

Stopping proton selection

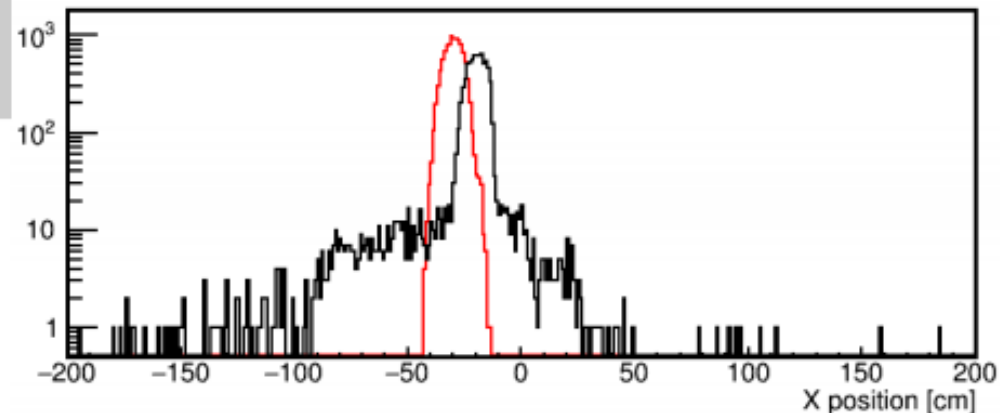
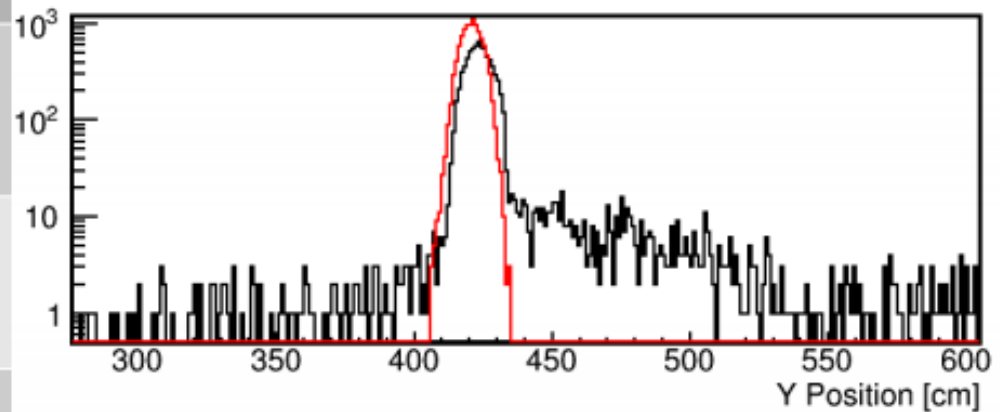
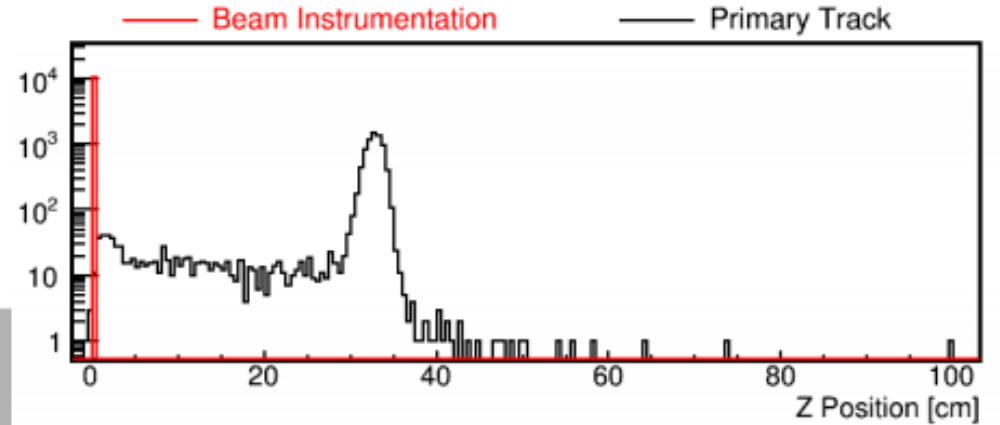
Heng Ye cuts to select stopping protons (in data)

1. To select the beam particles (with proton filter already applied)
 - Track position – Beam instrumentation position
 - Angle cut
2. To select stopping protons
 - Track length/CSDA range → Cut in track length > 40 cm

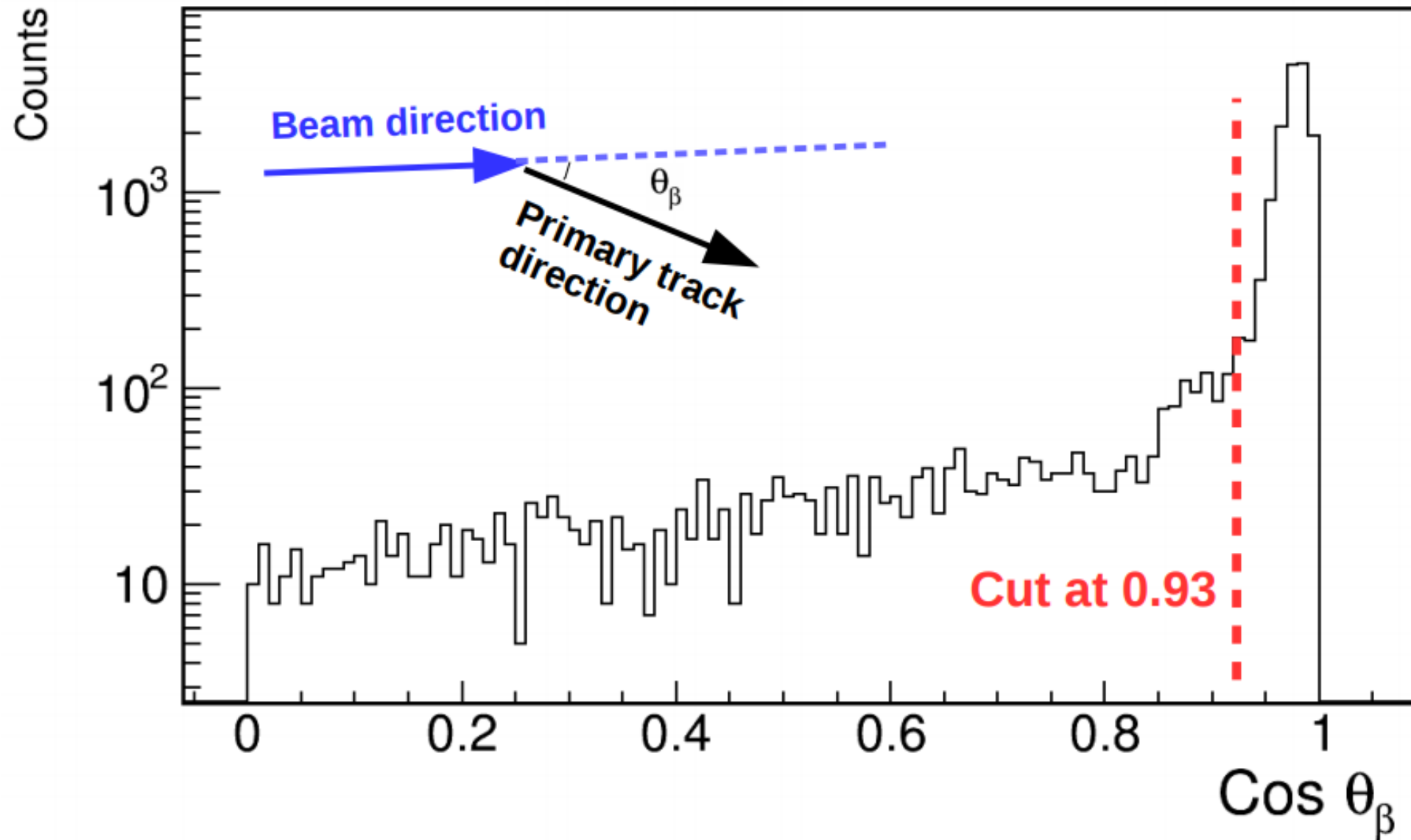
Beam Position

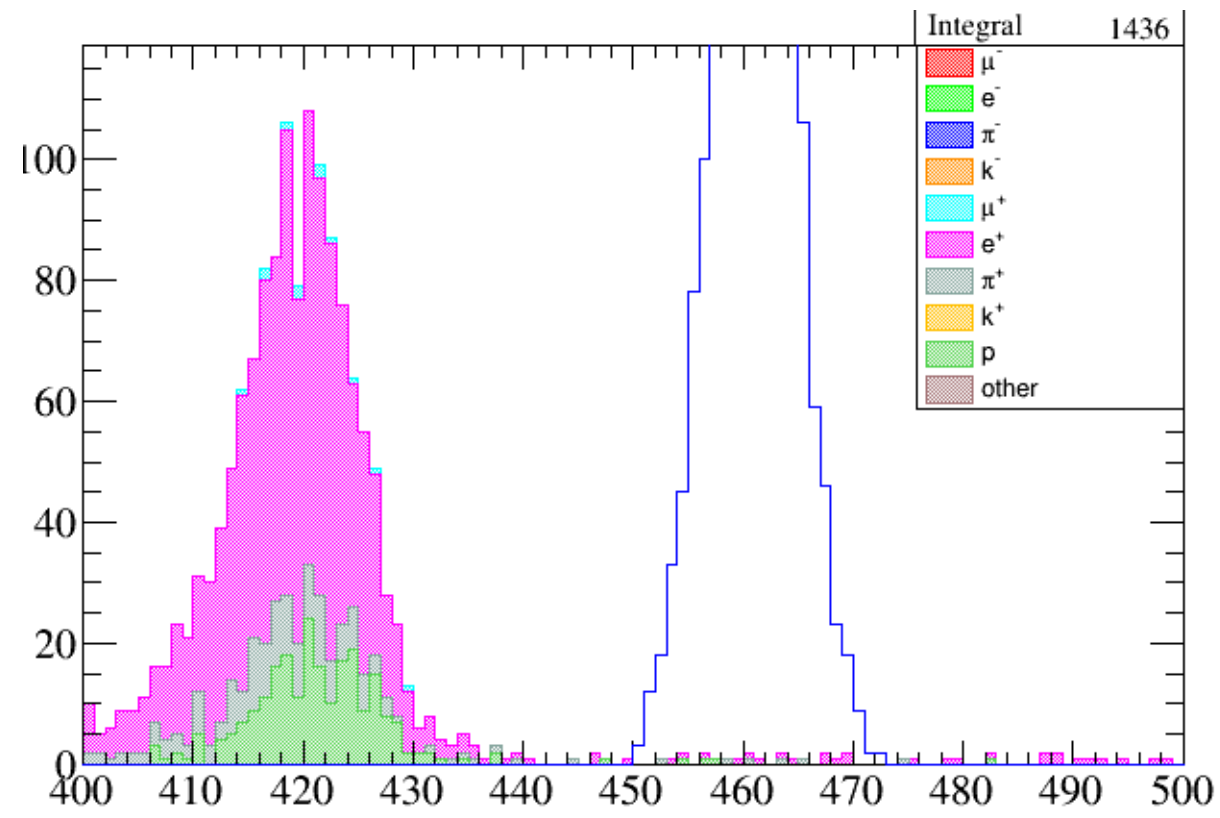
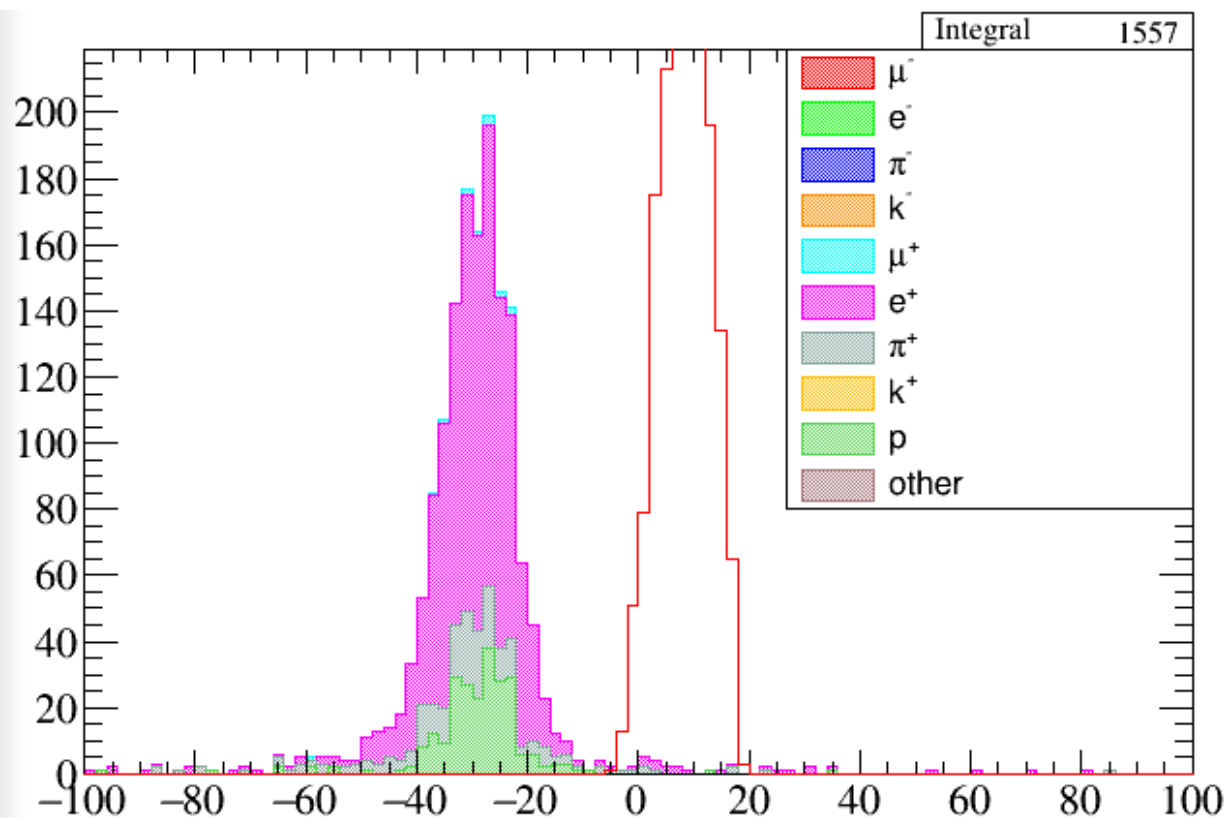
	Beam Inst. [cm]	Primary Track [cm]
Z Position	0 (0)	32.73 (0.939)
Y Position	421.01 (3.876)	423.38 (4.753)
X Position	-29.75 (4.118)	-19.43 (4.358)

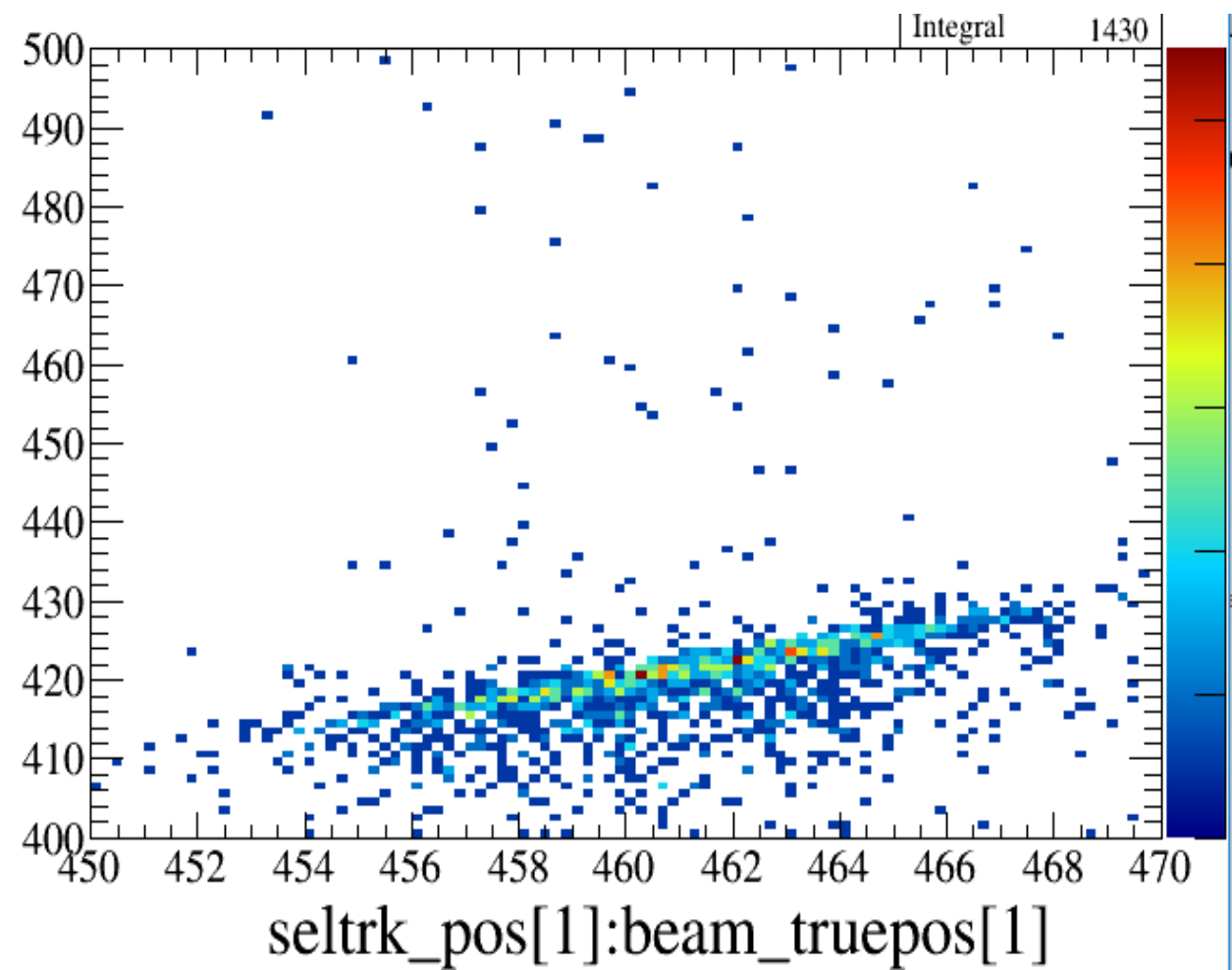
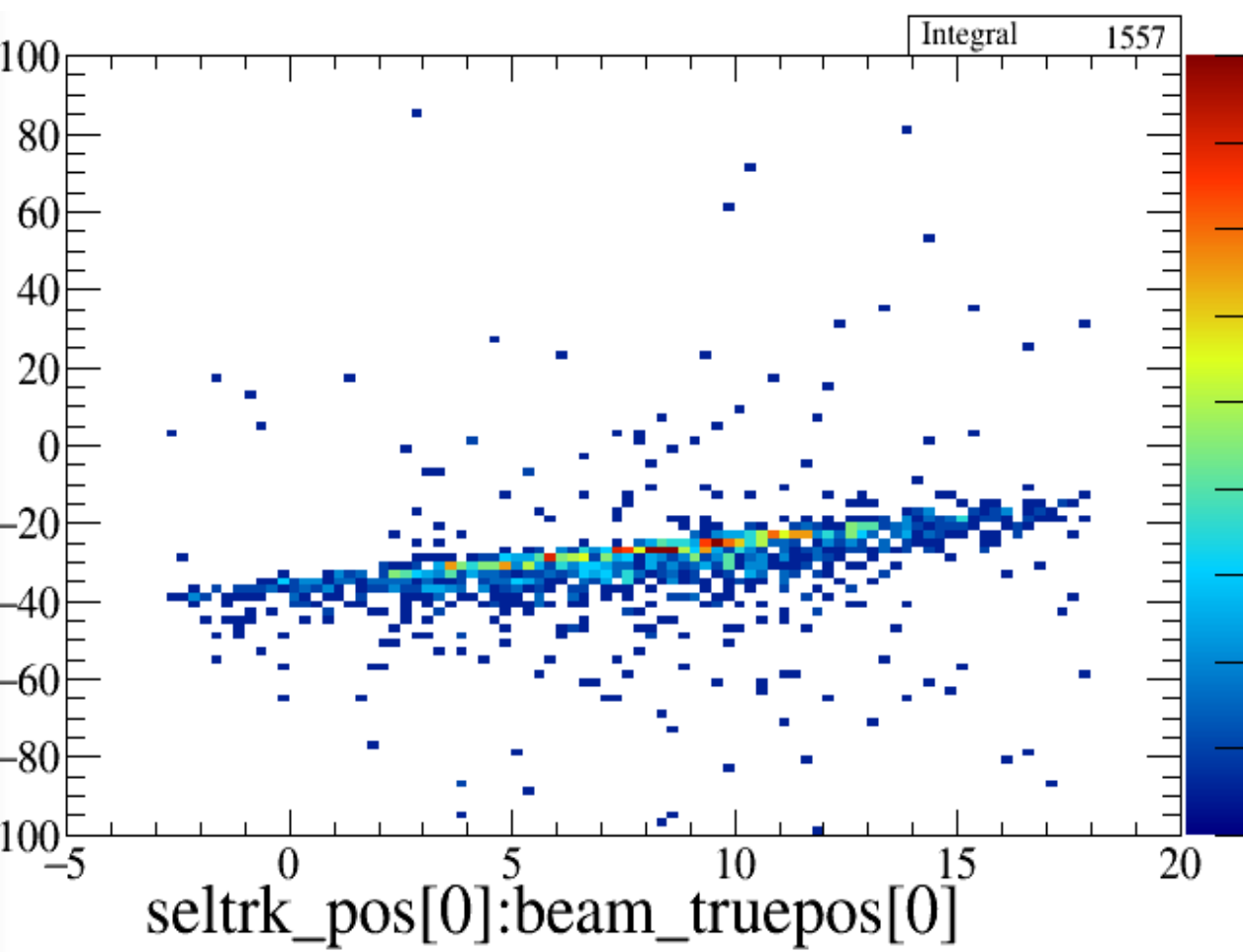
Values in the table: Mean (Sigma)

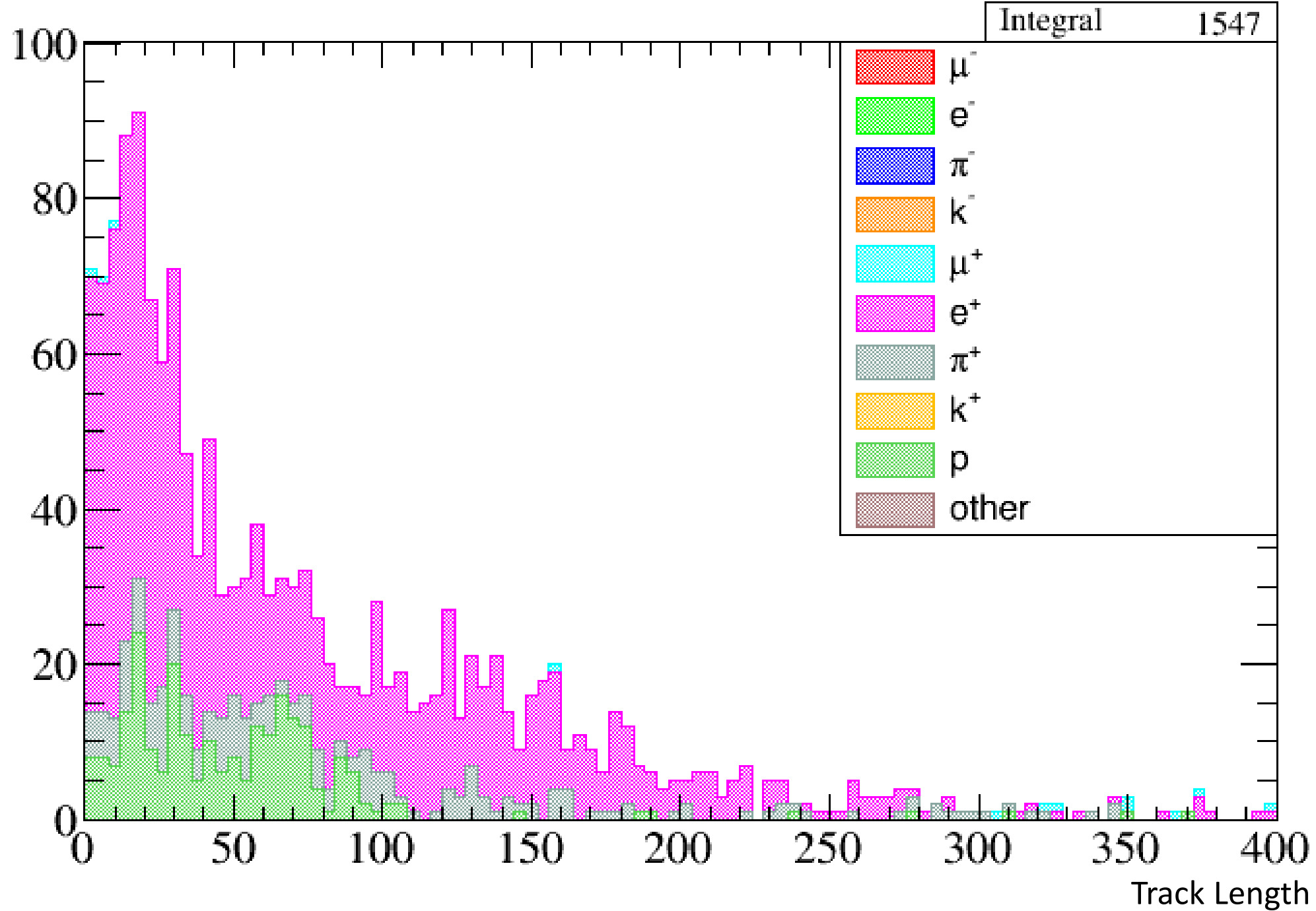


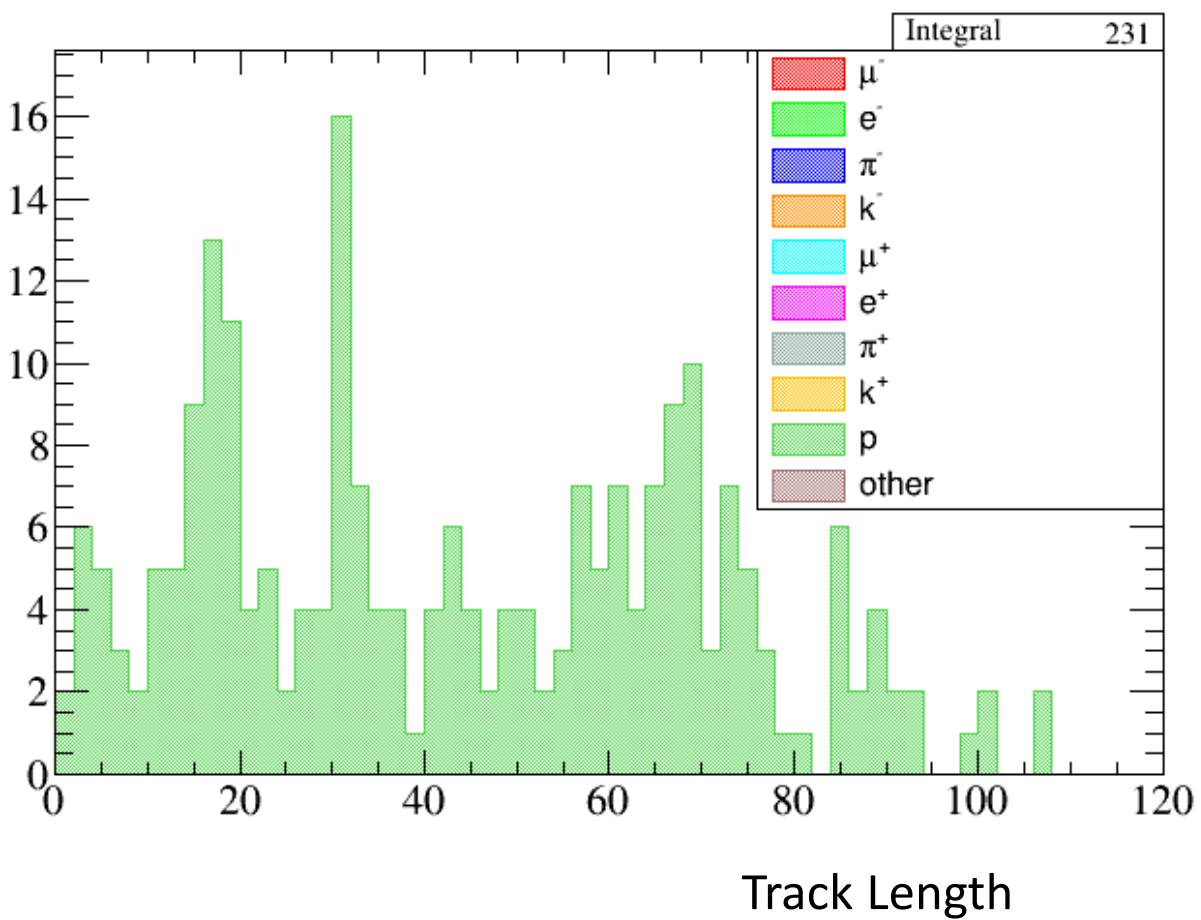
Track Selection – Angle Cut



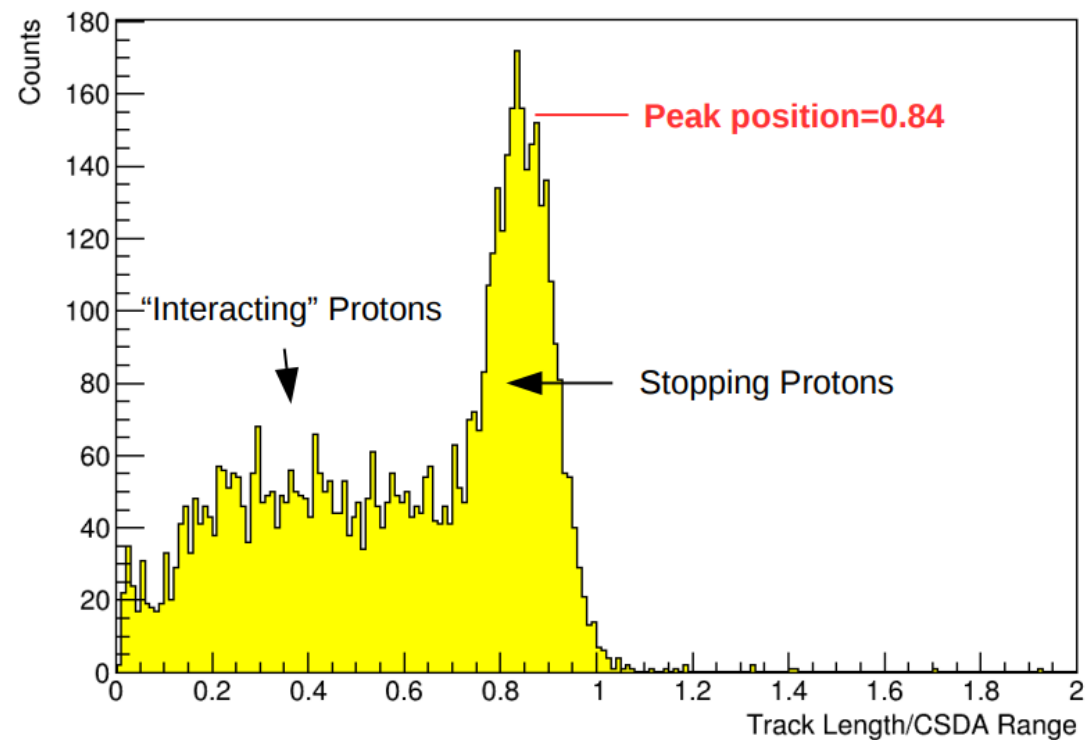




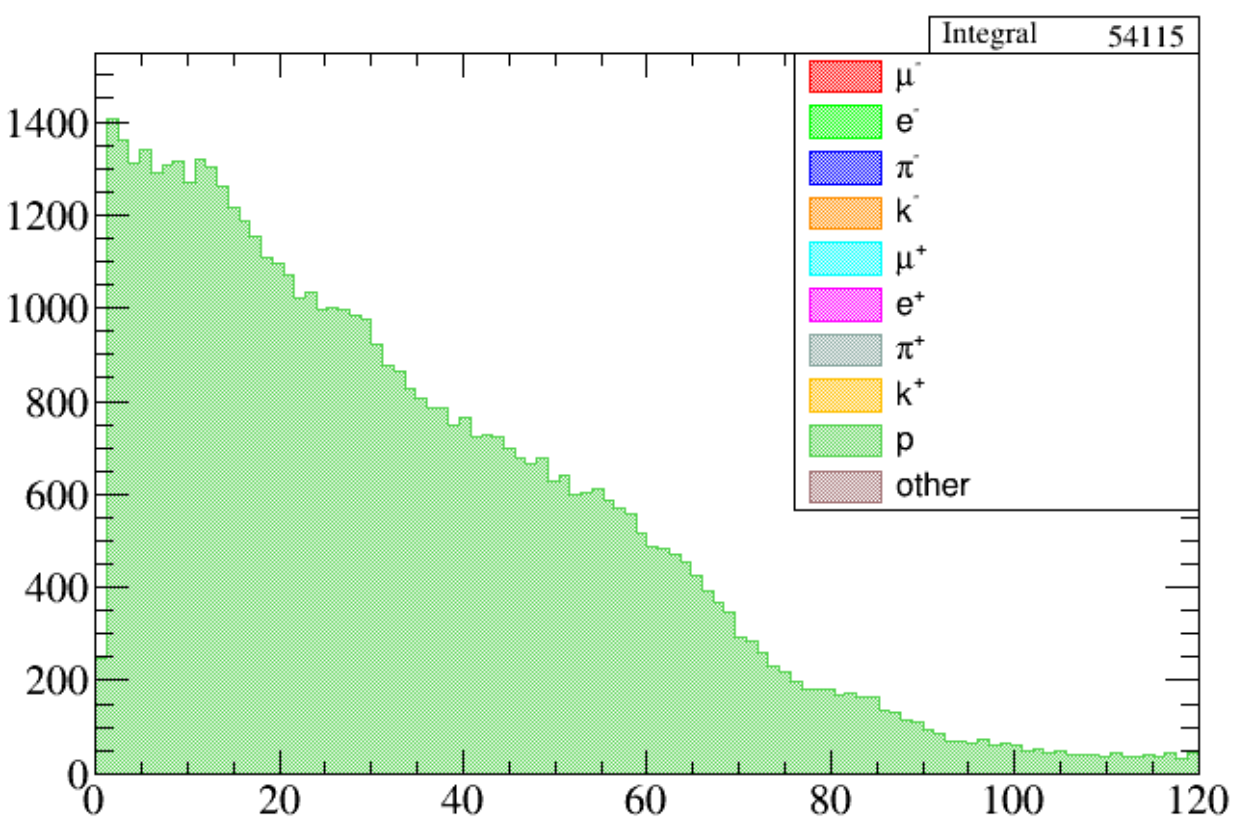




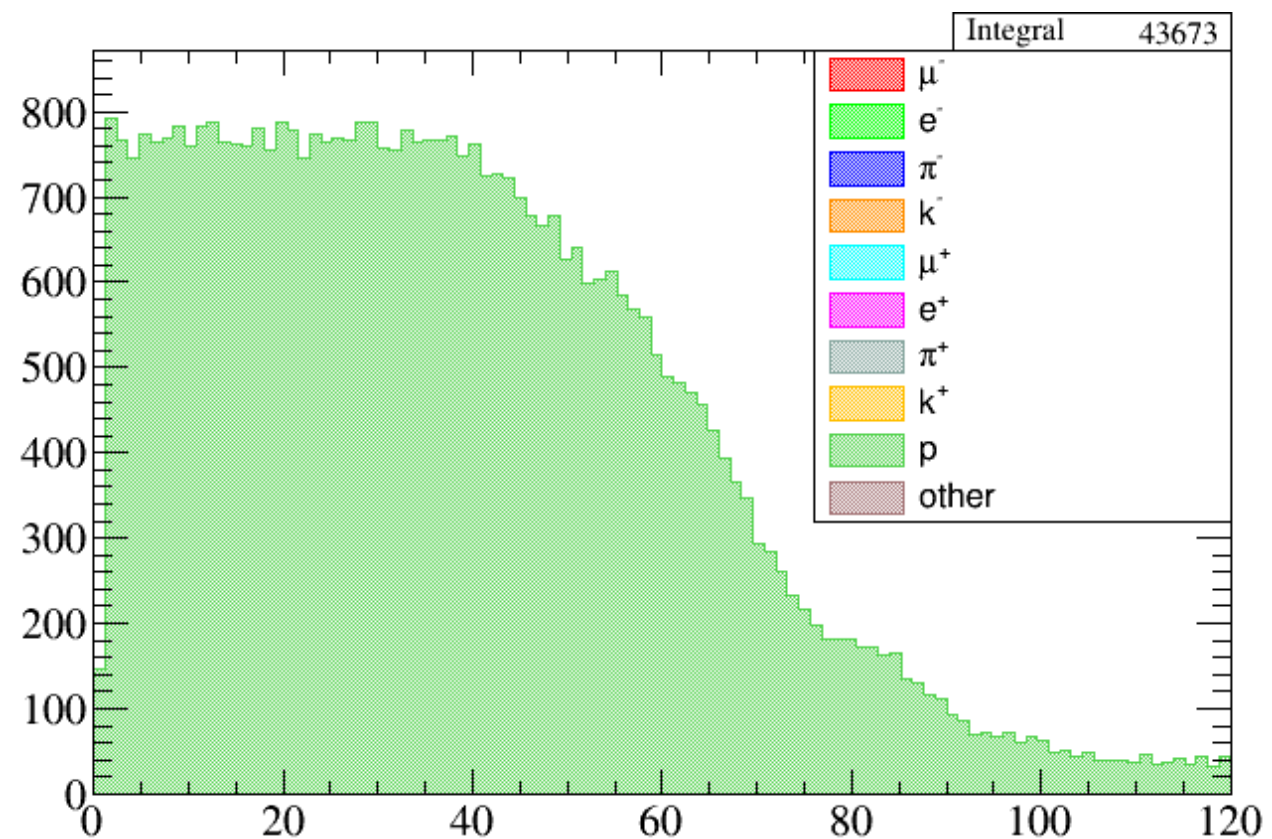
Track Length Distribution



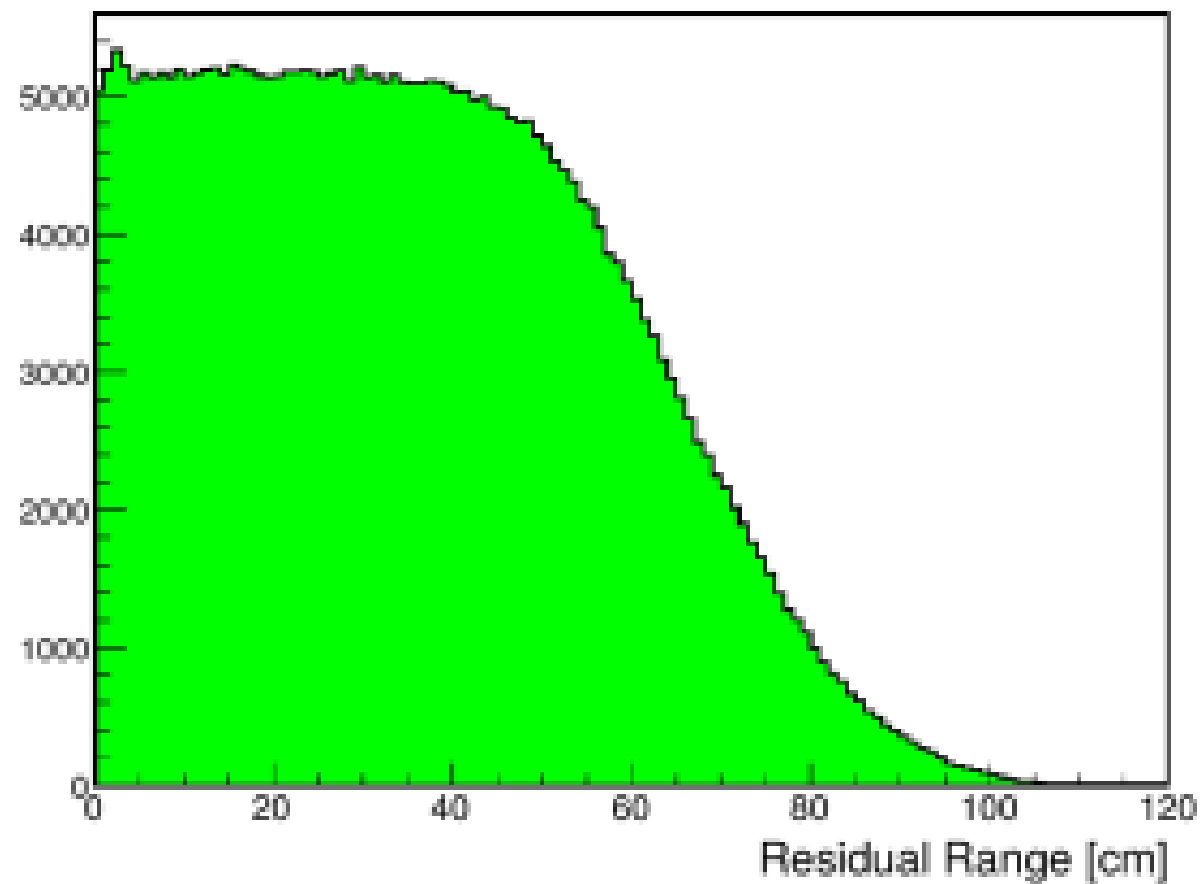
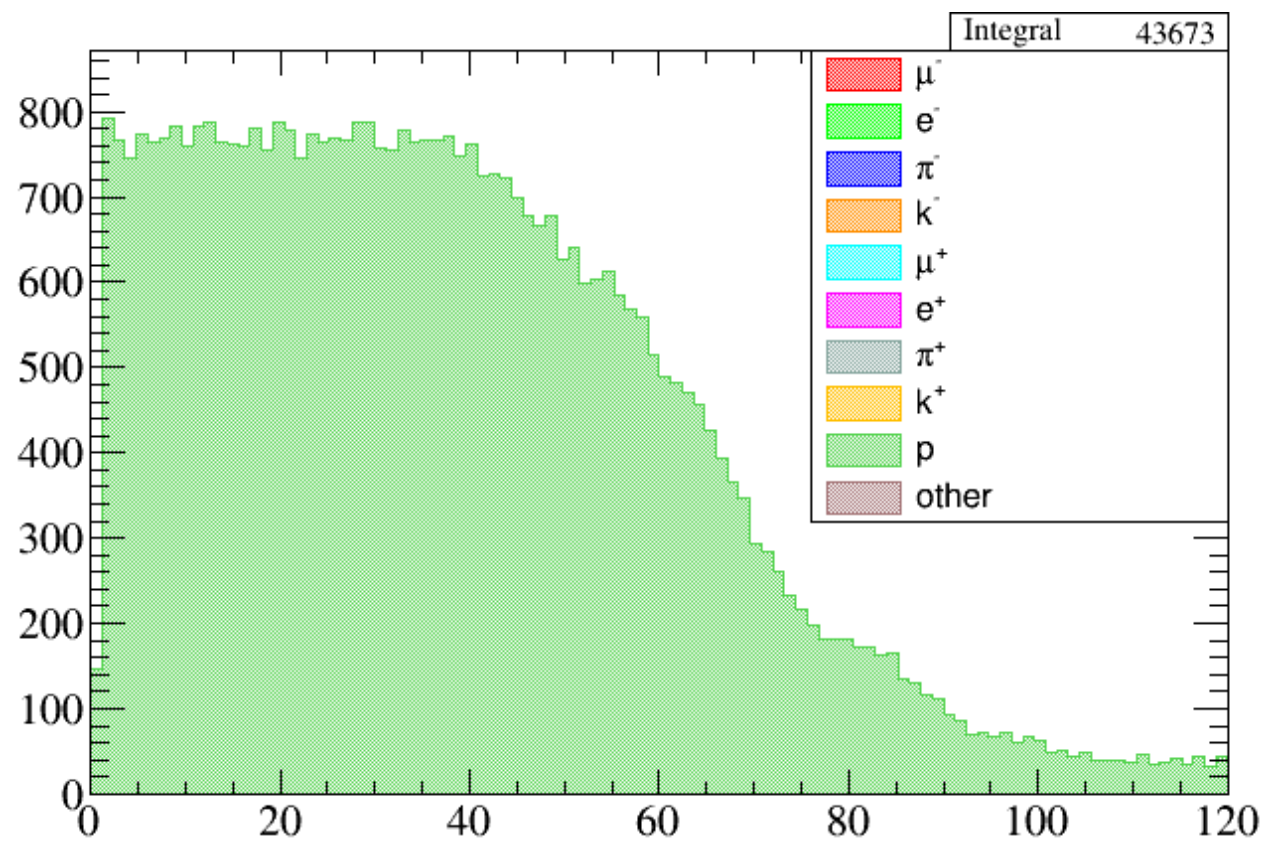
Residual Range

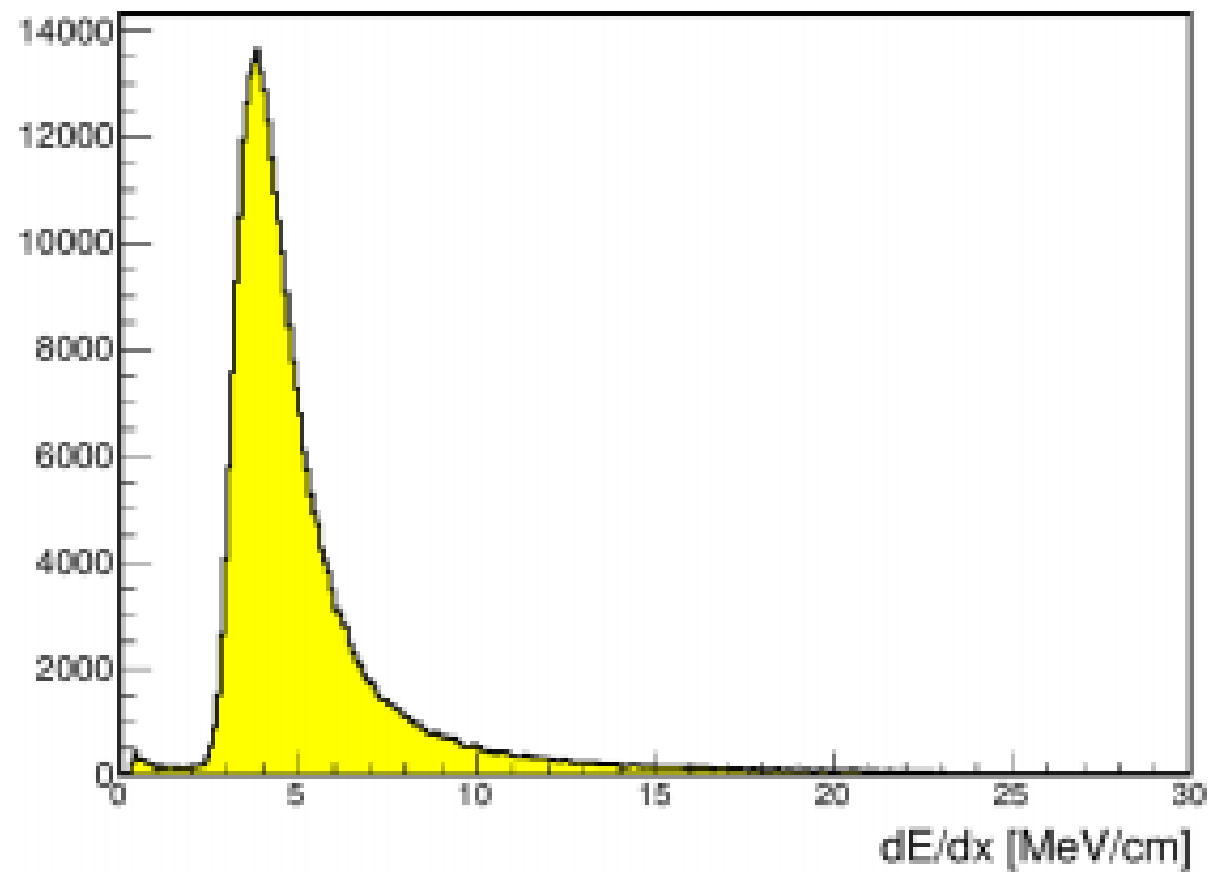
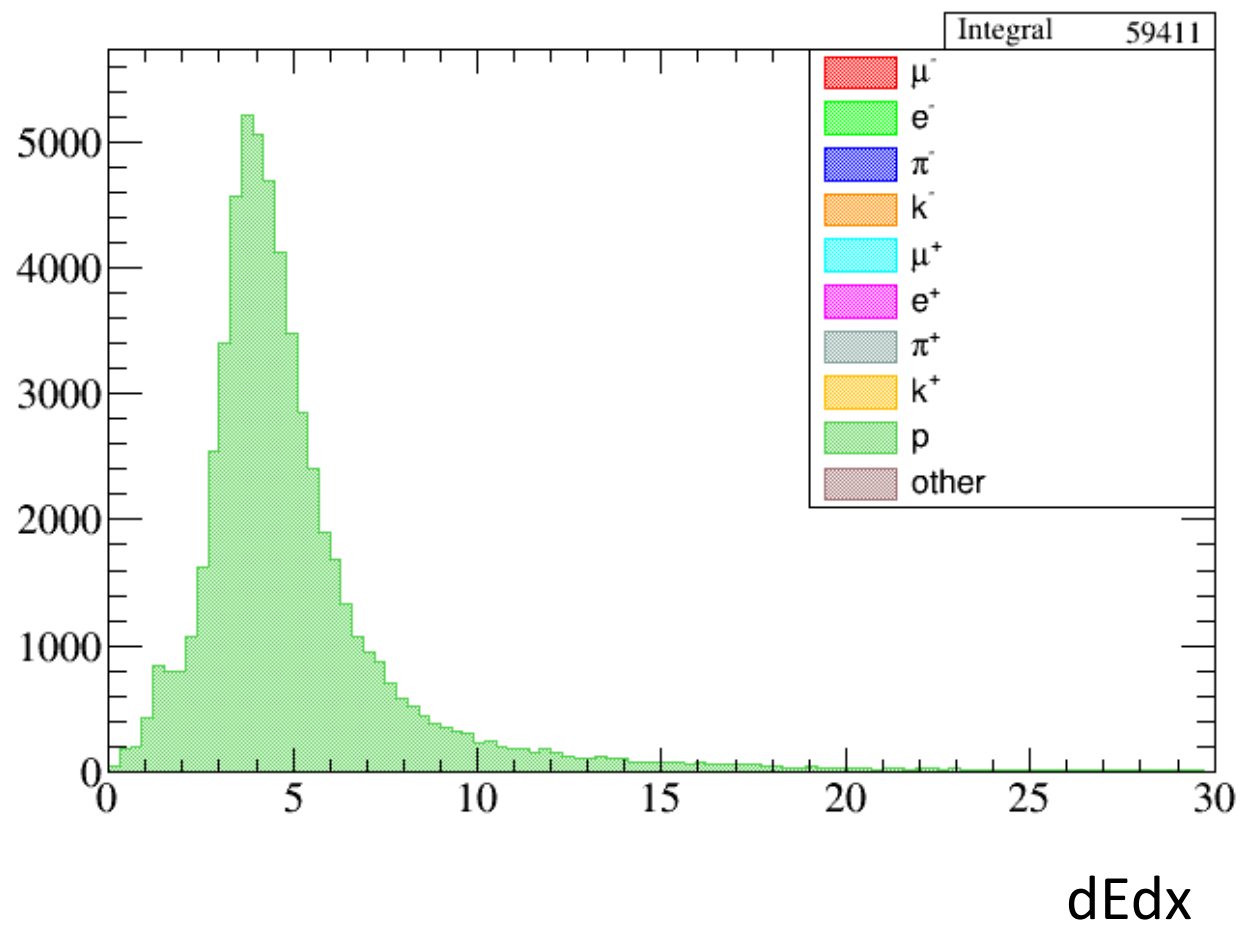


No cut



Track length > 40 cm





The residual range vs dEdx plot fit the plot by Heng Ye.

- Apply range cuts to select stopping protons
- Find more cuts to get rid of the other particles

