$\varepsilon_x = .71 \text{ nm}, \, \varepsilon_y / \varepsilon_x = 0.20\%, \, \sigma_\varepsilon = 0.039\%, \, \sigma_z = 5.6 \text{ mm},$ 

 $\beta_{x,y}^* = (.11 \text{ m}, .7 \text{ mm}), \nu_{x,y,z} = (218.1585, 222.2004, -0.0288), \text{ Crab Waist} = 70\%$ 

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400 turns, Damping: each element, Touschek Lifetime: 87280 sec @  $N = 1 \times 10^{10}$