

Particle Identification Algorithm

- 1) Find the momentum of each track in the event in MeV/c.
- 2) From the table determine how many photoelectrons and amount of ionization that was deposited in the TOP and CDC respectively.
- 3) From the graphs determine which particle species was most likely to produce this response.
- 4) If ambiguous (e.g. pion and muons) choose the one that is most likely occur in a BB event (apriori probability)

electron 6% muons 5% pions 73% kaons 15% protons 2%

Try it:

Event-1 Track A $p=450\text{MeV/c}$ 23 pe and 2.7 kV/cm
 mu, pi mu, pi, e

(ambiguous)

Track A = pion

