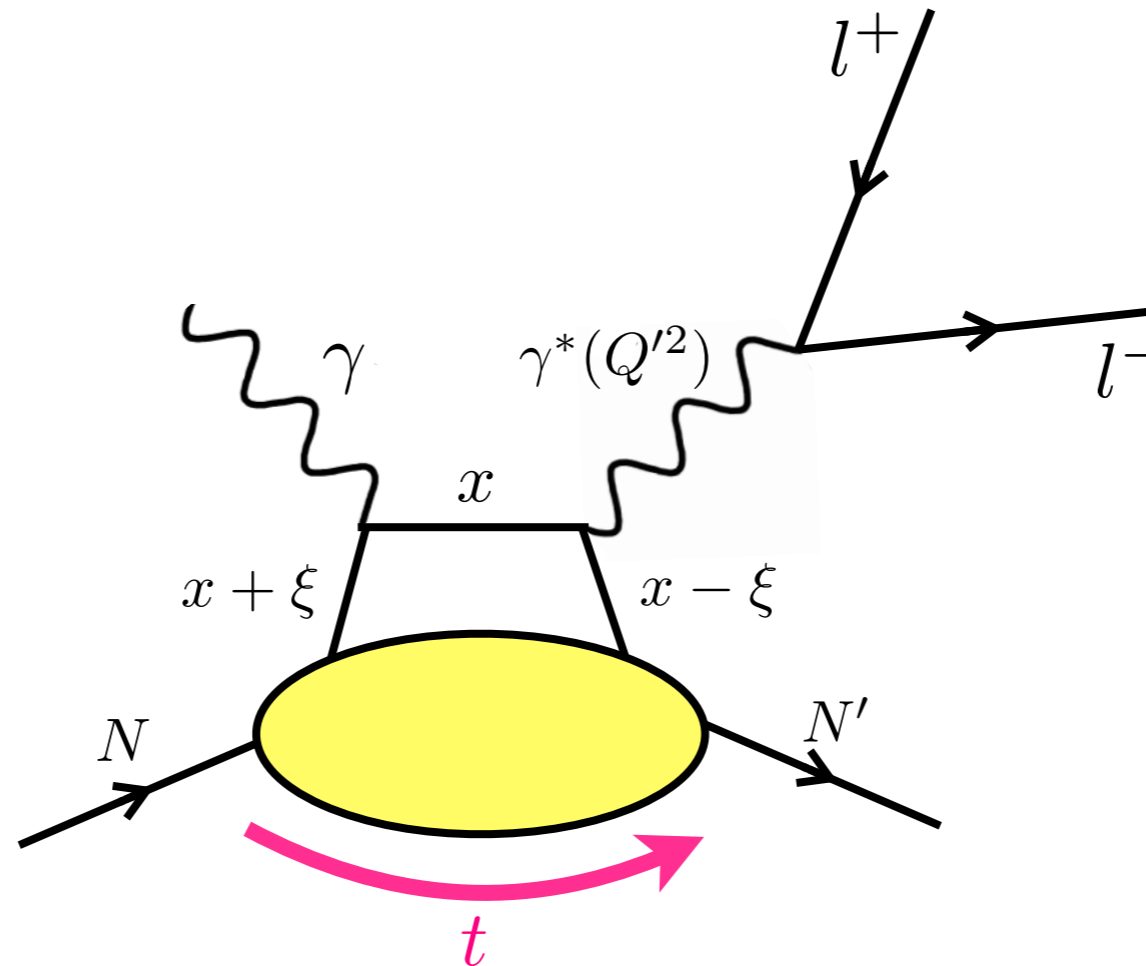


Timelike Compton Scattering

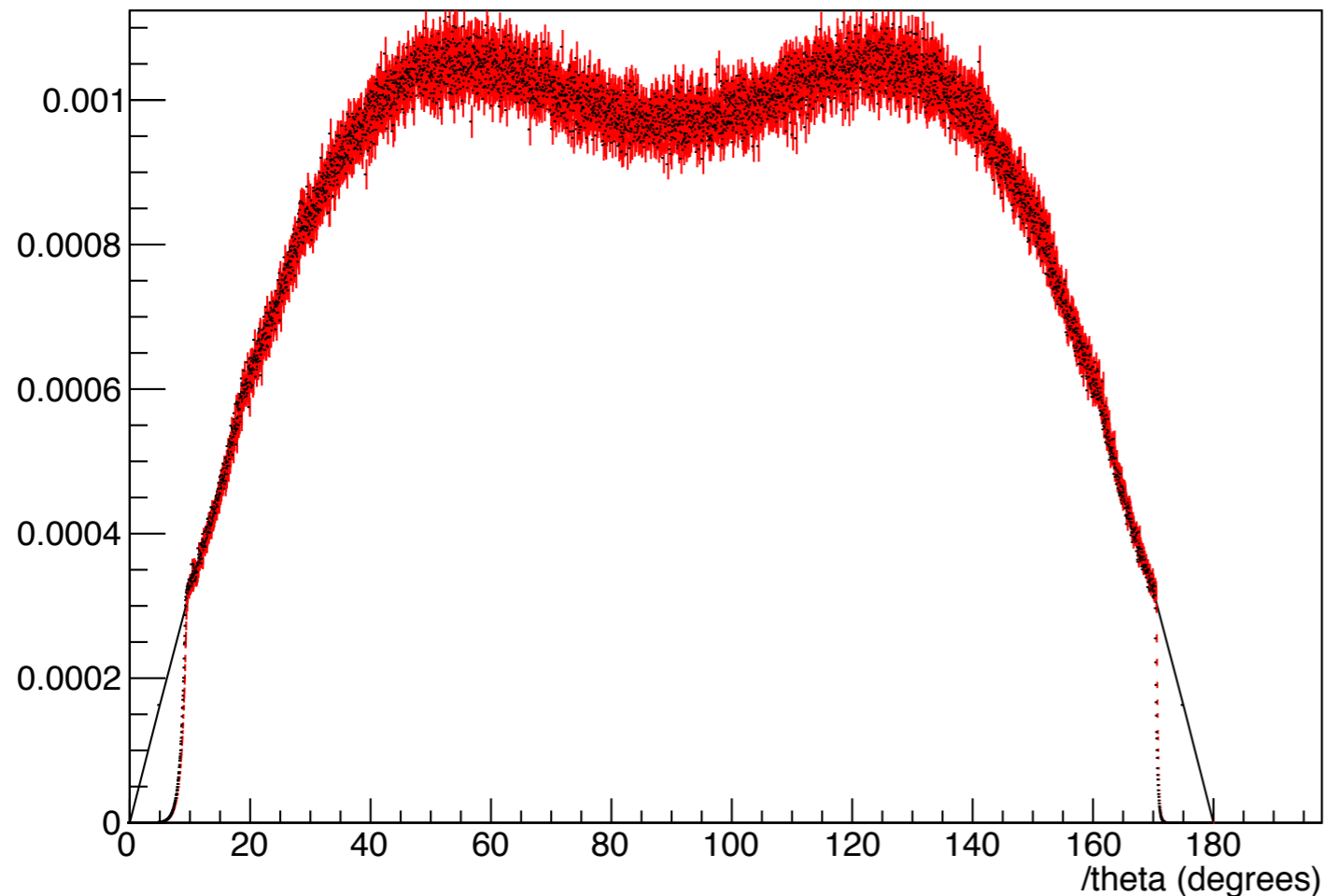


Daria Sokhan
University of Glasgow

*Together with Kayleigh Gates (University of Glasgow) and
Pawel Sznajder (National Centre for Nuclear Research, Warsaw)*

TCS generator

Theta Distributions for PARTONS and Generator



Code verification

Red: generated

Black: PARTONS calculation

$$Q^2 = 0.01 GeV^2$$

$$y = 0.1$$

$$Q'^2 = 2 GeV^2$$

$$-t = 0.2 GeV^2$$

(study by Kayleigh Gates)

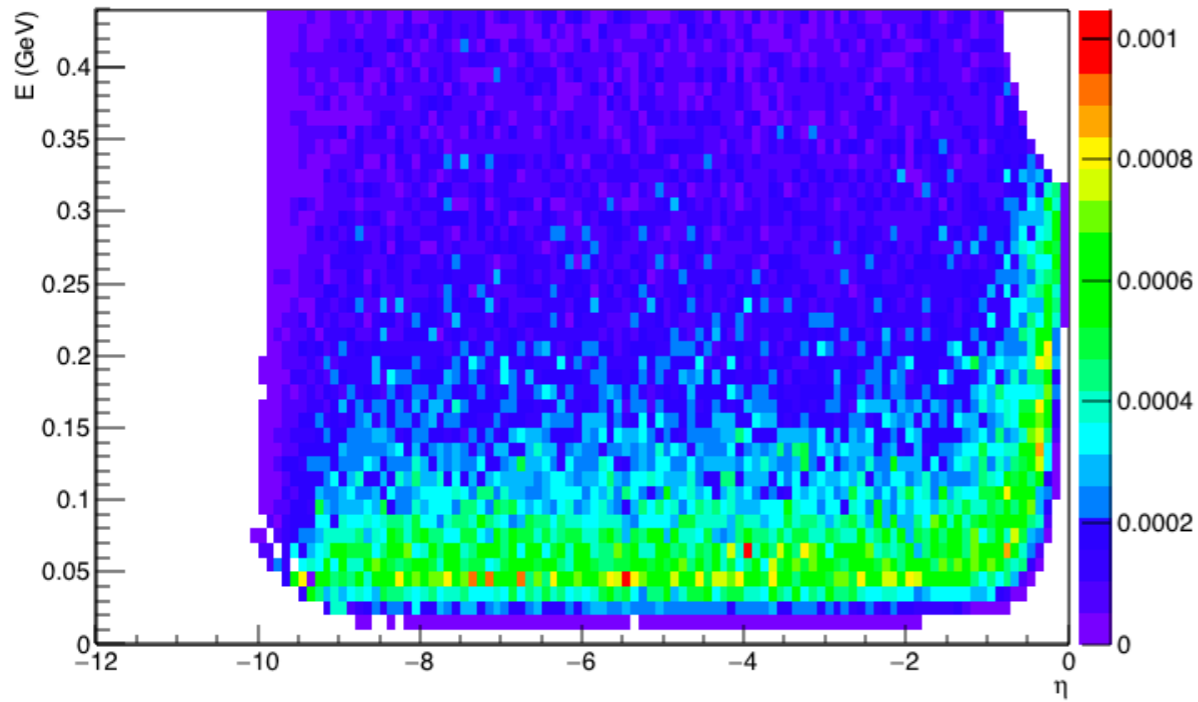
TCS toy MC: generator developed by Pawel Sznajder using CFFs produced by PARTONS (same as in DVCS and pi0 studies: GK parametrisation)

At this point no cuts are applied. Pure TCS amplitude (no BH!)

Quasi-real photon (q): E vs η

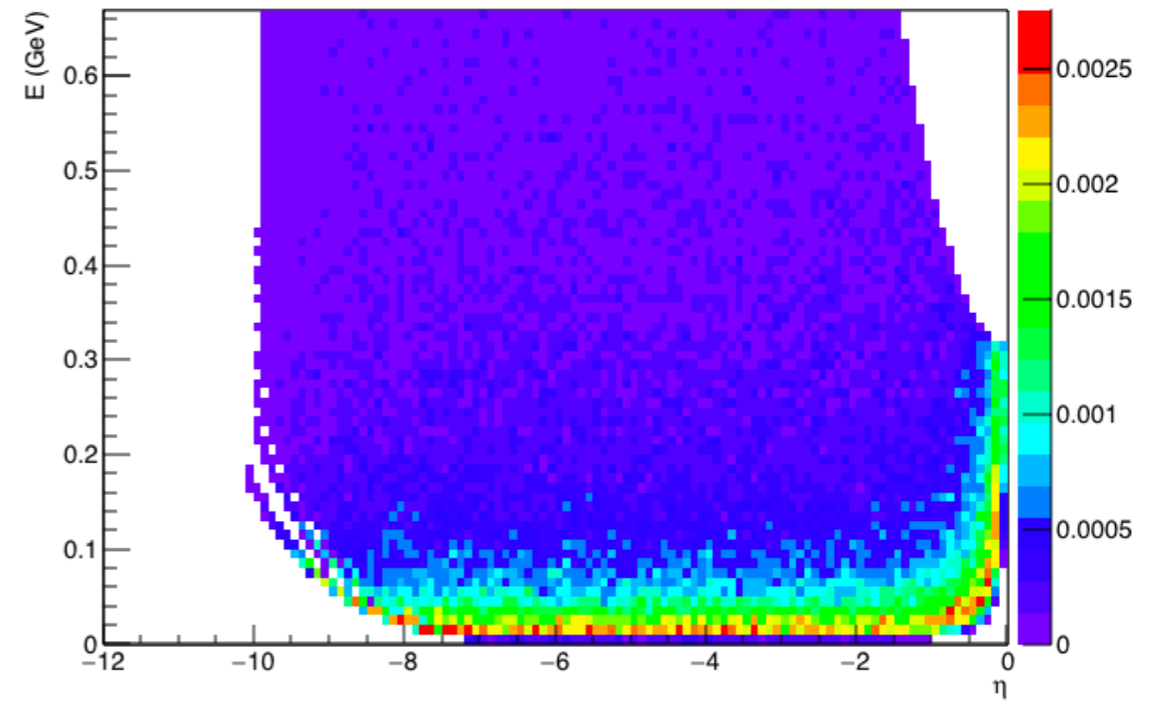
5 GeV x 41 GeV

$\gamma: \nu$ vs η



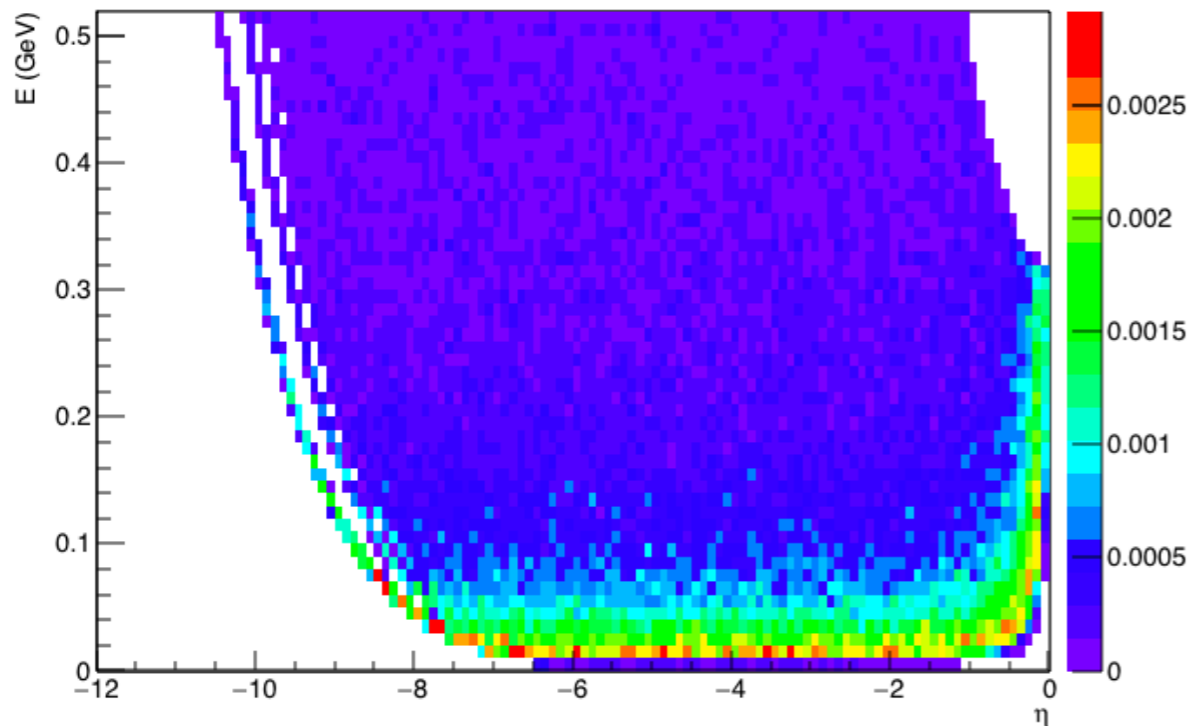
5 GeV x 100 GeV

$\gamma: \nu$ vs η



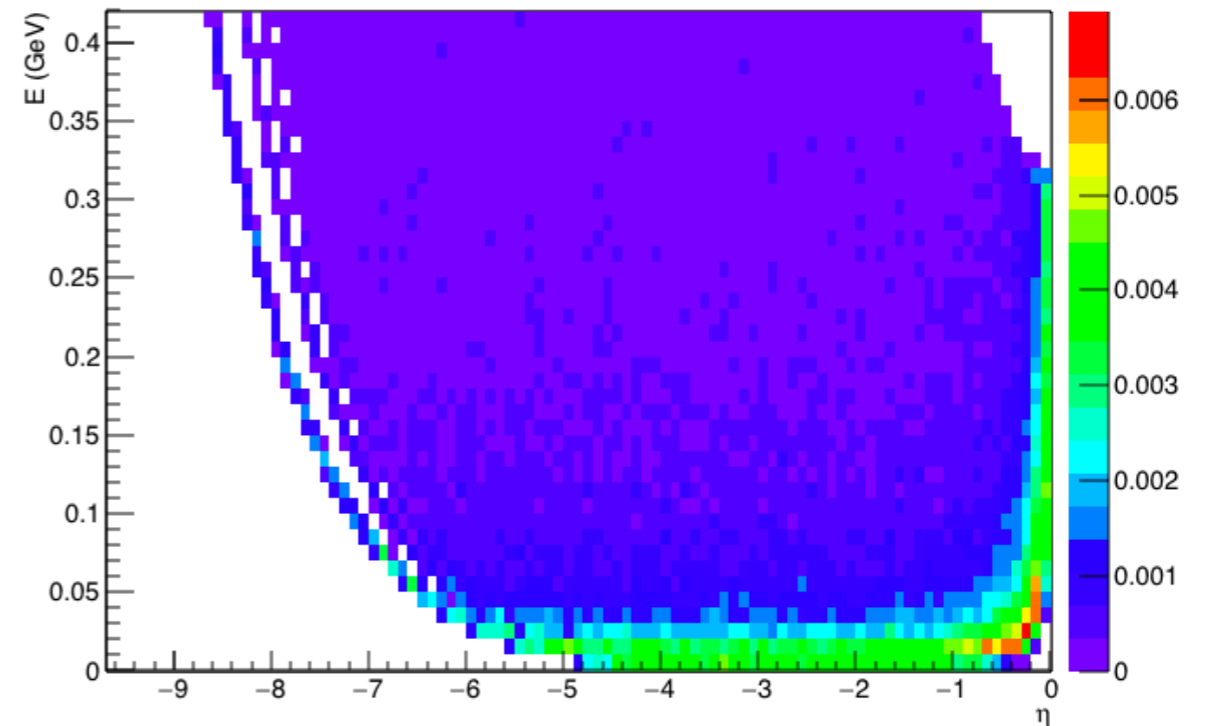
10 GeV x 100 GeV

$\gamma: \nu$ vs η



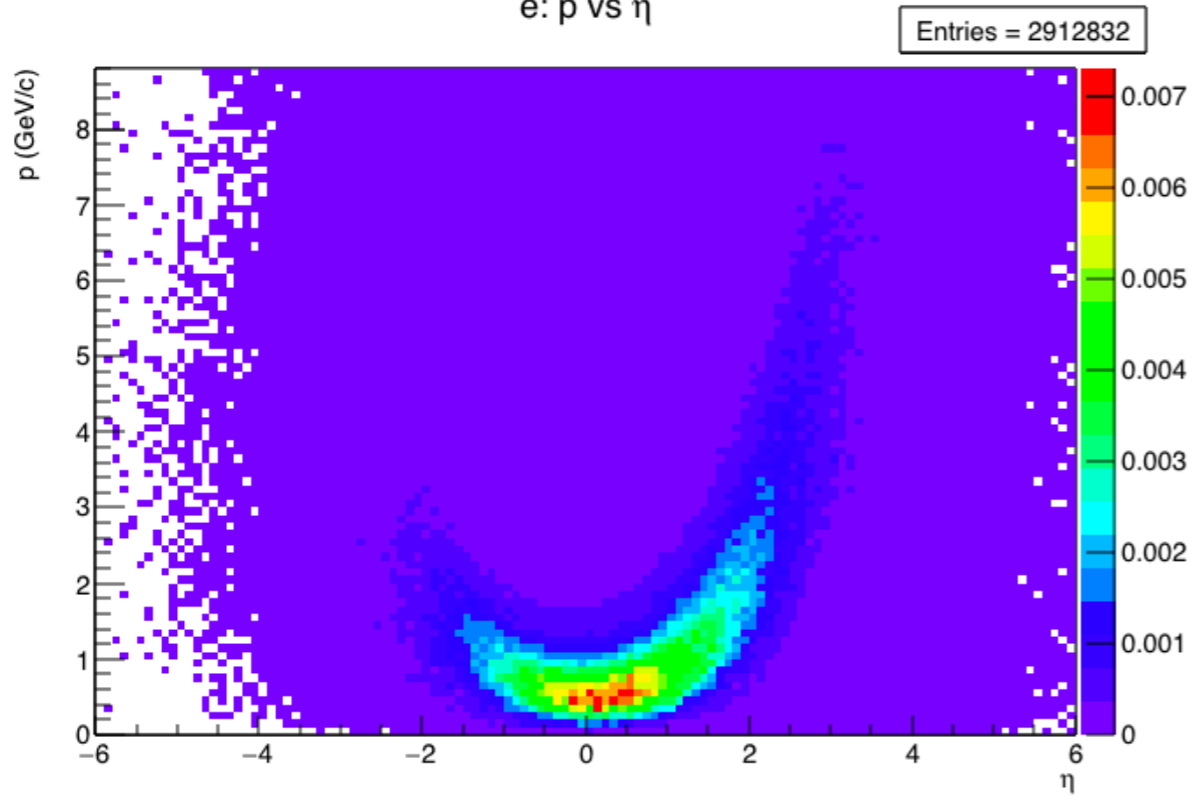
18 GeV x 275 GeV

$\gamma: \nu$ vs η

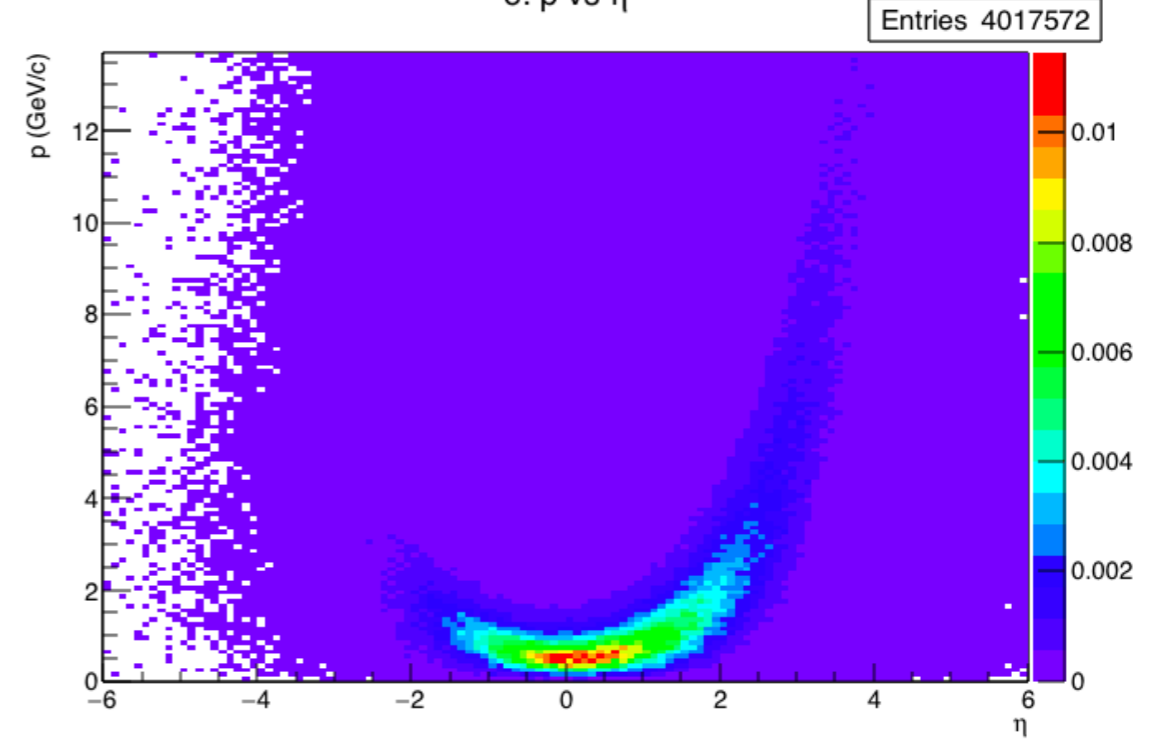


$e+e^-$: p vs η

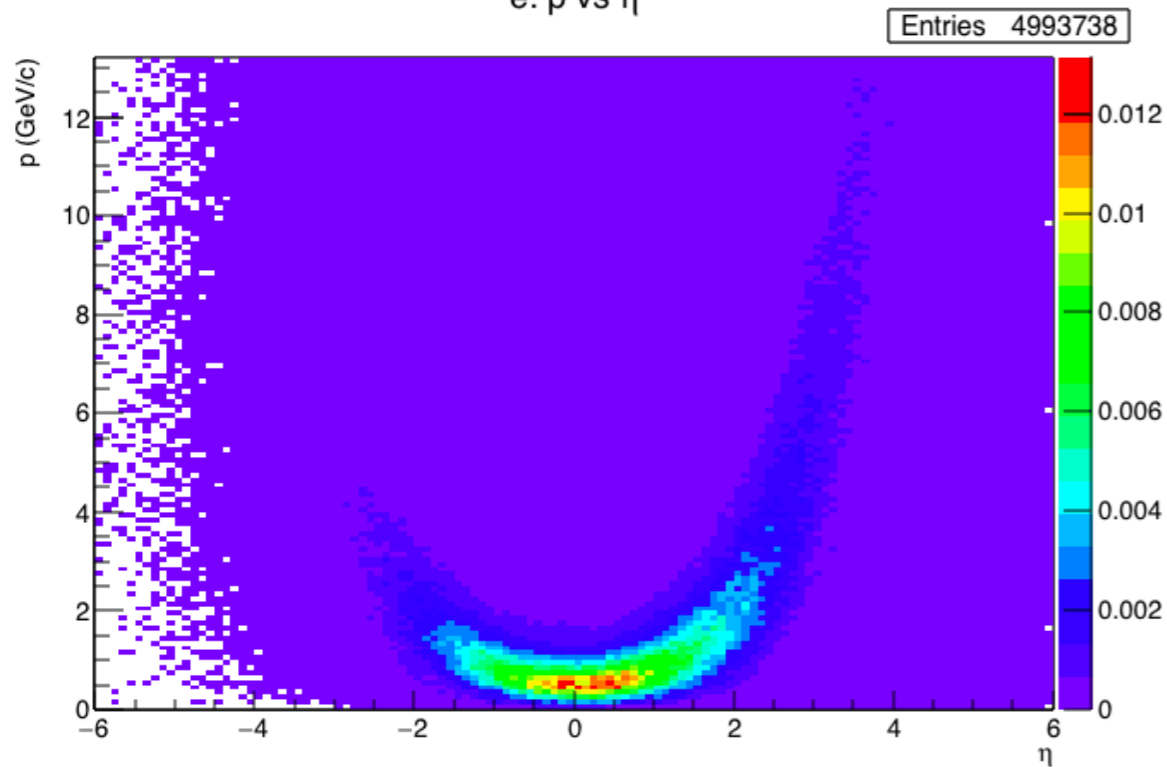
5 GeV x 41 GeV
e: p vs η



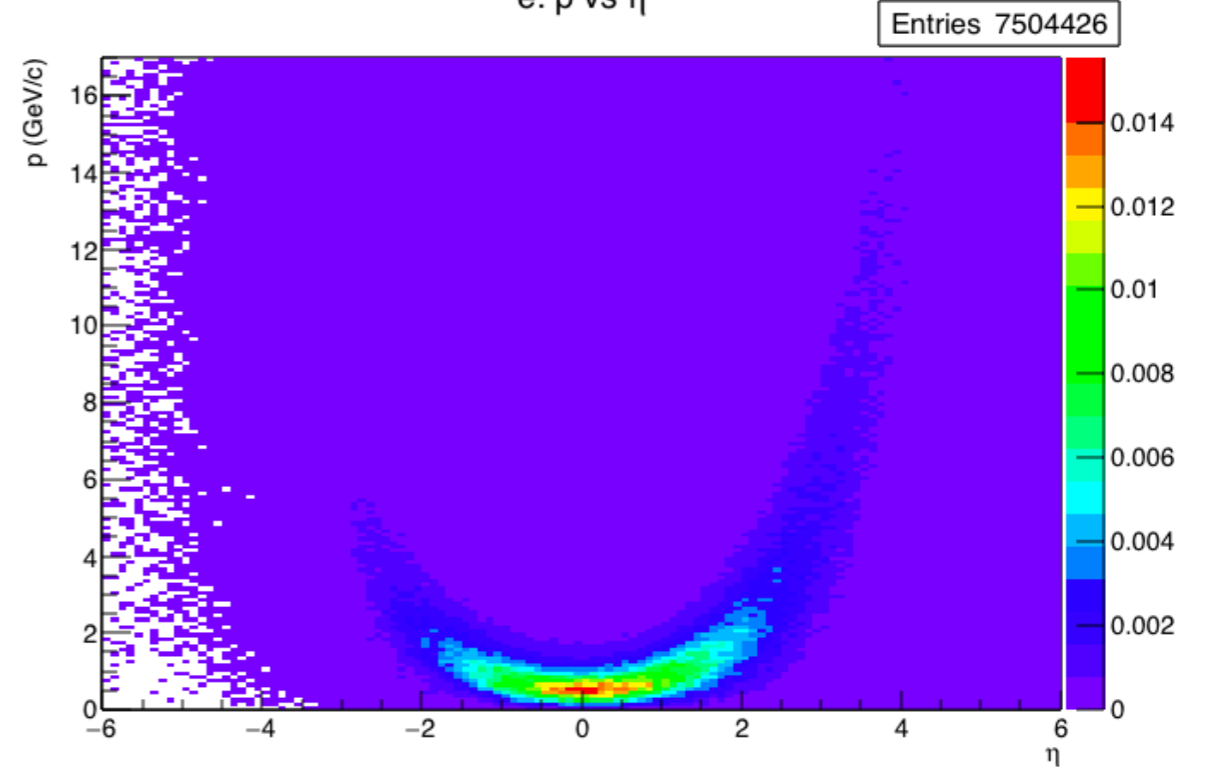
5 GeV x 100 GeV
e: p vs η



10 GeV x 100 GeV
e: p vs η



18 GeV x 275 GeV
e: p vs η

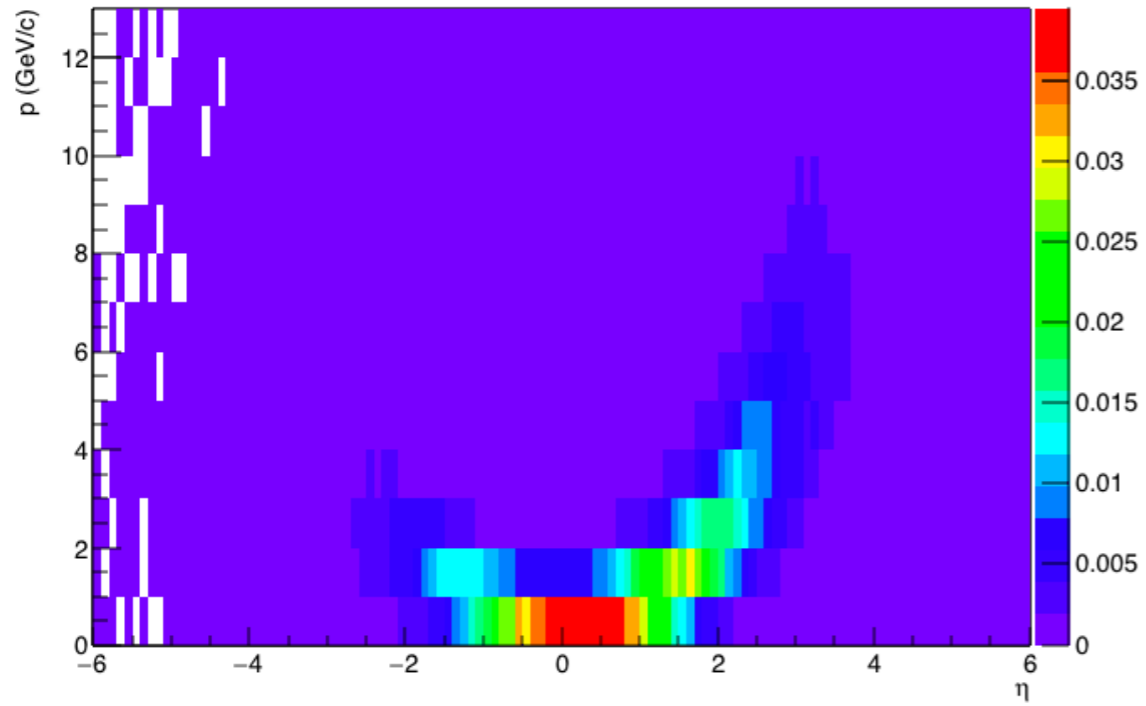


mu+mu-: p vs eta

5 GeV x 41 GeV

μ : p vs η

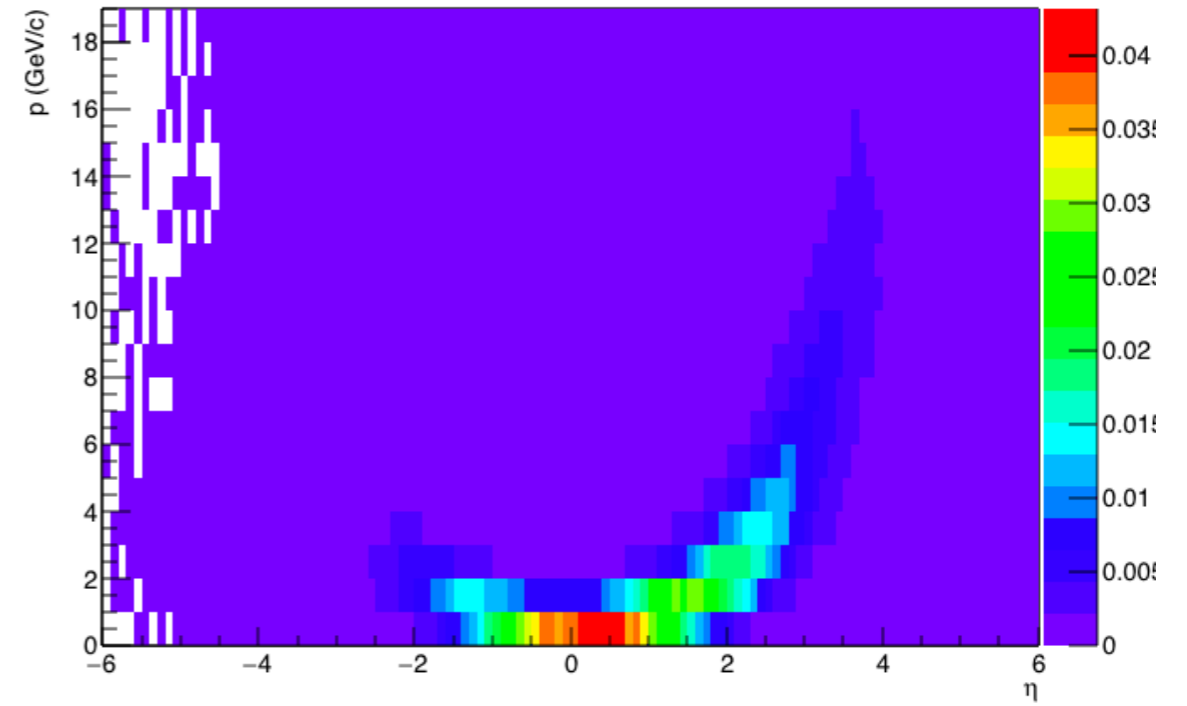
Entries 2914018



5 GeV x 100 GeV

μ : p vs η

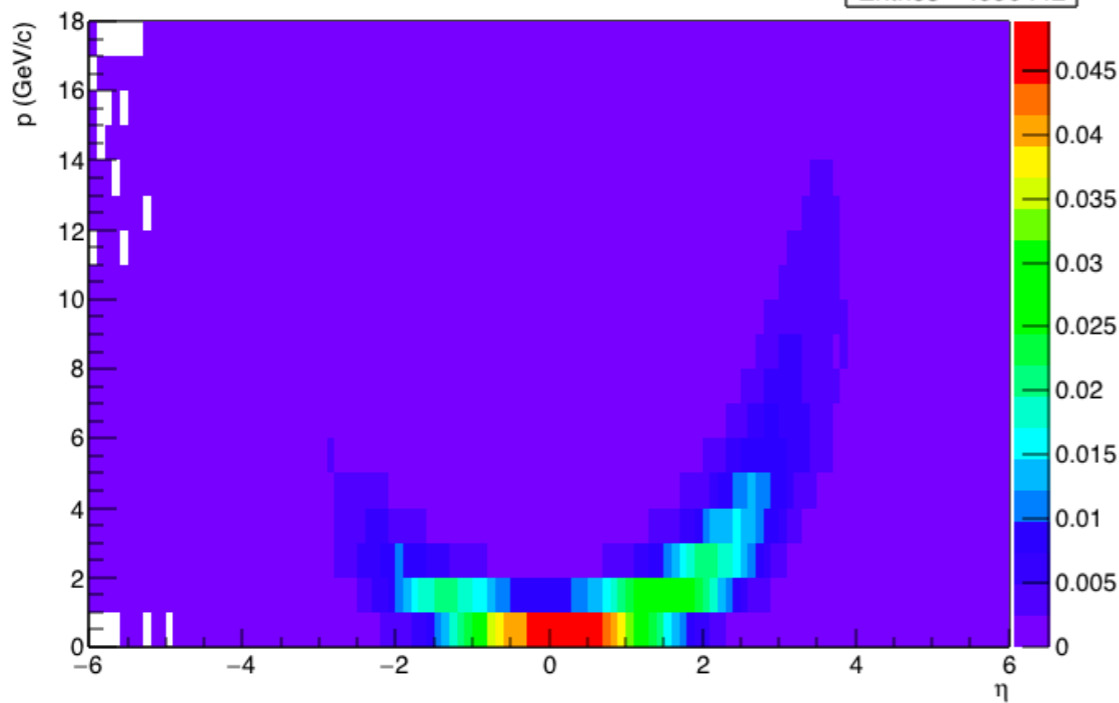
Entries 4019332



10 GeV x 100 GeV

μ : p vs η

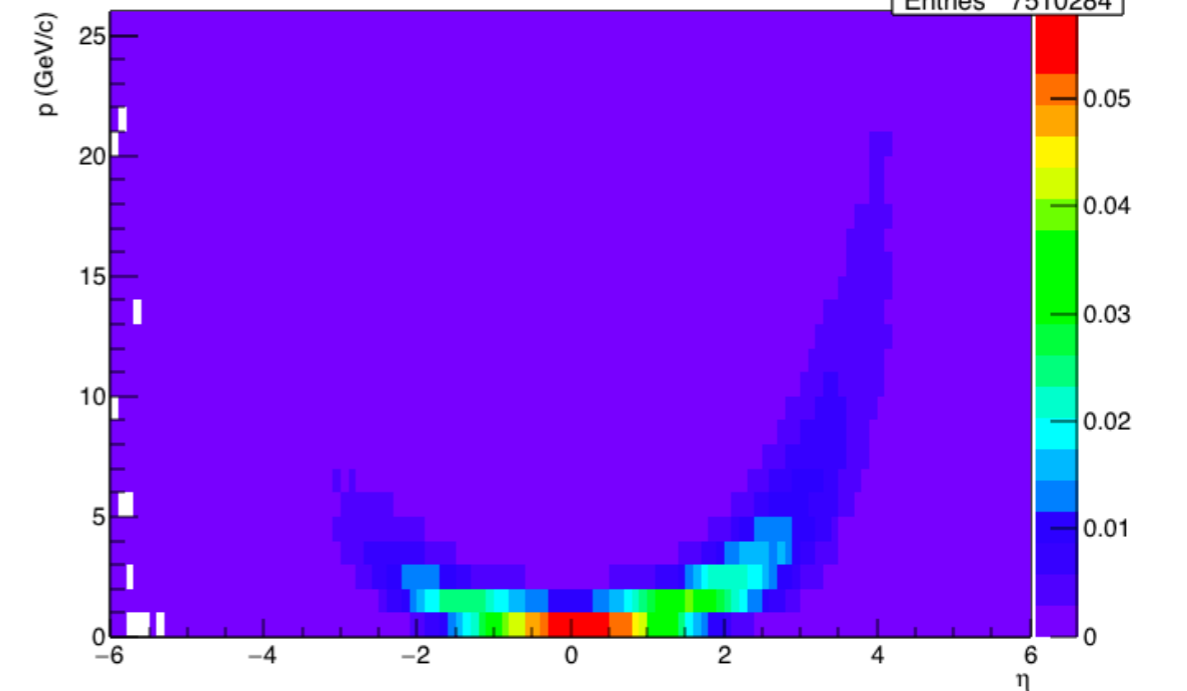
Entries 4990442



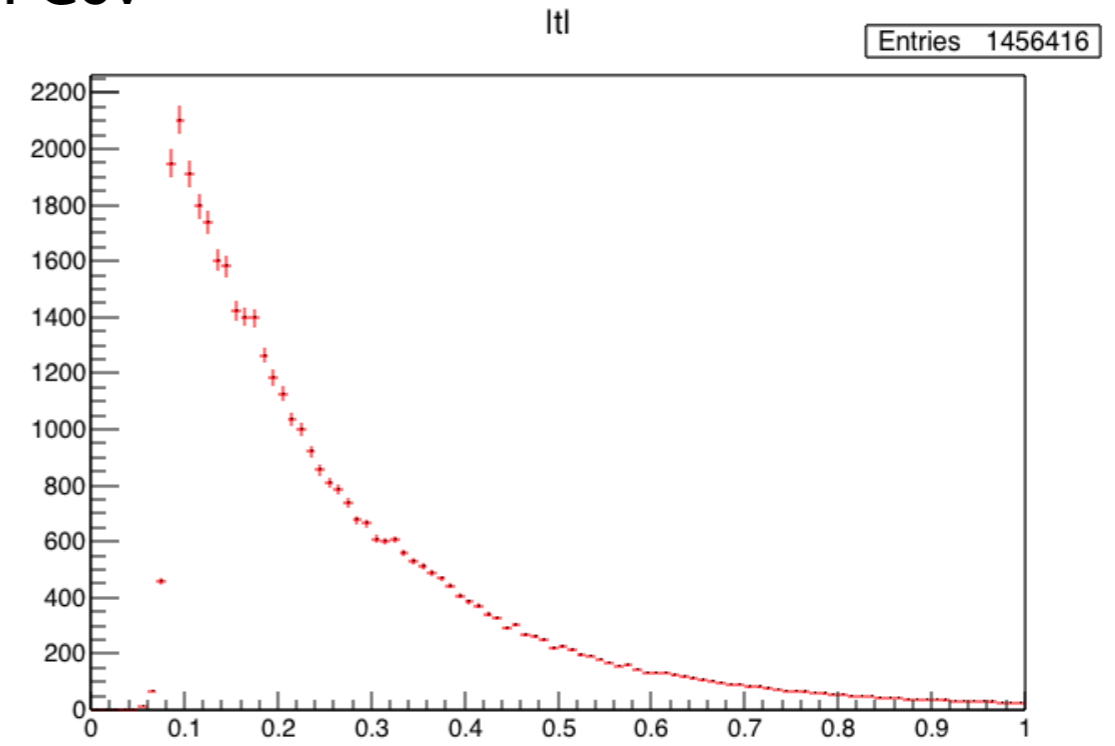
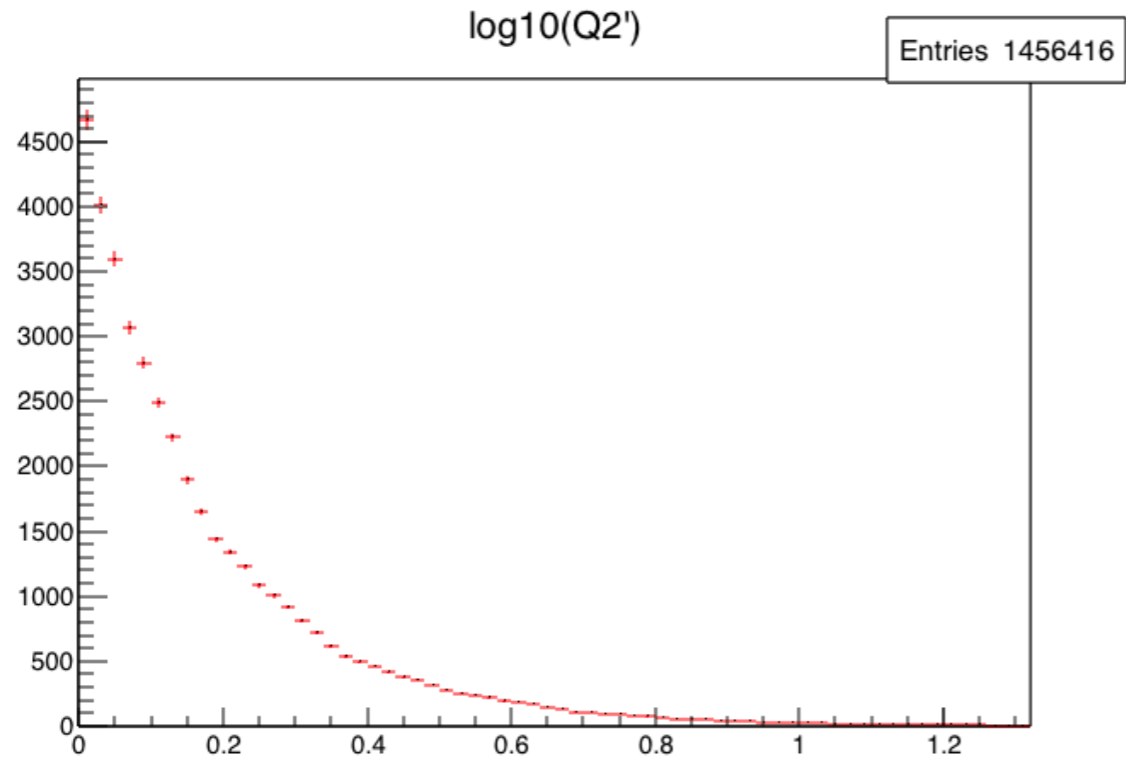
18 GeV x 275 GeV

μ : p vs η

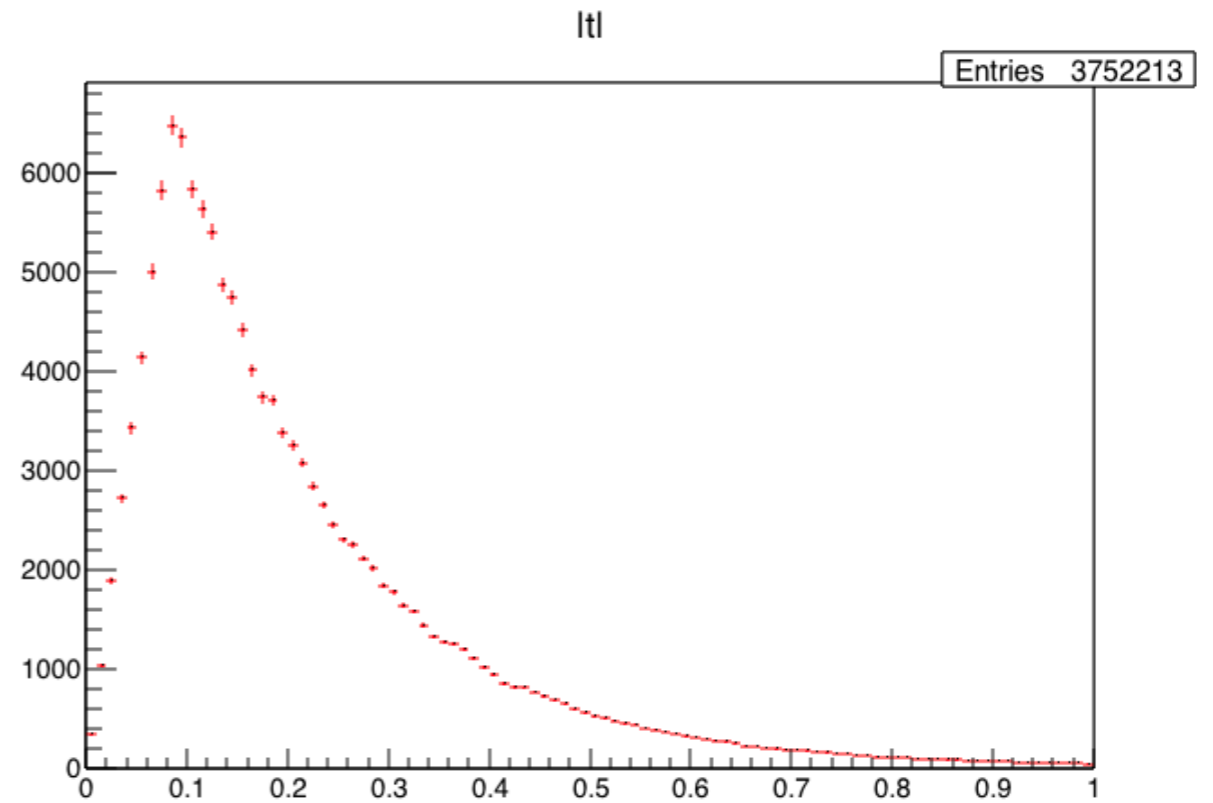
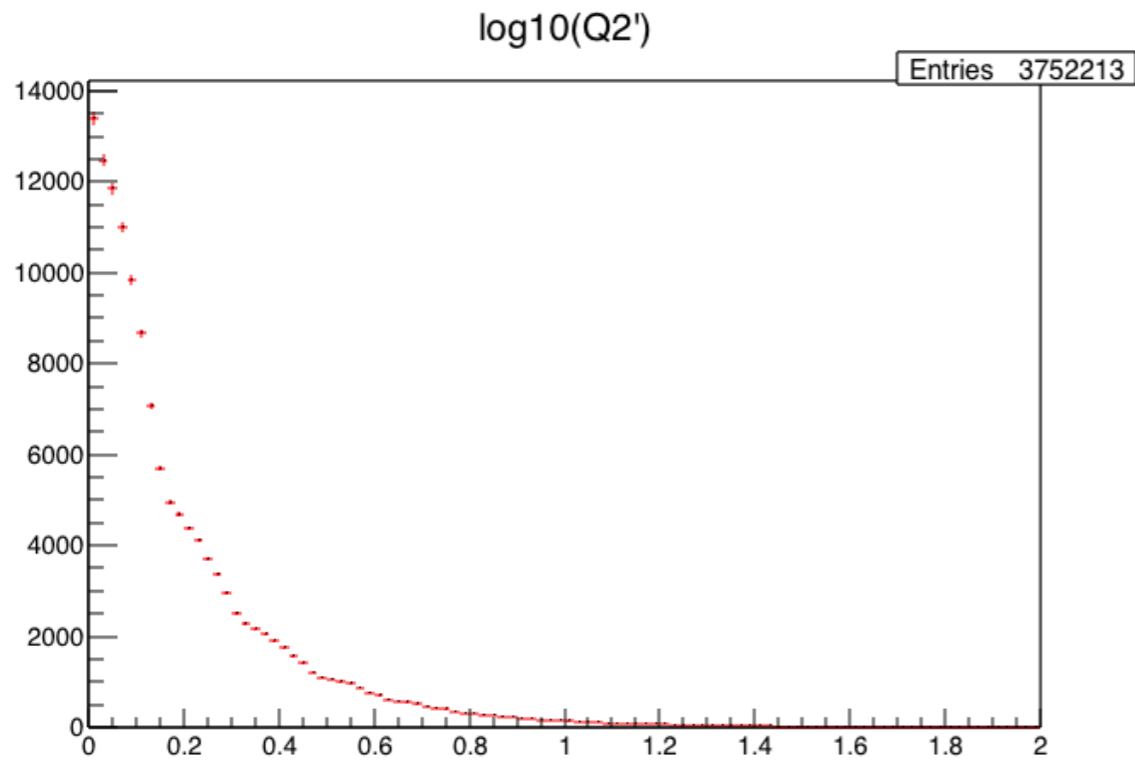
Entries 7510284



5 GeV x 41 GeV

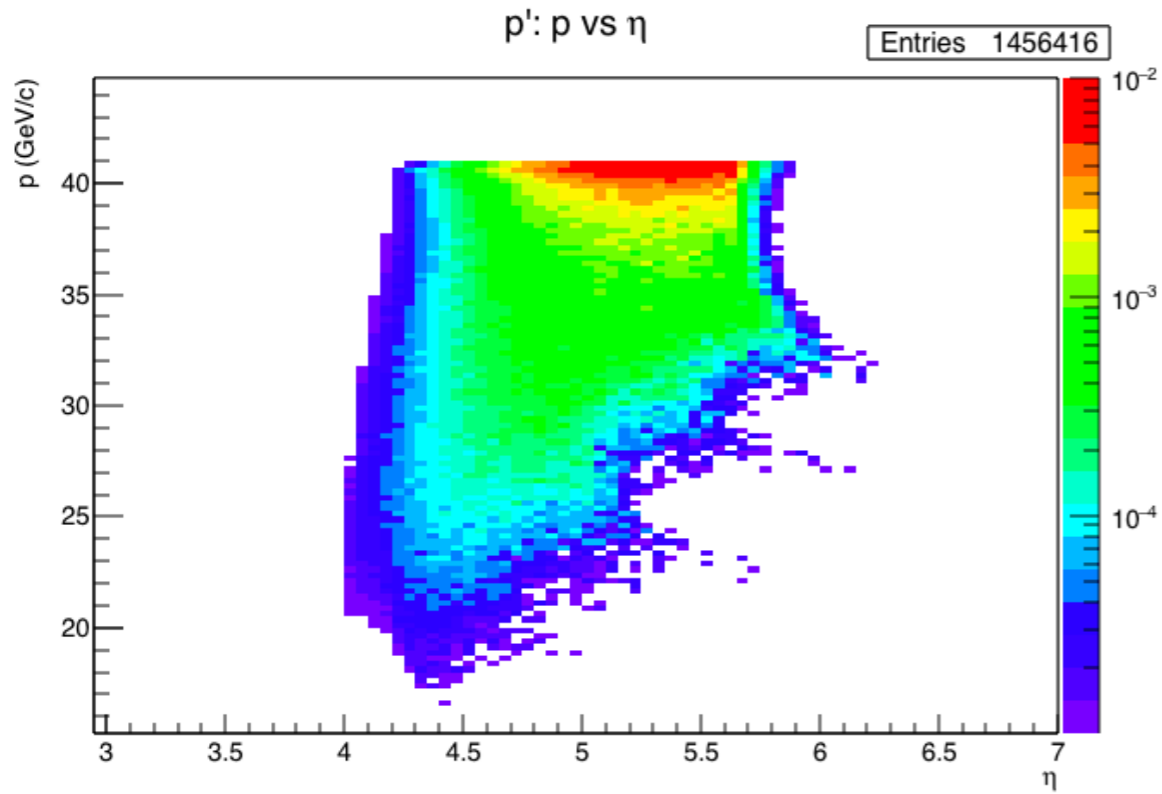


18 GeV x 275 GeV

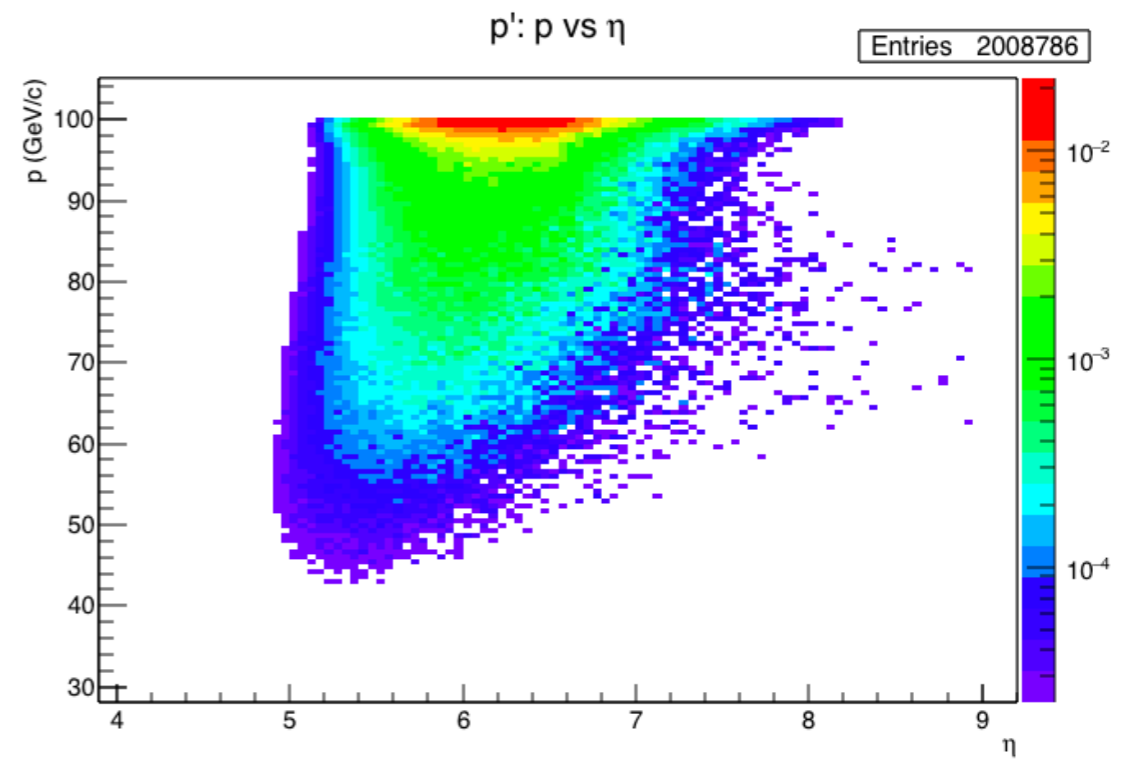


Scattered proton: p vs eta

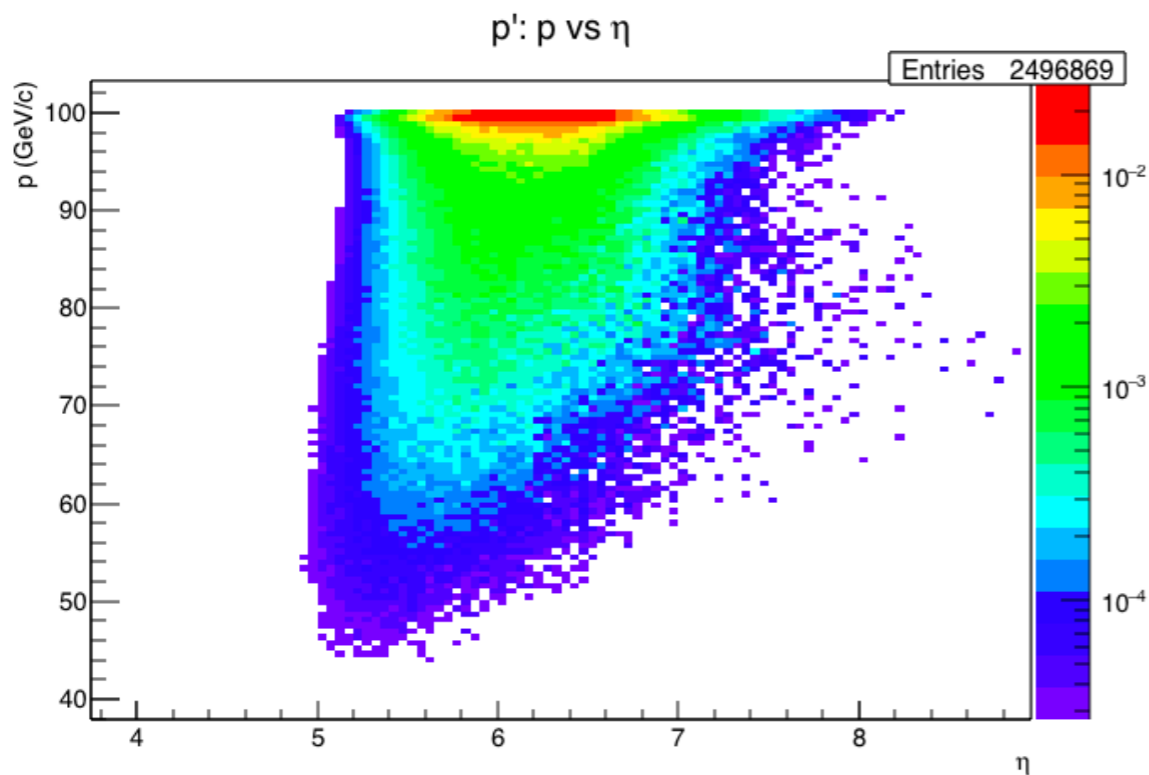
5 GeV x 41 GeV



5 GeV x 100 GeV



10 GeV x 100 GeV



18 GeV x 275 GeV

