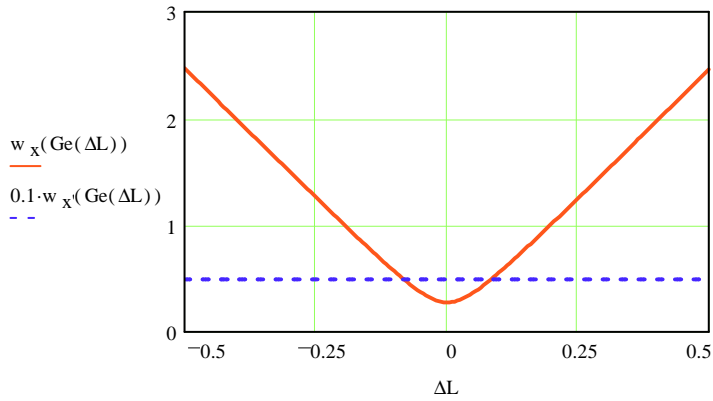


### G2/G3 horizontal foci - phase space analysis

distance from focal spot (m)

$$L_{\max} := 0.5 \quad \Delta L := -L_{\max}, -0.99 \cdot L_{\max}, \dots, L_{\max}$$

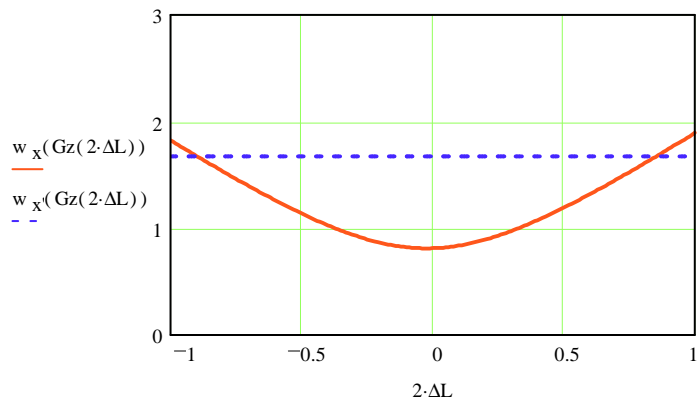
horizontal beam widths  
(mm) for x and (mrad) for x'  
source size: sigmaH (mm)



$$w_x(\text{Ge}(0)) = 0.277$$

$$w_{x'}(\text{Ge}(0)) = 4.901$$

$$\frac{\text{sigmaH}}{w_x(\text{Ge}(0))} = 11.906$$



$$w_x(\text{Gz}(0)) = 0.813$$

$$w_{x'}(\text{Gz}(0)) = 1.672$$

$$\frac{\text{sigmaH}}{w_x(\text{Gz}(0))} = 4.059$$

horizontal beam width along the line: from multilayer2 to beam splitter (G2: red) to foci

$$y_2 := y_{\text{bs}}, y_{\text{bs}} + 0.02 \dots y_{\text{I2}} + 2$$

$$y_3 := y_{\text{ML2}}, y_{\text{ML2}} + 0.02 \dots y_{\text{I1}} + 4$$

