

\*\*\*\*\* Summary for 'm4 Standard Lattice' \*\*\*\*\*

29-Jul-2024 13:10:55

Energy: ### 3.0 GeV

Circumference: ## 528.0 m

Full tunes H/V: ## 42.20 / 16.28

Momentum Compaction Factor: # 3.06e-04

Chromaticity H: ##+1.02

Chromaticity V: ##+0.99

Radiation Loss: ## 363.8 keV

Natural Energy Spread: # 0.08 %

Natural Emittance: ## 328.2 pmrad

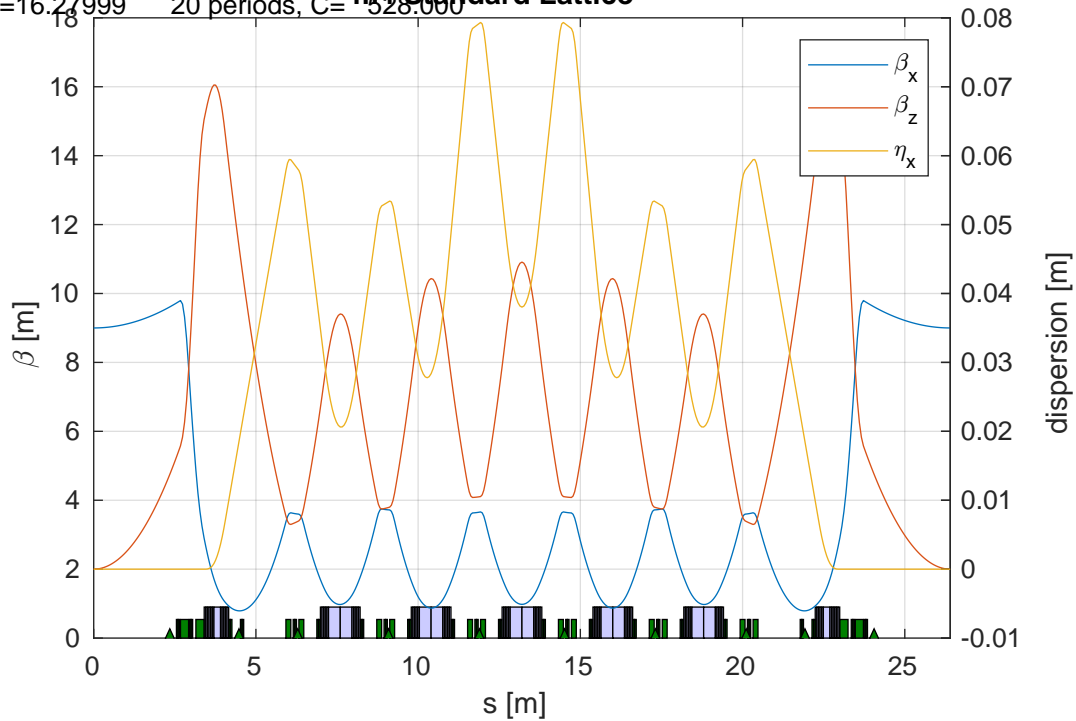
RF Voltage: # 1.8 MV

Achromat natural chromaticities: H/V## -2.50 / -2.51

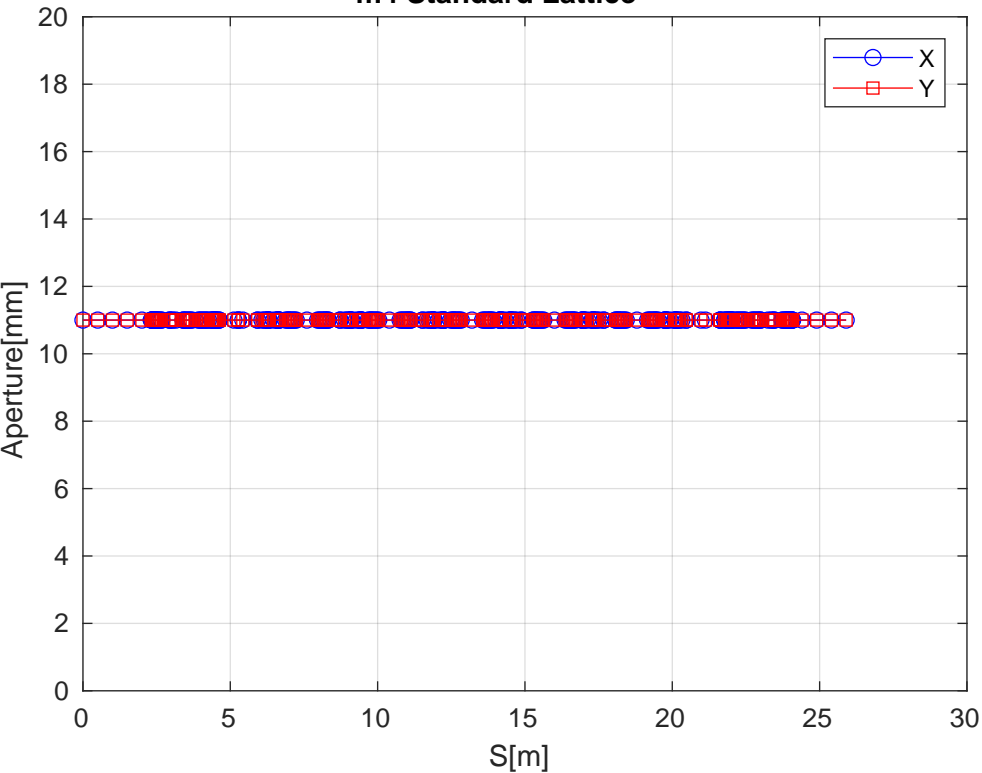
Achromat tunes H/V: ## 2.11 / 0.81

$\nu_x = 42.20000$  $\delta p/p = 0.000$  $\nu_z = 16.27999$ 20 periods,  $C = 528.000$ 

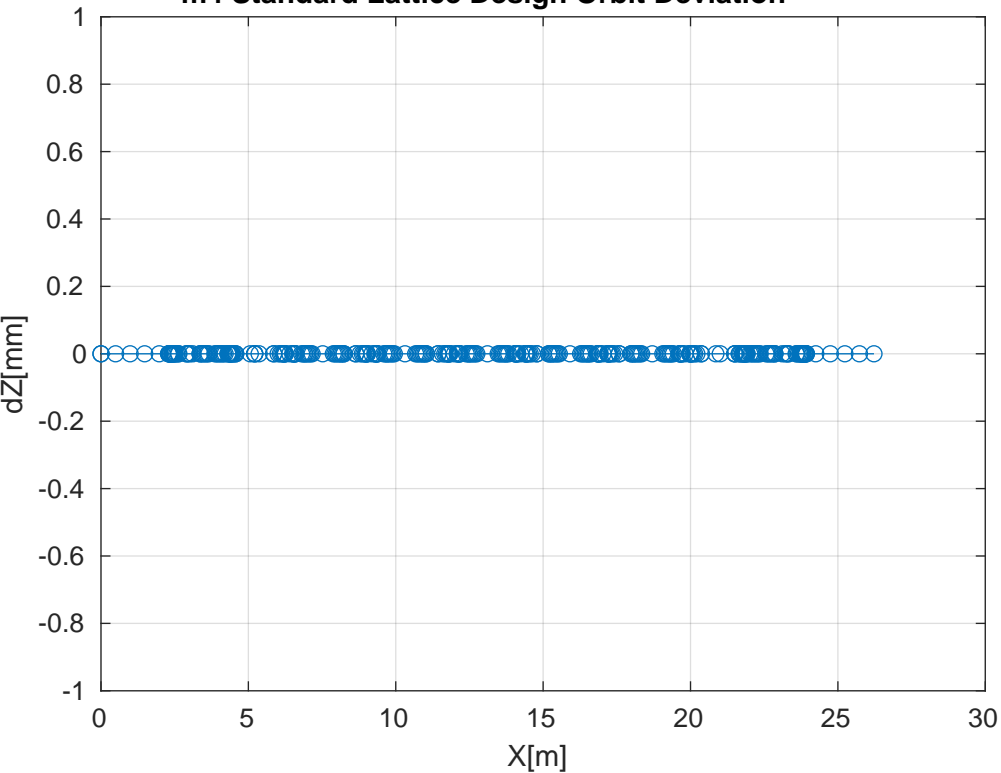
m4 Standard Lattice



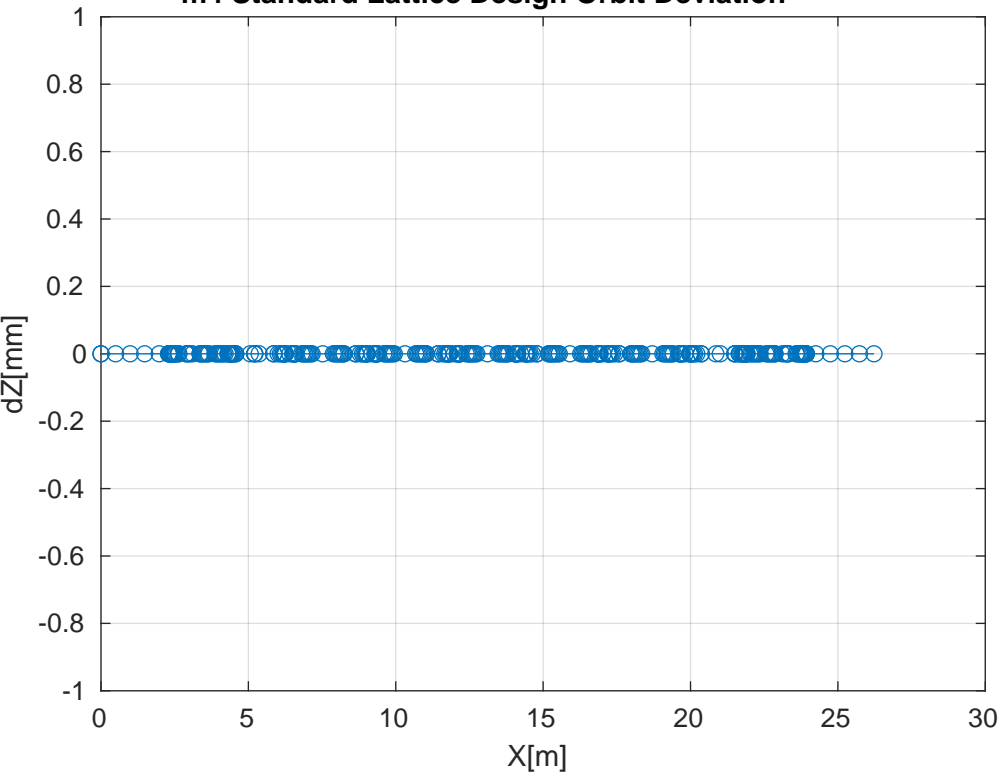
m4 Standard Lattice



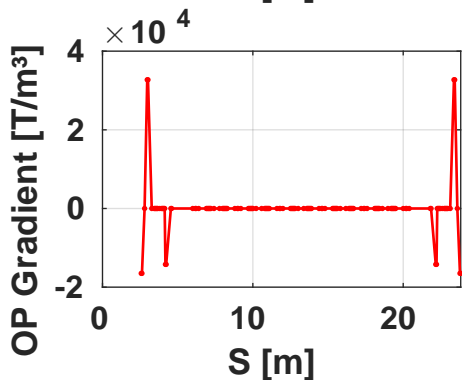
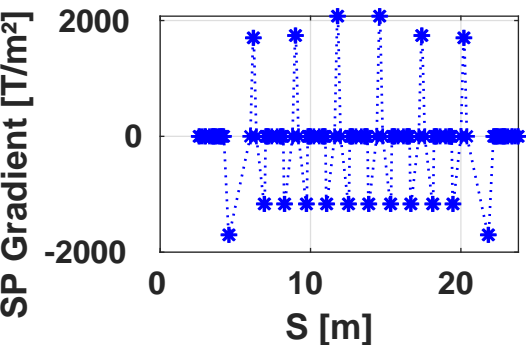
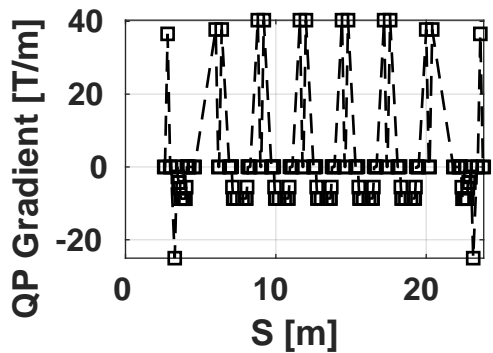
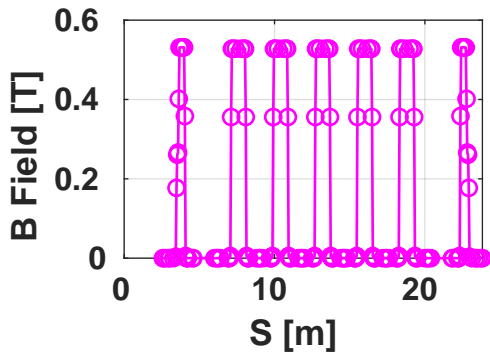
**m4 Standard Lattice Design Orbit Deviation**



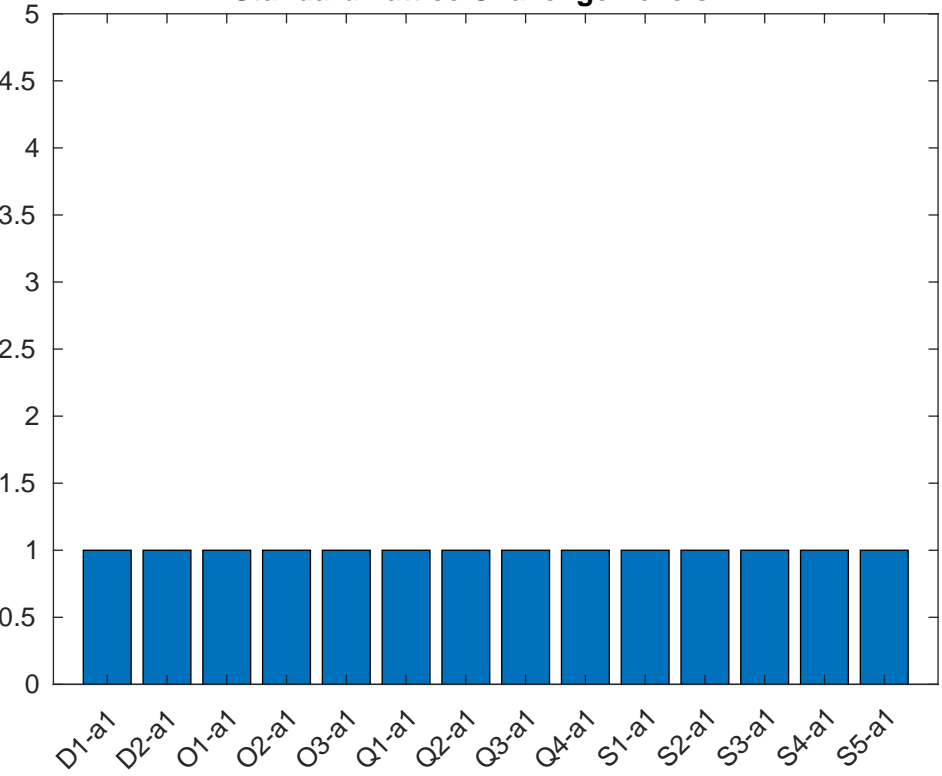
**m4 Standard Lattice Design Orbit Deviation**



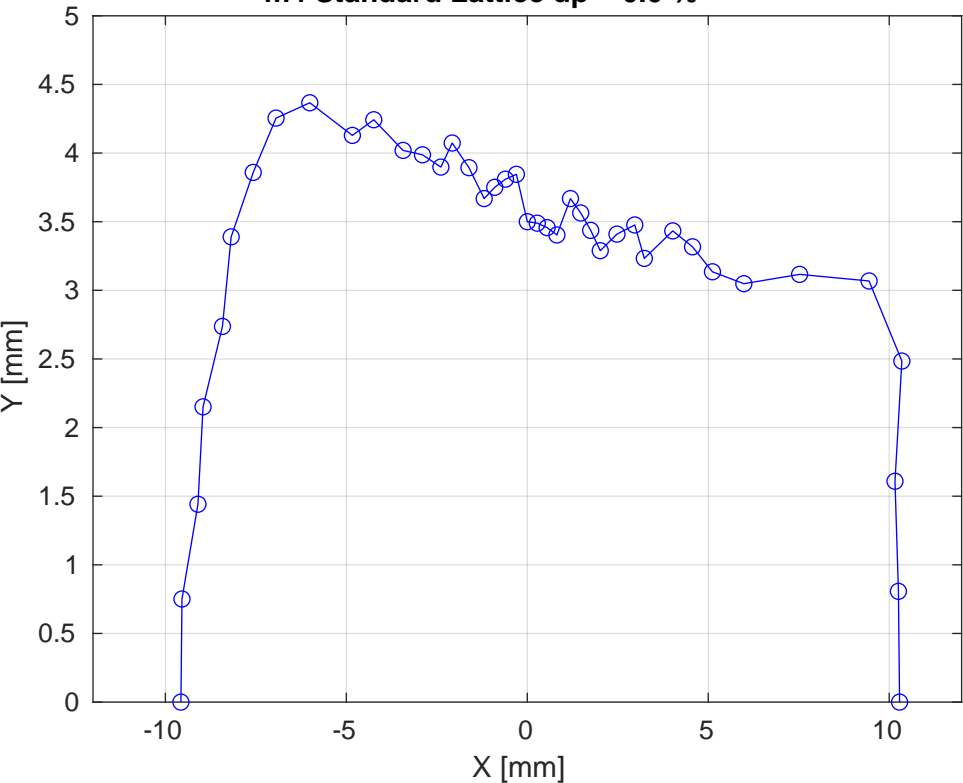
# m4 Standard Lattice



**m4 Standard Lattice Challenge Levels**

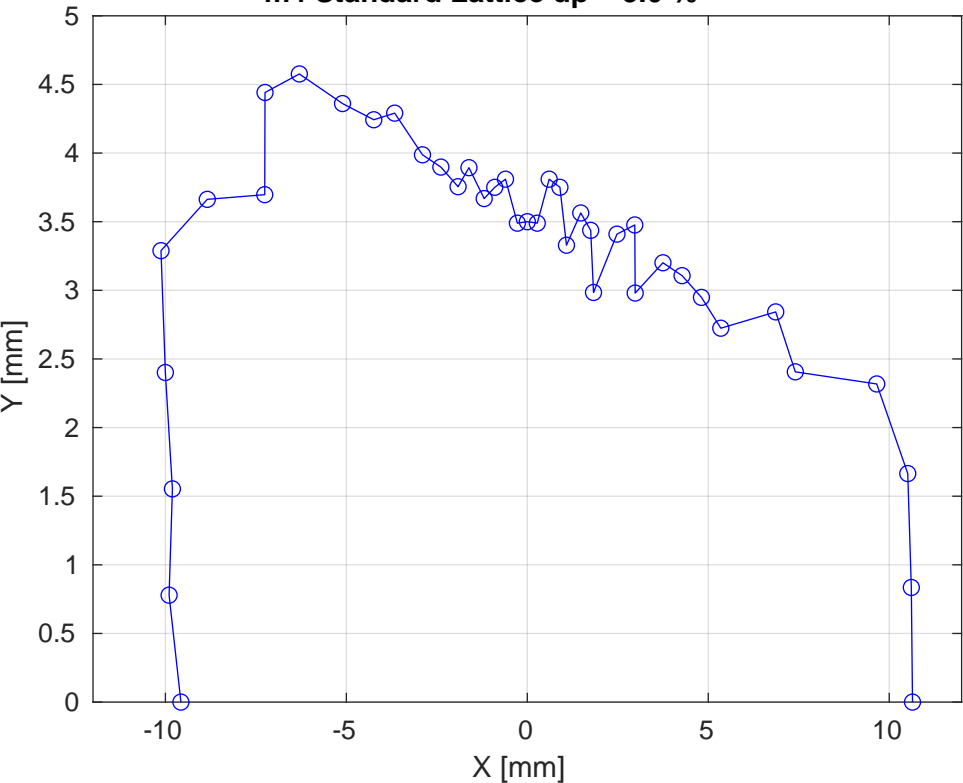


**m4 Standard Lattice dp = 0.0 %**

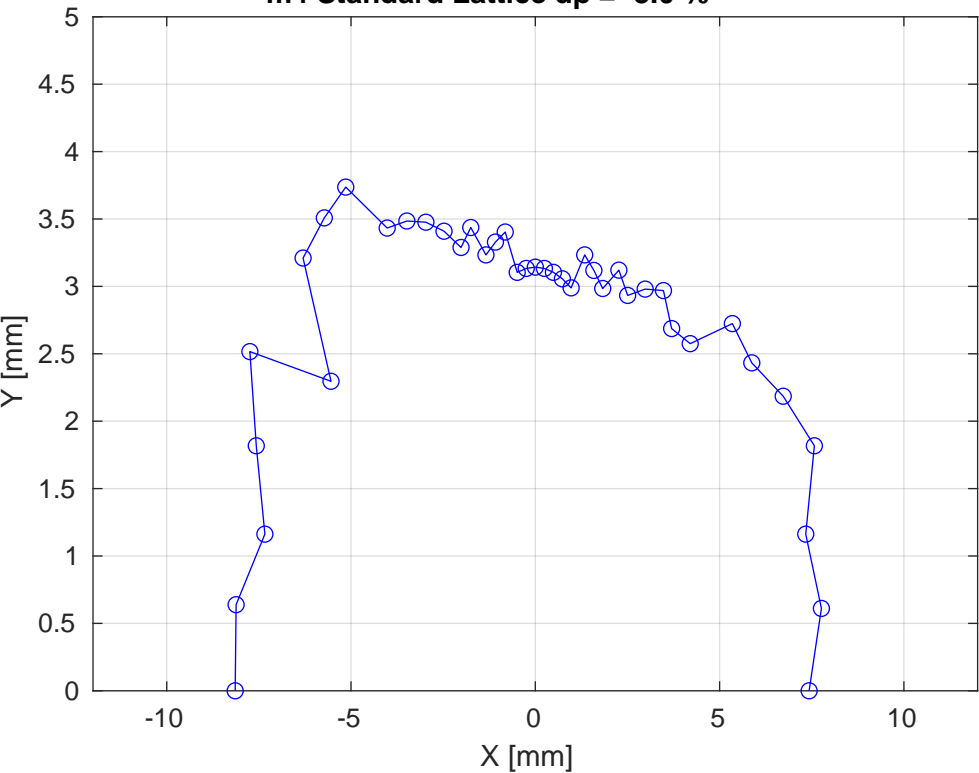




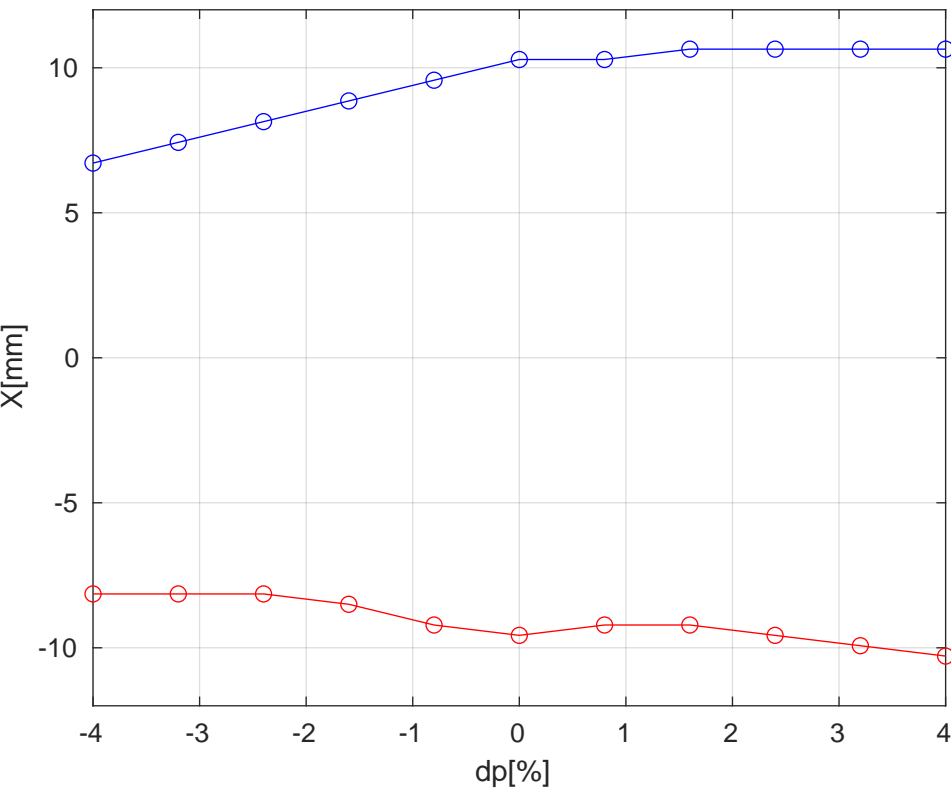
**m4 Standard Lattice dp = 3.0 %**



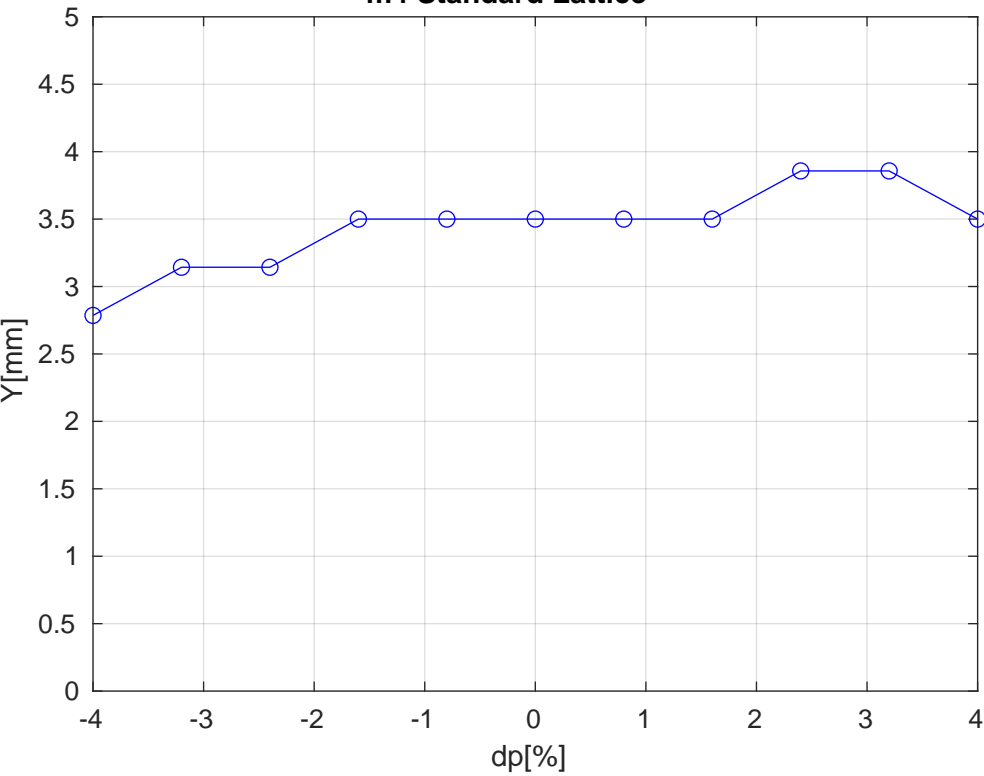
m4 Standard Lattice dp = -3.0 %



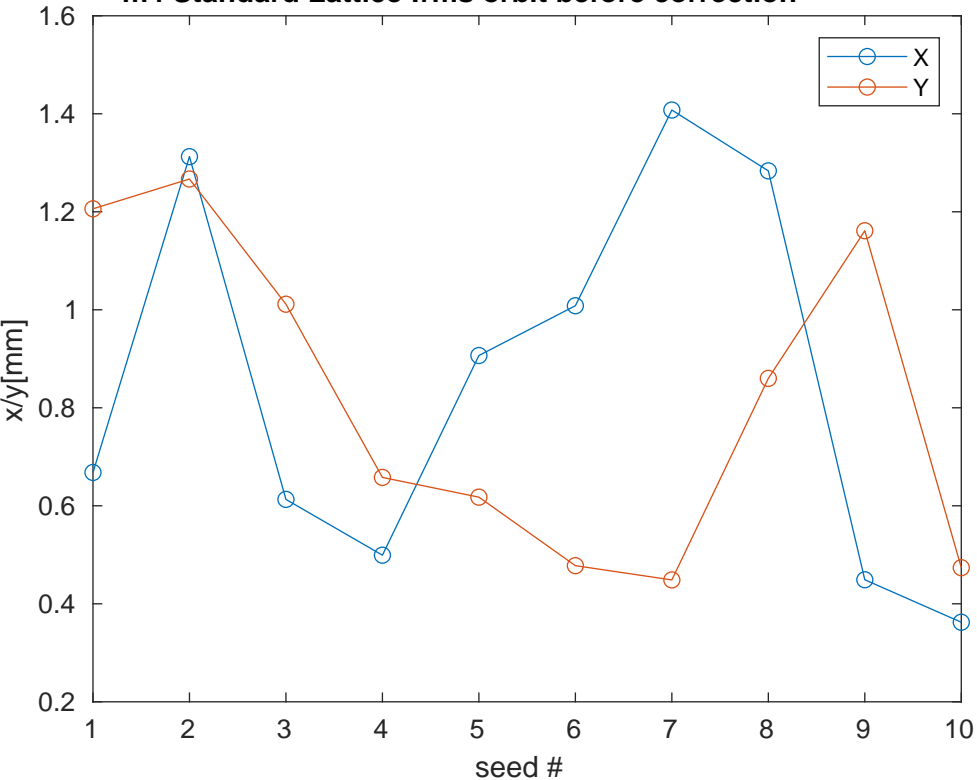
m4 Standard Lattice



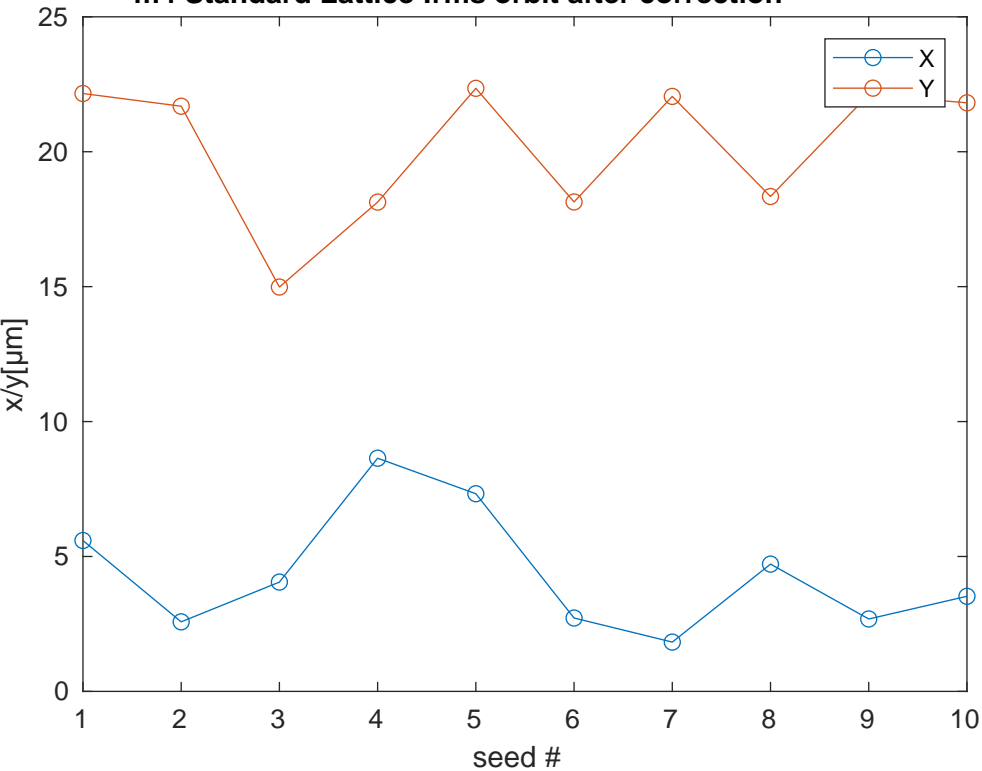
m4 Standard Lattice



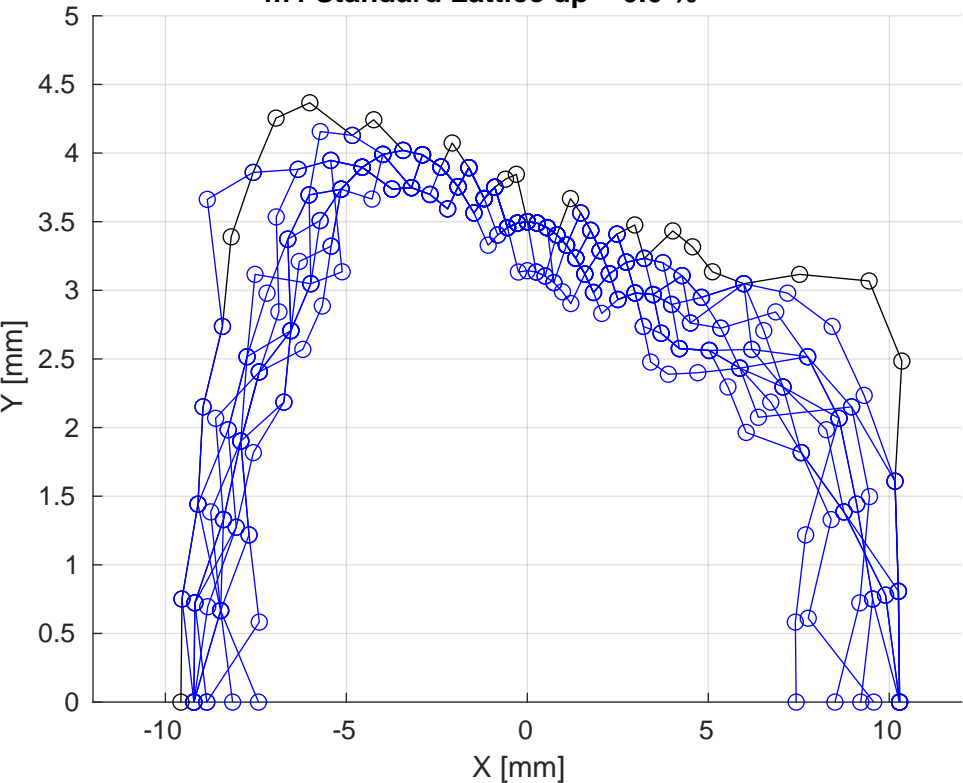
m4 Standard Lattice :rms orbit before correction



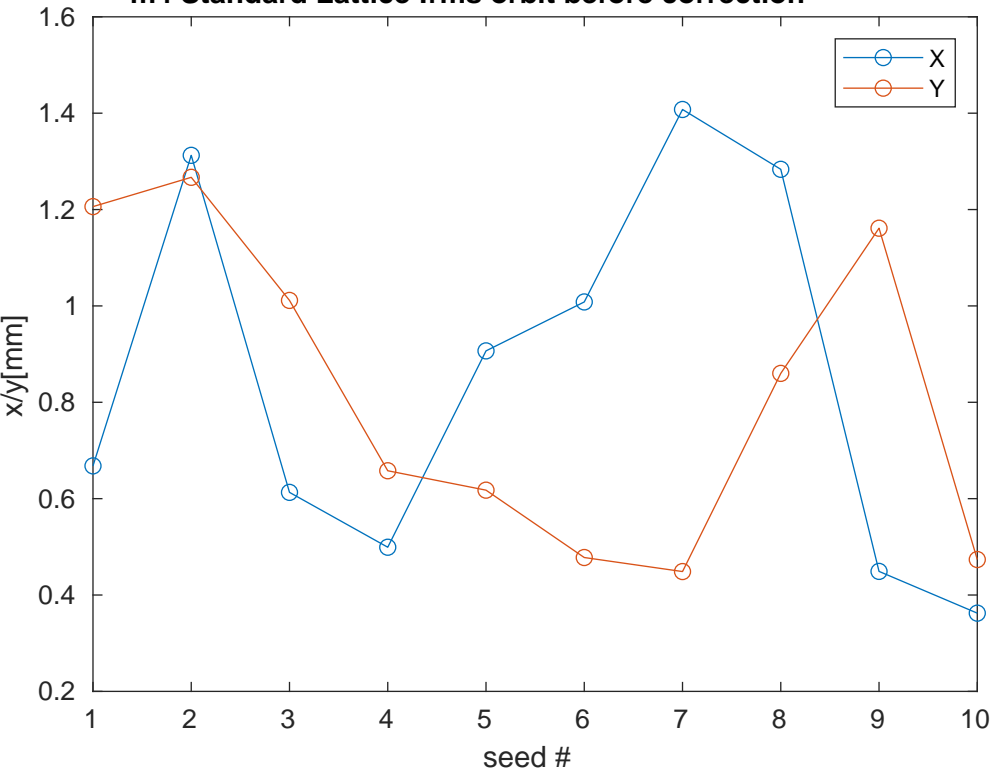
m4 Standard Lattice :rms orbit after correction



**m4 Standard Lattice dp = 0.0 %**

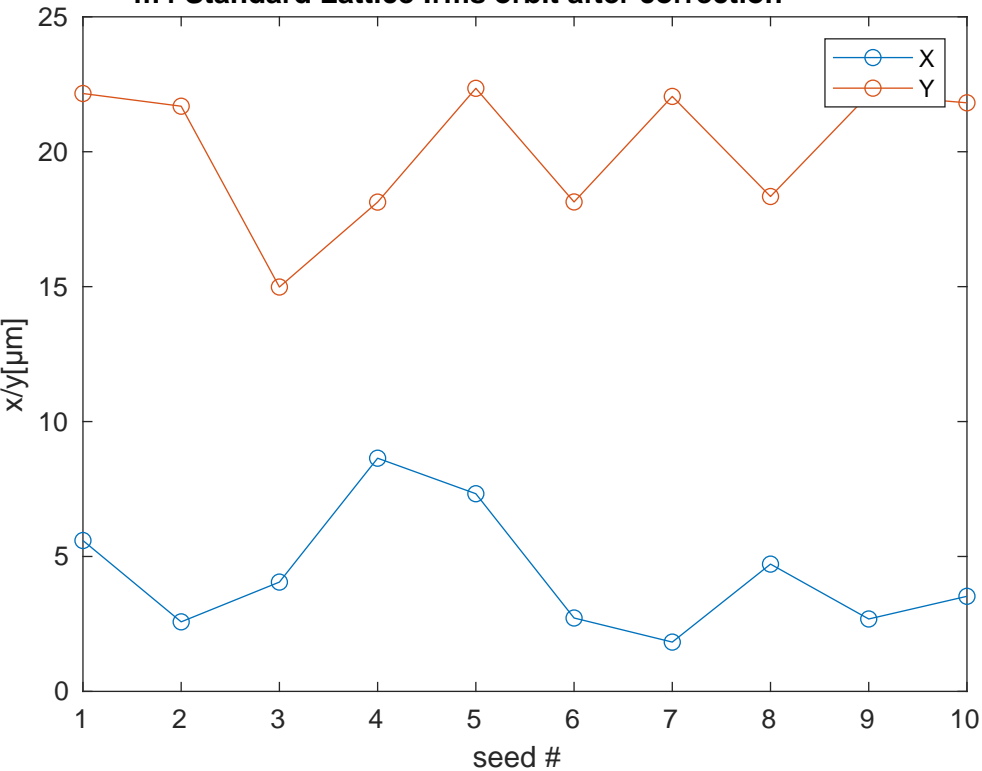


**m4 Standard Lattice :rms orbit before correction**

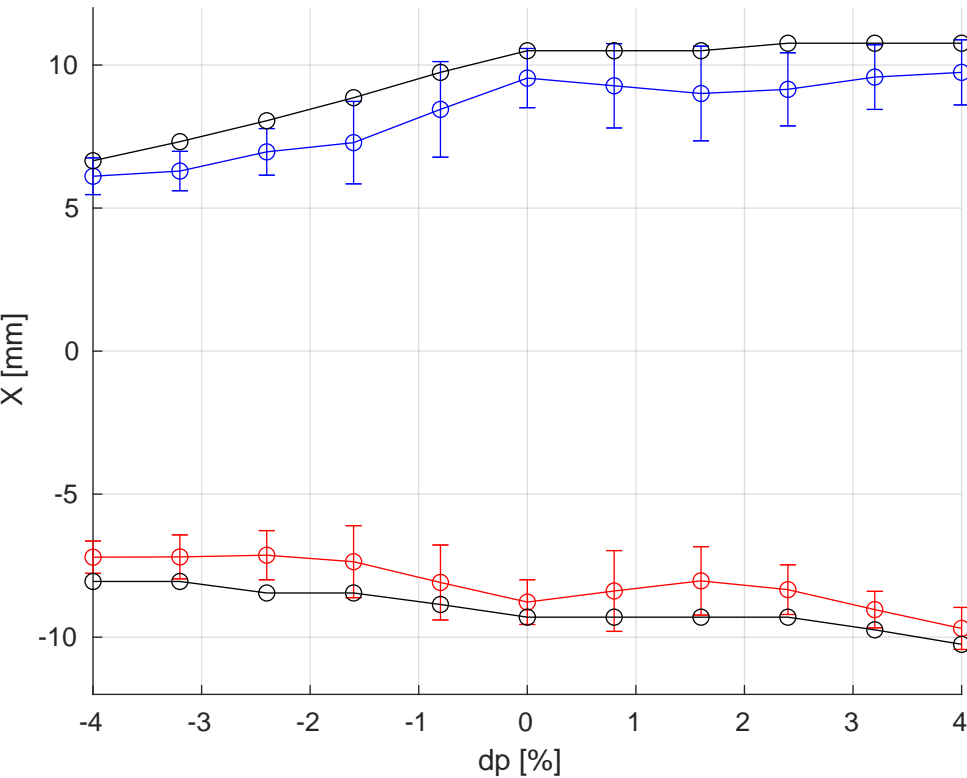




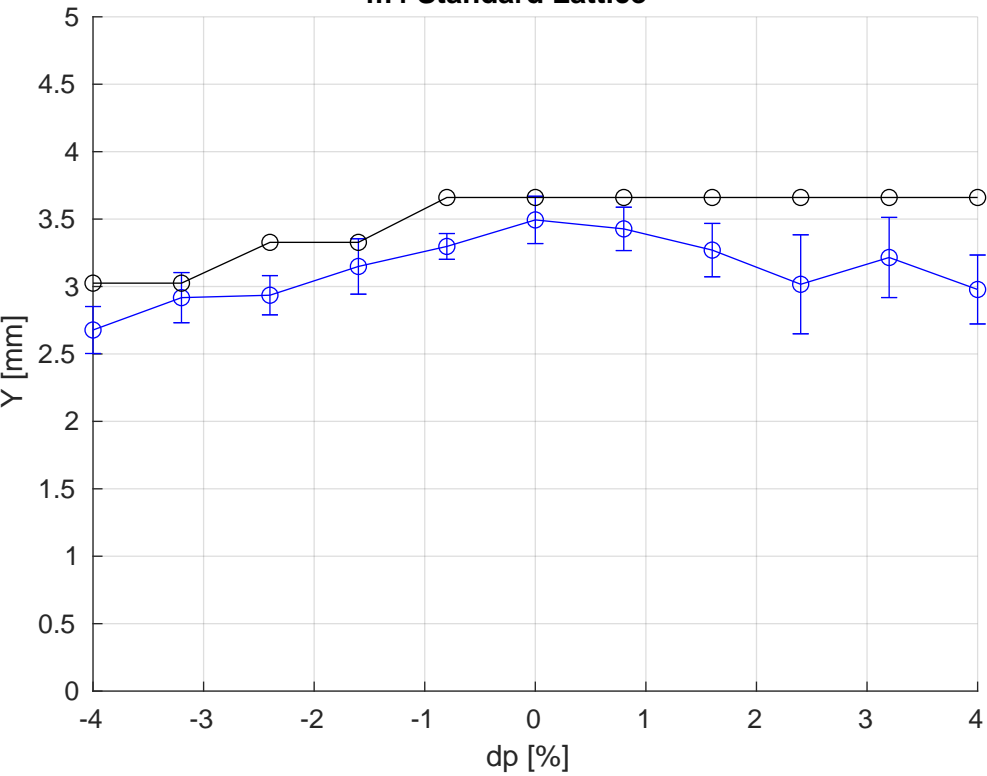
m4 Standard Lattice :rms orbit after correction



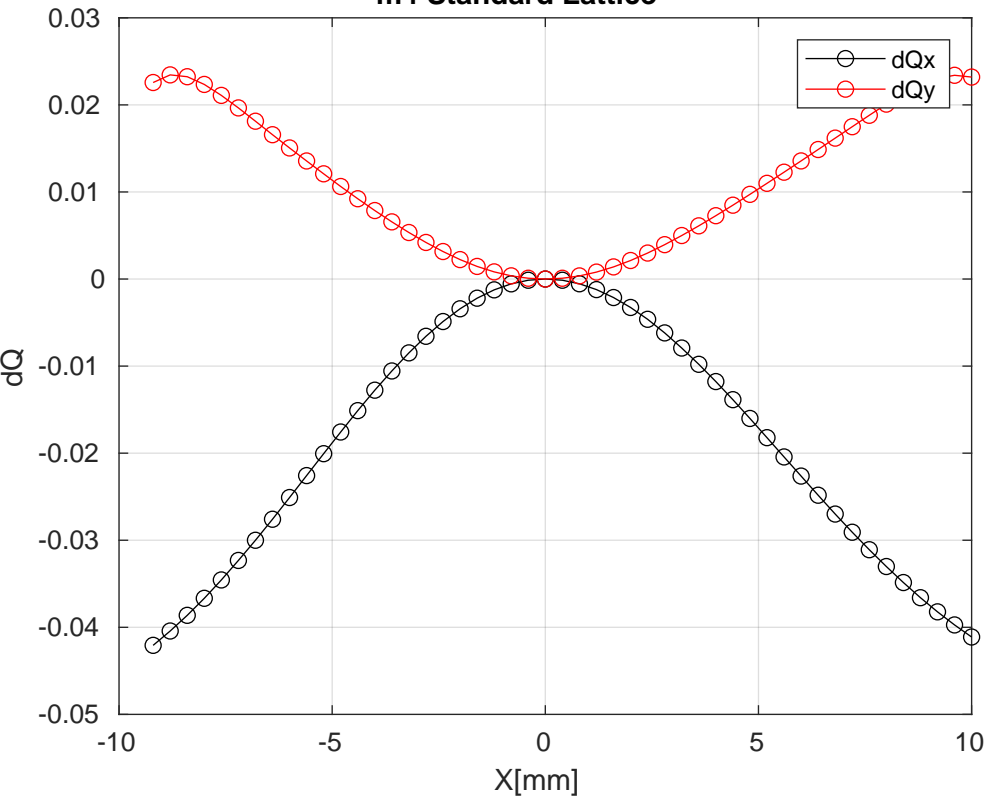
m4 Standard Lattice



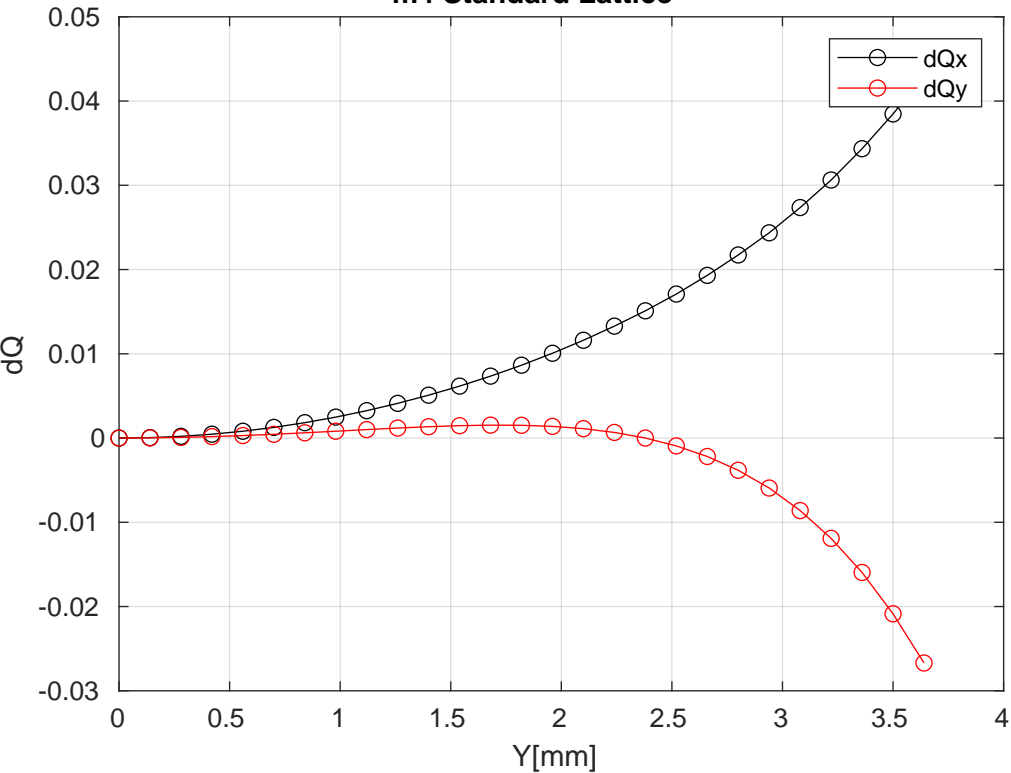
**m4 Standard Lattice**



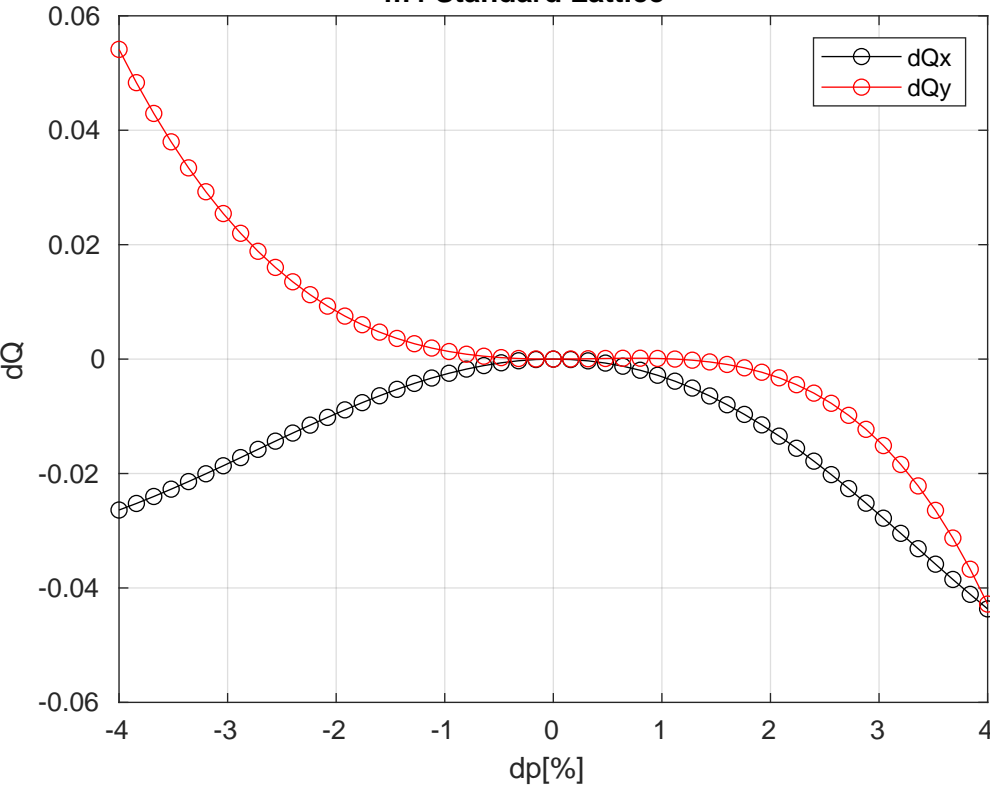
# m4 Standard Lattice



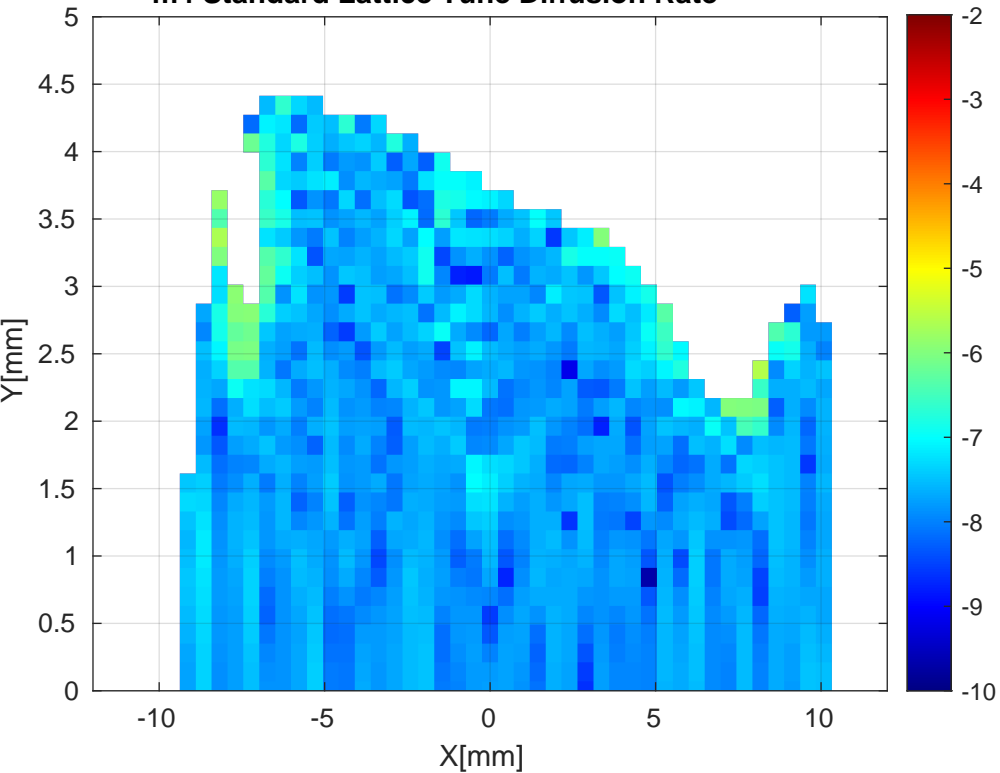
m4 Standard Lattice



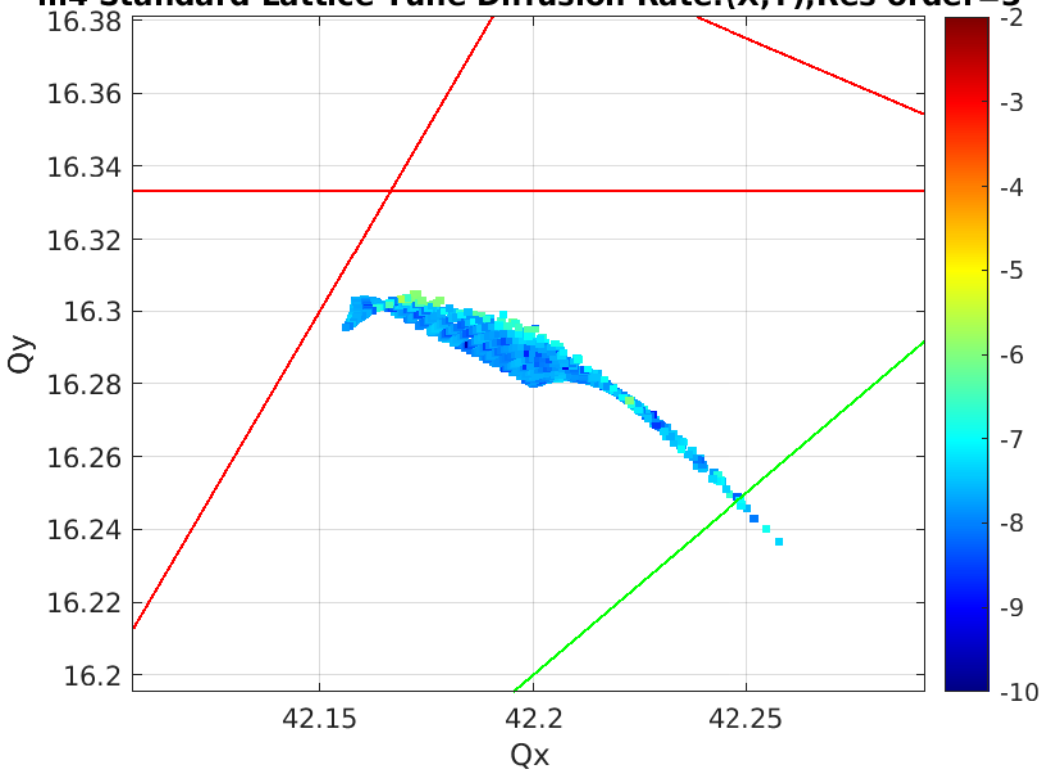
m4 Standard Lattice



m4 Standard Lattice Tune Diffusion Rate

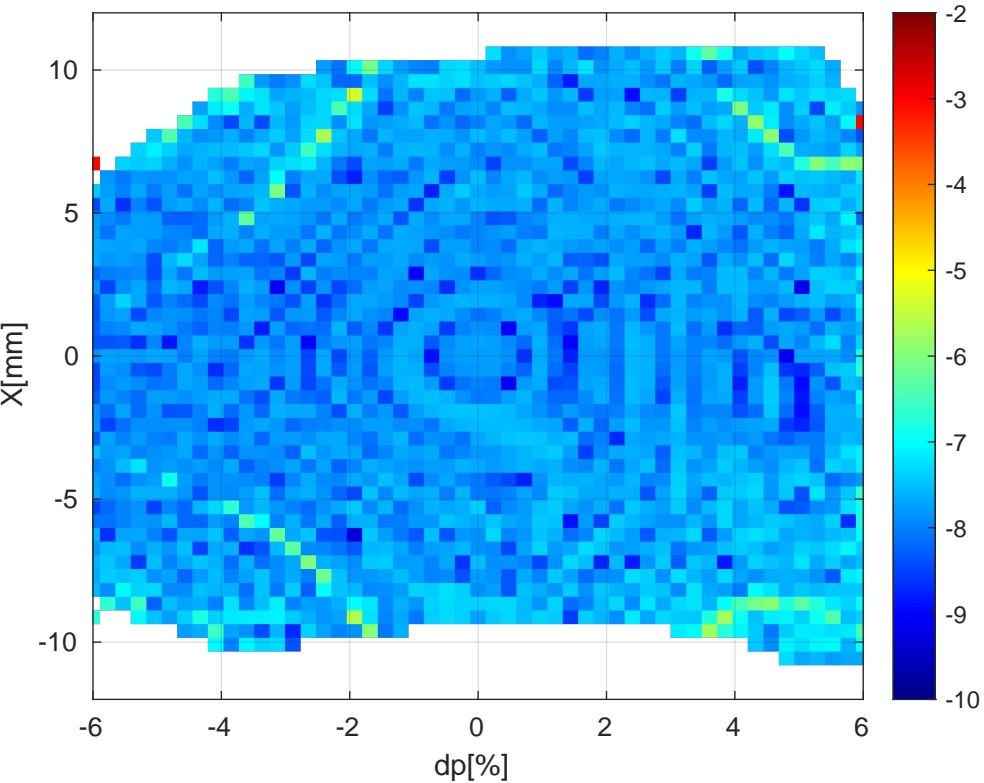


**m4 Standard Lattice Tune Diffusion Rate:(X,Y),Res order=3**

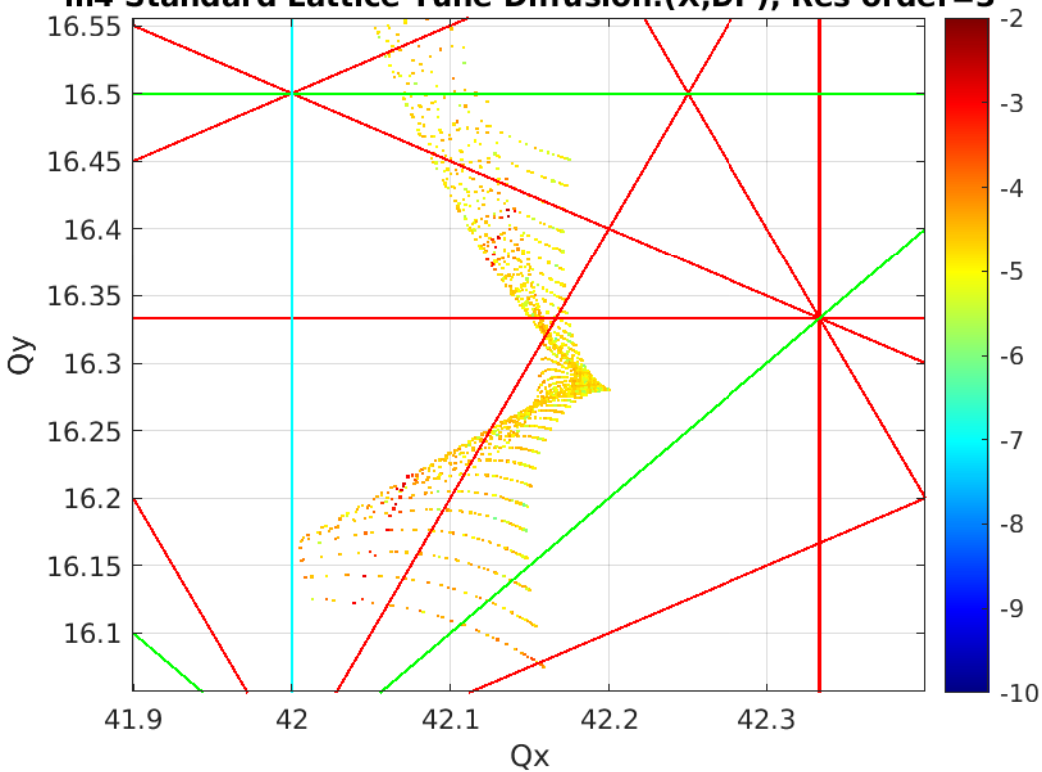




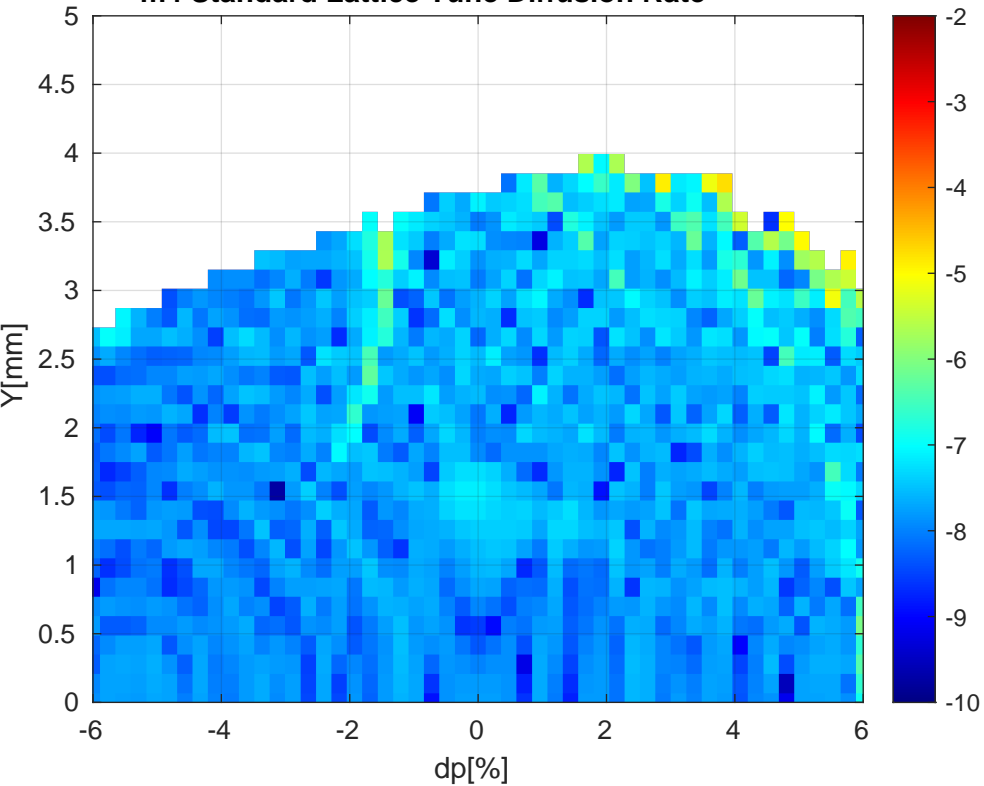
m4 Standard Lattice Tune Diffusion Rate



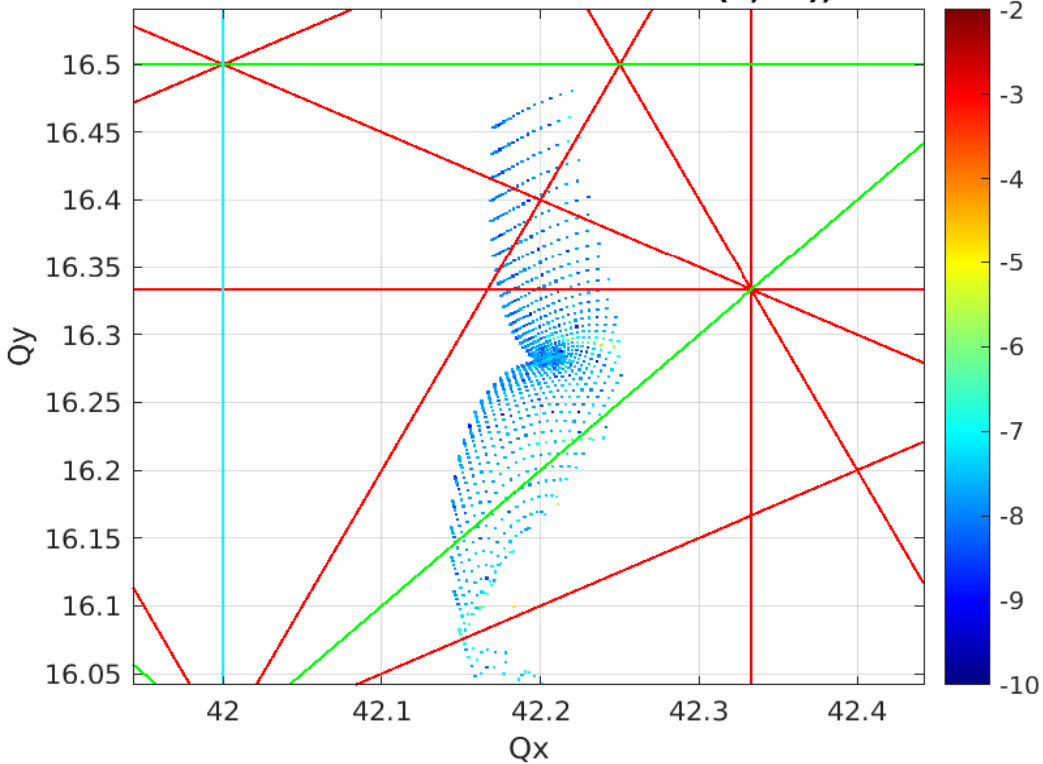
**m4 Standard Lattice Tune Diffusion:(X,DP), Res order=3**



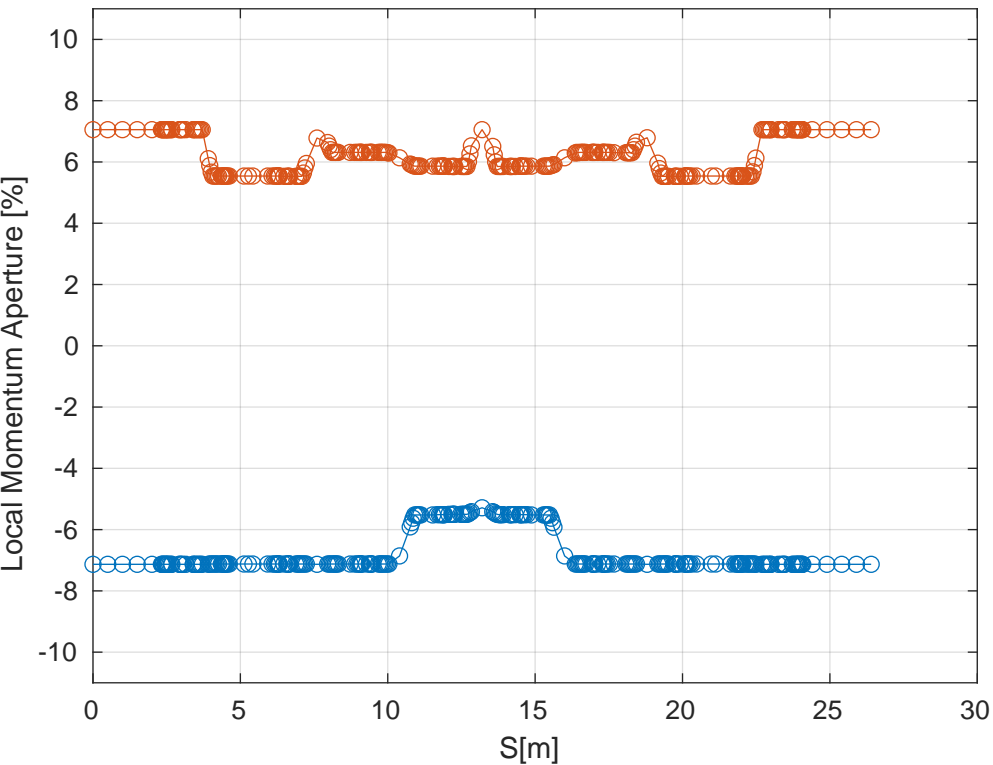
m4 Standard Lattice Tune Diffusion Rate



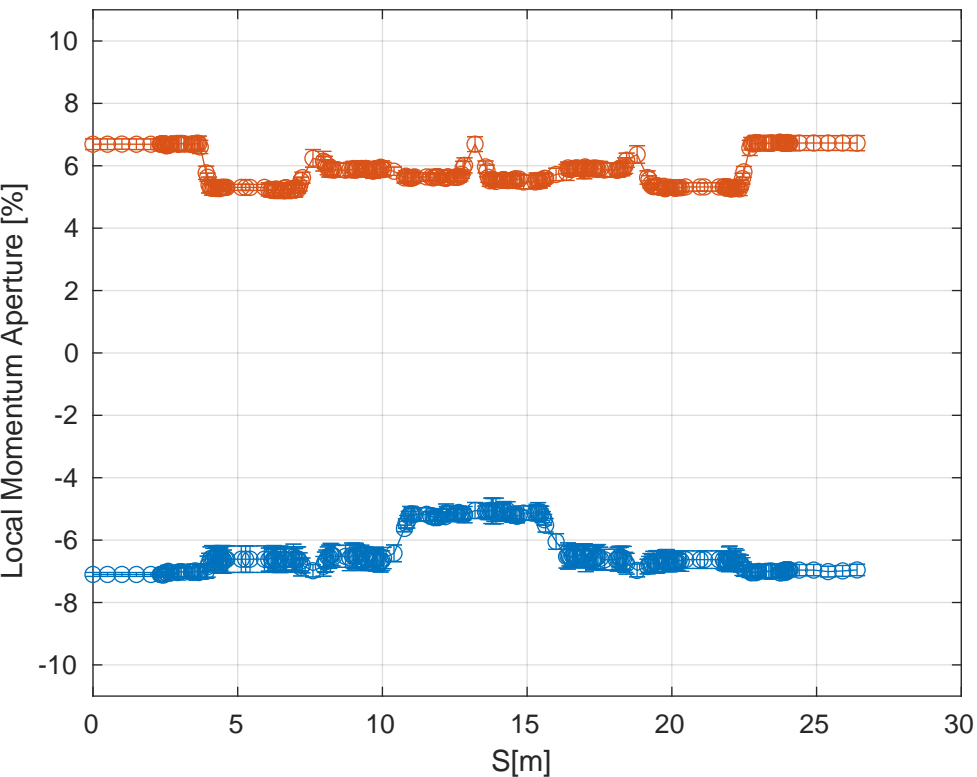
**m4 Standard Lattice Tune Diffusion Rate:(Y,DP),Res order=3**



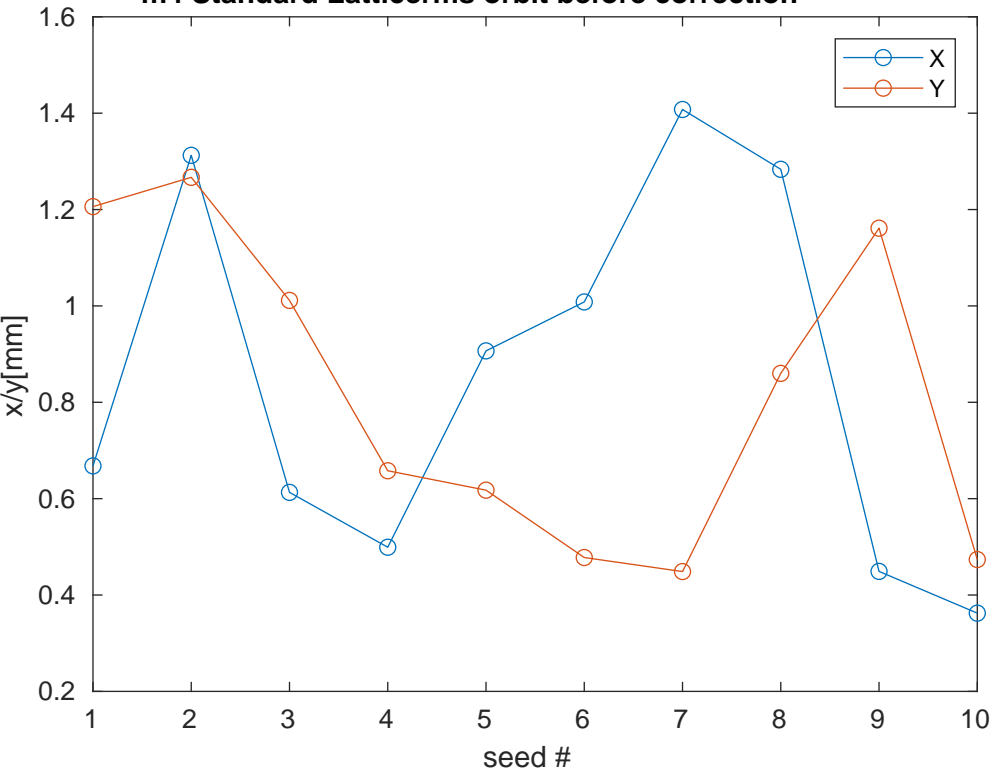
m4 Standard Lattice LMA without errors



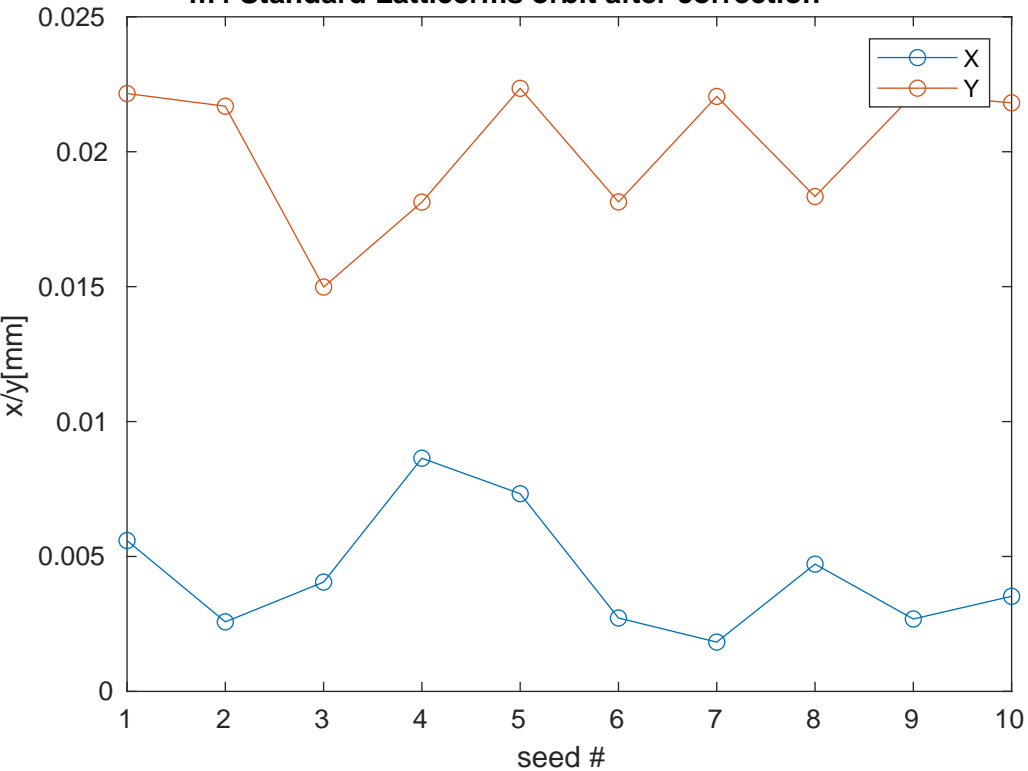
m4 Standard Lattice LMA with errors



m4 Standard Latticermms orbit before correction

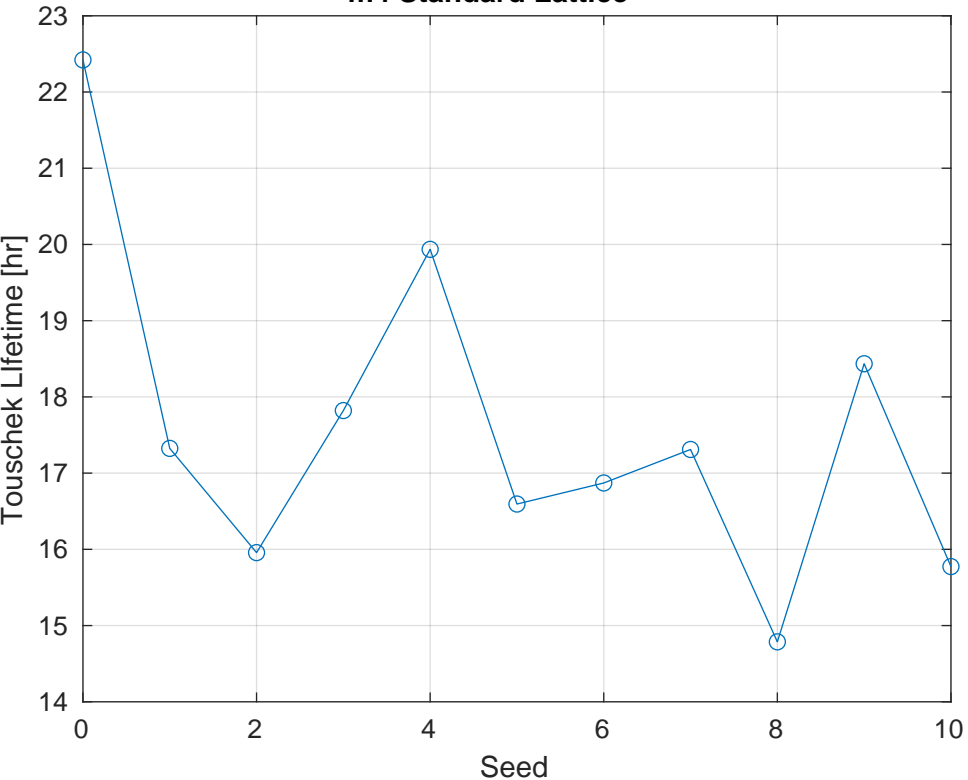


m4 Standard Latticterms orbit after correction

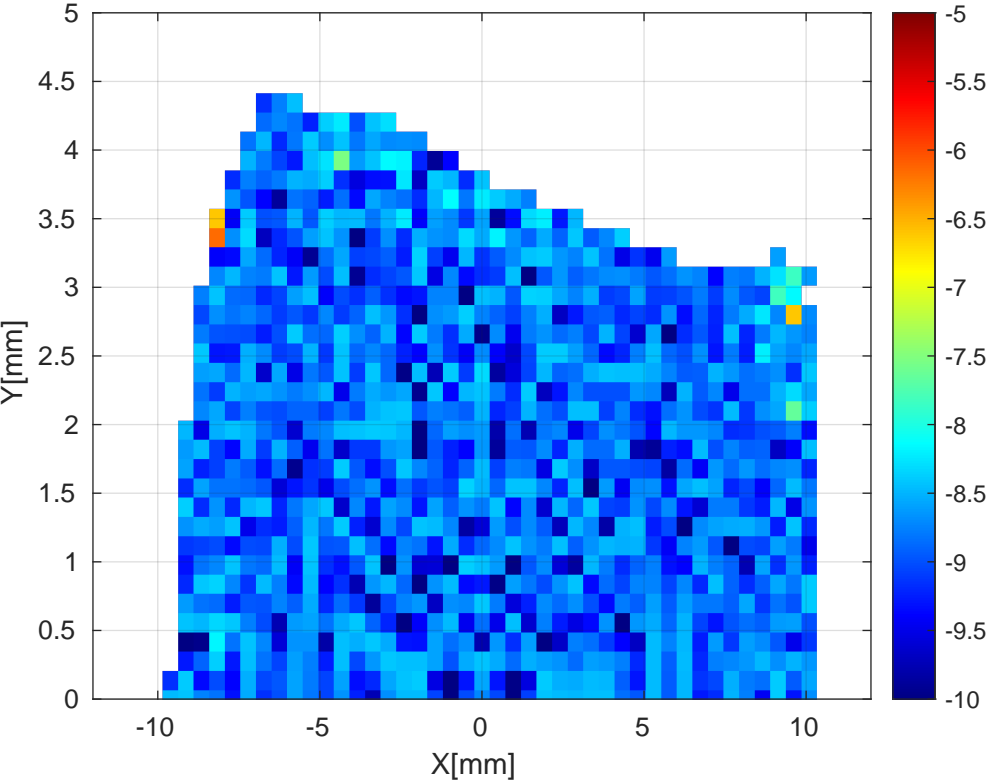




m4 Standard Lattice



m4 Standard Lattice: no errors Tune Diffusion Rate



m4 Standard Lattice: with errors Tune Diffusion Rate

