G2/G3 horizontal foci - phase space analysis

distance from focal spot (m)

\[ L_{\text{max}} := 0.5 \quad \Delta L := L_{\text{max}} \cdot 0.99 - L_{\text{max}}. \]

horizontal beam widths (mm) for \( x \) and (mrad) for \( x' \)

source size: \( \text{sigmaH} \) (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

\[ y_2 := y_{bs} \cdot y_{bs} + 0.02 \cdot y_{I2} + 2 \]
\[ y_3 := y_{ML2} \cdot y_{ML2} + 0.02 \cdot y_{I1} + 4 \]