

GEANT4 Simulation Report

Riccardo Nicolaidis²

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²riccardo.nicolaidis@unitn.it

GDML File Name : **LEM_Plastic_Mirion_Mirion-worldVOL_Parsed.gdml**

NTuple Info:

- Ntuple ID: 0 Ntuple Name: Edep
- Ntuple ID: 0 Ntuple Column ID: 0 Ntuple Column Name: RandEnergy
- Ntuple ID: 0 Ntuple Column ID: 1 Ntuple Column Name: Xgen
- Ntuple ID: 0 Ntuple Column ID: 2 Ntuple Column Name: Ygen
- Ntuple ID: 0 Ntuple Column ID: 3 Ntuple Column Name: Zgen
- Ntuple ID: 0 Ntuple Column ID: 4 Ntuple Column Name: pDirX
- Ntuple ID: 0 Ntuple Column ID: 5 Ntuple Column Name: pDirY
- Ntuple ID: 0 Ntuple Column ID: 6 Ntuple Column Name: pDirZ
- Ntuple ID: 0 Ntuple Column ID: 7 Ntuple Column Name: Ed_LV_SiliconDetector_Thick_2
- Ntuple ID: 0 Ntuple Column ID: 8 Ntuple Column Name: Ed_LV_SiliconDetector_Thick_0
- Ntuple ID: 0 Ntuple Column ID: 9 Ntuple Column Name: Ed_LV_PlasticVetoBottom
- Ntuple ID: 0 Ntuple Column ID: 10 Ntuple Column Name: Ed_LV_SiliconDetector_Thin_1
- Ntuple ID: 0 Ntuple Column ID: 11 Ntuple Column Name: Ed_LV_SiliconDetector_Thin_4
- Ntuple ID: 0 Ntuple Column ID: 12 Ntuple Column Name: Ed_LV_SiliconDetector_Thin_0
- Ntuple ID: 0 Ntuple Column ID: 13 Ntuple Column Name: Ed_LV_Calo
- Ntuple ID: 0 Ntuple Column ID: 14 Ntuple Column Name: Ed_LV_SiliconDetector_Thin_2
- Ntuple ID: 0 Ntuple Column ID: 15 Ntuple Column Name: Ed_LV_SiliconDetector_Thin_3
- Ntuple ID: 0 Ntuple Column ID: 16 Ntuple Column Name: Ed_LV_PlasticVetoTop
- Ntuple ID: 0 Ntuple Column ID: 17 Ntuple Column Name: Ed_LV_SiliconDetector_Thick_4
- Ntuple ID: 0 Ntuple Column ID: 18 Ntuple Column Name: Ed_LV_SiliconDetector_Thick_1
- Ntuple ID: 0 Ntuple Column ID: 19 Ntuple Column Name: Ed_LV_SiliconDetector_Thick_3

Volume	Material	Mass (g)
LV_AlTop	G4_Al	568.663
LV_BakeliteCable_Thin_1	G4_BAKELITE	0.327105
LV_BakeliteCable_Thin_4	G4_BAKELITE	0.327105
LV_BakeliteCable_Thin_3	G4_BAKELITE	0.327105
LV_AlShieldUpper	G4_Al	26.045
LV_AlFrame_Thick_3	G4_Al	2.97844
LV_AlFrame_Thick_1	G4_Al	2.97844
LV_AlFrame_Thick_4	G4_Al	2.97844
LV_AlShieldLower	G4_Al	22.2453
LV_BakeliteCable_Thin_2	G4_BAKELITE	0.327105
LV_AlFrame_Thick_5	G4_Al	0.576306
LV_AlFrame_Thick_9	G4_Al	0.706286
LV_AlFrame_Thick_6	G4_Al	0.706286
LV_AlFrame_Thick_8	G4_Al	0.706286
LV_BakeliteCable_Thin_0	G4_BAKELITE	0.266907
LV_AlFrame_Thick_7	G4_Al	0.706286
LV_AlScrew_Thick_0	G4_Al	1.46527
LV_AlFrame_Thick_2	G4_Al	2.97844
LV_SiliconDetector_Thick_2	G4_Si	0.135903
LV_SiliconDetector_Thick_0	G4_Si	0.0439621
LV_AlScrew_Thick_2	G4_Al	2.44318
LV_AlFrame_Thick_0	G4_Al	2.18948
LV_AlScrew	G4_Al	5.5011
LV_AlScrew_1	G4_Al	5.5011
LV_AlScrew_2	G4_Al	5.5011
LV_AlScrew_3	G4_Al	5.5011
LV_BakeliteBoardMiddleLower	G4_BAKELITE	17.2834
LV_PlasticVetoBottom	G4_PLASTIC_SC_VINYLTOLUENE	128.504
LV_AlBottom	G4_Al	422.153
LV_BakeliteBoardTop	G4_BAKELITE	18.323
LV_AlFrame_Thin_2	G4_Al	2.97844
LV_AlScrew_Thin_2	G4_Al	2.44318
LV_SiliconDetector_Thin_1	G4_Si	0.135903
LV_AlScrew_Thin_4	G4_Al	2.44318
LV_AlFrame_Thin_3	G4_Al	2.97844
LV_AlFrame_Thin_4	G4_Al	2.97844
LV_AlScrew_Thin_0	G4_Al	1.46527
LV_SiliconDetector_Thin_4	G4_Si	0.135903
LV_AlFrame_Thin_0	G4_Al	2.18947
LV_AlFrame_Thin_1	G4_Al	2.97844
LV_AlScrew_Thin_1	G4_Al	2.44318
LV_SiliconDetector_Thin_0	G4_Si	0.0439621
LV_BakeliteBoardCalo	G4_BAKELITE	7.99125
LV_BakeliteBoardBottom	G4_BAKELITE	19.1034
LV_Calo	G4_PLASTIC_SC_VINYLTOLUENE	74.304
LV_BakeliteBoardMiddleUpper	G4_BAKELITE	17.2834
LV_AlScrew_Thin_3	G4_Al	2.44318
LV_SiliconDetector_Thin_2	G4_Si	0.135903
LV_SiliconDetector_Thin_3	G4_Si	0.135903
LV_AlScrew_Thick_3	G4_Al	2.44318
LV_PlasticVetoTop	G4_PLASTIC_SC_VINYLTOLUENE	234.744
LV_SiliconDetector_Thick_4	G4_Si	0.135903
LV_SiliconDetector_Thick_1	G4_Si	0.135903
LV_SiliconDetector_Thick_3	G4_Si	0.135903
LV_AlScrew_Thick_4	G4_Al	2.44318
LV_AlScrew_Thick_1	G4_Al	2.44318

hPID_1

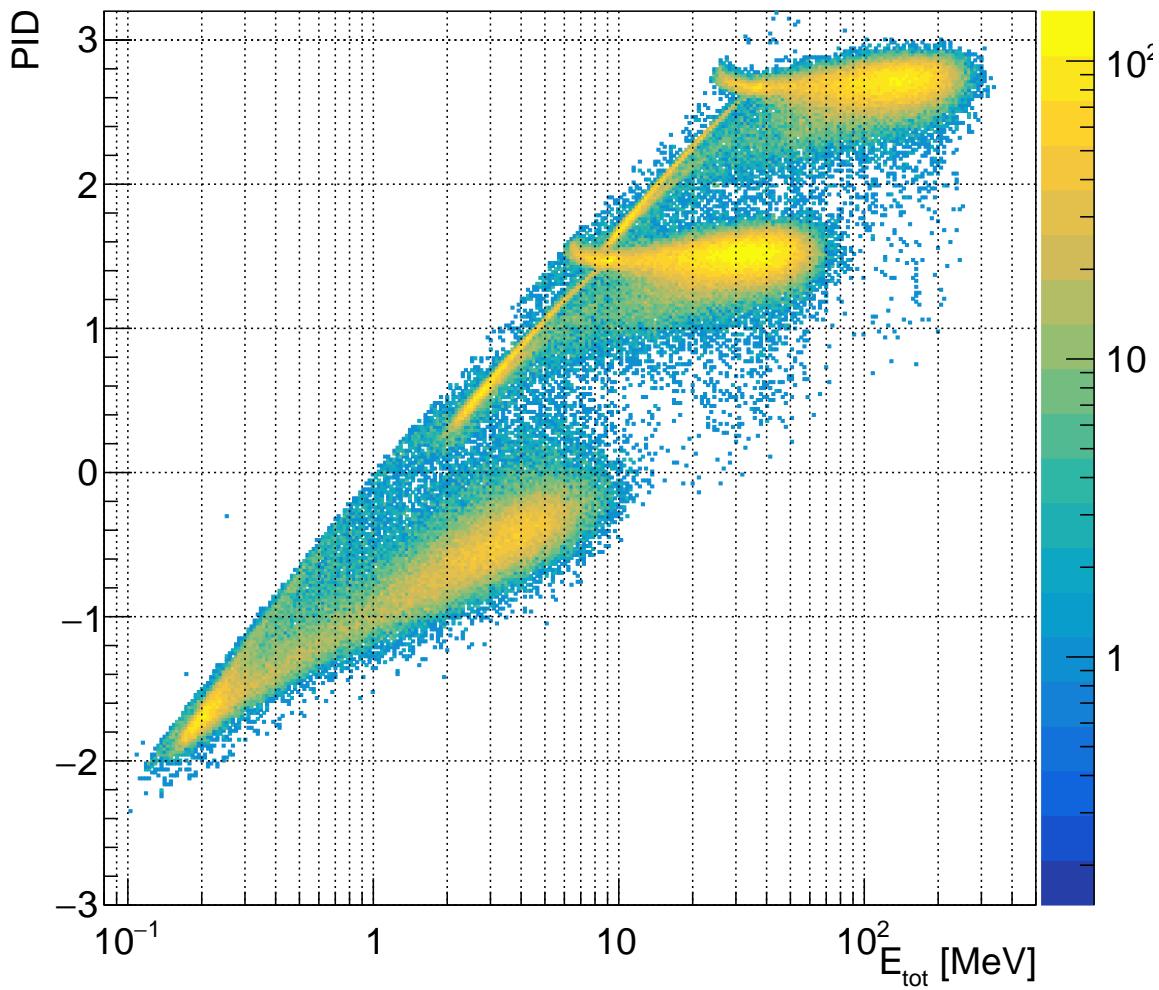


Figure: PID, No Gaussian Smearing, Total Energy is the Energy reconstructed.

hPID_2

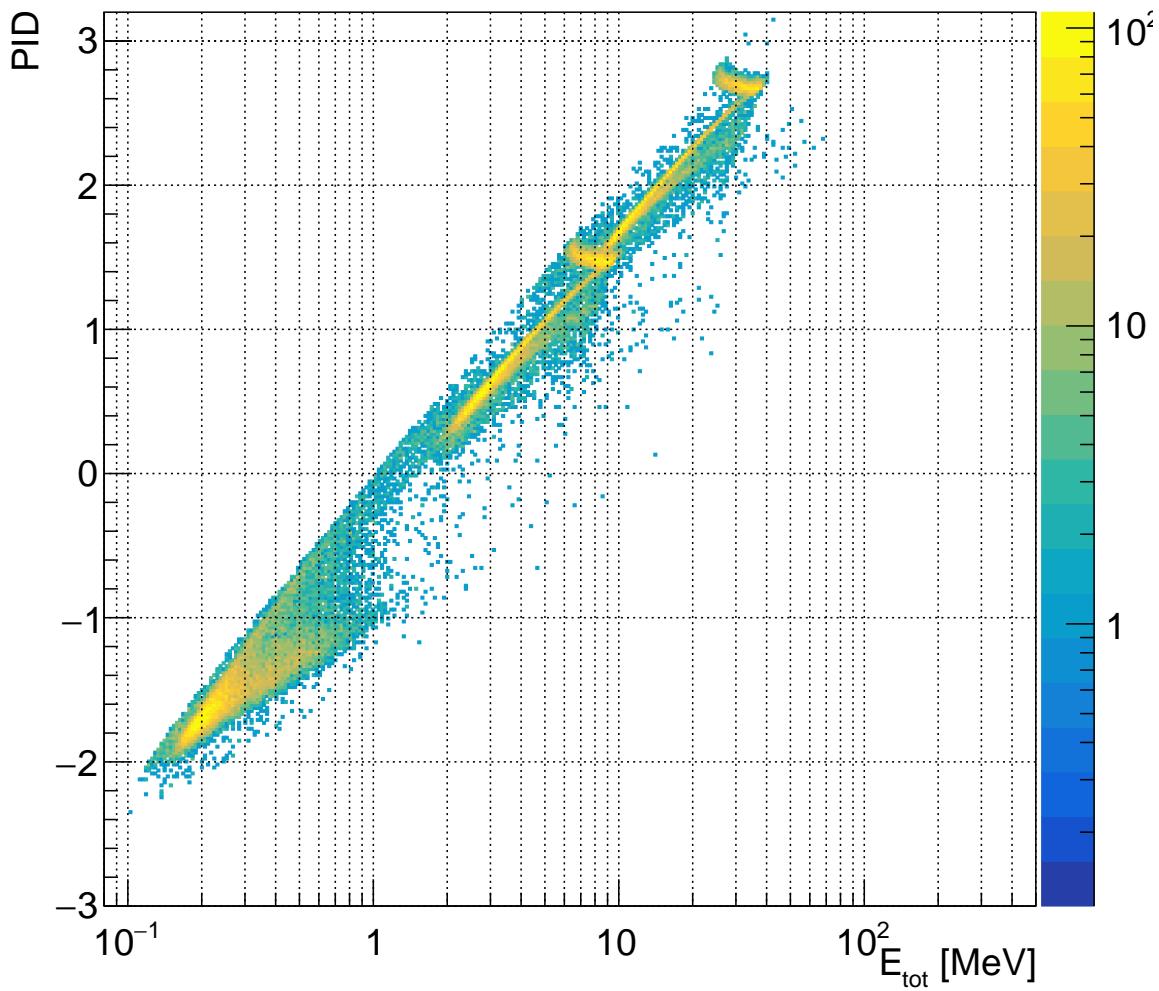


Figure: PID, No Gaussian Smearing, Total Energy is the Energy reconstructed, No Calorimeter.

hPID2_1

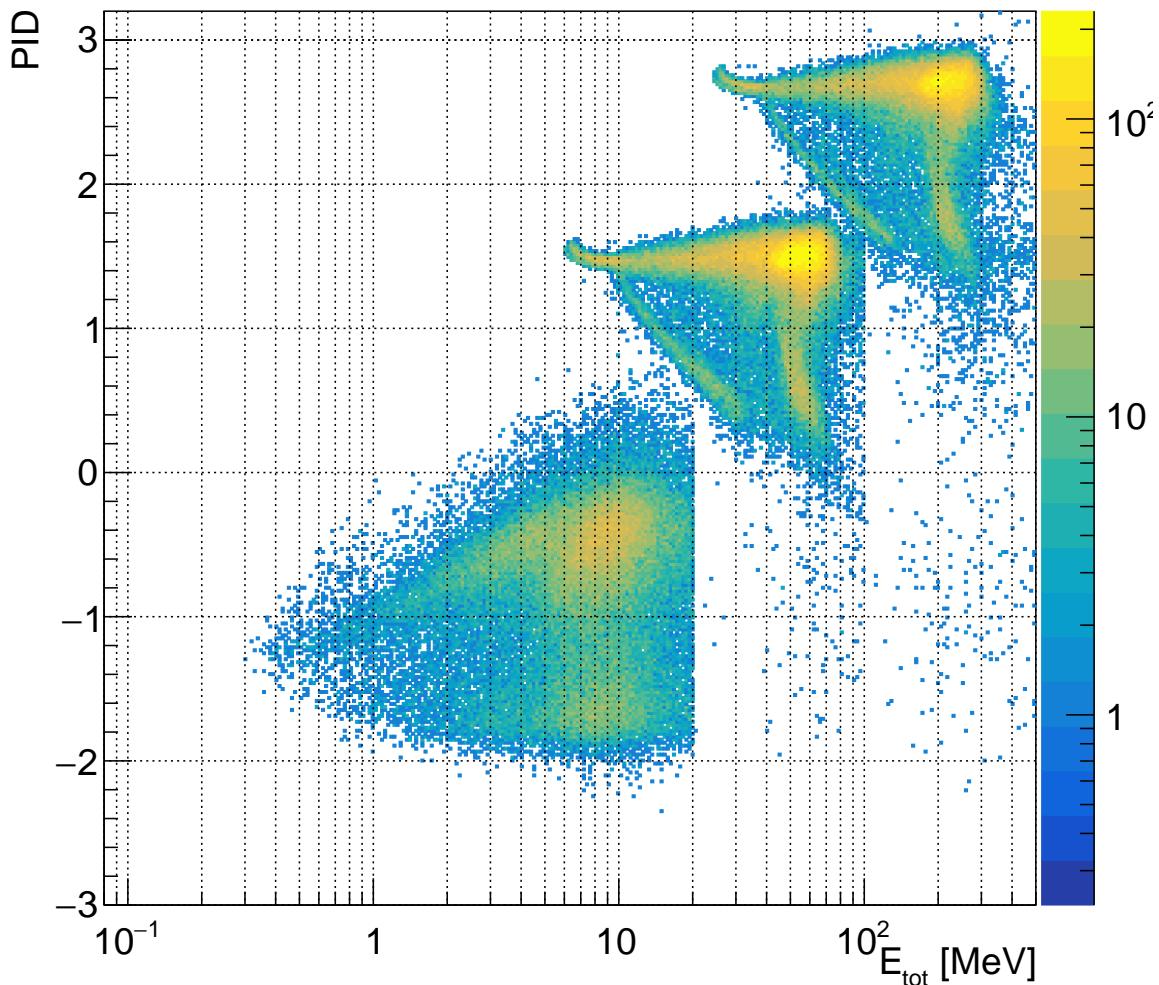


Figure: PID, No Gaussian Smearing, Total Energy is the MC Energy.

hPID2_2

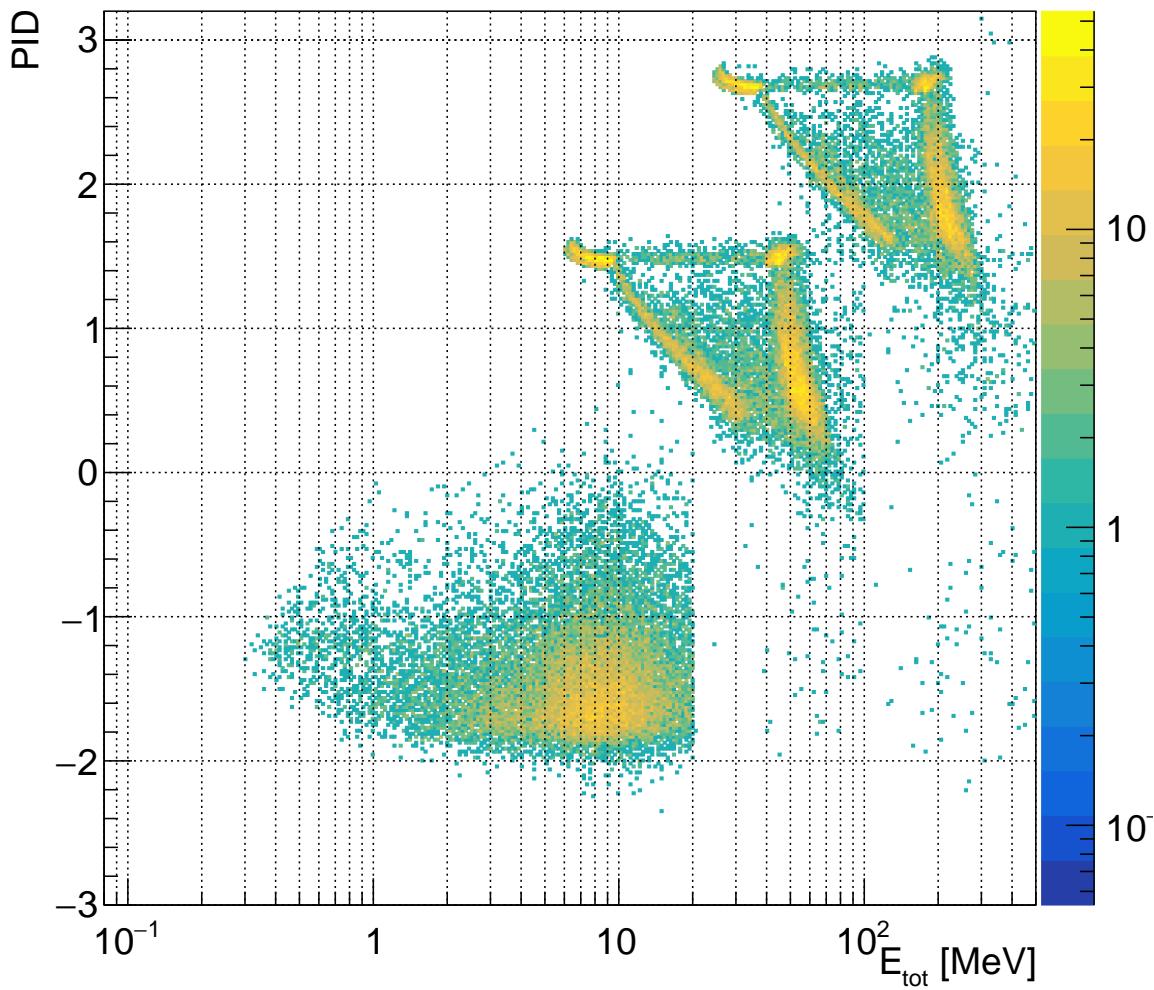


Figure: PID, No Gaussian Smearing, Total Energy is the MC Energy, No Calorimeter.

hPID_1

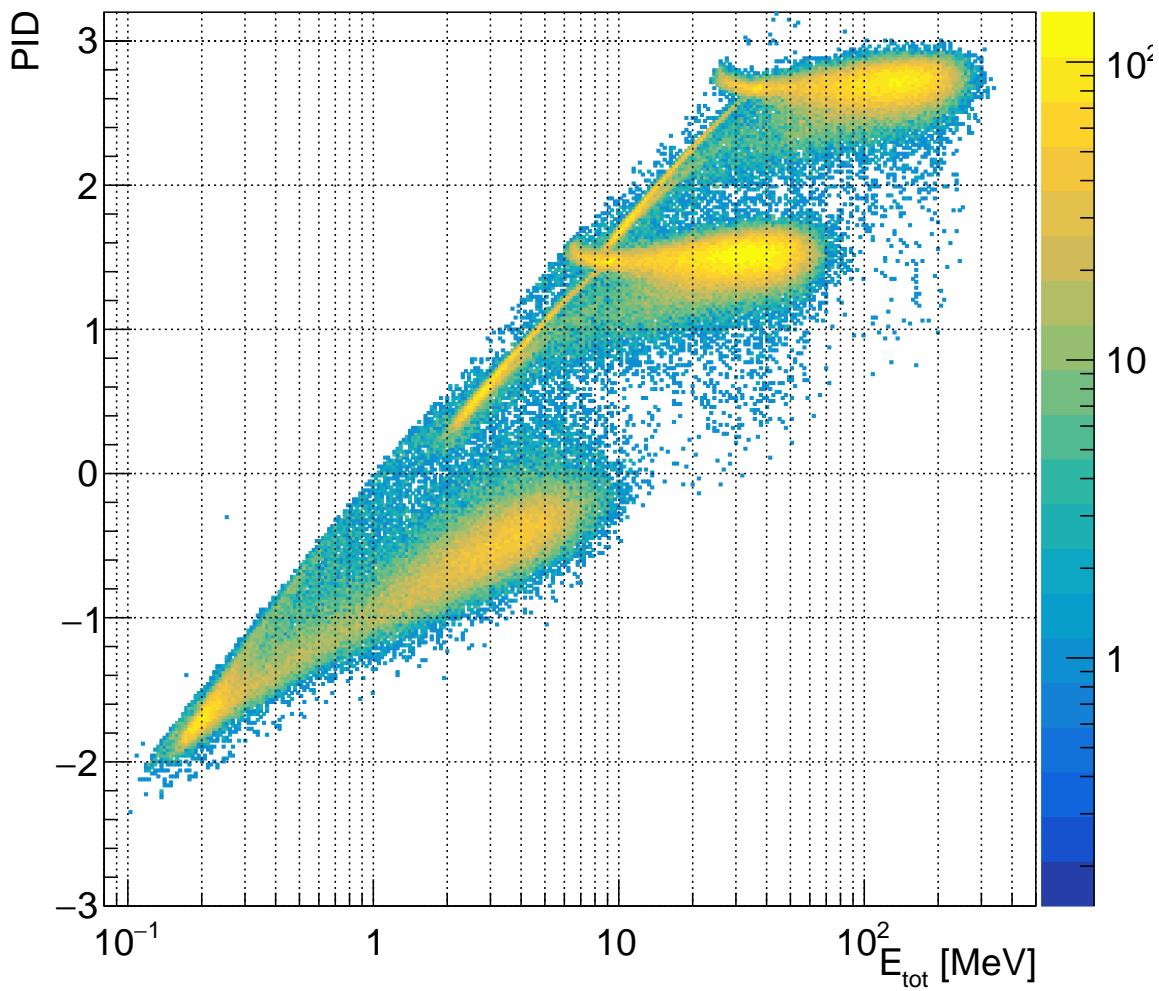


Figure: PID, Gaussian Smearing, Total Energy is the Energy reconstructed.

hPID_3

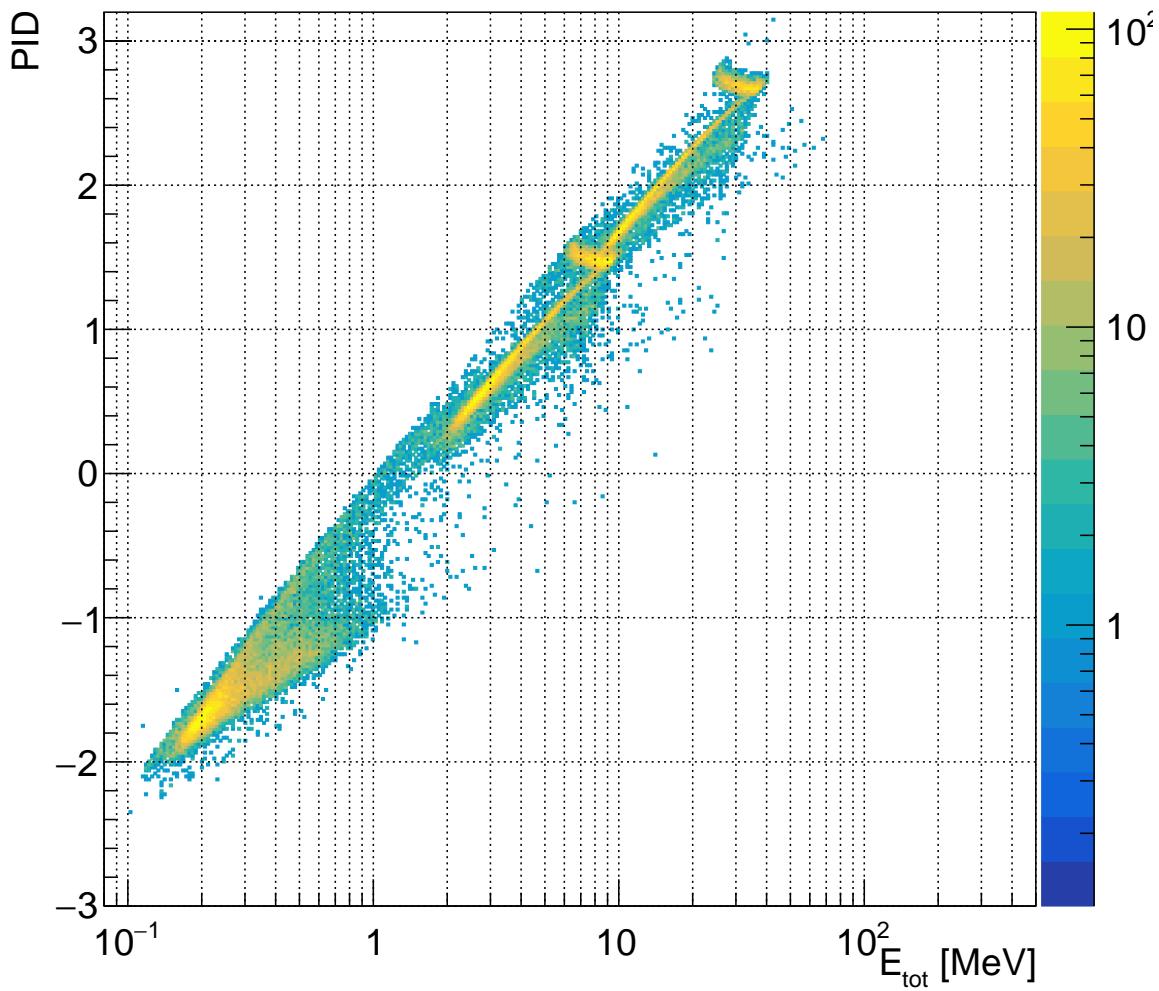


Figure: PID, Gaussian Smearing, Total Energy is the Energy reconstructed, No Calorimeter.

hPID2_1

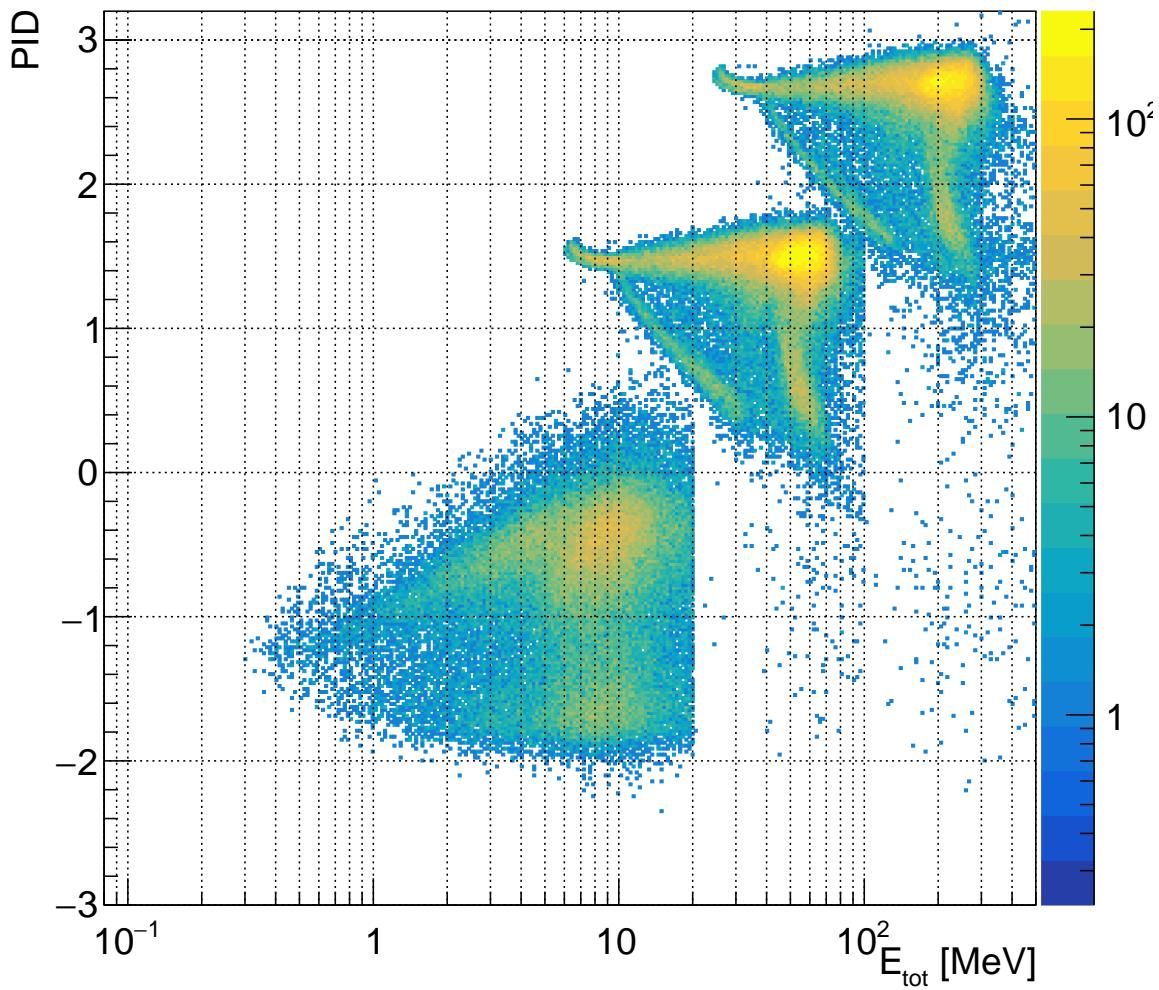


Figure: PID, Gaussian Smearing, Total Energy is the MC Energy.

hPID2_3

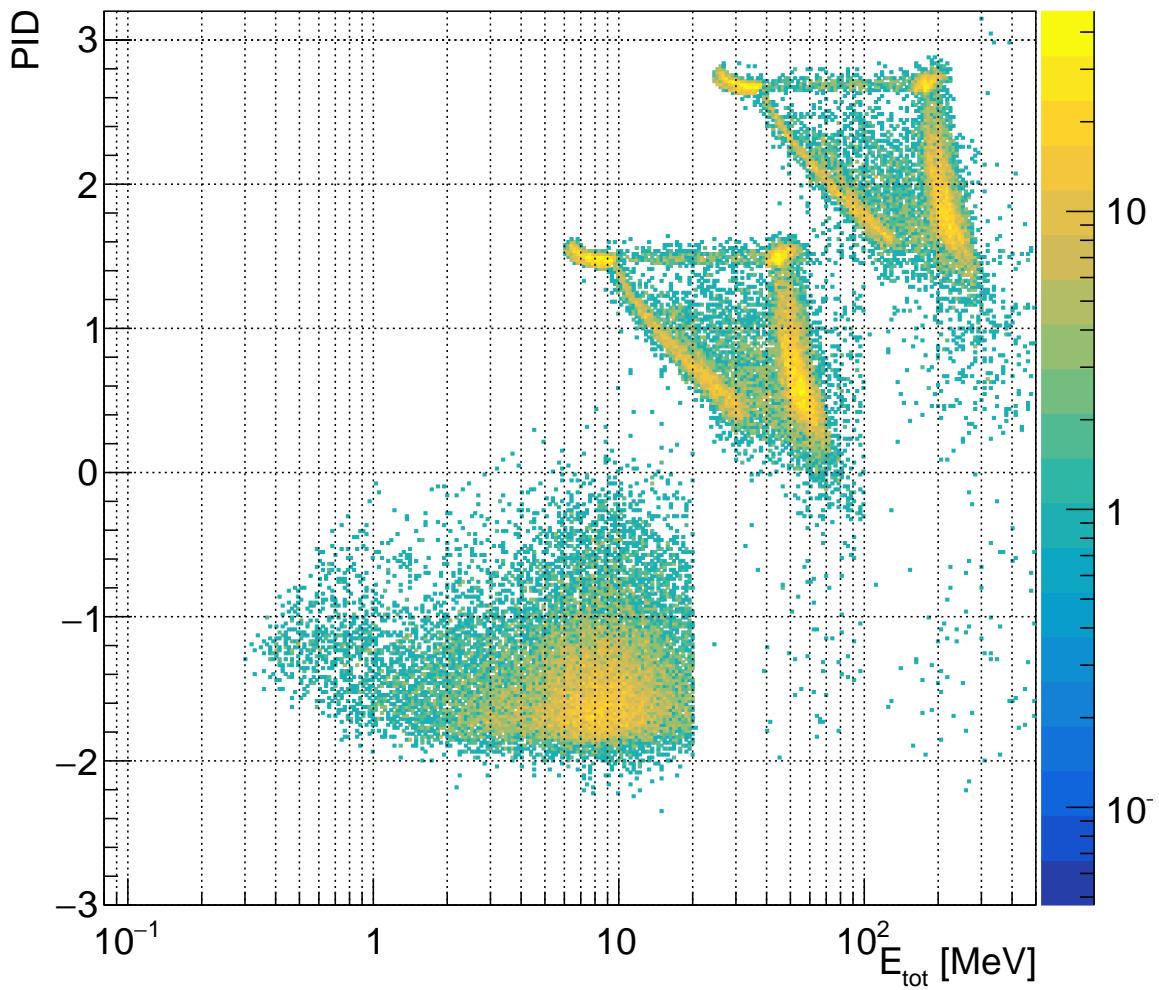


Figure: PID, Gaussian Smearing, Total Energy is the MC Energy, No Calorimeter.

mgrPID

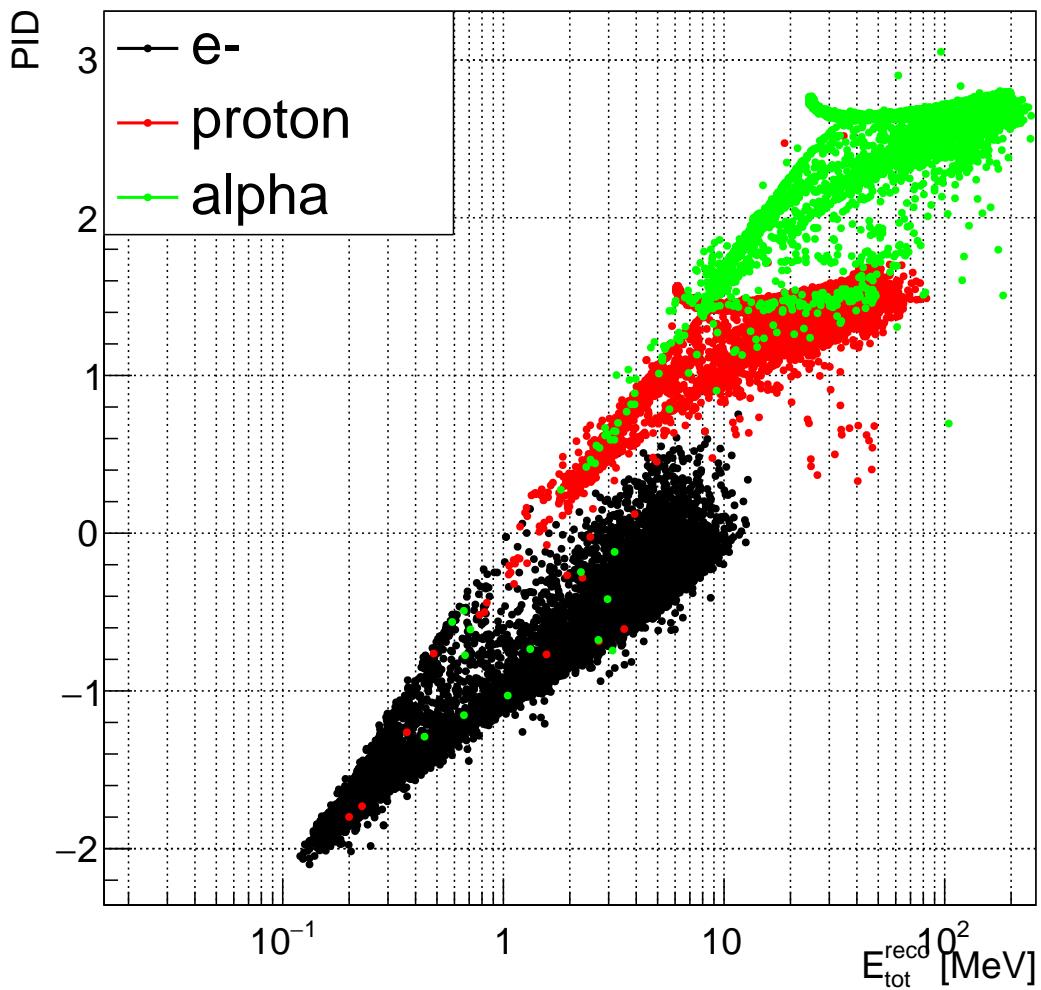


Figure: PID, Gaussian Smearing, Total Energy is the Energy reconstructed, No Calorimeter.

MC quantities for e-_t0

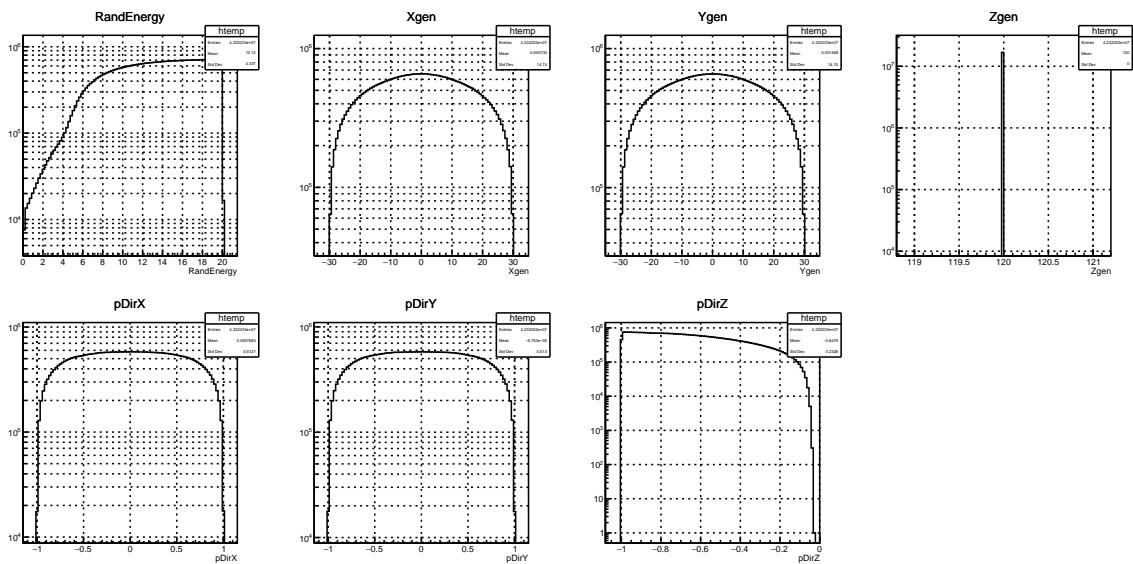


Figure: MC quantities

Energies distribution for e-

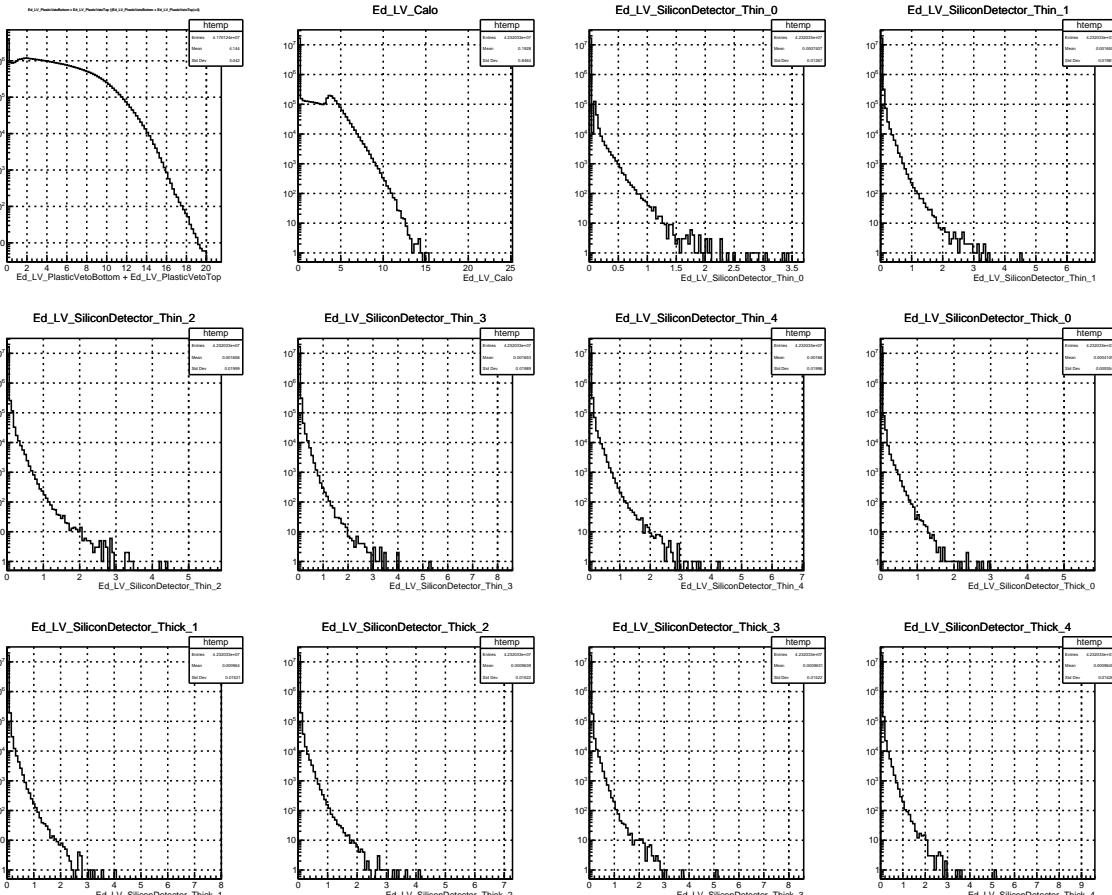


Figure: Detected energies

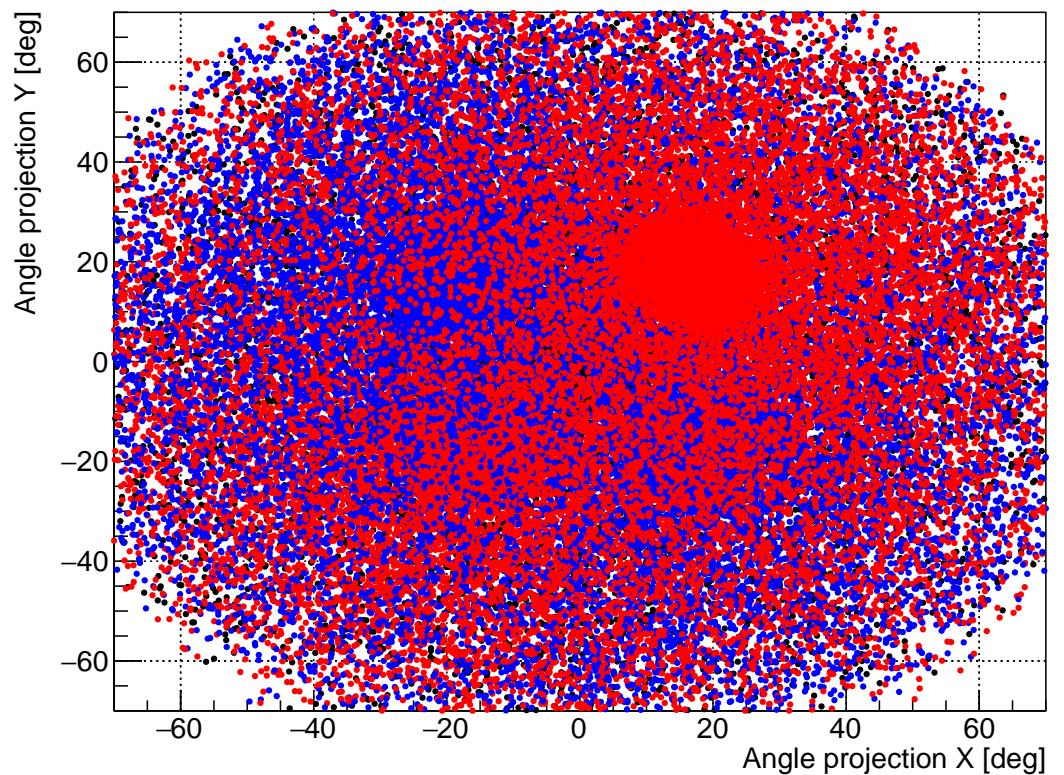


Figure: Angles distribution

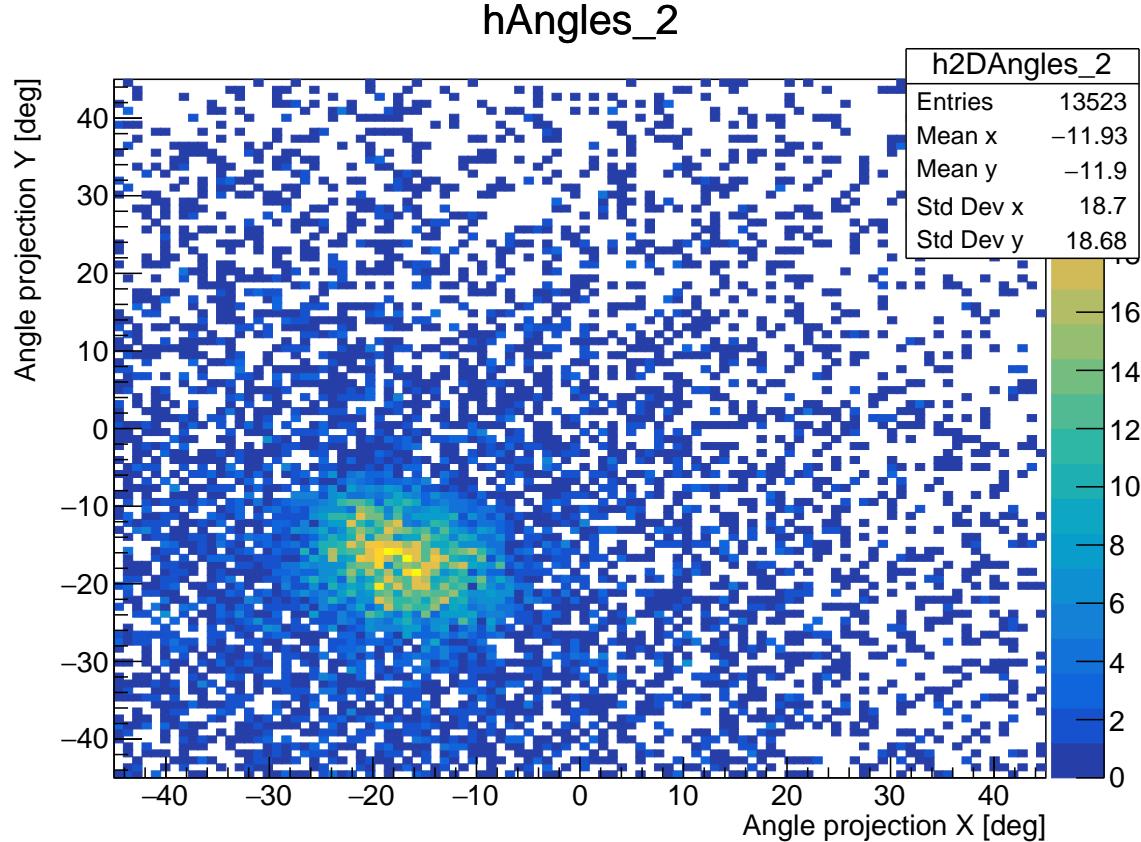


Figure: Angles distribution

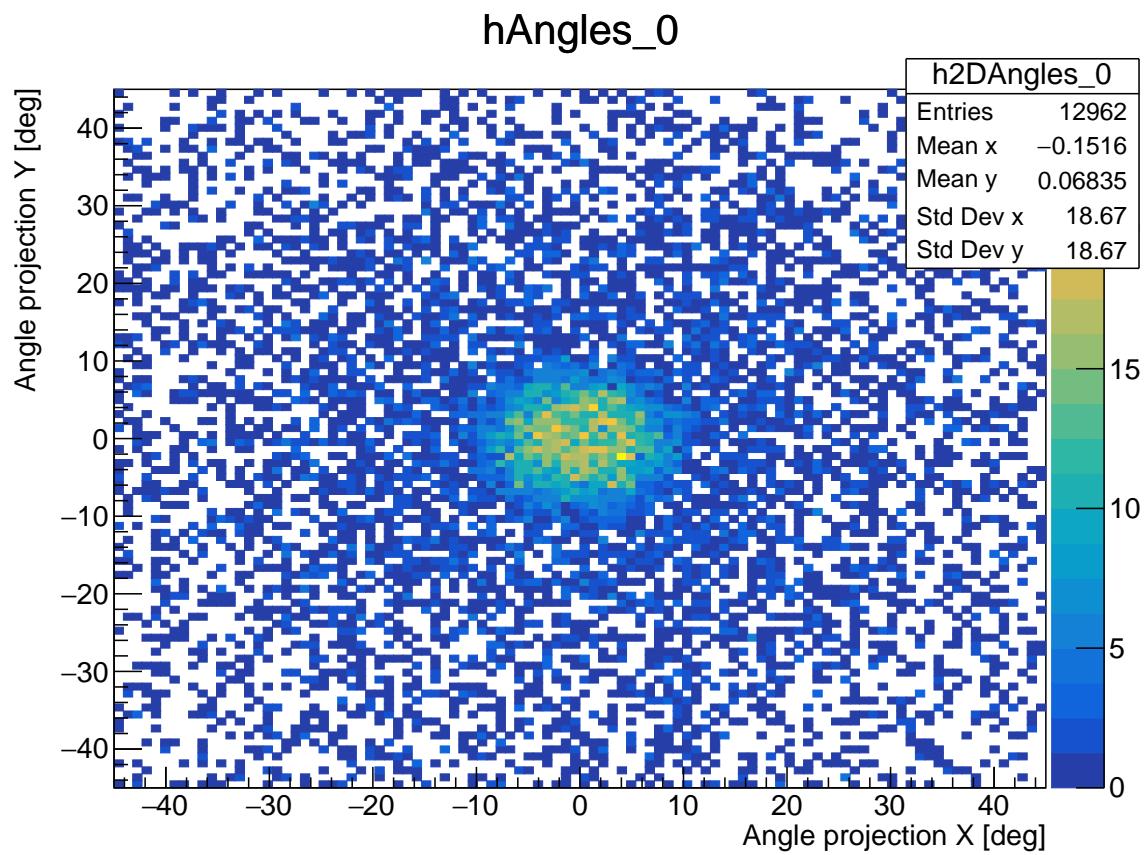


Figure: Angles distribution

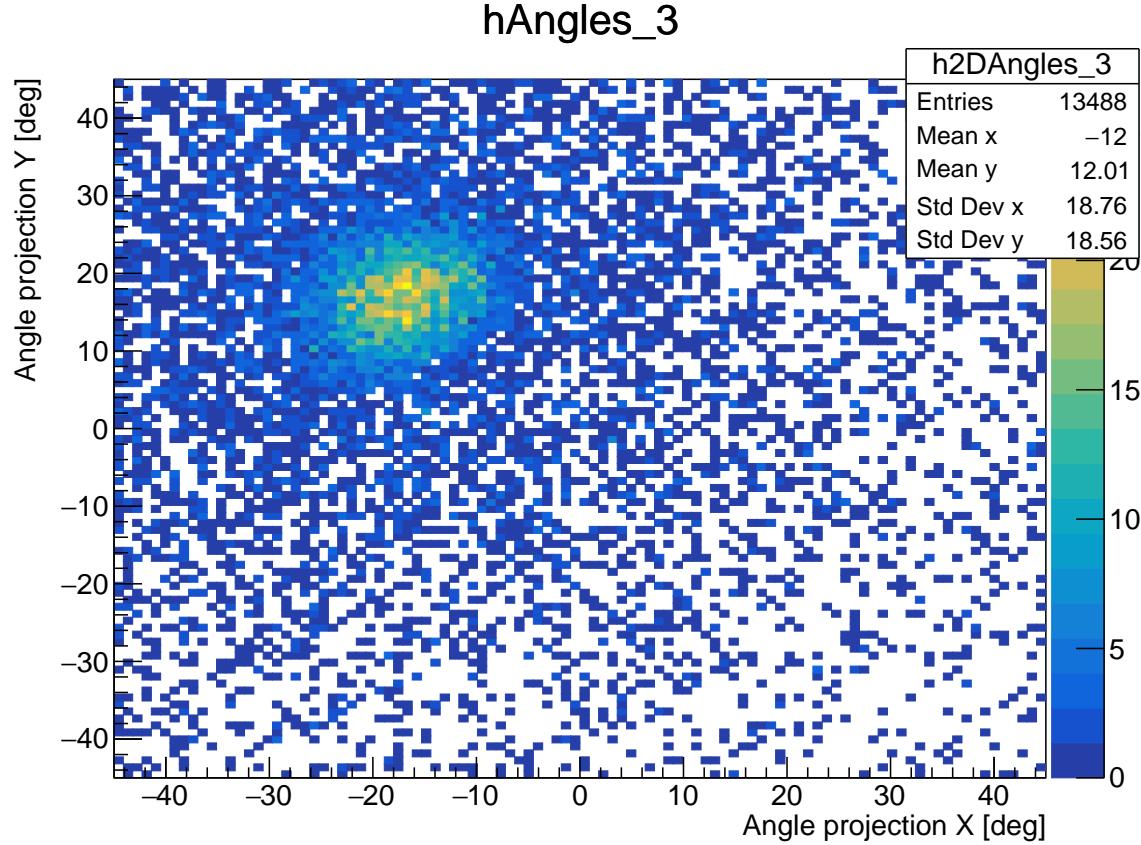


Figure: Angles distribution

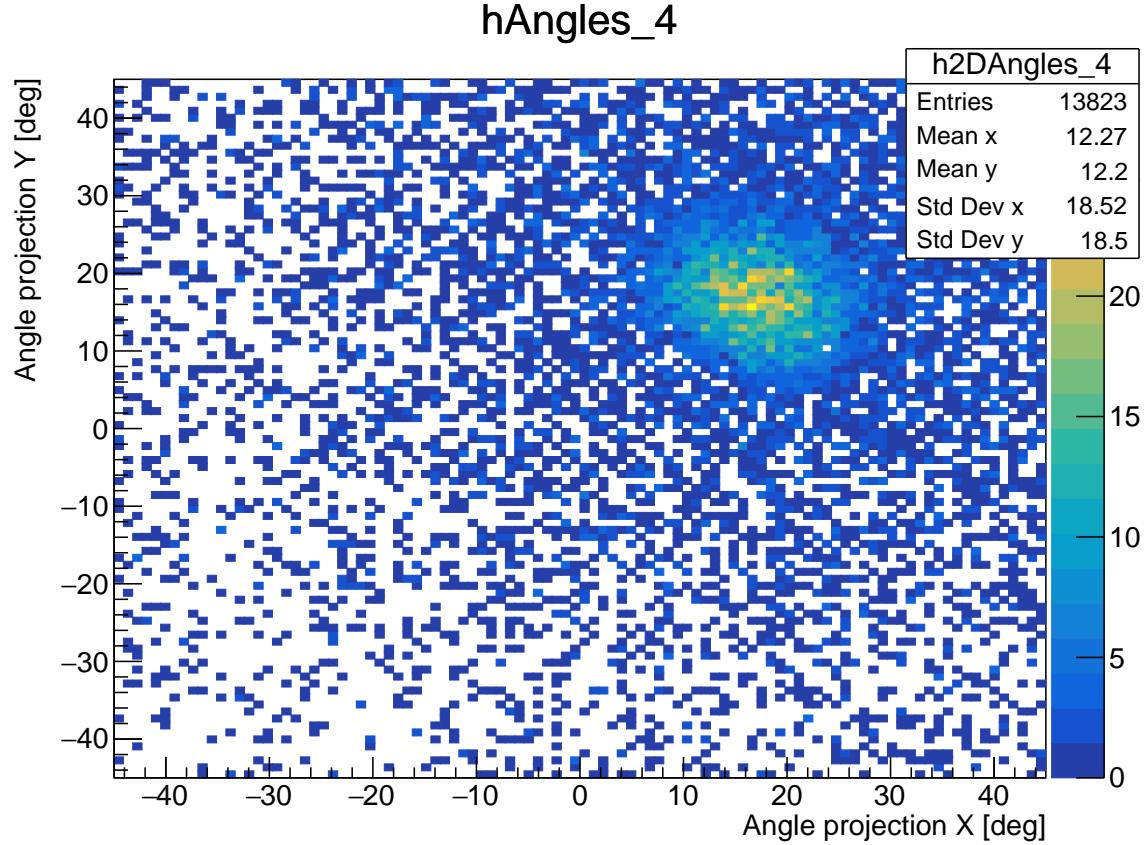


Figure: Angles distribution

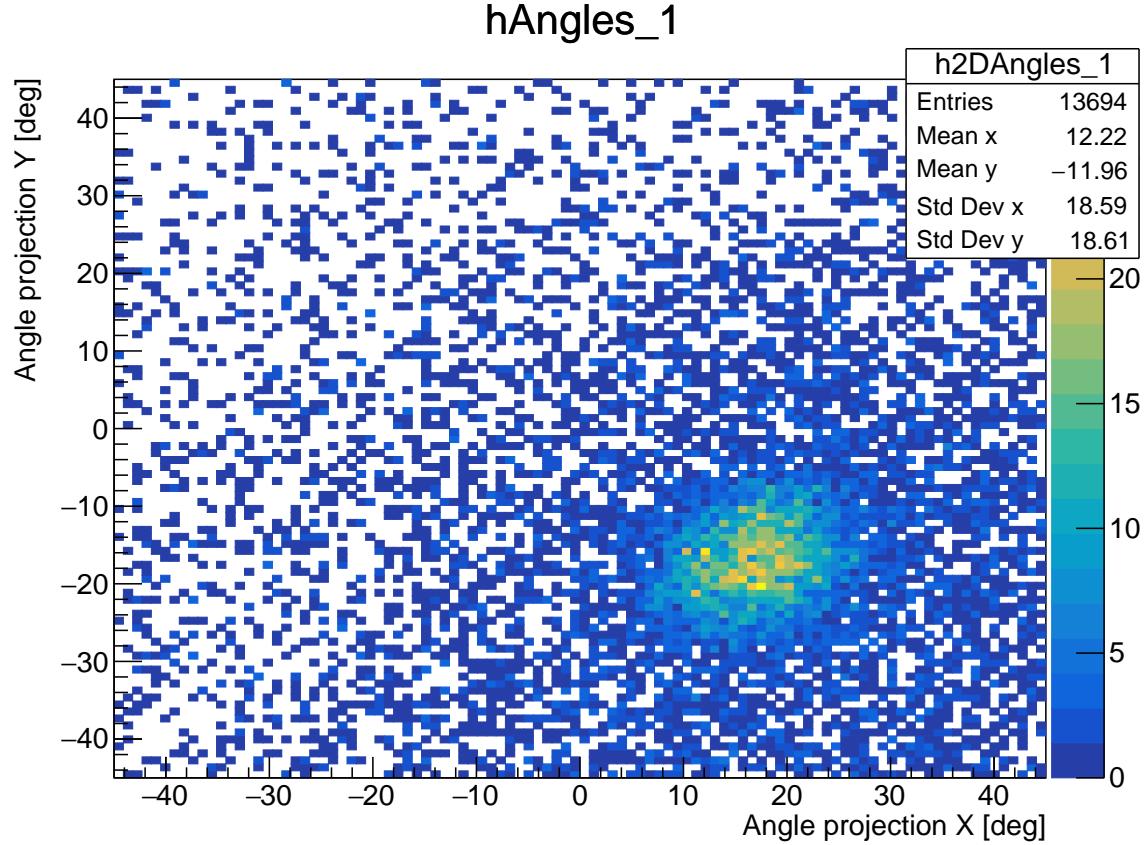


Figure: Angles distribution

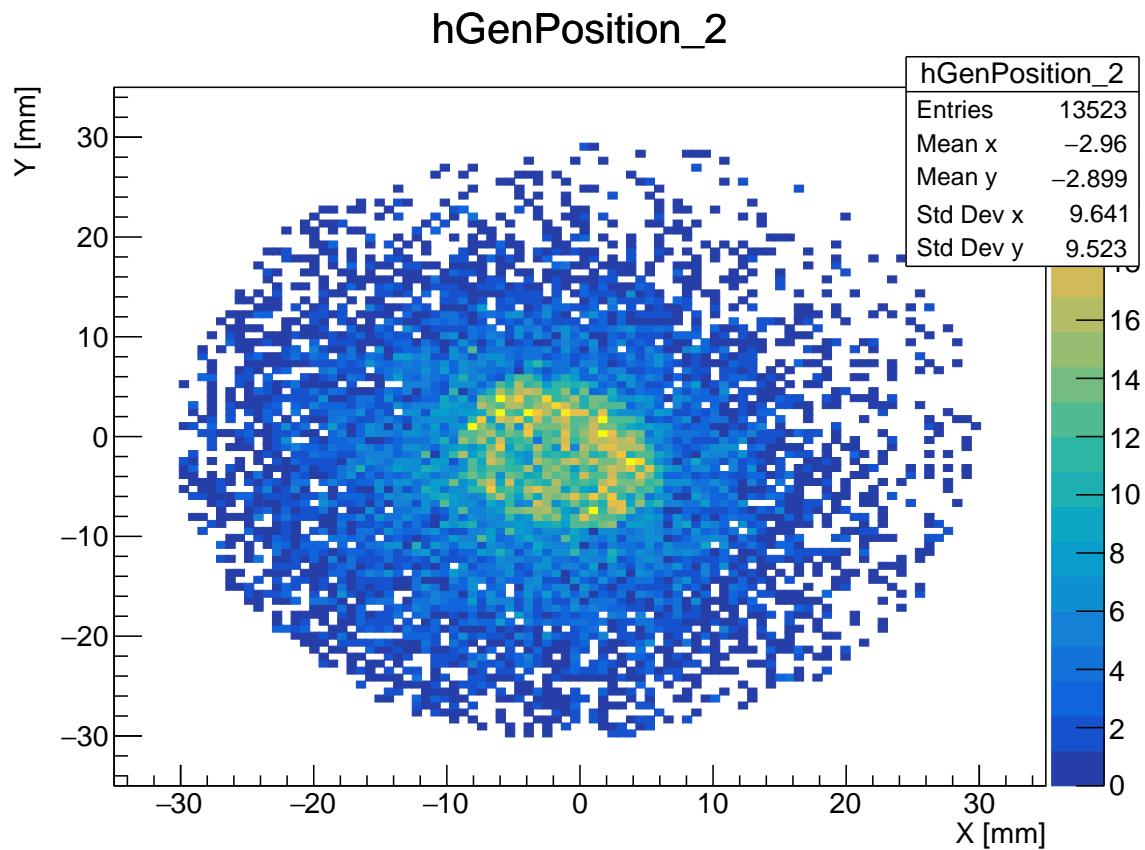


Figure: Generation Position

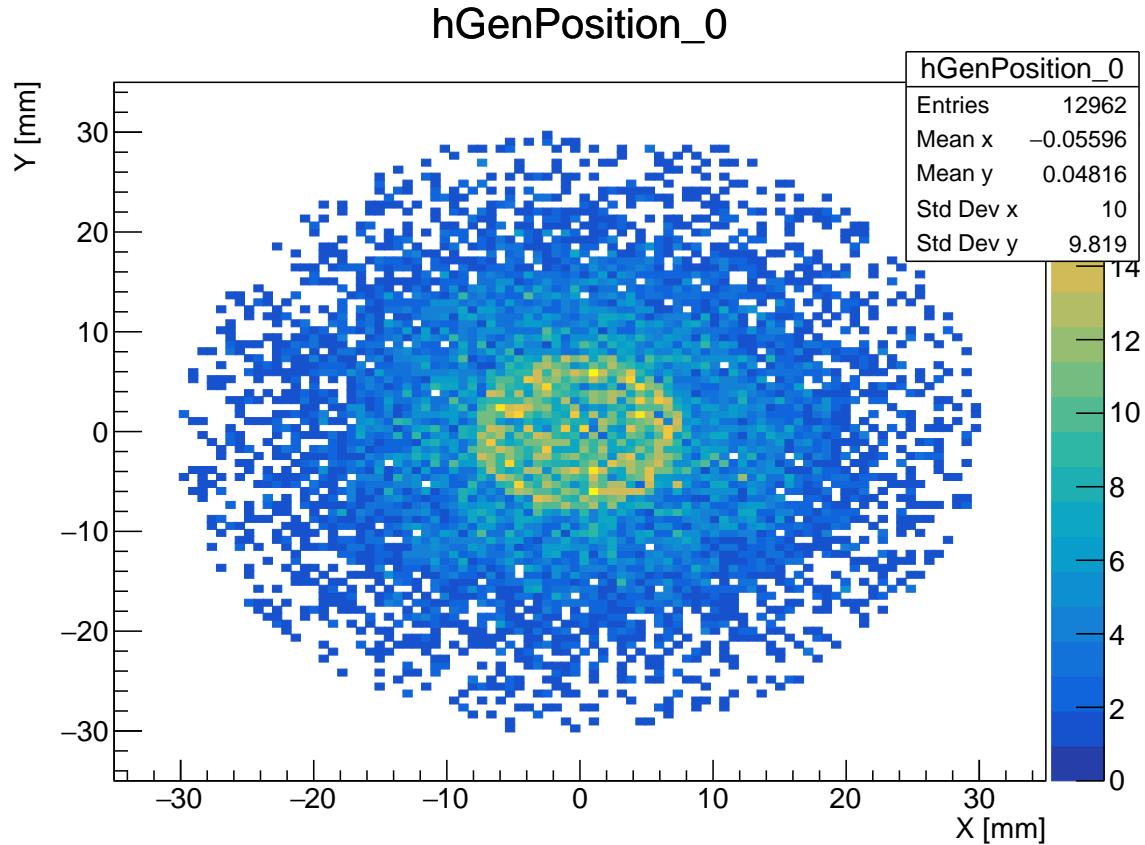


Figure: Generation Position

hGenPosition_3

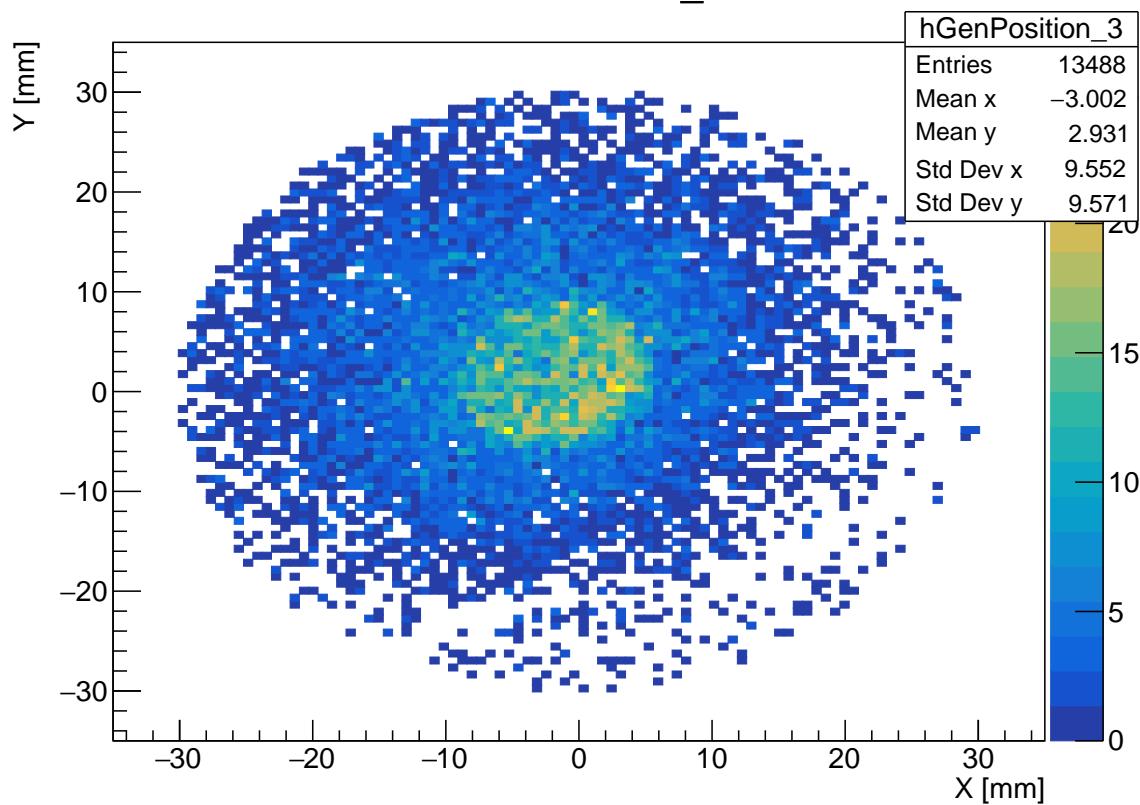


Figure: Generation Position

hGenPosition_1

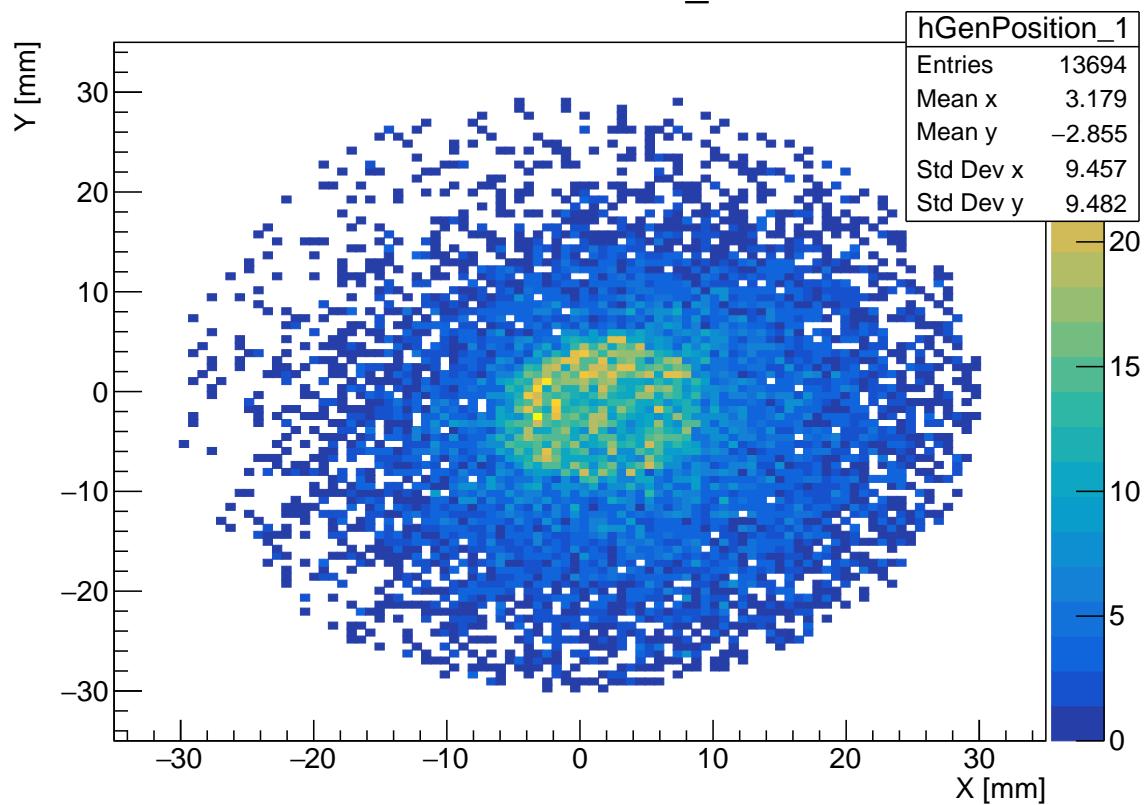


Figure: Generation Position

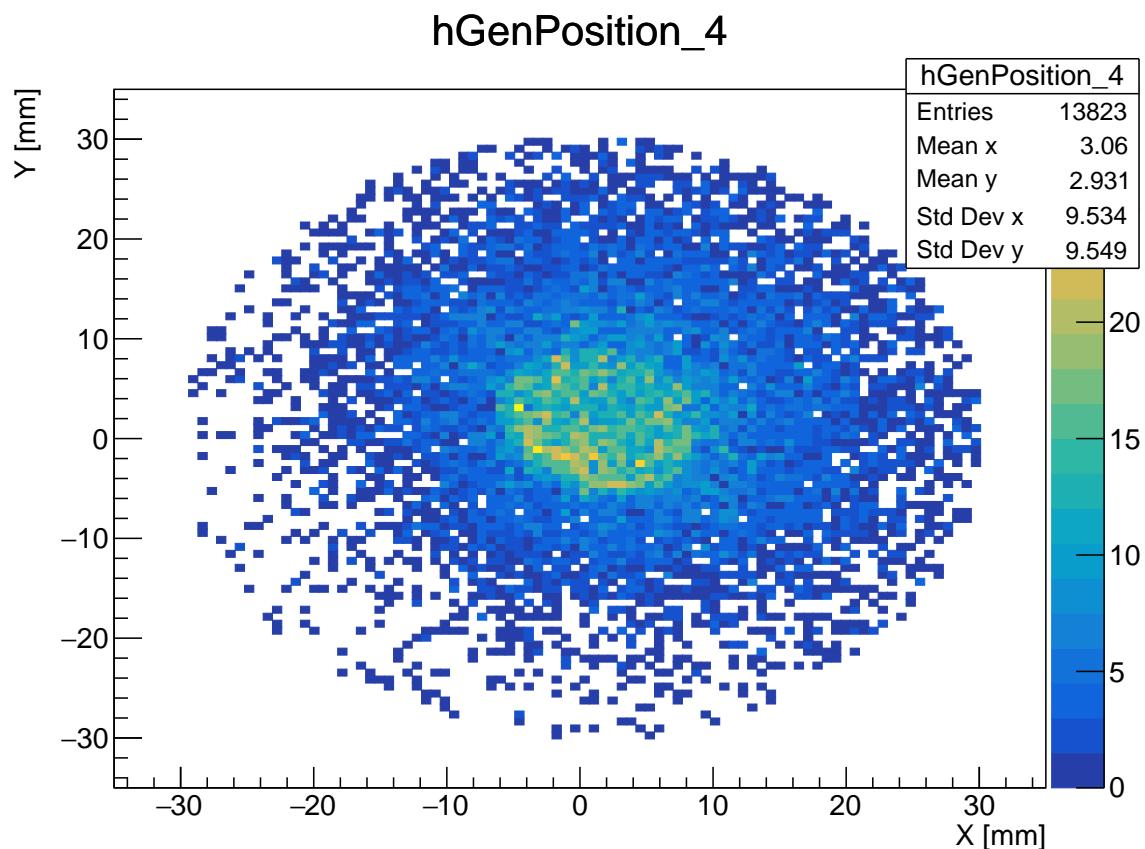


Figure: Generation Position

MC quantities for proton_t0

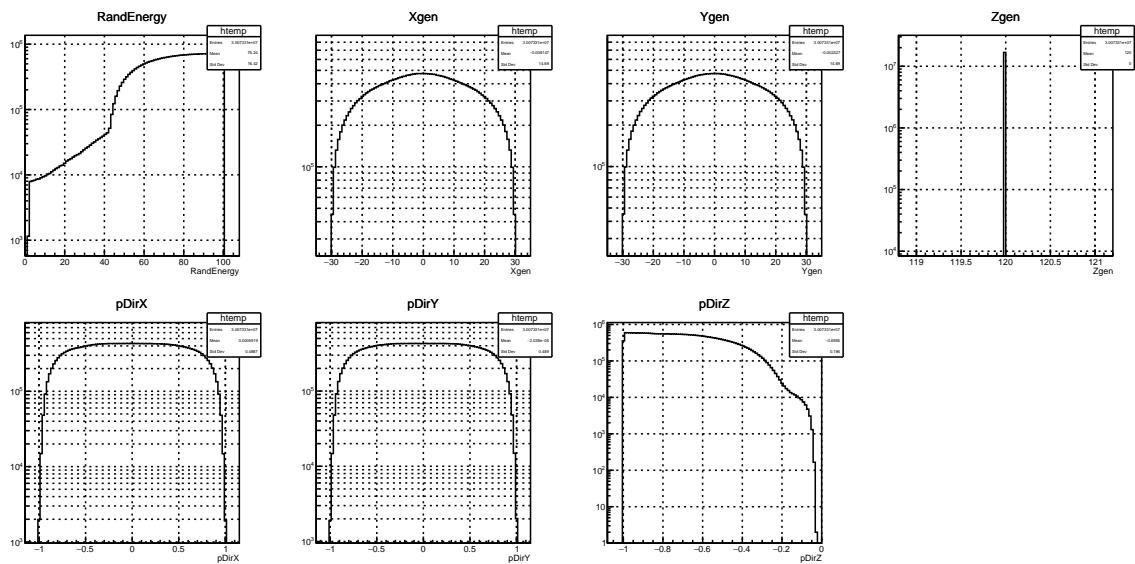


Figure: MC quantities

Energies distribution for proton

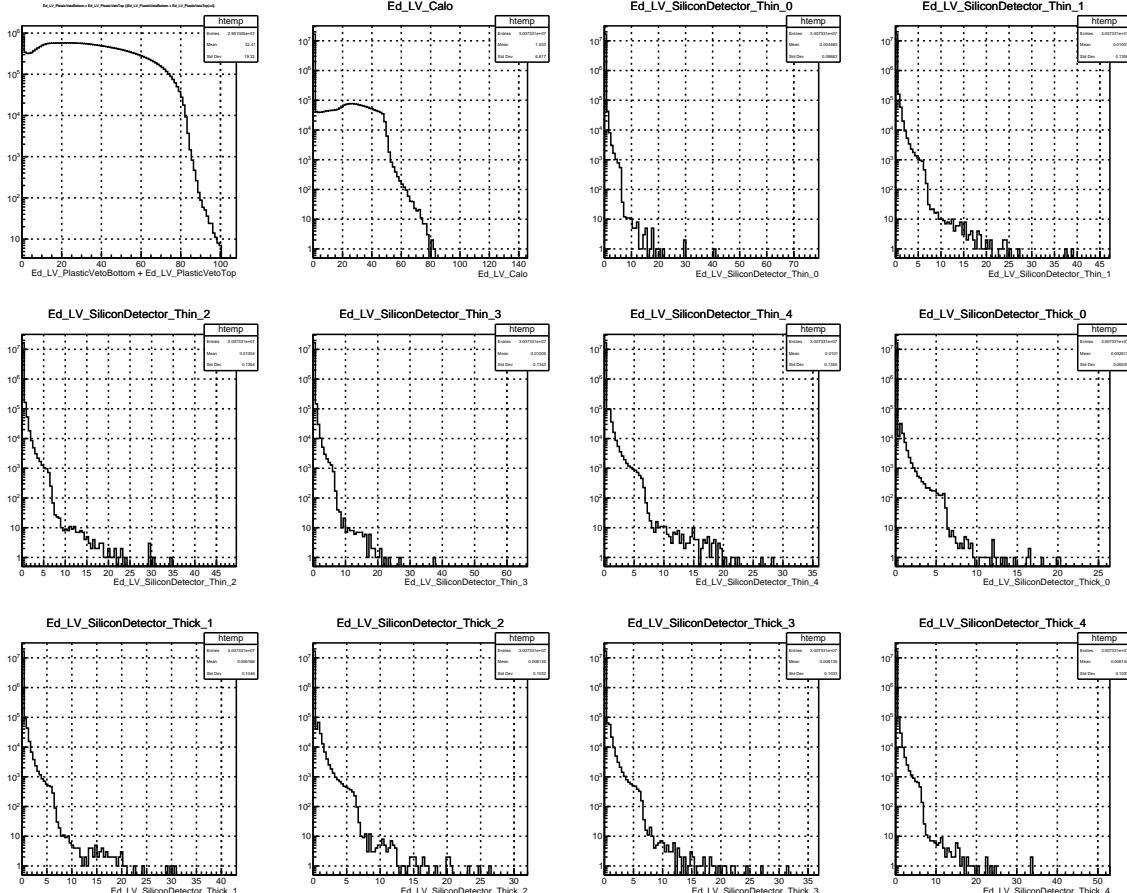


Figure: Detected energies

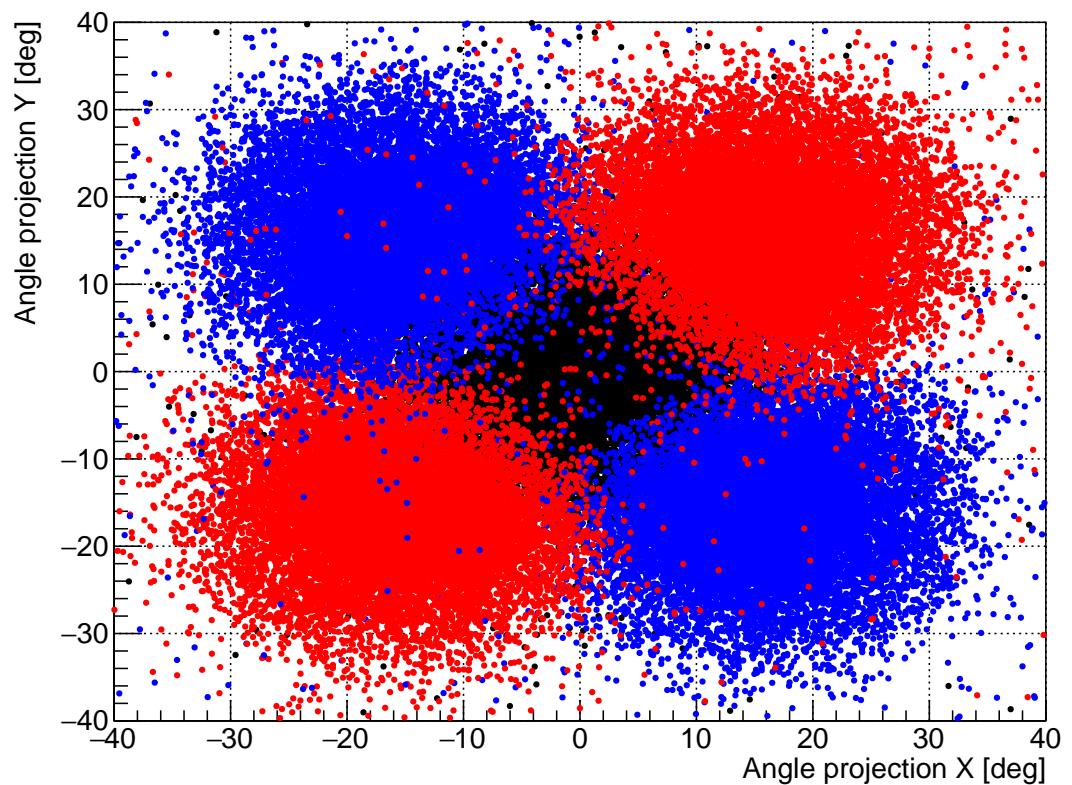


Figure: Angles distribution

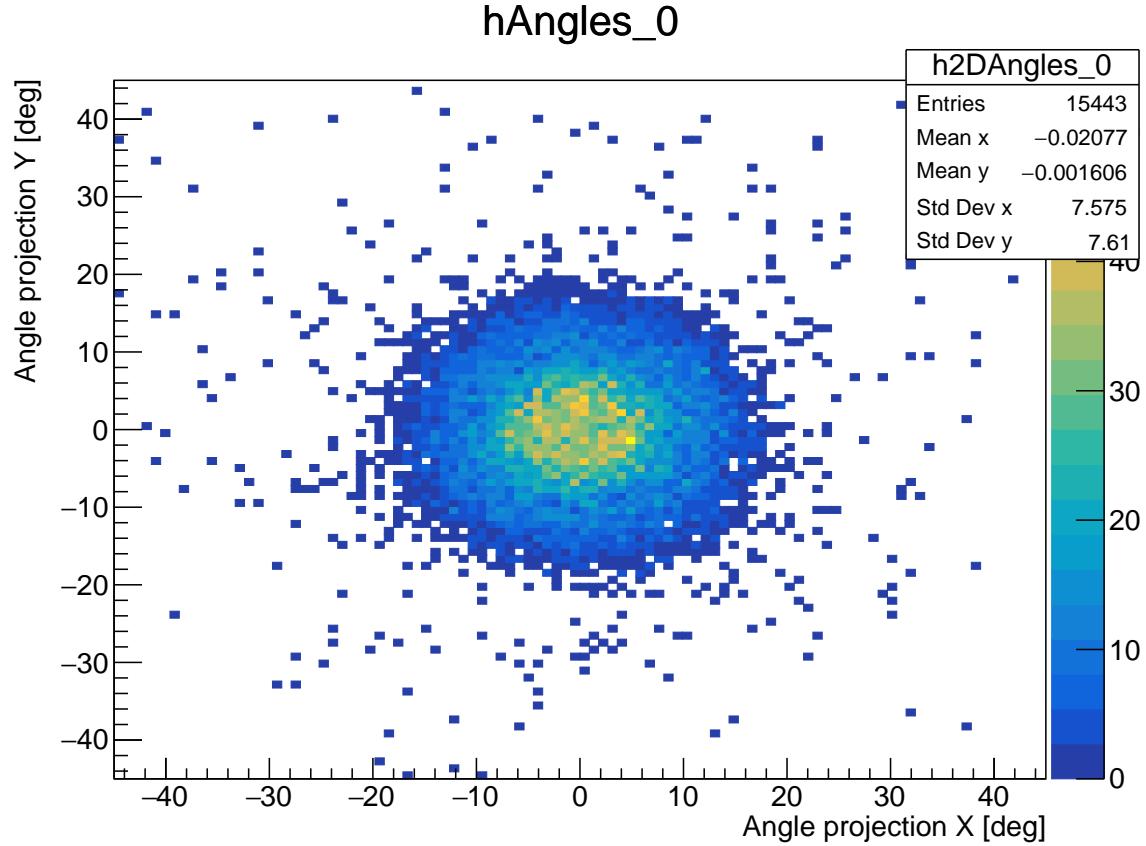


Figure: Angles distribution

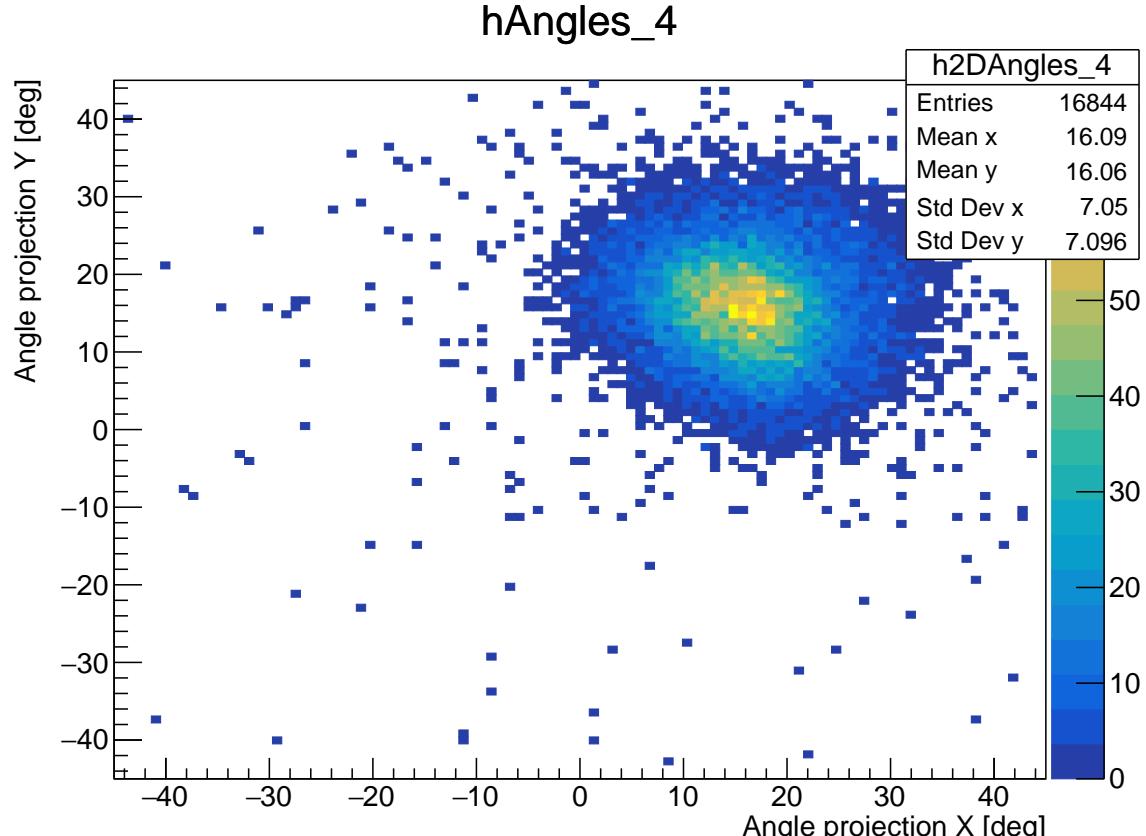


Figure: Angles distribution

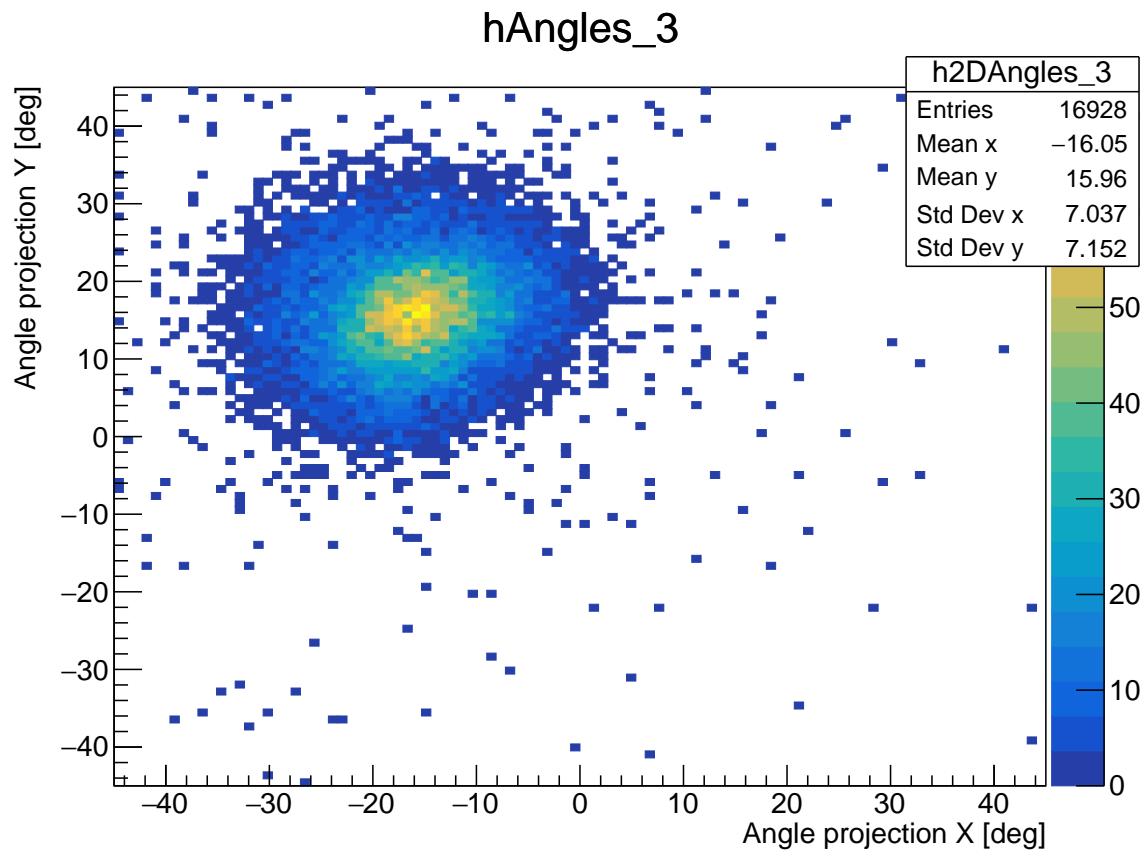


Figure: Angles distribution

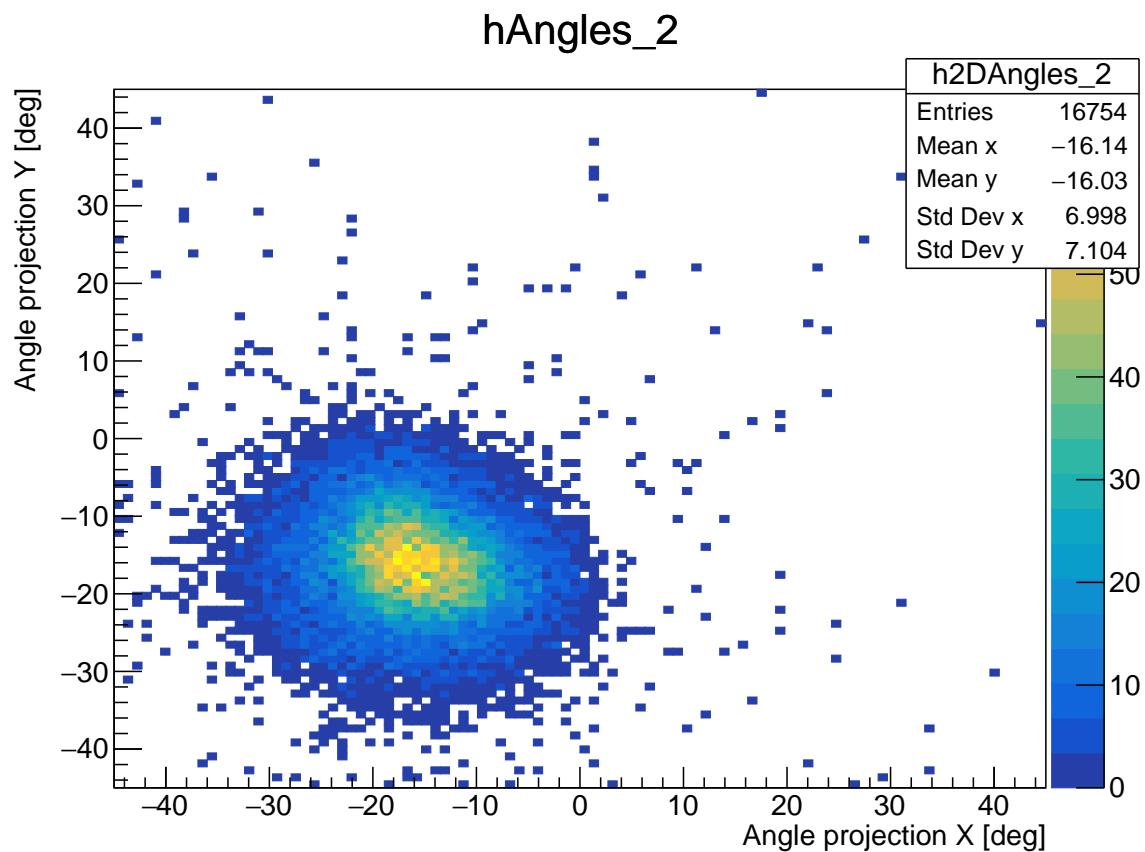


Figure: Angles distribution

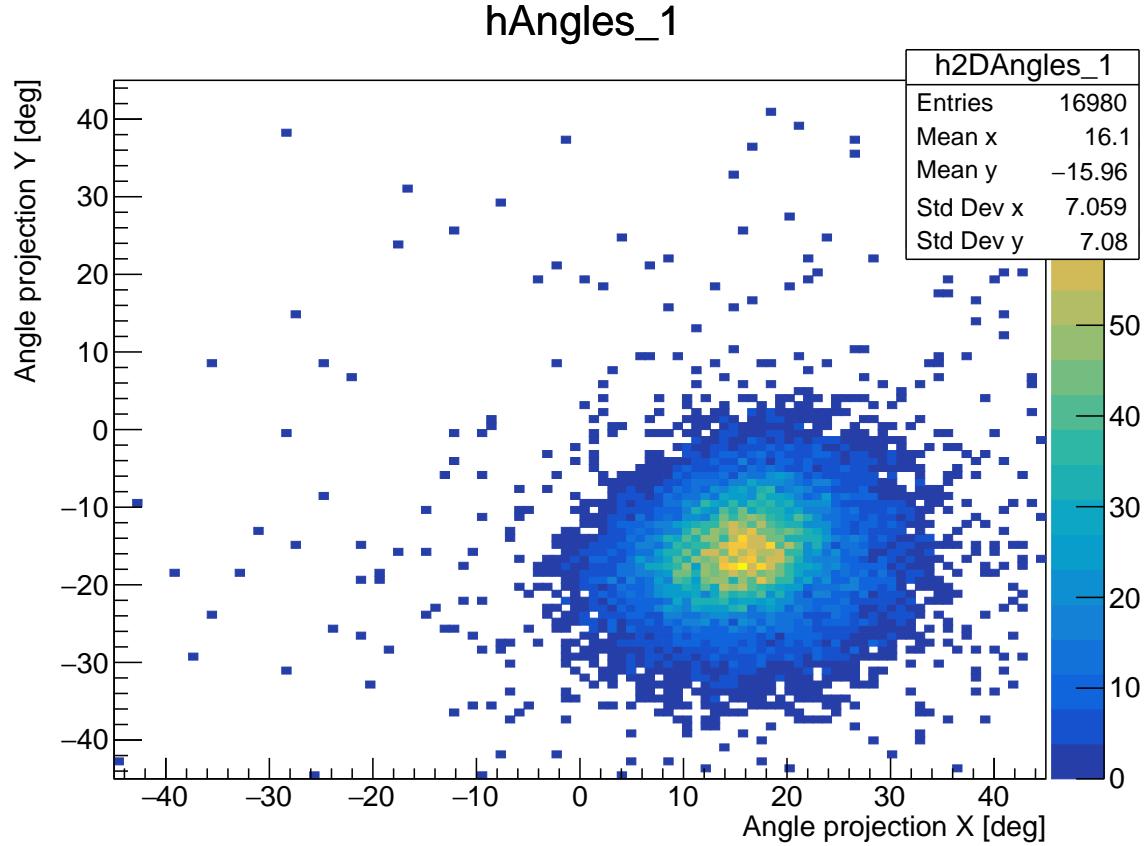


Figure: Angles distribution

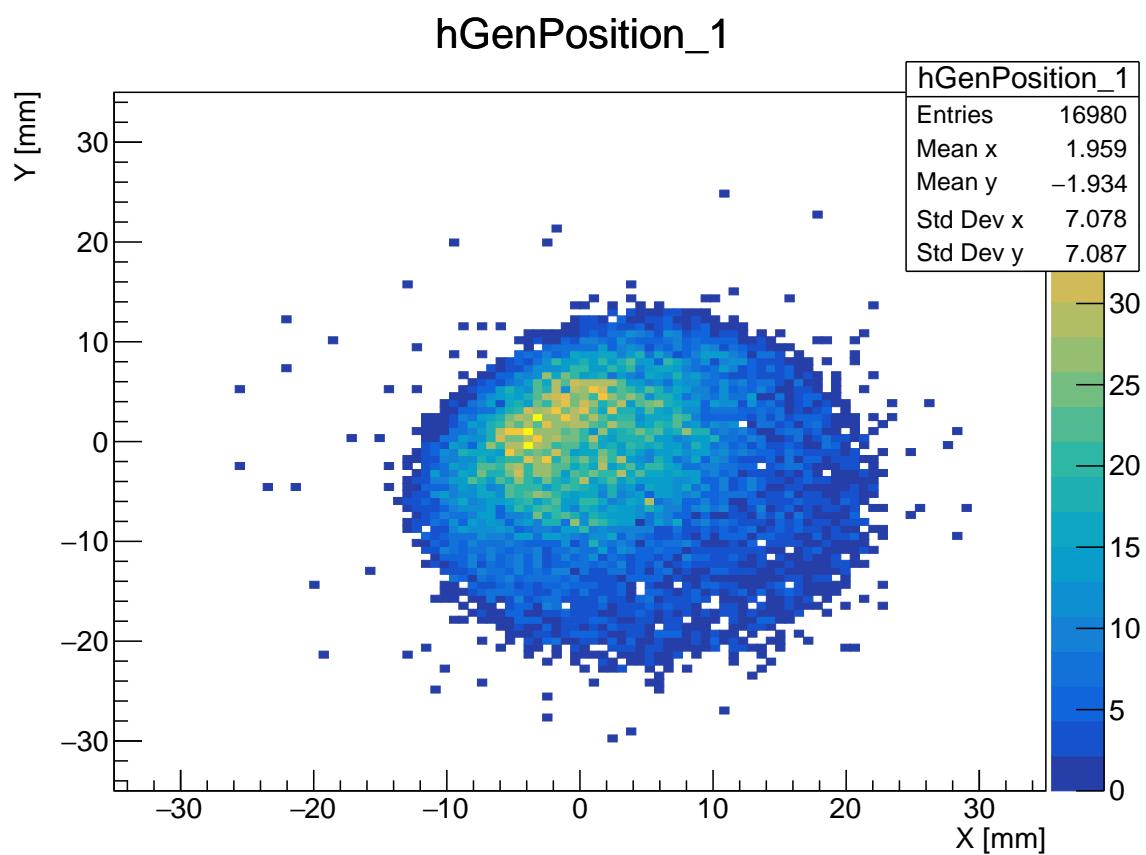


Figure: Generation Position

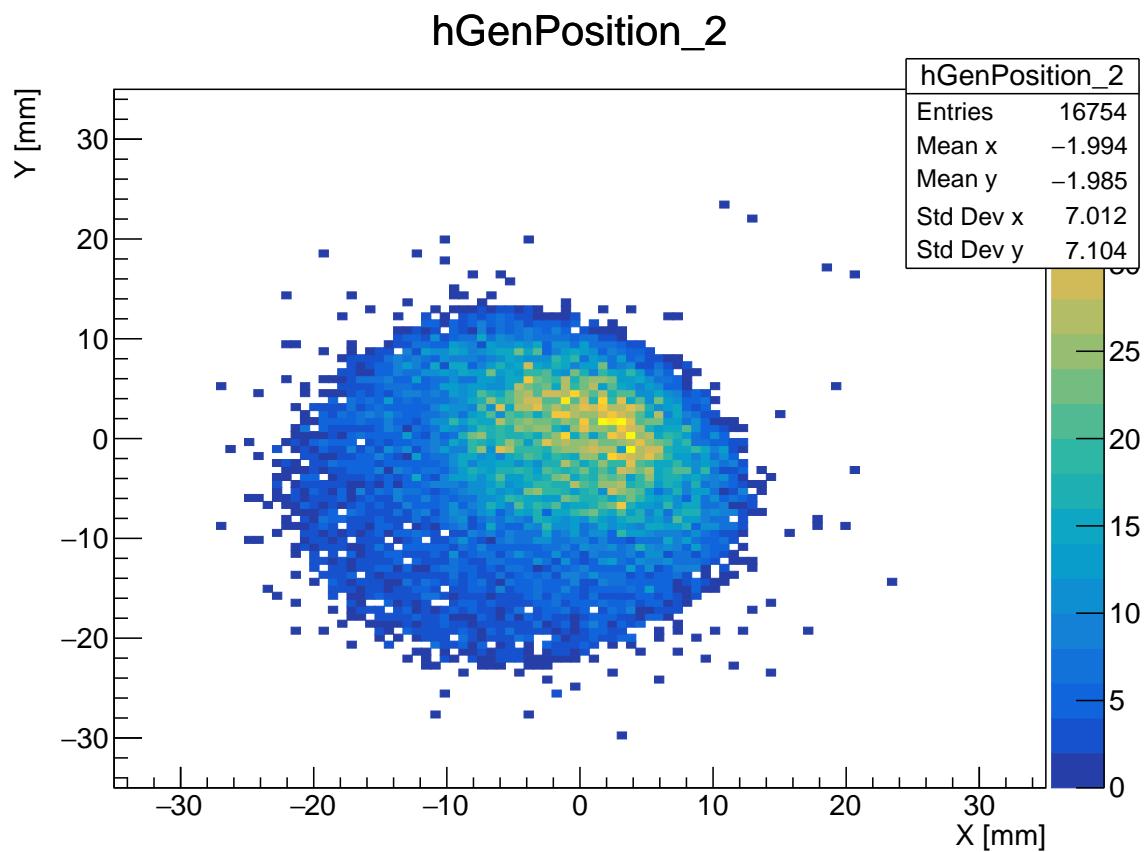


Figure: Generation Position

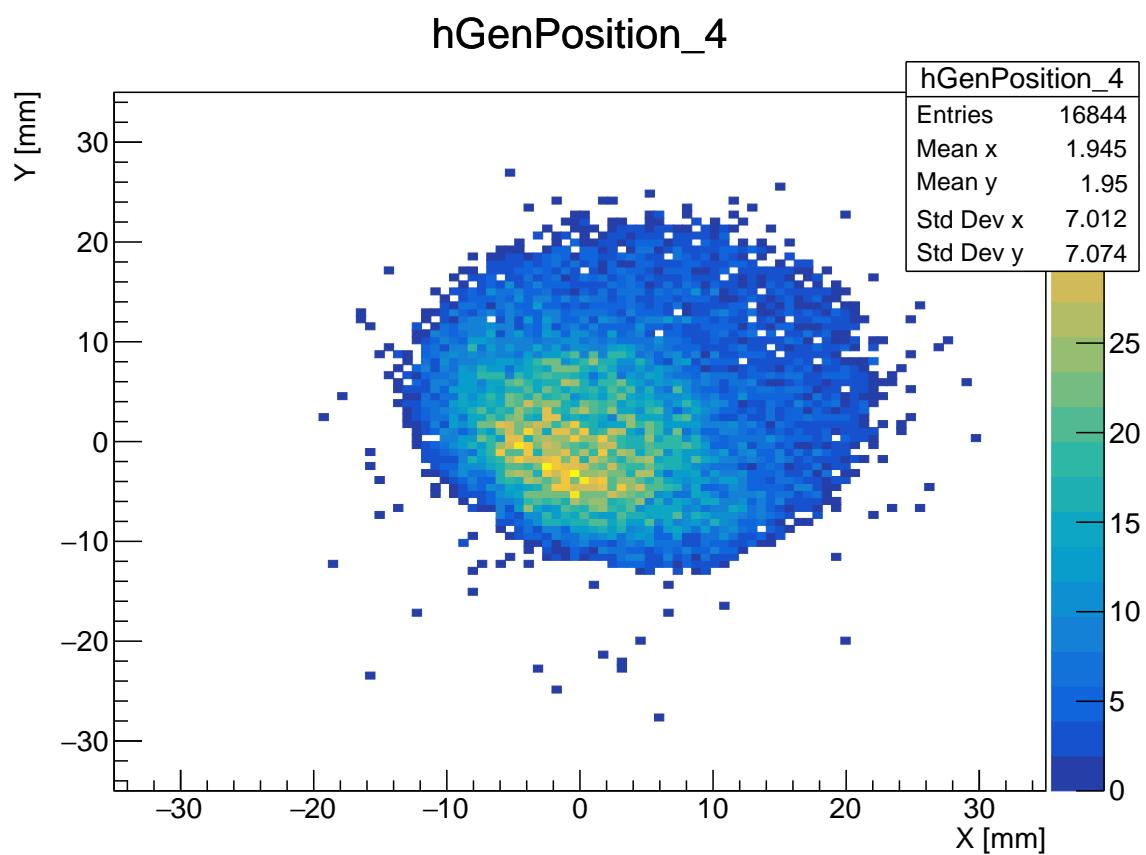


Figure: Generation Position

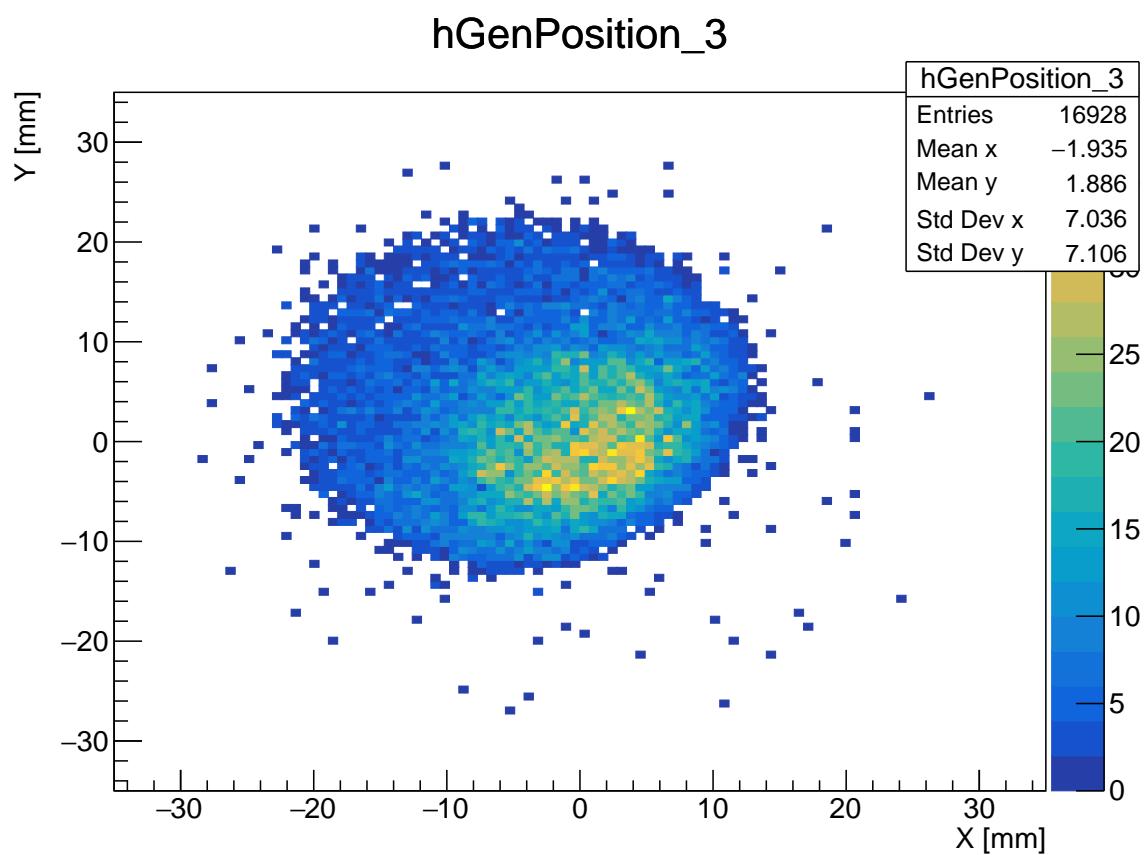


Figure: Generation Position

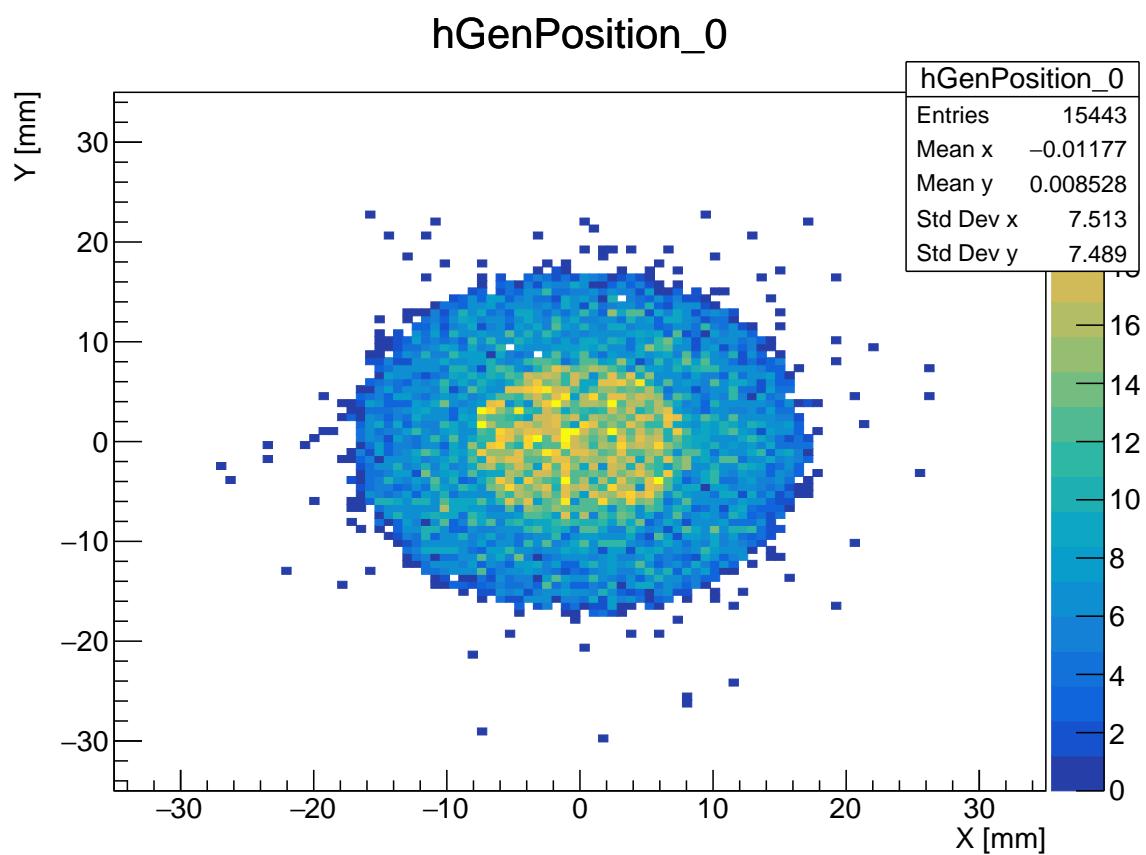


Figure: Generation Position

MC quantities for alpha_t0

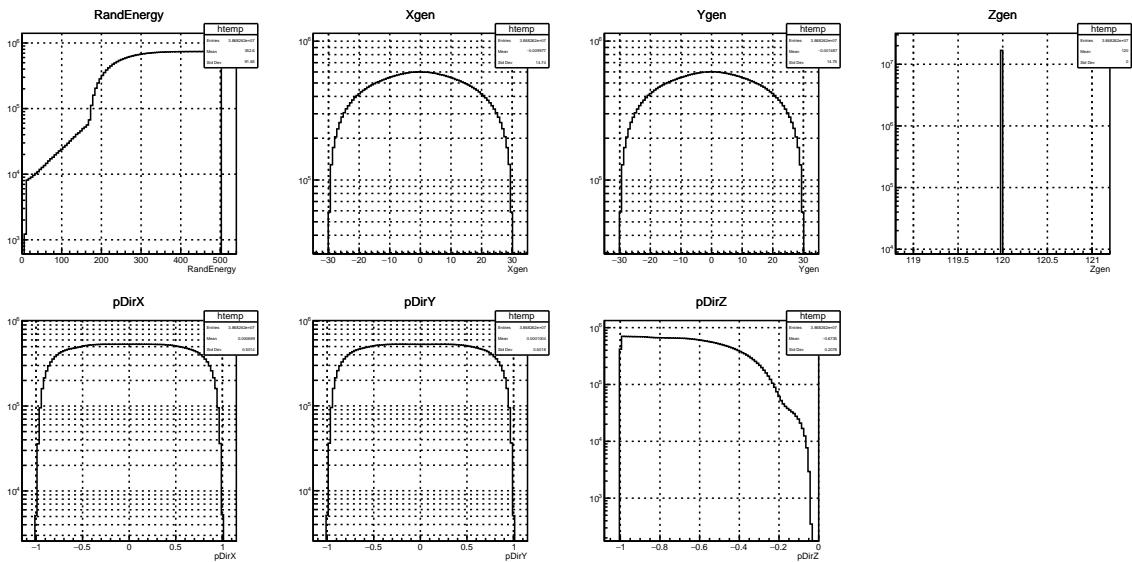


Figure: MC quantities

Energies distribution for alpha

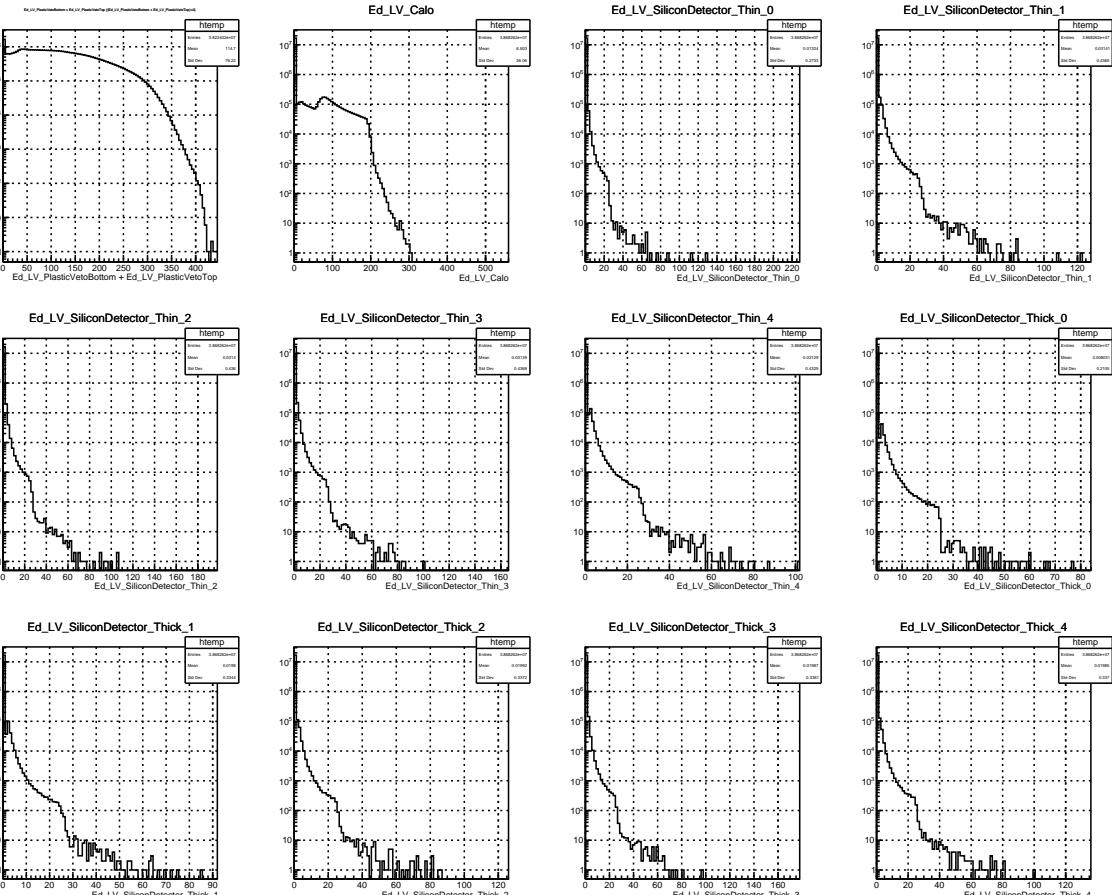


Figure: Detected energies

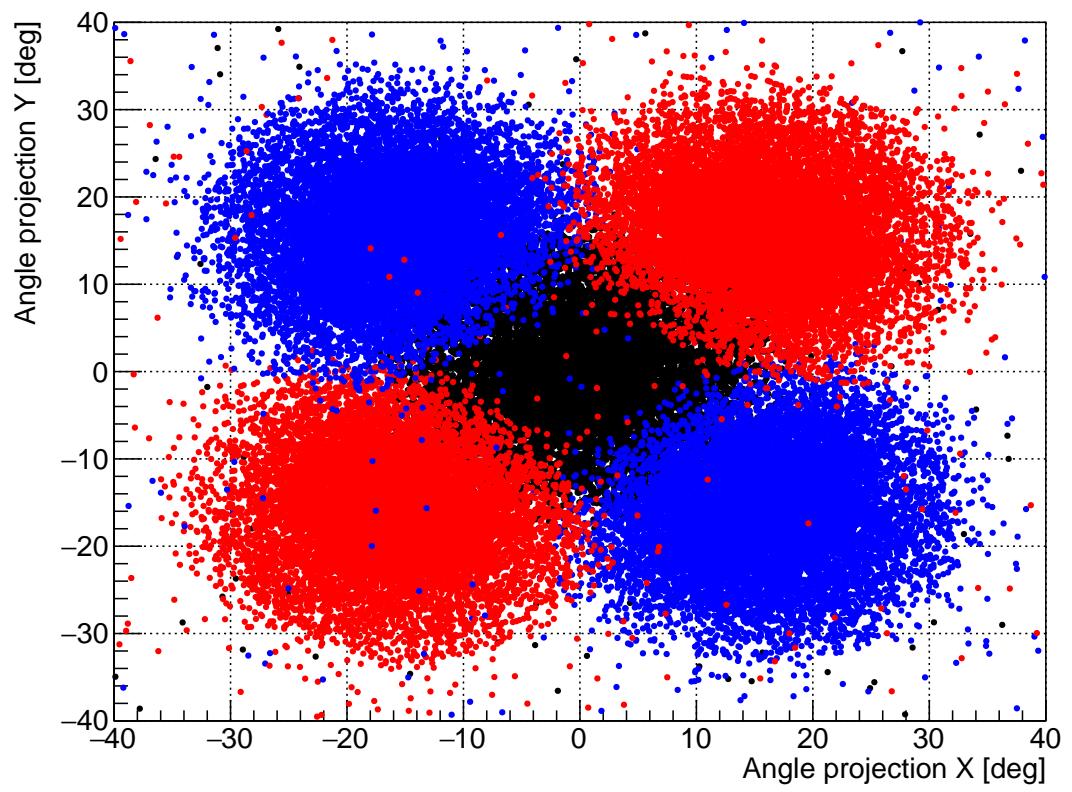
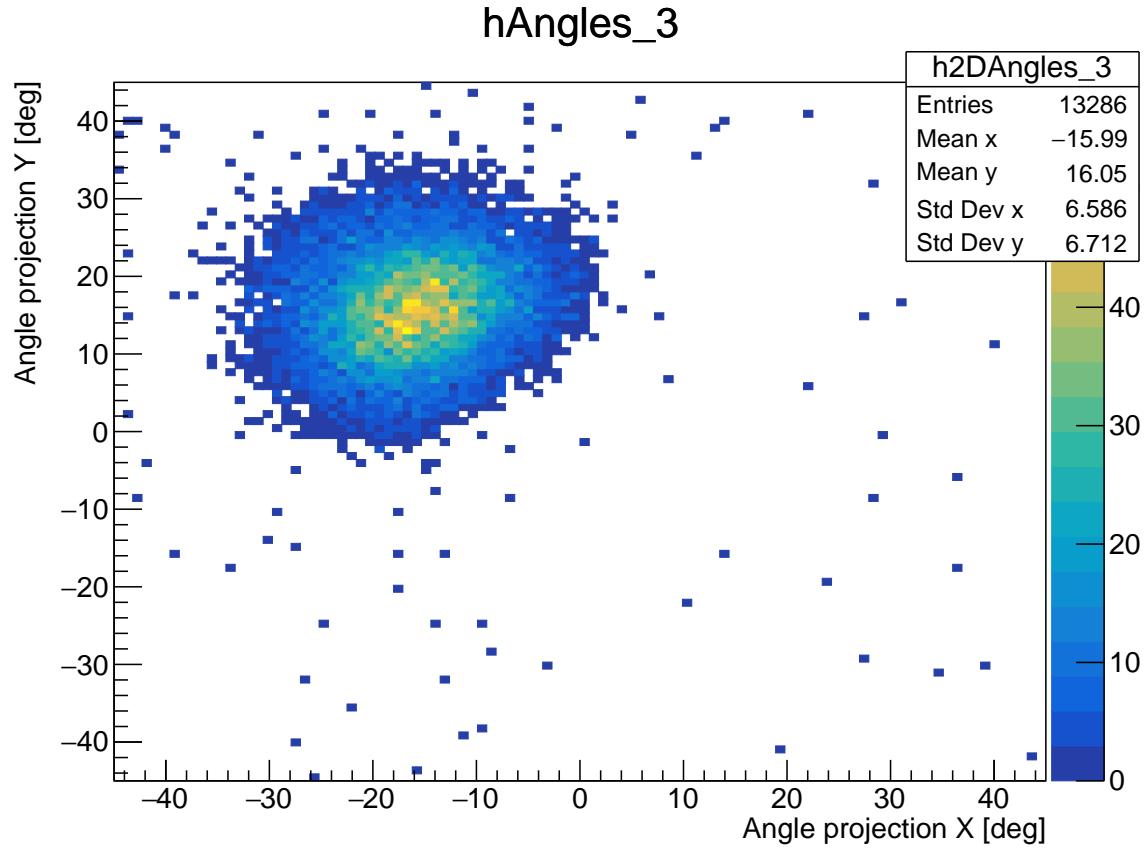


Figure: Angles distribution



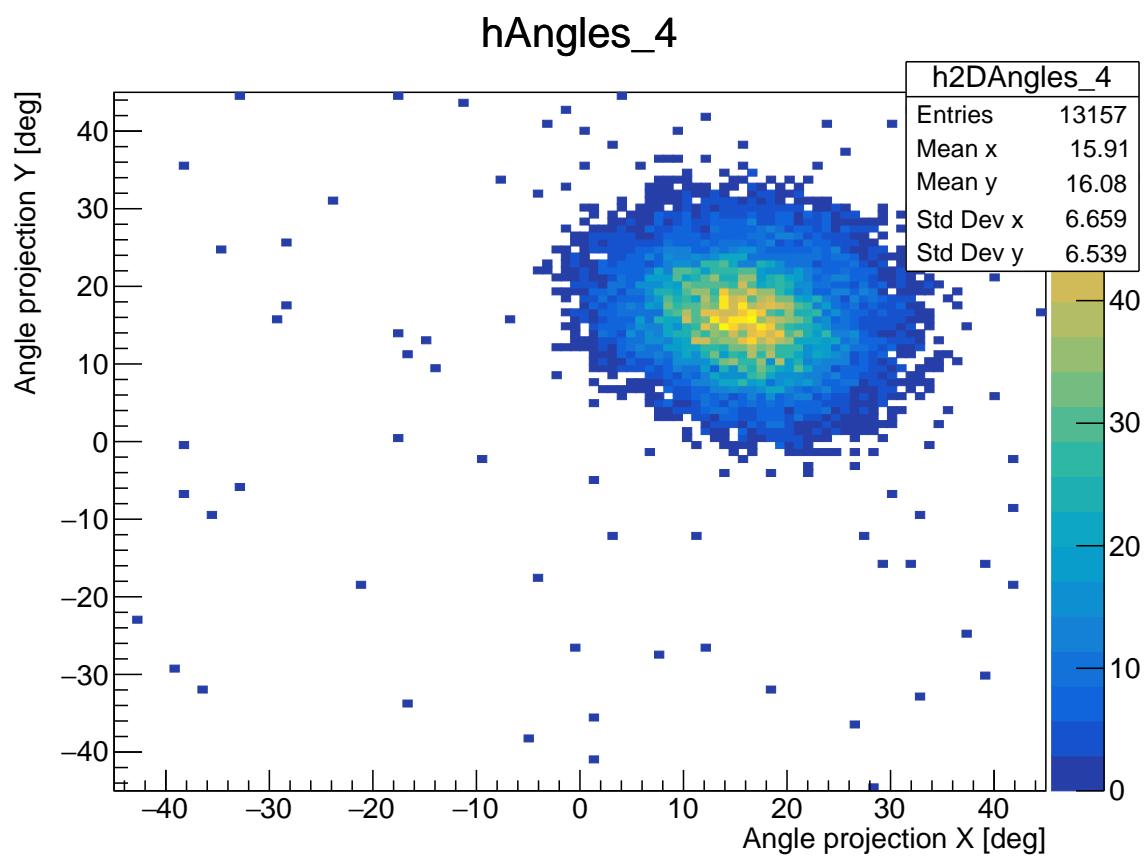
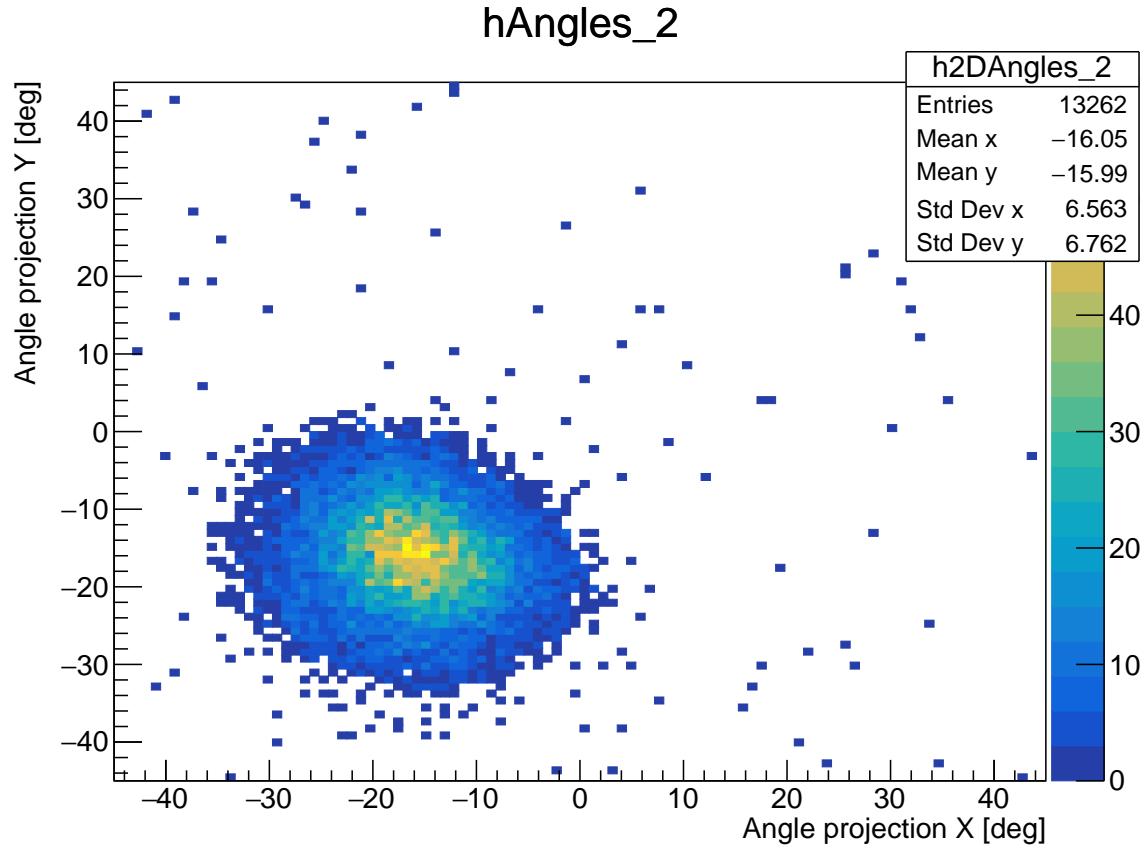


Figure: Angles distribution



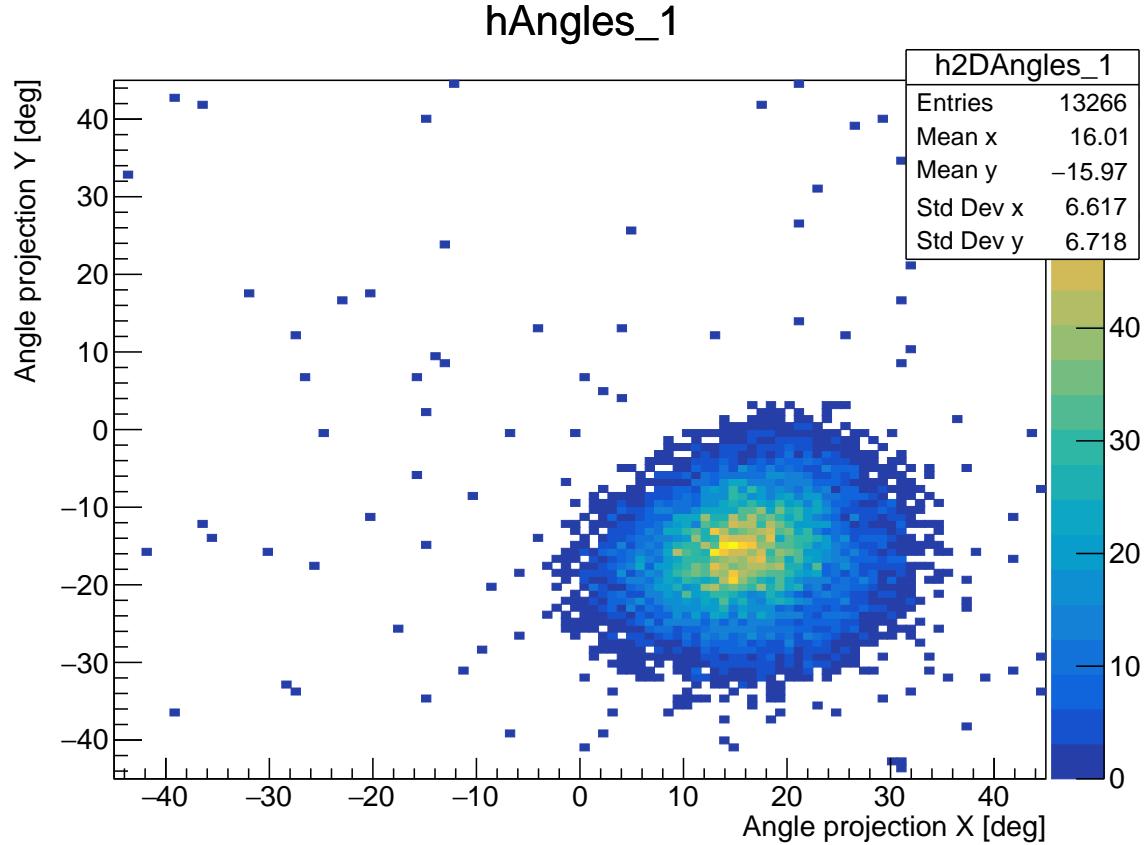


Figure: Angles distribution

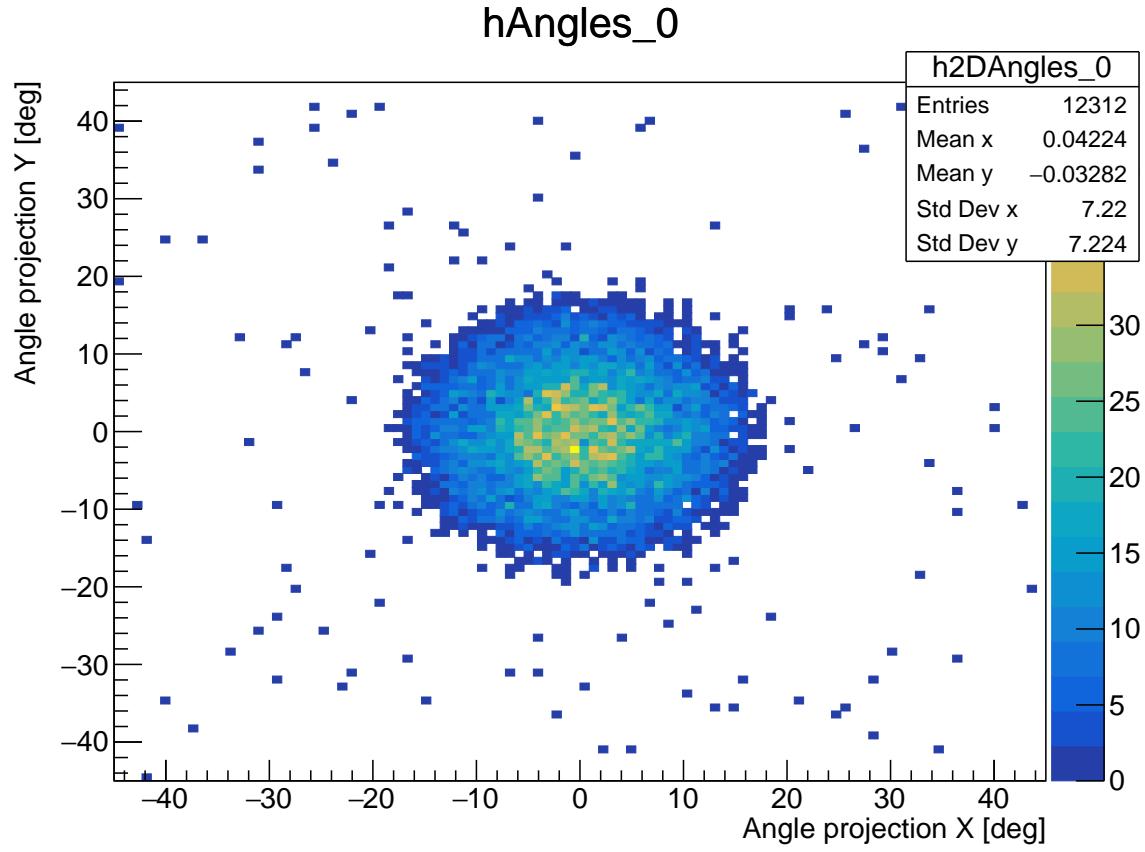


Figure: Angles distribution

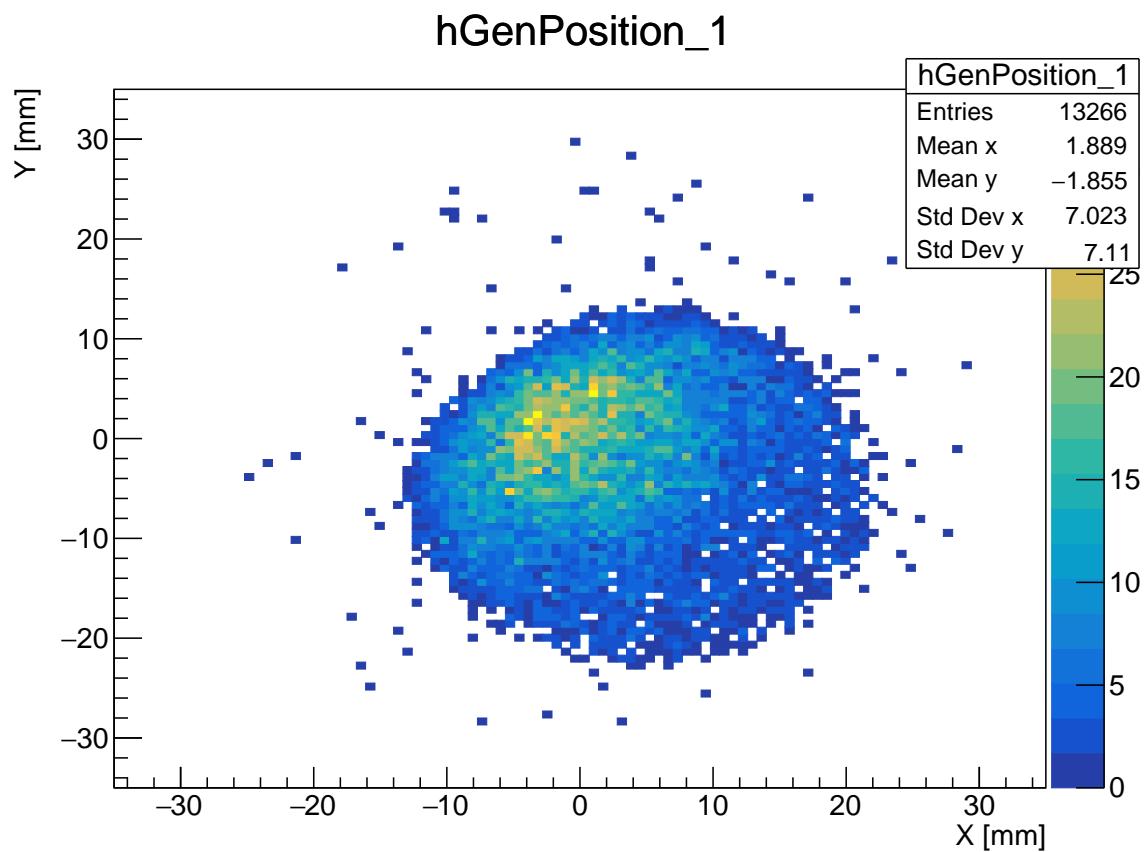


Figure: Generation Position

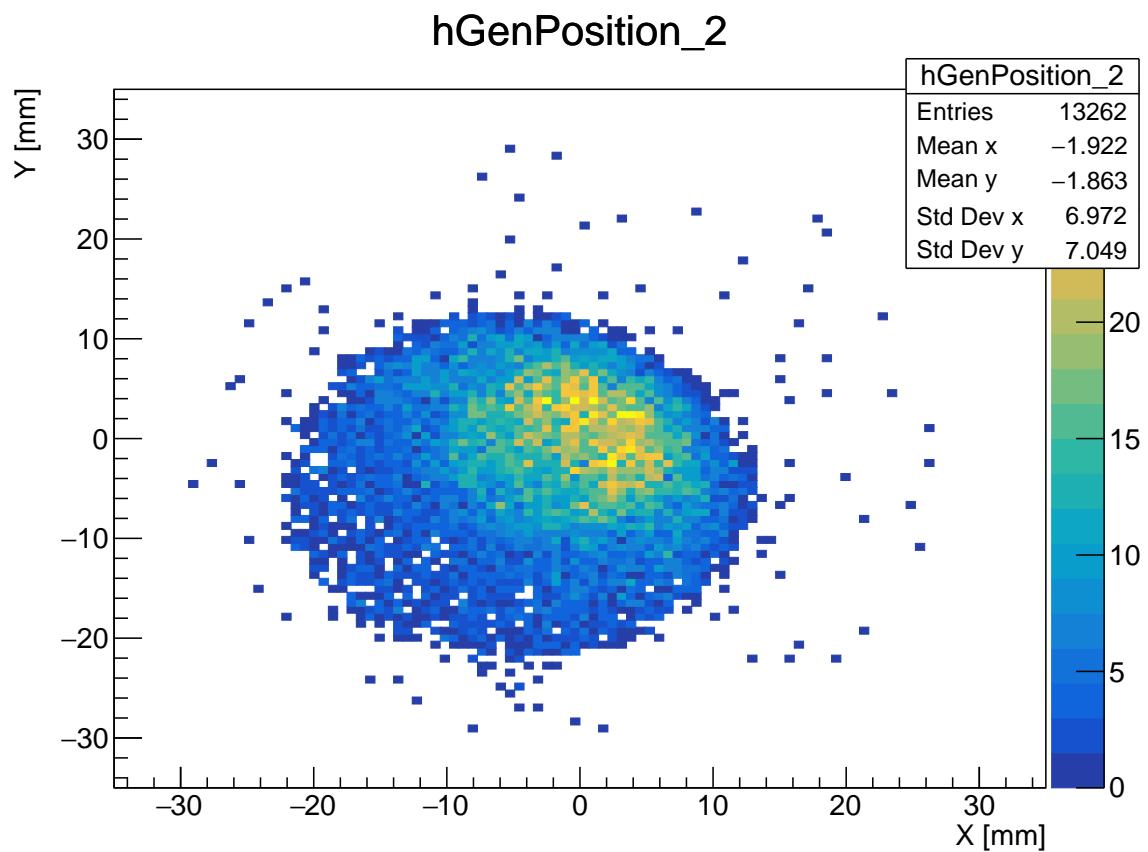


Figure: Generation Position

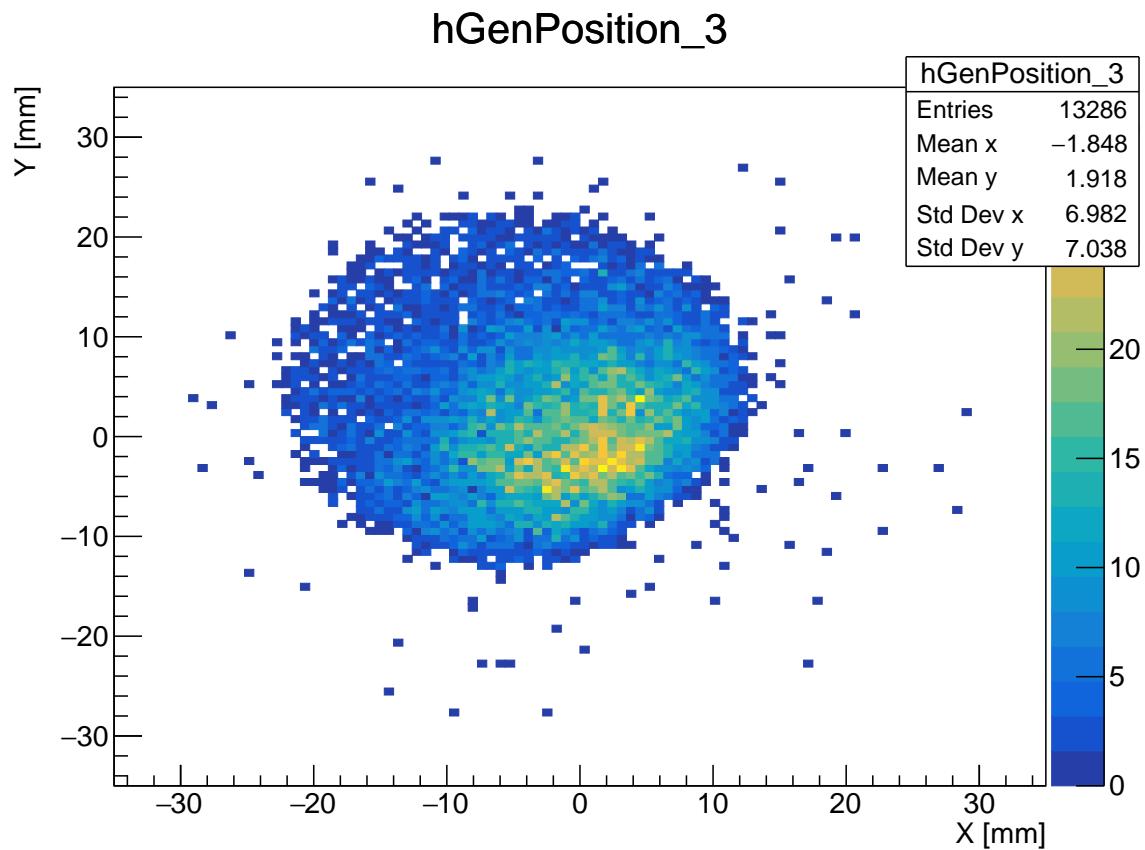


Figure: Generation Position

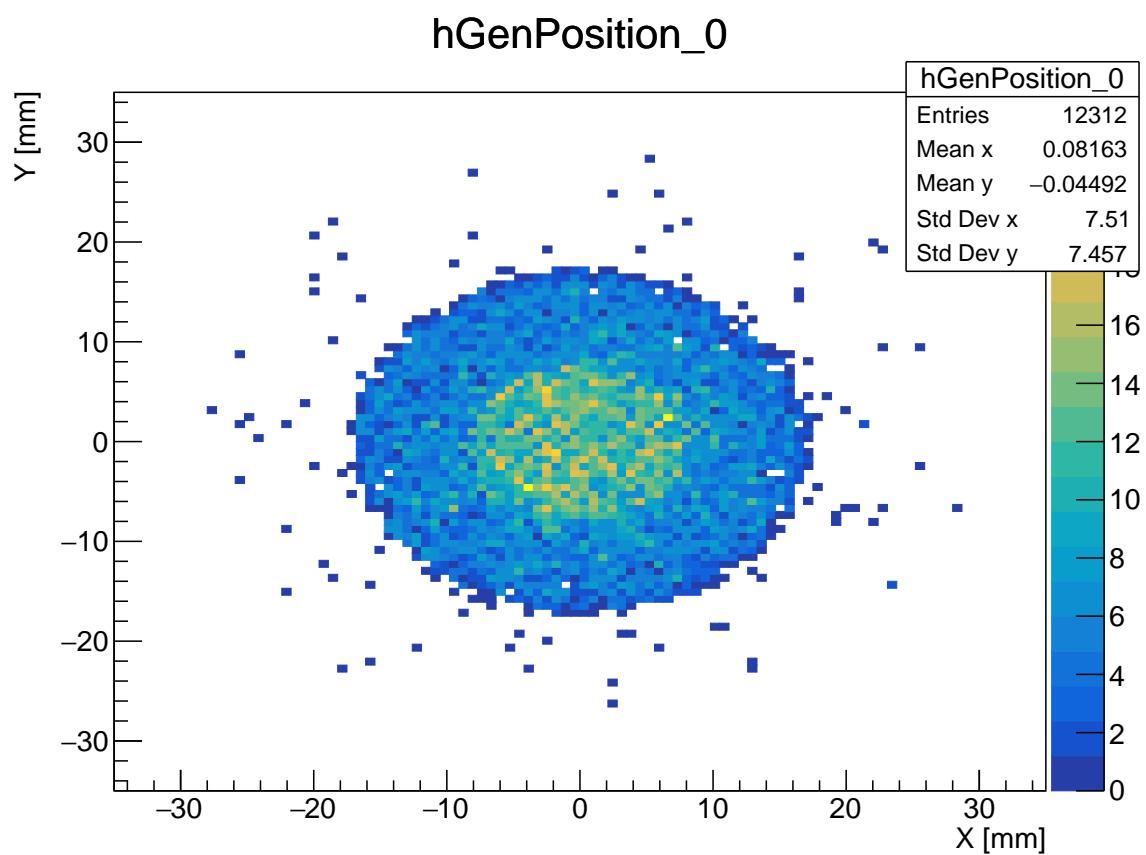


Figure: Generation Position

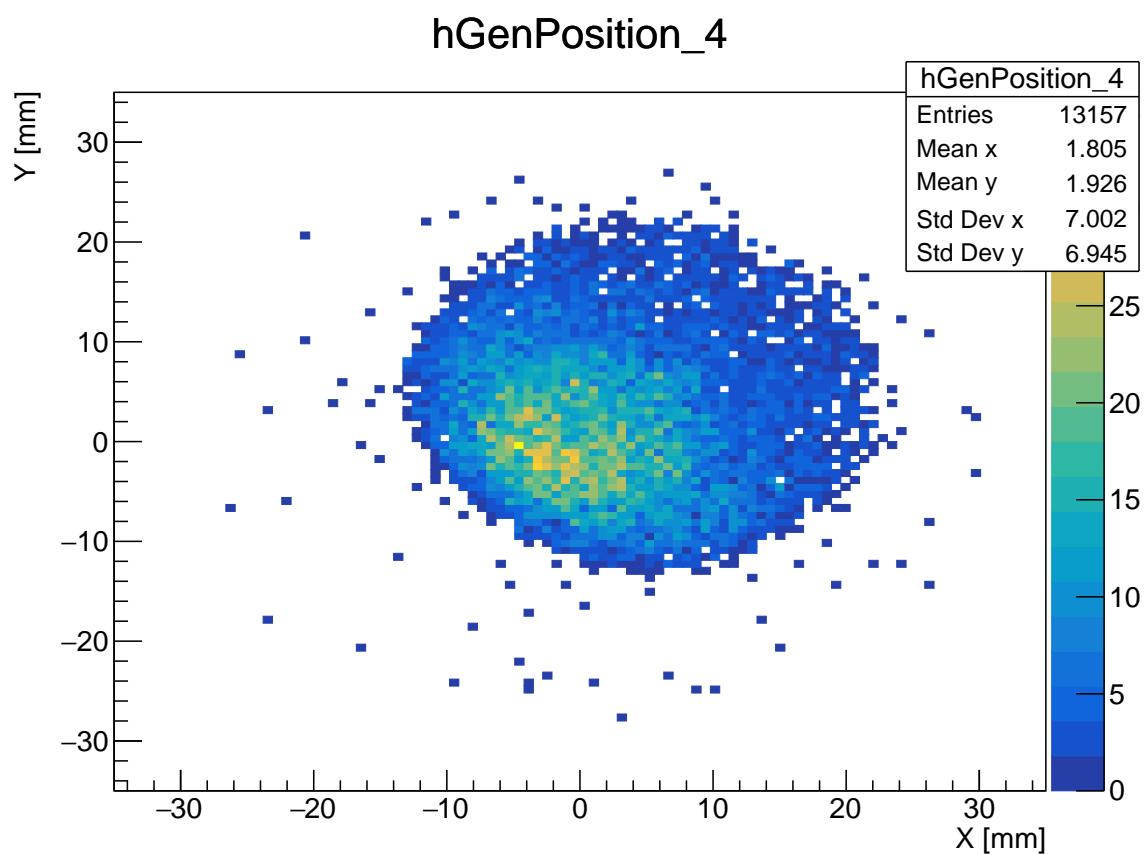


Figure: Generation Position

