

Beam rotation

Qualitative observations

Rin, a, b [cm]:

[30, 99.5, 41.8]

Scaling factor [A]: 9000

Maximum field strength: 60.855 mT, FWHM 149.3 mm

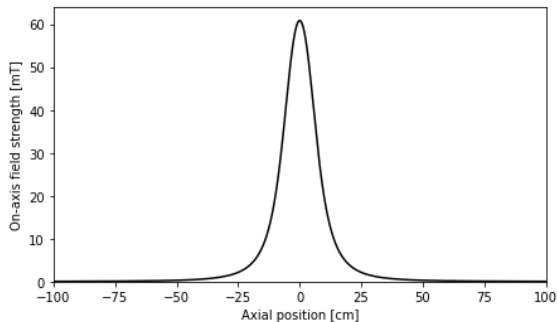


Figure: Field profile used so far

Beam rotation

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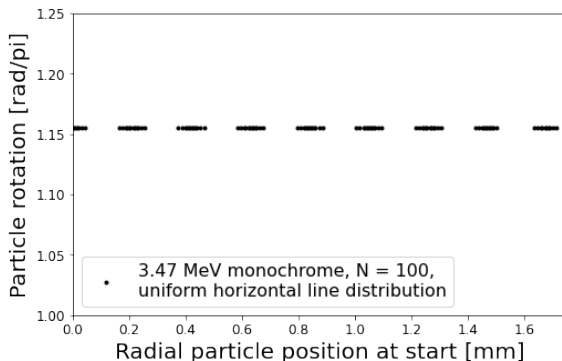


Figure: Particle rotation does not seem to depend on the beam's radial distribution.

(The particles had no starting transverse momentum)

Beam rotation

Qualitative observations

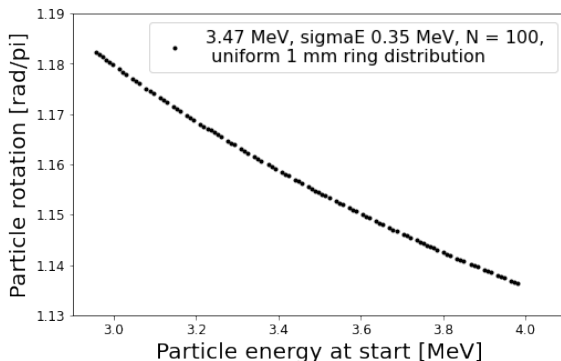


Figure: Particle rotation exhibits slight inverse proportionality to particle energy.

(The particles had no starting transverse momentum)

Beam rotation

Qualitative observations

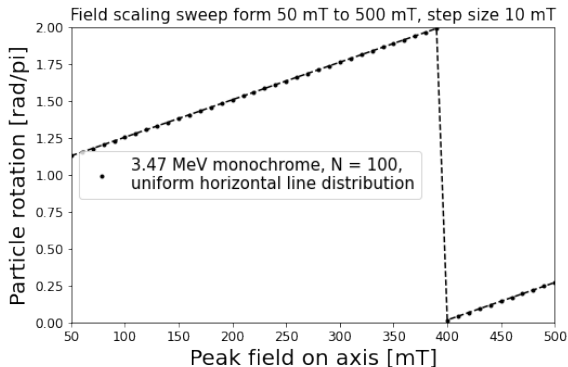


Figure: Beam rotation is linearly proportional to maximum field strength.
(The particles had no starting transverse momentum)

Beam rotation

Qualitative observations

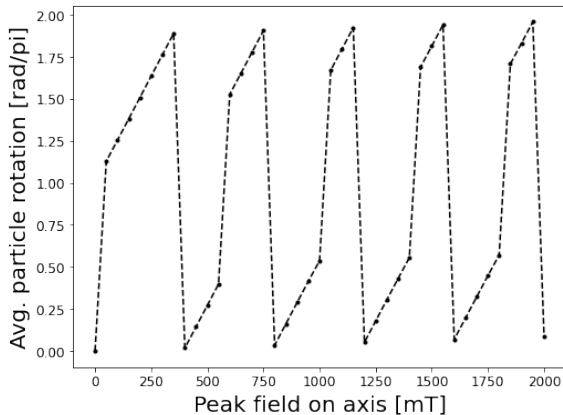


Figure: ??? No idea, why the jumps. Could be “nonlinear effects”, could be unreasonable field strengths - for ASTRA, and in general.