WARP Simulation of Proton Beam in IOTA – full space charge (Preliminary)

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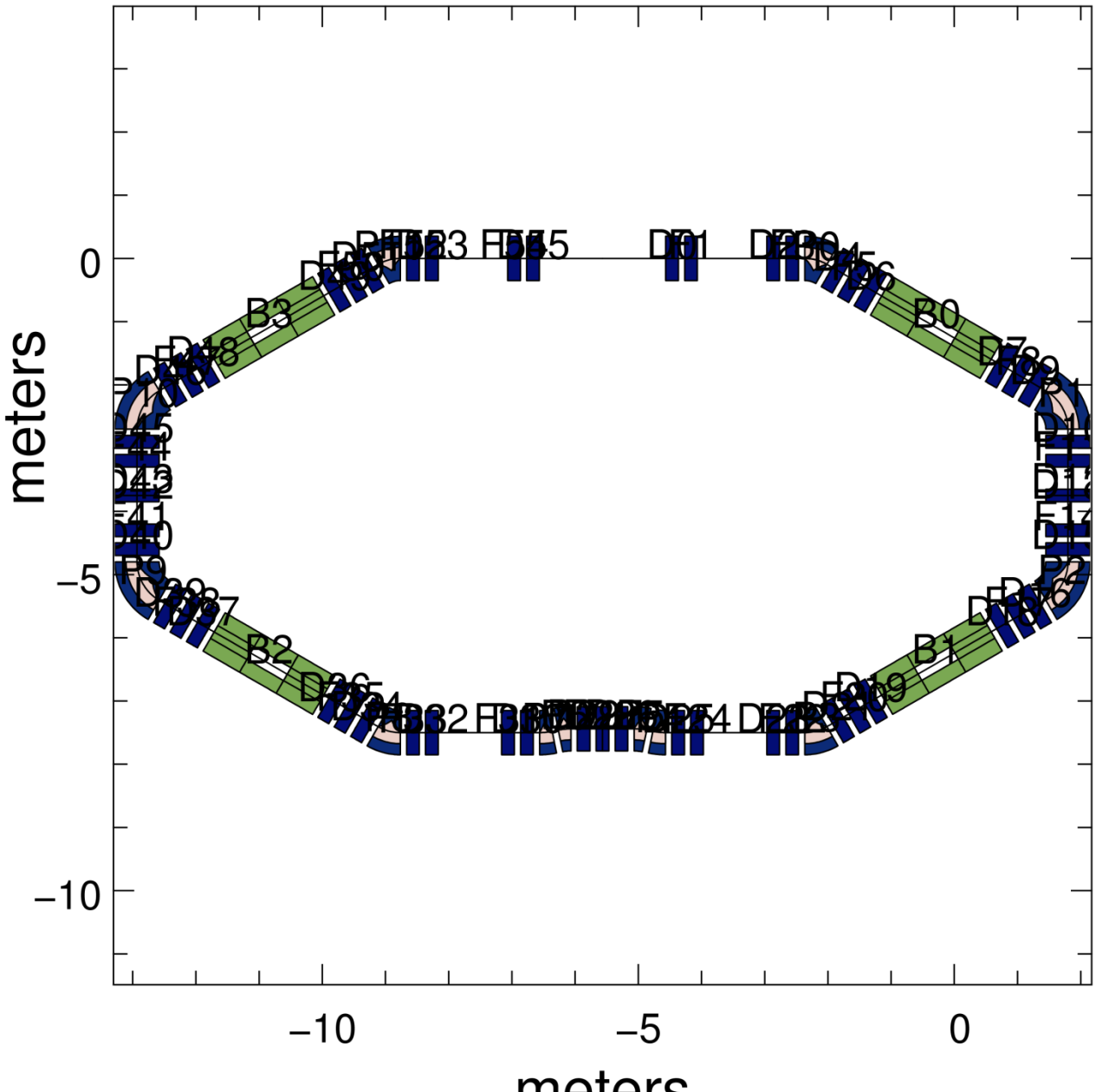
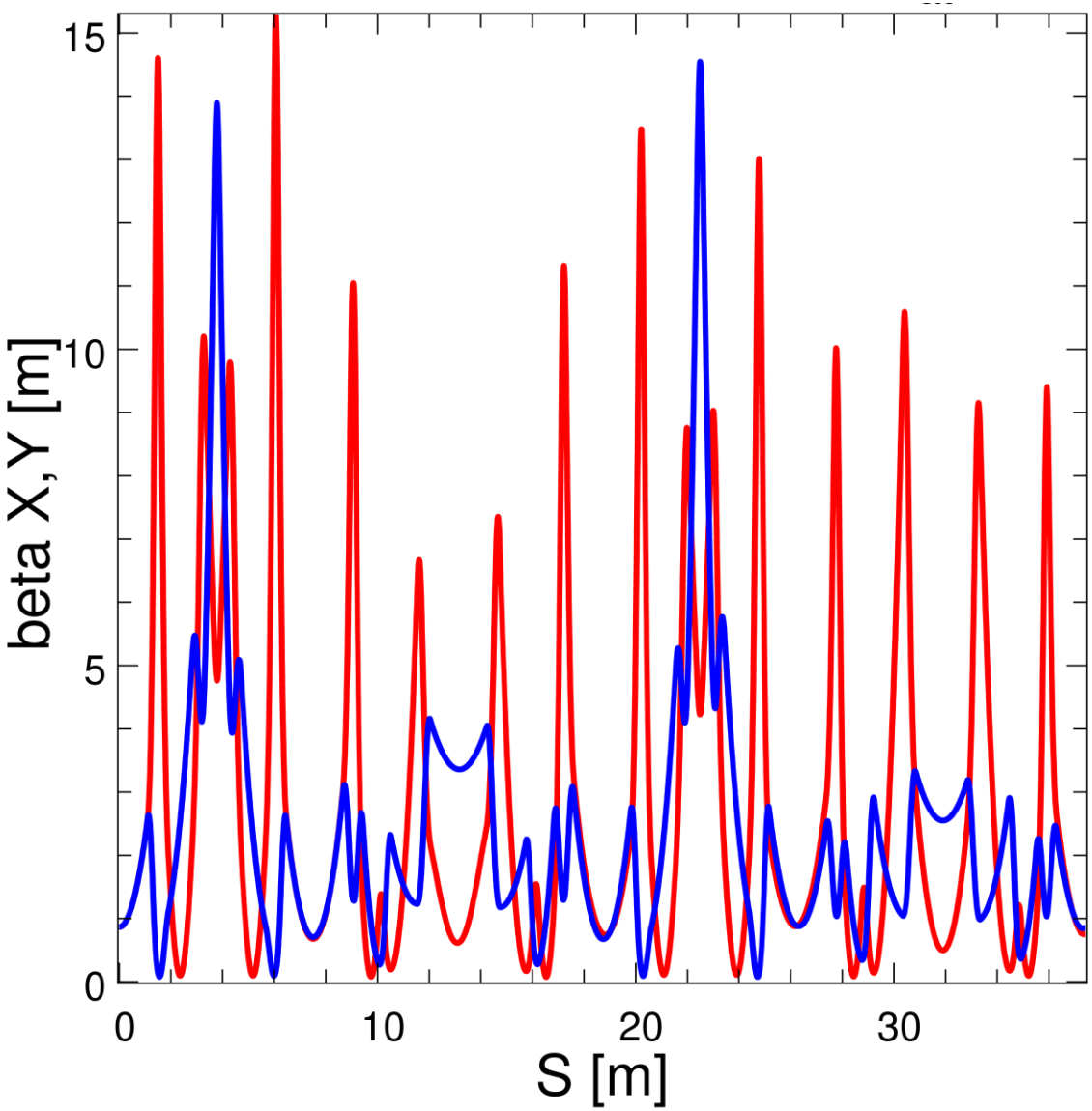
WARP Simulation of IOTA



Matched solution with space charge



2.5 MeV protons
14.1 mA
2.5 μm rms unnormalized

Slight mismatch remains

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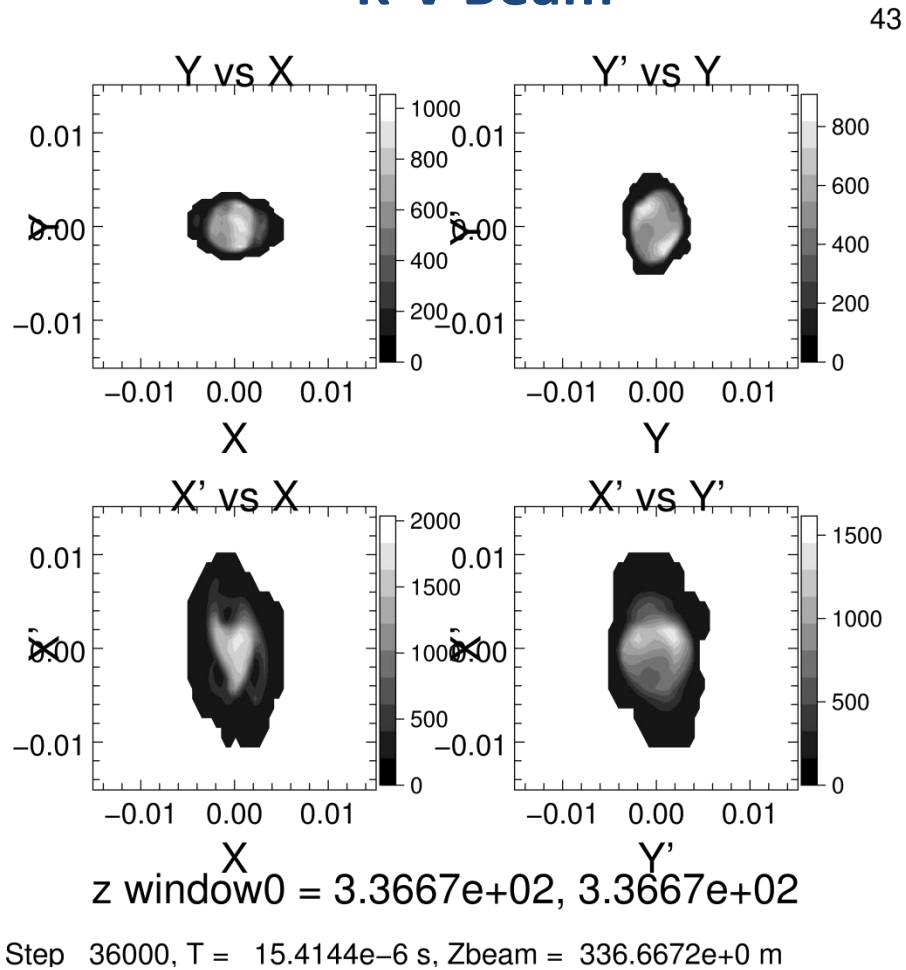
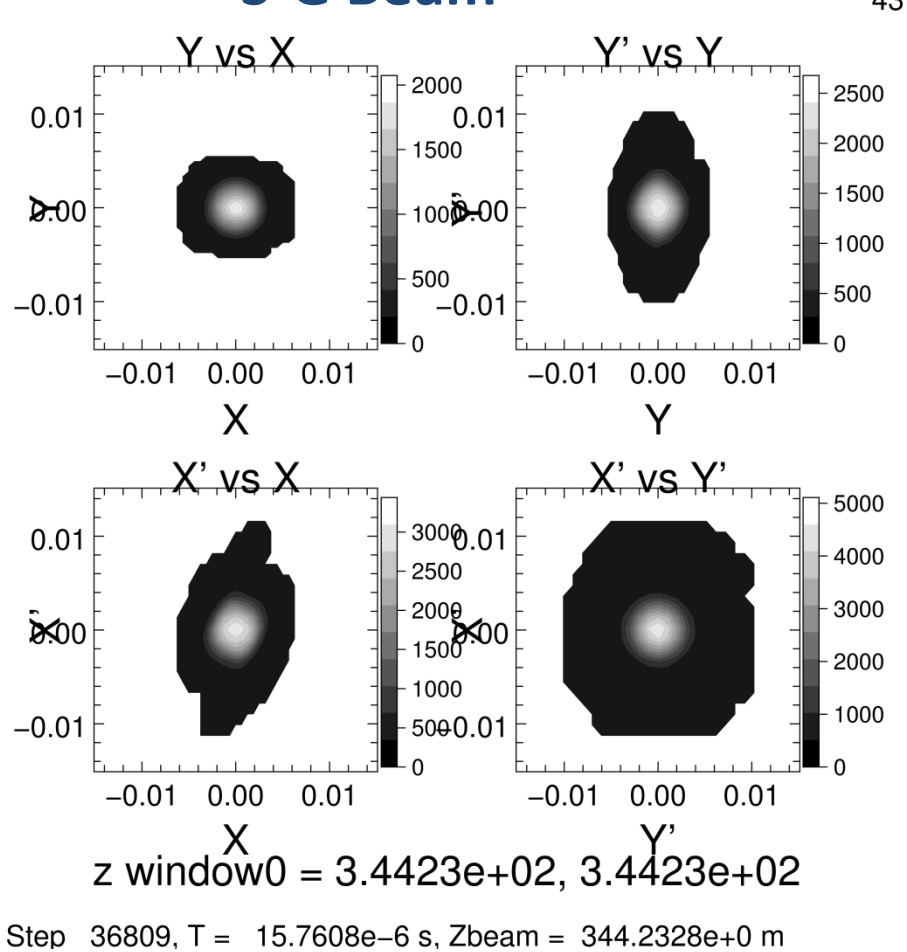
KV Instability observed, not present for semi-Gaussian (SG)

K-V Beam



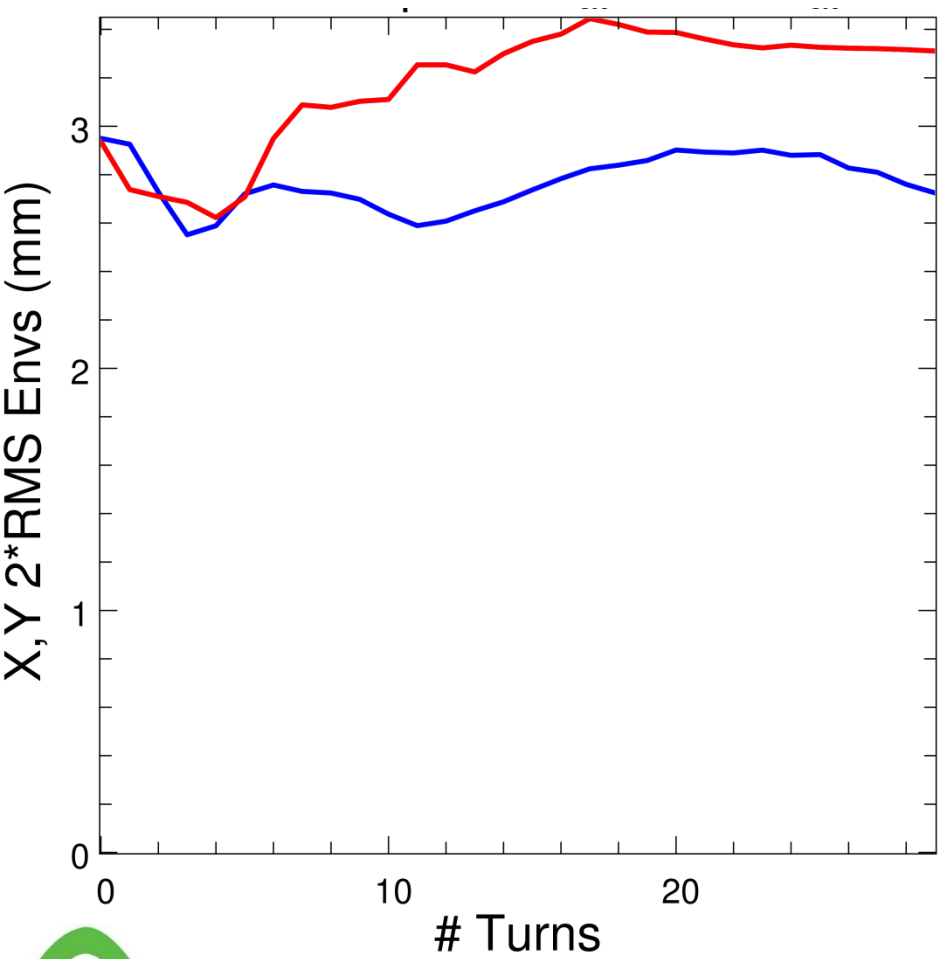
S-G Beam



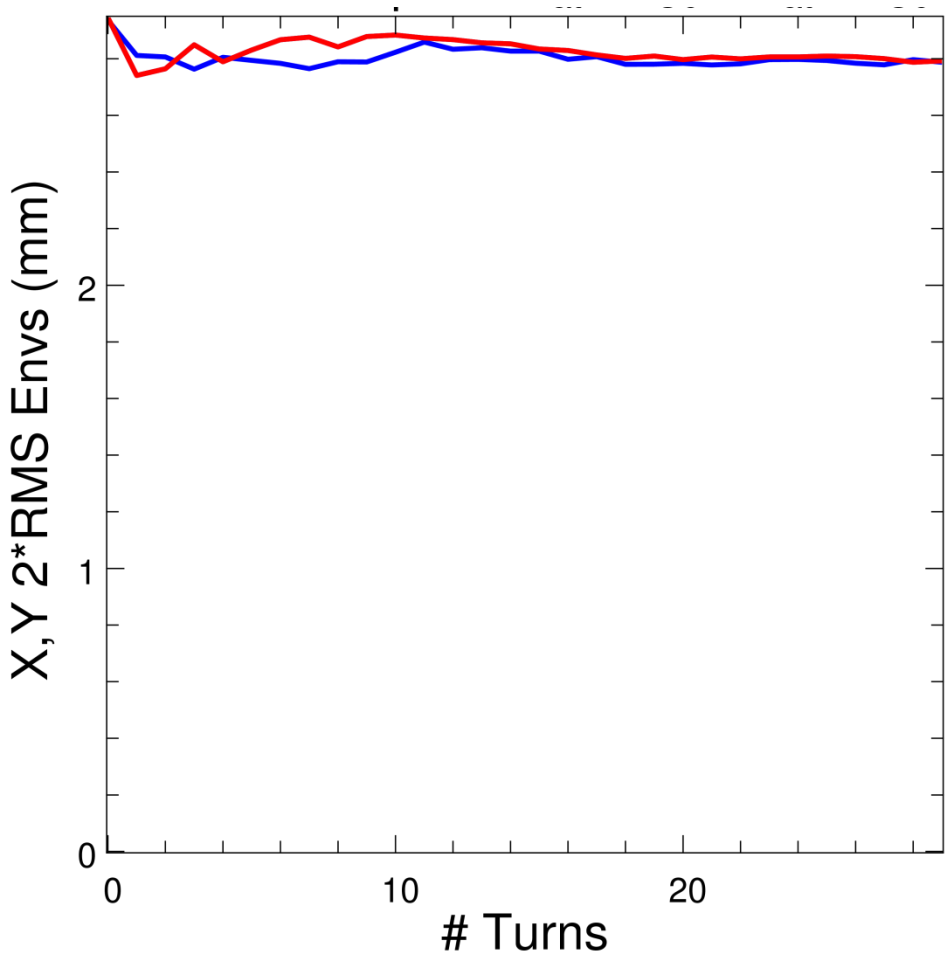
Trace space after about 10 turns

Beam Envelopes

K-V Beam

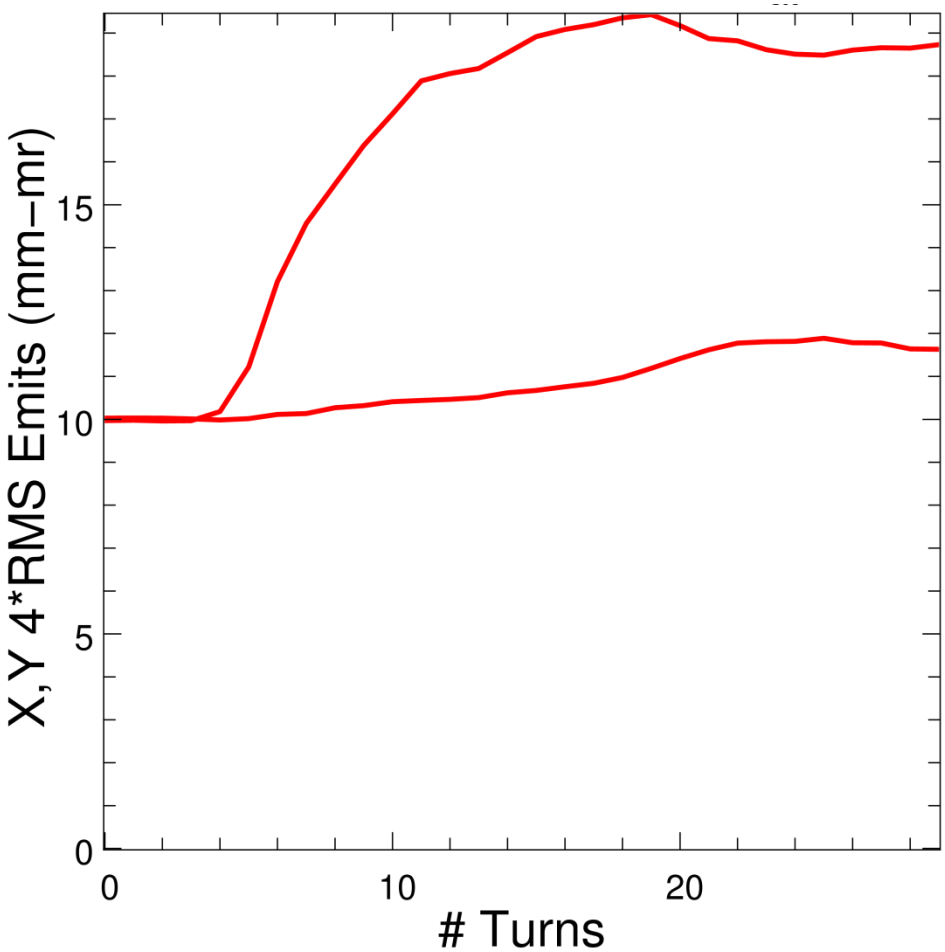
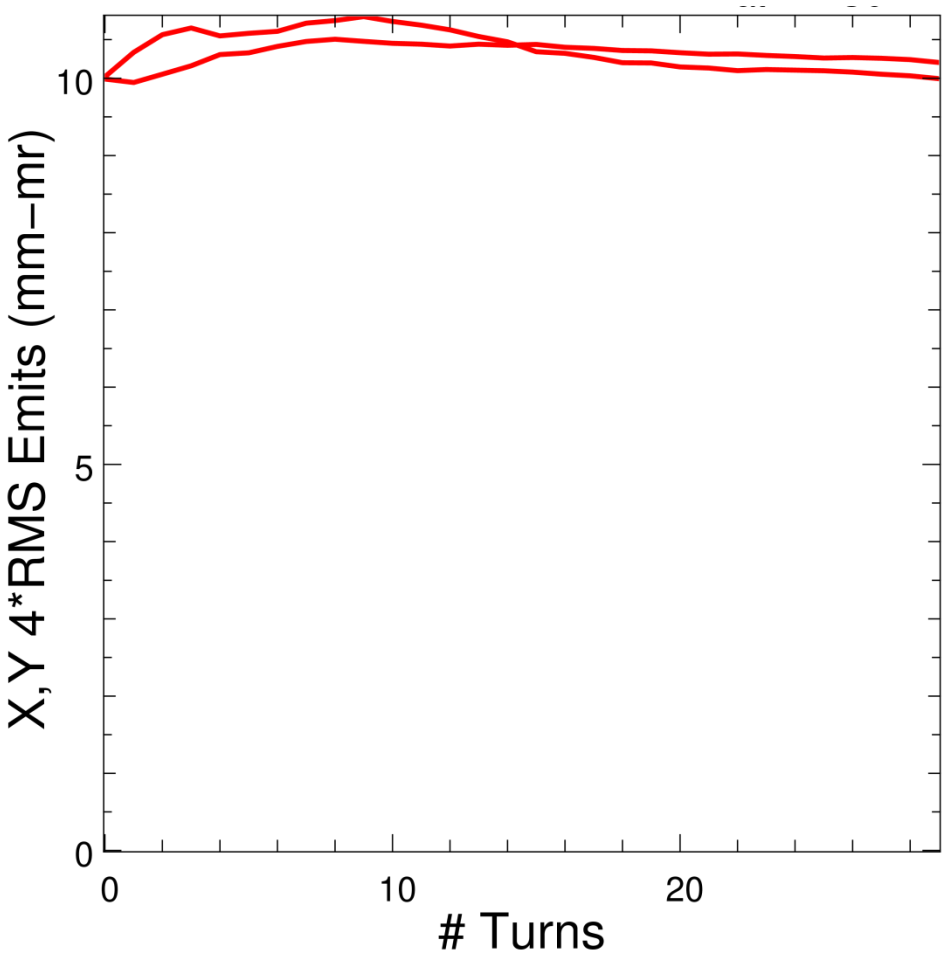


S-G Beam



Emittance Growth

K-V Beam



S-G Beam