Contribution submission to the conference Mnchen 2009

Proton Longitudinal Structure Function F_L Determination —

•Shiraz Habib — Notkestrae 85, 22607 Hamburg

Inclusive neutral current cross section measurements $\tilde{\sigma}(x, Q^2)$ are presented in the four-momentum transfer squared range $Q^2 > 60$ GeV^2 using the complete HERA-II data set.The cross sections are measured over the inelasticity range $0.001 < y < 0.9$. Measurements in the region $y < 0.3$ are dominated by the F_2 proton structure function. At higher y both F_2 and the longitudinal structure function F_L contribute. By using the low y measurements to predict F_2 at high y, F_L can then be extracted and results are presented here. The F_L structure function provides additional constraints on the gluon density.

Part:	**T**
Type:	**Vortrag;Talk**
Topic:	**2.2 QCD Partonstruktur (Exp.)**
Email:	**shiraz.habib@desy.de**