

$$\begin{aligned}\mathcal{L} &= \sum_{x_i} -\log C(x_i) y_i - \log(1 - C(x_i)) (1 - y_i) \\ &= - \int \mathrm{d}x \, p_{top}(x) \log C(x) + p_{QCD} \log(1 - C(x))\end{aligned}$$