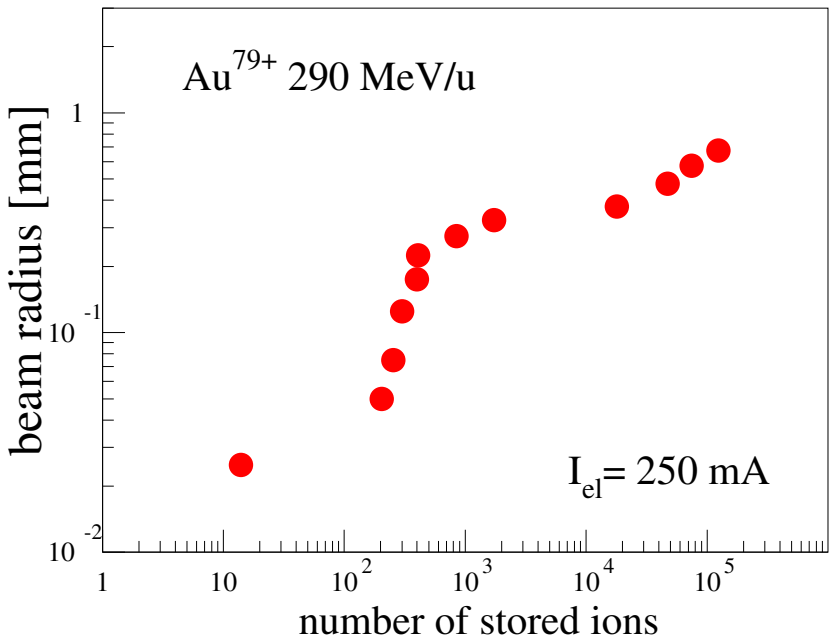
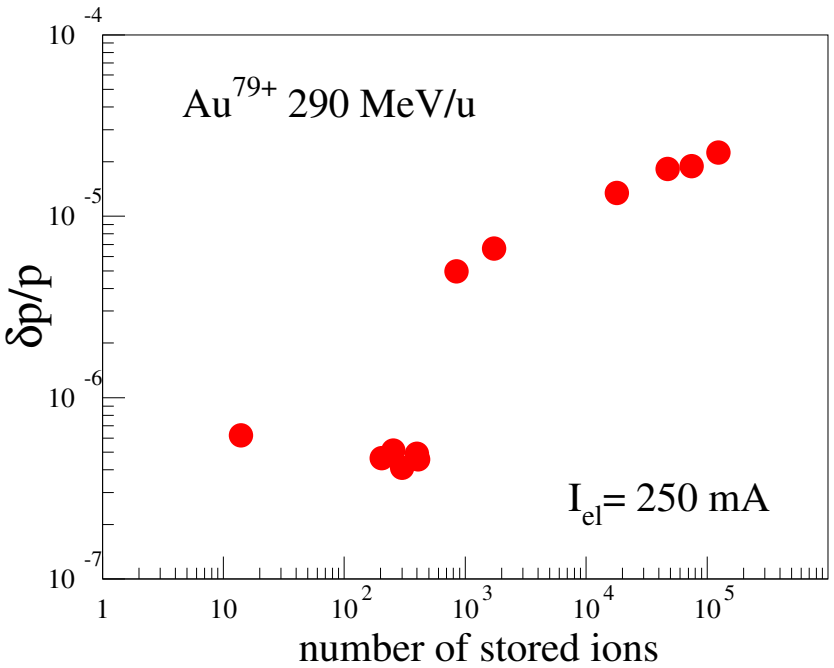
Beam Radius near Transition Point





Plasma Parameter

$$\Gamma_{\parallel} = \frac{U_{\parallel}}{kT_{\parallel}} = \frac{q^2 e^2 N / 4\pi\epsilon_o C\gamma}{m_i c^2 \beta^2 (\delta p/p)^2_{rms}} \simeq \frac{0.06\ meV}{4\ meV} \simeq 0.015$$

$$\Gamma_{\perp} = \frac{U_{\perp}}{kT_{\perp}} = \frac{q^2 e^2 / 4\pi\epsilon_o x_{rms}}{m_i c^2 \beta^2 \gamma^2 x^2_{rms}} \simeq \frac{0.15\ eV}{0.3\ eV} \simeq 0.5$$