

$$s(x, y, \eta_s) = \frac{1}{2\pi\sigma_{\perp}} \frac{1}{\sqrt{2\pi\sigma_{\eta}}} \exp\left(-\frac{(x-x_0)^2}{2\sigma_{\perp}^2} - \frac{(y-y_0)^2}{2\sigma_{\perp}^2} - \frac{(\eta_s-\eta_0)^2}{2\sigma_{\eta}^2}\right)$$