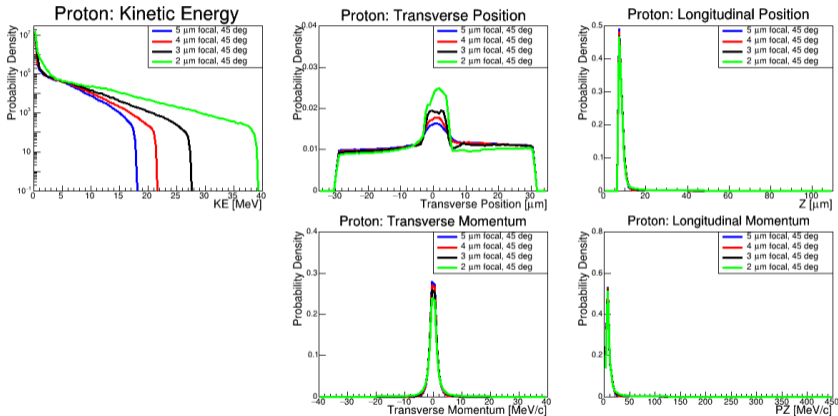


LhARA: Capture Meeting

Hin Tung Lau

18 March, 2021

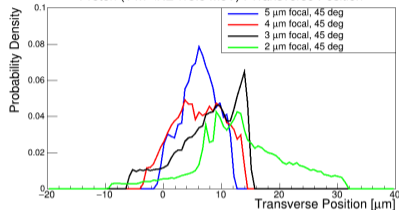
Varying Laser Focal Spot Size



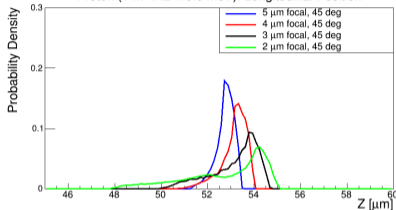
- Four simulations where the laser focal spot size is varied (2 to 5 microns).
- Except energy (as expected), the distributions are similar.

Varying Laser Focal Spot Size w/ KE Cuts

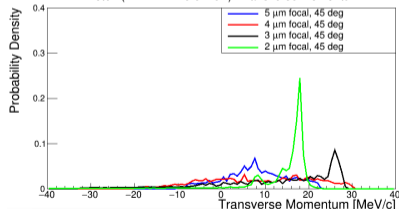
Proton (14.7<KE<15.3 MeV) : Transverse Position



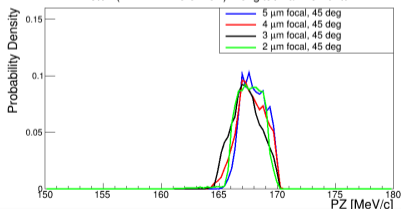
Proton (14.7<KE<15.3 MeV): Longitudinal Position



Proton (14.7<KE<15.3 MeV): Transverse Momentum



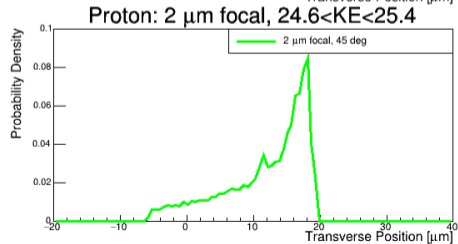
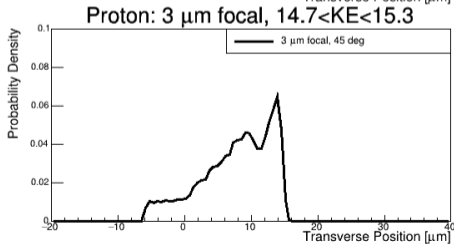
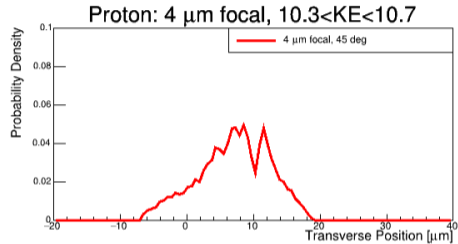
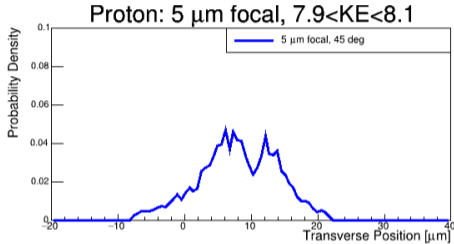
Proton (14.7<KE<15.3 MeV): Longitudinal Momentum



- Applied energy cuts
14.7 < KE < 15.3 MeV.
- Consists of:
 - 1500 entries
 - 3000 entries
 - 6000 entries
 - 17000 entries
- Cut distributions can vary quite a lot with different features visible.

Varying Laser Focal Spot Size w/ KE Cuts

- Sometimes possible to find features like double peaks in distributions based on energy cuts



Varying Laser Focal Spot Size w/ KE Cuts

