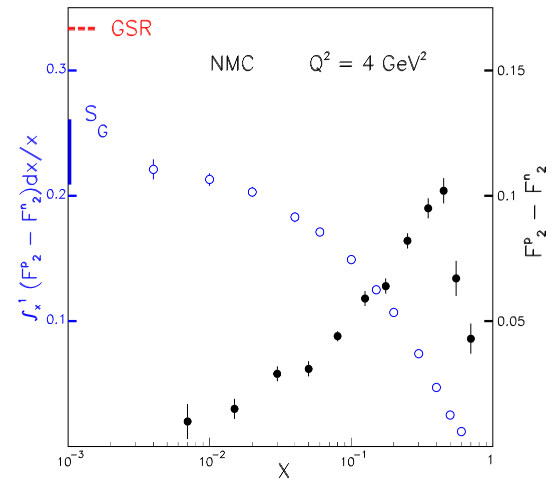
New Muon Collaboration (NMC)

PRL 66 2712 (1991), PRD 50 R1 (1994)

- Deep Inelastic Scattering: μp and μd



- F_2^n/F_2^p for $0.004 \le x \le 0.8$

- $I_{GS} = 0.235 \pm 0.026 \neq \frac{1}{3}$

- Possible Explanations:

  $\Rightarrow$ Charge symmetry breaking

  Expect this to be on the order of the proton-neutron mass difference

  $\Rightarrow$ Unexpected behavior at small x

  FNAL E665 measured F_2^n/F_2^p for $10^{-6} \le x \le 0.3$
  PRL **75** 1466 (1995)

$\Rightarrow$ $\bar{u}(x) \neq \bar{d}(x)$