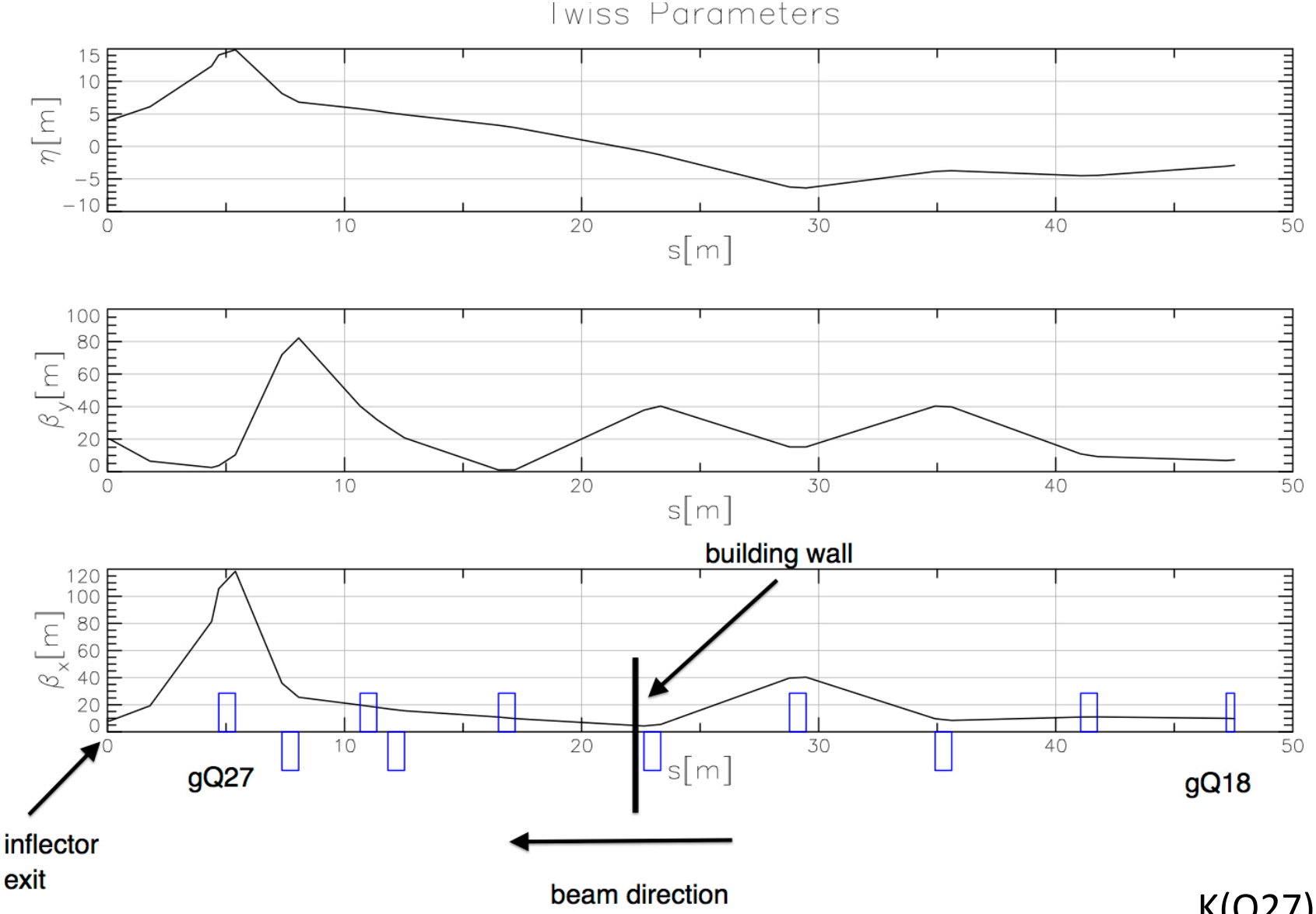
At inflector exit { $\beta_x = 8.0$ m, $\beta_y = 20.0$ m, $\eta = 4$m } For best match into ring

$$\sigma_x(q27) = \left(\beta_x\epsilon + \eta^2(\Delta E/E)^2\right)^{\frac{1}{2}} = \left(120 \cdot 40 \times 10^{-6}\text{m} \cdot \text{rad} + (15\text{m})^2(0.0015)^2\right)^{\frac{1}{2}} = 72\text{mm}$$



K(Q27) = 0.774 m^{-2}