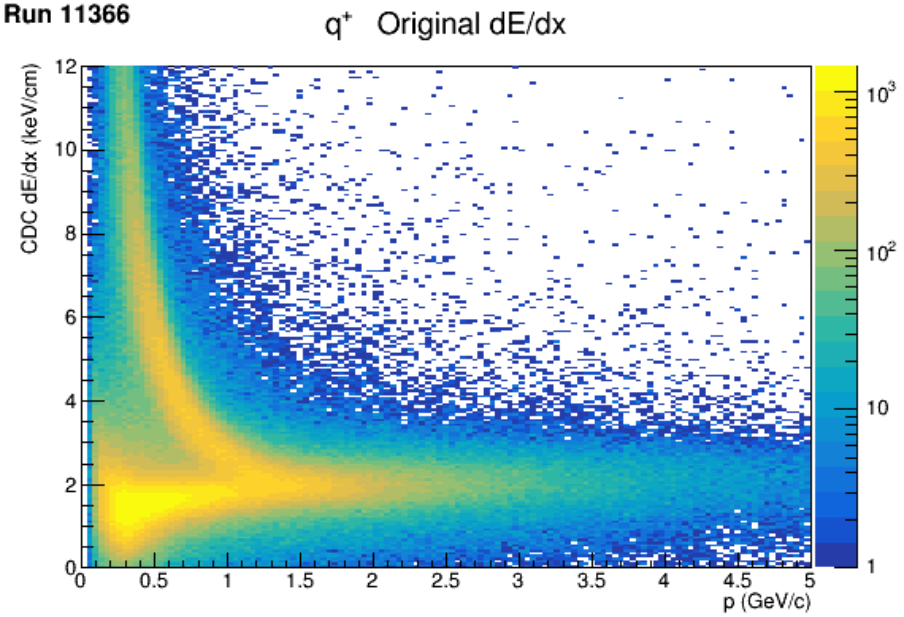
CDC dE/dx with beam current

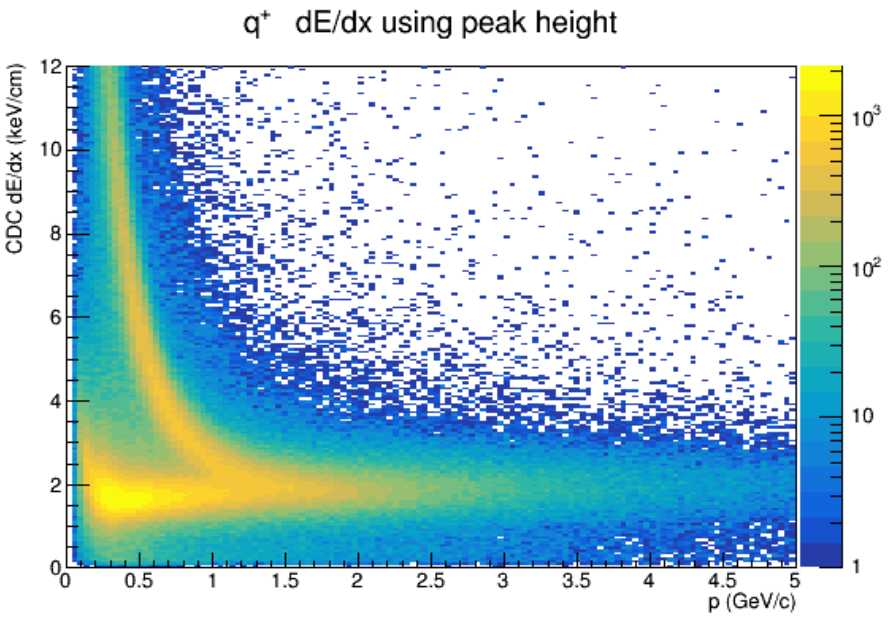
11366 3mm collimator, 50um diamond, 150nA, 1200A, 30kHz

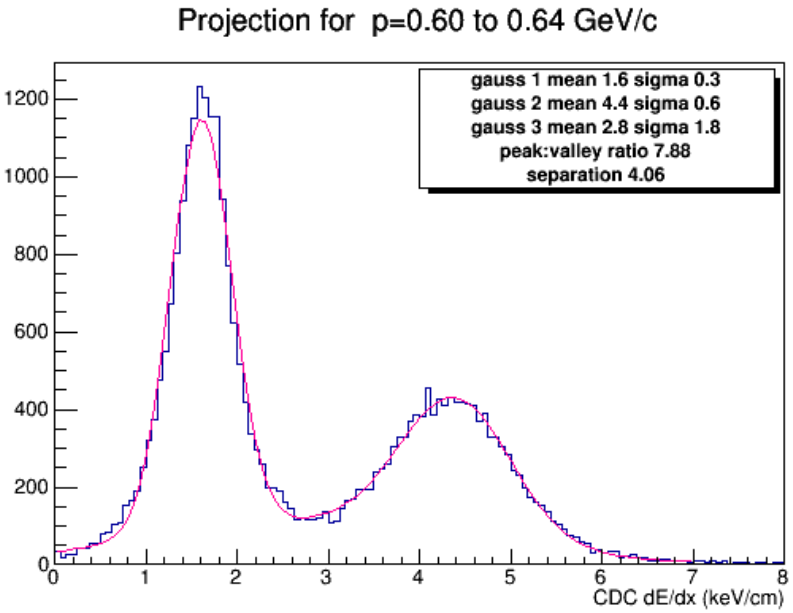
30570 5mm collimator, 58um diamond, 100nA, 1350A, 33kHz

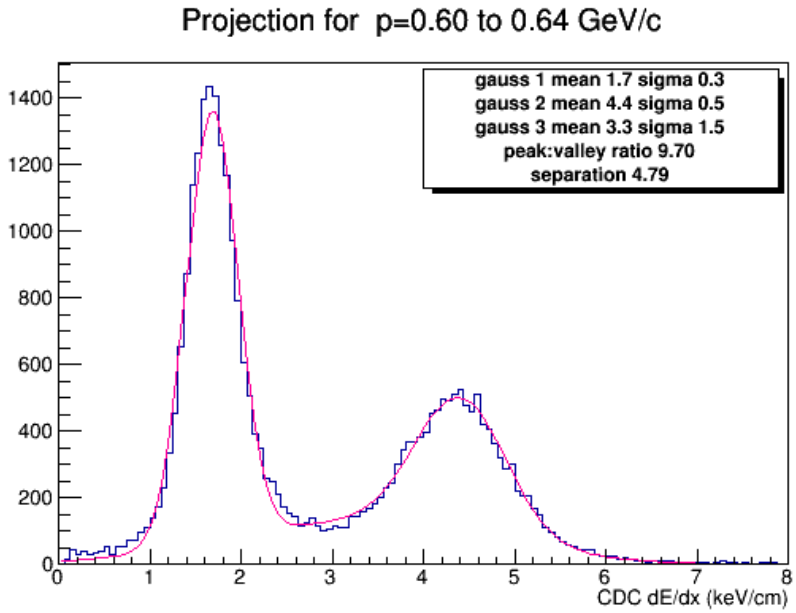
31001 5mm collimator, 58um diamond, 147nA, 1350A, 50kHz

Run 11366

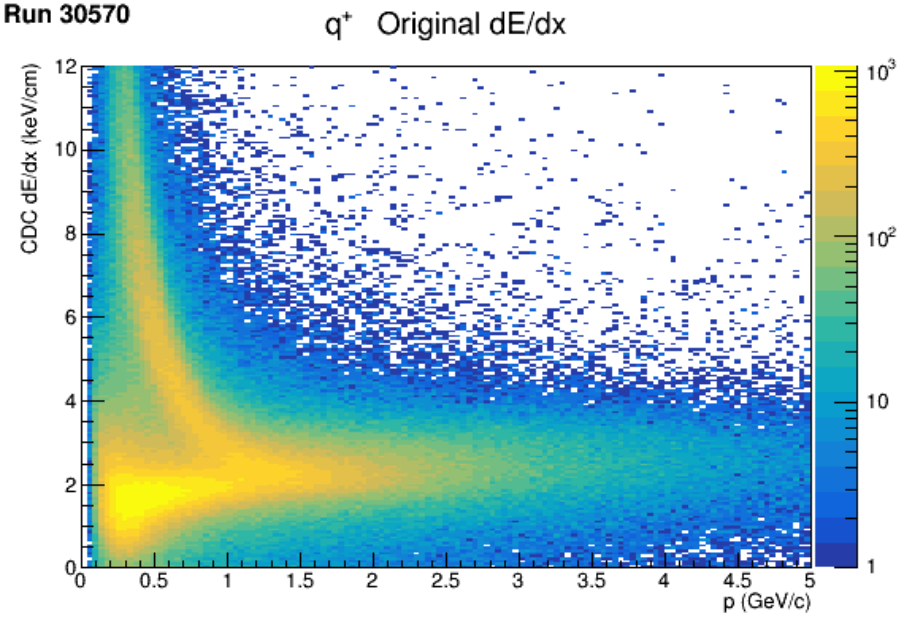

q⁺ Original dE/dx
CDC dE/dx (keV/cm)
p (GeV/c)

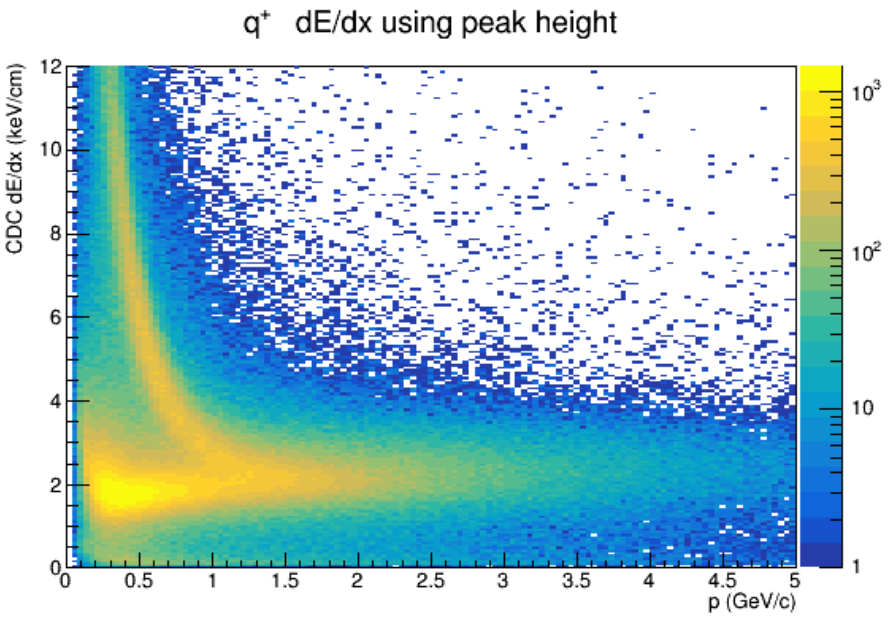

q⁺ dE/dx using peak height
CDC dE/dx (keV/cm)
p (GeV/c)

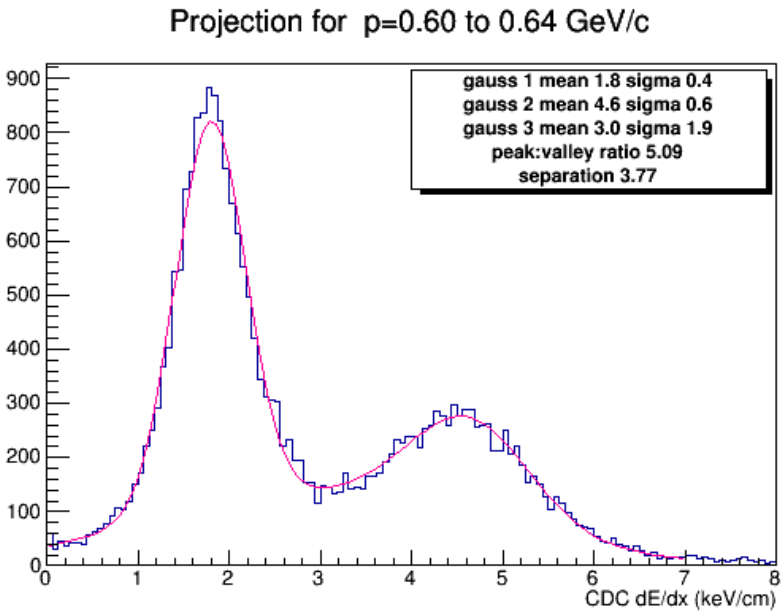

Projection for p=0.60 to 0.64 GeV/c
gauss 1 mean 1.6 sigma 0.3
gauss 2 mean 4.4 sigma 0.6
gauss 3 mean 2.8 sigma 1.8
peak:valley ratio 7.88
separation 4.06
CDC dE/dx (keV/cm)

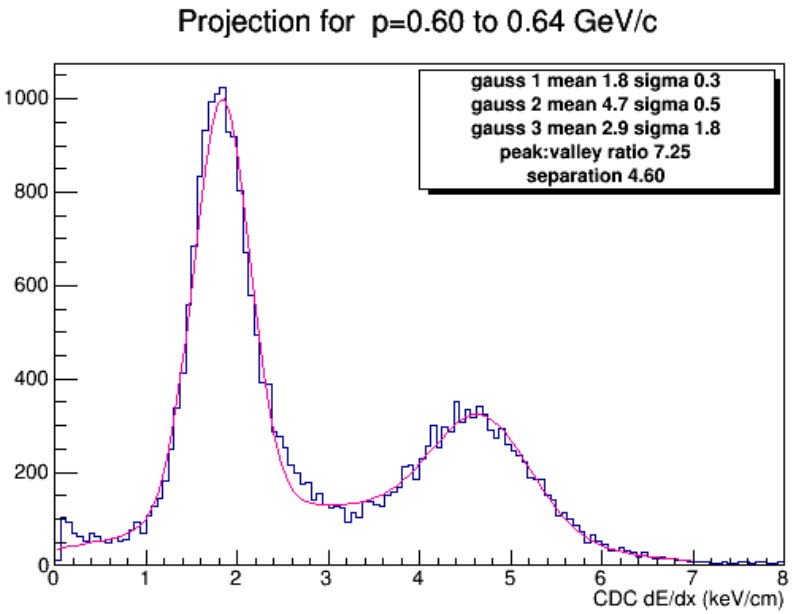

Projection for p=0.60 to 0.64 GeV/c
gauss 1 mean 1.7 sigma 0.3
gauss 2 mean 4.4 sigma 0.5
gauss 3 mean 3.3 sigma 1.5
peak:valley ratio 9.70
separation 4.79
CDC dE/dx (keV/cm)

Run 30570

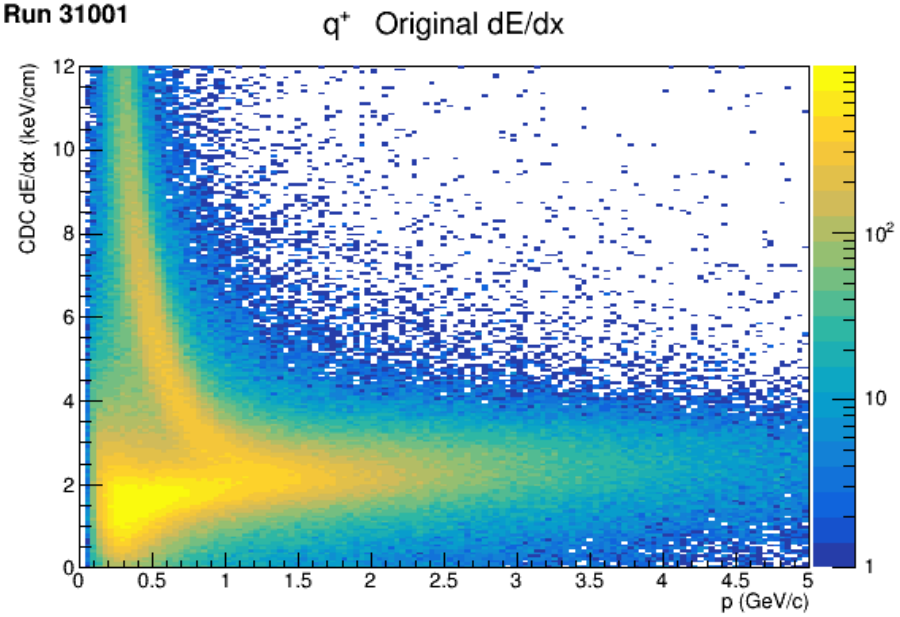

q+ Original dE/dx
CDC dE/dx (keV/cm)
p (GeV/c)

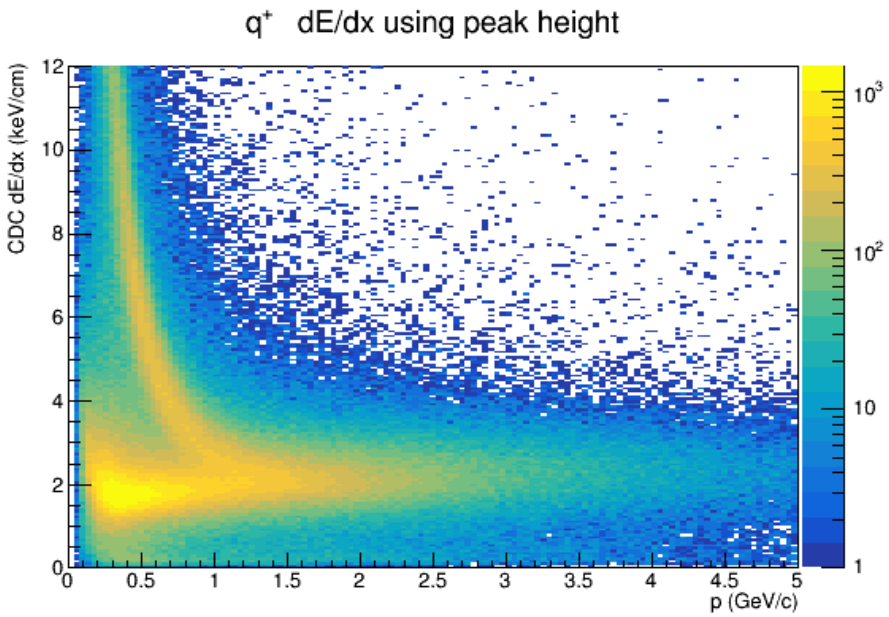

q+ dE/dx using peak height
CDC dE/dx (keV/cm)
p (GeV/c)

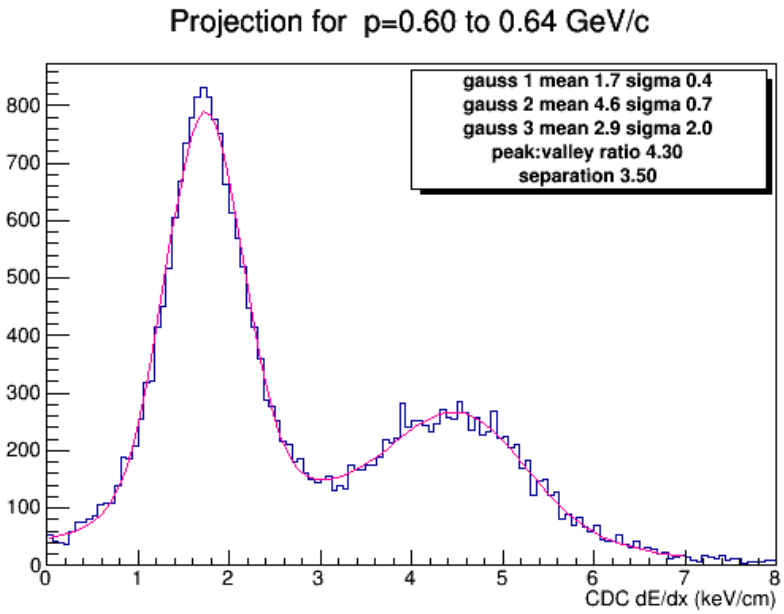

Projection for p=0.60 to 0.64 GeV/c
gauss 1 mean 1.8 sigma 0.4
gauss 2 mean 4.6 sigma 0.6
gauss 3 mean 3.0 sigma 1.9
peak:valley ratio 5.09
separation 3.77
CDC dE/dx (keV/cm)

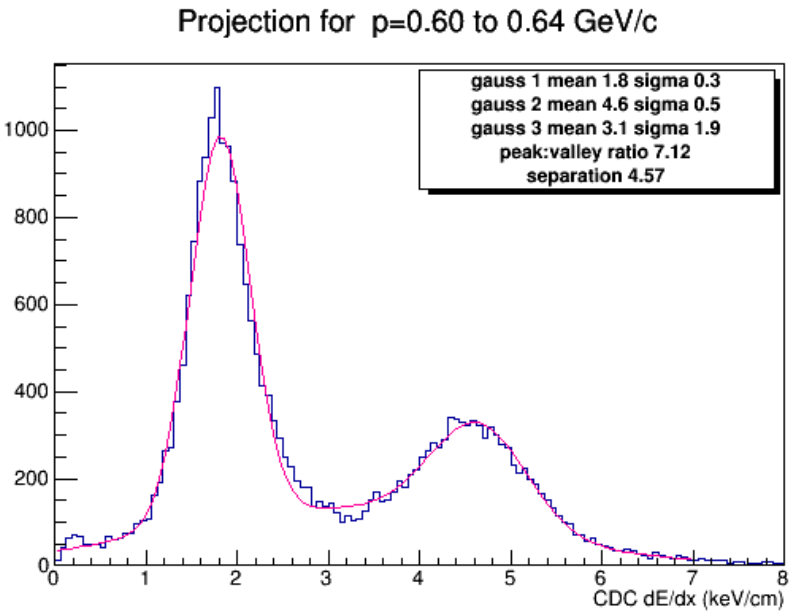

Projection for p=0.60 to 0.64 GeV/c
gauss 1 mean 1.8 sigma 0.3
gauss 2 mean 4.7 sigma 0.5
gauss 3 mean 2.9 sigma 1.8
peak:valley ratio 7.25
separation 4.60
CDC dE/dx (keV/cm)

Run 31001


q+ Original dE/dx
CDC dE/dx (keV/cm)
p (GeV/c)


q+ dE/dx using peak height
CDC dE/dx (keV/cm)
p (GeV/c)


Projection for p=0.60 to 0.64 GeV/c
gauss 1 mean 1.7 sigma 0.4
gauss 2 mean 4.6 sigma 0.7
gauss 3 mean 2.9 sigma 2.0
peak:valley ratio 4.30
separation 3.50
CDC dE/dx (keV/cm)


Projection for p=0.60 to 0.64 GeV/c
gauss 1 mean 1.8 sigma 0.3
gauss 2 mean 4.6 sigma 0.5
gauss 3 mean 3.1 sigma 1.9
peak:valley ratio 7.12
separation 4.57
CDC dE/dx (keV/cm)

Compare the two later runs with similar conditions:

5mm collimator, 58um diamond 1350A solenoid

Run	Event rate	Original dE/dx Separation	Amplitude dE/dx Separation
30570	33kHz	3.8	4.6
31001	50kHz	3.5	4.6