

Service de Physique Nucléaire



Séminaire

le vendredi 18 avril 2008 à 11H

CEA Saclay, Orme des Merisiers, Bât. 703, Salle 135

Impact of CLAS and COMPASS data on polarized parton densities and higher twist

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The effects of the CLAS and latest COMPASS data on the polarized parton densities and higher twist contributions to the spin structure function g_1 have been studied. It is demonstrated that the inclusion of the low Q^2 CLAS data in the NLO QCD analysis of the world DIS data improves essentially our knowledge of HT corrections to g_1 and does not affect the central values of the PDFs, while the large Q^2 COMPASS data influence mainly the strange quark and gluon polarizations, but practically do not change the HT corrections. The uncertainties in the determination of polarized parton densities are significantly reduced due to both data sets. These results strongly support the QCD framework, in which the leading twist NLO pQCD contribution is supplemented by higher twist terms of $O(\Lambda^2/Q^2)$.

Le café sera servi 10 minutes avant

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