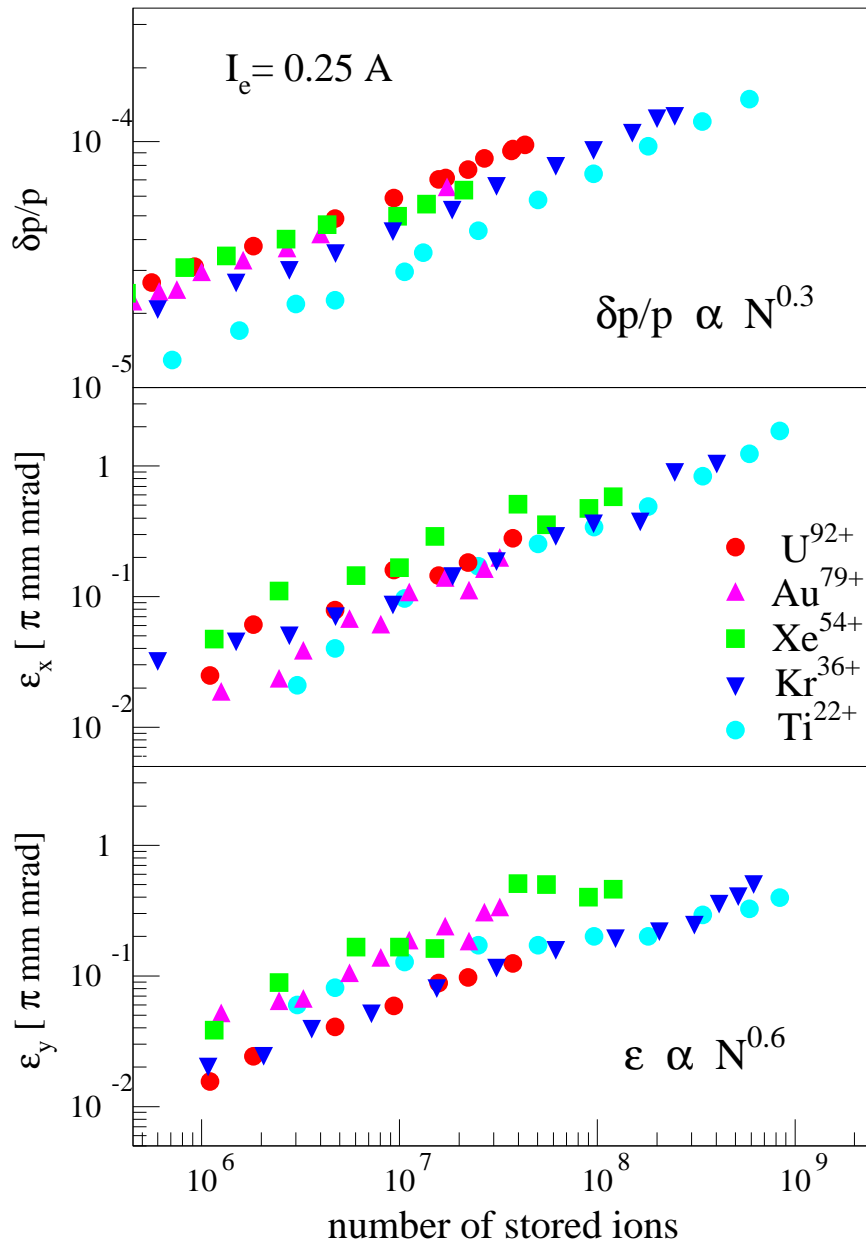


# Typical Beam Parameters for Electron Cooled Highly Charged Ions



phase space density  $\propto N^{-0.5}$

$\Rightarrow$  increase with decreasing ion number

cooling rate decreases for intense ion beams

IBS theoretically:  $\frac{\delta p}{p}, \epsilon_{\perp} \propto \left(\frac{q^2}{A}\right)^{\frac{1}{3}}$