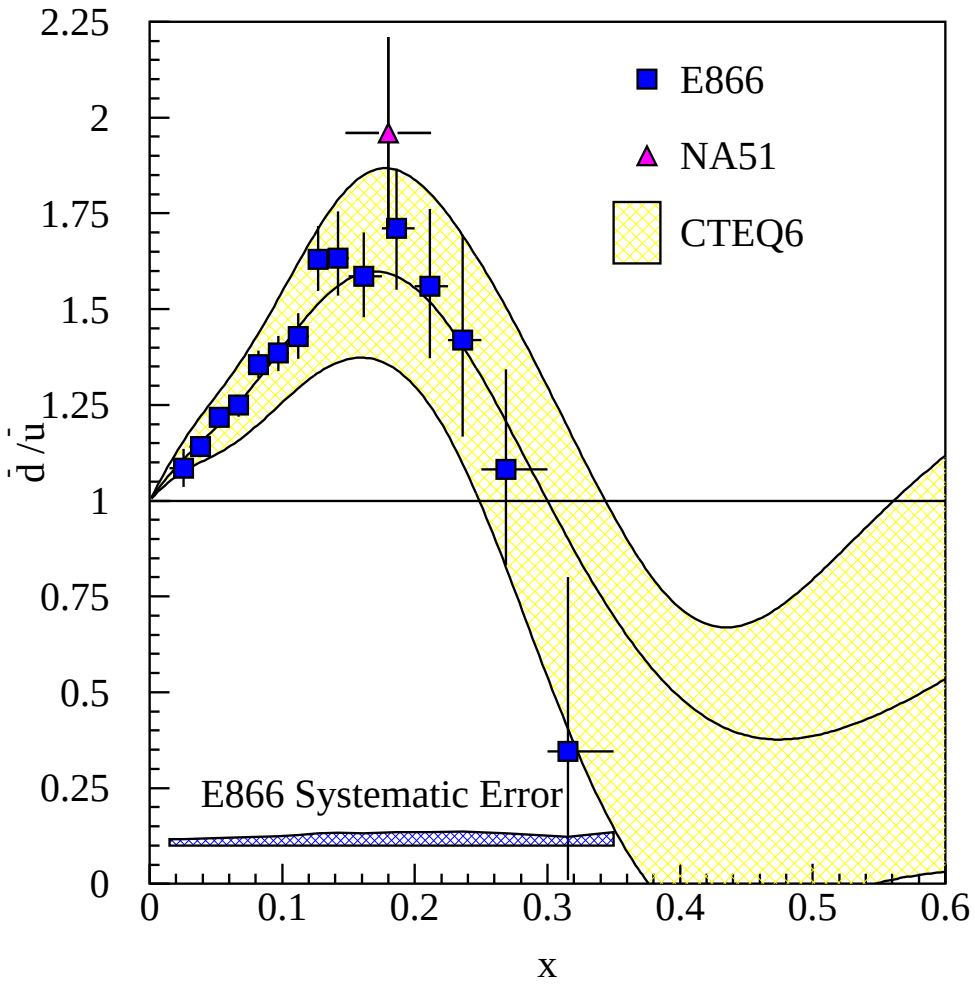

FIG. III.15 (Color online) x-dependence of $\bar{d}/\bar{u}$. The solid blue squares represent the measurements from FNAL E866 (Hawker *et al.*, 1998; Towell *et al.*, 2001), while the red triangle indicates the CERN NA51 measurement (Baldit *et al.*, 1994). The yellow shaded region indicates the uncertainty from the CTEQ6 evaluation of the world data.

E. The pion structure function

The pion plays a key role in nucleon and nuclear structure. It has not only been used to explain the long-range nucleon-nucleon interaction, forming a basic part of the Standard Model of Nuclear Physics (Pieper and Wiringa, 2001; Wiringa, 2006), but also, e.g., to explain the flavor asymmetry observed in the quark sea in the nucleon. However, compared to that of other hadrons, the pion mass is anomalously small. This owes to dynamical chiral symmetry breaking and any veracious description of the pion must properly account for its dual role as a quark-antiquark bound-state and the Nambu-Goldstone boson associated