LhARA: Capture Meeting

Hin Tung Lau

May 27, 2021

Ideal Beam with Gabor Lens Field Maps

Updated simulations to use the field maps from the Gabor Lens instead of solenoids.

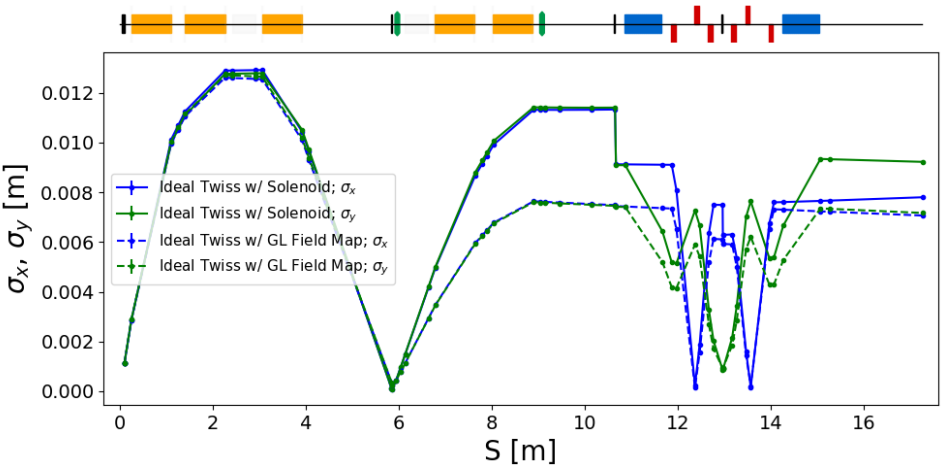
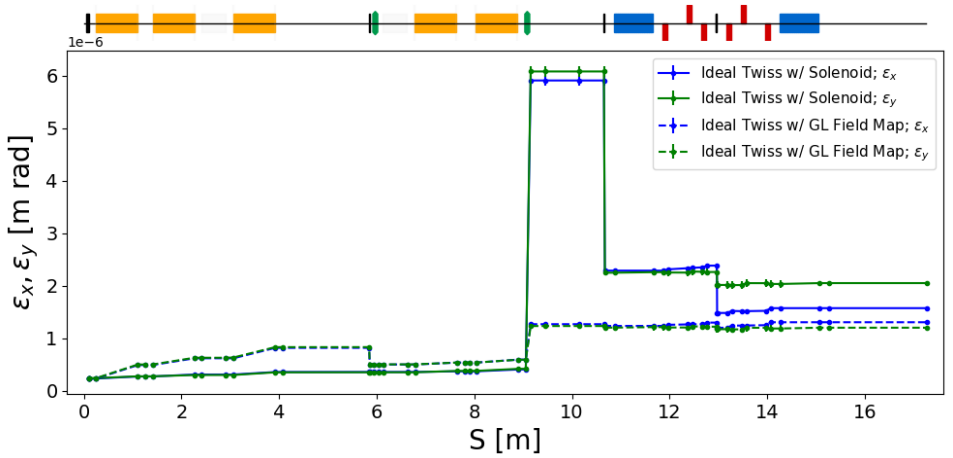
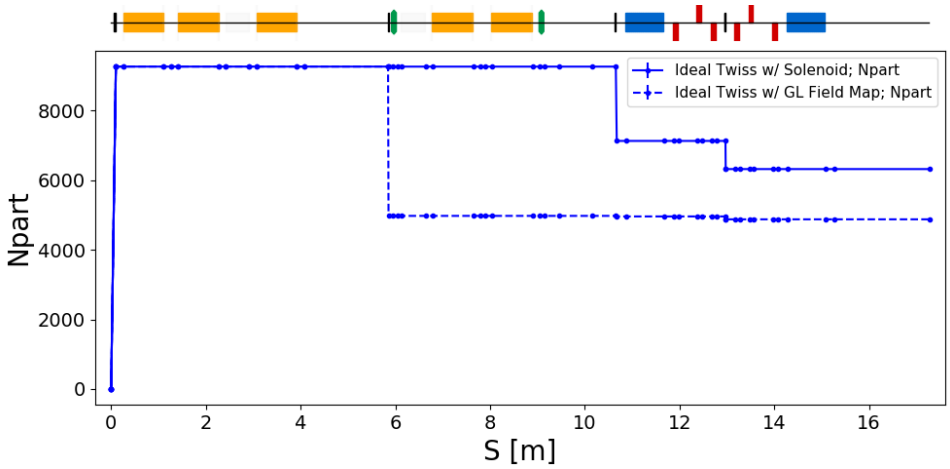


Figure: Beam size tracking with an ideal beam, comparing tracking with solenoids (solid lines) and with GL field maps (dashed lines).

Ideal Beam with Gabor Lens Field Maps

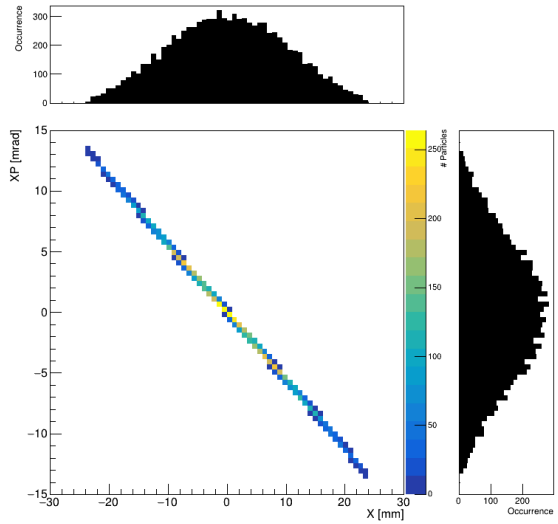


Ideal Beam with Gabor Lens Field Maps

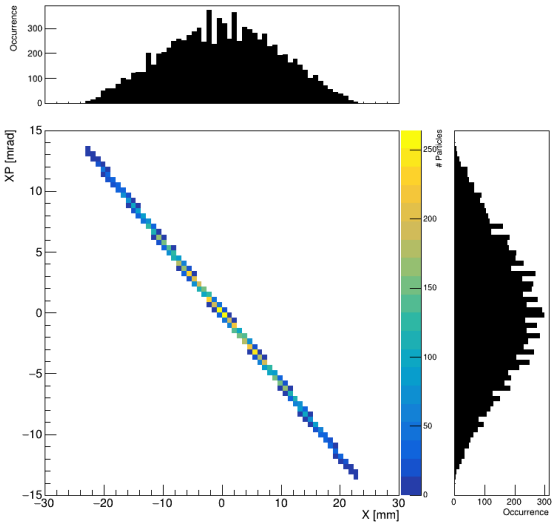


Discrepancy between GL3 and Collimator

Ideal Beam w/ Solenoid: Exit of GL3

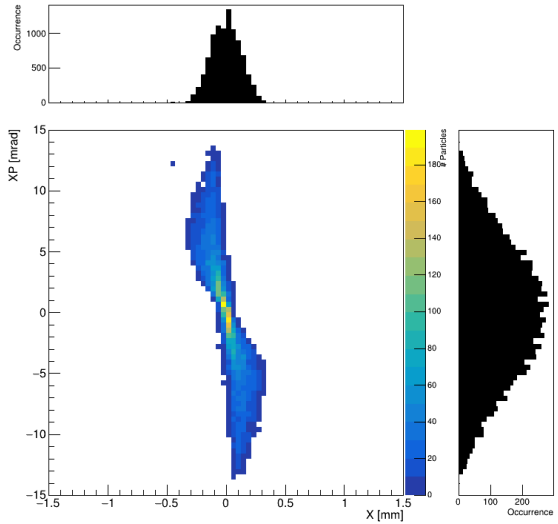


Ideal Beam w/ GL: Exit of GL3

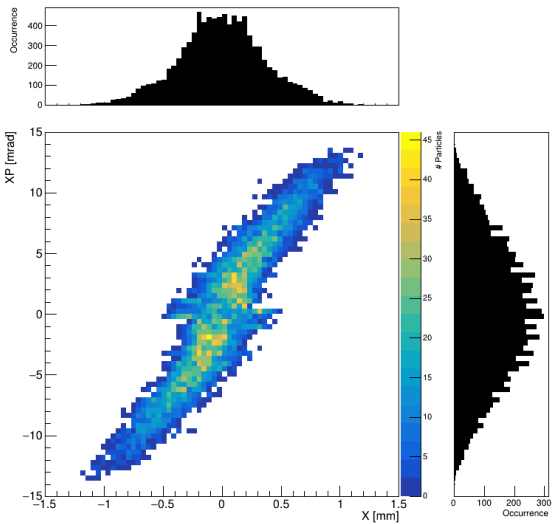


Discrepancy between GL3 and Collimator

Ideal Beam w/ Solenoid: Entry of Collimator at ~6m

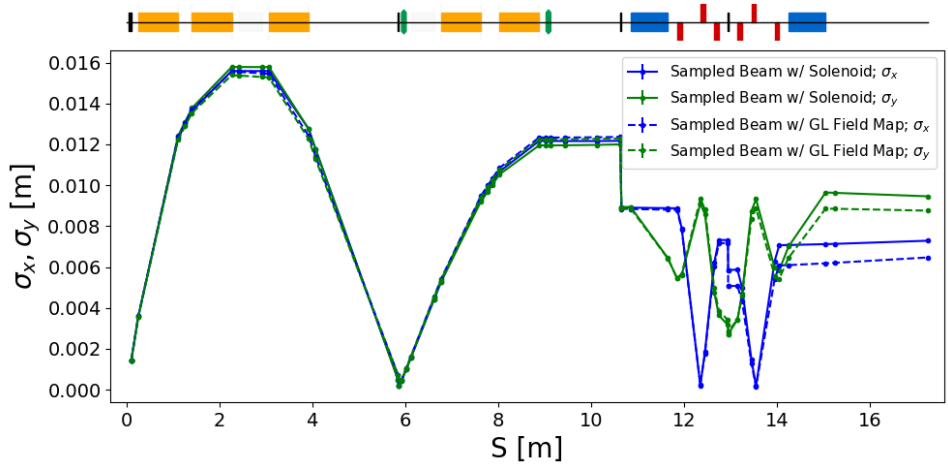


Ideal Beam w/ GL: Entry of Collimator at ~6m

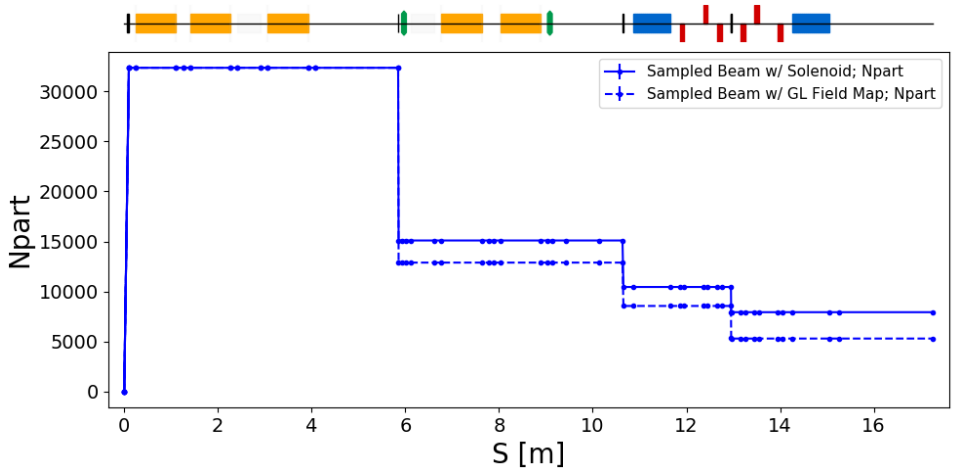


Sampled Beam with Gabor Lens Field Maps

No major discrepancy between solenoids and field maps for sampled beam.

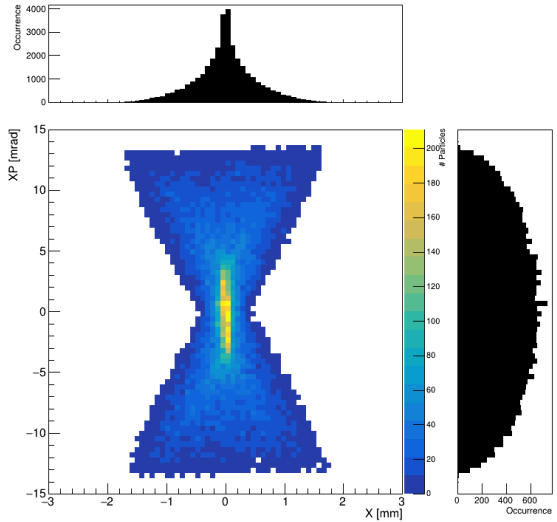


Sampled Beam with Gabor Lens Field Maps

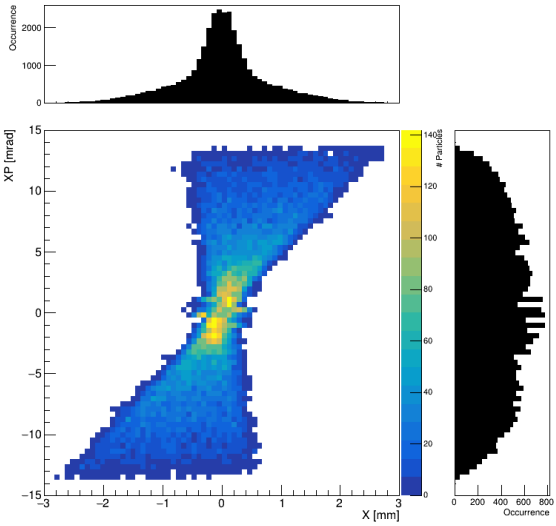


Sampled Beam with Gabor Lens Field Maps

Sampled Beam w/ Solenoid: Entry of Collimator at ~6m

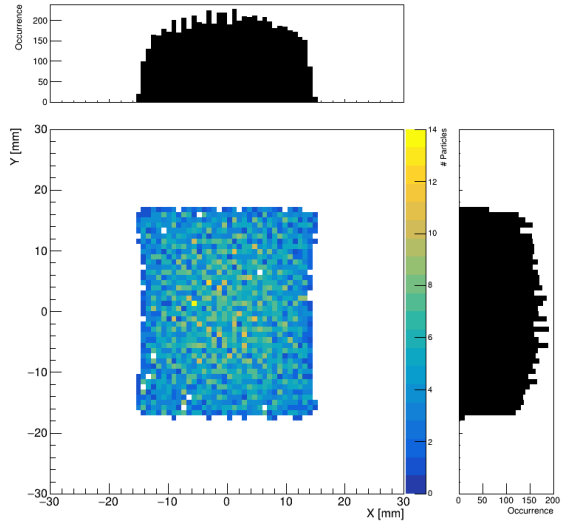


Sampled Beam w/ GL: Entry of Collimator at ~6m

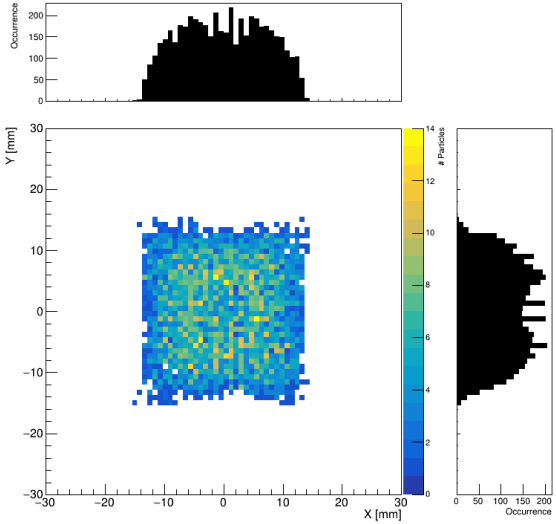


Ideal Beam at End Station

Ideal Beam w/ Solenoid: Stage 1 End

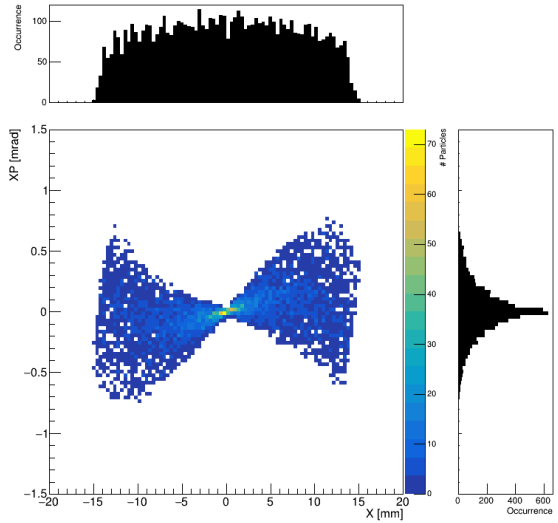


Ideal Beam w/ GL: Stage 1 End

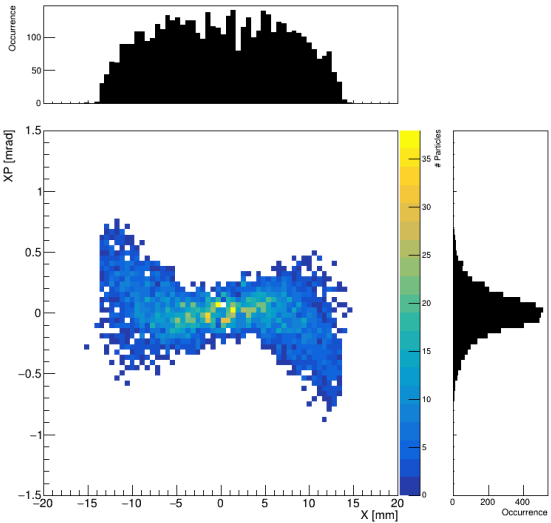


Ideal Beam at End Station (Horizontal Trace Space)

Ideal Beam: Stage 1 End

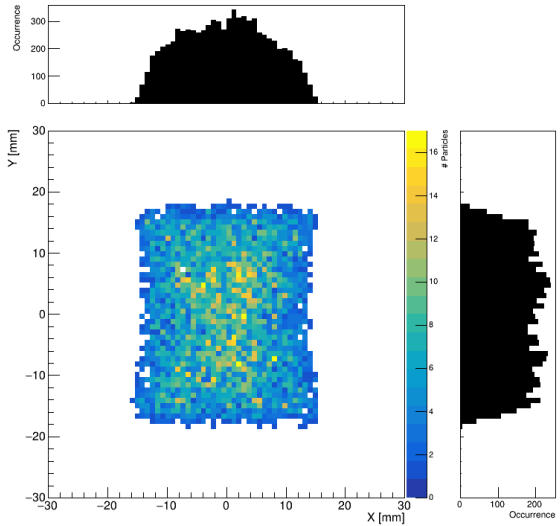


Ideal Beam w/ GL: Stage 1 End

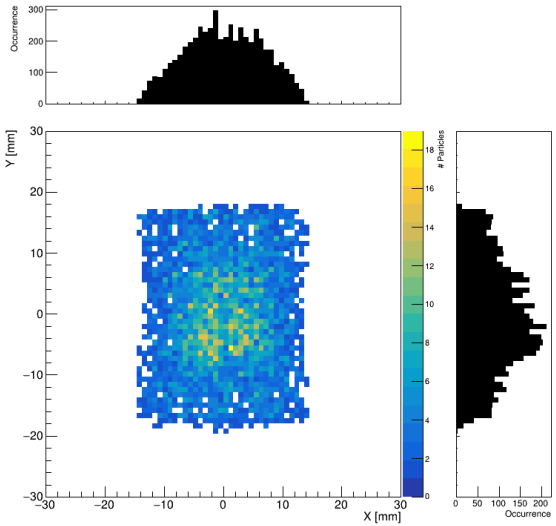


Sampled Beam at End Station

Sampled Beam w/ Solenoid: Stage 1 End



Sampled Beam w/ GL: Stage 1 End



Sampled Beam at End Station (Horizontal Trace Space)