

## PDF General Issues:

- Proton PDF; nuclear corrections for interpreting heavy target DIS (Ar, Fe, Pb).

## Strange quark PDF: $s(x)$

- Resolve tension between fixed-target ( $\nu N, \ell N$ ) and collider expectations ( $W^\pm, Z$ )

## Charm & Bottom: $c(x)$ & $b(x)$

- Multi-scale & resummation issues:  $\text{Log}(m_{c,b}/Q)$
- “Fitted” charm:  $c(x) \neq 0$  at  $m_c$
- Intrinsic heavy flavors:  $c(x) \neq 0$  at  $Q < m_c$

## Neutrino cross sections on heavy targets (Ar, Fe, Pb)

- Universality of Neutral Current ( $\gamma$ ) and Charged Current ( $W^\pm$ ) processes

## Expanded $\{x, Q^2\}$ Kinematic Regime

- Small- $x$  saturation, resummation:  $\text{Log}[1/x]$
- Large- $x$  higher twist:  $(M^2/Q^2)$
- Low  $Q^2$  non-perturbative effects

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