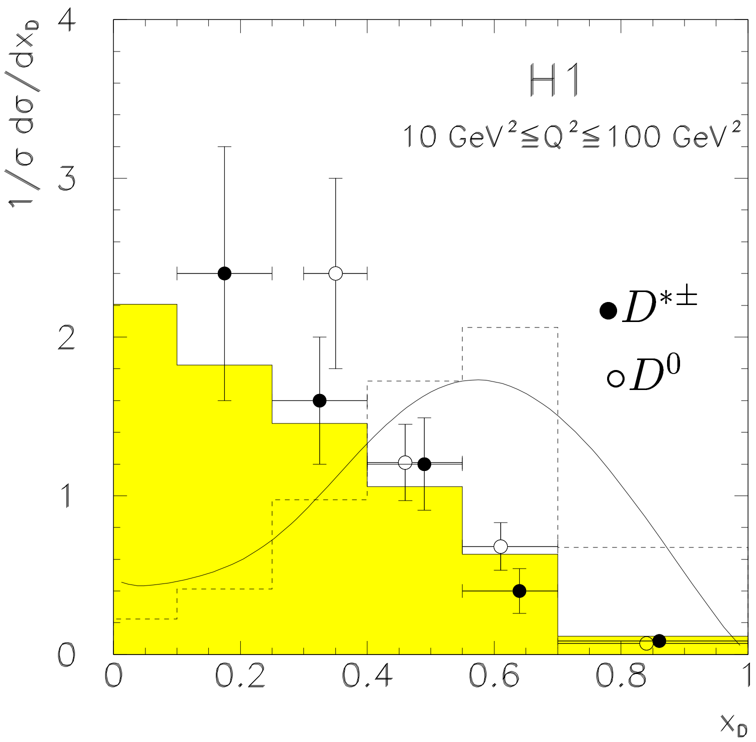
Production Dynamics in DIS ?

D fractional momentum distribution, x_D is convolution of charm energy distribution with D fragmentation function.

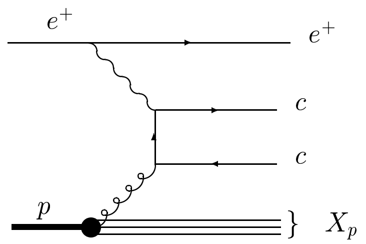
$\Longrightarrow$ contains information about underlying production mechanism

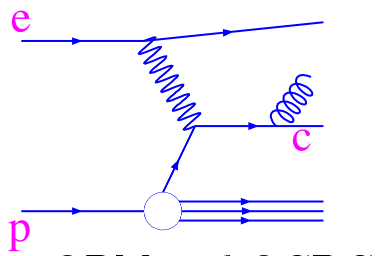
$$x_D = \left(\frac{|\vec{p}_{D0}|}{|\vec{p}_p|}\right)_{\gamma^* p} = \frac{2|\vec{p}_{D0}|}{W}$$

yellow histogram:	BGF : AROMA, MRSH, $m_c = 1.5$ GeV
dashed histogram:	QPM Monte Carlo
full line:	QCD evolution of $\mathcal{D}_D^{\nu N}(x_D)$ from $\langle W \rangle \approx 8$ GeV to $\langle W \rangle \approx 125$ GeV



BGF





QPM and QCDC

$\Longrightarrow$ Charm production is dominated by BGF (also seen by ZEUS).

$\Longrightarrow$ upper limit on charm produced from proton sea < 0.05 at 95% CL