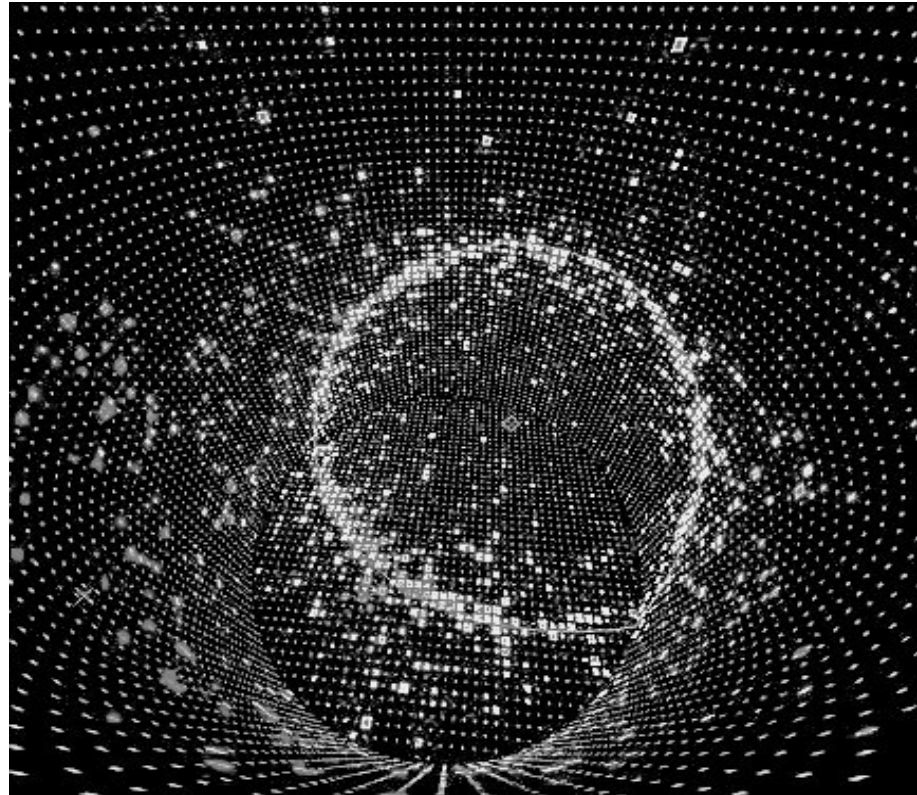
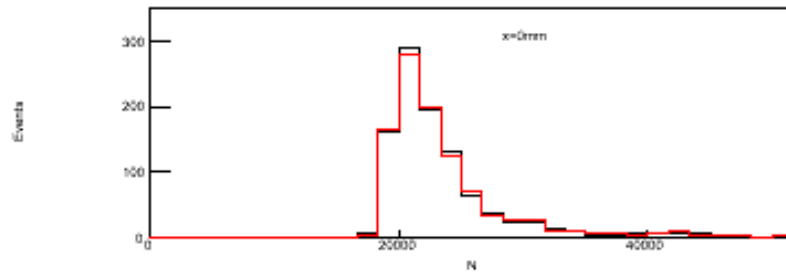


2 – Detectors Crystal Cube Geometry
5 – Detectors Crystal Cube Geometry

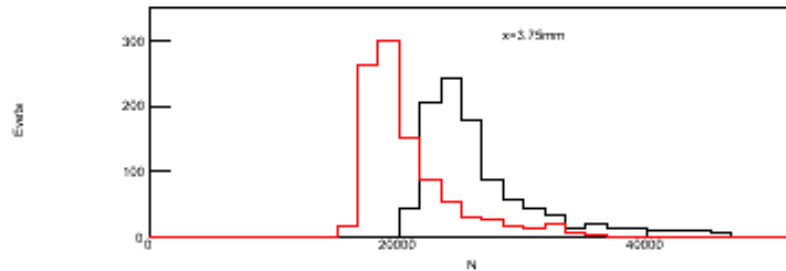
Future Goals



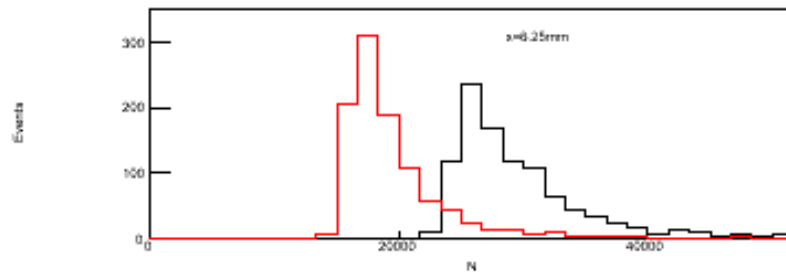
Total photons measured in each detector



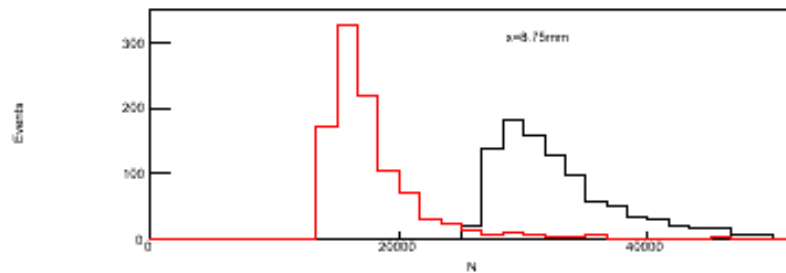
	Detector 0	Detector 1	Ratio
Cerenkov	Mean:166 RMS: 43.8	Mean:166.3 RMS:41.3	1.002
Total	Mean: 2.37×10^4 RMS: 0.58×10^4	Mean: 2.37×10^4 RMS: 0.57×10^4	1



	Detector 0	Detector 1	Ratio
Cerenkov	Mean:185 RMS: 40.8	Mean:148.6 RMS:32.4	0.799
Total	Mean: 2.69×10^4 RMS: 0.62×10^4	Mean: 2.09×10^4 RMS: 0.49×10^4	0.778

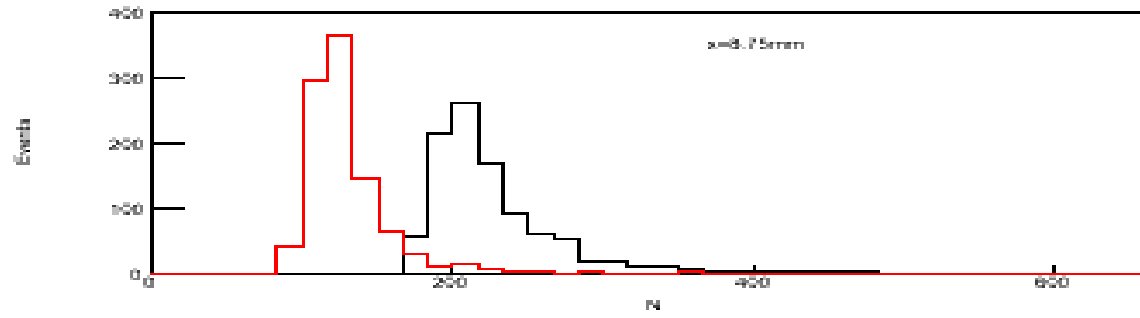
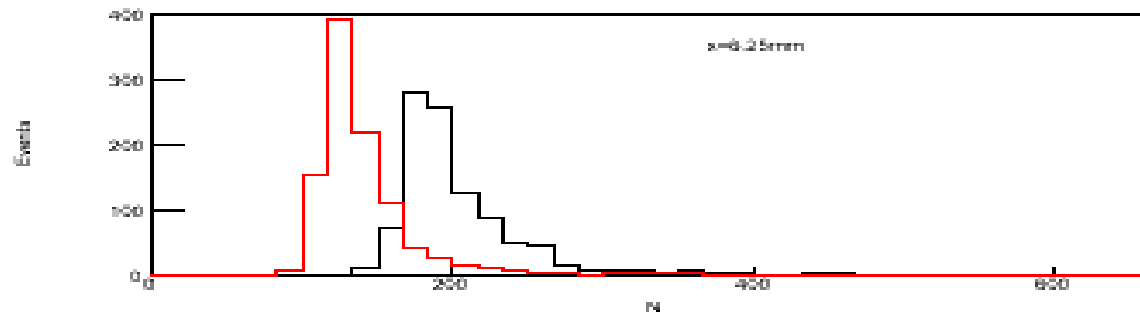
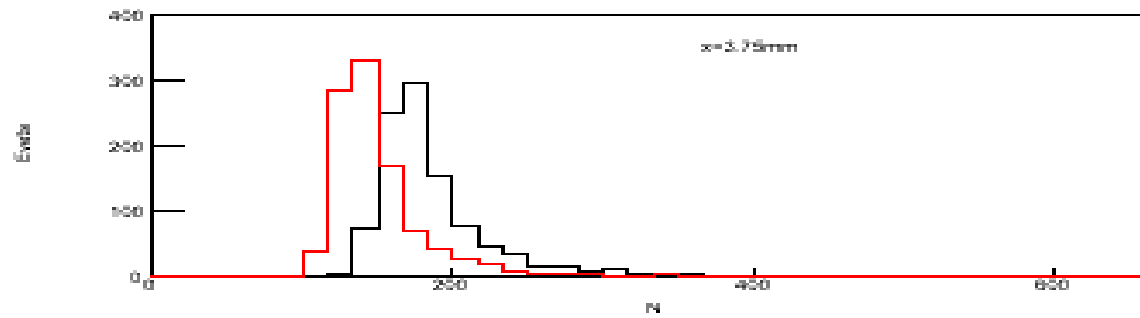
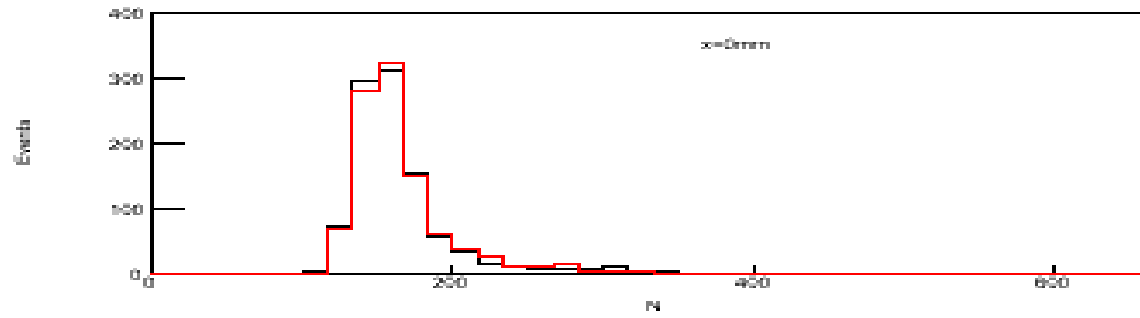


	Detector 0	Detector 1	Ratio
Cerenkov	Mean:204 RMS: 45.6	Mean:138.9 RMS:32.5	0.681
Total	Mean: 3.01×10^4 RMS: 0.71×10^4	Mean: 1.96×10^4 RMS: 0.48×10^4	0.651

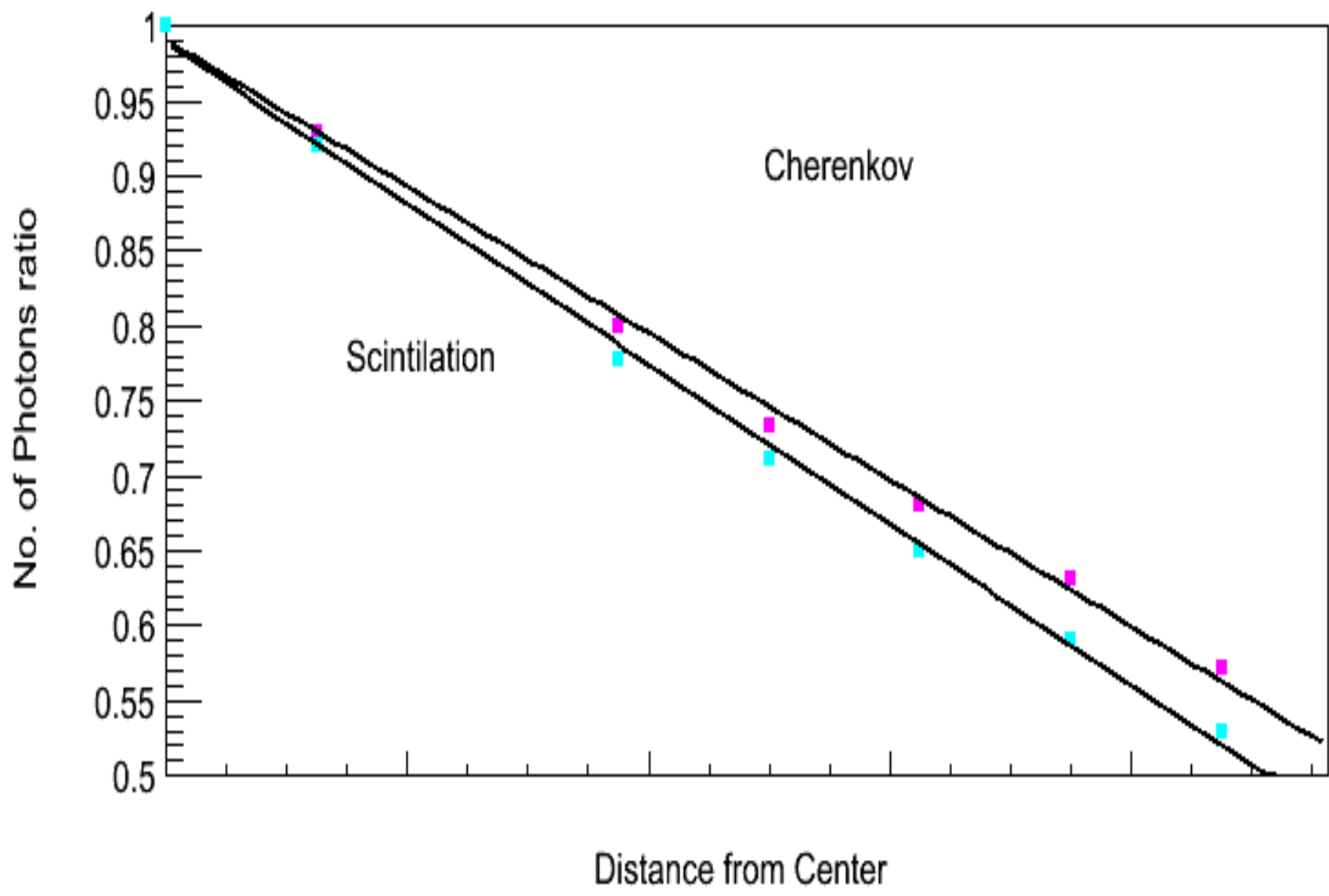


	Detector 0	Detector 1	Ratio
Cerenkov	Mean:227.2 RMS: 47.8	Mean:129.8 RMS:30.1	0.571
Total	Mean: 3.39×10^4 RMS: 0.76×10^4	Mean: 1.79×10^4 RMS: 0.46×10^4	0.465

Cherenkov photons measured in each detector



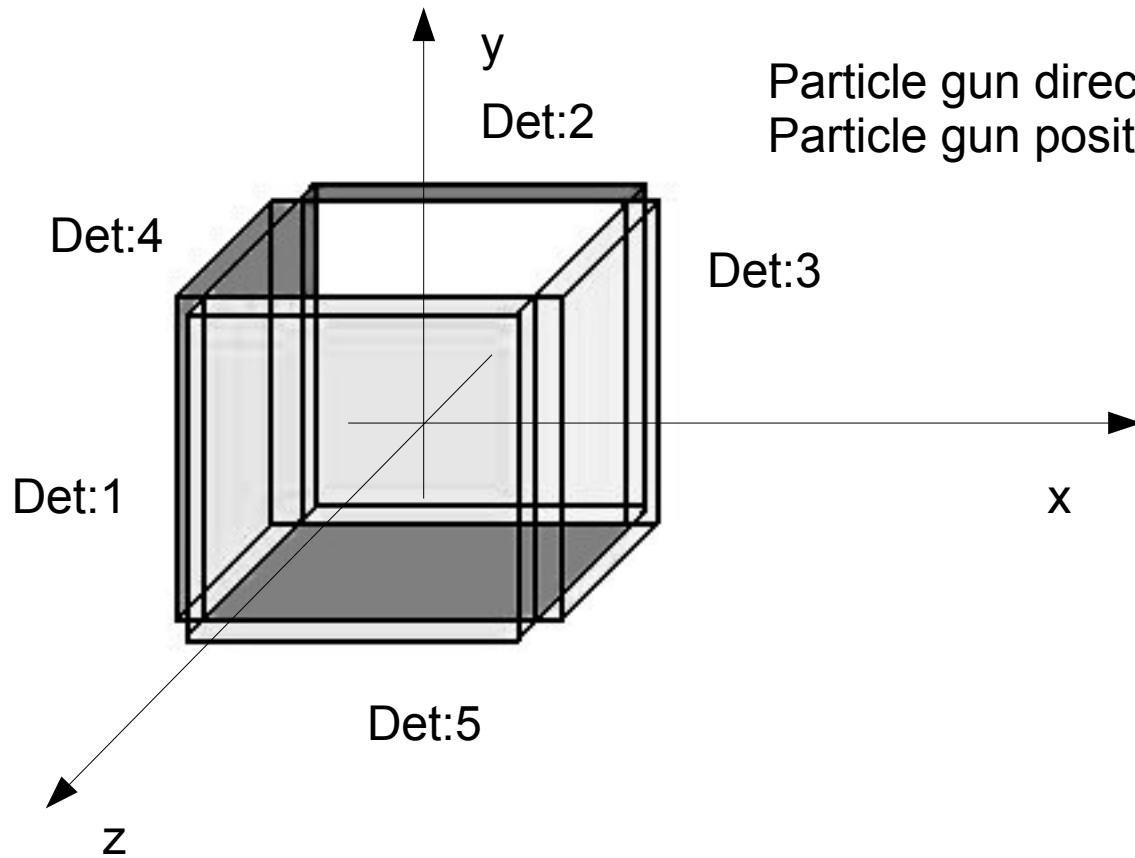
Ratio of cherenkov/scintillation photons measured to detector 1 to detector 2



Yiannis Makris
Savvas Kyriacou

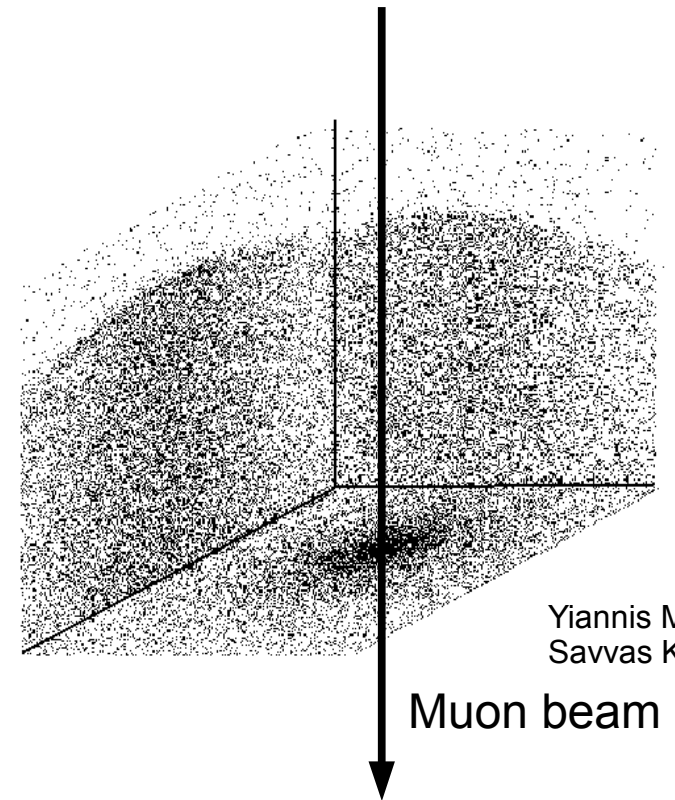
New Simulation Set up Geometry

Single muon(-) beam
Muon energy : 10GeV
Crystal: BGO
Detectors : 5



Particle gun direction: 0,-1,0

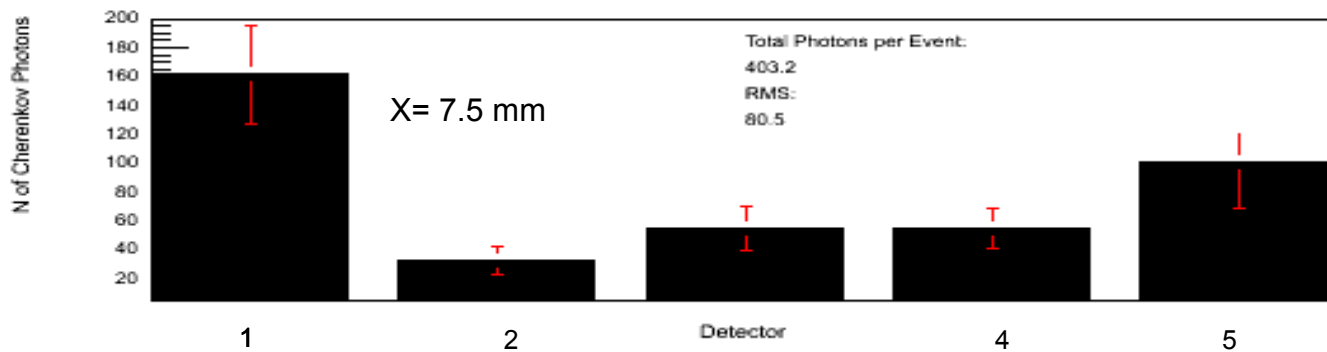
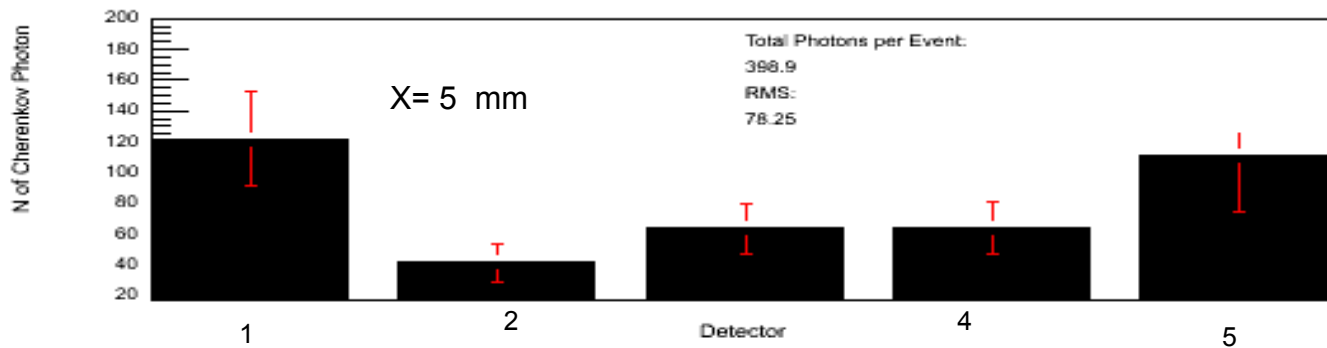
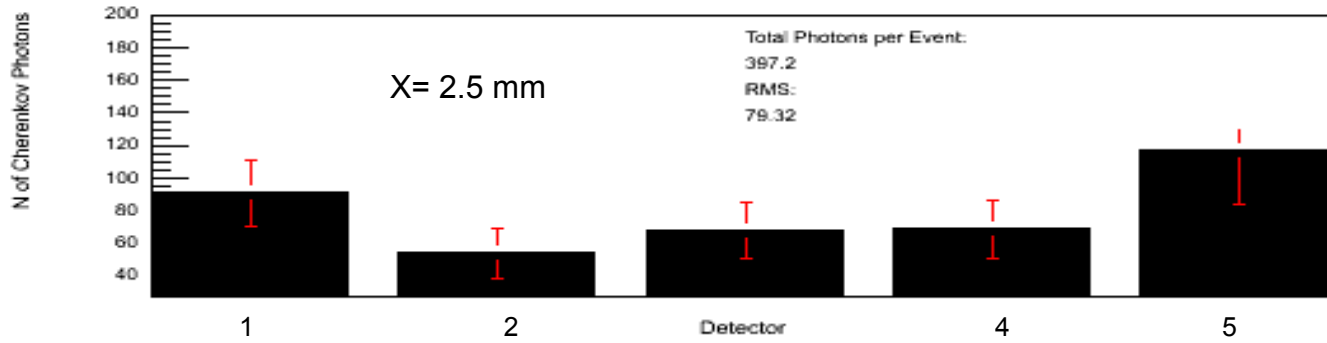
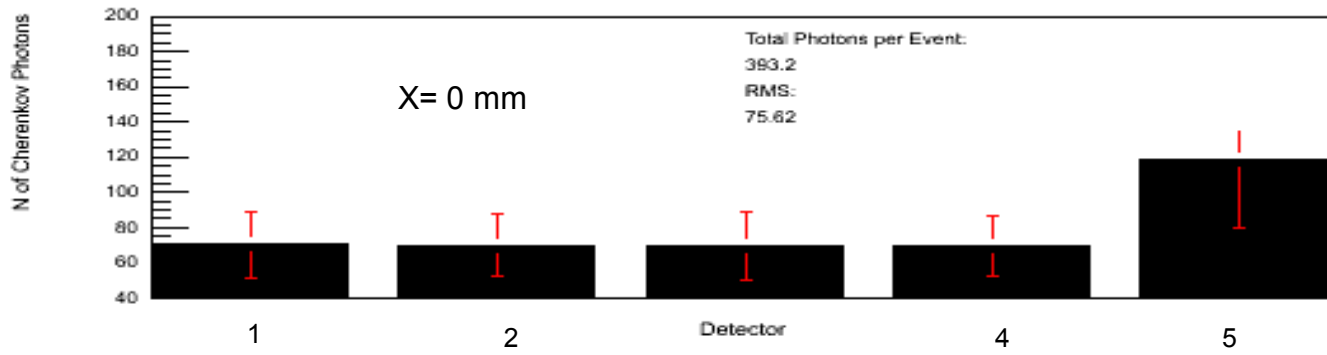
Particle gun positions(4): x=0,y=1,z=0,0.25,0.50,0.75



Yiannis Makris
Savvas Kyriacou

Muon beam ~

Amount of measured Cherenkov photons for each detector at the different positions



Currently working on - goals:

Achieving creating a sensitive crystal volume – instant measurement of the deposited energy in the crystal step by step and comparison to the measured photons.

A spatial simulation of the exact position of the silicon detectors .