MC Root Output
Initial Tests

R.Dubois 8-May-2002

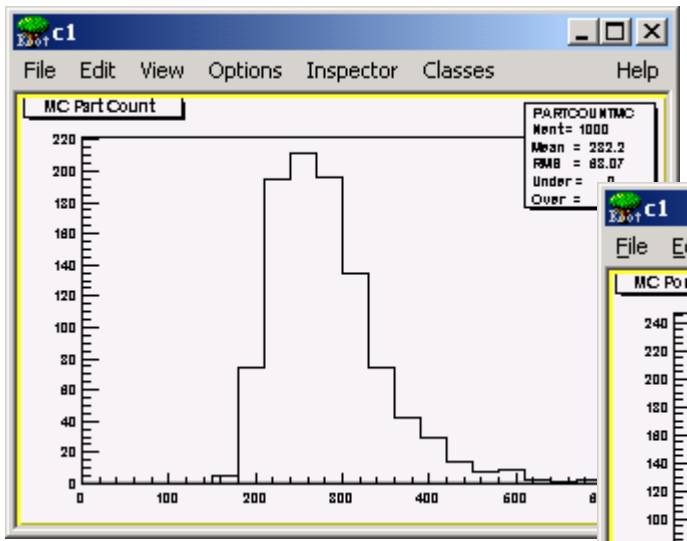
- Heather has done process-checking: verifying numerical transfer
- this is devoted to whether the contents make sense

First check: 5k 2 GeV muons via muon_pencil_angle – x=20, y=500, z=1000 θ=30 φ=90

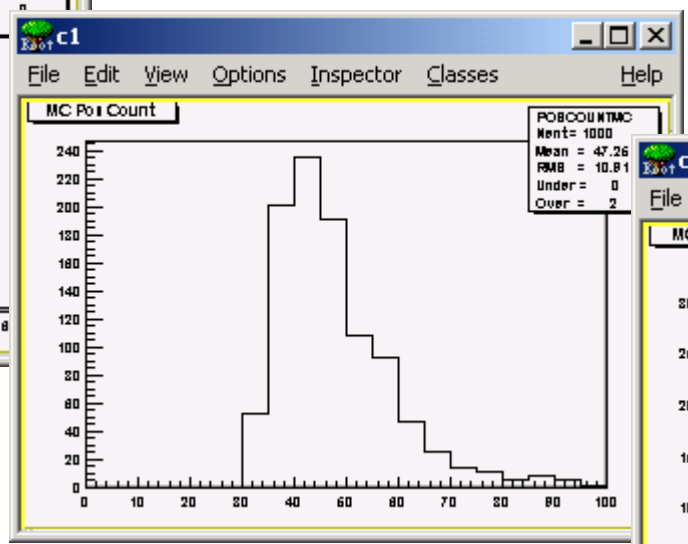
Filesize – 220 MB! 45 kB/event

Note: this uhh 'explores' some cracks

Expect about 5 kB/evt

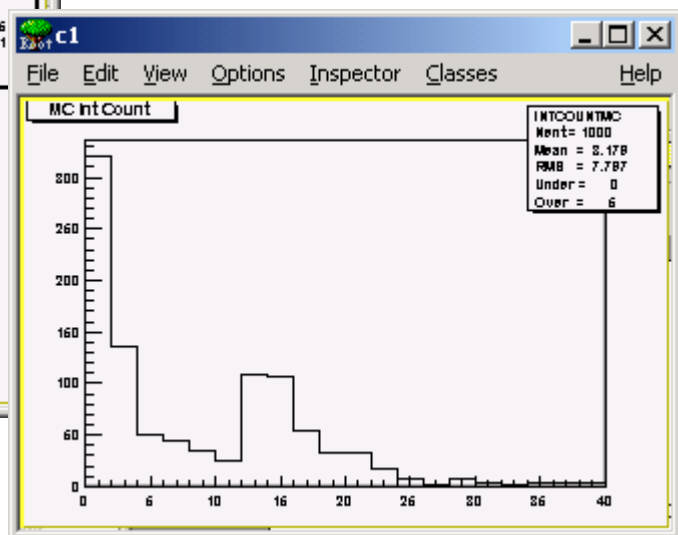


McParticles
<280>/evt!
Mostly low E δ-rays
Source of most of filesize

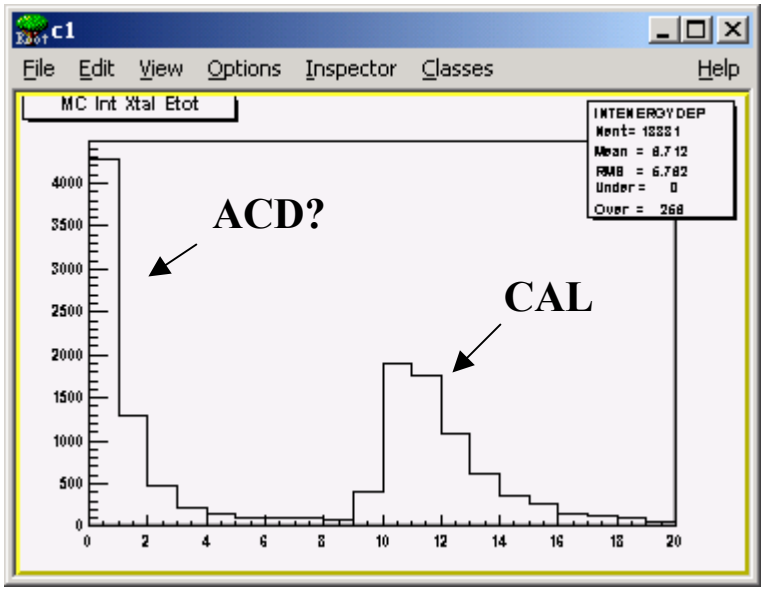


McPositionHits

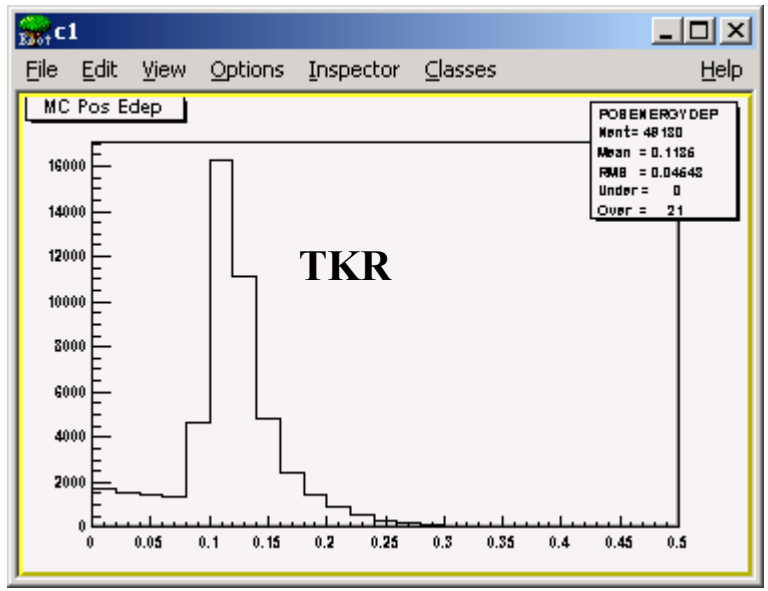
McIntegratingHits



Individual Hits



McIntegratingHits: E per iHit

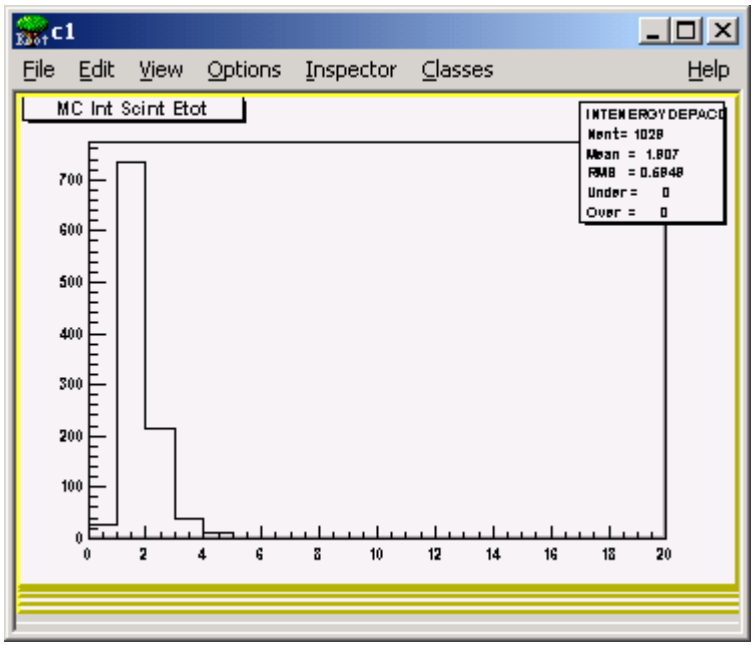


Vertical muons

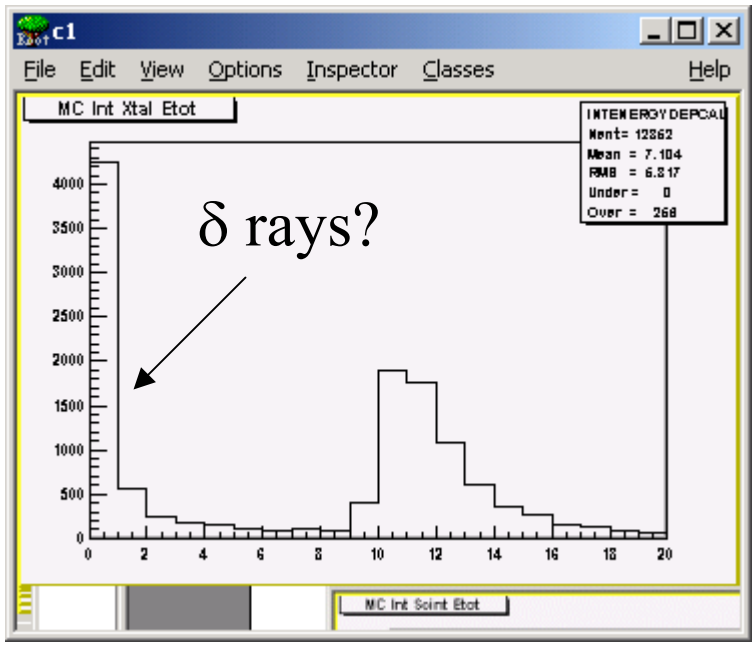
Expected dE/dx in CAL is ~11 MeV

PDG for TKR is 0.15 MeV (ave seen is 0.12). (thin material?)

Selecting on Volume IDs



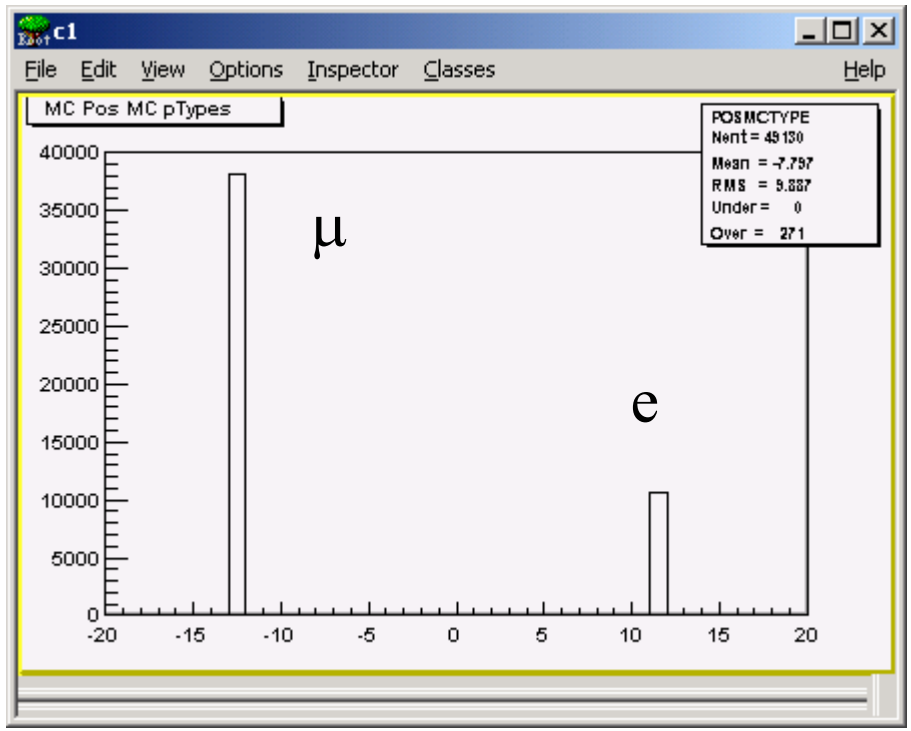
ACD



CAL

- dE in ACD looks right – 1.9 MeV in 1 cm tile
- Would use the energy map in integrating hit to look at low E spike but having troubles in CINT.

PositionHit Parentage



For 1k muons - ~37k hits by muons; 10k by electrons = δ rays

So Far

- More McParticles than we can afford
- Energy losses seem ok in ACD, CAL, TKR
  - Need more detailed appraisal of Landau dists…
- Identification using VolumeIdentifiers works
- Hit parentage in McPositionHits looks ok
- Problems accessing McIntegratingHit energy map (MC,E) in CINT