Structure Functions

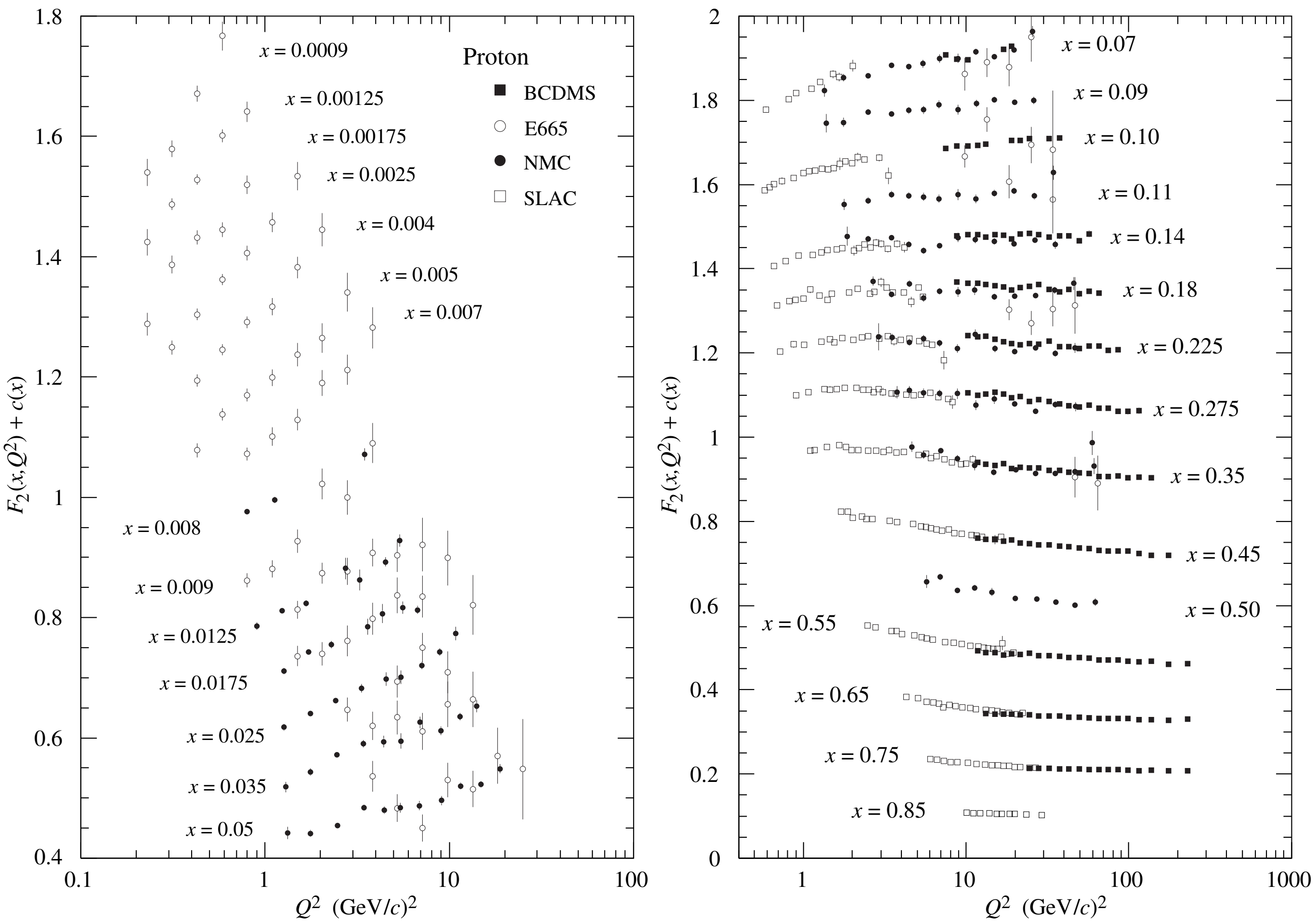

Figure 38.3: The proton structure function F_2^p measured in electromagnetic scattering of electrons (SLAC) and muons (BCDMS, E665, NMC), shown as a function of Q^2 for bins of fixed x. Only statistical errors are shown. For the purpose of plotting, a constant $c(x) = 0.1 i_x$ is added to F_2^p where i_x is the number of the x bin, ranging from 1 ($x = 0.05$) to 14 ($x = 0.0009$) on the left-hand figure, and from 1 ($x = 0.85$) to 15 ($x = 0.07$) on the right-hand figure. For HERA data in the kinematic range of this figure, see Fig. 38.1. References: **BCDMS**—A.C. Benvenuti *et al.*, Phys. Lett. **B223**, 485 (1989); **E665**—M.R. Adams *et al.*, Phys. Rev. **D54**, 3006 (1996); **NMC**—M. Arneodo *et al.*, Phys. Lett. **B364**, 107 (1995). **SLAC**—L.W. Whitlow *et al.*, Phys. Lett. **B282**, 475 (1992). (Courtesy of R. Voss, 1996.)