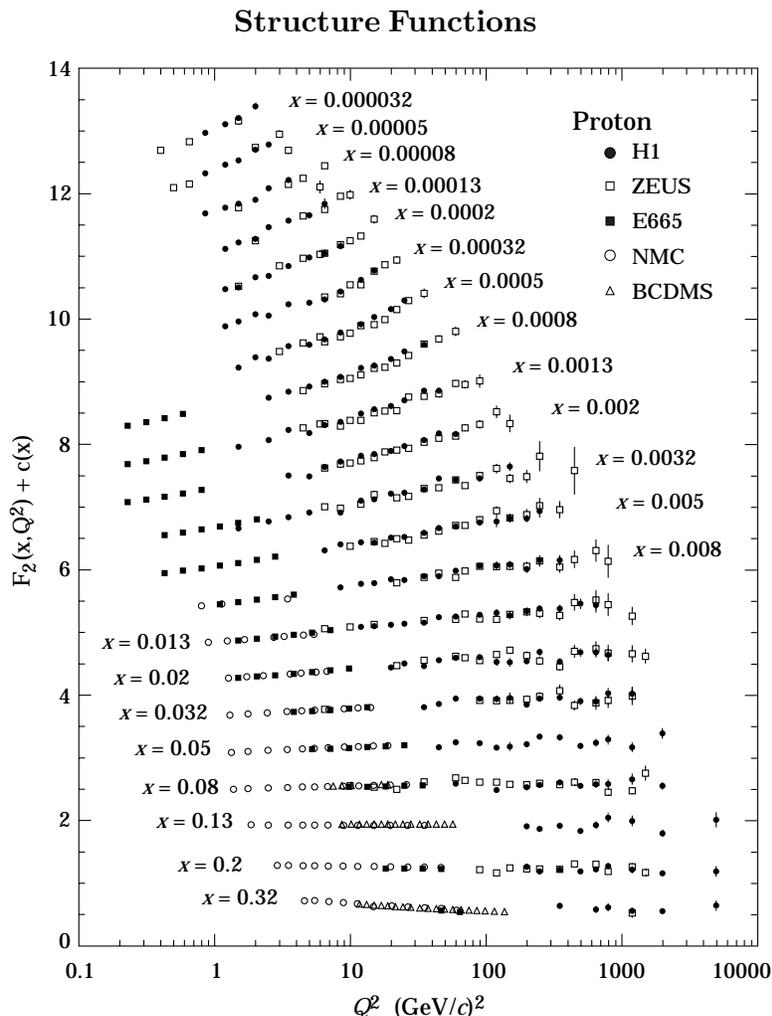


## 38. PLOTS OF CROSS SECTIONS AND RELATED QUANTITIES

NOTE: THE FIGURES IN THIS SECTION ARE INTENDED TO SHOW THE REPRESENTATIVE DATA. THEY ARE NOT MEANT TO BE COMPLETE COMPILATIONS OF ALL THE WORLD'S RELIABLE DATA.



**Figure 38.1:** The proton structure function  $F_2^p$  measured in electromagnetic scattering of electrons (H1, ZEUS) and muons (BCDMS, E665, NMC), in the kinematic domain of the HERA data, for  $x > 0.00003$ ; cf. Fig. 38.2 for data at smaller  $x$ . Only statistical errors are shown. The data are plotted as a function of  $Q^2$  in bins of fixed  $x$ . The H1 binning in  $x$  is used in this plot; the ZEUS, BCDMS, E665 and NMC data are rebinned to the  $x$  values of the H1 data using a phenomenological parametrization. For the purpose of plotting, a constant  $c(x) = 0.6(i_x - 0.4)$  is added to  $F_2^p$ , where  $i_x$  is the number of the  $x$  bin ranging from  $i_x = 1$  ( $x = 0.32$ ) to  $i_x = 21$  ( $x = 0.000032$ ). References: **H1**—S. Aid *et al.*, Nucl. Phys. **B470**, 3 (1996); C. Adloff *et al.*, Nucl. Phys. **B497**, 3 (1997); **ZEUS**—M. Derrick *et al.*, Z. Phys. **C72**, 399 (1996); J. Breitweg *et al.*, Phys. Lett. **B407**, 432 (1997); **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). (Courtesy of R. Voss, 1997.)