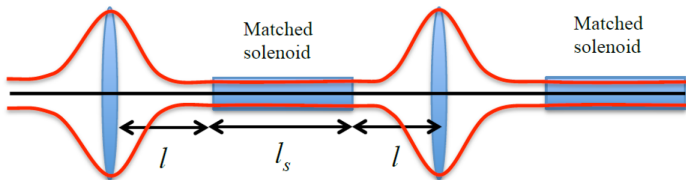


# CeC Physics

Jun Ma

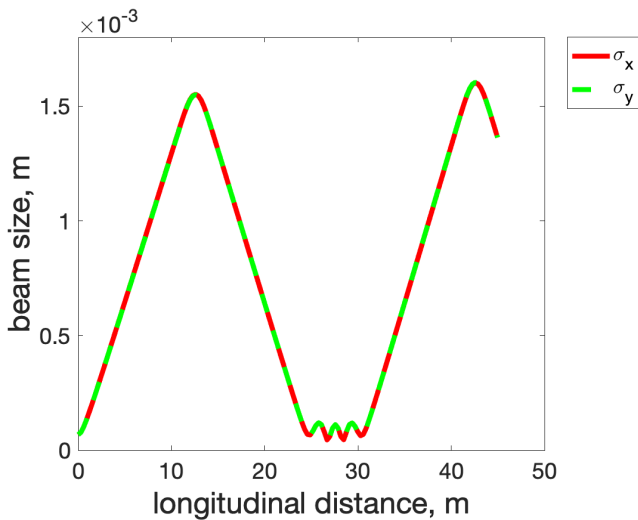
Collider-Accelerator Department  
Brookhaven National Laboratory

7/16/2021

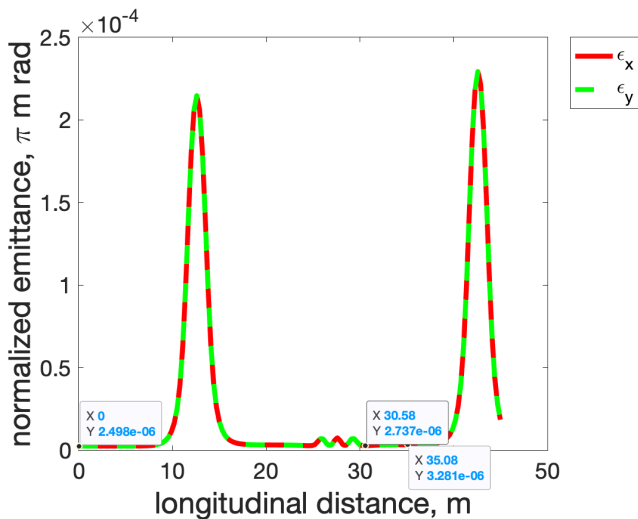


(a)

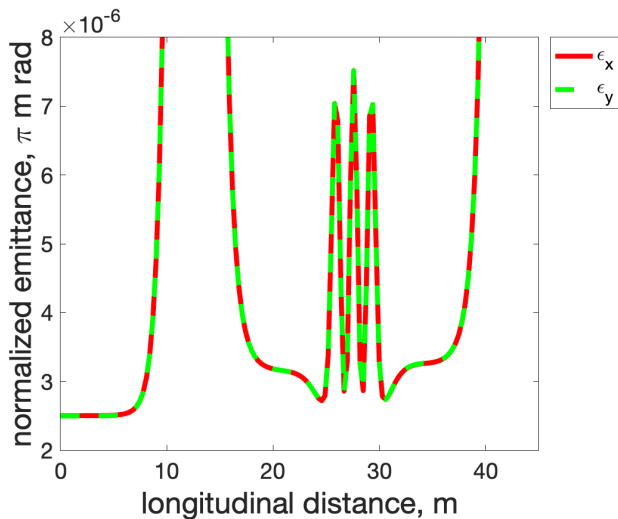
- KV distribution
- Energy  $\gamma=293.1$ , R.M.S. energy spread  $\delta E/E=1e-4$
- Peak current  $I=150$  A
- Normalized KV emittance  $\varepsilon_{n,KV}=10 \mu\text{m}$
- Initial beam waist  $a_o=1.35e-4$  m
- Cell length 30 m, central solenoid length  $l_s=4.8$  m,  $l=12.6$  m
- Solenoid radius 1 m



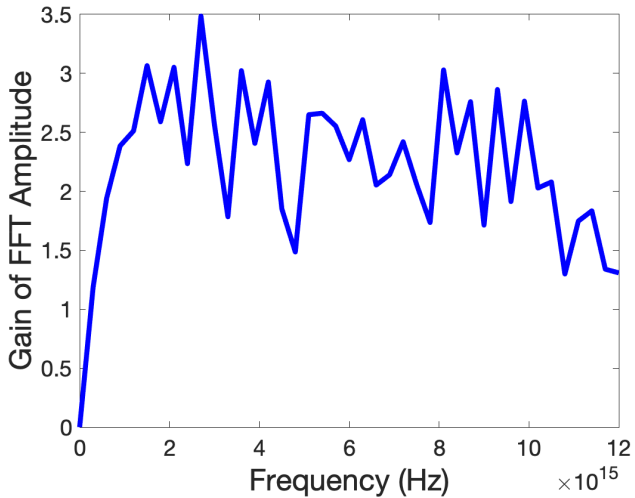
(a) Beam size



(a) Beam emittance



(a) Beam emittance



(a) Gain of noise