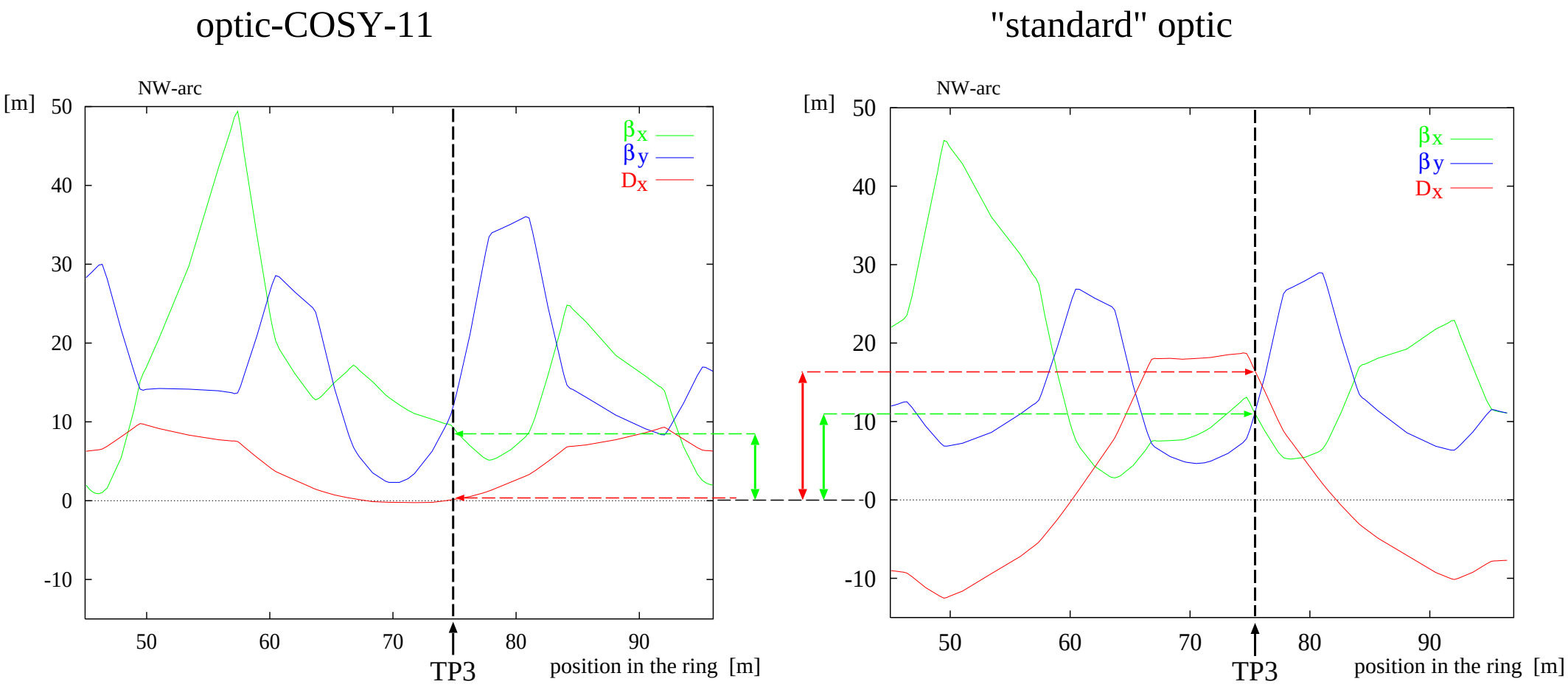

horizontal beam dimension: $\sigma_x = \sqrt{\varepsilon * \beta_x + D_x^2 \left(\frac{\Delta p}{p}\right)^2}$

vertical beam dimension: $\sigma_y = \sqrt{\varepsilon * \beta_y}$