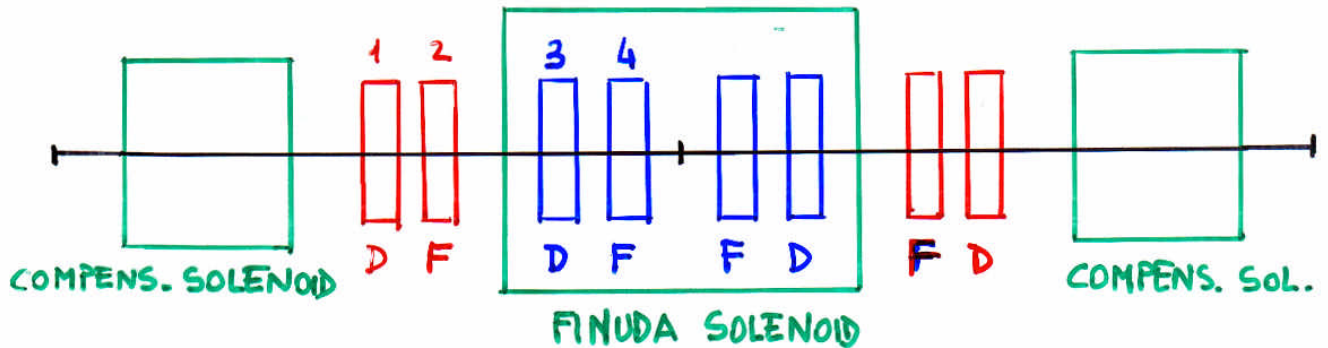


# Preliminary Optics for Finuda

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# FINUDA INTERACTION REGION



FINUDA MAGNET FIELD  $\sim 1 \text{ T} \times 2.5 \text{ m}$   
 COMPENSATOR FIELD  $1.2 \text{ T} \times 1 \text{ m}$

4 ROTATED PERMANENT QUADS

4 ROTATED LARGE APERTURE QUADS

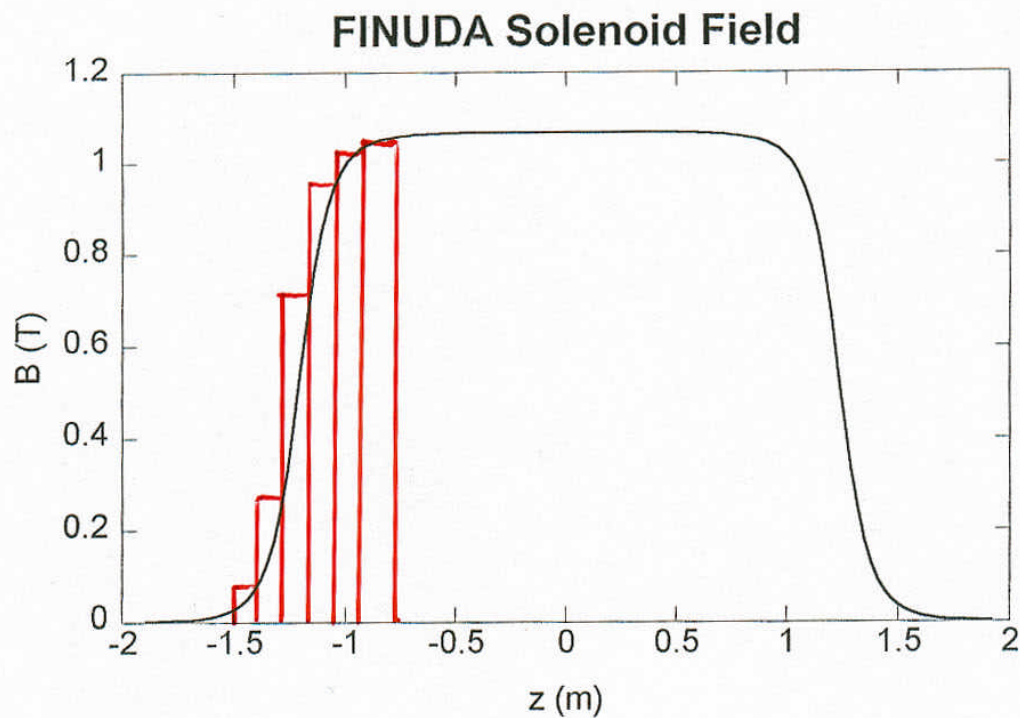
|               | TILT | ANGLE         |
|---------------|------|---------------|
| F QUAD 4      |      | $6.75^\circ$  |
| D QUAD 3      |      | $12.79^\circ$ |
| F/D QUADS 1/2 |      | $19.81^\circ$ |

PRELIMINARY OPTICS MODEL FOR FINUDA  
(POSITRON RING)

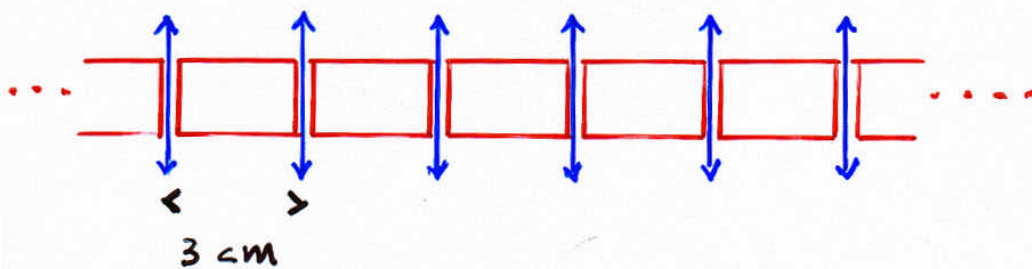
$$Q_x = 5.15 \quad Q_y = 5.21$$

|               | DEAR 10/02 | FINUDA       |
|---------------|------------|--------------|
| $\beta_x$ IP2 | 1.75       | 1.5 m        |
| $\beta_y$ IP2 | 3.7        | 3.5 cm       |
| $\beta_x$ IP1 |            | 2.0 m        |
| $\beta_y$ IP1 |            | 8.0 cm       |
| $\epsilon$    | 0.65       | 0.75 mm mrad |
| $\alpha_c$    | 0.028      | 0.025        |
| $Q_x'$        | -9.6       | -10.2        |
| $Q_y'$        | -16.0      | -14.3        |

PERMANENT QUADS ARE INSERTED IN  
THE FINUDA SOLENOID FIELD

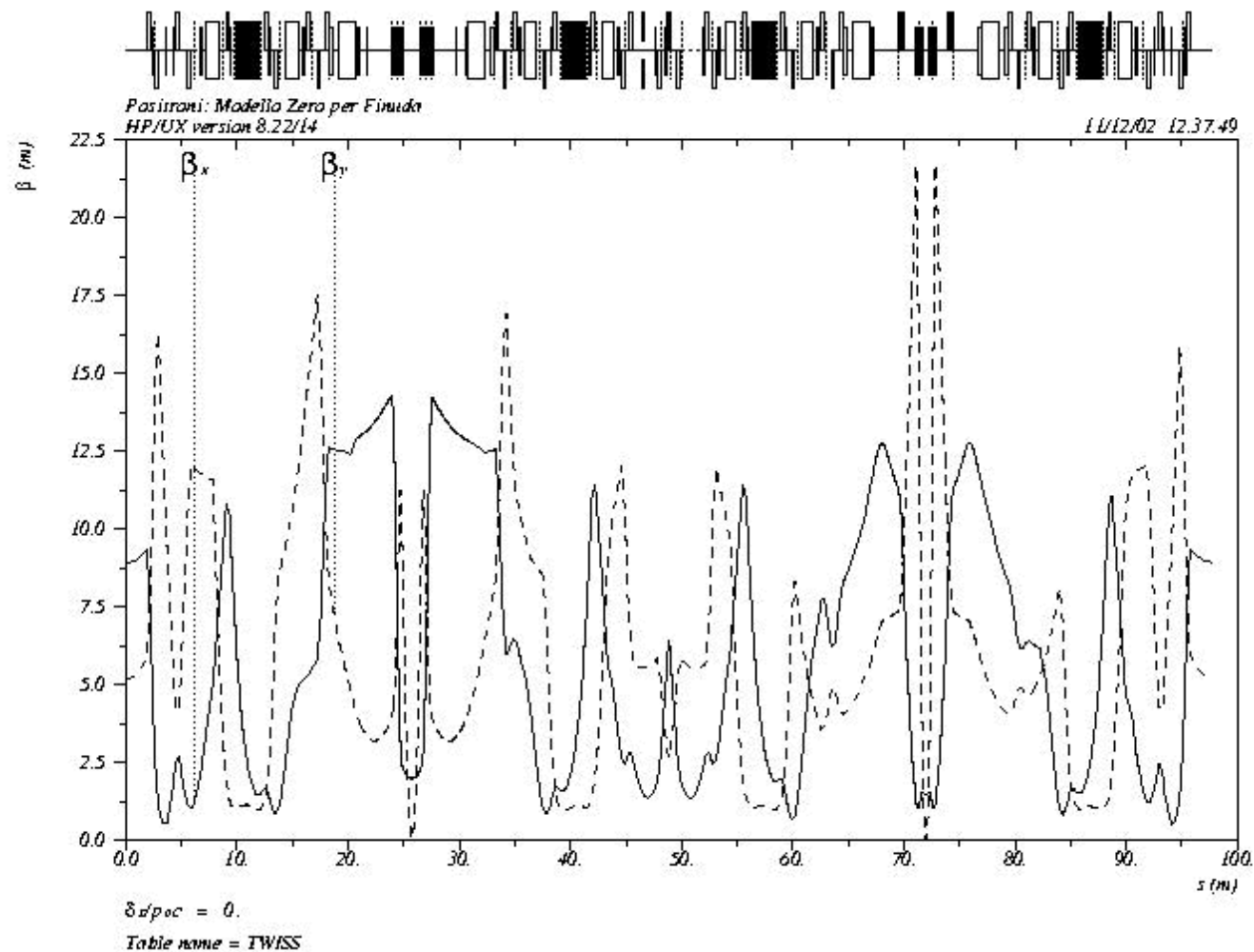


HOW IS DESCRIBED IN THE MAD-MODEL:

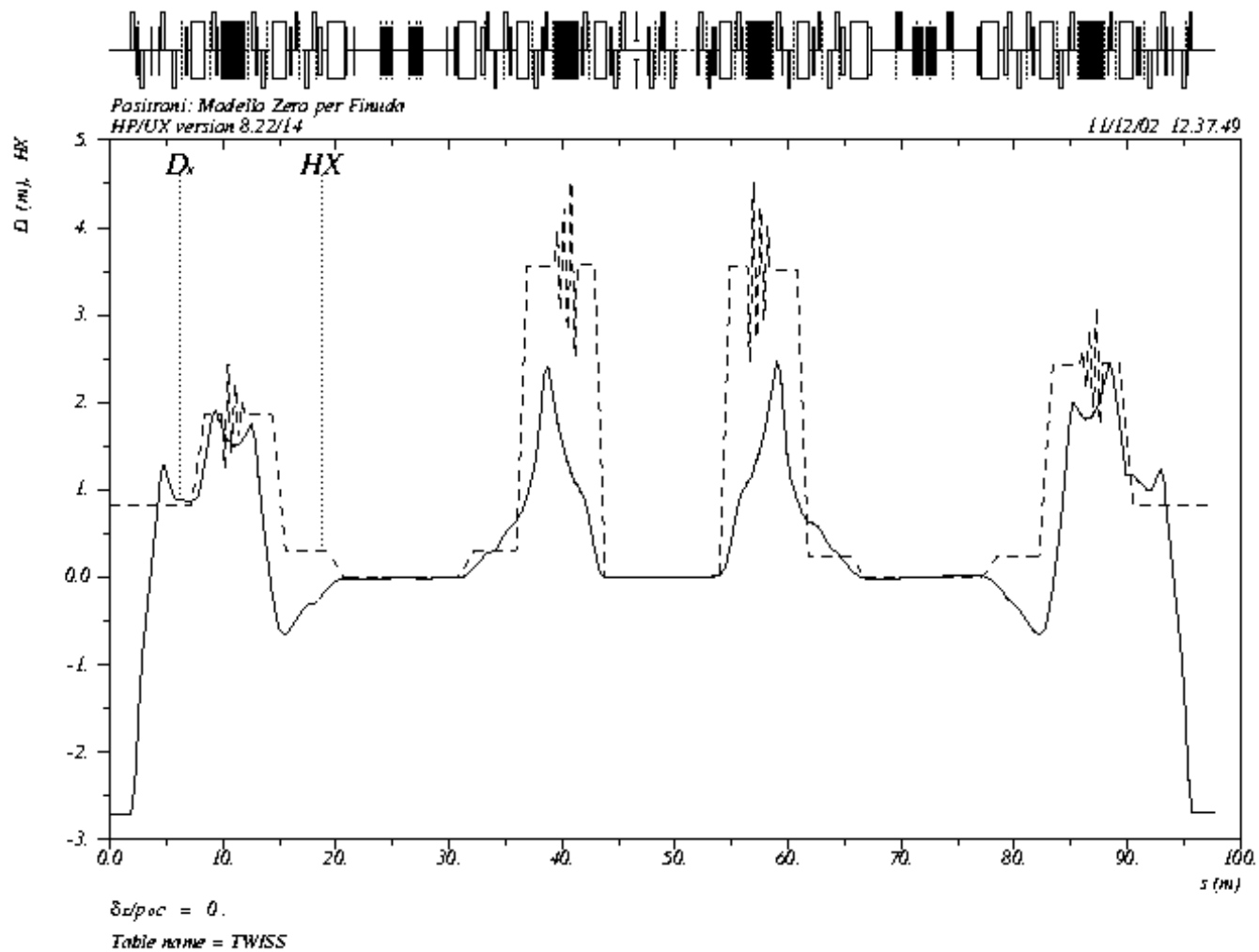


... THICK SOLEN. SLICE + THIN QUAD LENS + THICK SOLEN. SLICE + ...

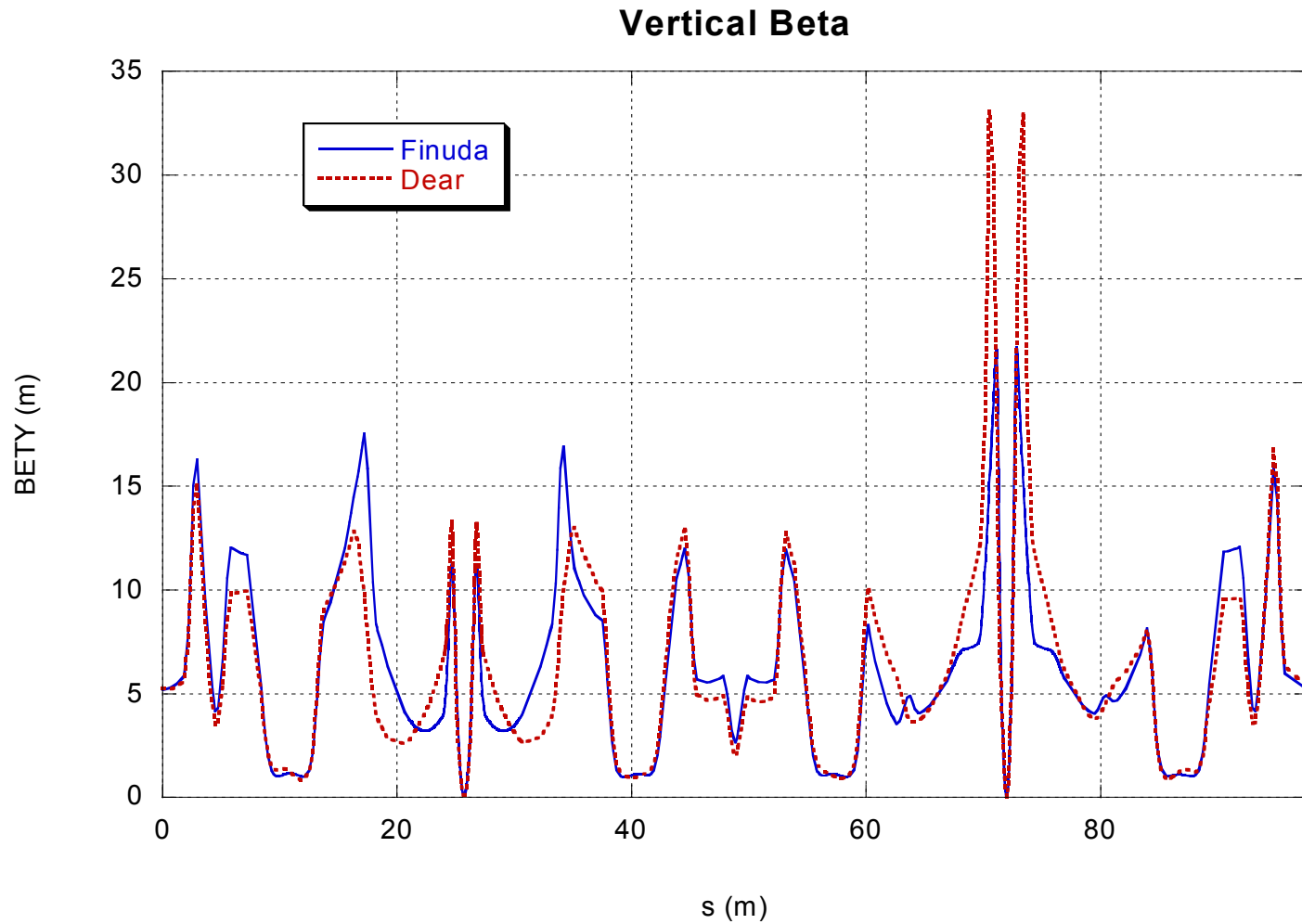
# Beta Functions calculated by MAD



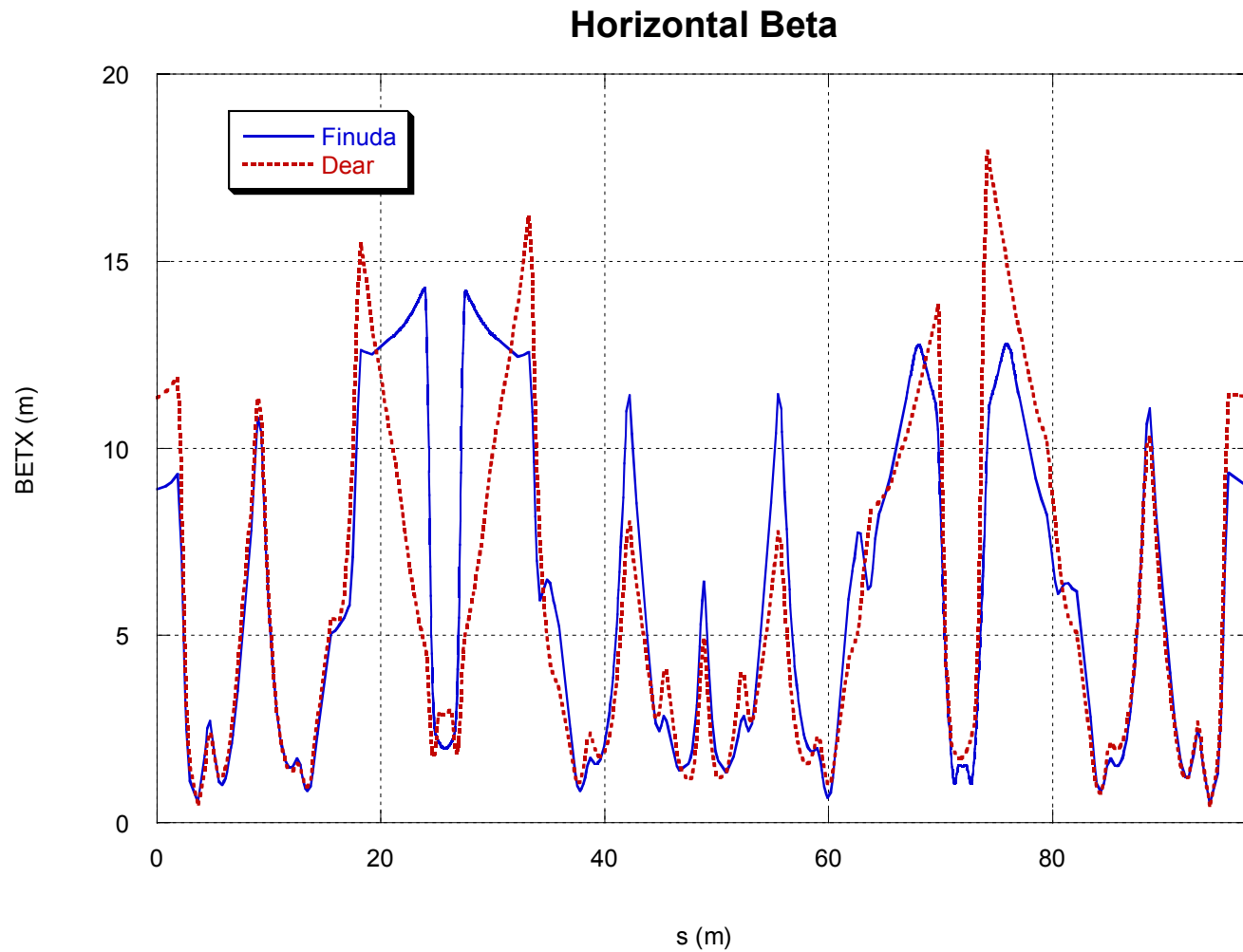
# Dispersion calculated by MAD



# Finuda vs Dear Optics (1)



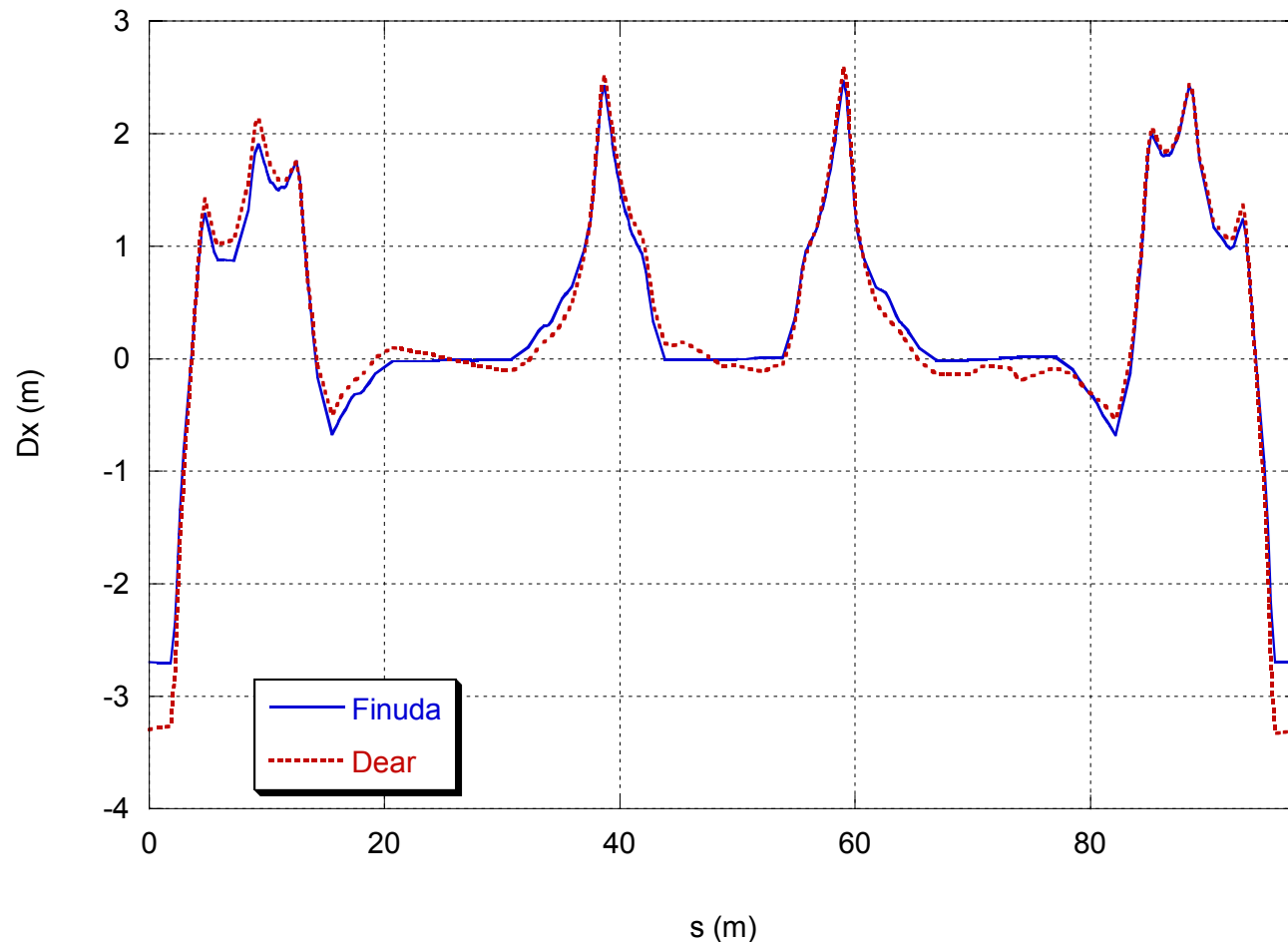
# Finuda vs Dear Optics (2)



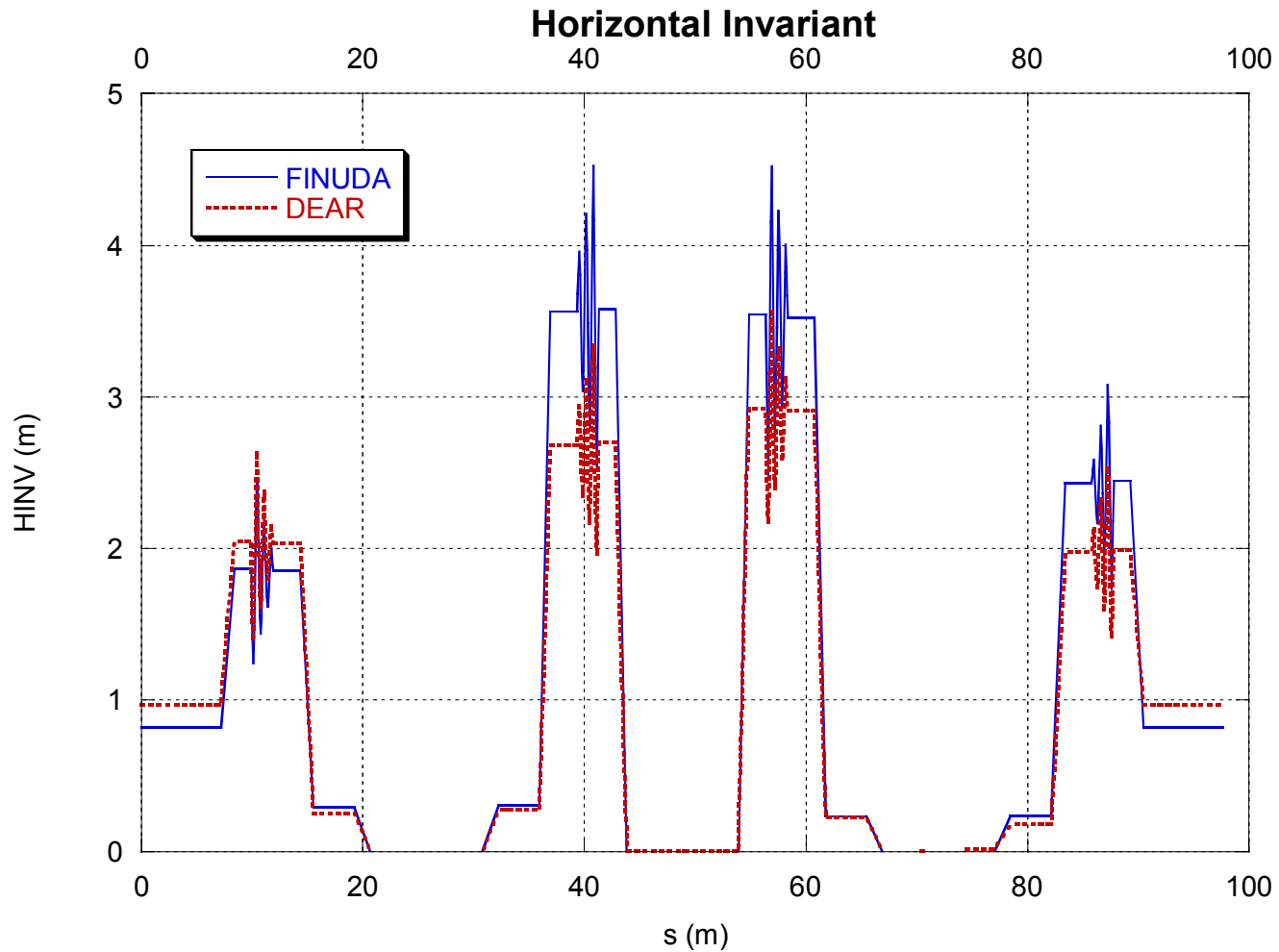


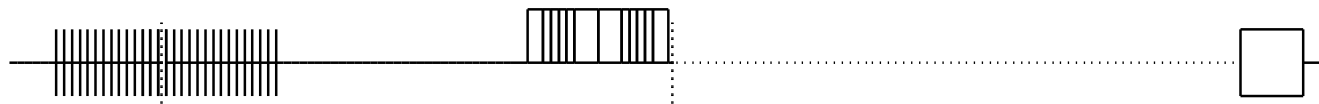
# Finuda vs Dear Optics (3)

## Dispersion



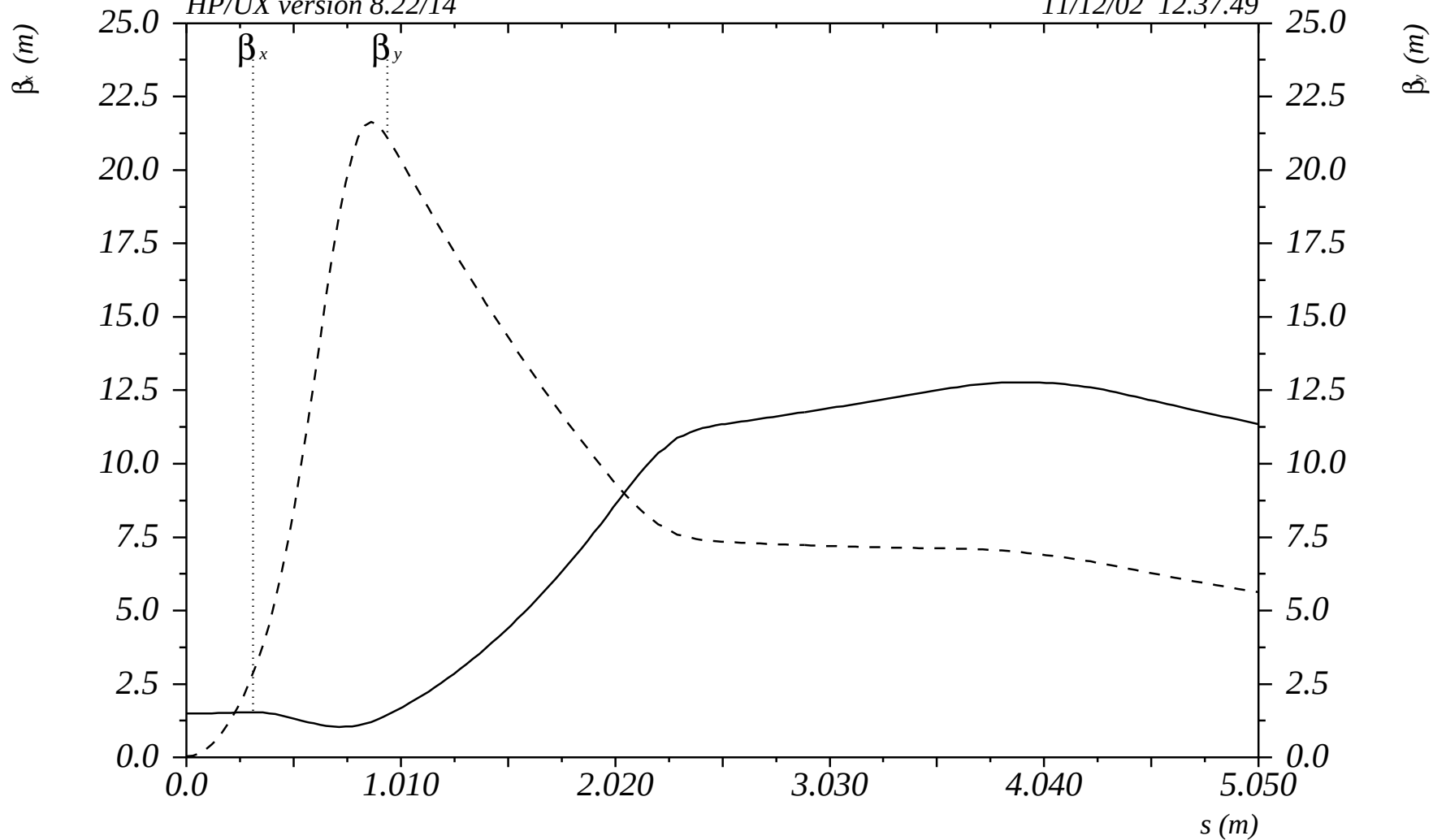
# Finuda vs Dear Optics (4)





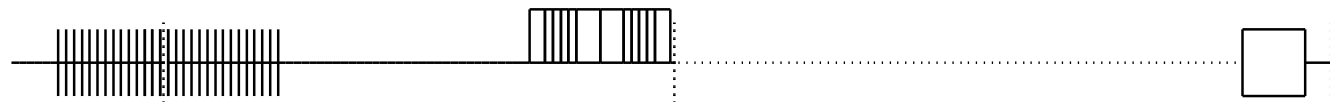
FINUDA:  $\beta_x^* = 1.5 \text{ m}$   $\beta_y^* = 3.5 \text{ cm}$   
Positroni: Modello Zero per Finuda  
HP/UX version 8.22/14

11/12/02 12.37.49



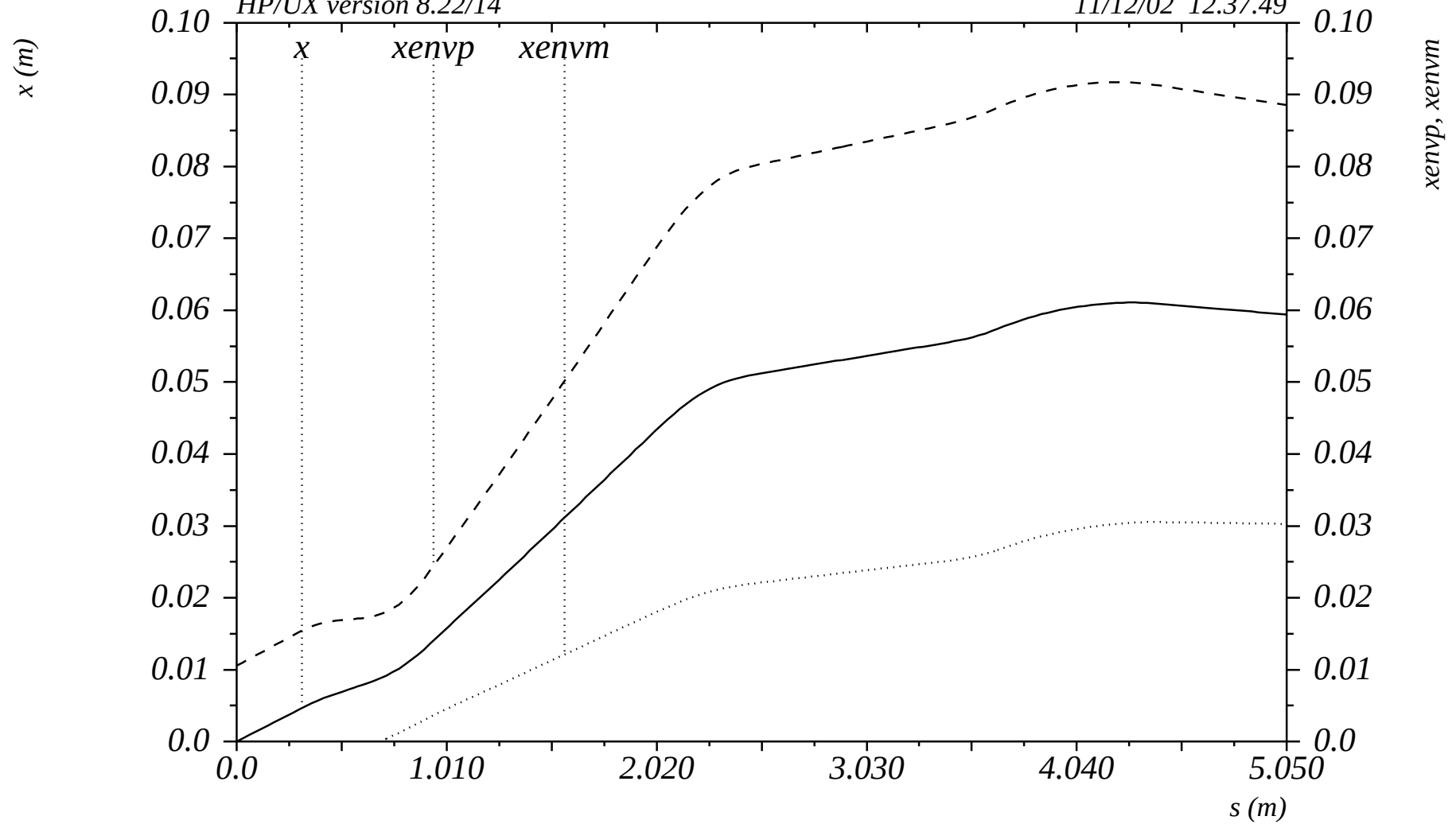
$\delta_E/p_0c = 0.$

Table name = TWISS



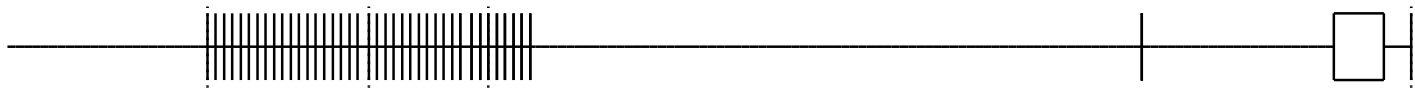
FINUDA:  $px=15$  mrad  
Positroni: Modello Zero per Finuda  
HP/UX version 8.22/14

11/12/02 12.37.49



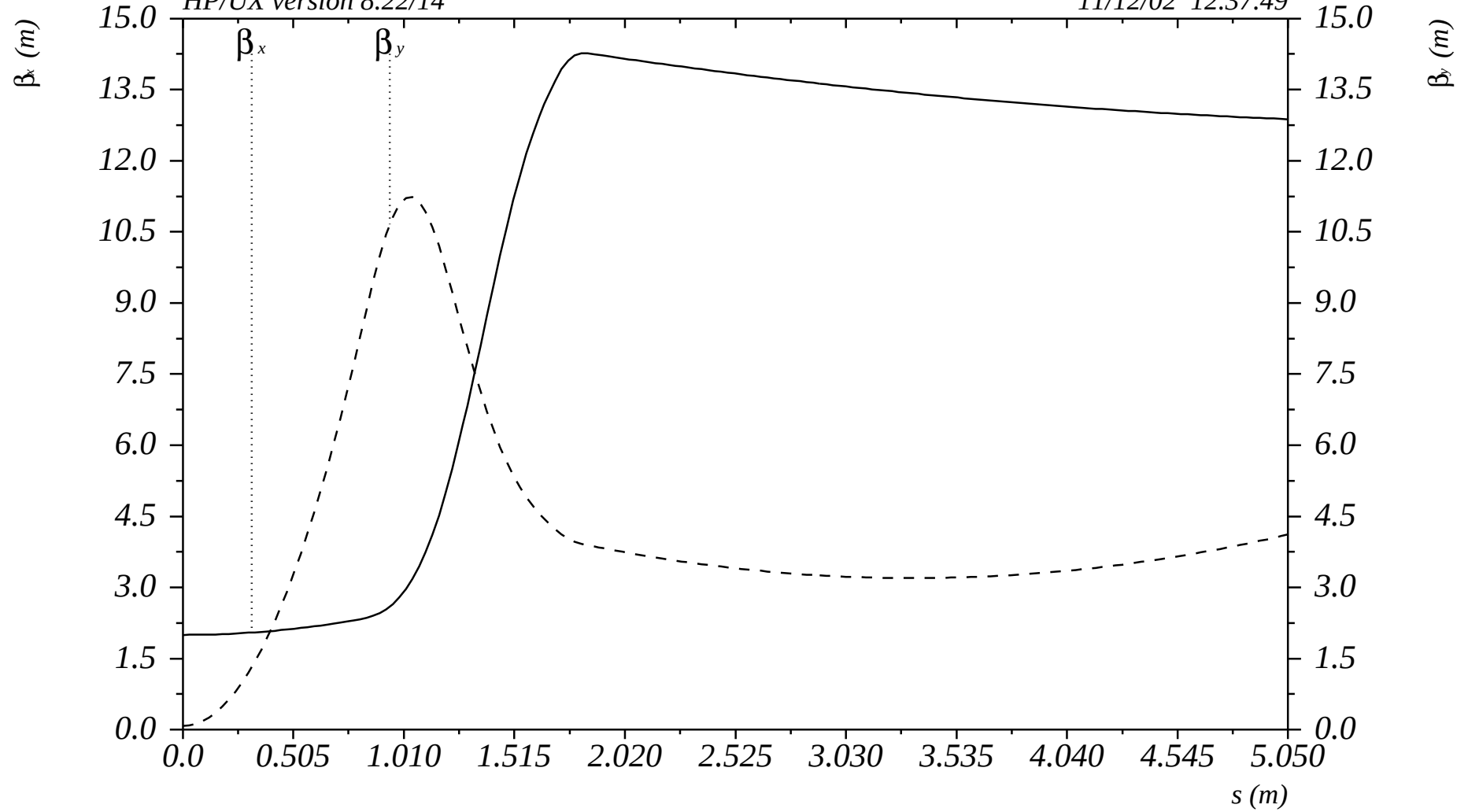
$\delta_E/p_0c = 0.$

Table name = TWISS



KLOE:  $\beta_x^* = 2 \text{ m}$   $\beta_y^* = 8 \text{ cm}$   
Positroni: Modello Zero per Finuda  
HP/UX version 8.22/14

11/12/02 12.37.49



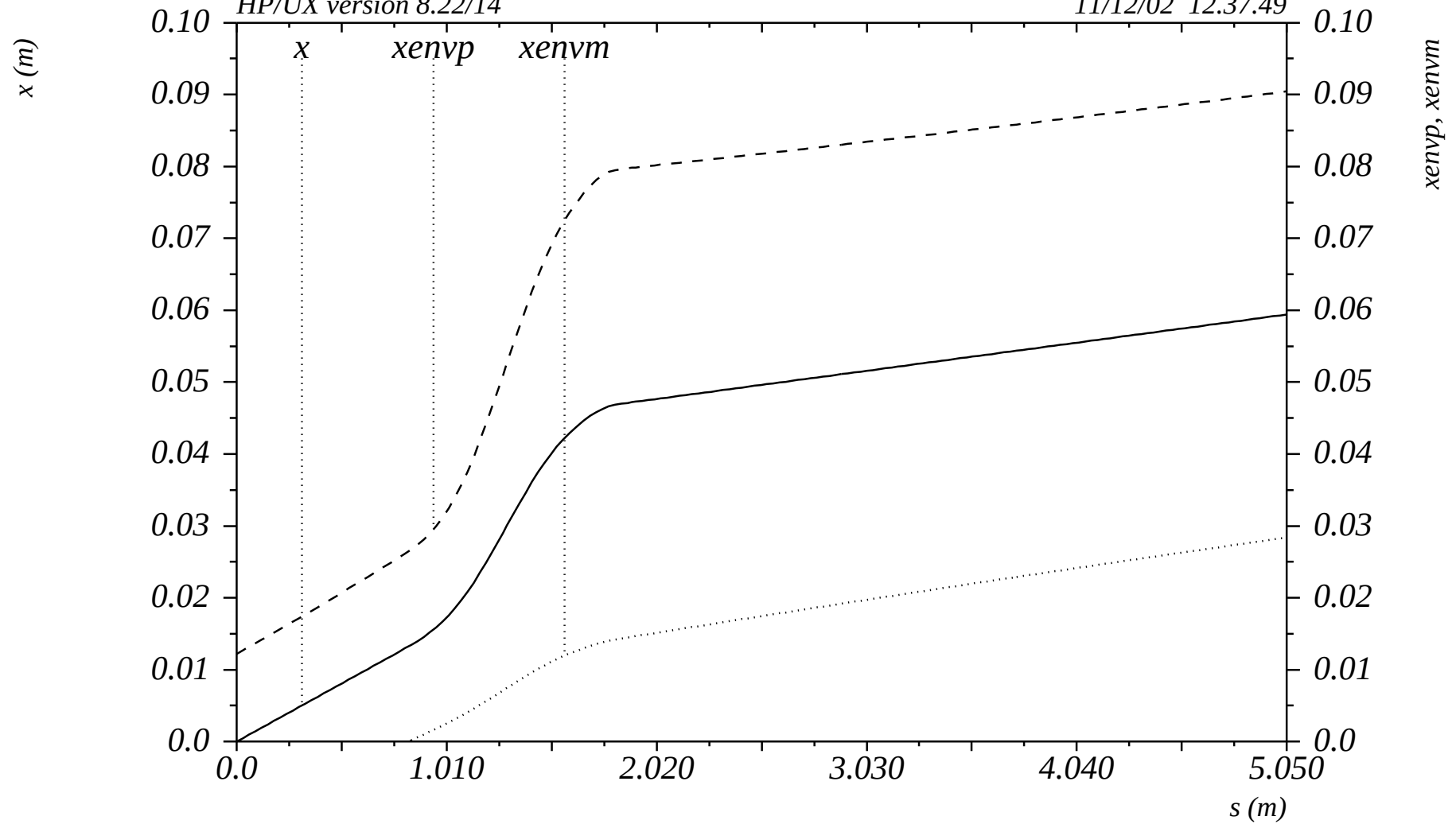
$\delta_E/p_0c = 0.$

Table name = TWISS



KLOE,  $px = 16$  mrad  
Positroni: Modello Zero per Finuda  
HP/UX version 8.22/14

11/12/02 12.37.49



$\delta_E/p_0c = 0.$

Table name = TWISS