Bunch Length & Charge $\sigma = 2.5 \times 10^{-5}$ $q = 1 \times 10^{-9}$

TTF Module (8 cavities)

$c_n := \mathrm{conv}(s_n, w_{TM}, \lambda, sa, sb)$ $\mathrm{mean}(s, \lambda, c) = -1.532 \times 10^5$ $\mathrm{rms}(s, \lambda, c) = 8.561 \times 10^4$

LOLA (length=3.6m, r_pipe=22.44mm)

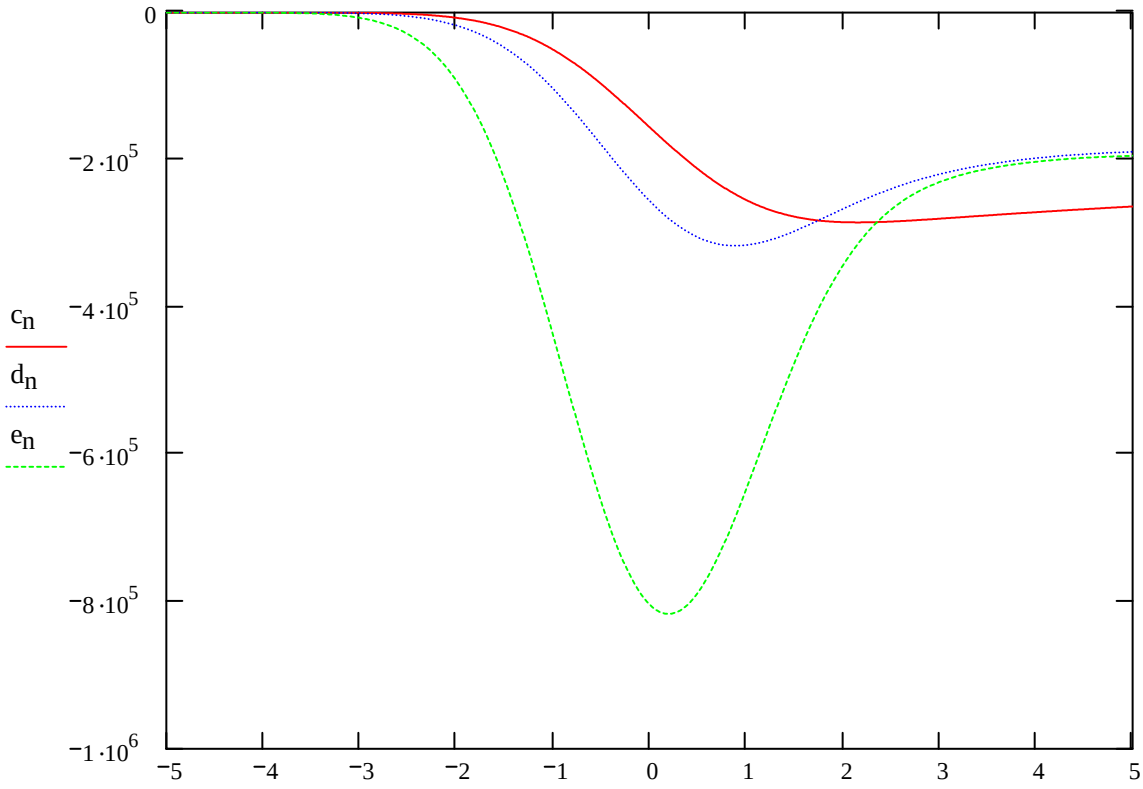
$d_n := \mathrm{conv}(s_n, w_{LOLA}, \lambda, sa, sb)$ $\mathrm{mean}(s, \lambda, d) = -2.2 \times 10^5$ $\mathrm{rms}(s, \lambda, d) = 9.271 \times 10^4$

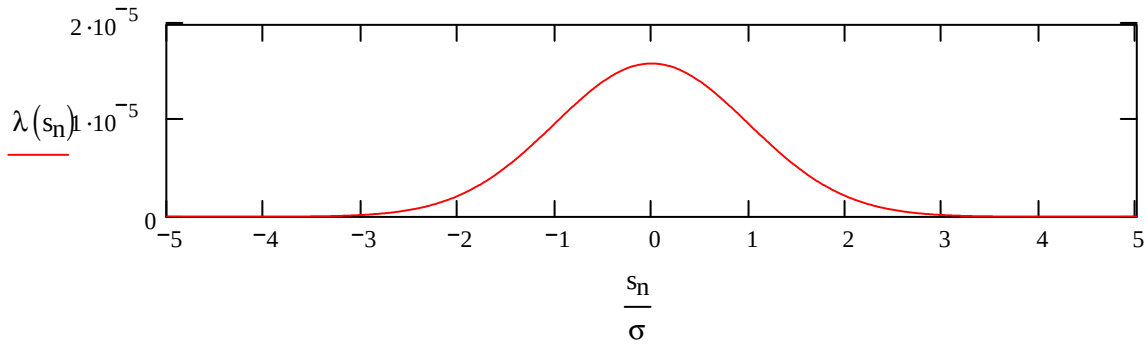
3rd Harmonic Cavity (4 cavities, r_pipe=39mm, step transitions to r_p=20mm included)

$e_n := \mathrm{conv}(s_n, w_{3rd}, \lambda, sa, sb) - d_{3rd} \cdot \lambda(s_n)$

$\mathrm{mean}(s, \lambda, e) = -6.081 \times 10^5$ $\mathrm{rms}(s, \lambda, e) = 2.063 \times 10^5$

(**sigma=1.5mm**: -5.766E4 2.312E4)





Bunch Length & Charge $\sigma = 2.5 \times 10^{-5}$ $q = 1 \times 10^{-9}$

TTF Module (8 cavities)

$c_n := \mathrm{conv}(s_n, w_{TM}, \lambda, sa, sb)$ $\mathrm{mean}(s, \lambda, c) = -1.532 \times 10^5$ $\mathrm{rms}(s, \lambda, c) = 8.561 \times 10^4$

LOLA (length=3.6m, **+ estimated step transition**)

$d_{LOLA} := d_{3rd} \cdot \frac{20}{22.44}$

$d_n := \mathrm{conv}(s_n, w_{LOLA}, \lambda, sa, sb) - d_{LOLA} \cdot \lambda(s_n)$

$\mathrm{mean}(s, \lambda, d) = -5.821 \times 10^5$ $\mathrm{rms}(s, \lambda, d) = 1.979 \times 10^5$

3rd Harmonic Cavity (4 cavities, r_pipe=39mm, step transitions to r_p=20mm included)

$e_n := \mathrm{conv}(s_n, w_{3rd}, \lambda, sa, sb) - d_{3rd} \cdot \lambda(s_n)$

$\mathrm{mean}(s, \lambda, e) = -6.081 \times 10^5$ $\mathrm{rms}(s, \lambda, e) = 2.063 \times 10^5$

(**sigma=1.5mm**: -5.766E4 2.312E4)