

LhARA Meeting

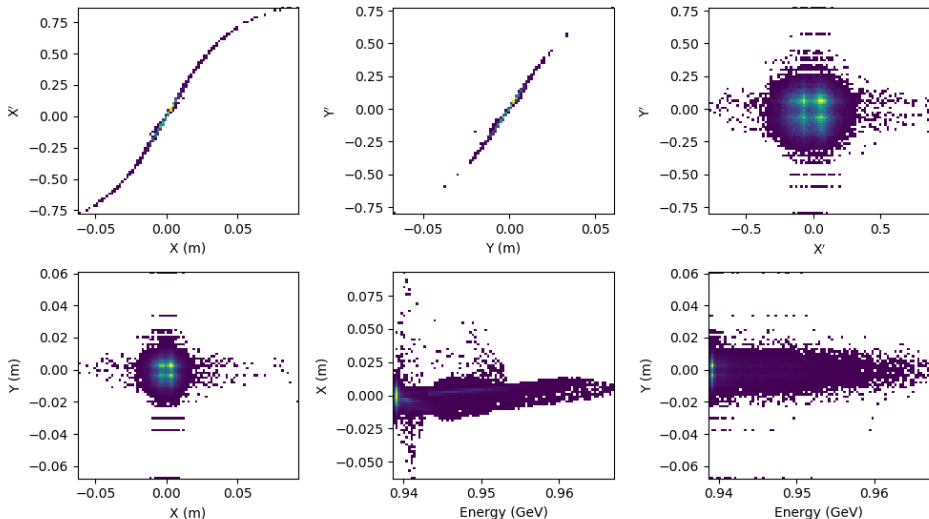
Hin Tung Lau

September 3, 2020

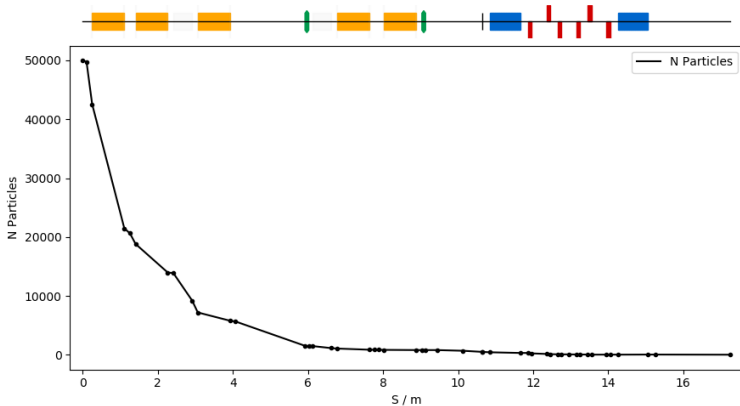
Zcut Distribution

View of beam distribution after about 5 cm of drift from target.

Correlations at o0.

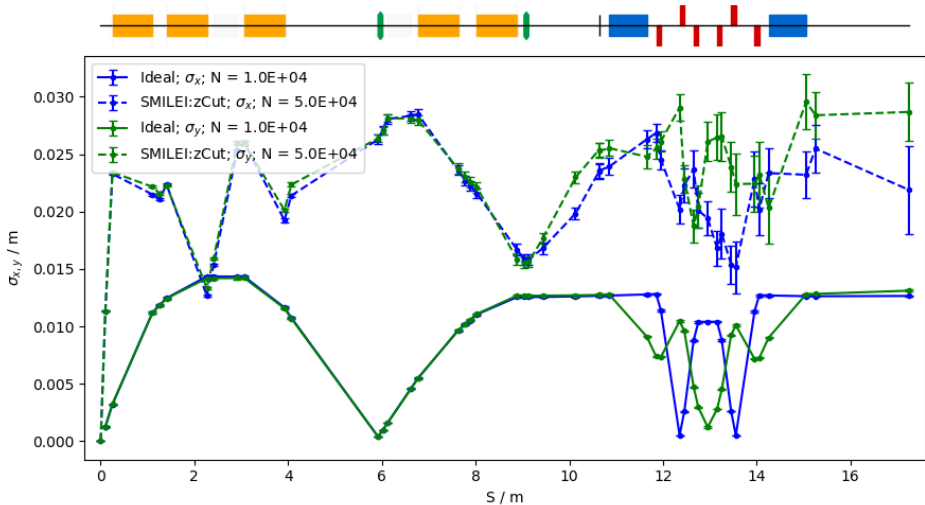


Zcut Distribution through BDSIM Stage 1



Most protons are lost in first couple of Gabor lenses.

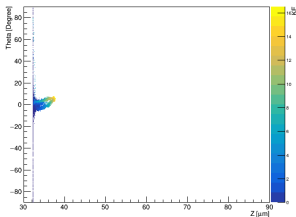
Zcut Distribution through BDSIM Stage 1



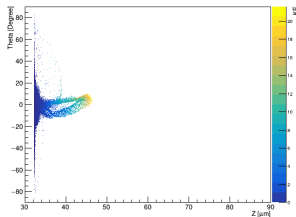
Clarification: Definition of Theta

'Angle' presented in past weeks is based on definition: $\theta = \arctan\left(\frac{p_x}{p_z}\right)$, where z is the longitudinal direction.

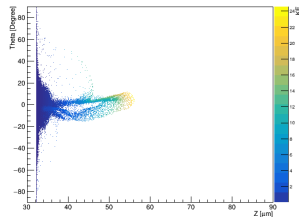
Proton: Time = 249 ± 7 [fs]



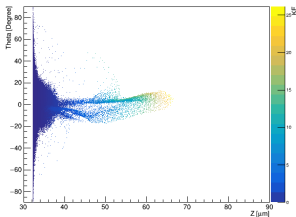
Proton: Time = 399 ± 7 [fs]



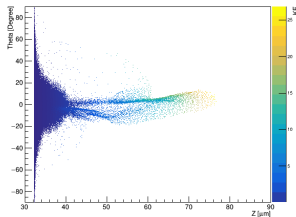
Proton: Time = 549 ± 7 [fs]



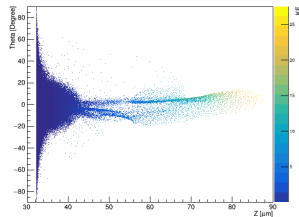
Proton: Time = 698 ± 7 [fs]



Proton: Time = 848 ± 7 [fs]



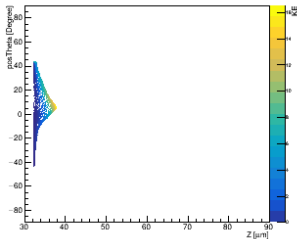
Proton: Time = 998 ± 7 [fs]



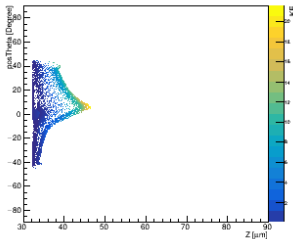
Clarification: Definition of Theta

Conventional definition of angle: $posTheta = \arctan\left(\frac{x}{z}\right)$, where z is the longitudinal direction.

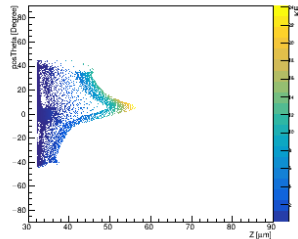
Proton: Time = 249 ± 7 [fs]



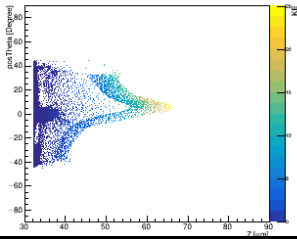
Proton: Time = 399 ± 7 [fs]



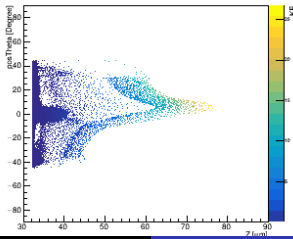
Proton: Time = 549 ± 7 [fs]



Proton: Time = 698 ± 7 [fs]



Proton: Time = 848 ± 7 [fs]



Proton: Time = 998 ± 7 [fs]

