



Cornell Laboratory for  
Accelerator-Based Sciences  
and Education (CLASSE)

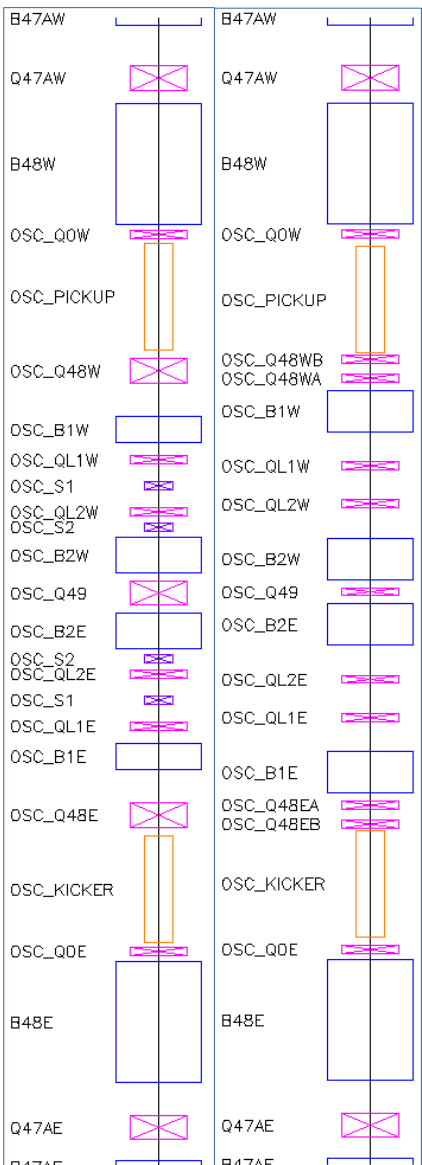
# OSC Bypass with 65 cm and 85 cm Bends

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# Layout & Optics

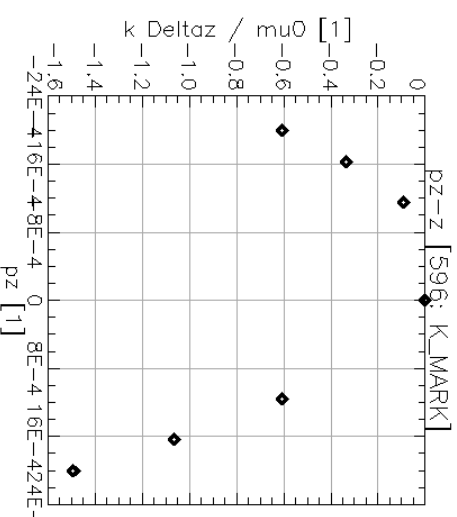
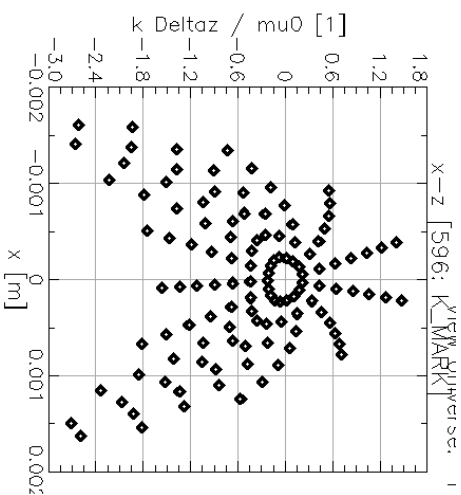
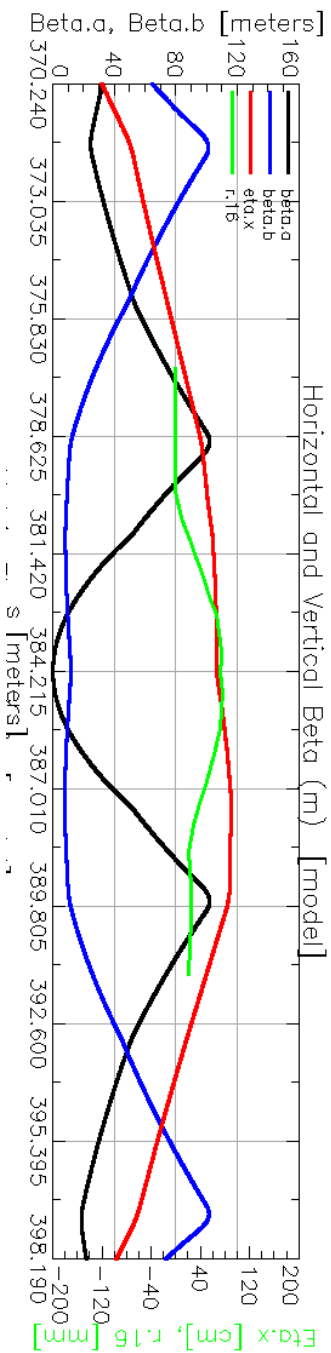
**1.0 m bends without engineering considerations:**



$\epsilon_x = 2.2 \text{ nm}$   
 $\sigma_{\epsilon_x} = 24.0 \text{ nm}$   
 $\sigma_{op} = 2.9 \cdot 10^{-4}$

**0.65 m & 0.85 m bends with engineering considerations:**

$\epsilon_x = 1.8 \text{ nm}$   
 $\sigma_{\epsilon_x} = 14.8 \text{ nm}$   
 $\sigma_{op} = 4.4 \cdot 10^{-4}$



# Sextupoles

- Sextupole length 0.2 m
- Starting Chrom -2.5, -2.0
- Example Options:
  - 1) Outer sextupoles  $K_2 = 71 \text{ m}^{-3}$ 
    - Chrom: 55, -16
  - 2) Inner sextupoles  $K_2 = 125 \text{ m}^{-3}$ 
    - Chrom: 37, -29
  - 3) Inner & Outer  $K_2 = 45 \text{ m}^{-3}$ 
    - Chrom: 48, -21

