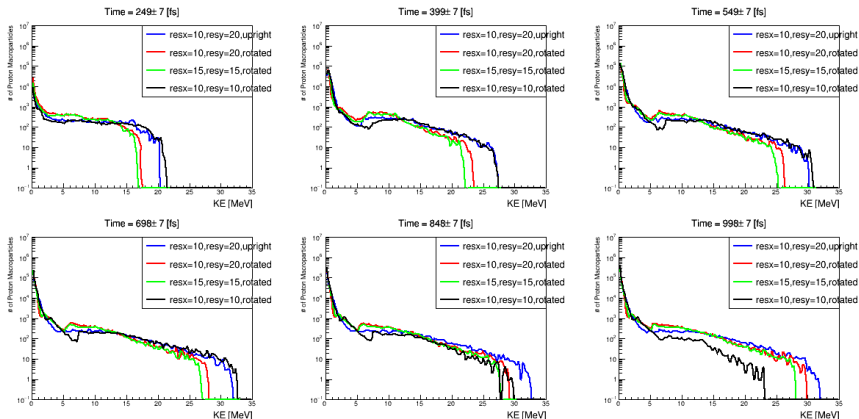


LhARA Meeting

Hin Tung Lau

July 23, 2020

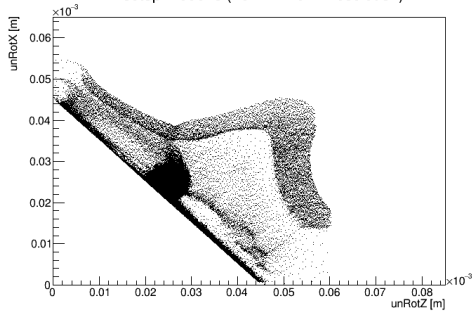
Convergence



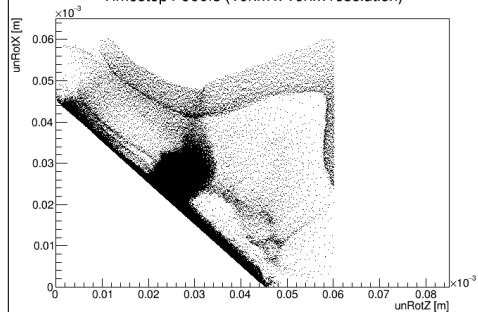
Oversight on border size caused odd behaviour for black curve for time > 700 fs (next slide)

Convergence

Timestep = 699 fs (10nm x 10nm resolution)



Timestep >900fs (10nm x 10nm resolution)



Preliminary Proton Distribution – Energy Cuts

Simulation: PPC=400, Cell Resolution=15nm x 15nm, Foil=2 Micron, final timestep (Time ≈ 1000 fs)

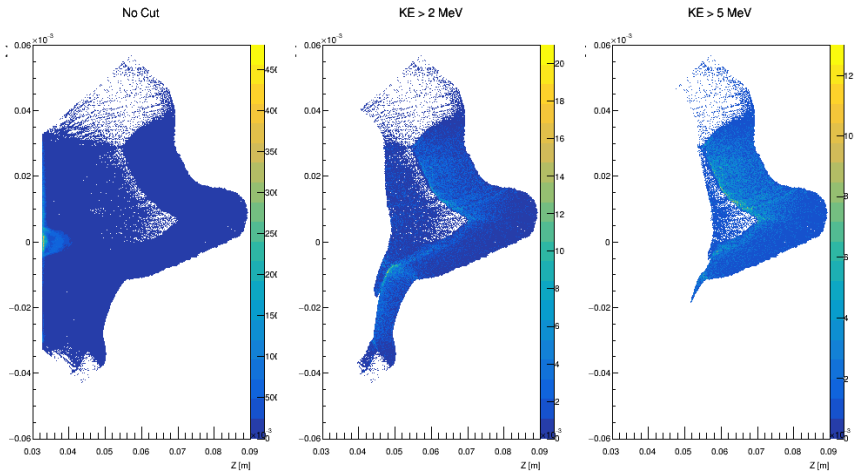
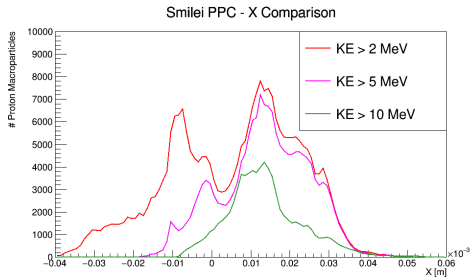
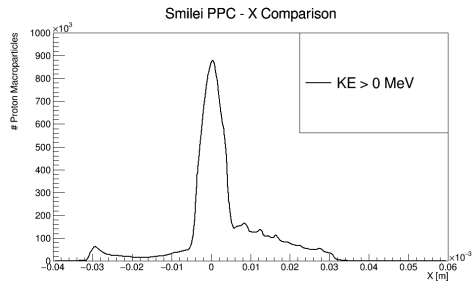


Figure: Plotting transverse plane vs longitudinal plane rotated by 45 degrees. Colours correspond to number of proton macroparticles within histogram cell.

Preliminary Proton Distribution – Energy Cuts

1D transverse plane spectrum.



Preliminary Proton Distribution – Energy Cuts

Plot of KE against the transverse plane.

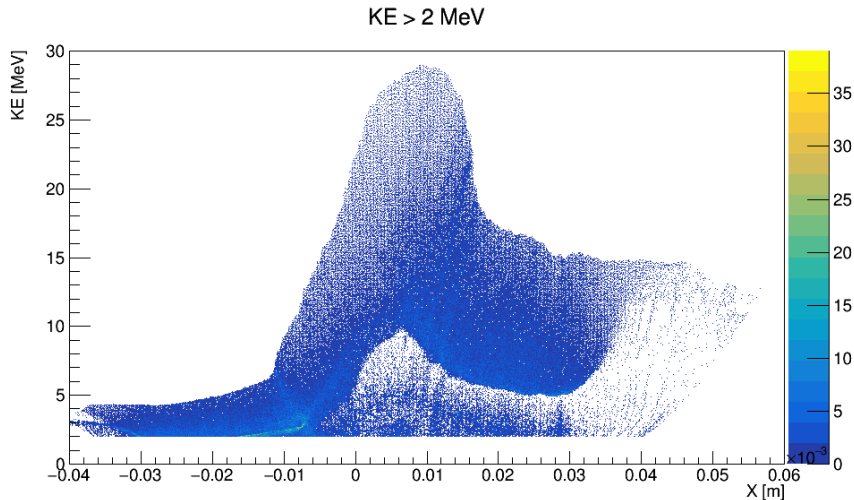
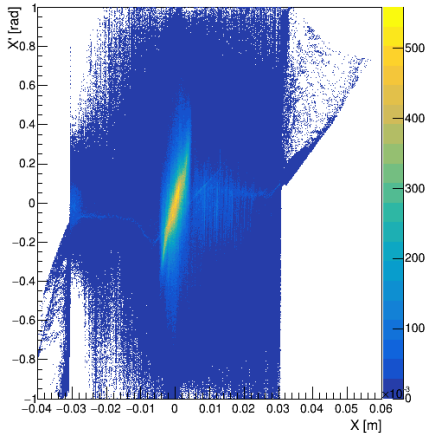


Figure: Plot of KE vs transverse plane with KE cuts. Colours correspond to number of proton macroparticles within histogram cell.

Preliminary Proton Distribution – Energy Cuts

Transverse phase space plot

KE > 0 MeV



KE > 2 MeV

