

PLUME Detector:

Geant4 Exploration 2

Duque Bran, Moreno Sarria

August 10, 2021

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Secondary Electrons

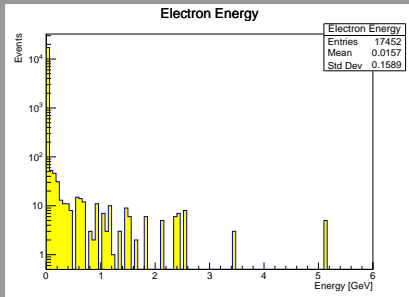


Figure 1: Energy Distribution for Secondary Electrons.

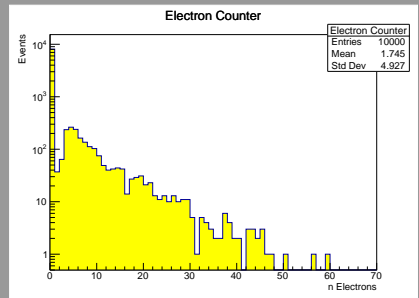


Figure 2: Secondary Electrons Generation.

Photon Counter

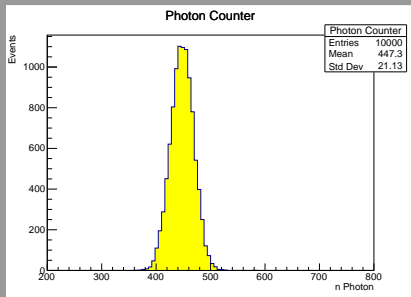


Figure 3: Primary Photons Counter.

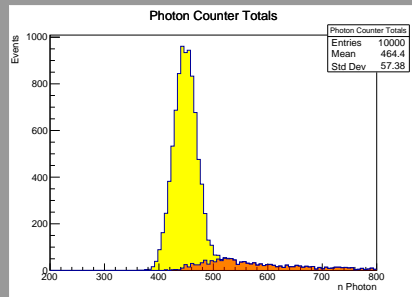


Figure 4: Total Photons Counter.

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Primary Beam Entrance Position

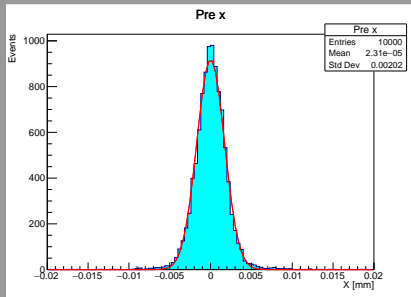


Figure 5: Beam X Position Distribution before entering into Second Module.

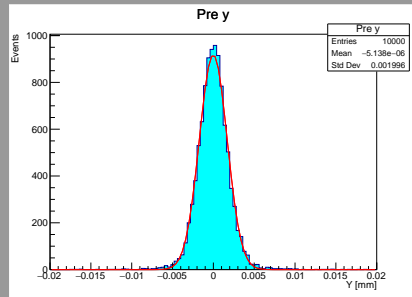


Figure 6: Beam Y Position Distribution before entering into Second Module.

Primary Beam Position

Mean x : 6.657×10^{-6} mm
Mean y : -8.99×10^{-6} mm
Std Deviation x : 2.471×10^{-3}
Std Deviation y : 2.301×10^{-3}

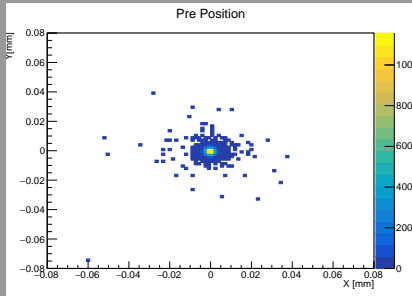


Figure 7: Beam Position Distribution before entering into Second Module.

Mean x : 4.85×10^{-4} mm
Mean y : -1.99×10^{-3} mm
Std Deviation x : 1.805×10^{-1}
Std Deviation y : 1.575×10^{-1}

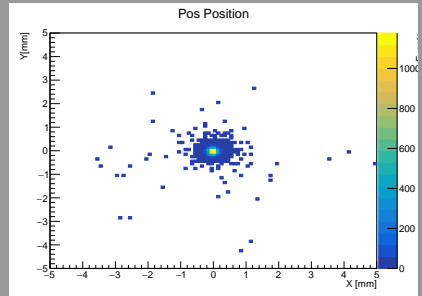


Figure 8: Beam Position Distribution after entering into Second Module.

Secondary Electrons

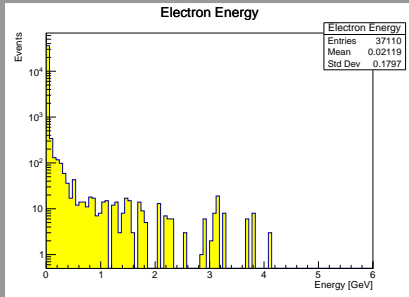


Figure 9: Energy Distribution for Secondary Electrons.

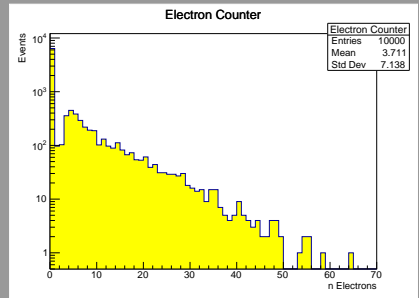


Figure 10: Secondary Electrons Generation.

Photon Counter Comparison

Mean x : 447.3
Mean y : 447.5
Std Deviation x: 20.95
Std Deviation y: 21.41

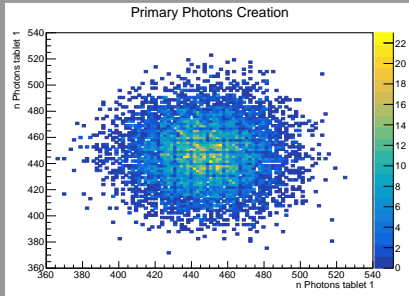


Figure 11: Primary Photon Counter Comparison between both Modules.

Mean x : 463.3
Mean y : 464.8
Std Deviation x: 55.63
Std Deviation y: 60.71

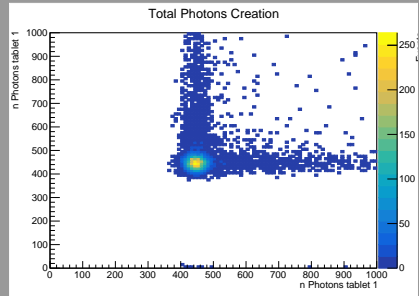


Figure 12: Total Photon Counter Comparison between both Modules.