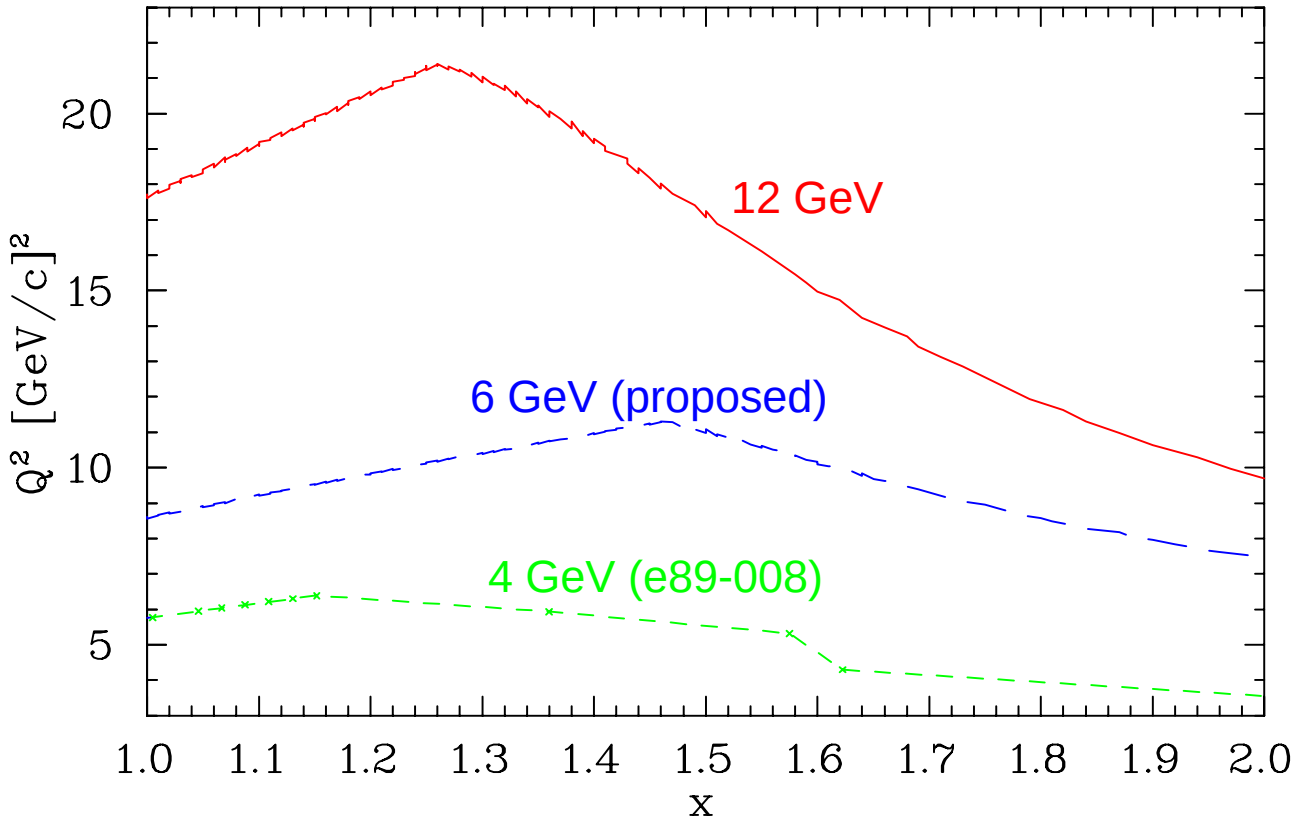

12 GeV also provides a *new* opportunity:

Quark distributions at x>1: 'superfast quarks'

Two measurements exist so far:

CCFR (ν-C): $F_2 \sim e^{-8x}$ (Q^2~100 GeV^2)

BCDMS (μ-Fe): $F_2 \sim e^{-16x}$ (Q^2~100 GeV^2)

These experiments have data in a limited range around x=1, and are limited by statistics or resolution.

JLab@12 GeV will allow high precision measurements of the quark distributions near x=1.