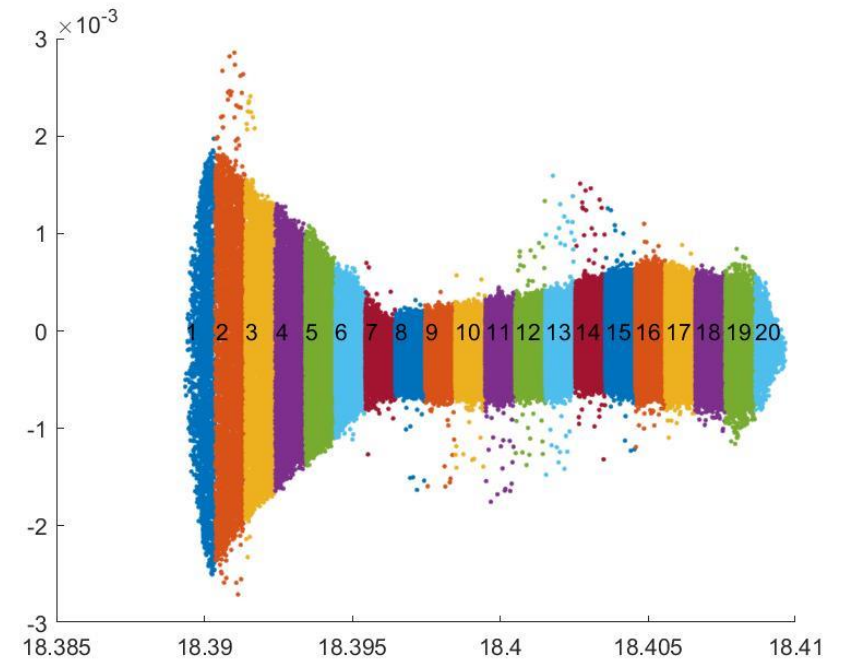
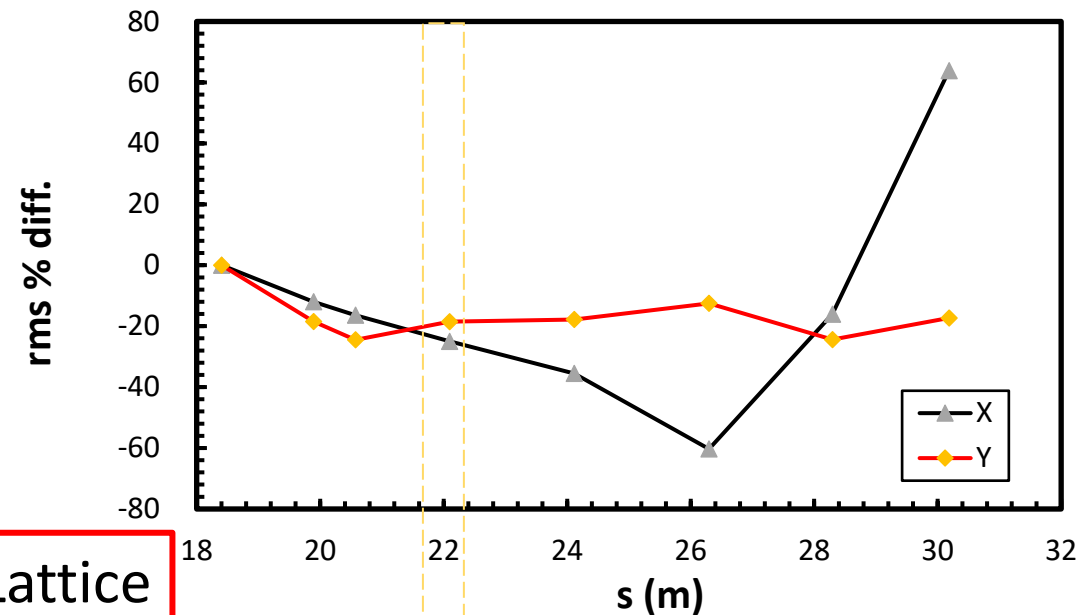
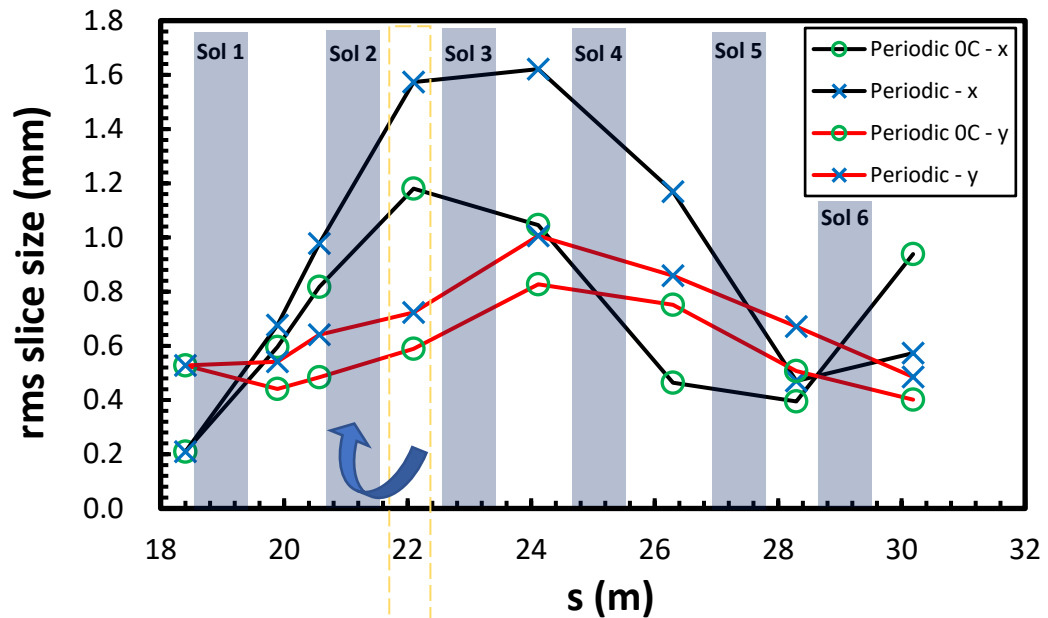


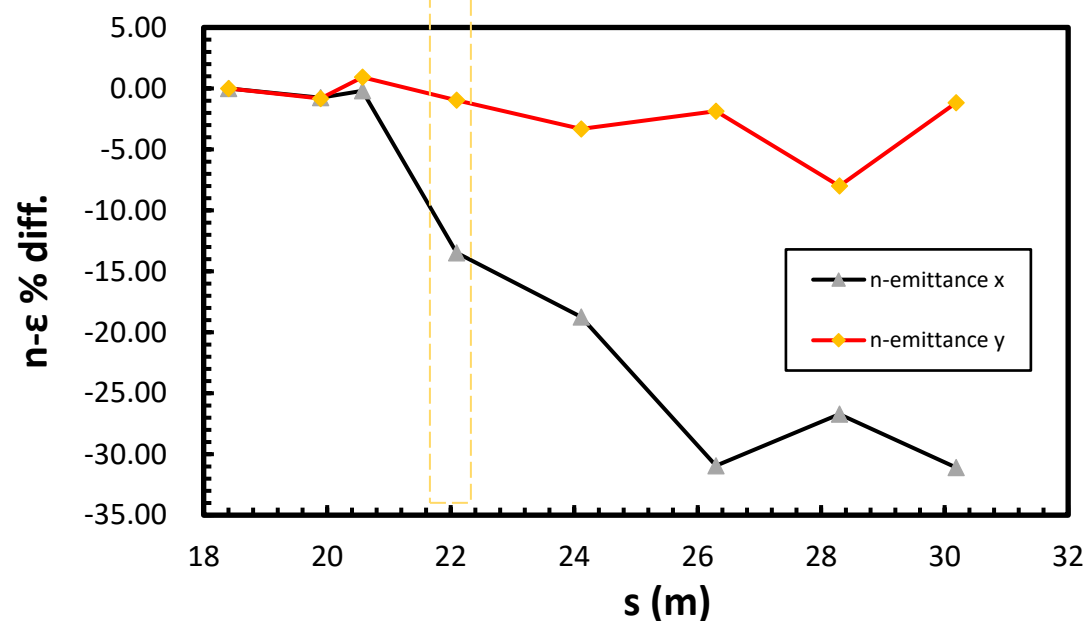
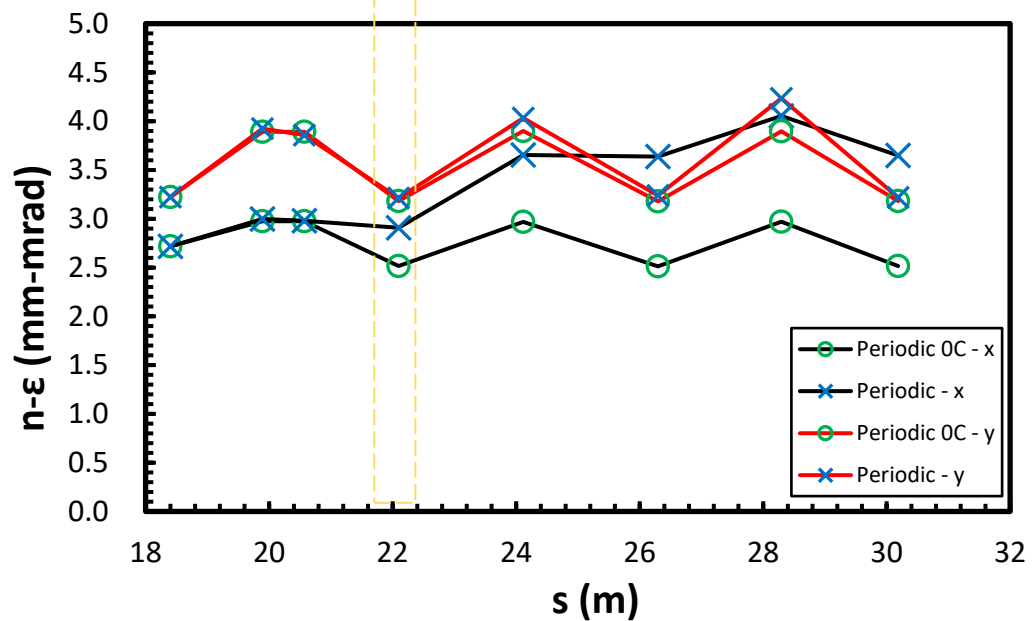
Emittance Growth in PCA

Kai Shih
1/11/2023



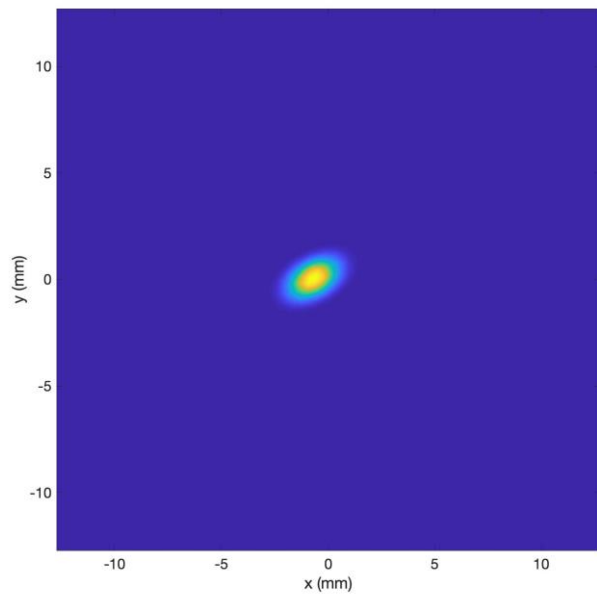


Relax Lattice
G Slice# 11

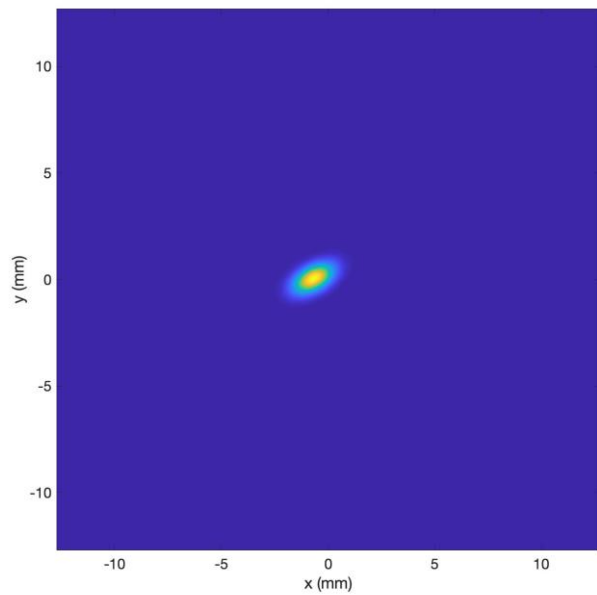


Sol 1

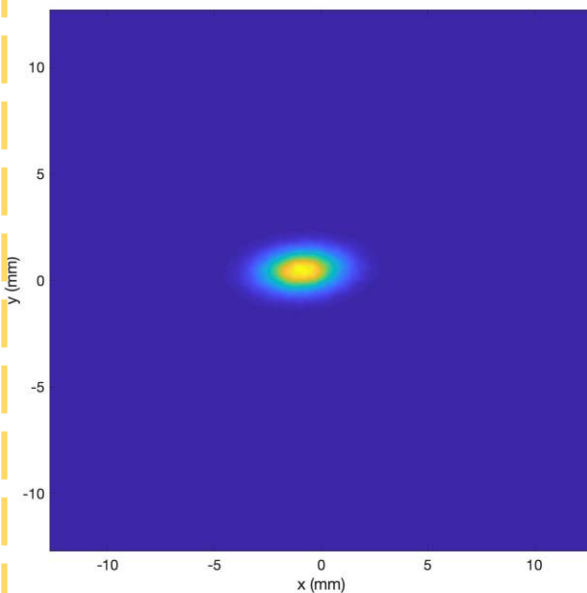
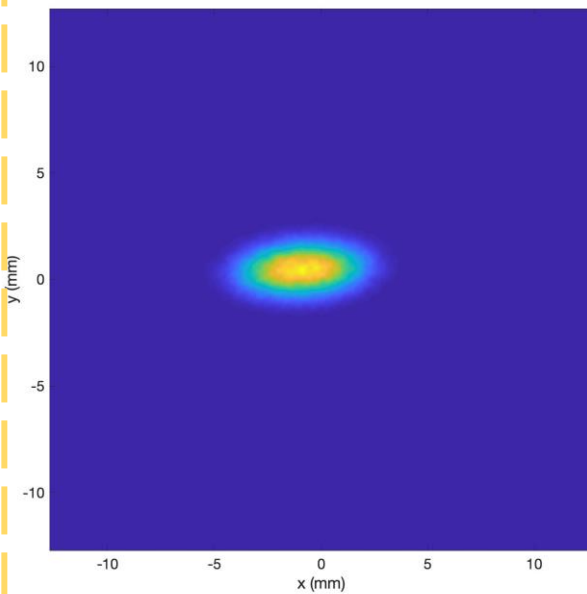
Space Charge



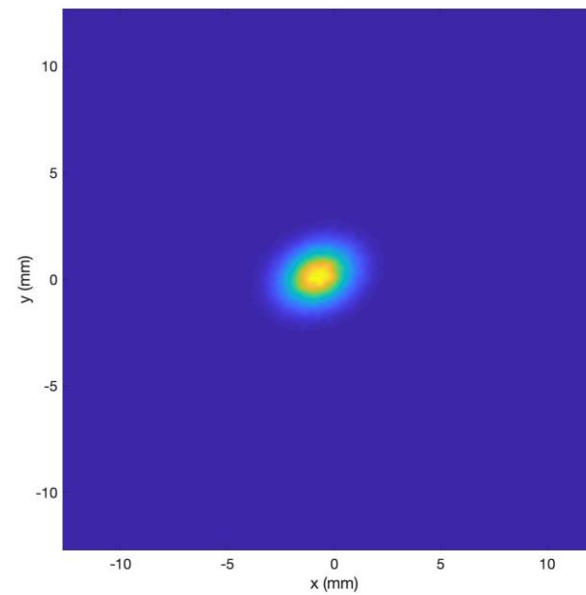
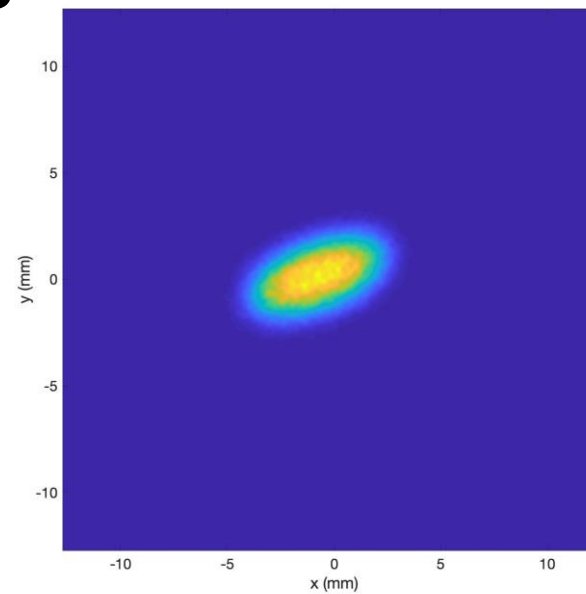
NO Space Charge



Sol 2



Sol 3



Sol 4

Whole Beam Relax Lattice

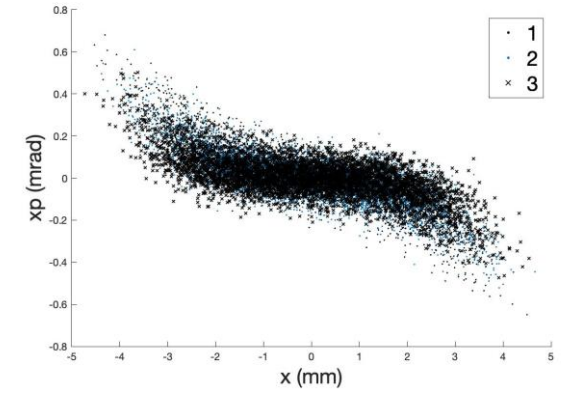
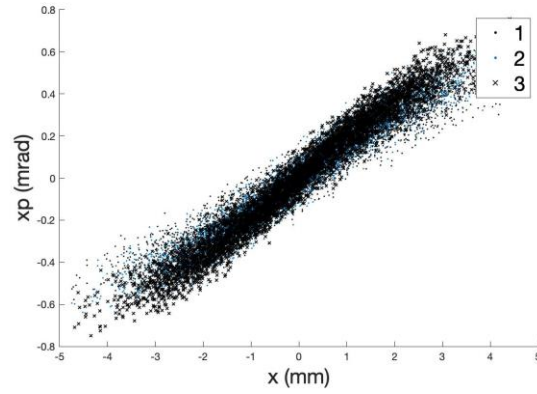
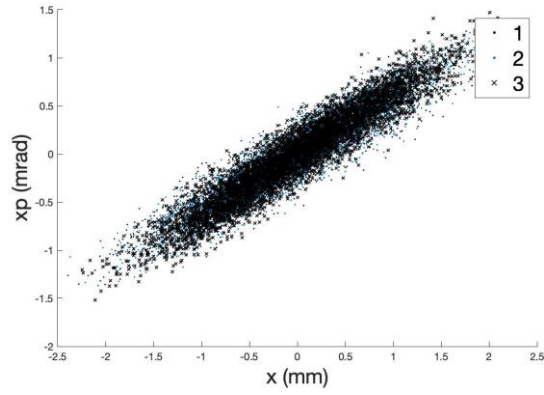
Sol 1

Sol 2

Sol 3

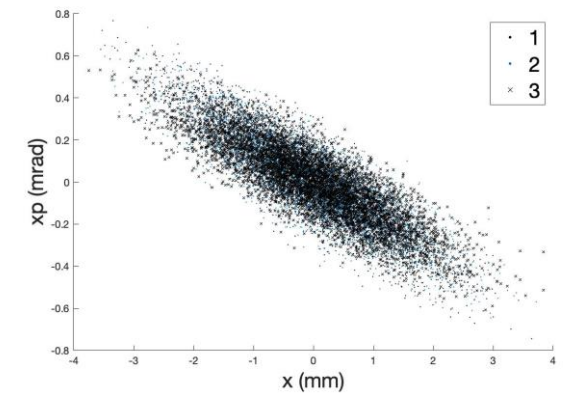
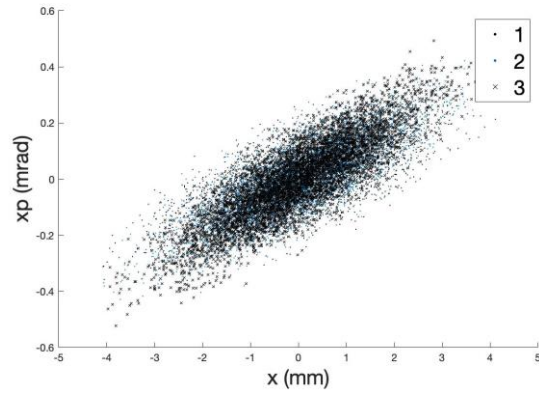
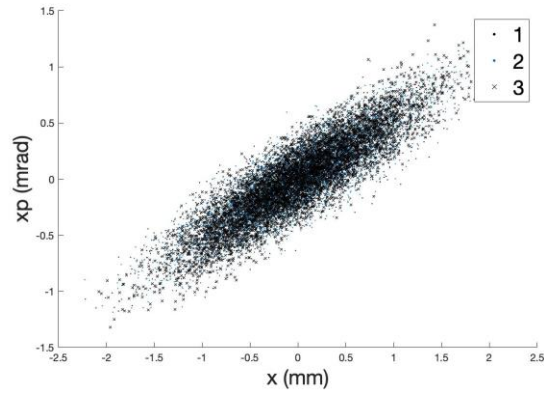
Sol 4

Space Charge



Relax Lattice
G Slice# 11
 $x-x'$

NO Space Charge



Whole Beam Relax Lattice

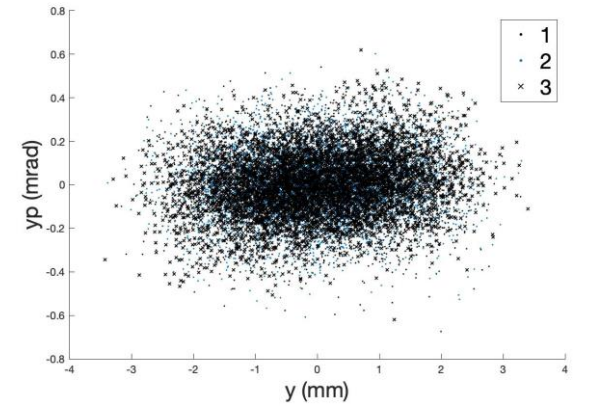
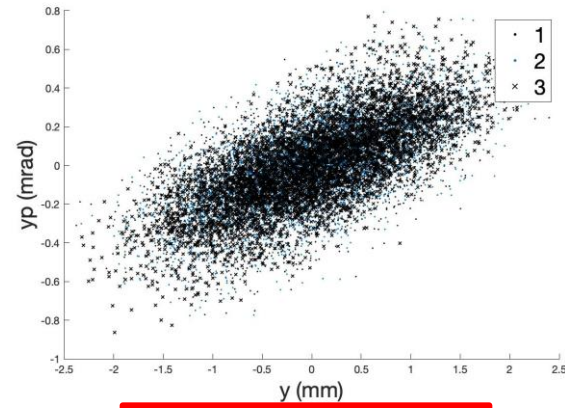
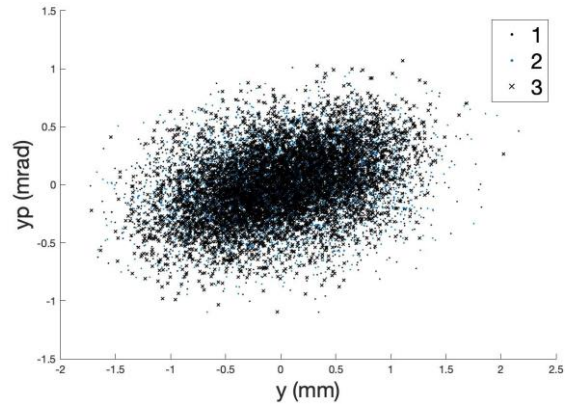
Sol 1

Sol 2

Sol 3

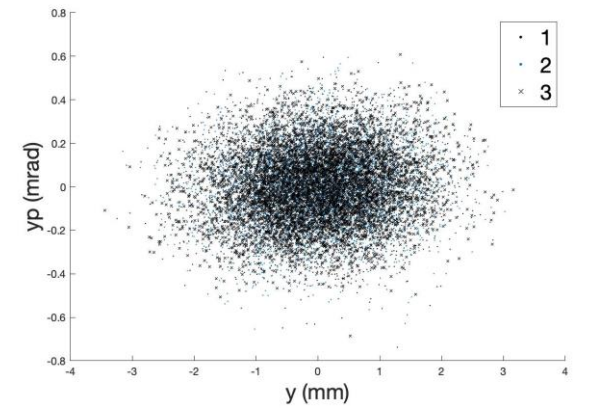
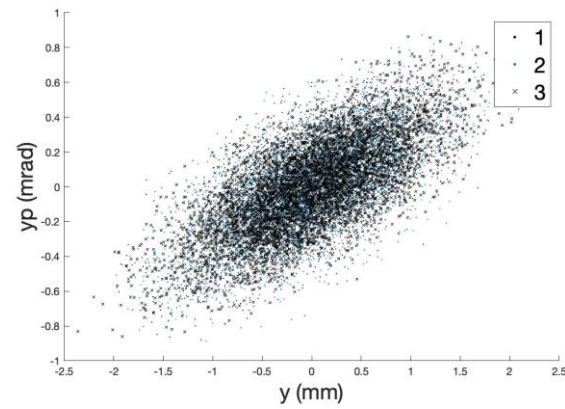
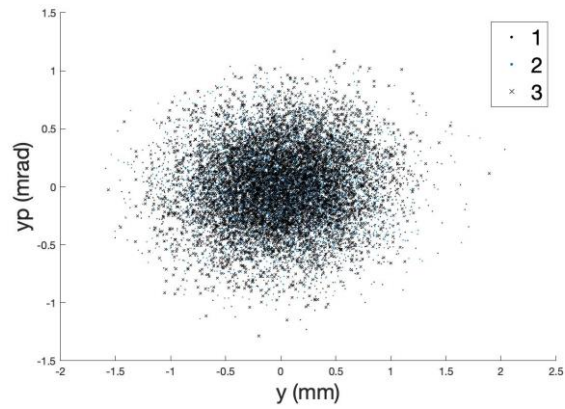
Sol 4

Space Charge

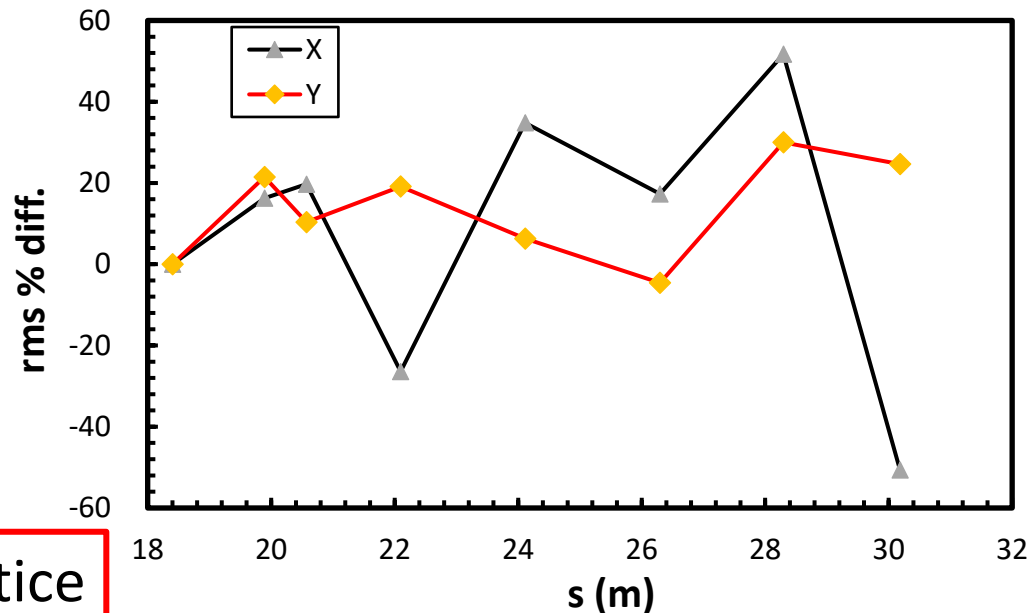
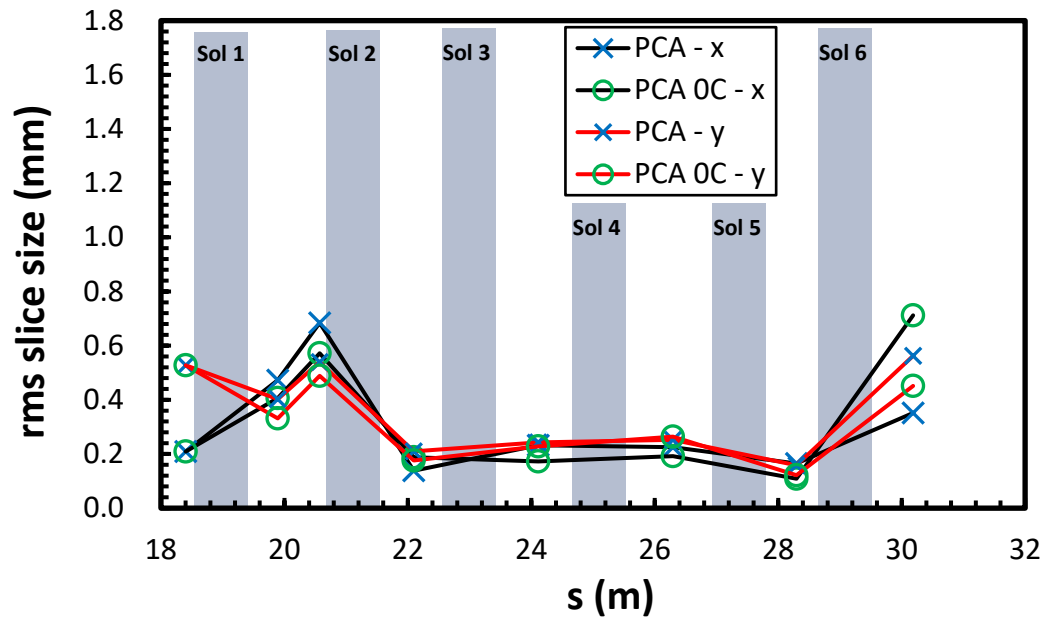


Relax Lattice
G Slice# 11
 $y-y'$

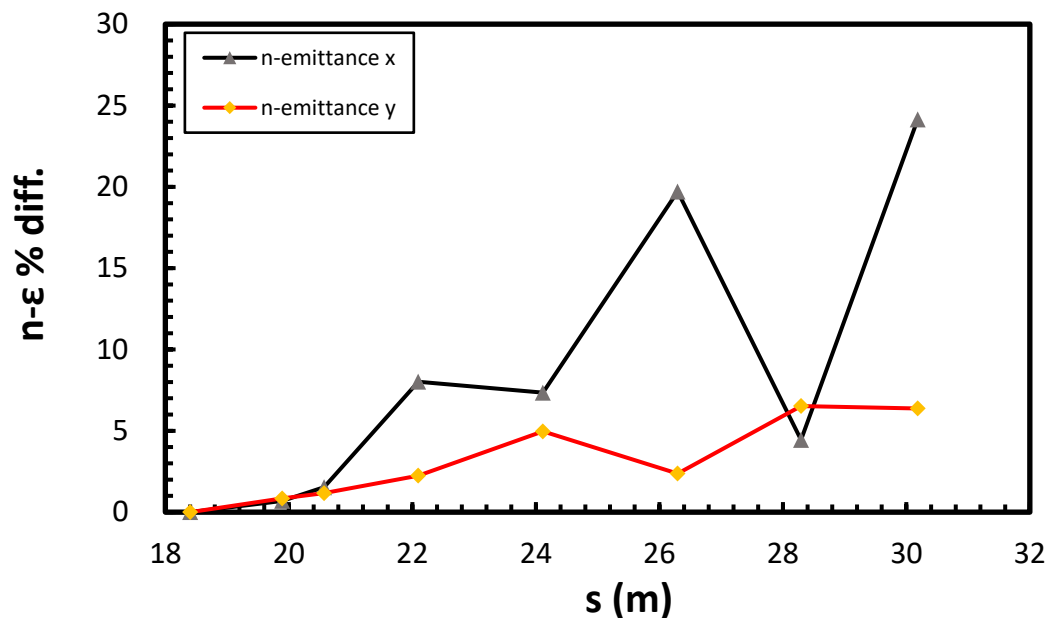
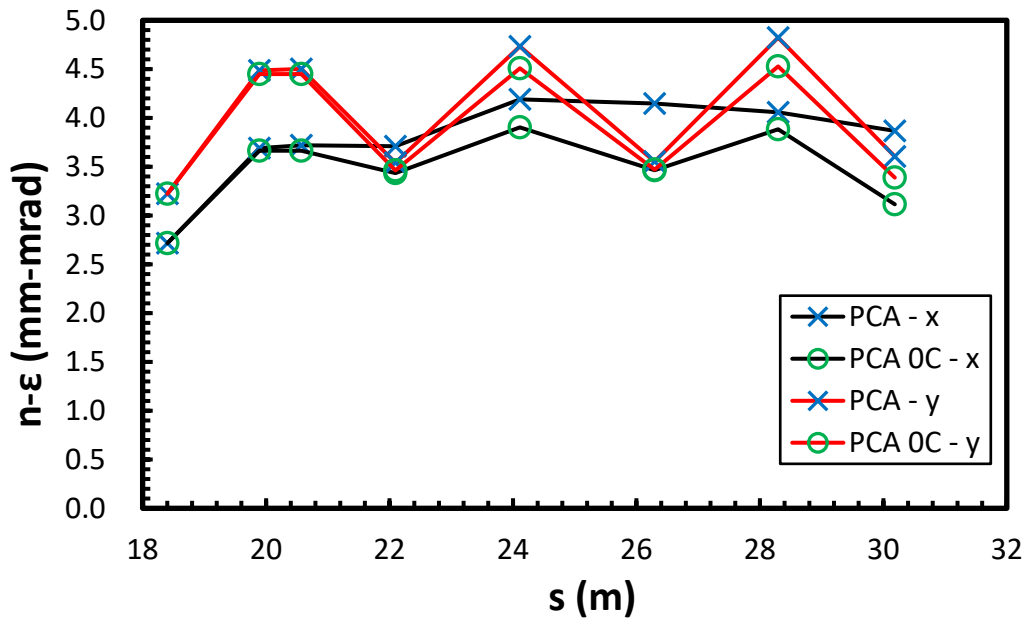
NO Space Charge



Whole Beam Relax Lattice

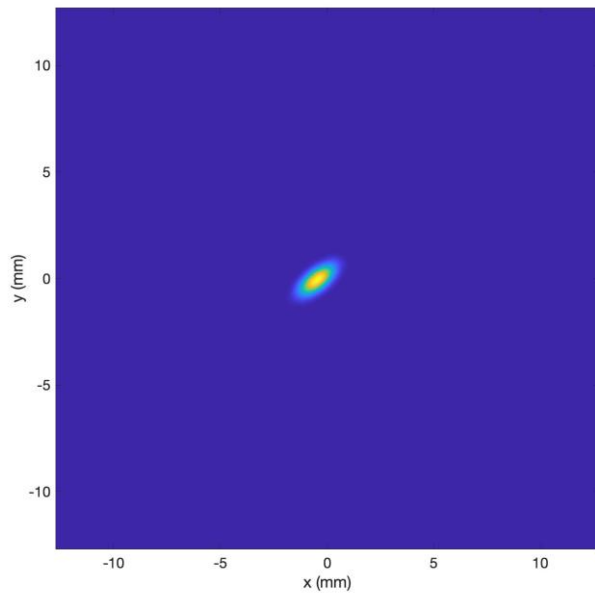


PCA Lattice
G Slice# 11

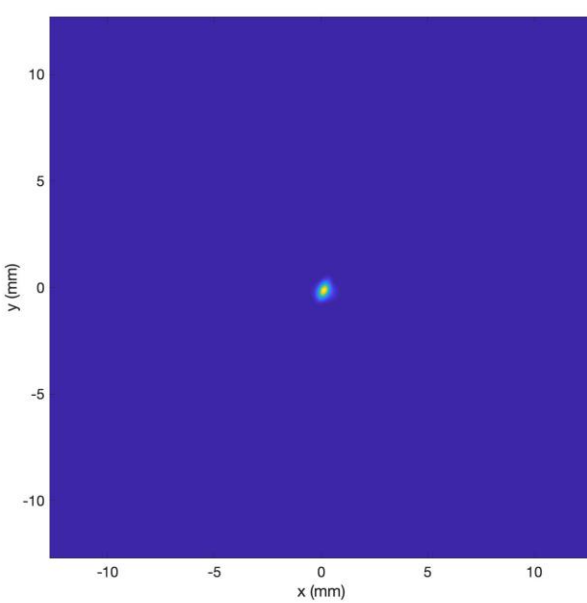


Sol 1

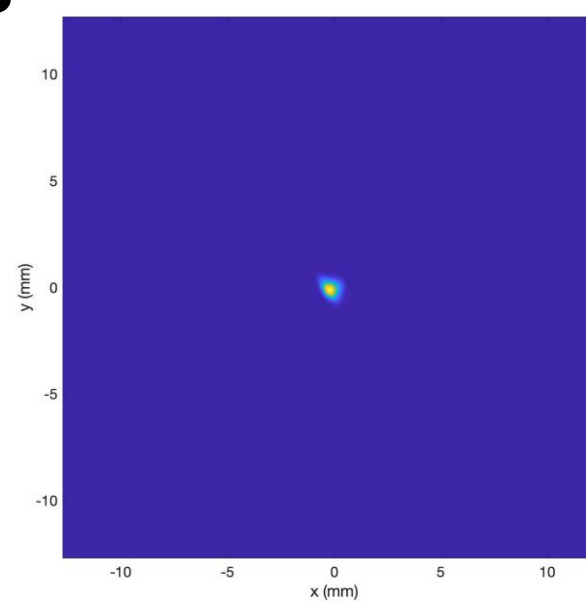
Space Charge



Sol 2

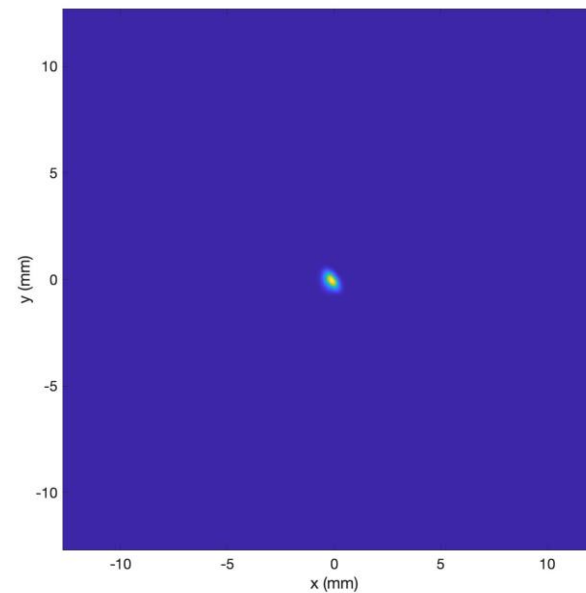
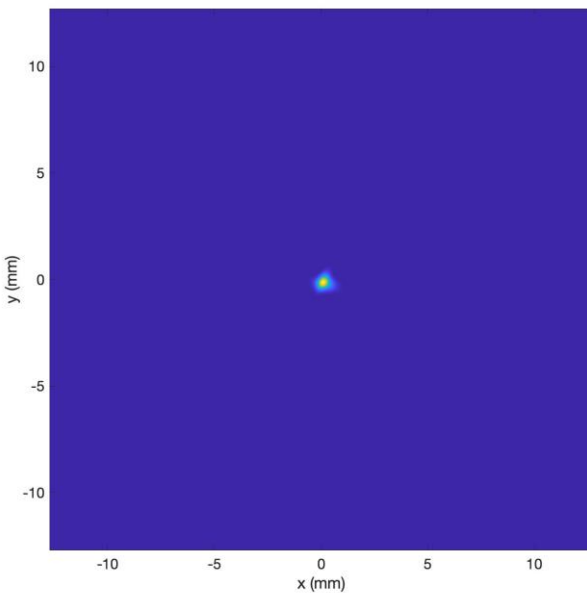
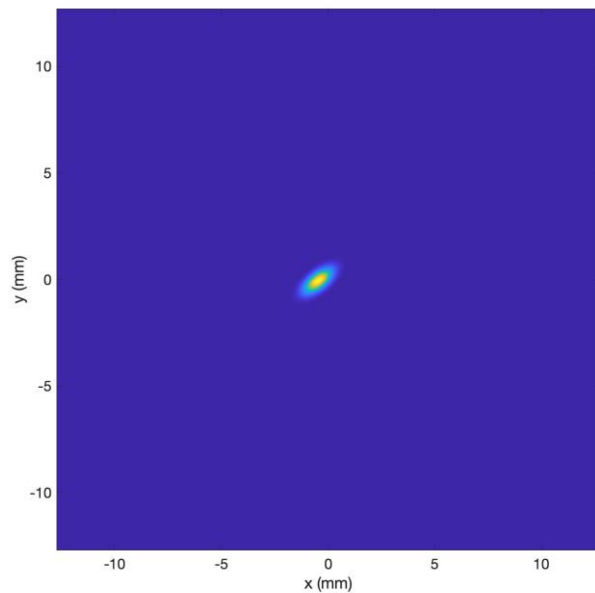


Sol 3



Sol 4

NO Space Charge



Whole Beam PCA Lattice

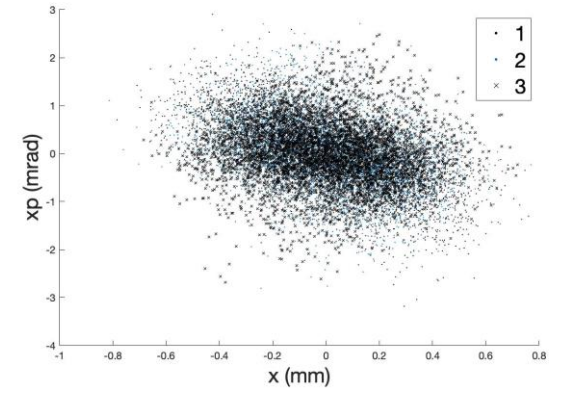
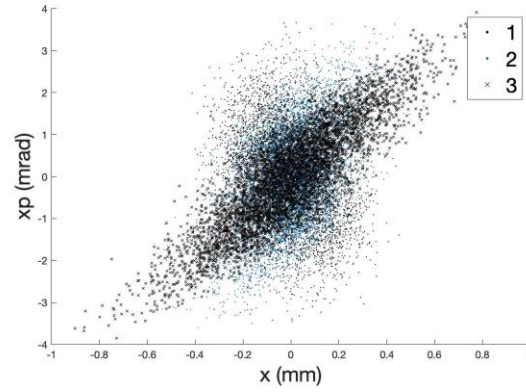
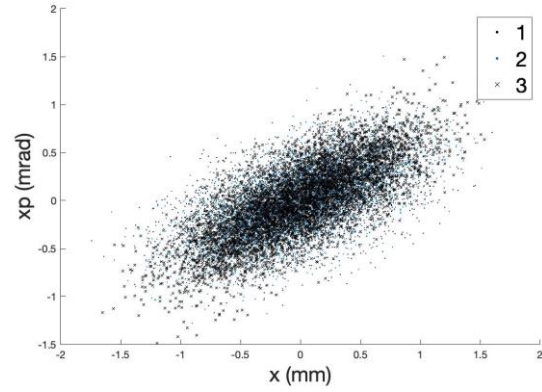
Sol 1

Sol 2

Sol 3

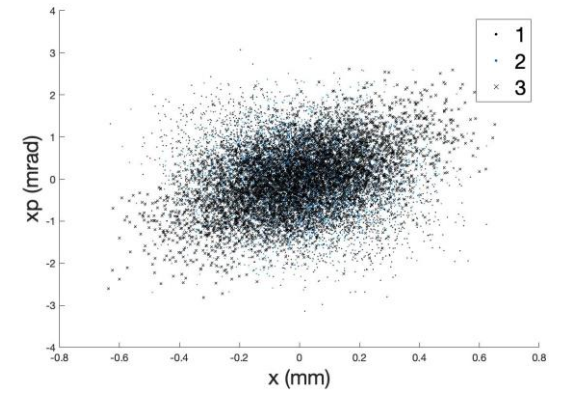
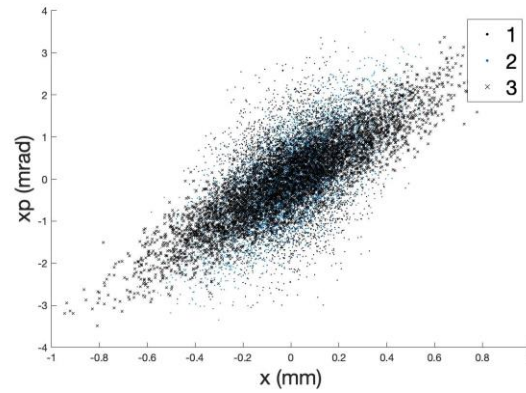
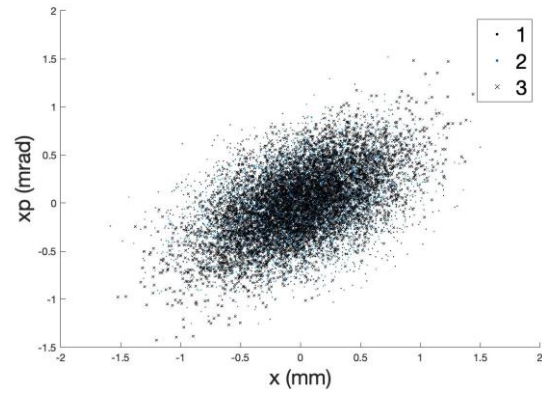
Sol 4

Space Charge



PCA Lattice
G Slice# 11
 $x-x'$

NO Space Charge



Whole Beam PCA Lattice

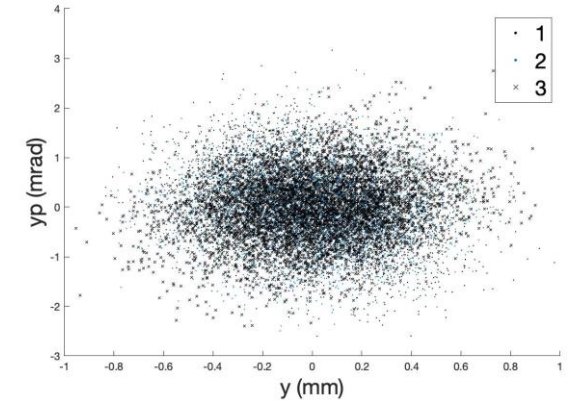
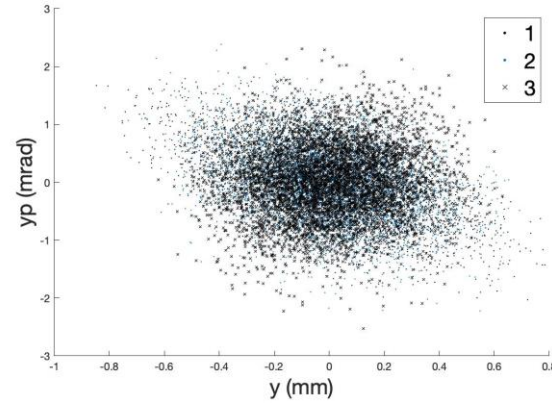
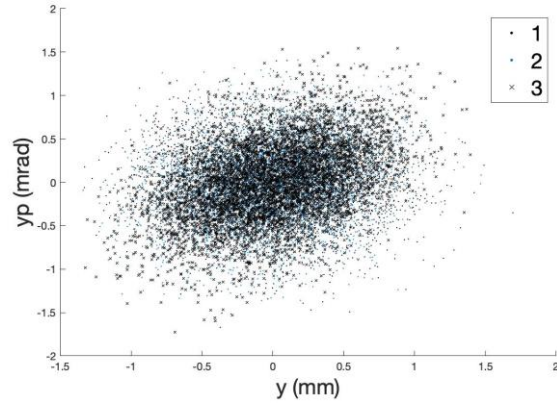
Sol 1

Sol 2

Sol 3

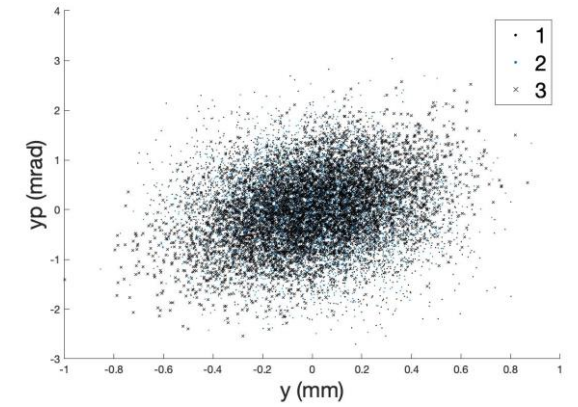
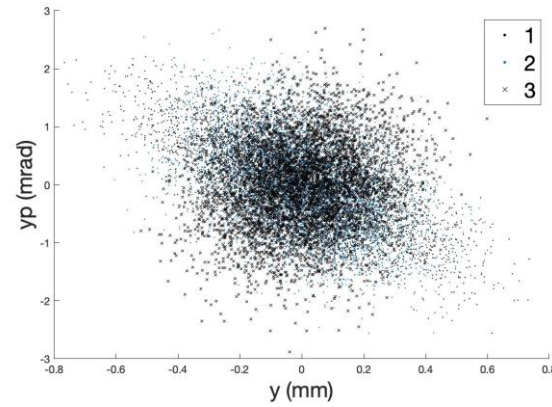
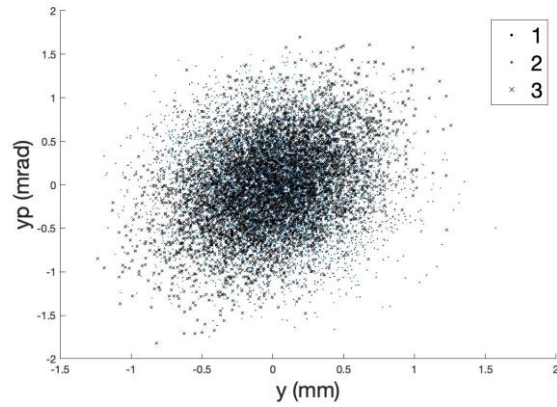
Sol 4

Space
Charge

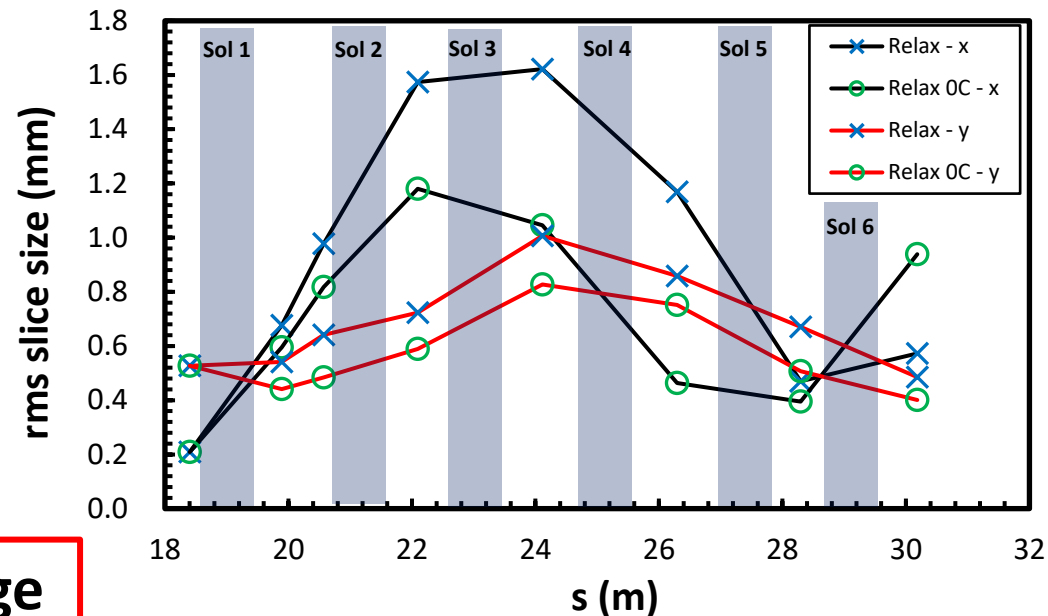
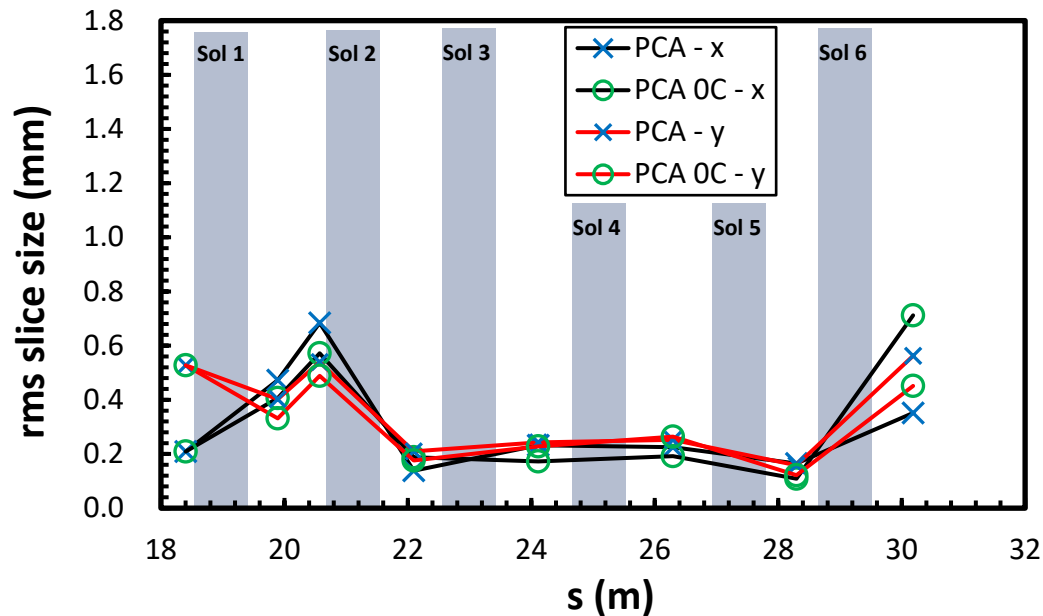


PCA Lattice
G Slice# 11
 $y-y'$

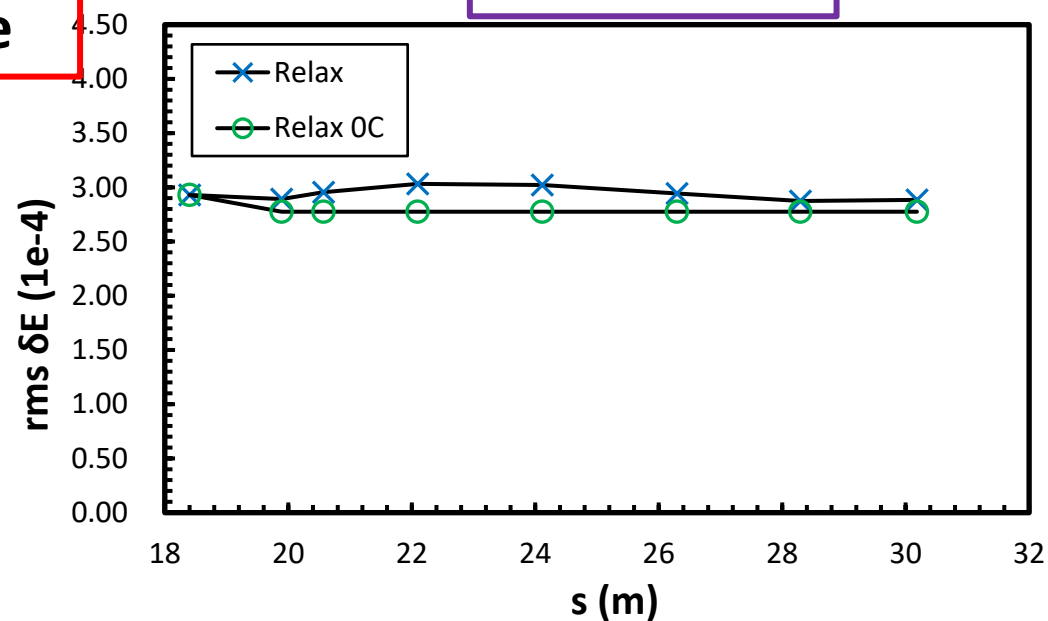
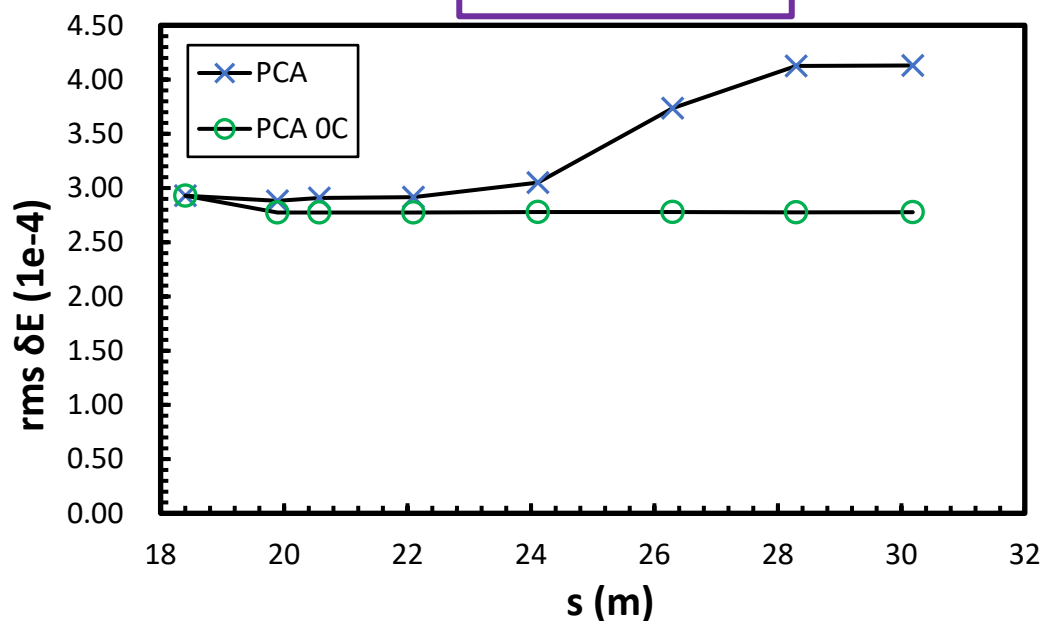
NO
Space
Charge

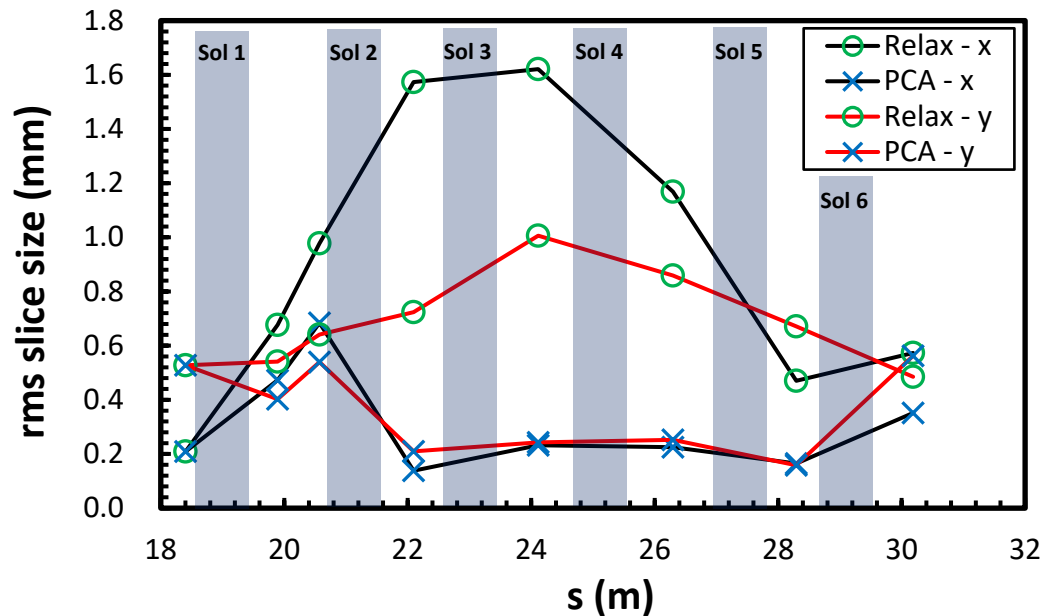


Whole Beam PCA Lattice

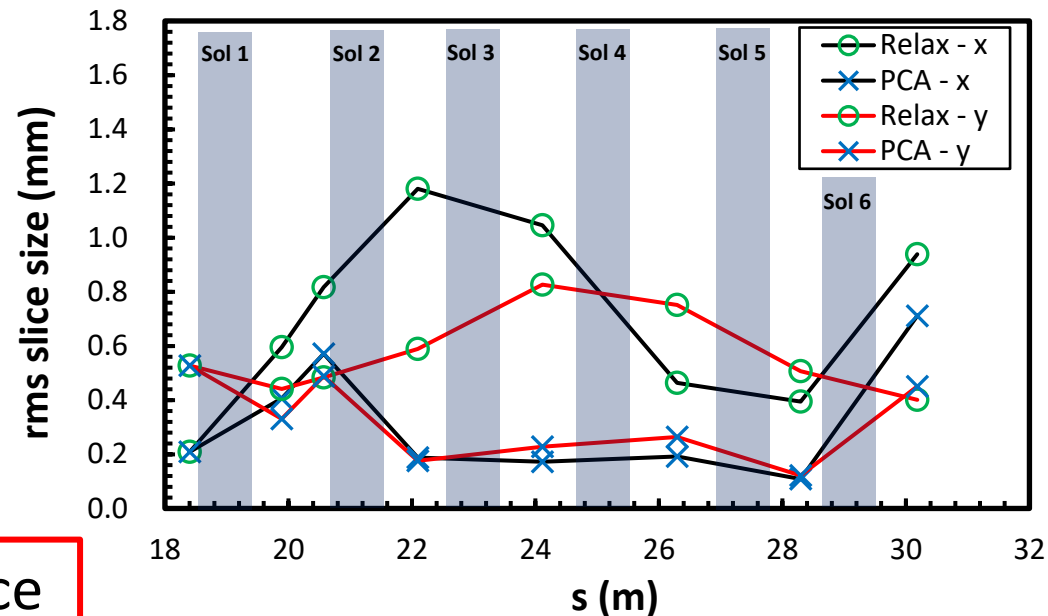


**Full Charge
VS
0 Charge**





Full Charge



0 Charge

PCA Lattice
VS
Relax Lattice

