



Simulation Statistics

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Contents

Histograms (true_vs_measured values and resolution for energy, pseudorapidity, and azimuthal angle) for the following detector-particle pairs:

- Central Electromagnetic Calorimeter (CEMC): electron
- Endcap Electromagnetic Calorimeter (EEMC): electron
- Forward Electromagnetic Calorimeter (FEMC): electron
- Forward Hadronic Calorimeter (FHCAL): pion
- Inner Hadronic Calorimeter (HCALIN): pion
- Outer Hadronic Calorimeter (HCALOUT): pion

Simulation Parameters

e^- , π^- (100k)

p : [0,30] GeV/c

cut: $e > 0.2$ GeV;
detector-wise
eta cuts

Eta: [-4,4]

phi: [- π , π]

default units



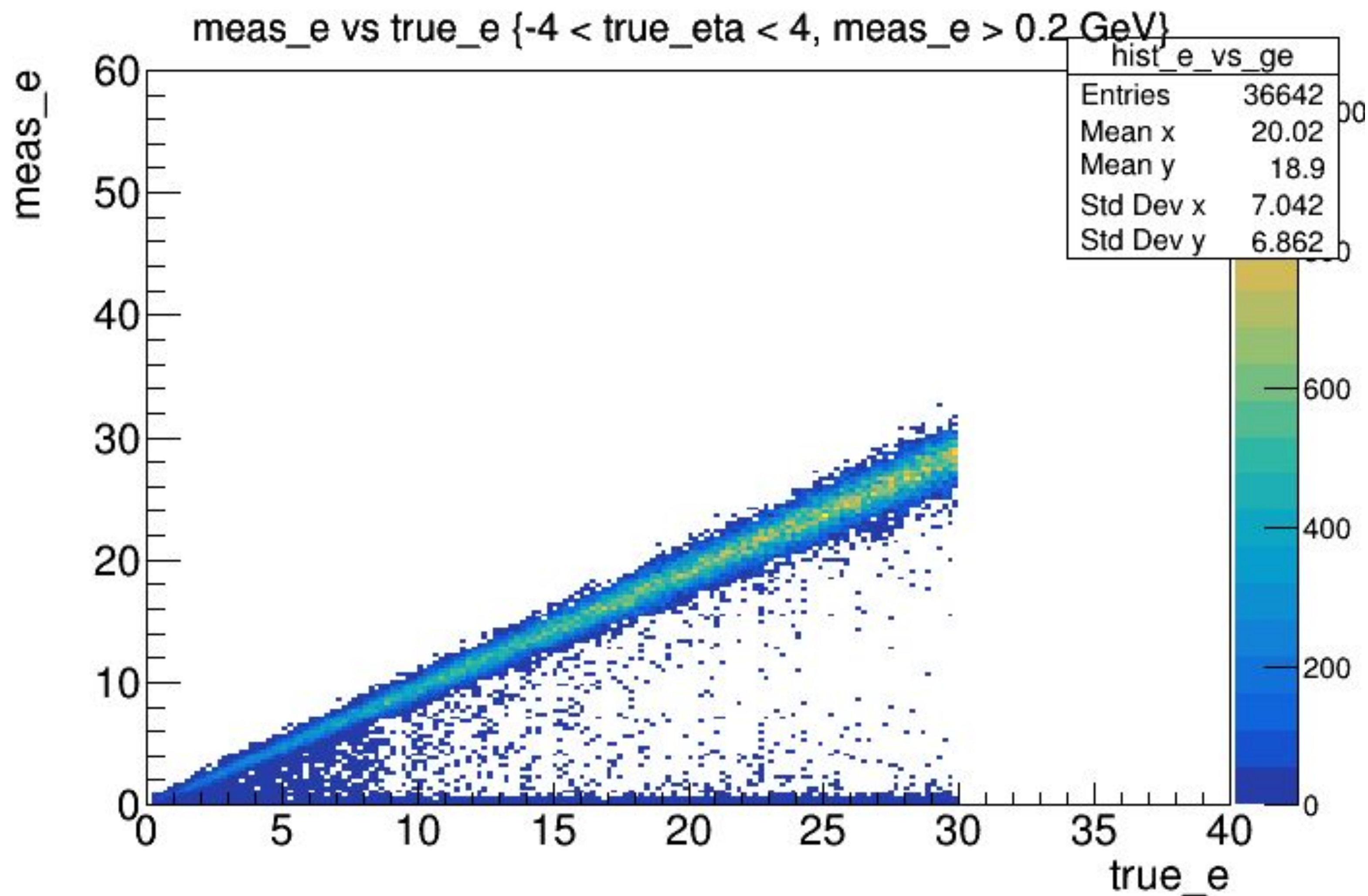
CEMC

CEMC (e^-)

e vs ge

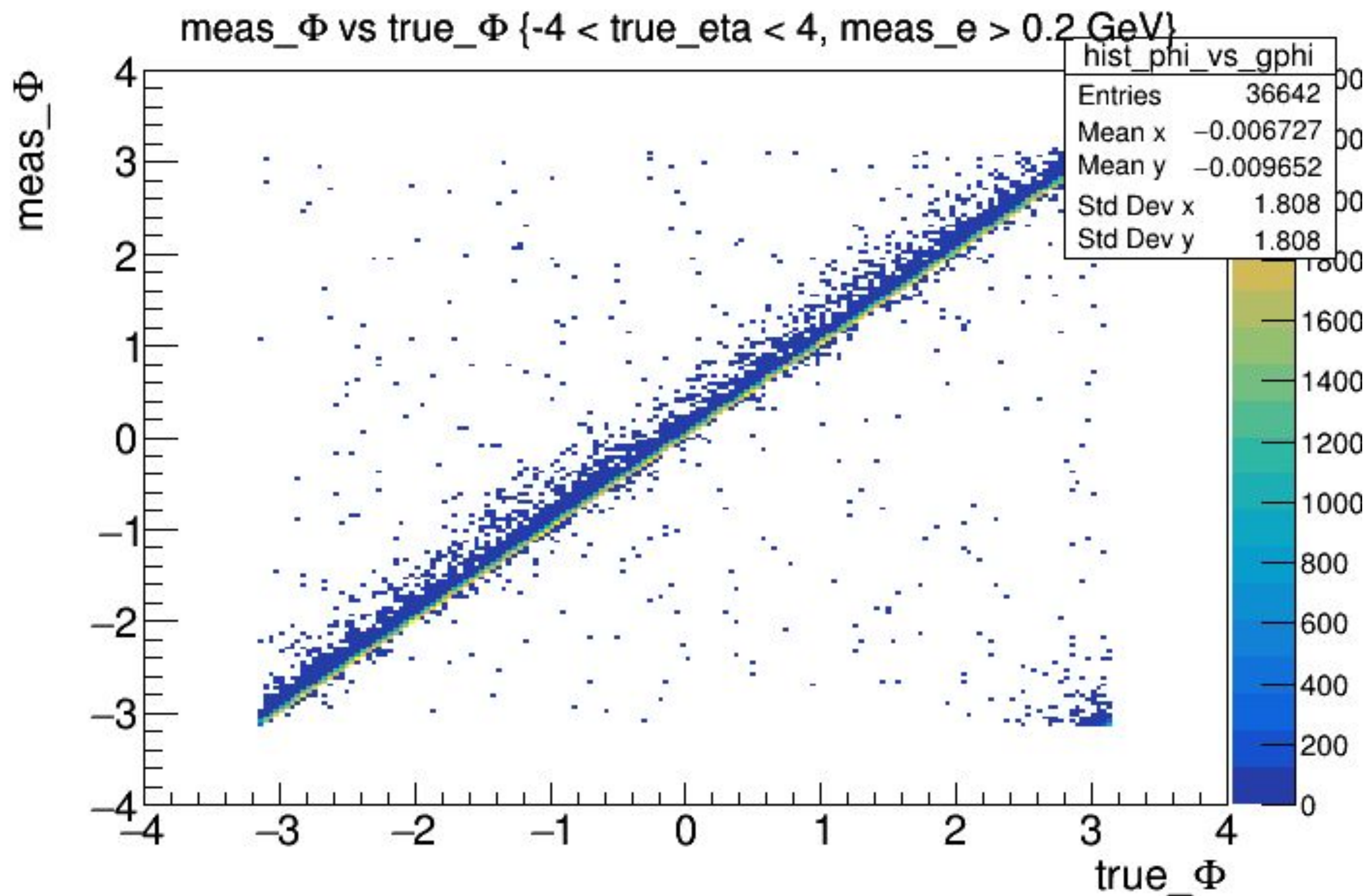
Explicit η cut: -4 to 4

Energy Cut: 0.2GeV



CEMC (e^-)

phi vs gphi
Explicit η cut: -4 to 4
Energy Cut: 0.2GeV

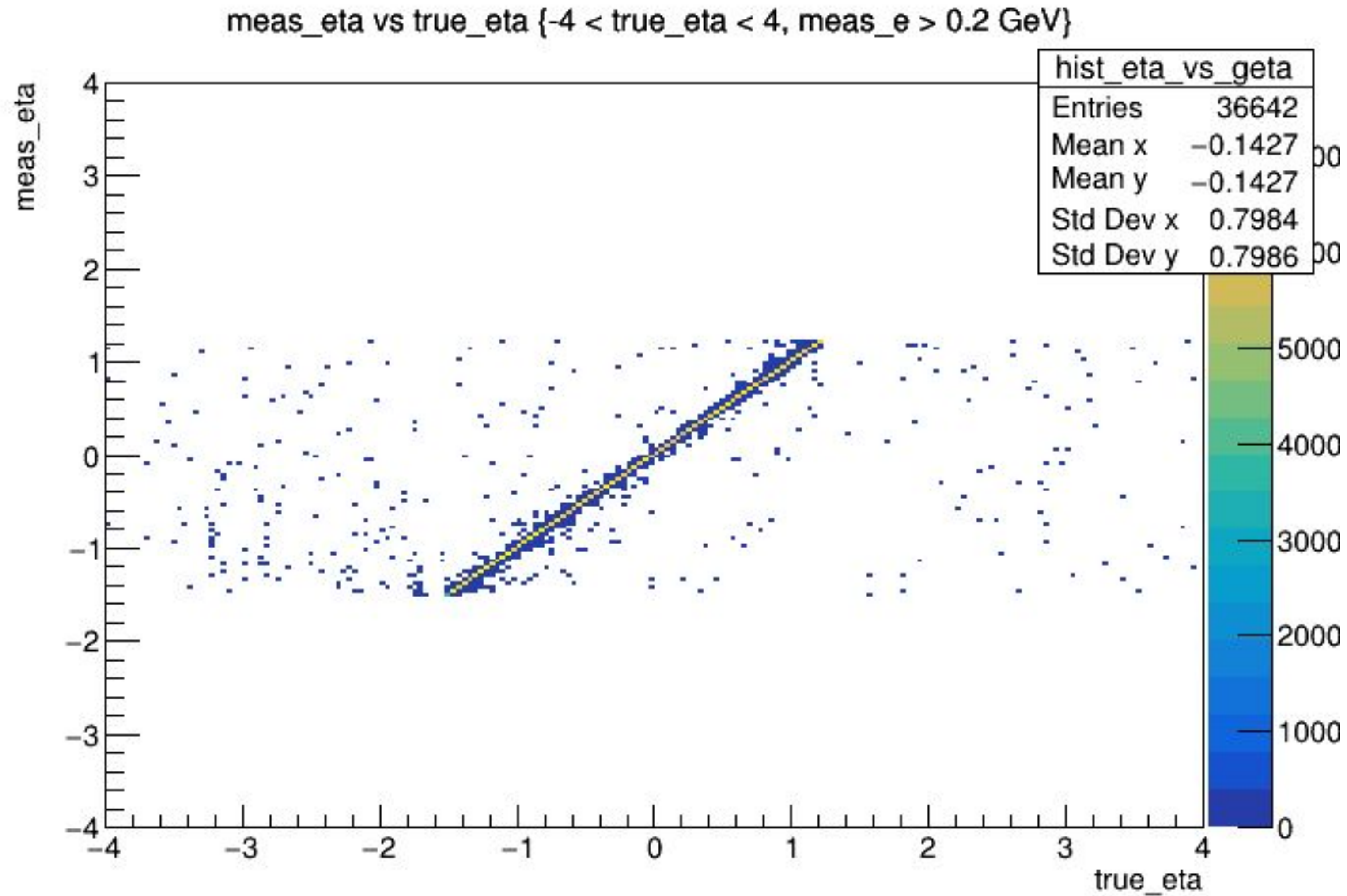


CEMC (e^-)

eta vs geta

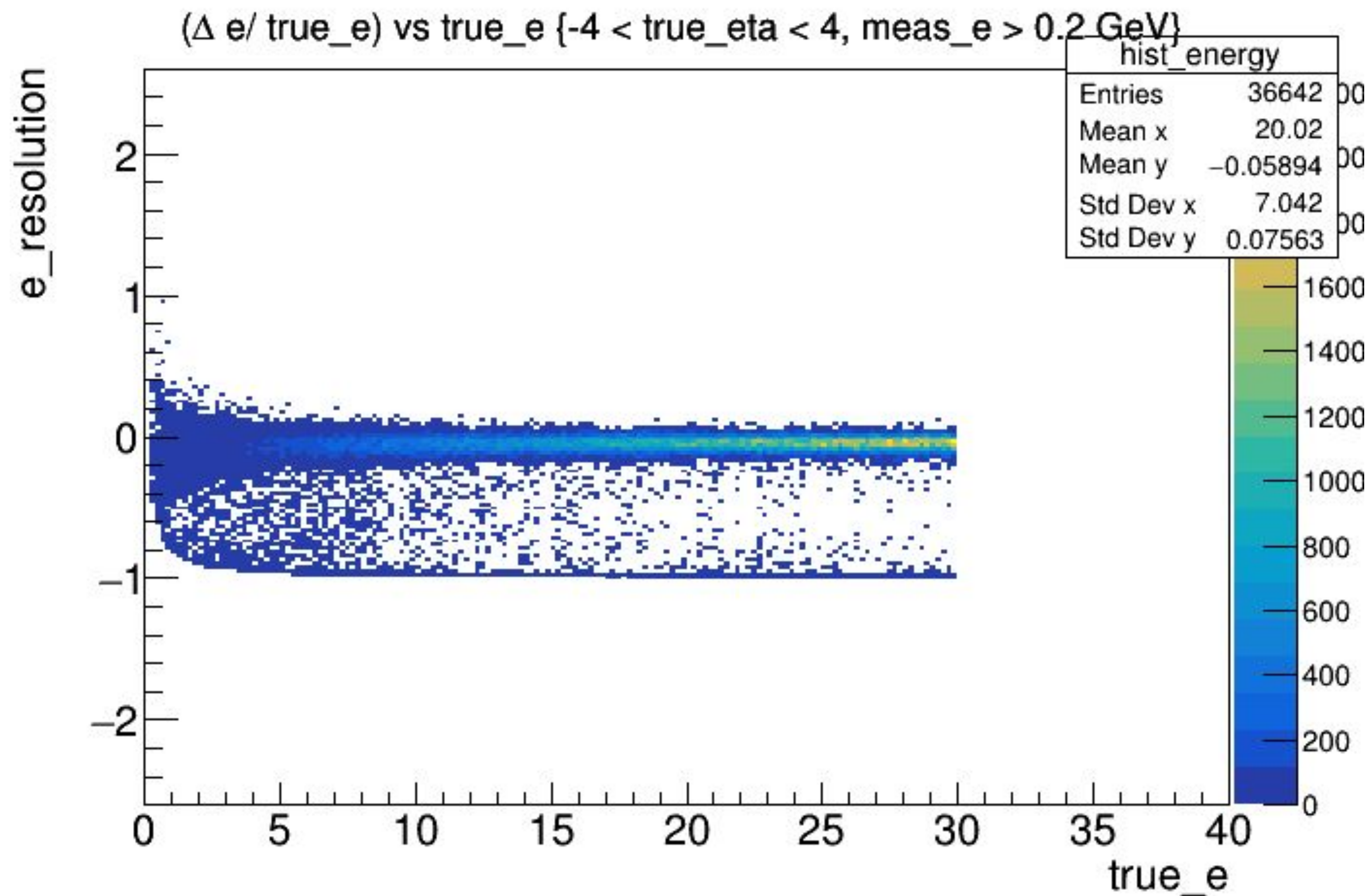
Explicit η cut: -4 to 4

Energy Cut: 0.2GeV



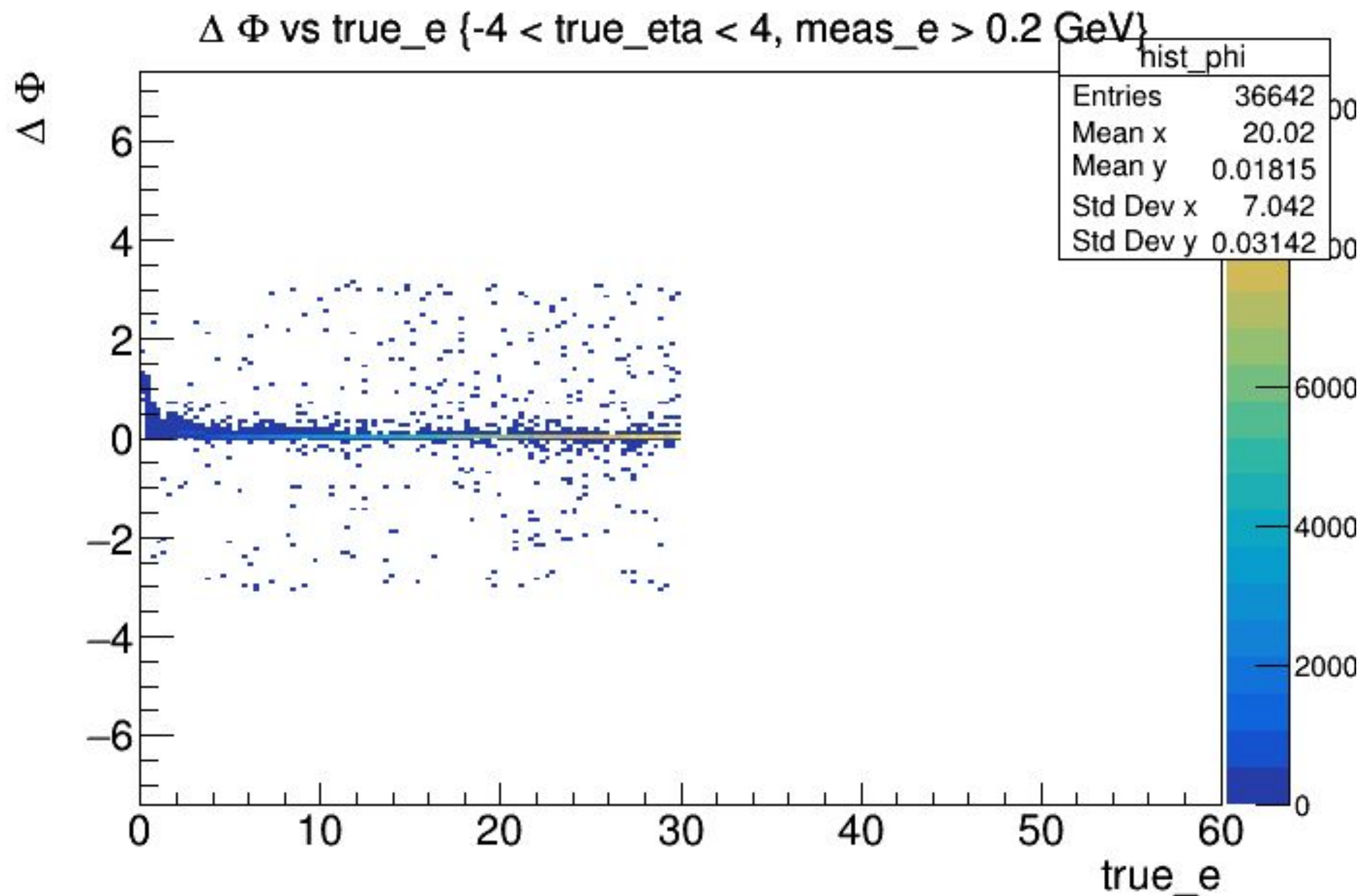
CEMC (e^-)

$\Delta e/ge$ vs ge
Explicit η cut: -4 to 4
Energy Cut: 0.2GeV



CEMC (e^-)

$\Delta\phi$ vs g_e
Explicit η cut: -4 to 4
Energy Cut: 0.2 GeV



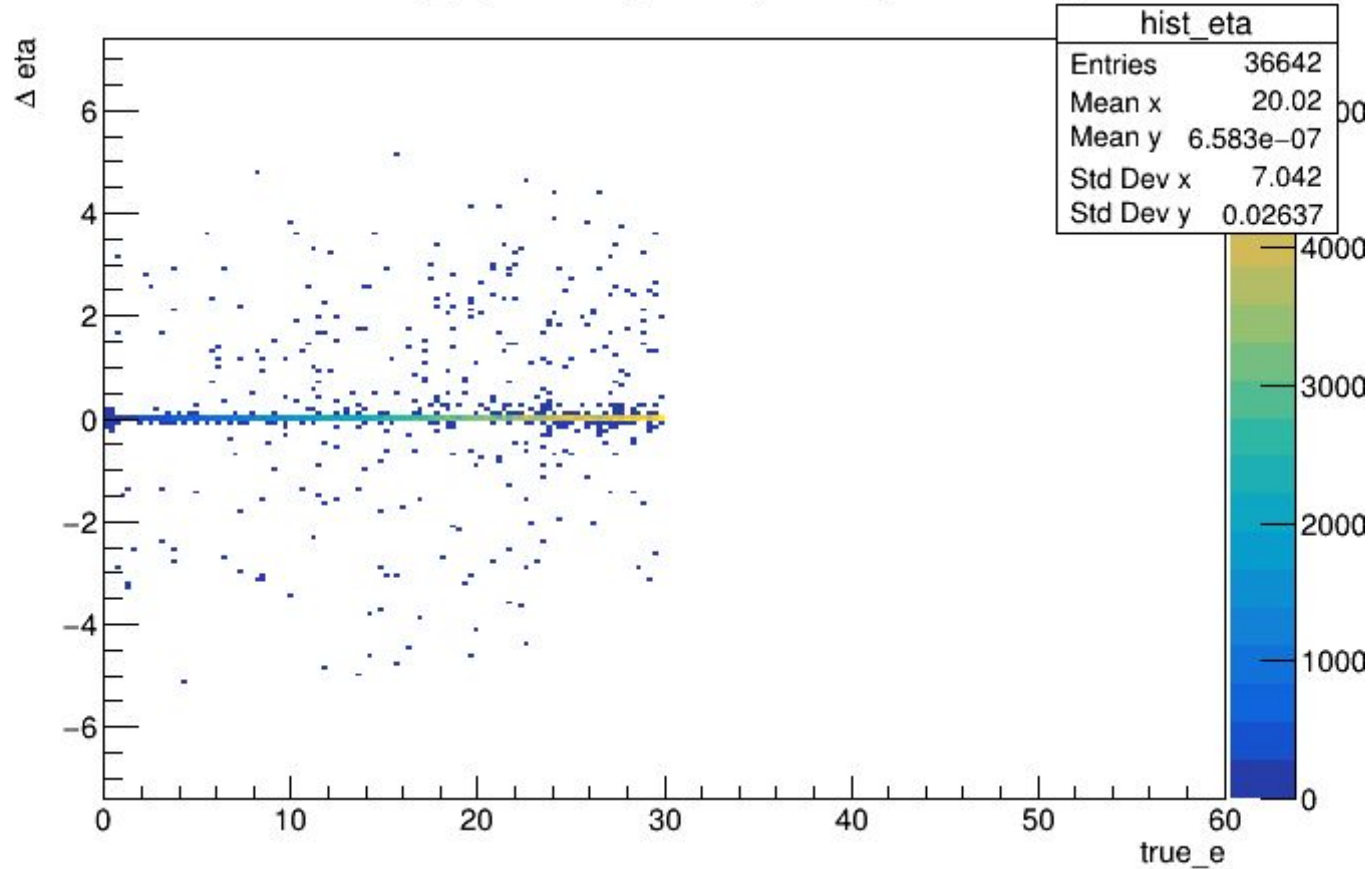
CEMC (e^-)

$\Delta\eta$ vs g_e

Explicit η cut: -4 to 4

Energy Cut: 0.2GeV

$\Delta\eta$ vs true_e $\{-4 < \text{true}_\eta < 4, \text{meas}_e > 0.2 \text{ GeV}\}$

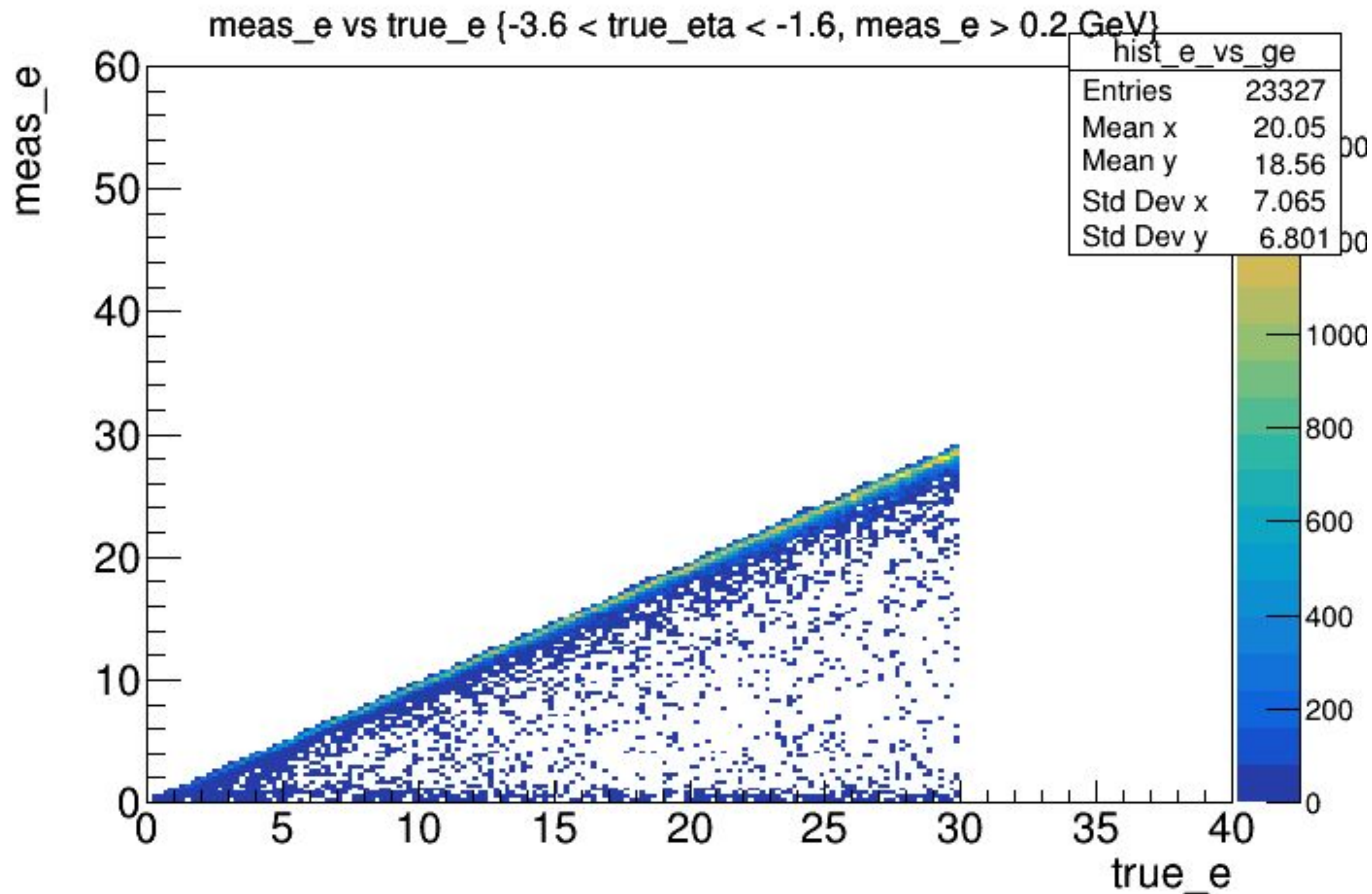




EEMC

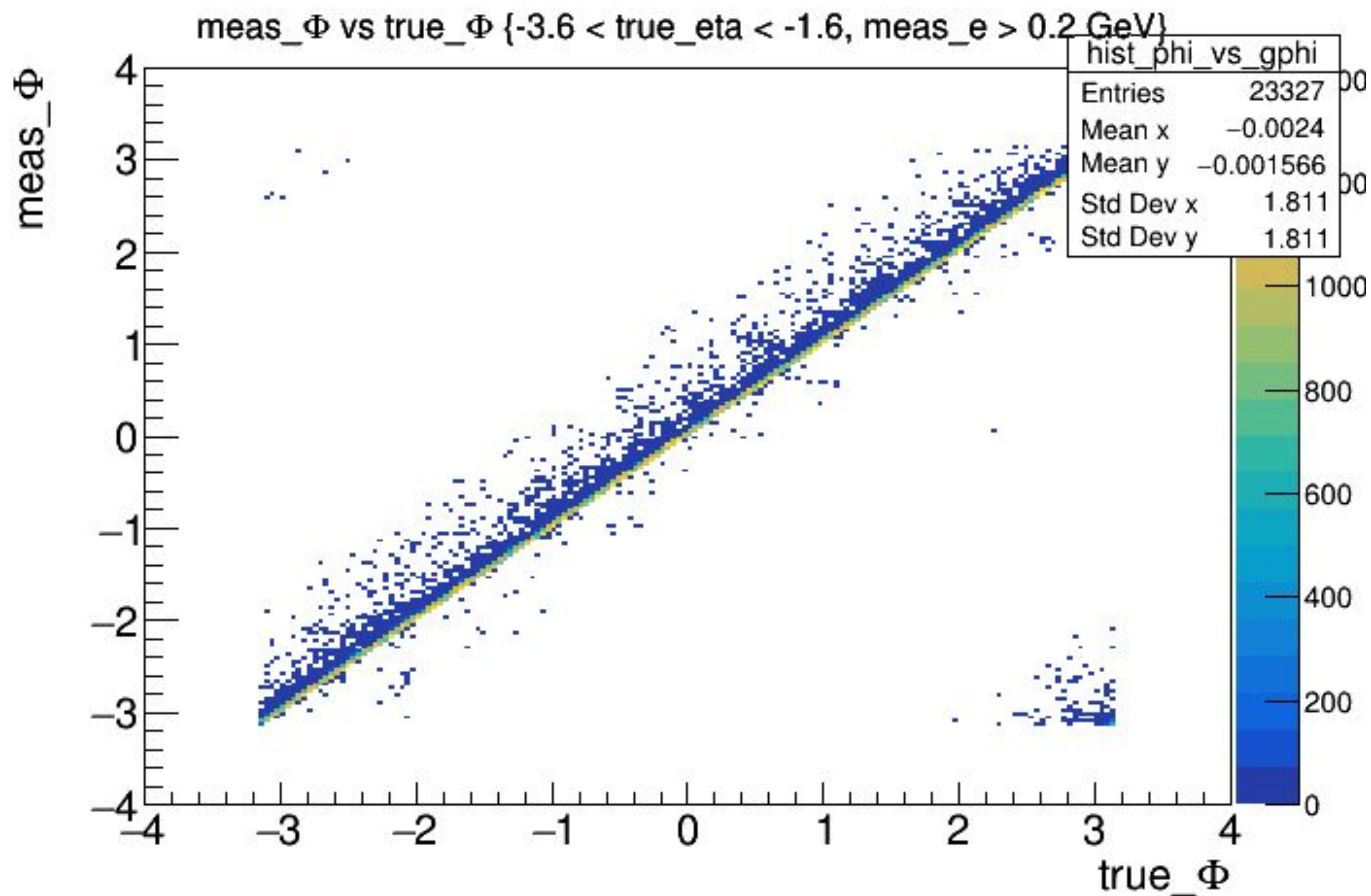
EEMC (e^-)

e vs ge
Explicit η cut: -3.6 to -1.6
Energy Cut: 0.2GeV



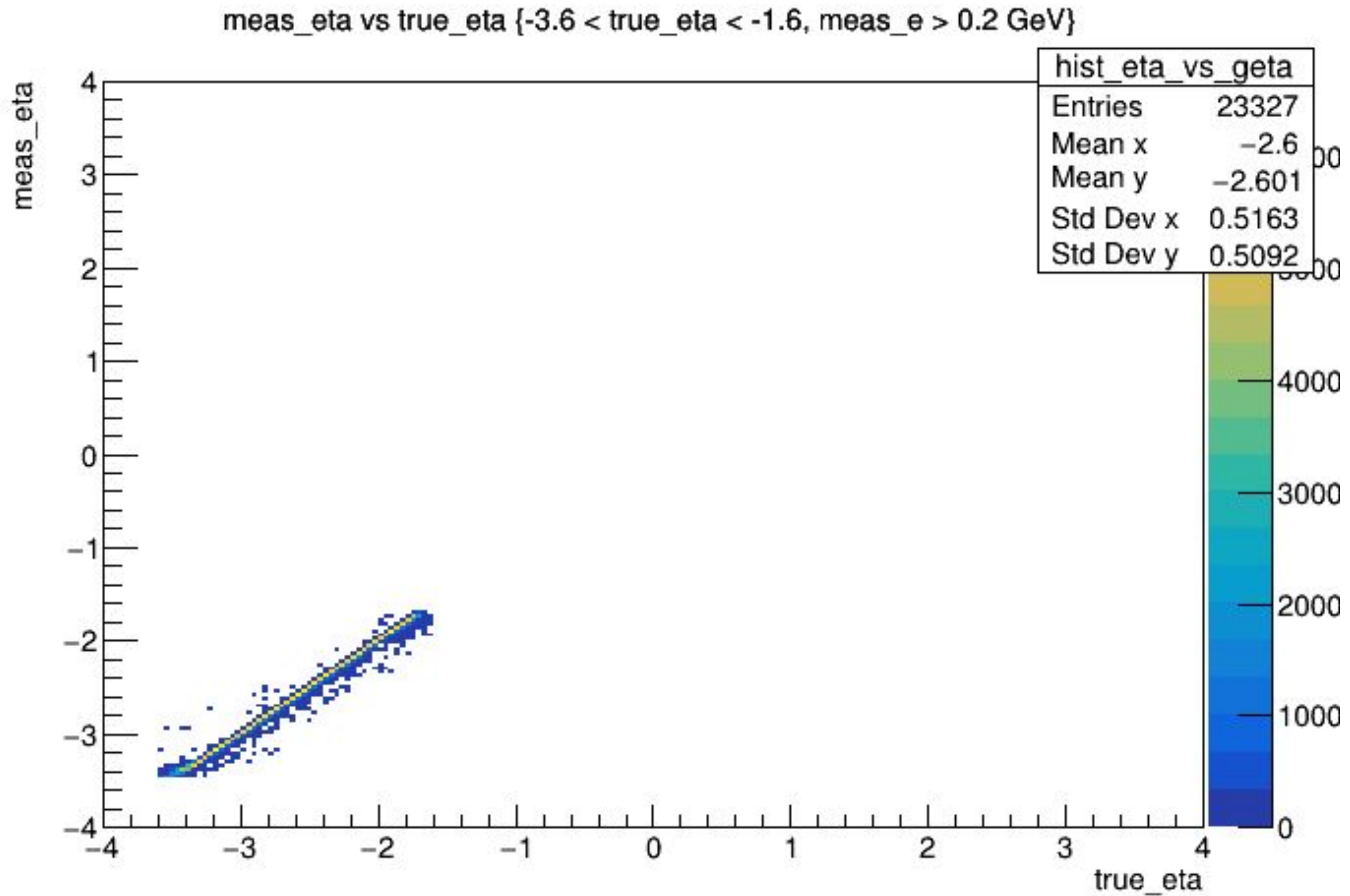
EEMC (e^-)

phi vs gphi
Explicit η cut: -3.6 to -1.6
Energy Cut: 0.2GeV



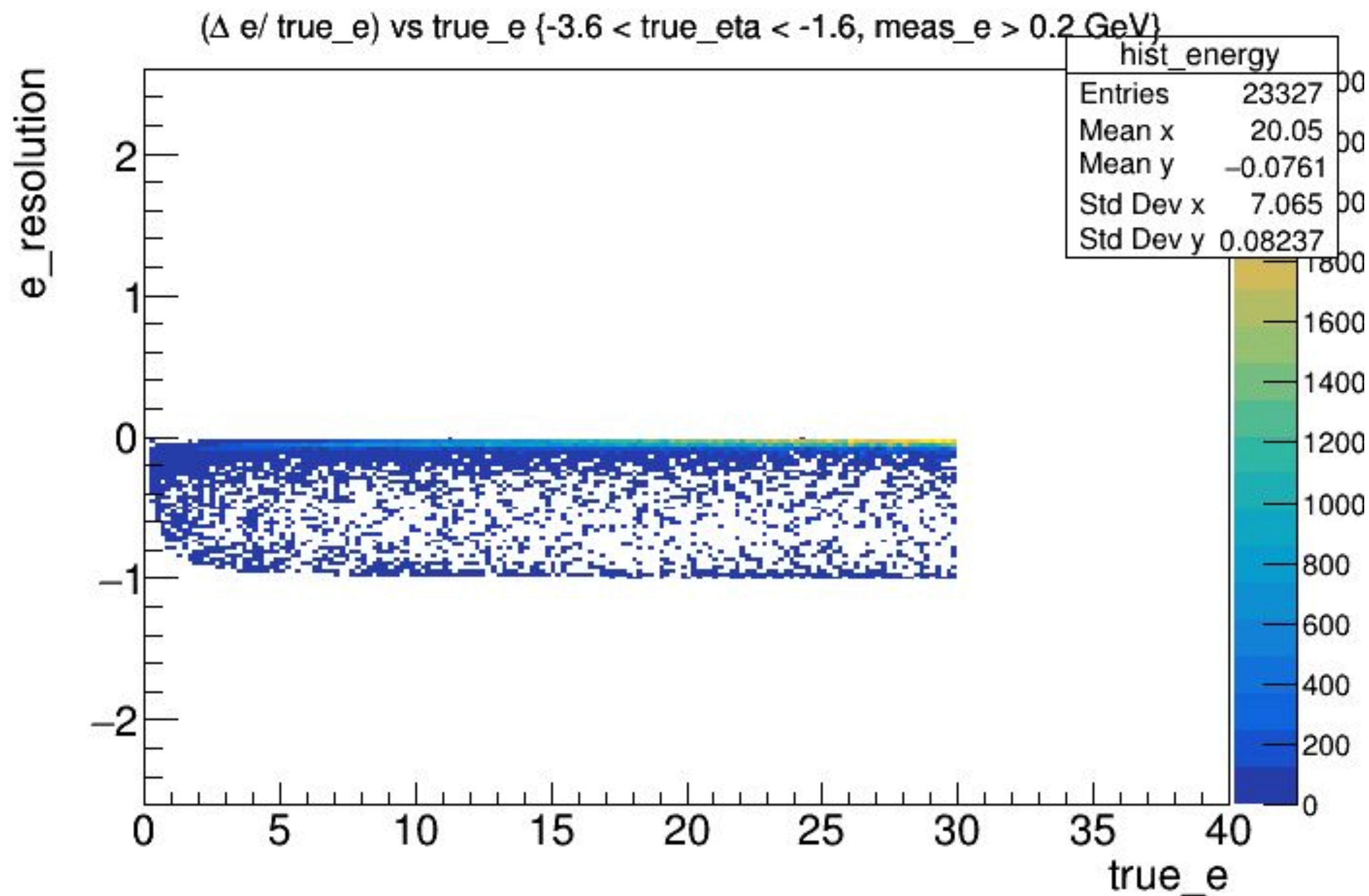
EEMC (e^-)

eta vs geta
Explicit η cut: -3.6 to -1.6
Energy Cut: 0.2GeV



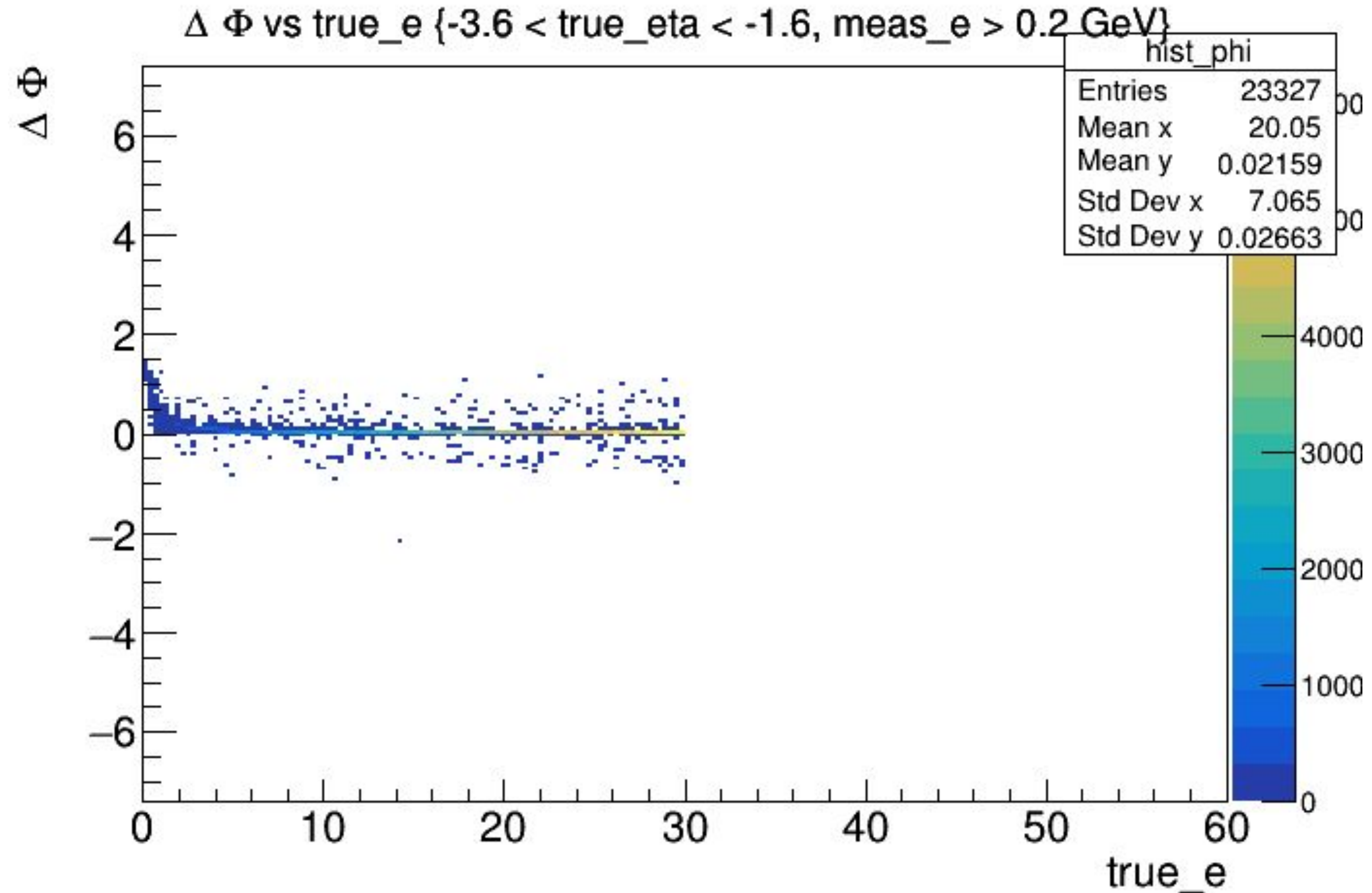
EEMC (e^-)

$\Delta e/ge$ vs ge
Explicit η cut: -3.6 to -1.6
Energy Cut: 0.2GeV



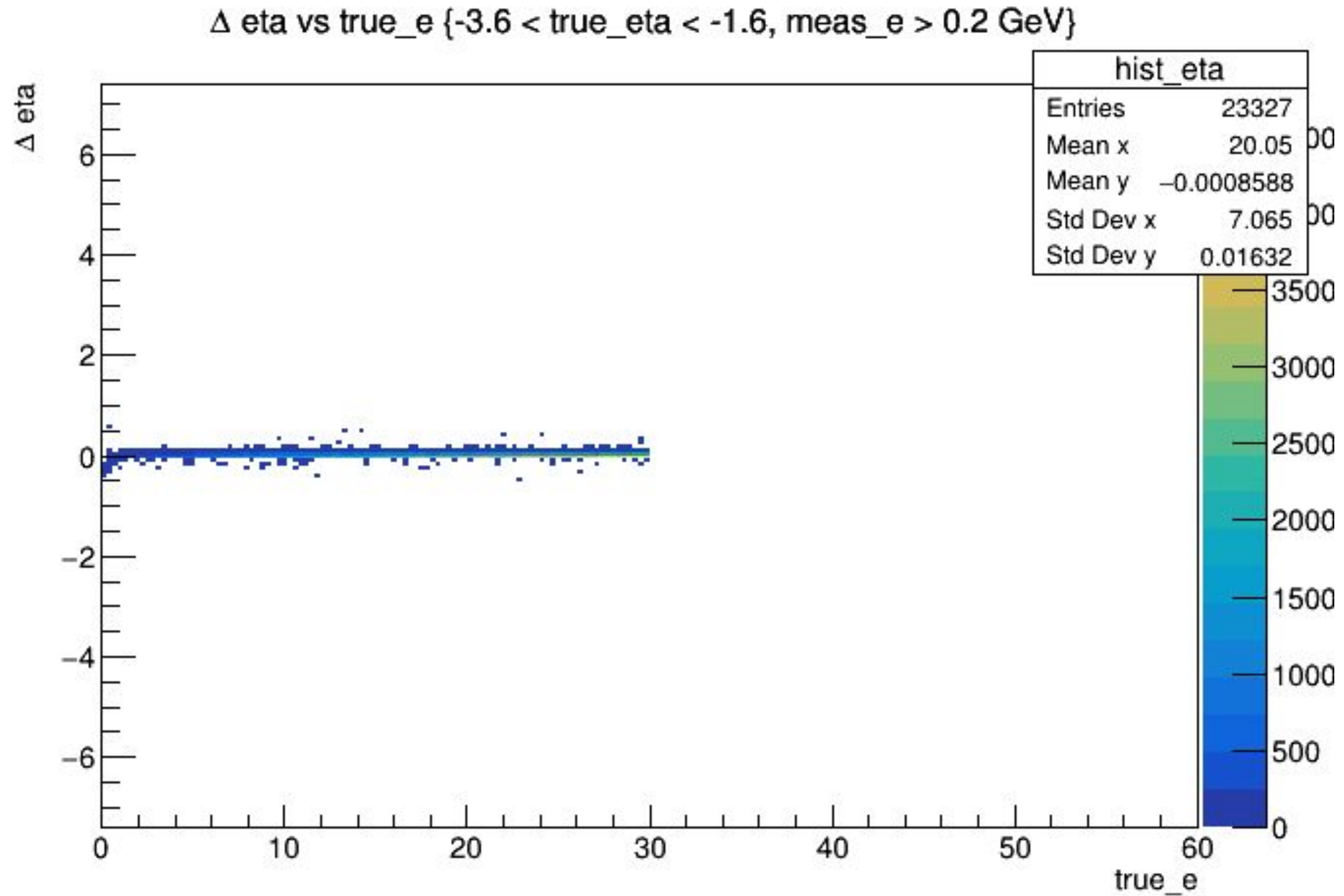
EEMC (e^-)

$\Delta\phi$ vs g_e
Explicit η cut: -3.6 to -1.6
Energy Cut: 0.2 GeV



EEMC (e^-)

$\Delta\eta$ vs g_e
Explicit η cut: -3.6 to -1.6
Energy Cut: 0.2GeV

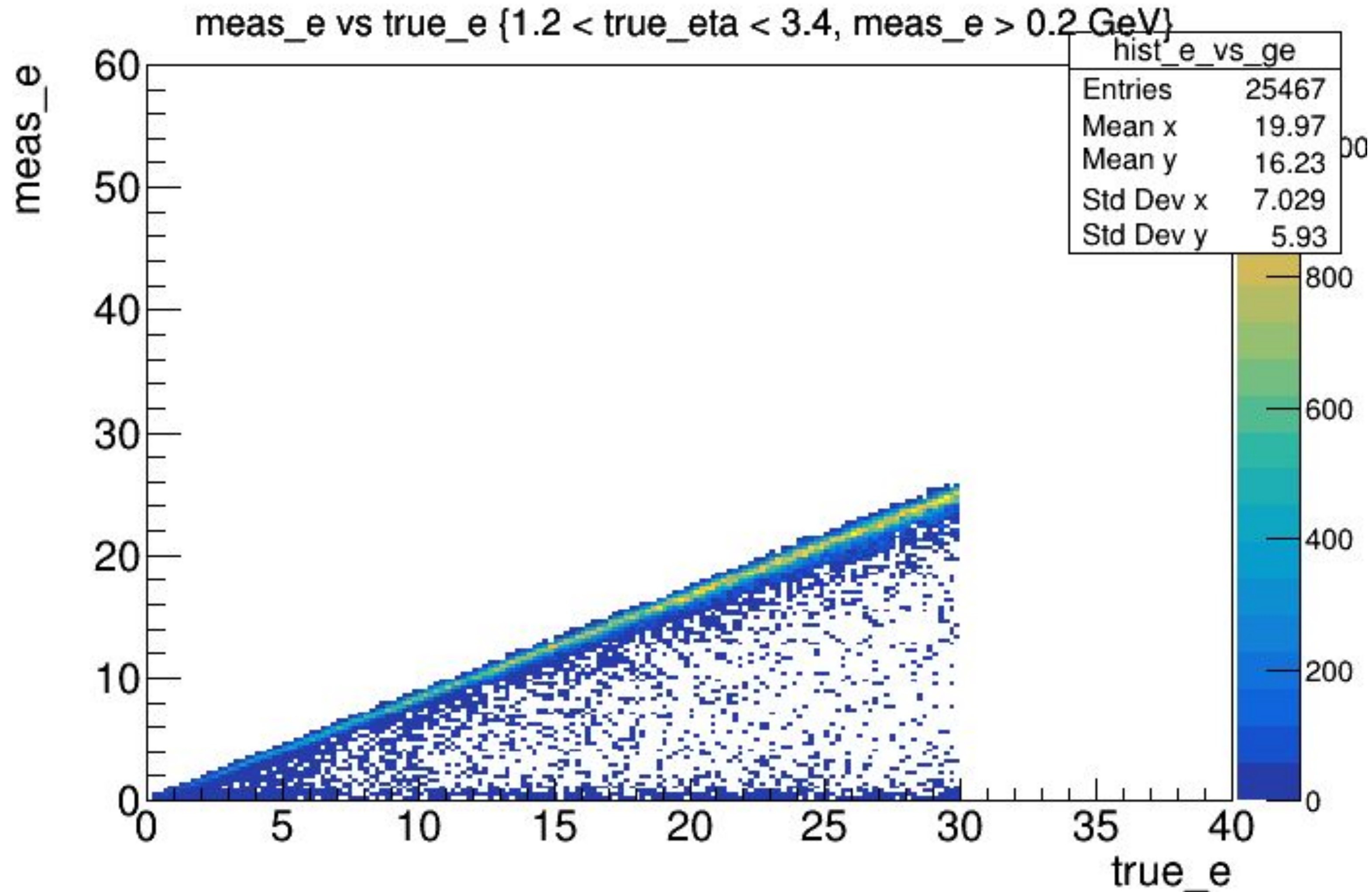




FEMC

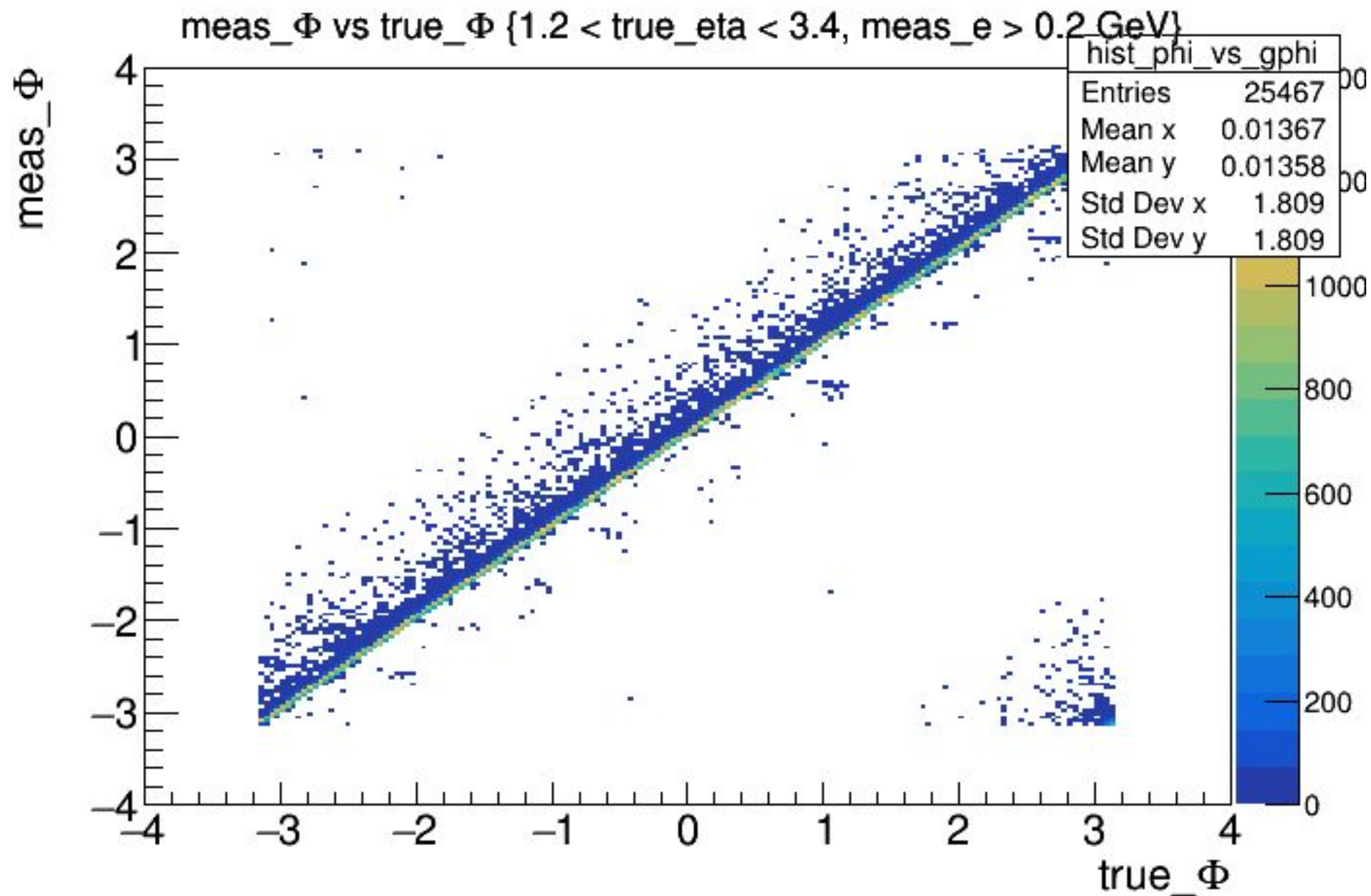
FEMC (e^-)

e vs ge
Explicit η cut: 1.2 to 3.4
Energy Cut: 0.2GeV



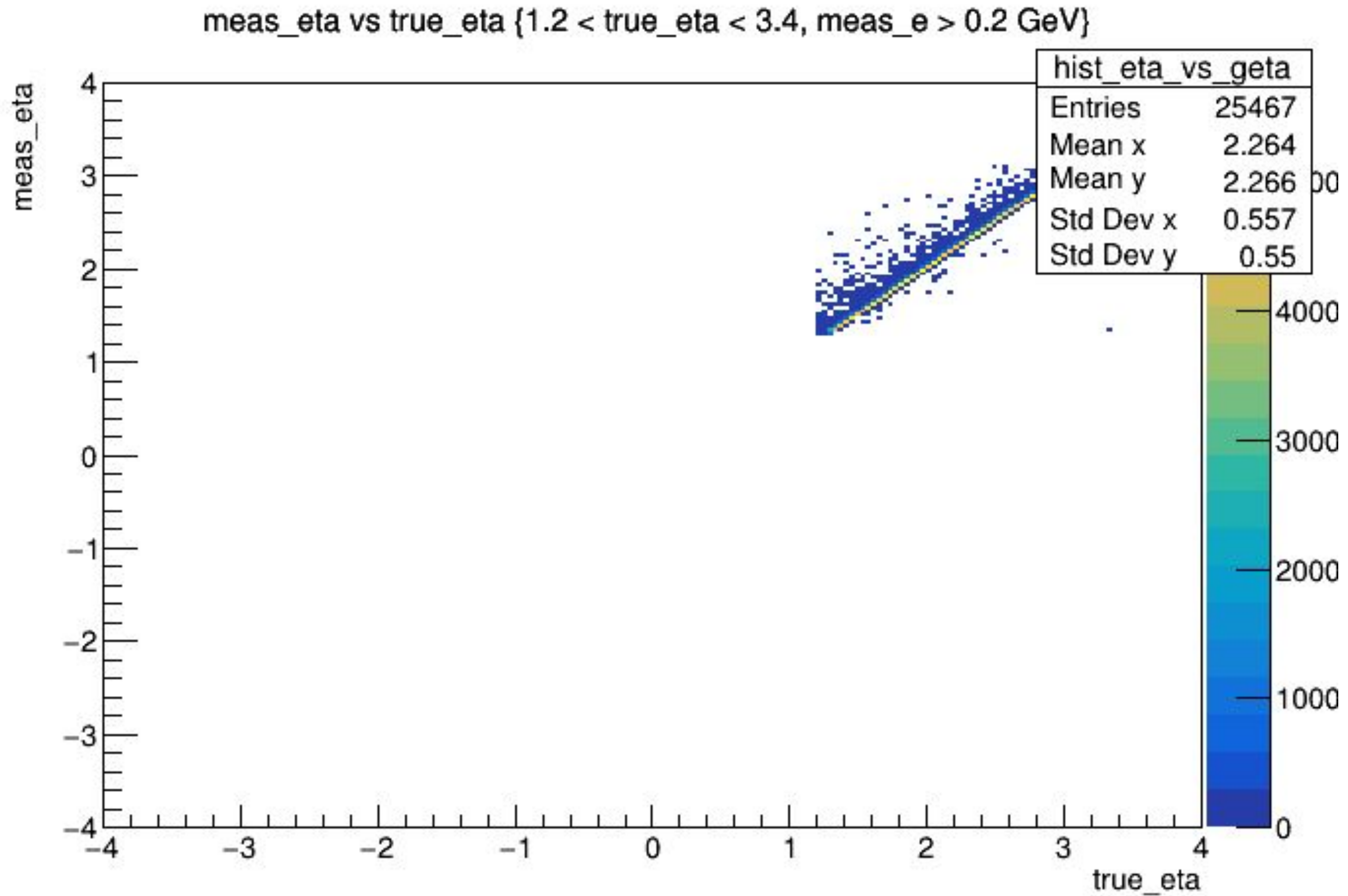
FEMC (e^-)

phi vs gphi
Explicit η cut: 1.2 to 3.4
Energy Cut: 0.2GeV



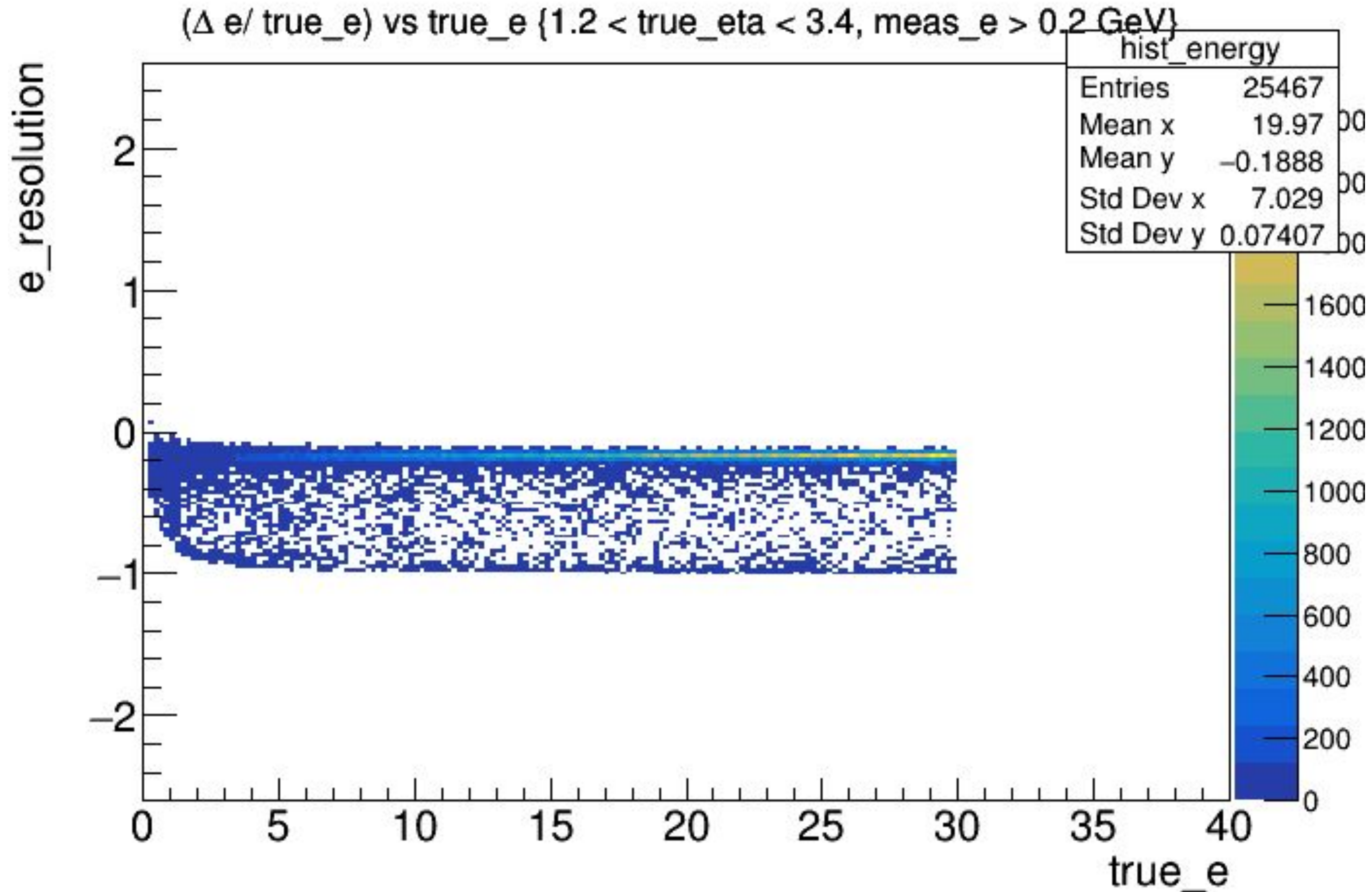
FEMC (e^-)

eta vs geta
Explicit η cut: 1.2 to 3.4
Energy Cut: 0.2GeV



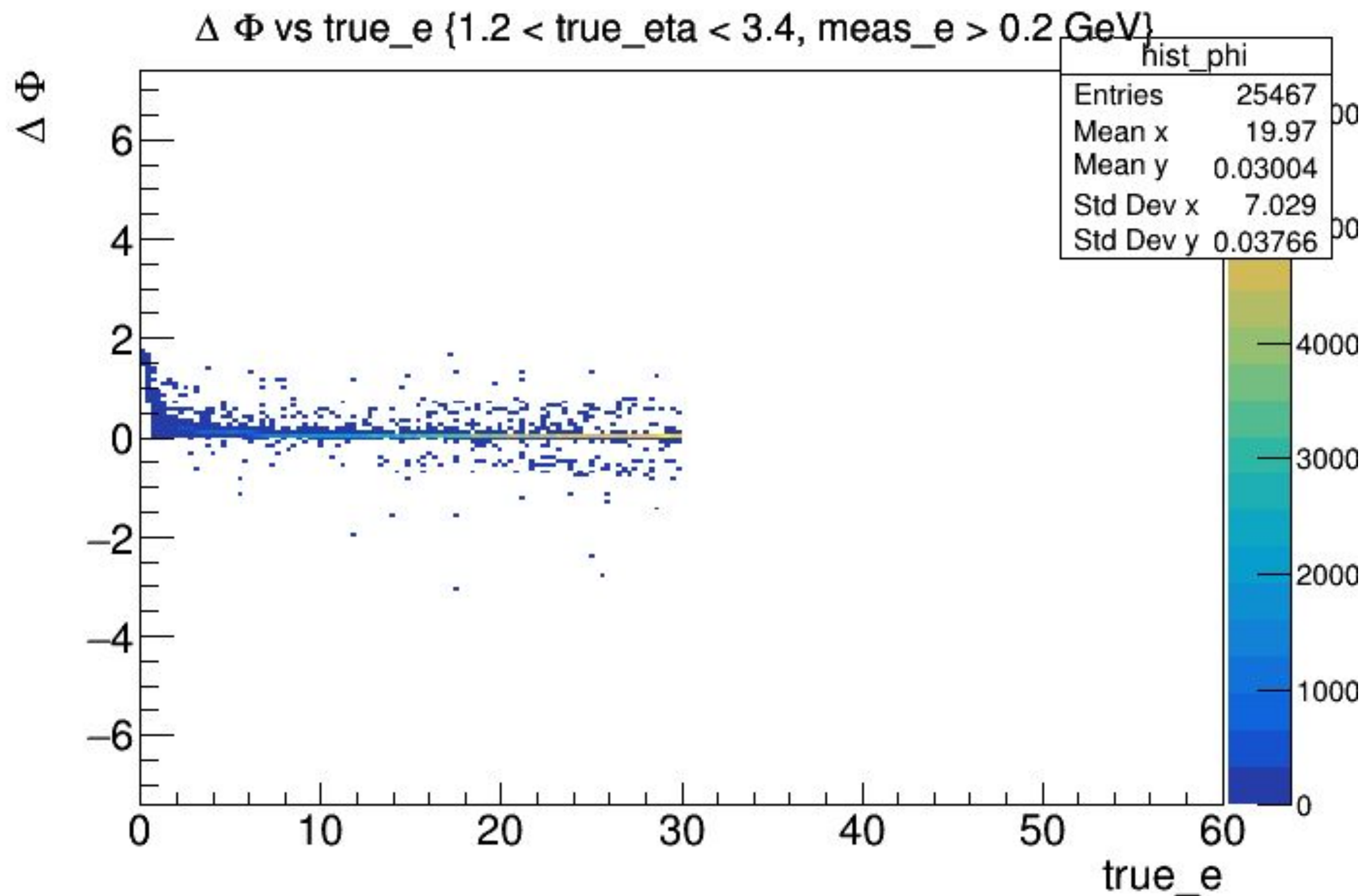
FEMC (e^-)

$\Delta e/ge$ vs ge
Explicit η cut: 1.2 to 3.4
Energy Cut: 0.2GeV



FEMC (e^-)

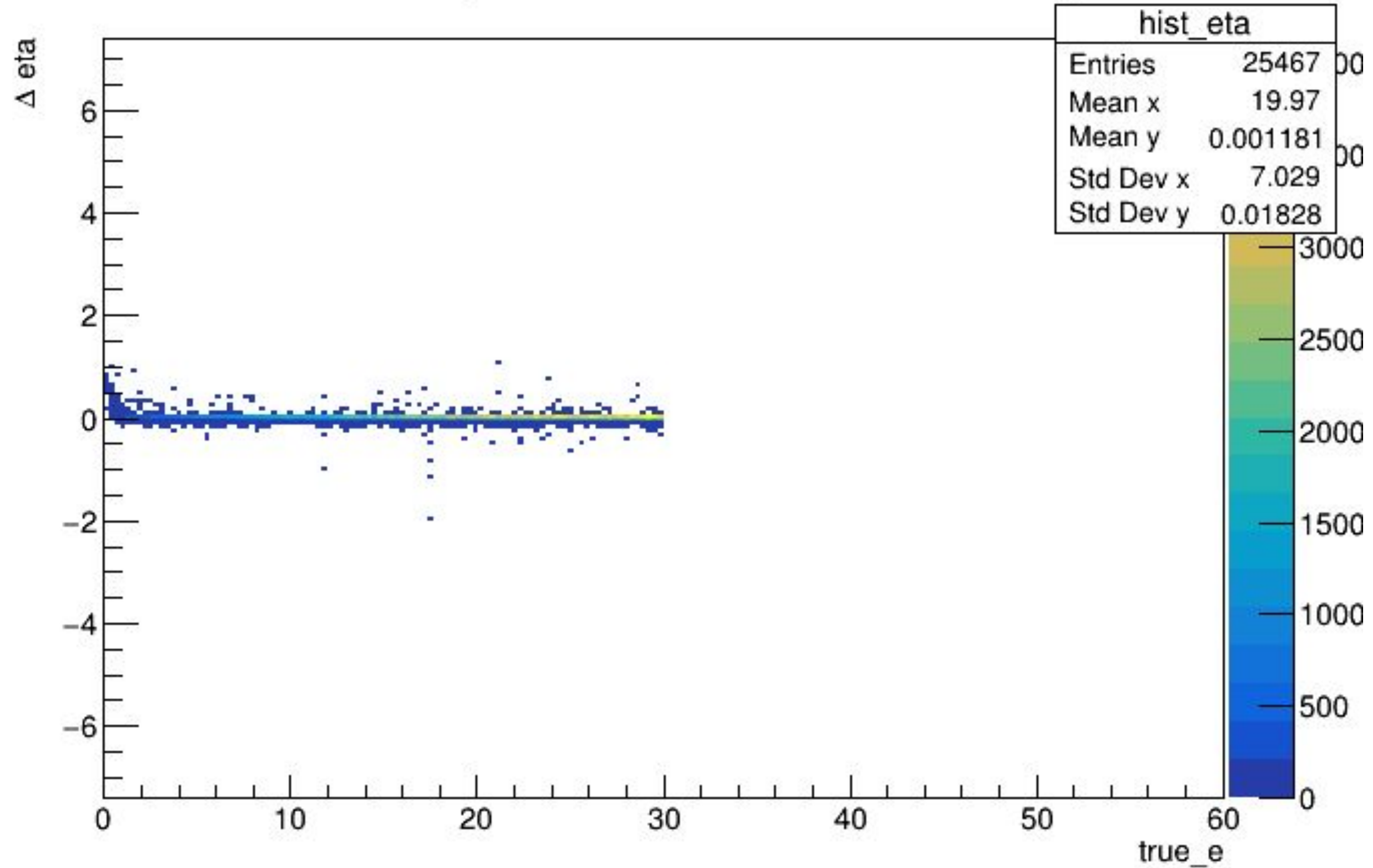
$\Delta\phi$ vs g_e
Explicit η cut: 1.2 to 3.4
Energy Cut: 0.2GeV



FEMC (e^-)

$\Delta\eta$ vs g_e
Explicit η cut: 1.2 to 3.4
Energy Cut: 0.2GeV

$\Delta\eta$ vs true_e {1.2 < true_eta < 3.4, meas_e > 0.2 GeV}

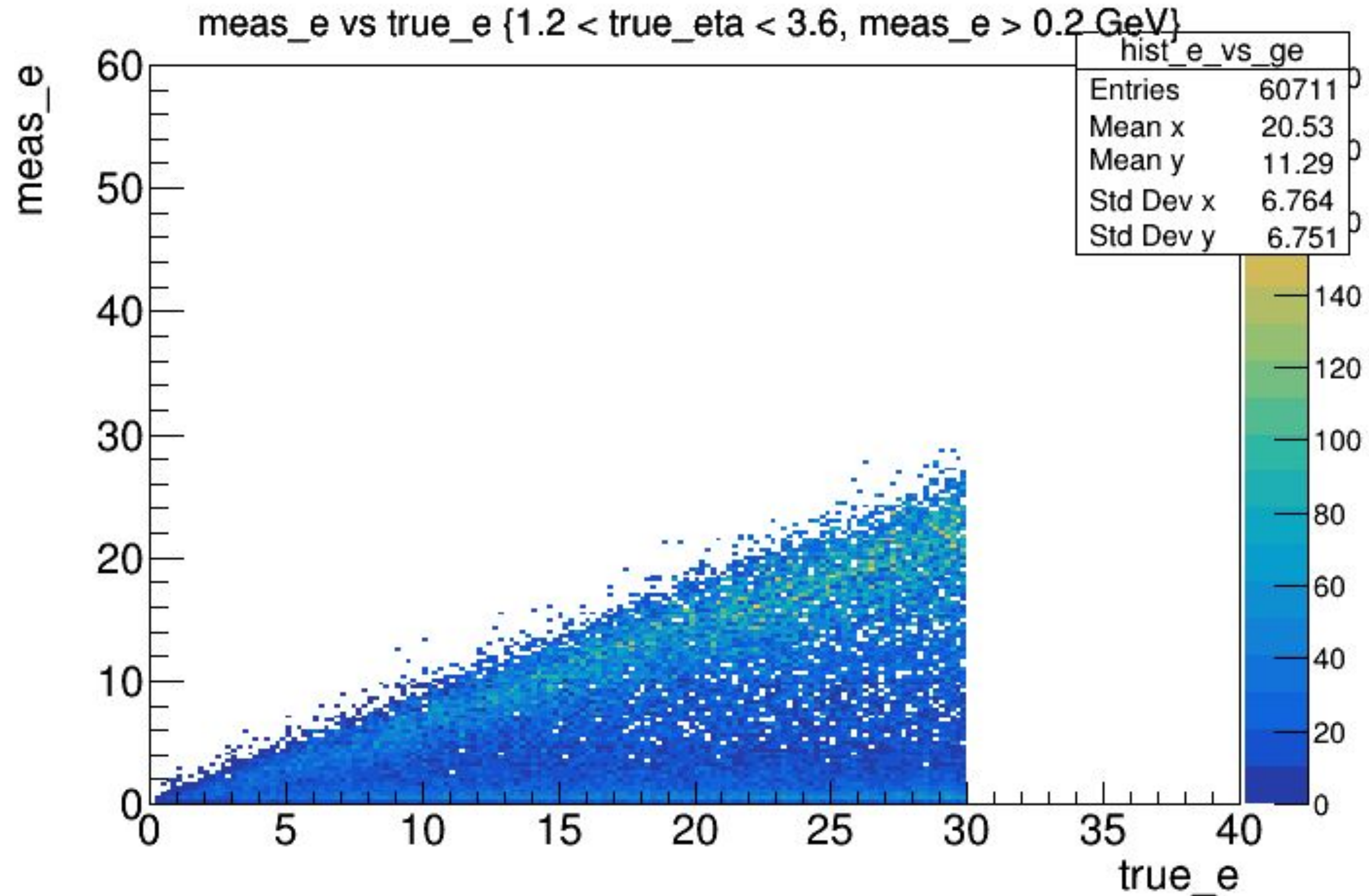




FHCAL

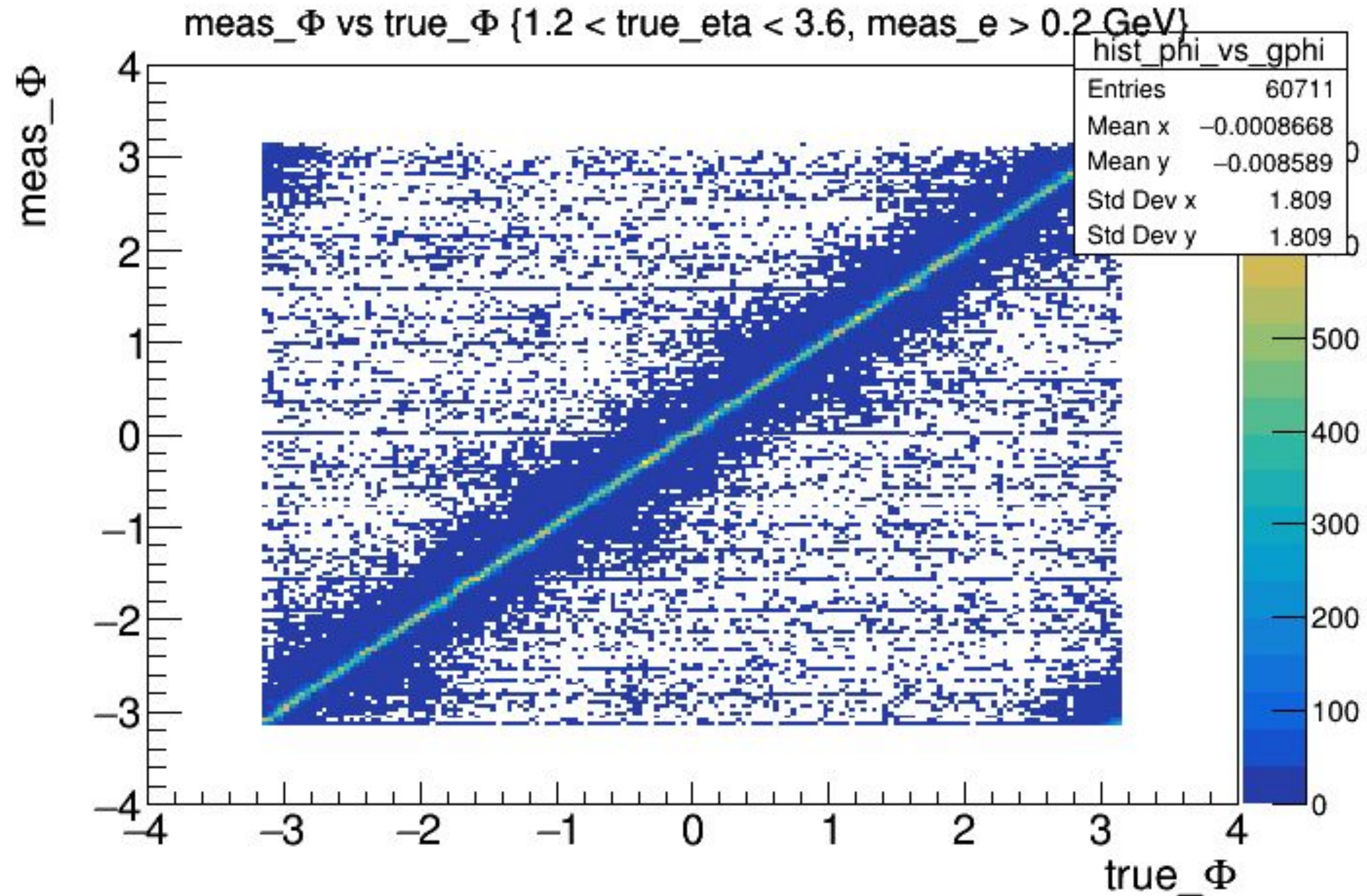
FHCAL

(π^-)
Explicit η cut: 1.2 to 3.6
Energy Cut: 0.2 GeV



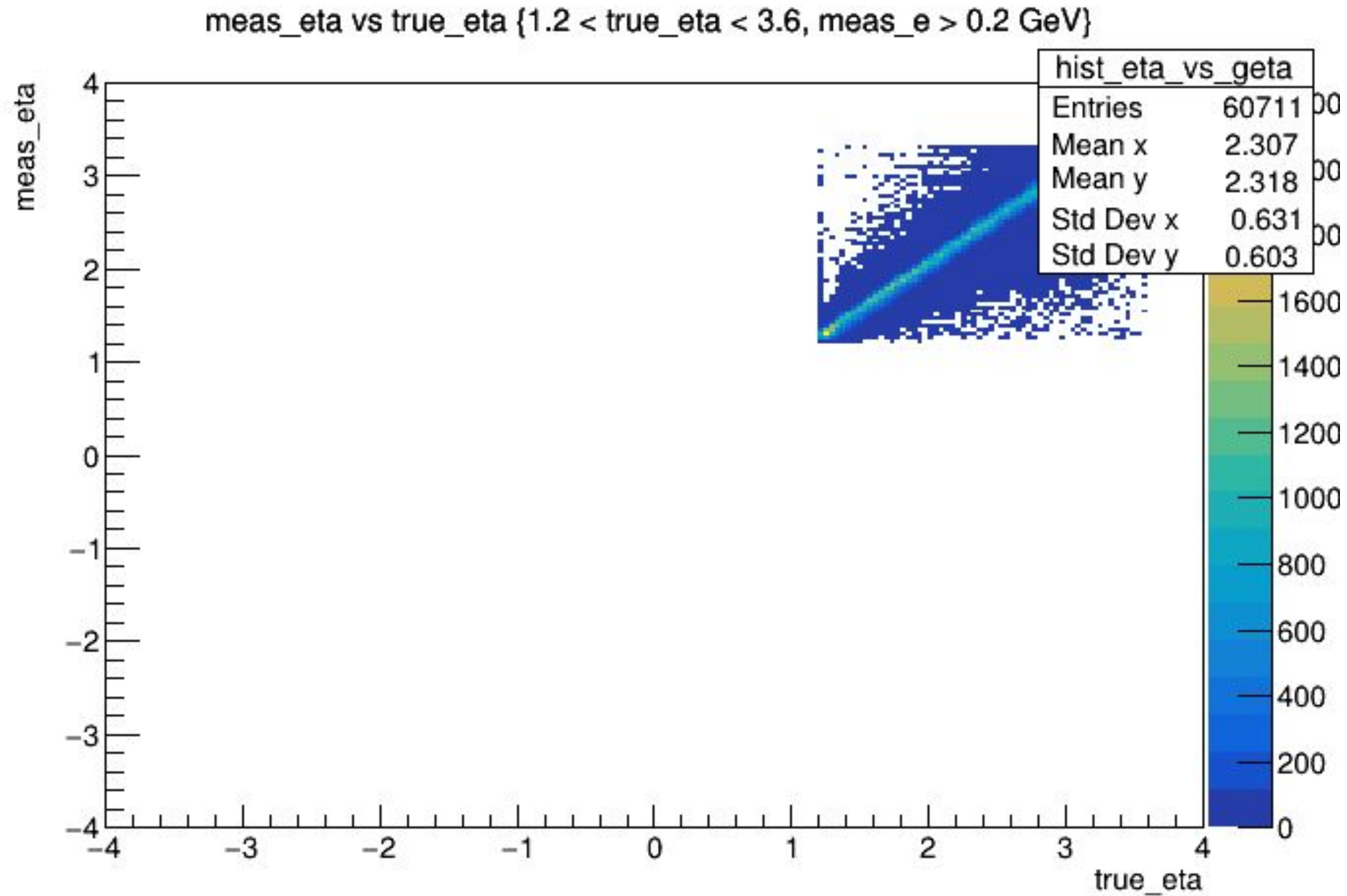
FHCAL

phi vs gphi
(π^-)
Explicit η cut: 1.2 to 3.6
Energy Cut: 0.2 GeV



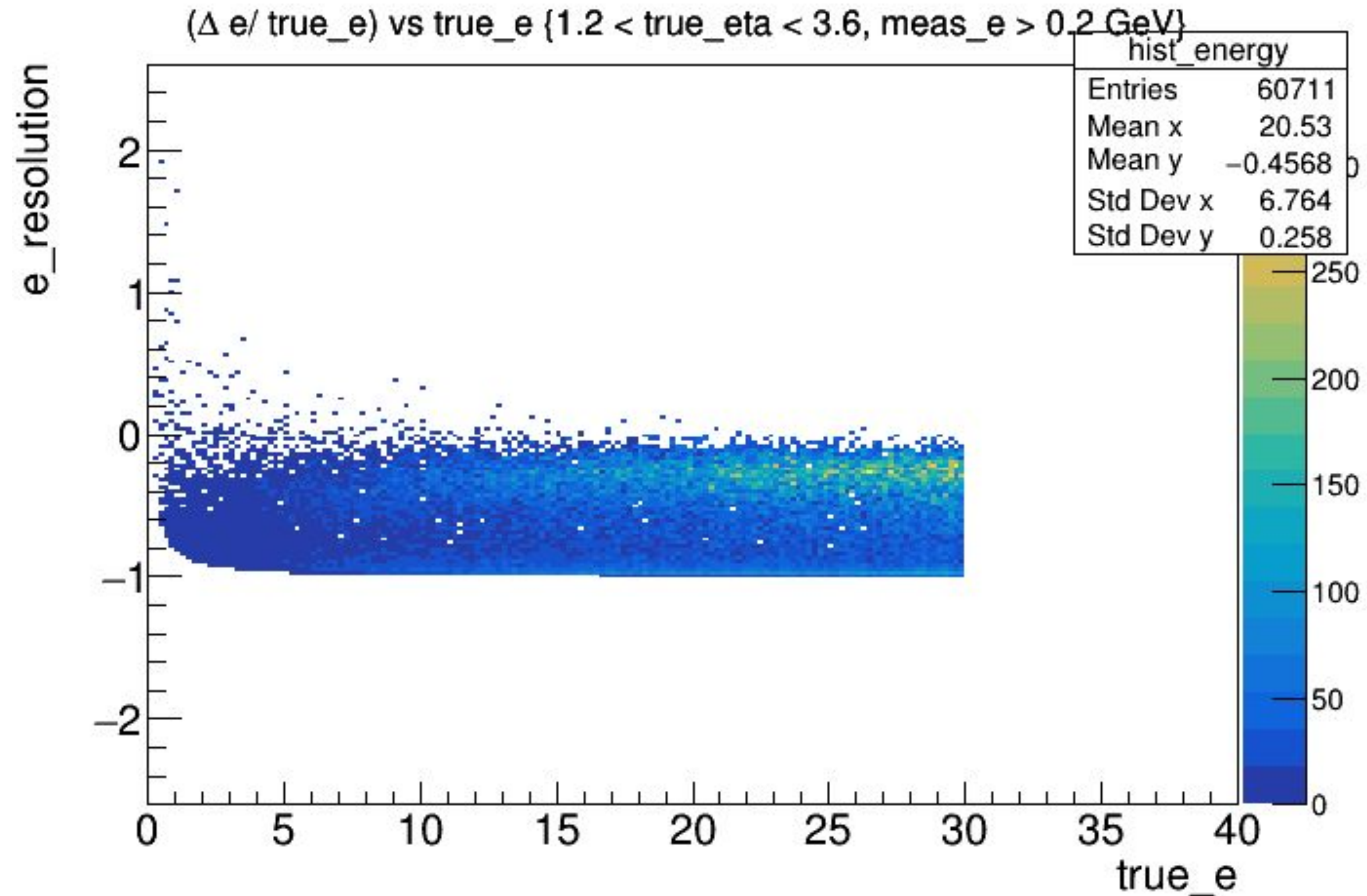
FHCAL

eta vs geta
(π^-)
Explicit η cut: 1.2 to 3.6
Energy Cut: 0.2 GeV



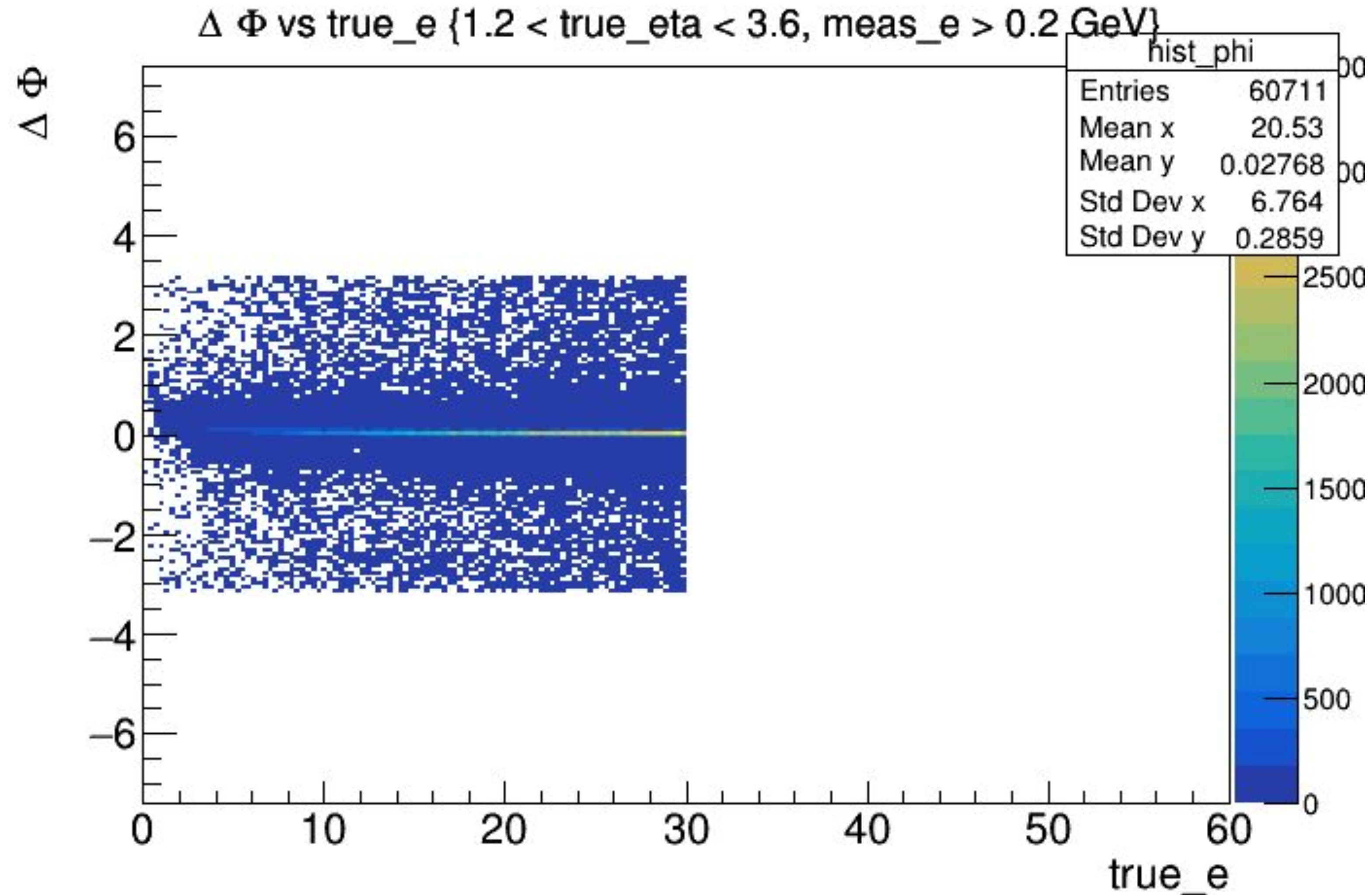
FHCAL

$\Delta e/e$ vs e
(π^-)
Explicit η cut: 1.2 to 3.6
Energy Cut: 0.2 GeV



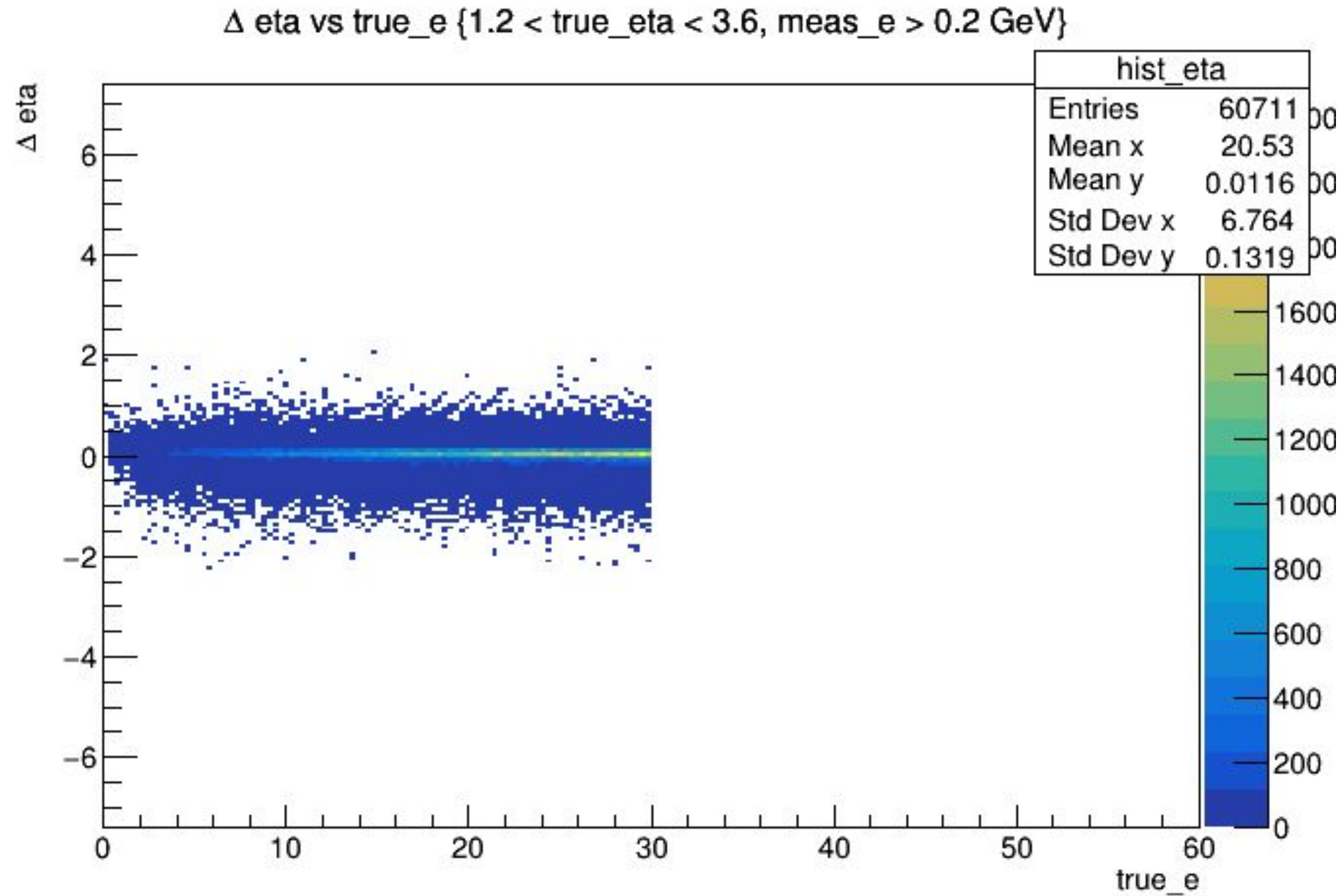
FHCAL

$\Delta\phi$ vs η
(π)
Explicit η cut: 1.2 to 3.6
Energy Cut: 0.2 GeV



FHCAL

$\Delta\eta$ vs q_e
(π^-)
Explicit η_{cut} : 1.2 to 3.6
Energy Cut: 0.2 GeV

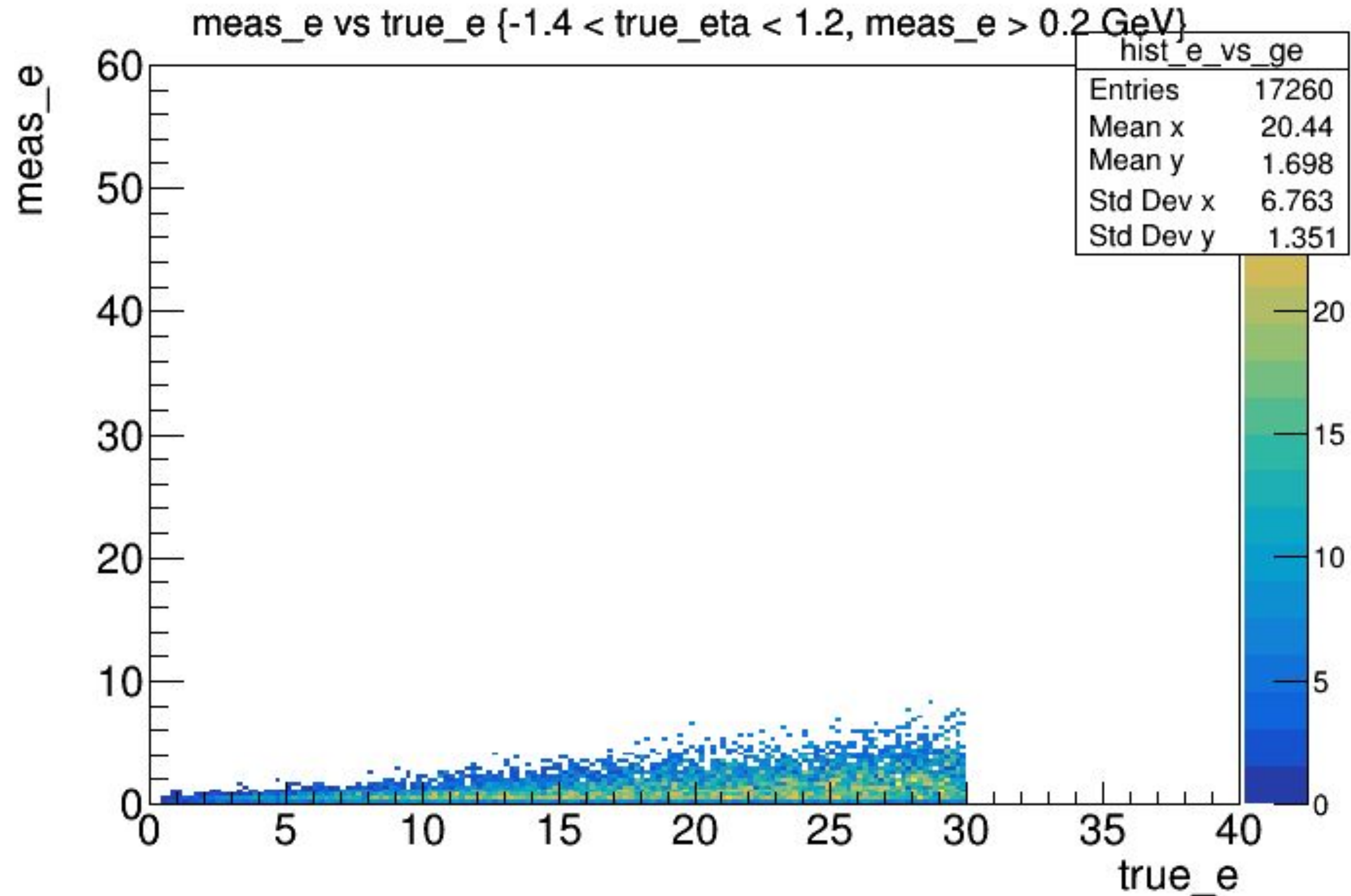




HCALIN

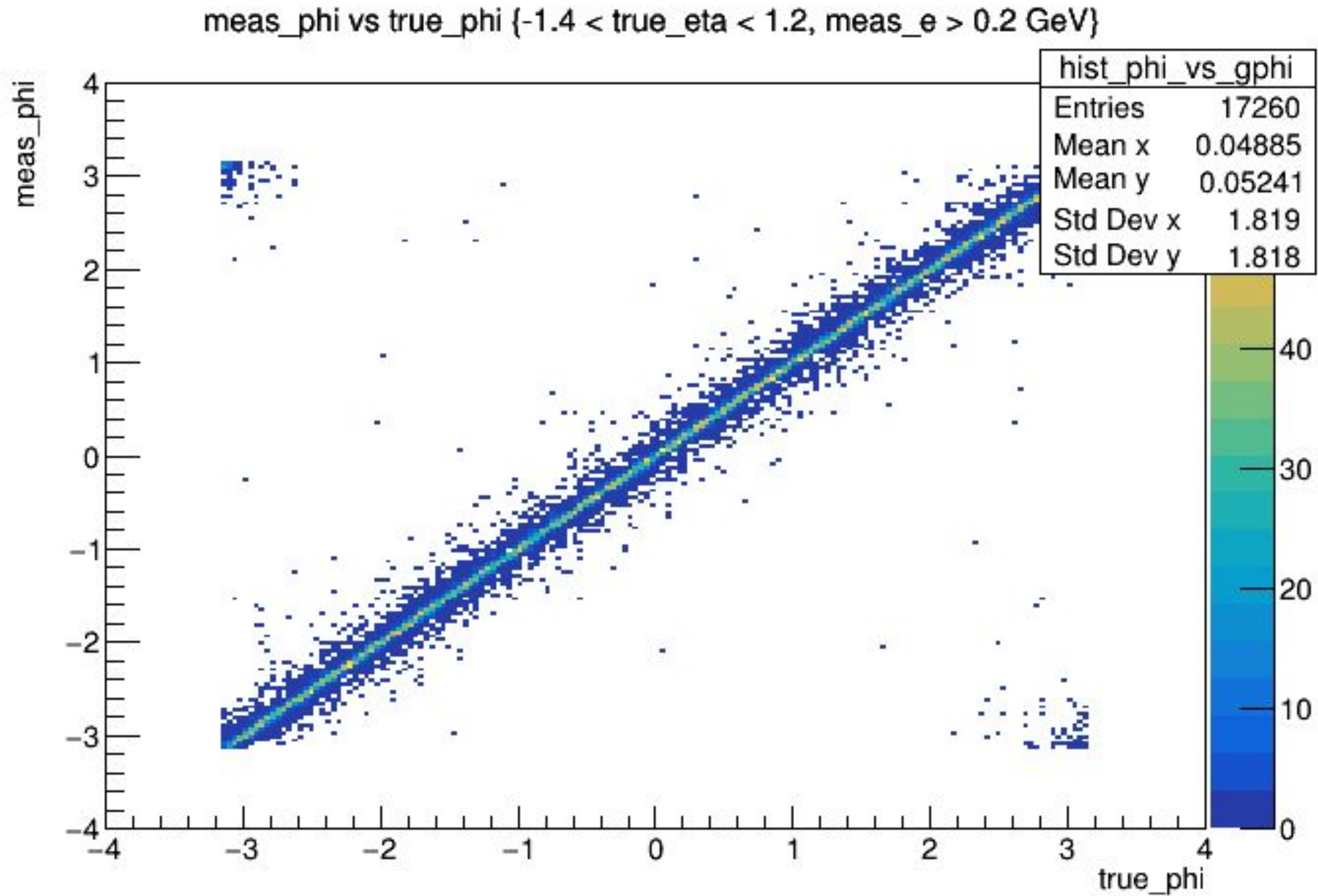
HCALIN (π^-)

e vs ge
Explicit η cut: -1.4 to 1.2
Energy Cut: 0.2GeV



HCALIN (π^-)

phi vs gphi
Explicit η cut: -1.4 to 1.2
Energy Cut: 0.2GeV

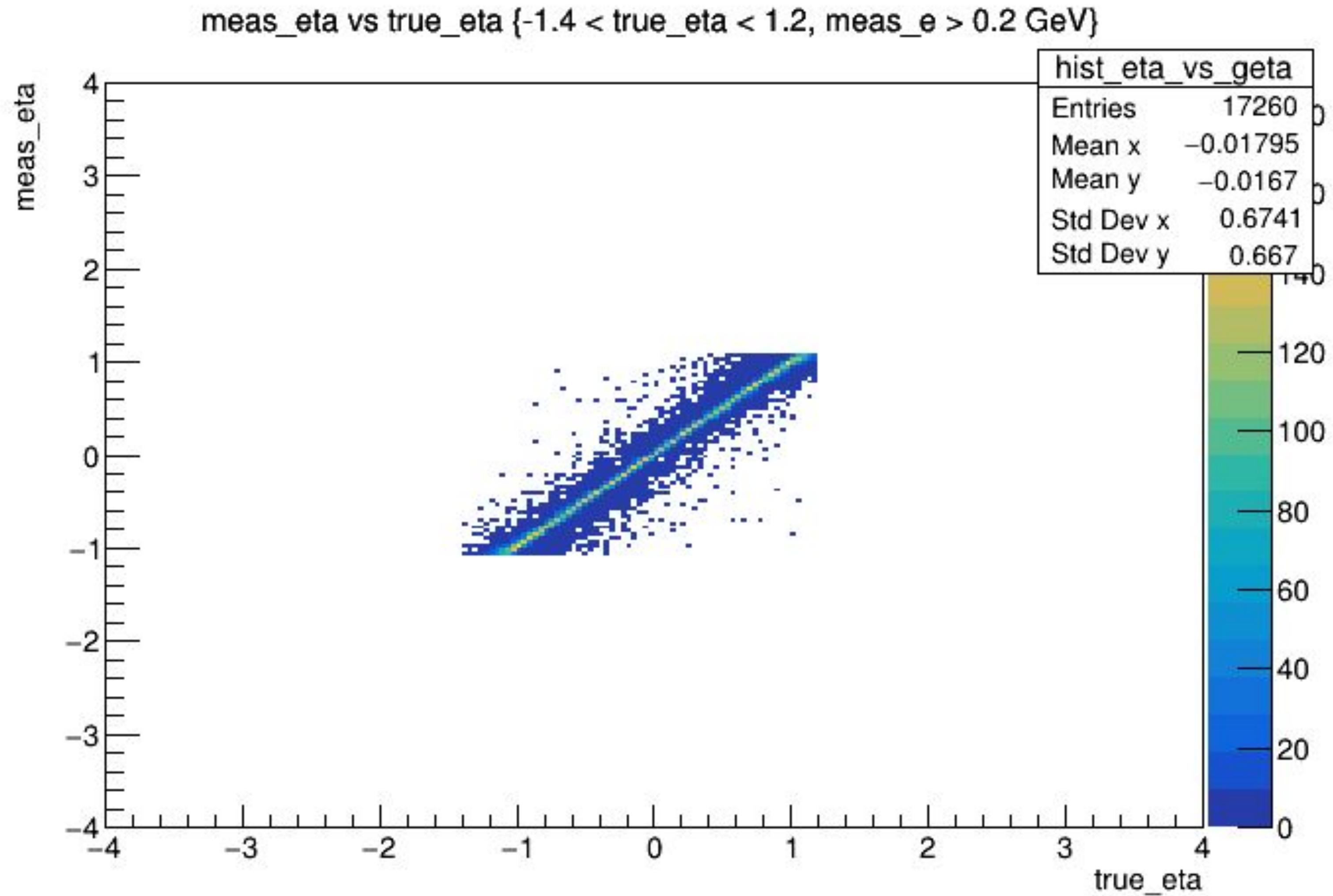


HCALIN (π^-)

eta vs geta

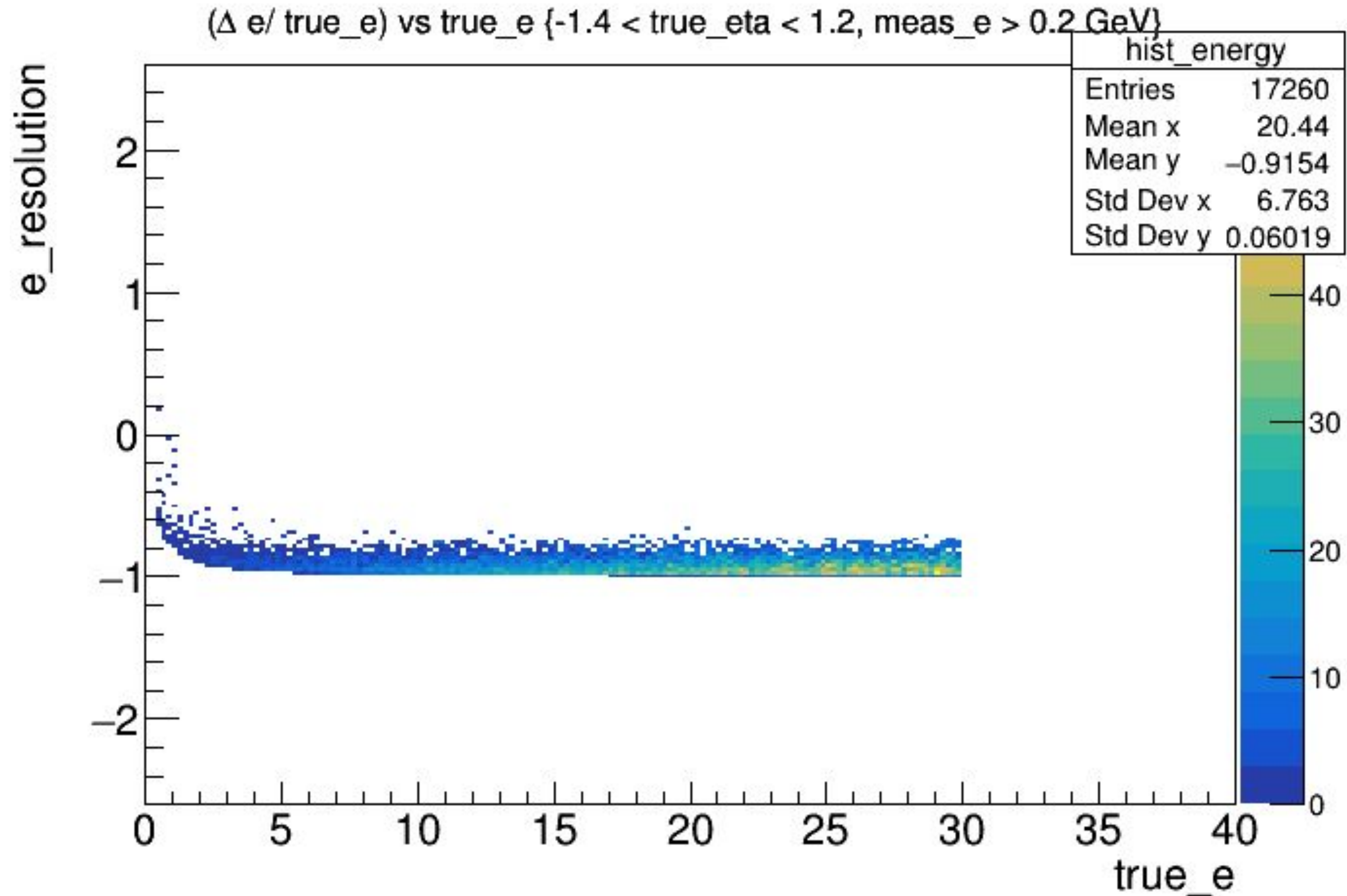
Explicit η cut: -1.4 to 1.2

Energy Cut: 0.2GeV



HCALIN (π^-)

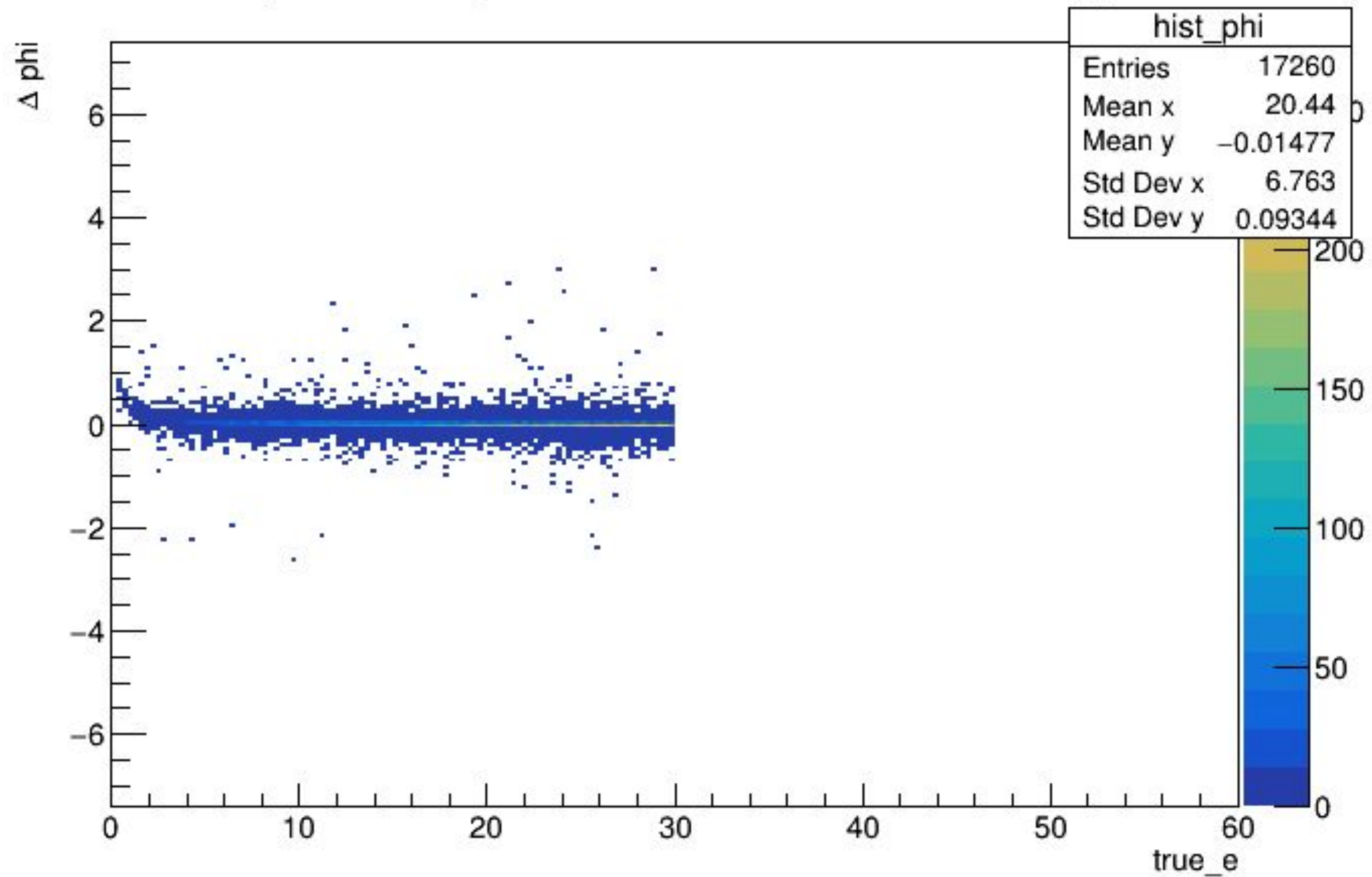
$\Delta e/ge$ vs ge
Explicit η cut: -1.4 to 1.2
Energy Cut: 0.2GeV



HCALIN (π^-)

$\Delta\phi$ vs g_e
Explicit η cut: -1.4 to 1.2
Energy Cut: 0.2 GeV

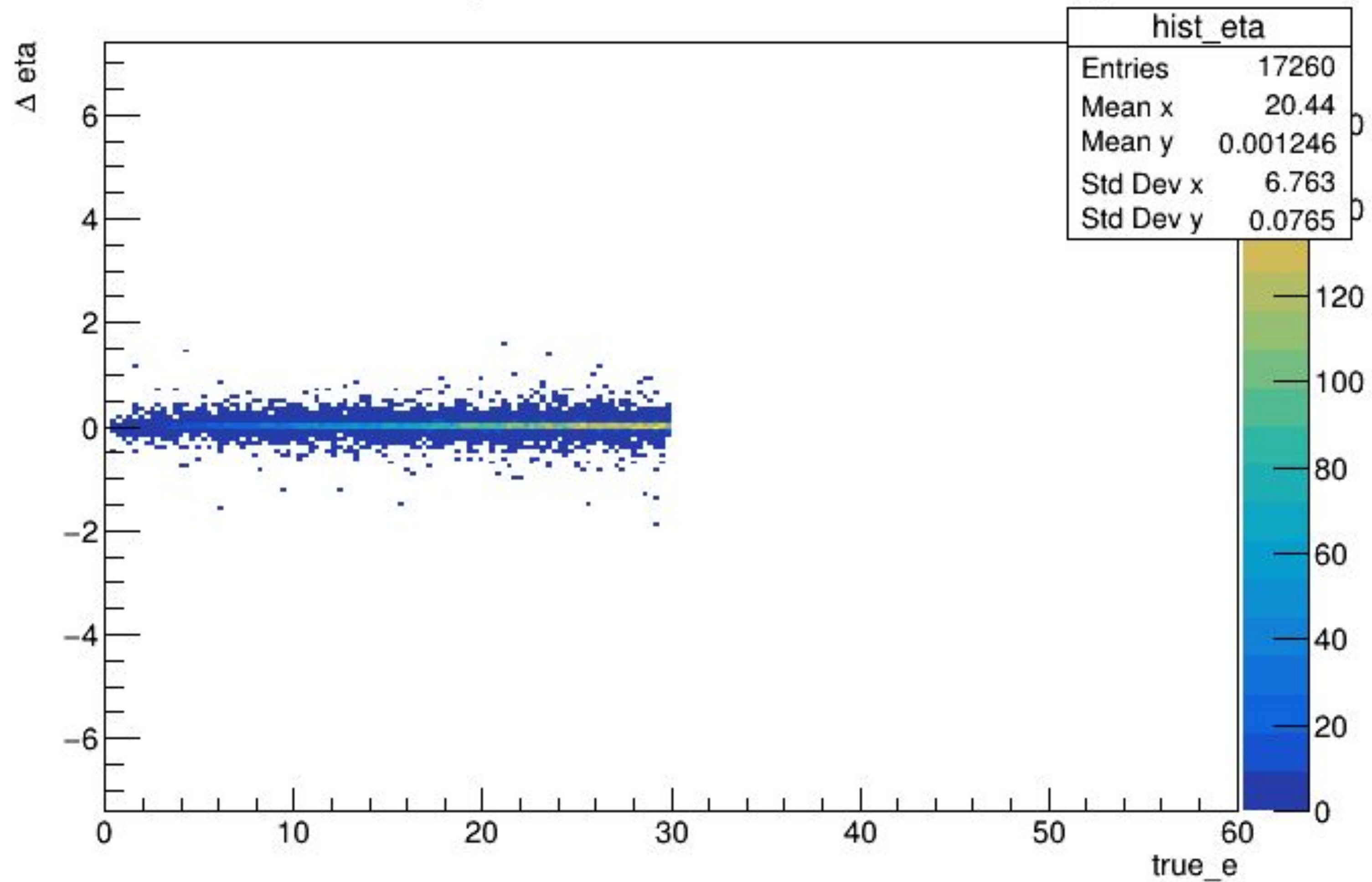
$\Delta\phi$ vs true_e $\{-1.4 < \text{true_eta} < 1.2, \text{meas_e} > 0.2 \text{ GeV}\}$



HCALIN (π^-)

$\Delta\eta$ vs g_e
Explicit η cut: -1.4 to 1.2
Energy Cut: 0.2GeV

$\Delta\eta$ vs true_e $\{-1.4 < \text{true}_\eta < 1.2, \text{meas}_e > 0.2 \text{ GeV}\}$

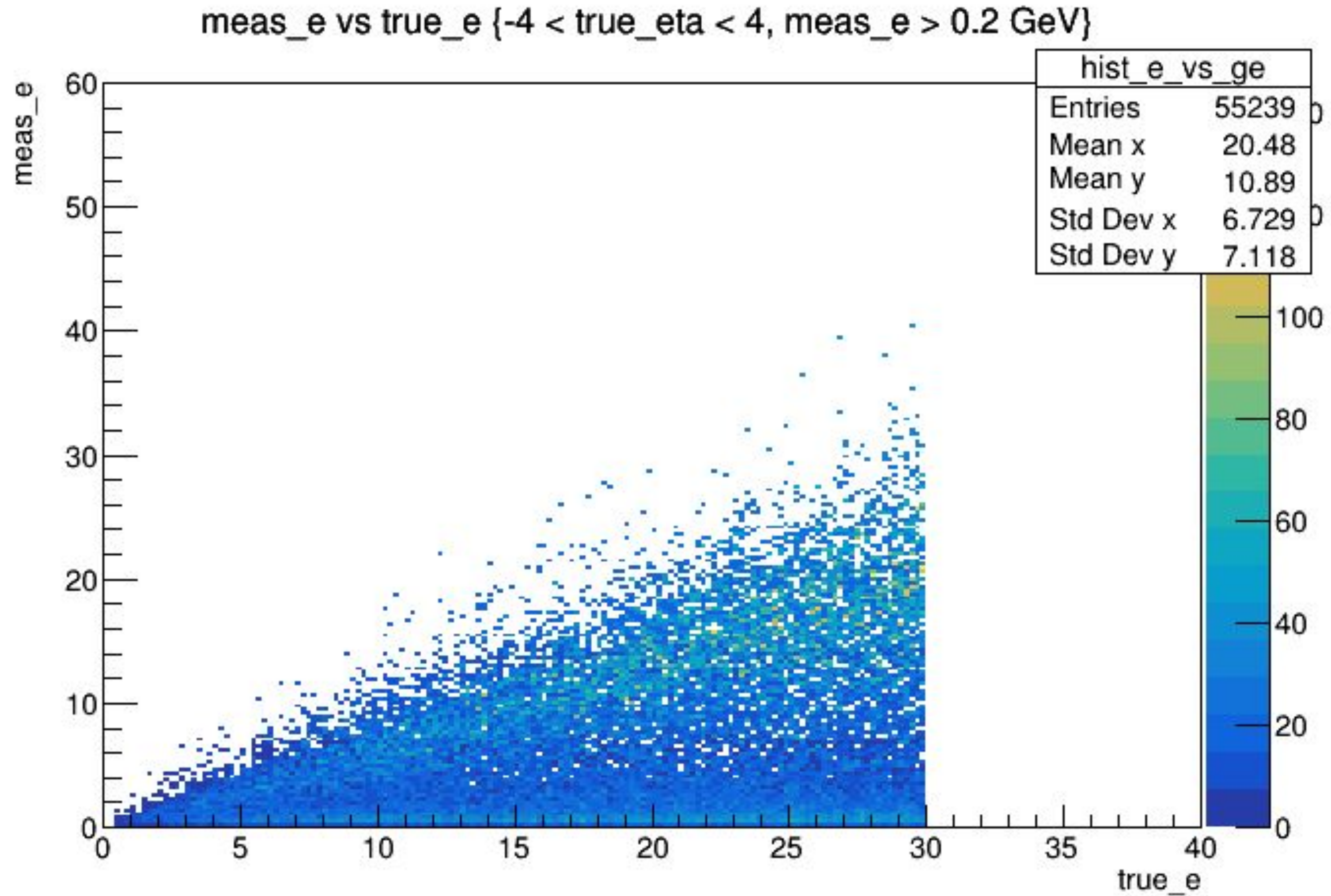




HCAALOUT

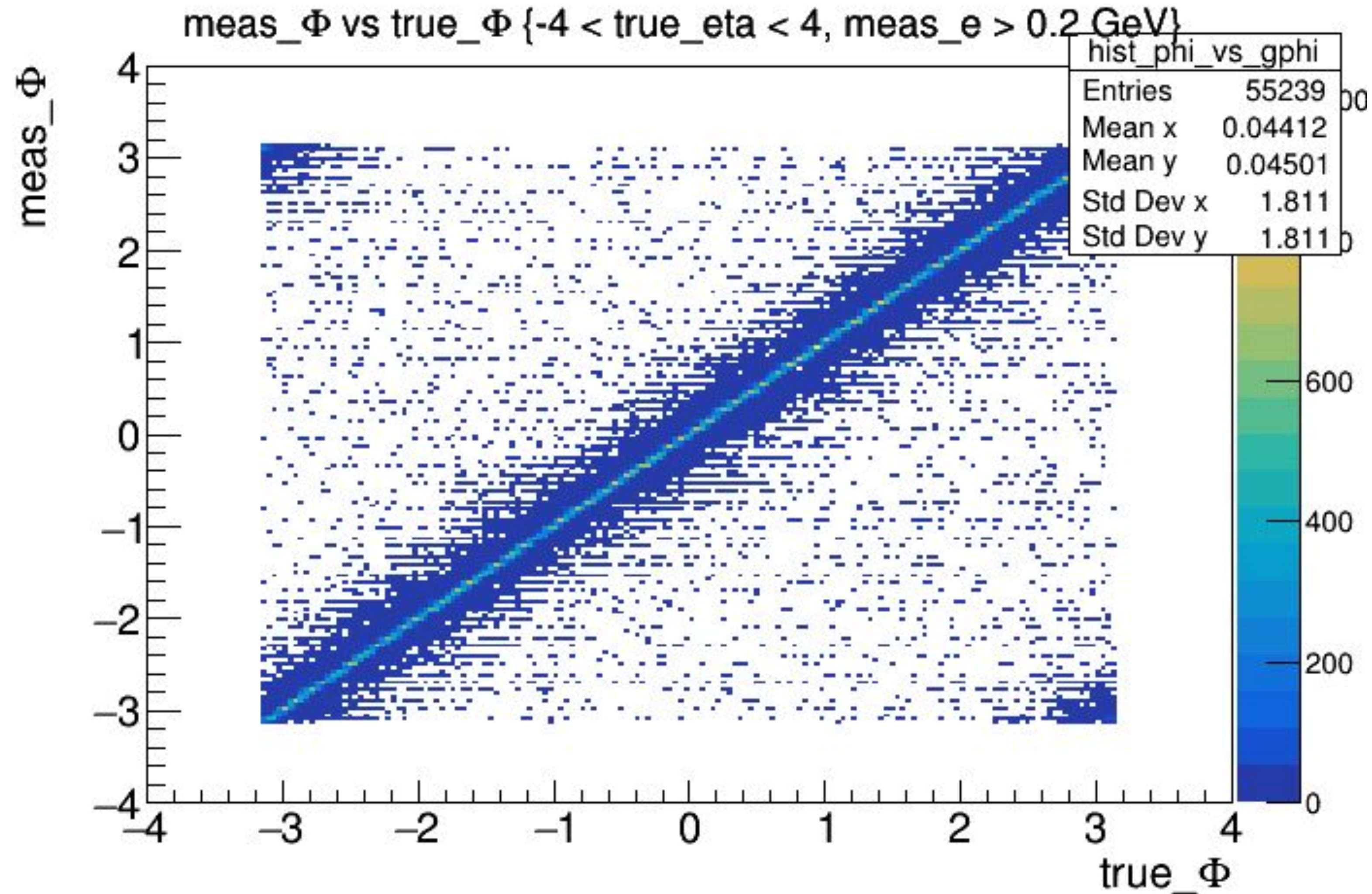
HCALOUT (π^-)

e vs ge
Explicit η cut: -4 to 4
Energy Cut: 0.2GeV



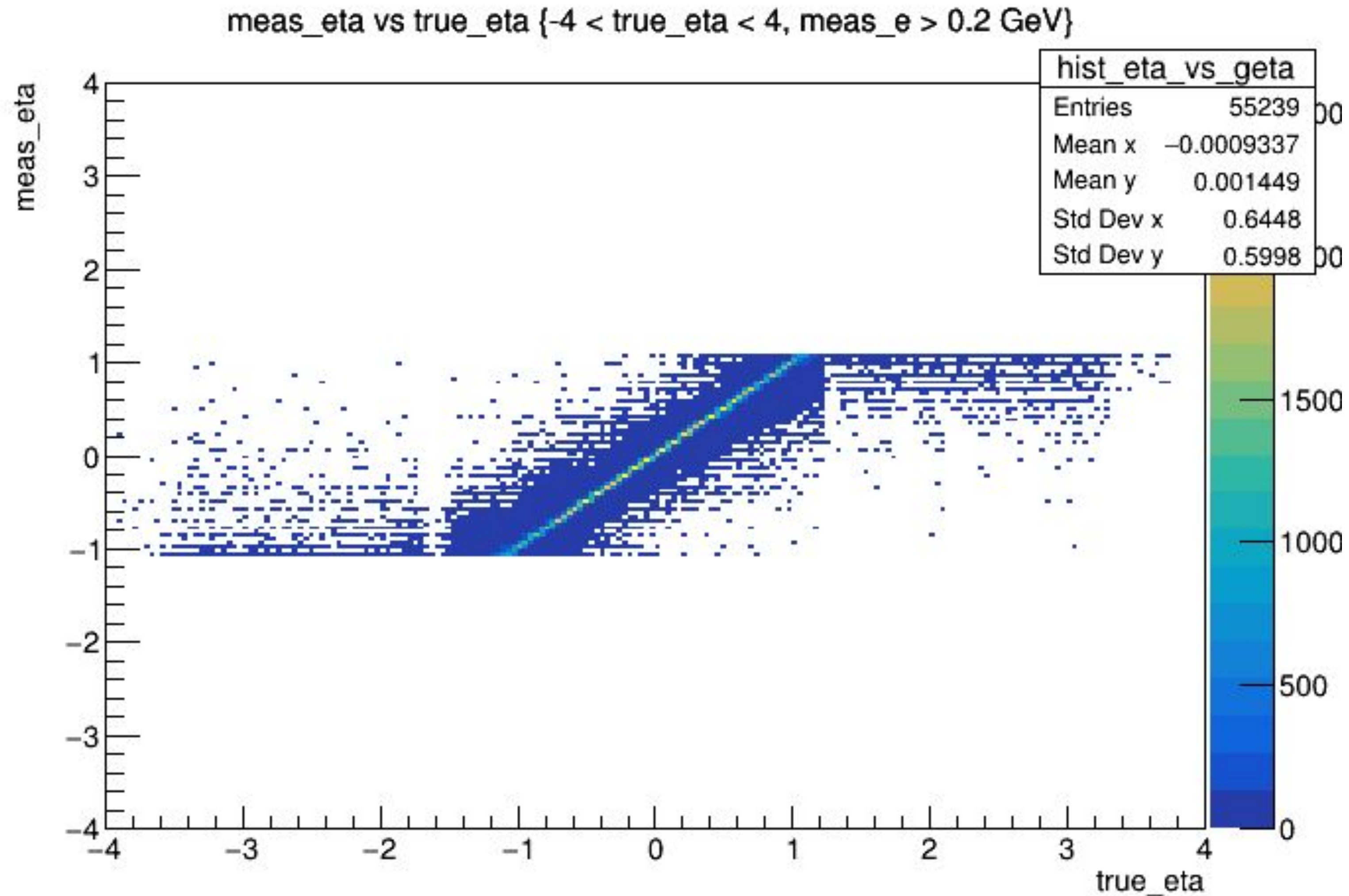
HCALOUT (π^-)

phi vs gphi
Explicit η cut: -4 to 4
Energy Cut: 0.2GeV



HCALOUT (π^-)

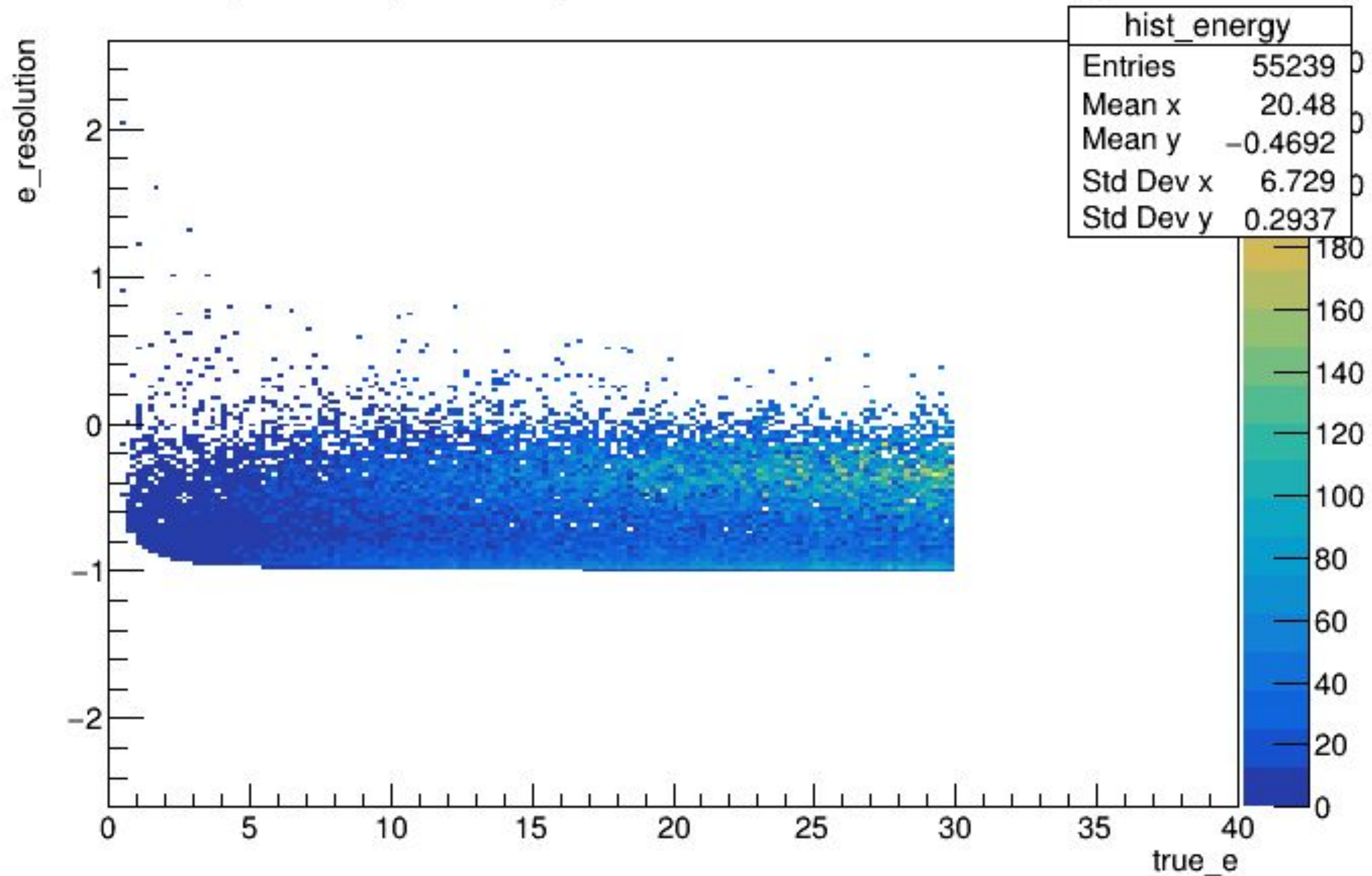
eta vs geta
Explicit η cut: -4 to 4
Energy Cut: 0.2GeV



HCALOUT (π^-)

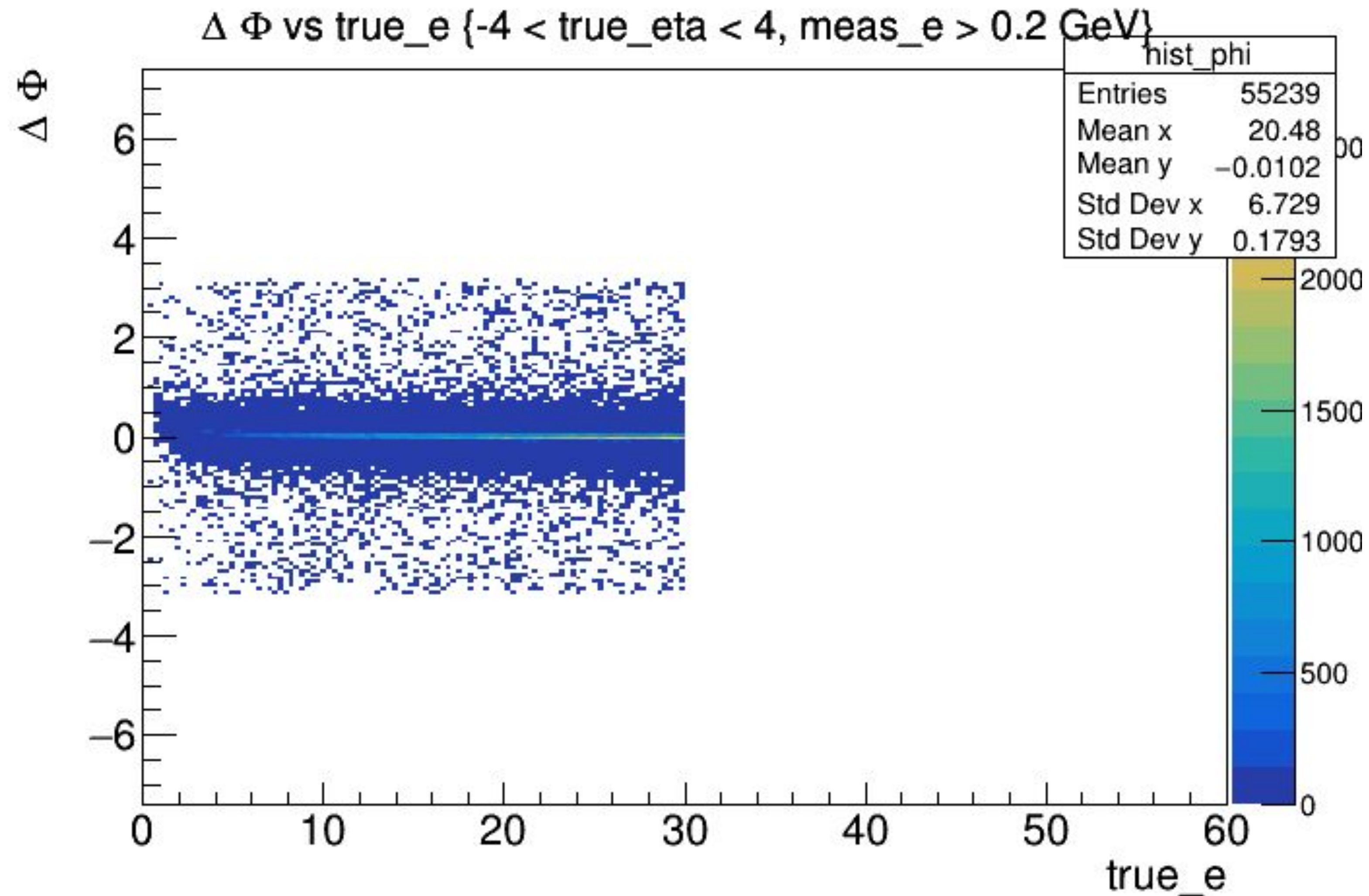
$\Delta e/ge$ vs ge
Explicit η cut: -4 to 4
Energy Cut: 0.2GeV

($\Delta e/true_e$) vs $true_e$ {-4 < $true_eta$ < 4, $meas_e$ > 0.2 GeV}



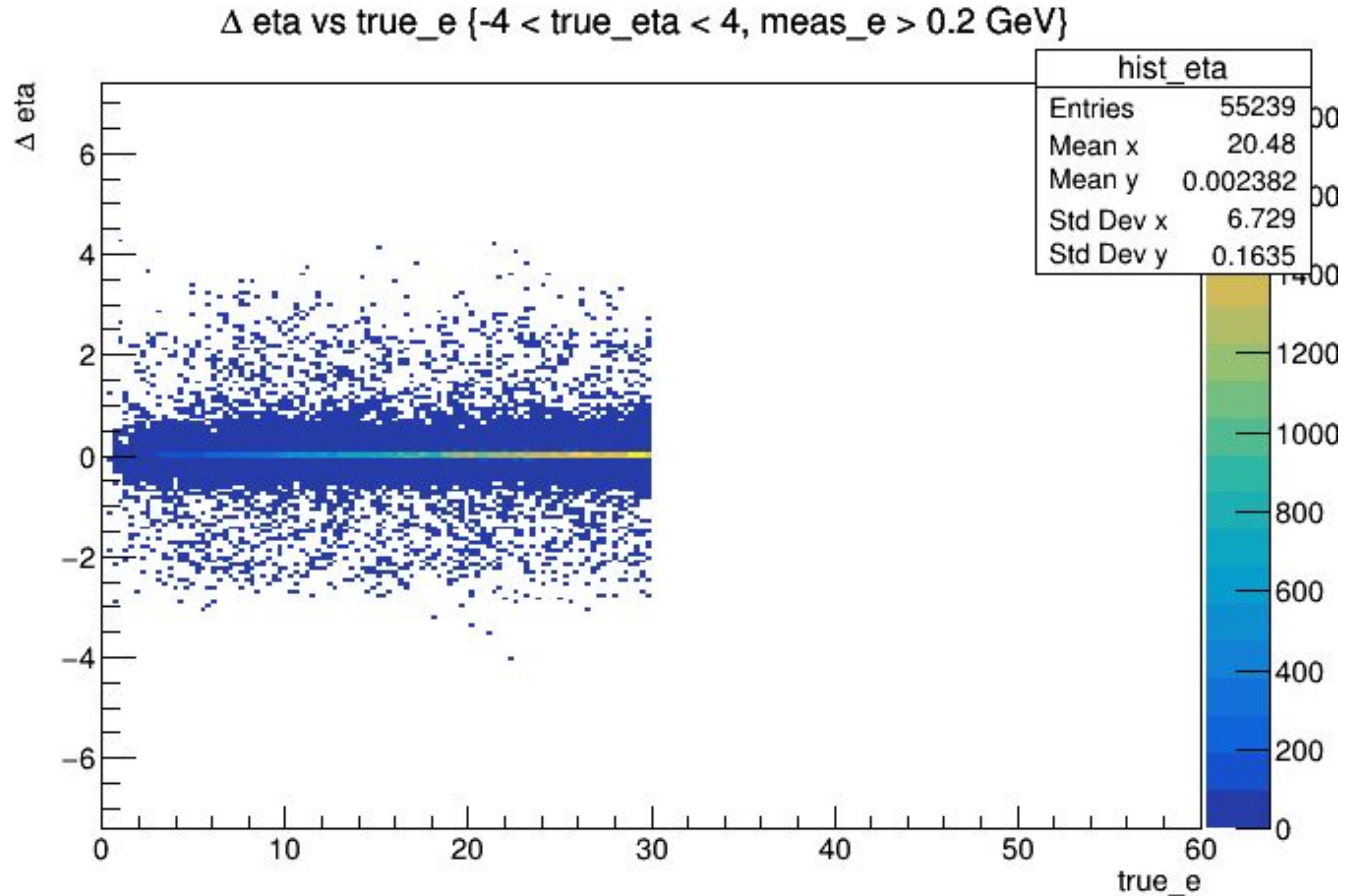
HCALOUT (π^-)

$\Delta\phi$ vs g_e
Explicit η cut: -4 to 4
Energy Cut: 0.2 GeV



HCALOUT (π^-)

$\Delta\eta$ vs ge
Explicit η cut: -4 to 4
Energy Cut: 0.2GeV





LOONEY TUNES



"That's all Folks!"