

$$\phi_\lambda(z, \xi) = \mathcal{N}_\lambda \frac{\kappa}{\sqrt{\pi}} \sqrt{z(1-z)} \exp\left(-\frac{\kappa^2 \xi^2}{2}\right) \\ \times \exp\left(-\frac{(1-z)m_q^2 + zm_{\bar{q}}^2}{2\kappa^2 z(1-z)}\right),$$