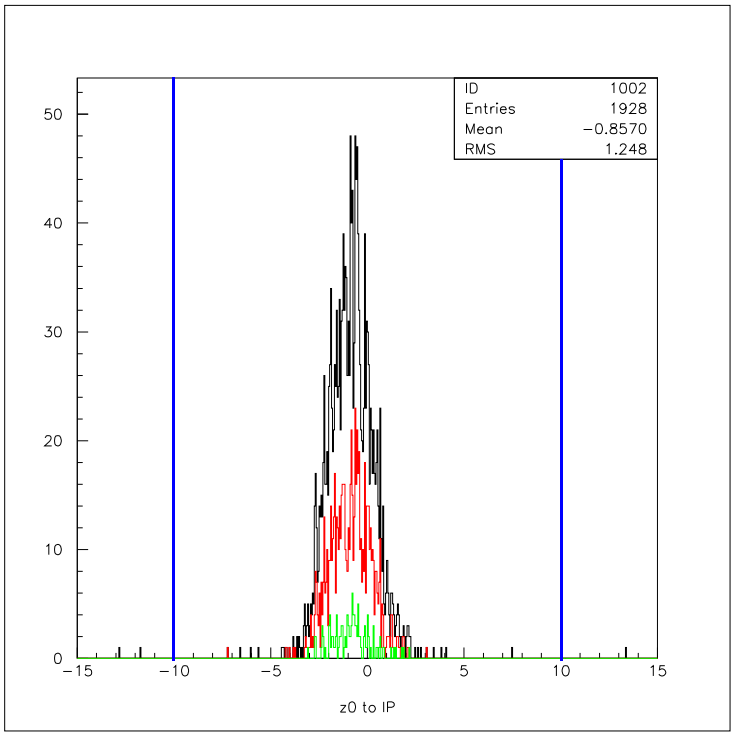
```
module talk GfiBhwide
  minThetaPositron set 13.0
  maxThetaPositron set 142.0
  minThetaElectron set 13.0
  maxThetaElectron set 142.0
  minEnergyPositron set 3.0
  minEnergyElectron set 3.0
  maxCMSAcollinearity set 180.0
  minThetaPhoton set 13.0
  maxThetaPhoton set 142.0
  minEnergyPhoton set 0.5
  minNumEnergeticPhotons set 1
  maxNumPhotonsProduced set 10
  minPhotonTrackSeparation set 10.0
exit
```

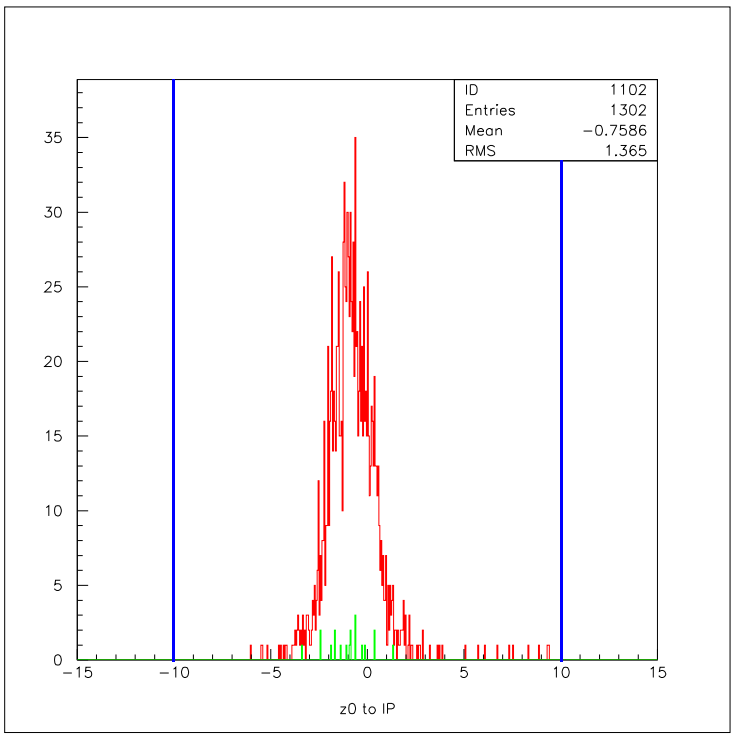
# d0 CUTS


ID 1001
Entries 1928
Mean 0.8307E-02
RMS 0.2315
300
250
200
150
100
50
0
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
d0 to IP

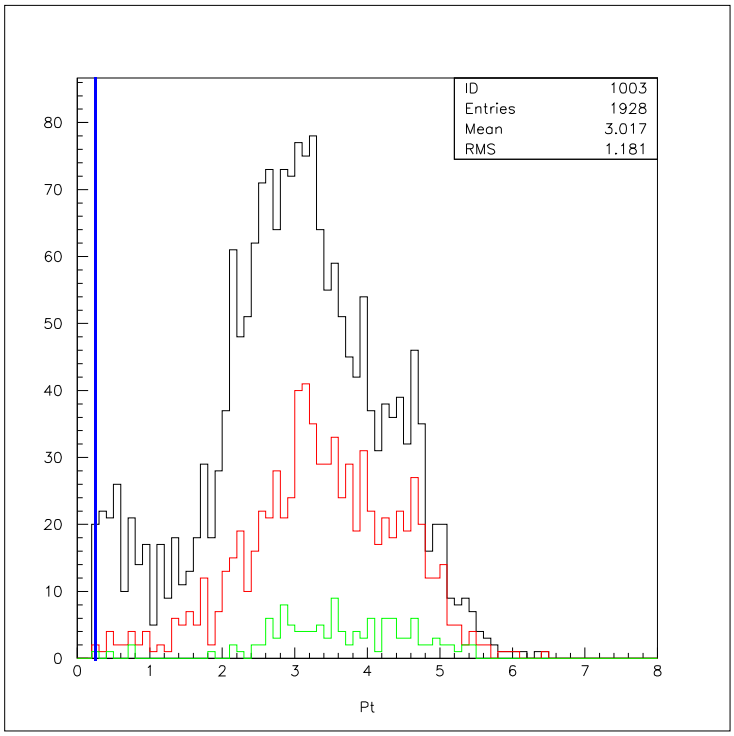

ID 1101
Entries 1302
Mean 0.2020E-01
RMS 0.2419
225
200
175
150
125
100
75
50
25
0
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
d0 to IP

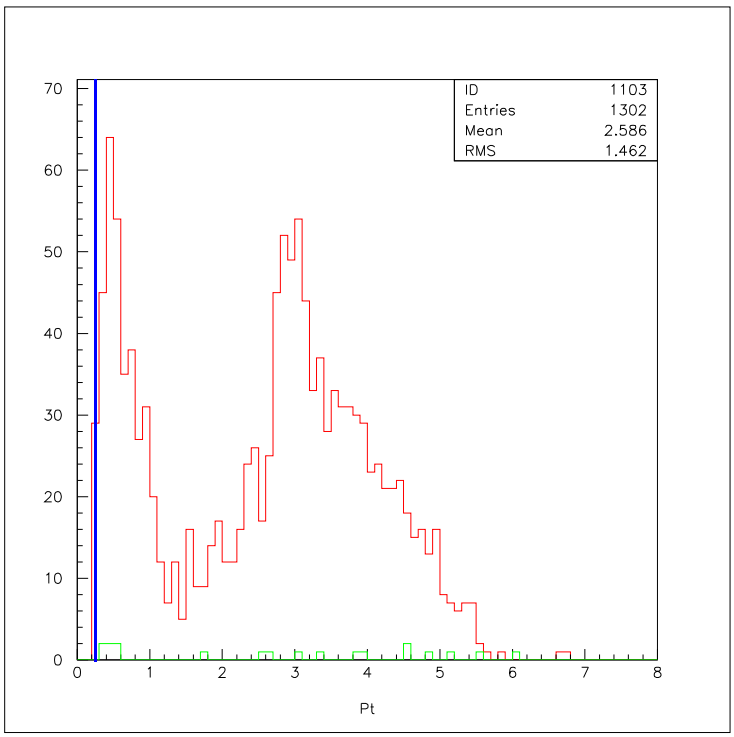
# z0 CUTS


ID 1002
Entries 1928
Mean −0.8570
RMS 1.248
50
40
30
20
10
0
−15
−10
−5
0
5
10
15
z0 to IP

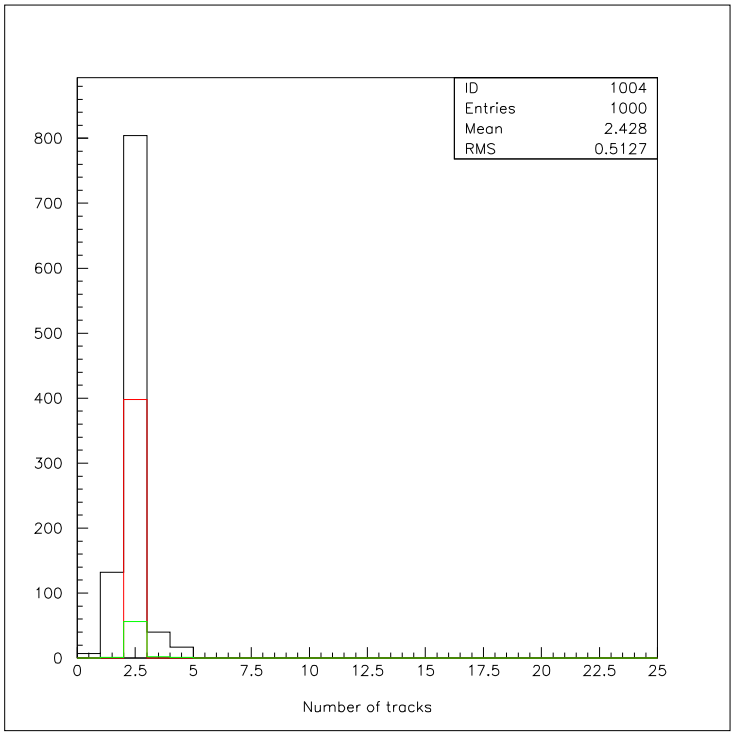

ID 1102
Entries 1302
Mean −0.7586
RMS 1.365
35
30
25
20
15
10
5
0
−15
−10
−5
0
5
10
15
z0 to IP

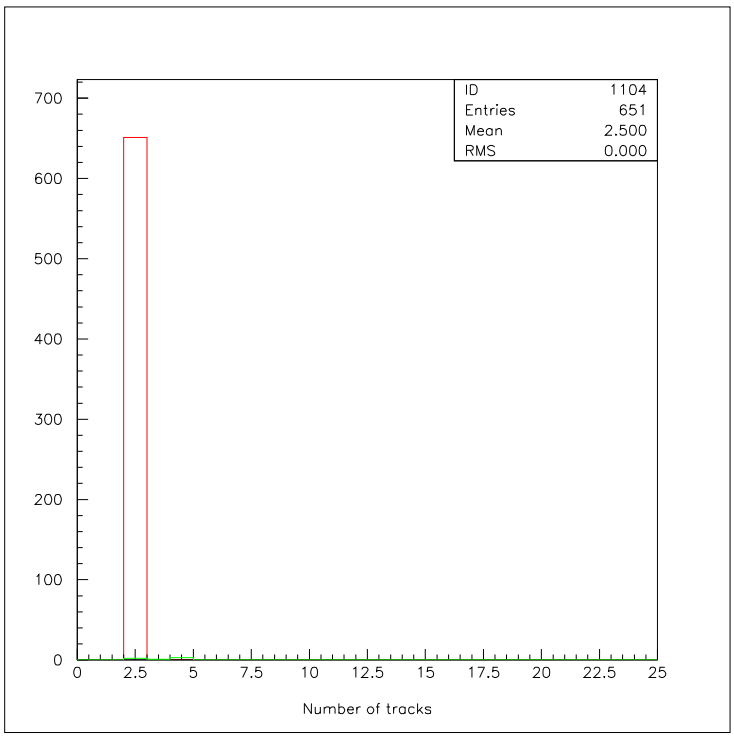
# Pt CUTS


ID 1003
Entries 1928
Mean 3.017
RMS 1.181
Pt

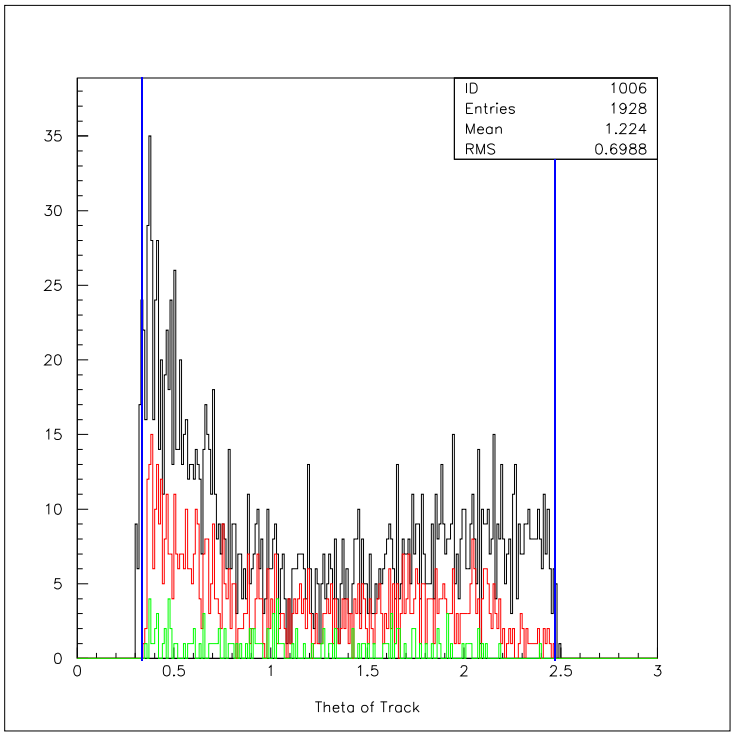

ID 1103
Entries 1302
Mean 2.586
RMS 1.462
Pt

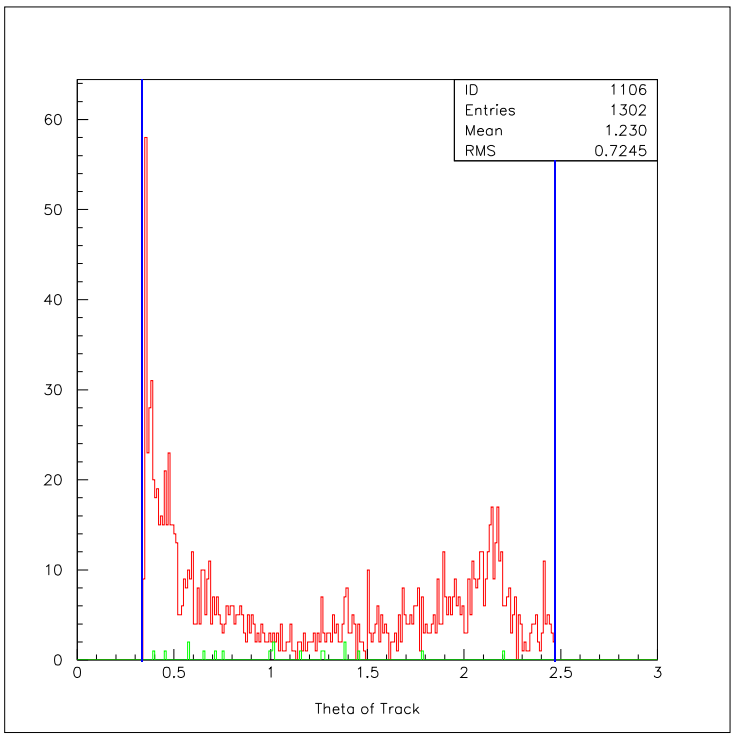
# Number of Tracks



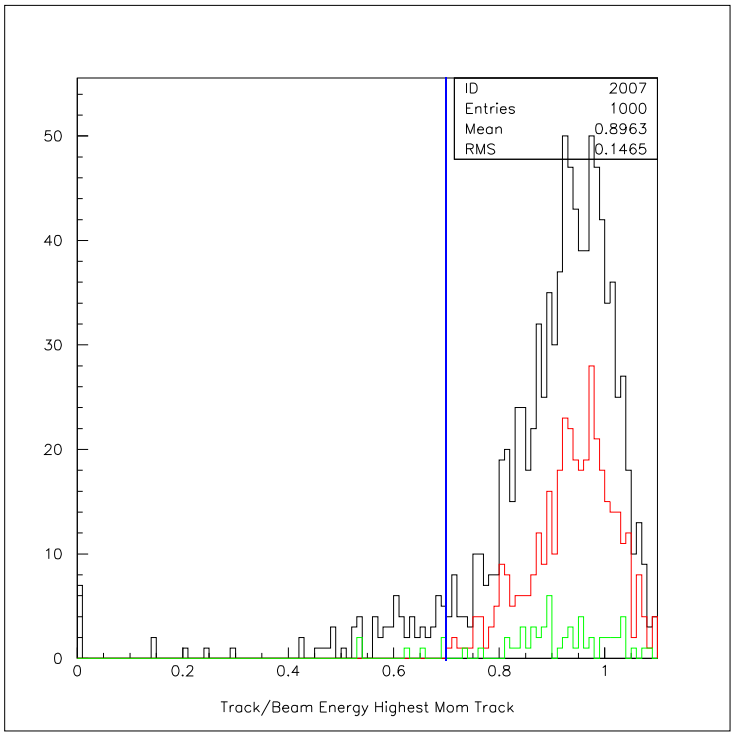



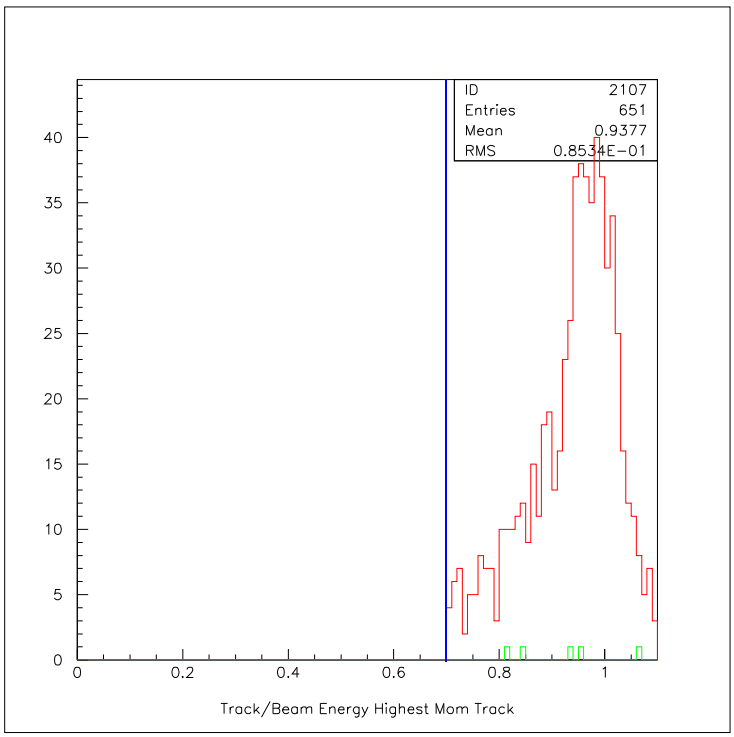
# Theta CUTS


ID 1006
Entries 1928
Mean 1.224
RMS 0.6988
35
30
25
20
15
10
5
0
0
0.5
1
1.5
2
2.5
3
Theta of Track

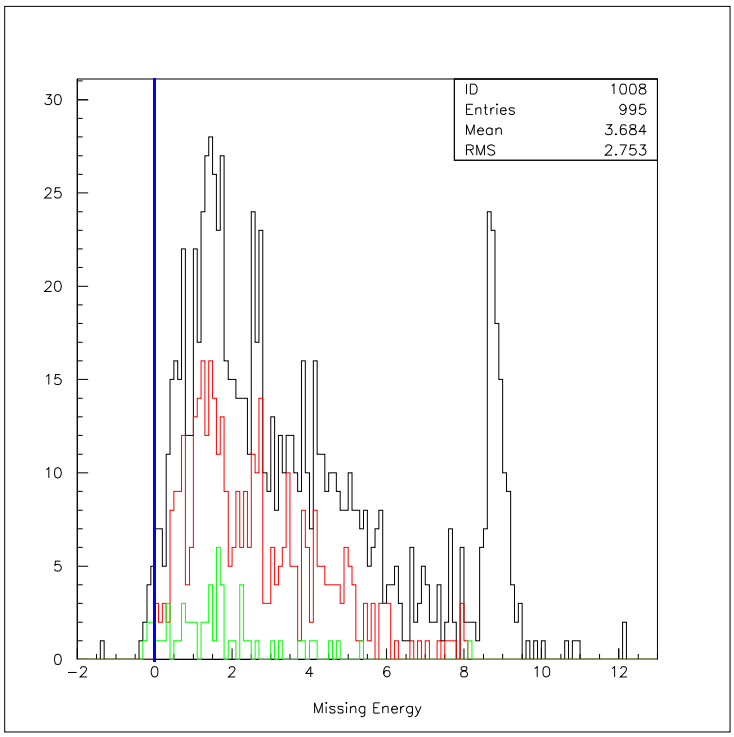

ID 1106
Entries 1302
Mean 1.230
RMS 0.7245
60
50
40
30
20
10
0
0
0.5
1
1.5
2
2.5
3
Theta of Track

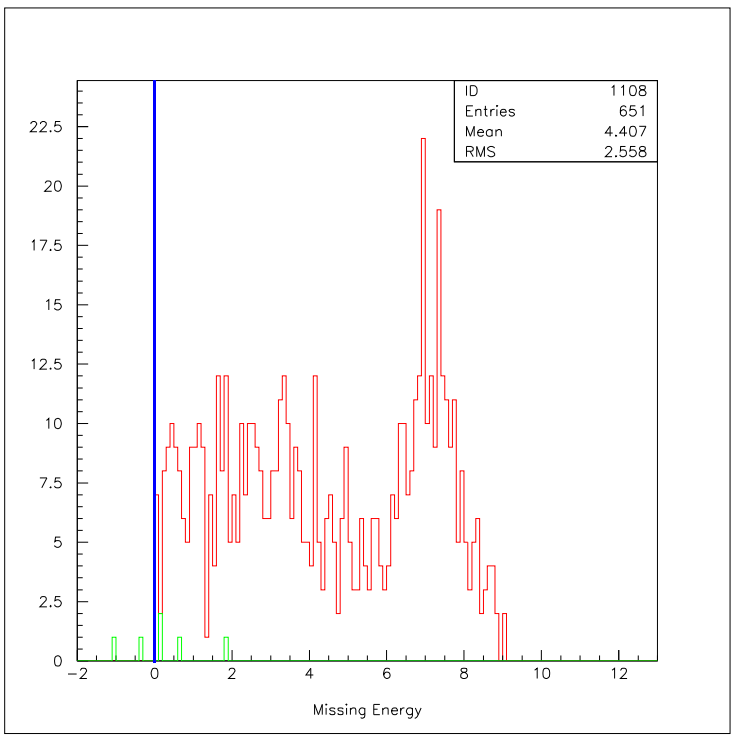
# Momentum CUTS



# Missing Energy CUTS



# Still To Do

- Add Charge Plots
- Add Electron ID Events
- Run Over Normal Bhabha events
- Adjust Cuts For Maximum Efficiency