Particles that would be cut by a 4 sigma collimator 0 compensation
  RMS emittance growth 1.9

integrated particles cut at 4 sigma

16M initial particles
>10% cut at 4 sigma

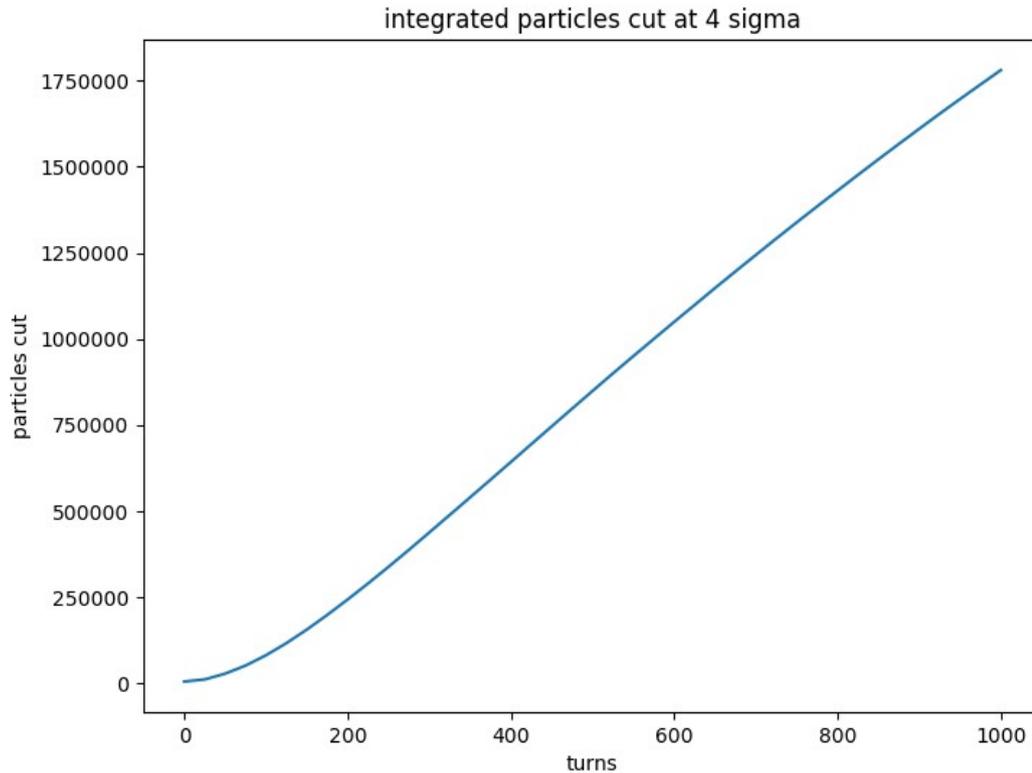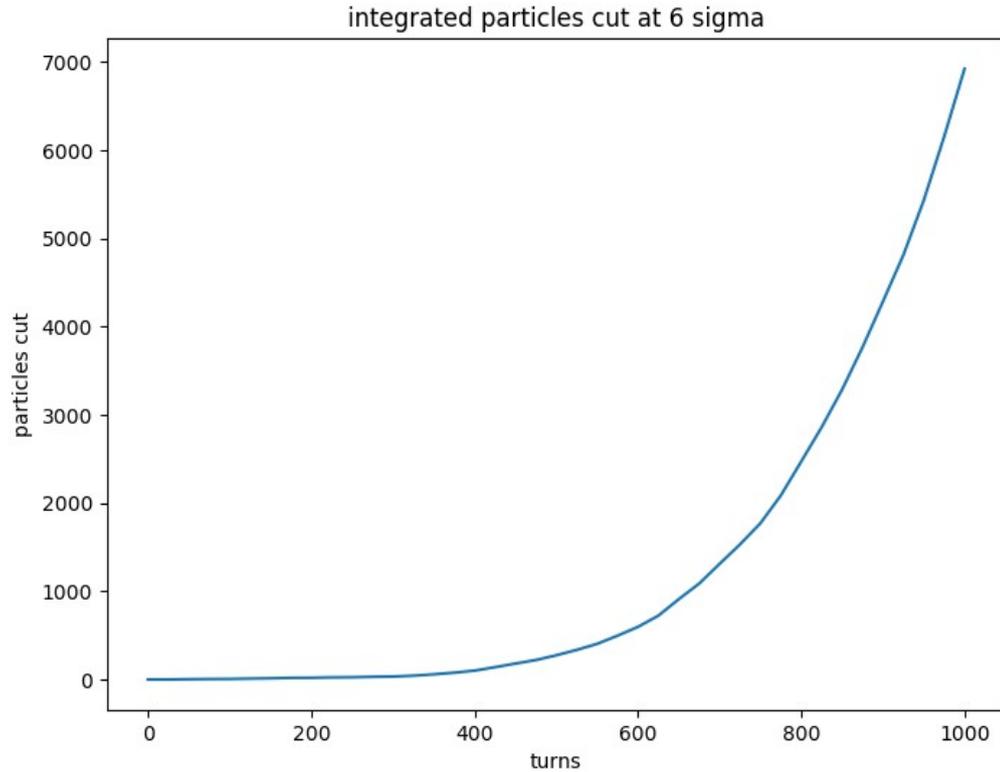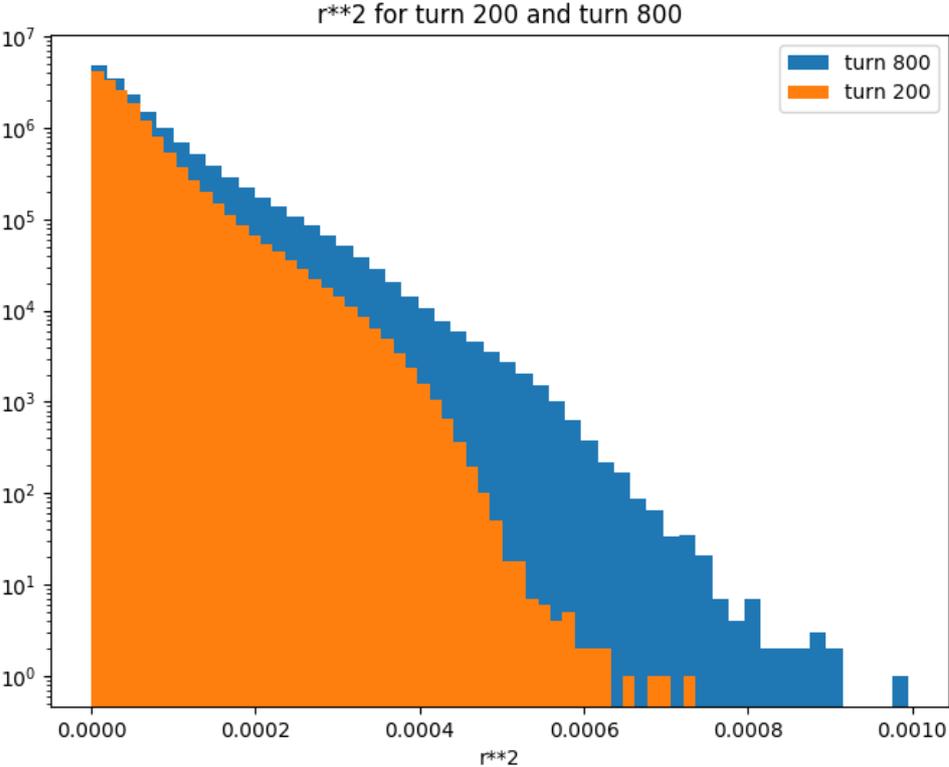# Particles that would be cut by a 6 sigma collimator 0 compensation
RMS emittance growth 1.9

16M initial particles
0.04% cut at 6 sigma

Evolution of r**2 distribution no compensation

r**2 for turn 200 and turn 800

R**2
4 sigma: 0.00028
6 sigma: 0.00062

Particles that would be cut by a 4 sigma collimator 4.4 (best) compensation
RMS emittance growth 1.07

16M initial particles
< 1% cut at 4 sigma

Particles that would be cut by a 6 sigma collimator 4.4 (best) compensation
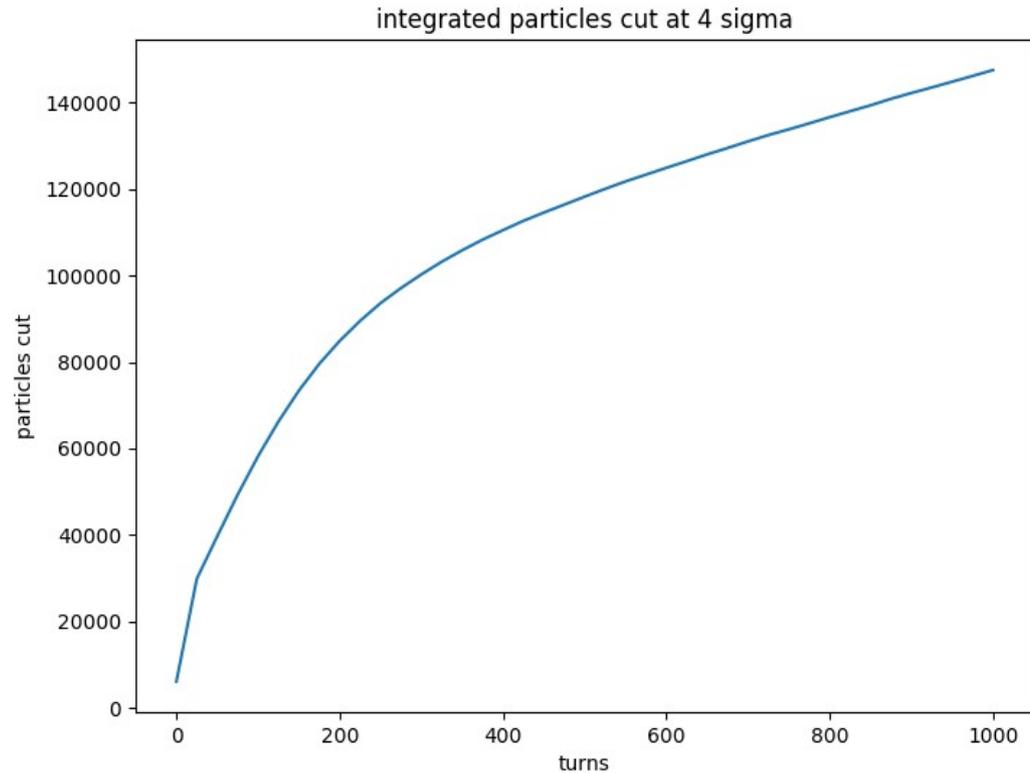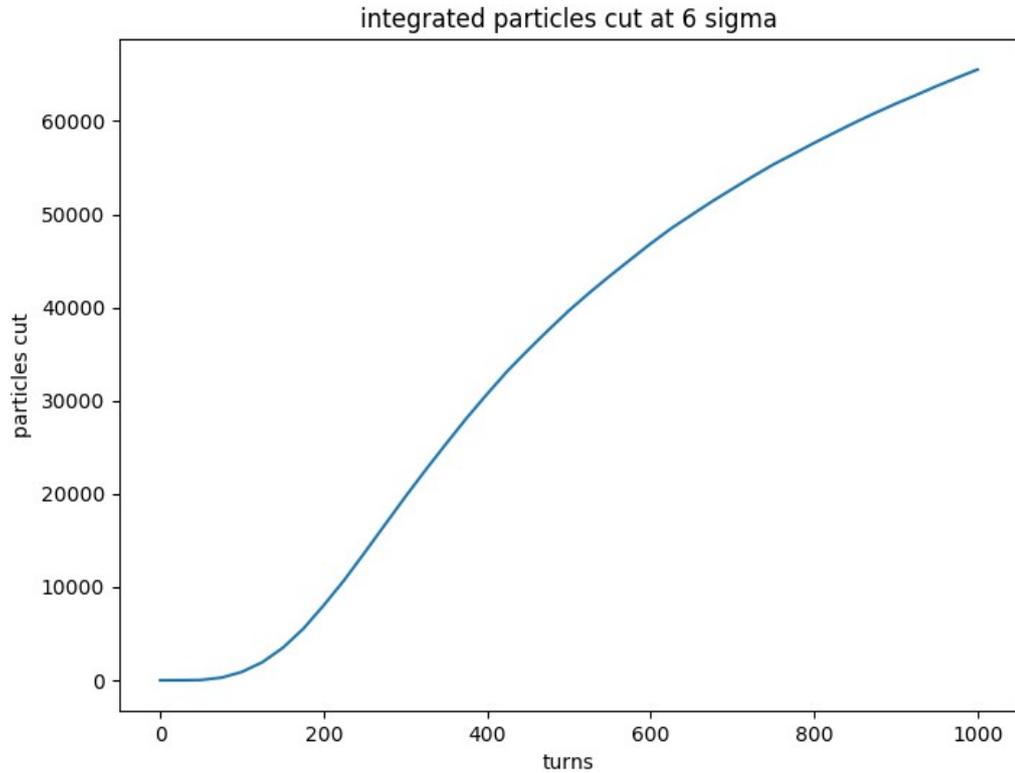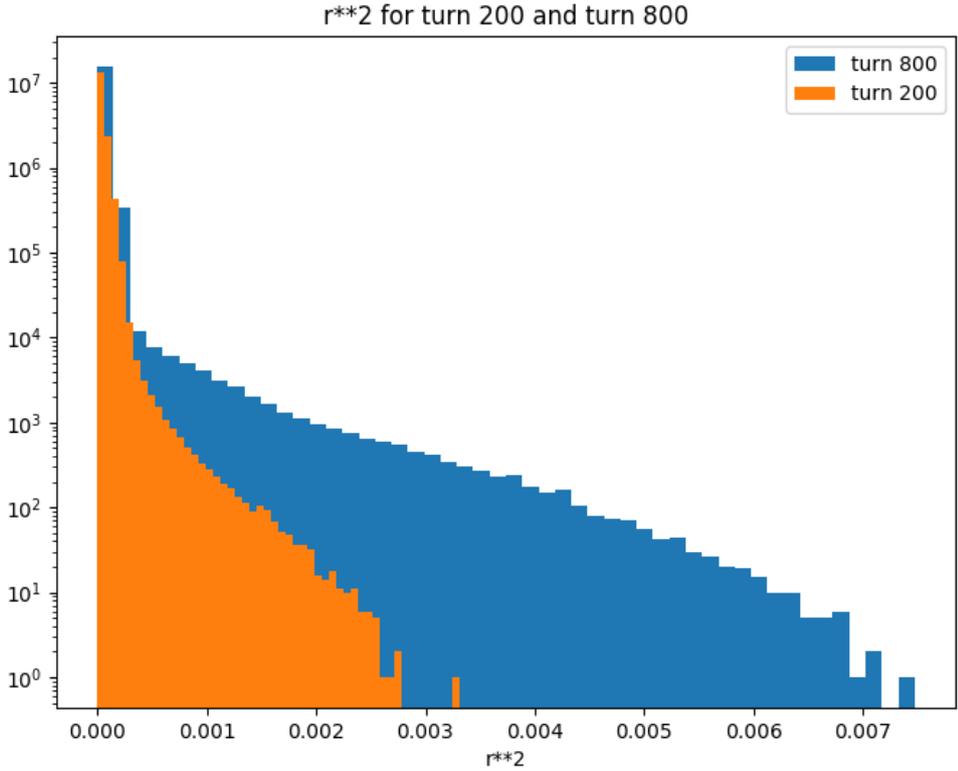RMS emittance growth 1.07

integrated particles cut at 6 sigma

16M initial particles
0.4% cut at 6 sigma

Evolution of r**2 distribution optimal compensation

r**2 for turn 200 and turn 800

R**2
4 sigma: 0.00028
6 sigma: 0.00062

Questions:

With compensation, cutting at 4 sigma is conceivable

Does it matter that more particles are cut at 6 sigma with the "best" compensation than with no compensation?